TEXAS WATER COMMISSION

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FLOODS IN TEXAS

Magnitude and Frequency of Peak Flows

By

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FOREWORD

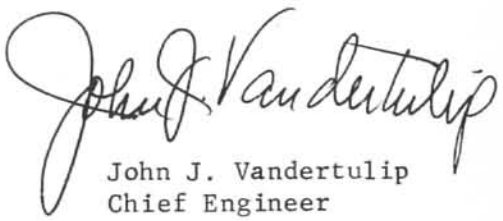
River basin and coastal area designations that appear on the tables and illustrations and in the text of this publication are those of the U. S. Geological Survey, and in several instances they differ from those of the Texas Water Commission. An enumeration of such instances follows:

U. S. Geological Survey	Texas Water Commission
Arkansas River basin	Canadian River basin
Taylor Bayou basin	(Part of the) Neches-Trinity coastal area
Clear Creek basin	(Part of the) San Jacinto-Brazos coastal area
Chocolate Bayou basin	(Part of the) San Jacinto-Brazos coastal area
Oyster Creek basin	(Part of the) San Jacinto-Brazos coastal area
Mission River basin	(Part of the) San Antonio-Nueces coastal area
San Bernard River basin	(Part of the) Brazos-Colorado coastal area

The U. S. Geological Survey's Red River basin includes the Texas Water Commission's Red River, Sulphur River, and Cypress Creek basins.

Flood discharge data at numerous locations were summarized during the preparation of this report. These extensive summaries were deemed to be of considerable value and, accordingly, were made a part of the printed report.

TEXAS WATER COMMISSION



John J. Vandertulip
Chief Engineer

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F L O O D S I N T E X A S

Magnitude and Frequency of Peak Flows

ABSTRACT

This report outlines methods by which the magnitude and frequency of expected floods for most streams in Texas may be predicted. Peak discharge data from gaging stations have been used to define flood-frequency curves applicable to the State. Composite frequency curves were drawn showing the relation of mean annual floods to floods having recurrence intervals from 1.2 to 50 years. Other curves express the relation of the mean annual flood to contributing drainage area. By combining data from the two types of curves, flood-frequency curves may be drawn for streams in Texas not materially affected by regulation or diversion. The curves should not be extrapolated beyond the range defined by base data.

In general, very large streams in the State do not lend themselves to regional analysis; therefore, they are given special treatment in this report.

A tabulation of peak gage heights and discharges for most gaging stations in the State having as many as 5 years of record are included. In general, the tabulations include all peaks above a selected base discharge. For some stations only annual peaks are shown.

F L O O D S I N T E X A S

Magnitude and Frequency of Peak Flows

INTRODUCTION

Knowledge of the magnitude and frequency of floods is a primary factor for the proper design of structures in the flood plains of streams. Such knowledge is also necessary for sound flood-plain zoning and may be used as a basis for establishing insurance rates for flood damage. The proper design of structures in the flood plains requires consideration of the flood hazard. If the failure of structures, such as dams, spillways, or levees can cause the loss of human life or great property damage, the structures should be designed to withstand the maximum flood. Other structures may be designed without considering the flood hazard. For most structures, however, such as bridges, culverts, highway fills, and buildings, inundation or loss of the structure will cause only temporary inconvenience or moderate property loss. Therefore, these structures usually are designed on the basis of less severe flooding considerations, taking into consideration the expected life of the structure, cost of repair or replacement, and inconvenience caused the public. These economic considerations dictate the choice of a design-flood frequency.

The purposes of this report are: (1) to describe methods of predicting magnitude and frequency of floods on most streams in Texas, and (2) to present accumulated flood-peak data in the State.

A comprehensive report now being prepared by the author will describe the magnitude and frequency of floods in Western Gulf of Mexico basin, which includes parts of Texas and several other states. Frequency relations for that part of Texas in the Arkansas and Red River basins are essentially the same as described by the author in a report titled "Magnitude and Frequency of Floods in Lower Mississippi River Basin." The two basin reports will be published as U. S. Geological Survey Water-Supply Papers.

Basic data for this report were compiled by U. S. Geological Survey personnel of the Texas district under the direction of Trigg Twichell, district engineer, Surface Water Branch. Unless otherwise noted in the individual station descriptions, the data were collected by the U. S. Geological Survey in cooperation with the Texas Water Commission and other Federal and State agencies and numerous political subdivisions.

DESCRIPTION OF THE AREA

Size and Drainage

Texas has an area of 265,896 square miles (Douglas, 1930). The State is traversed by several major rivers. The Canadian River, a tributary to the Arkansas River, and the Red River and its tributaries drain the Panhandle and the northern part of the State. The Sabine River on the east divides Texas from Louisiana below the State line gaging station near Logansport, Louisiana, and the Rio Grande on the south and west divides Texas from Mexico. Between these two rivers, the major river basins from east to west are: Neches, Trinity, San Jacinto, Brazos, Colorado, Lavaca, Guadalupe, San Antonio, and Nueces. The Arkansas and Red Rivers flow into the Mississippi River and thence into the Gulf of Mexico, whereas the streams in the remainder of the State drain directly into the Gulf of Mexico or into connecting lakes or bays.

Topography

The topography of the area is characterized by its diversity. The highest point in the State is on Guadalupe Peak in Culberson County in extreme West Texas with an elevation of about 8,750 feet. General land-surface elevation is about 5,000 feet above mean sea level along the Texas-New Mexico border in Hudspeth County, and decreases progressively southeastward across the State to mean sea level along the Gulf of Mexico.

Texas lies in four separate physiographic regions. These are: (1) the Basin and Range province; (2) the Great Plains province; (3) the Central Lowland; and (4) the Coastal Plain. These provinces, as defined by Fenneman (1931), are shown in Figure 1.

The Basin and Range province lies west of the Pecos River. General land-surface elevation ranges from less than 2,000 feet along the Rio Grande at the southeastern boundary of the province to about 5,000 feet at the Texas-New Mexico border. This province includes the Salt Basin, which lies between the Pecos River basin on the east and the Rio Grande basin on the west. It is a closed basin and comprises an area of about 5,500 square miles in Texas. Because it is a closed basin, this area does not contribute surface-water runoff to either the Pecos River or the Rio Grande.

The Great Plains province covers a large part of west-central and West Texas and is comprised of the High Plains, the Edwards Plateau, and the Central Texas section. The High Plains, a relatively flat area of West Texas, comprises an area of about 35,000 square miles. General land-surface elevation ranges from about 2,500 to 4,000 feet. This area is dotted by thousands of playa lakes or "pot holes" in which the small amount of surface runoff collects and either percolates into the ground or is lost to evaporation. Only on rare occasions will any surface runoff from streams originating on the High Plains appear in the reaches of the streams east of the High Plains escarpment. The rolling plains to the east of the escarpment is a region about 125 miles wide, west to east, and about 200 miles long. The surface area dips approximately 10 feet per mile to the east or southeast. Streambeds, generally, are of loose alluvial material, commonly shifting sand and light clay. Except for a 30-mile wide north-south band of Terrace deposits, the topography ranges from steep slopes

Figure 1

Contour Map of Texas Showing
Principal Physiographic Provinces

Provinces defined by Fenneman (1931)

Datum is mean sea level

on the High Plains escarpment to a relatively flat region on the east. Streams in the Edwards Plateau and Central Texas section of the Great Plains province generally have relatively steep slopes and narrow, well-defined flood plains. General land-surface elevation ranges from about 800 to 2,500 feet. Tremendous floods have occurred in this section of the State and, considering drainage-area size and rate of runoff, are among the greatest experienced in the United States. A peak discharge of 580,000 cfs (cubic feet per second) from a drainage area of 402 square miles occurred on the West Nueces River near Brackettville June 14, 1935.

The Central Lowland includes much of the north-central part of the State. The gently rolling topography of the area contrasts sharply with the rougher terrain to the south and southwest.

The Coastal Plain in Texas is represented by the West Gulf Coastal Plain section occupying most of southeast Texas. The West Gulf Coastal Plain in central and south-central Texas is separated from the Edwards Plateau by the Balcones fault zone which forms the Balcones escarpment extending from a point near Del Rio eastward to San Antonio, thence northeastward to a point near Waco. North of Waco the boundary between the West Gulf Coastal Plain and the Great Plains and Central Lowland is less distinct and is considered by some geologists to be the contact between Lower and Upper Cretaceous rocks. The topography of the West Gulf Coastal Plain ranges from low, rolling hills in the inland areas to relatively flat terrain along the lower reaches of the streams and along the Gulf Coast. Streams in this area have fairly flat slopes and wide flood plains.

Climate

The climate of Texas is even more diverse than its topography. Conditions range from humid along the lower reaches of the Sabine River to semiarid in the extreme western part of the State. Mean annual precipitation is about 55 inches along the lower Texas-Louisiana border and decreases fairly uniformly westward to less than 10 inches at El Paso. Rainfall is quite erratic with long periods of little or no precipitation and occasional tremendous downpours. A minimum annual precipitation of 1.95 inches was recorded at Imperial in 1953, and a maximum of 109.38 inches was recorded at Clarksville in Red River County in 1873. Some of the highest rates of rainfall in the United States have occurred in Texas. At D'Hanis in Medina County, 21.5 inches fell in 3 hours on May 31, 1935, and at Thrall in Williamson County, 38.2 inches fell in 24 hours on September 9 and 10, 1921.

Floods in Texas are caused by several different types of storms and may occur during any month of the year. Great floods have occurred most frequently during the months of April through October. Most of the major floods are caused by tropical or semitropical storms from the Gulf of Mexico. Some floods such as those of April through June 1957 are caused by cooler air from the northwest colliding with warm, moisture-laden air from the Gulf. On rare occasions, large floods have been caused by storms crossing Mexico and the United States from the Pacific Ocean. Floods in the western part of the State are frequently caused by thunderstorms of high intensity, and usually cover relatively small areas. These storms normally occur during the summer or early fall.

Snowmelt is not a contributing factor to floods in Texas.

FLOOD-FREQUENCY ANALYSIS

Method of Analysis

Methods used in the preparation of this report have been developed by engineers of the U. S. Geological Survey over a period of years and are outlined by Dalrymple (1960) and Benson (1962).

Peak-discharge data collected at a gaging station are used to define flood-frequency relations at the gaging station. These point relations are then combined to define regional frequency relations, which may be applied over a broad area. Using data collected in Texas and adjoining states for varying types and sizes of drainage areas, two basic relations were defined: (1) A curve showing the relation between the ratio of a flood for a selected recurrence interval to the mean annual flood, and (2) A curve showing the relation between the mean annual flood and the contributing drainage areas.

Records Available

A summary of pertinent data for all gaging stations is given in Appendix A, Table A1. Many measurements of peak discharge for outstanding floods have been made at miscellaneous sites in Texas. Peak-discharge data for these floods and for outstanding floods at gaging stations having less than 5 years of record are listed in Table A2.

Data on peak flow at 394 gaging stations in Texas and adjoining states having 5 or more years of record are included in Appendix B of this report. Location of these stations is shown on Plates 1 and 2.

Streamflow records for only 189 gaging stations were used in the analysis. In general, only those stations having 10 or more years of peak-discharge records, not materially affected by unnatural conditions, were used in defining regional flood-frequency relations. Some of the larger streams have experienced a relatively constant degree of regulation over a long period of time. Records for stations on these streams were used to define frequency relations under regulated conditions and are included in the 189 gaging stations noted above.

Flood Frequency at a Gaging Station

A flood-frequency curve based on peak-discharge records collected at a gaging station indicates what has happened at that particular site during a specific period of time. If the period was not typical of the long-term flood experienced in the area, this will be a poor basis for predicting future flood events. Furthermore, the information is generally wanted for an ungaged point. It is believed, therefore, that a frequency curve based on regional characteristics, as defined by many gaging-station records, is more reliable and applicable than one based on flood experiences at only one site. Exceptions would be stations on large streams having floodflow characteristics radically different from those of smaller tributary streams. In order to define regional frequency relations, it is first necessary to draw frequency curves for individual gaging stations.

Types of Flood Series

Flood data for a gaging station may be analysed either as an annual flood series or as a partial-duration flood series. Only the highest peak in each water year which begins October 1 and ends September 30 is used in the annual series, whereas the partial-duration series includes all peaks above a selected base. The water year is identified by the year in which it ends; thus, a peak which occurs in October, November, or December 1950 would be listed in the 1951 water year.

The annual flood series has been used in this report. Langbein (1949) has shown that for recurrence intervals of 10 or more years, the two methods give practically the same results. Comparative values of recurrence intervals by the two methods are shown in the following table.

Recurrence interval, in years	
Annual flood series	Partial-duration flood series
1.16	0.5
1.58	1.0
2.00	1.45
2.54	2.0
5.52	5.0
10.5	10
20.5	20
50.5	50
100.5	100

The above table may be used to compute recurrence intervals for partial-duration series from curves based on annual series. It should be noted that there is a distinction in meaning of "recurrence interval" between the two series. In the annual flood series, recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once as an annual maximum. In the partial-duration series, the recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once without regard to its relationship to the year or any other period of time.

Flood-Frequency Curves

Methods of preparing frequency graphs for a particular gaging station have been explained in numerous other publications, notably Dalrymple (1960).

In this report, data used to define frequency curves at gaging stations were plotted on a special form based on the theory of extreme values. The time scale as devised by Powell (1943) tends to make the frequency curve plot as a straight line for many gaging stations. Recurrence interval, the time scale of the curve, was computed by the formula $T=(n+1)/m$, where T is the recurrence interval in years, n is the number of years of record, and m is the order number, beginning with the largest flood as number 1. The frequency curve for Navasota River near Easterly, Tex., is shown in Figure 2 as an example. This curve is based on 36 years of record (1925-60). The greatest flood during this period was 60,300 cfs occurring May 2, 1944. By substituting in the formula given above, the recurrence interval was computed as $T=(36+1)/1 = 37$ years. Recurrence intervals for each of the other 35 annual peaks were computed in the same manner and plotted against corresponding discharge in Figure 2. After plotting the points, a curve was fitted to the points by visual inspection. As most streamflow records are relatively short, it is believed that this method is preferable to analytical curve fitting.

In Texas a great deal of historical flood information has been collected, and this information was used as an aid in defining the upper end of frequency curves. At the Navasota River gage near Easterly it is known that a peak discharge of 90,000 cfs occurred in June 1899. It is also known that this was the greatest flood since at least 1845 (116 years). The recurrence interval for this historical flood was computed as $(116+1)/1 = 117$ years and plotted at this position in Figure 2.

A recurrence interval is the average interval of time within which a flood of a given magnitude will be equaled or exceeded once. A flood having a recurrence interval of 10 years has a 10 percent chance of recurring in any year. A 50-year flood has a 2 percent chance of recurring in any year. It should be emphasized that there is no implication that a 10-year flood will occur each 10 years, or that one 50-year flood will occur each 50 years. Owing to the vagaries of nature, several large floods may occur during a relatively short period of time or, on the other hand, there may be a period of several years without an outstanding flood. Discharge records for the Nueces River at Laguna, Tex., illustrate this point. The frequency curve for this gaging station indicates that the peak discharge for the 10-year flood is 112,000 cfs. During the 5-year period from 1935 to 1939 there were three floods whose peak discharge exceeded this value, whereas during the 9-year period from 1940 to 1948 the greatest discharge experienced was 19,600 cfs having a recurrence interval of 2.6 years.

Regional Flood Frequency

The limitations of frequency curves based on flood data at a single gaging station led to the development of methods of combining the data for individual sites and relating flood-frequency functions to measurable characteristics of drainage basins.

Flood-frequency curves have been combined in two ways. First, the records were combined on the basis of similarity of the slope of the individual frequency curves. This step defined a composite dimensionless frequency curve representing the ratio of the floods for selected frequencies to an index flood (the mean annual flood). Secondly, a curve was defined of relation between topographic characteristics of a drainage basin and the mean annual flood based on

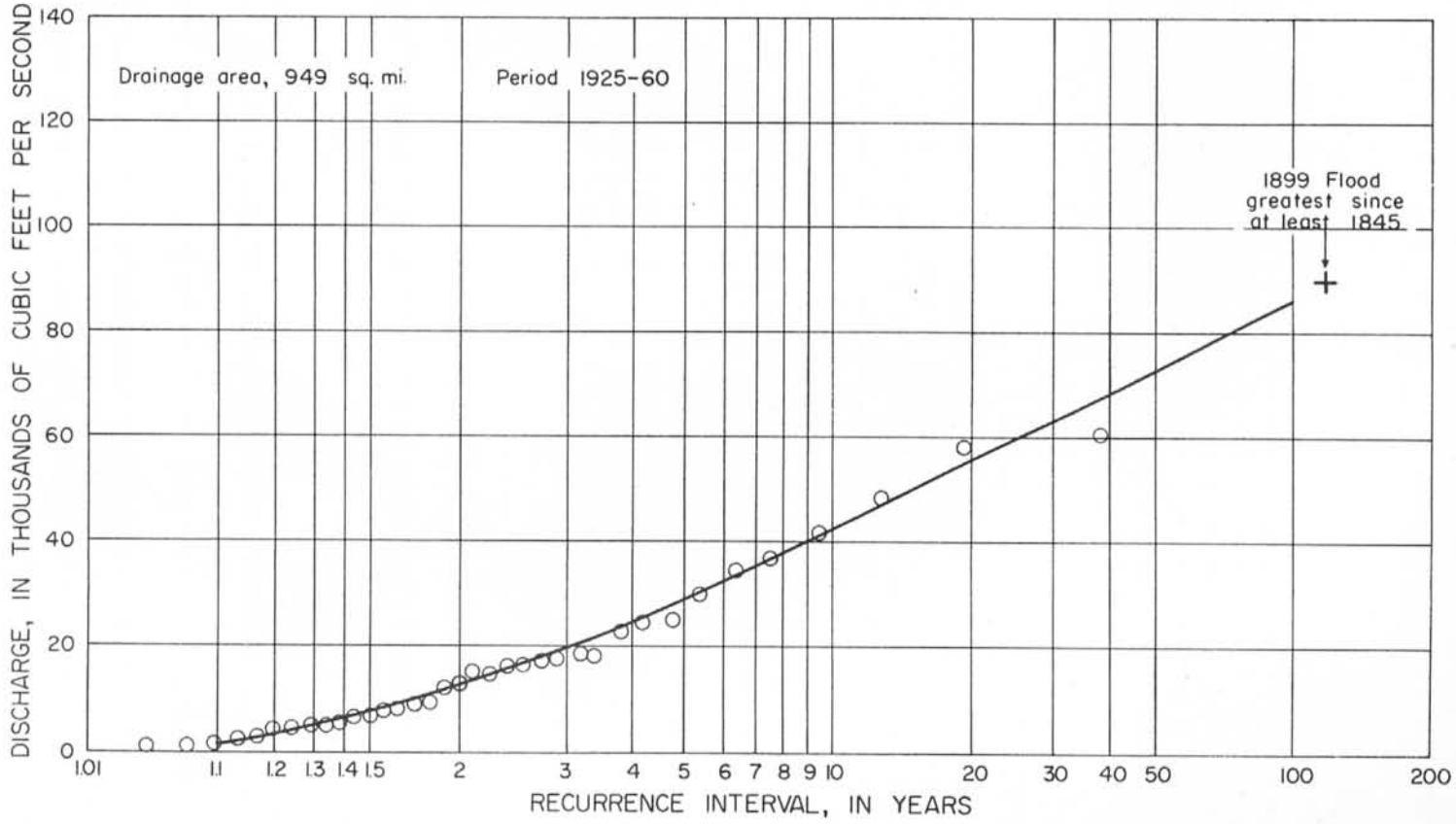

Figure 2

Flood-Frequency Curve for Navasota River Near Easterly, Tex.

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gaging-station records. The mean annual flood can be predicted at any point in the area by use of the relation curve defined in the second step. Flood-frequency curves for most sites in the State, whether gaged or ungaged, can be drawn by use of the two sets of curves.

Mean Annual Flood

The mean annual flood at a gaging station is by definition a flood having a recurrence interval of 2.33 years in the annual-flood series. According to the theory of extreme values, the mean of all the annual floods has a value corresponding to the flood of 2.33-year recurrence interval. The mean annual flood has been found to be a good index of geographical variation of floodflow and has been used as an index flood in this report.

Composite Frequency Curve

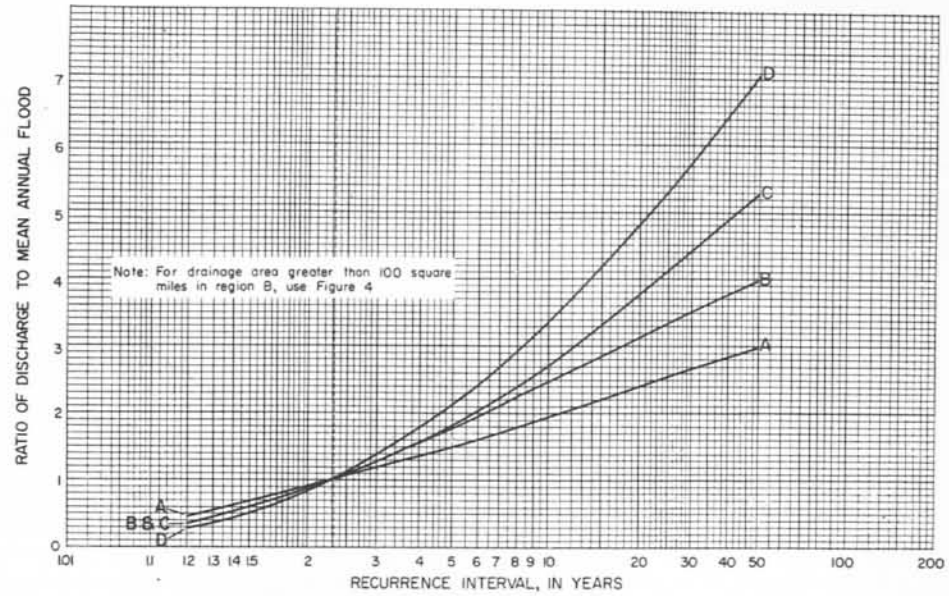
The State of Texas has been divided into seven flood-frequency regions (A-G) on the basis of similarity of the slope of the individual station frequency curves. The ratio of the 10-year flood to the mean annual flood was used as a measure of the slope. In each region, ratios to the mean annual flood of floods having recurrence intervals of 1.2, 2.33, 5, 10, 25, and 50 years were computed for each station and the median ratio at each flood level computed. The median ratios were used to define a dimensionless composite frequency curve for each region. These curves give the ratio of the flood of any recurrence interval between 1.2 and 50 years to the mean annual flood and are shown in Figure 3. Flood-frequency regions are outlined on Plate 1. In region B it was found that frequency curves for small drainage basins were steeper than for large basins. Composite curve B shown in Figure 3 is applicable only for areas of 100 square miles or less. Figure 4 is used for flood-frequency computations for larger areas in region B.

Mean Annual Flood Relation

Having derived composite frequency curves relating floods of various recurrence intervals to the mean annual flood, the next step is to provide a means of determining the value of the mean annual flood.

The magnitude of the mean annual flood is influenced to some extent by climatic factors and such physical characteristics of the drainage basin as size, topography, shape, soil type, and floodwater storage. Of the measurable physical characteristics, only size was found to be highly significant.

The mean annual flood was graphically correlated with drainage-basin size. On the basis of this correlation, the State was divided into eight hydrologic areas as shown on Plate 2. Curves showing the relation of mean annual flood to contributing drainage area are shown in Figure 5.



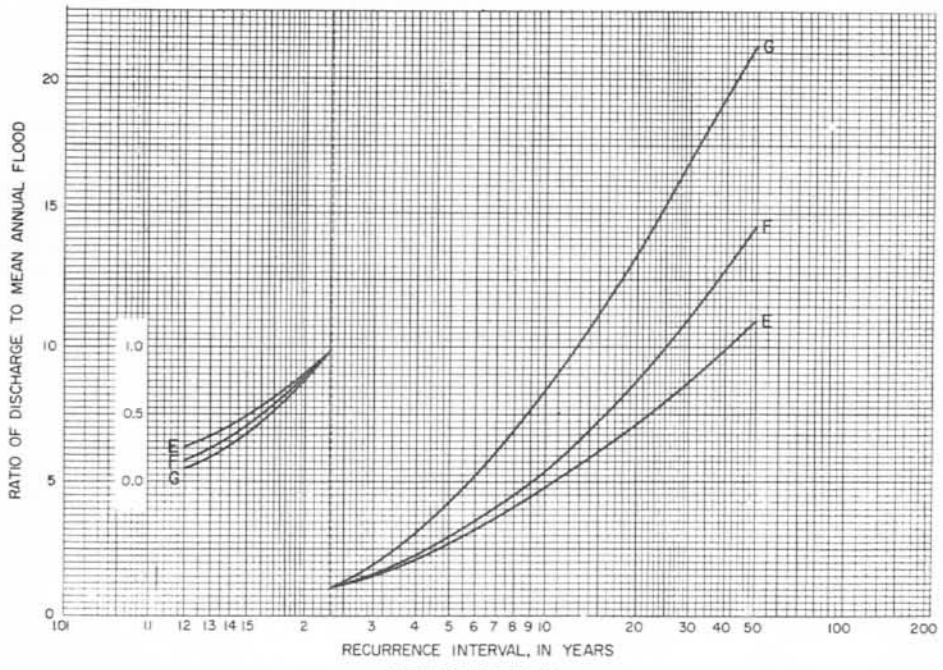


Figure 3

Frequency of Annual Floods, by Regions

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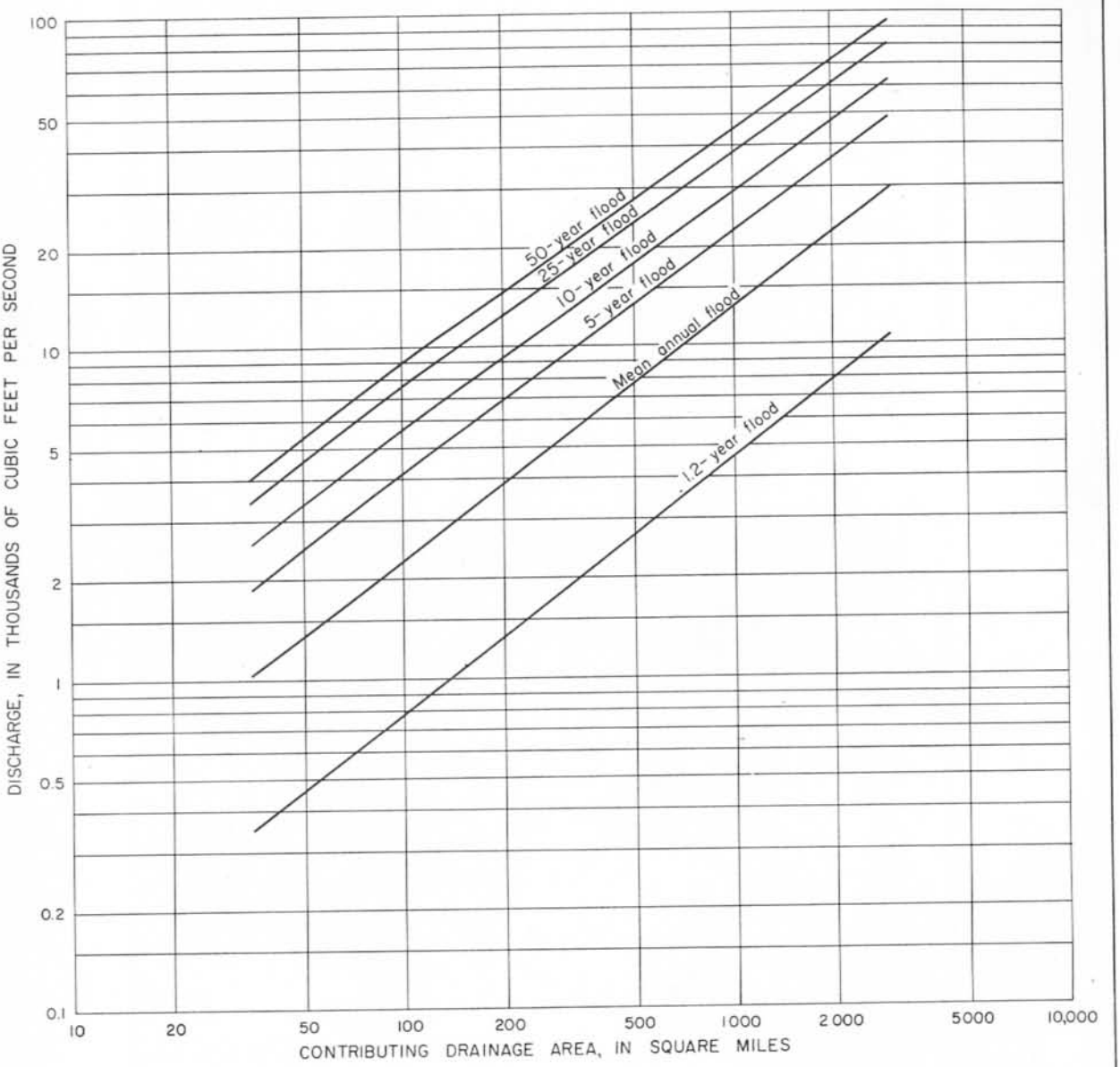

Figure 4

Relation of Discharge for Selected Flood Frequencies to Drainage Area, Region B, Area 7

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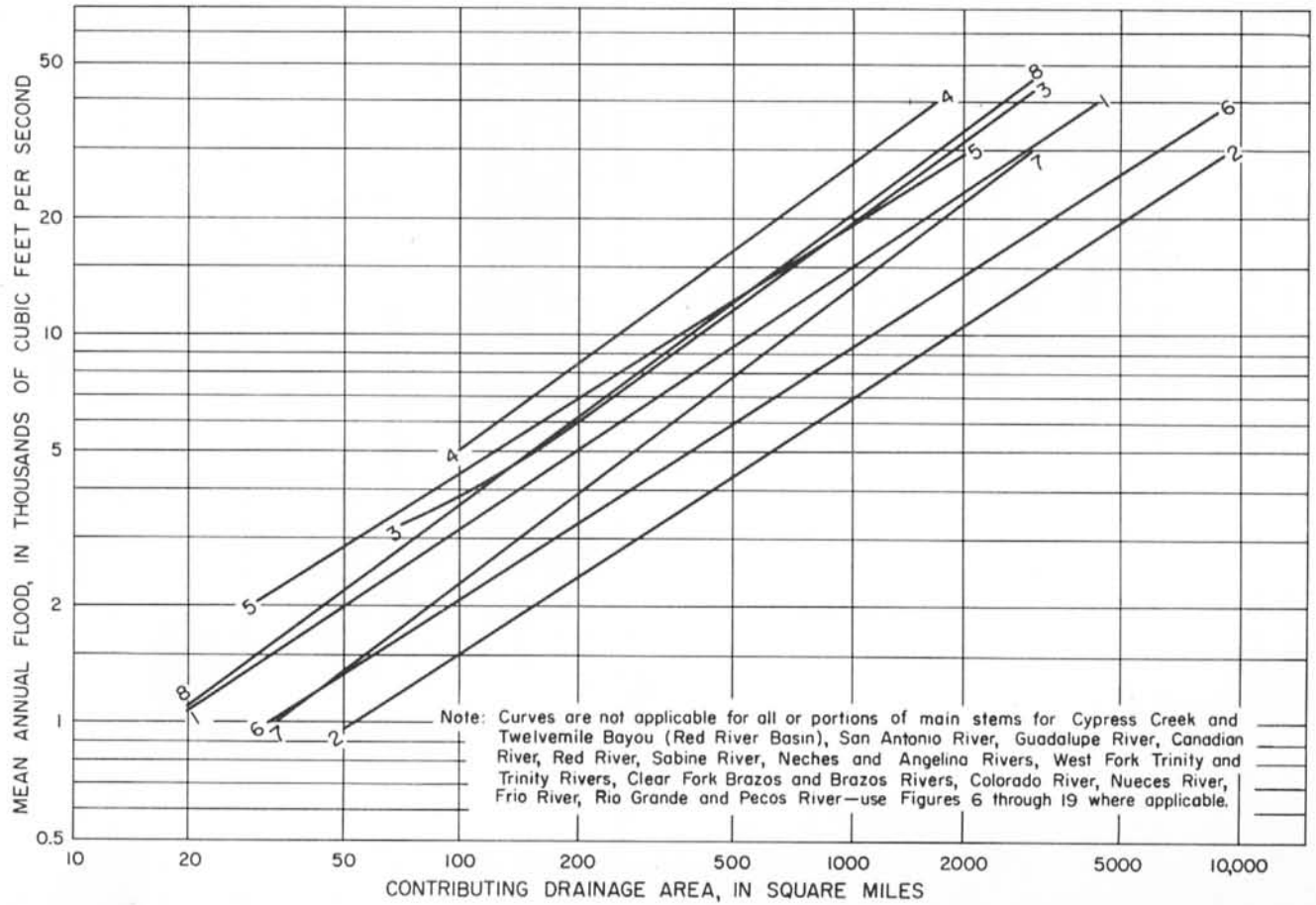

Figure 5

Variation of Mean Annual Flood With Drainage Area in Hydrologic Areas I Through 8

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APPLICATION OF FLOOD-FREQUENCY DATA

Procedures for determining the magnitude of flood peaks having recurrence intervals up to 50 years are outlined in this section. As stated in a previous section of the report, the frequency curves should not be extrapolated beyond the range defined by base data. Mean annual flood curves shown on Figure 5 indicate the range of drainage areas for which the mean annual flood is defined in each hydrologic area. Composite frequency curves shown on Figure 3 are defined only up to a 50-year recurrence interval.

Owing to the paucity of long-term records for drainage basins smaller than 100 square miles, frequency relations are not as well defined in the smaller basins as for those having drainage areas of 100 square miles or more.

Flood-frequency relations for some parts of the State are not defined, nor can they be safely estimated from relations derived for adjacent defined areas. The undefined areas are indicated by hatch lines on Plates 1 and 2.

On the basis of streamflow records, it is apparent that there is a drastic reduction in peak flow on streams in the Nueces River basin as they leave the Edwards Plateau, cross the Balcones escarpment, and flow through the Gulf Coastal Plain towards the Gulf of Mexico. This reduction in peak flow is probably caused by several factors, among which are: (1) loss to Edwards limestone in the Balcones fault zone and perhaps to other permeable formations downstream from the fault zone, (2) flattening of basin slopes in the Gulf Coastal Plain, (3) increase in natural flood storage, and (4) difference in rainfall pattern.

On the Nueces and Frio River main stems, the reduction of peak flows is defined by gaging stations upstream and downstream from the escarpment. For the Blanco and Sabinal Rivers and Seco and Hondo Creeks, flood-frequency relations are defined only upstream from the escarpment. Regional curves should not be used to compute frequency relations on these streams below the escarpment.

Regional Application

The magnitude of floods having recurrence intervals up to 50 years may be determined for most streams in Texas by the following procedure:

1. Determine the size of the contributing drainage area above the site.[1/]

[1/] There is a cooperative program between the U. S. Geological Survey and the Texas Water Commission for determination of drainage areas for the entire State. Drainage-area determinations have been published in Circulars of the Texas Water Commission as follows:

Sabine River Basin and Sabine-Neches Coastal Area--Circular No. 62-02
Neches River Basin and Neches-Trinity Coastal Area--Circular No. 62-03
San Jacinto River Basin and San Jacinto-Brazos Coastal Area--Circular No. 62-05
Trinity River Basin and Trinity-San Jacinto Coastal Area--Circular No. 63-01
San Antonio River Basin--Circular No. 63-07

See also "Drainage Area Data--Arkansas, White, and Red River Basins" compiled by the Southwestern Division, U. S. Army Corps of Engineers, Tulsa, Oklahoma, which contains drainage-area determinations for the listed river basins.

2. From Plates 1 and 2 determine the flood-frequency region and hydrologic area in which the site is located.

3. Determine the mean annual flood for the site from the appropriate hydrologic area curve, Figure 5.

4. From Figure 3 determine the ratio of flood discharge to the mean annual flood for the selected recurrence interval. (Exception for region B, see below.)

5. Multiply the mean annual flood (step 3) by the ratio of flood discharge to mean annual flood (step 4).

A complete frequency curve for the site can be drawn by repeating steps 4 and 5 for several selected recurrence intervals.

If the site is in region B, area 7, and the drainage area is greater than 100 square miles, steps 3, 4, and 5 are eliminated and the magnitude of floods having selected recurrence intervals may be taken directly from Figure 4.

For the purpose of illustration, let it be assumed that the user wishes to design a bridge on Village Creek near Handley at Fort Worth-Webb road crossing. Let it be further assumed that it is desired to design the structure to pass the 50-year flood. The following procedure should be followed:

1. The drainage area at the site should be determined from the best available topographic maps. The drainage area at the site is 126 square miles.

2. From Plates 1 and 2 determine the flood-frequency region and hydrologic area in which the site is located. Village Creek is in region C and area 3.

3. From Figure 5 determine the mean annual flood for hydrologic area 3 for a drainage area of 126 square miles. Determined as 4,400 cfs.

4. From Figure 3 determine the ratio of the 50-year flood to mean annual flood for region C. Determined as 5.3.

5. Determine the magnitude of the 50-year flood as 4,400 x 5.3=23,300 cfs.

Let it now be assumed that a discharge of 15,000 cfs has been measured at the site referred to above, and it is desired to determine the frequency of a similar occurrence. This may be determined as follows:

1. The mean annual flood has been determined as 4,400 cfs in the previous example.

2. Compute the ratio of the experienced flood to mean annual flood as 15,000/4,400 = 3.41.

3. From Figure 3 determine the recurrence interval for region C for a flood having a peak discharge 3.41 times that of the mean annual flood. Determined as 16 years.

Special Application

Most of the larger streams in Texas traverse regions having diverse climatic and physical characteristics. These streams integrate floodflow characteristics of all the areas through which they flow, and have flood-frequency relations differing from those of the smaller tributary streams. For this reason, regional and areal curves are not applicable and separate treatment must be given the larger streams. They may be placed in two categories: (1) Those streams for which one or more composite frequency curves (Figure 3) are applicable, whereas mean annual flood curves are not; and (2) those for which neither composite frequency curves nor mean annual flood curves are applicable.

Those streams falling in the first category are the main stems of:

Cypress Creek and Twelvemile Bayou below Boggy Creek (Red River basin)
San Antonio River below Medina River
Guadalupe River below Comfort

For Cypress Creek and Twelvemile Bayou and San Antonio River, individual curves showing variation of mean annual flood with drainage area were drawn and are shown in Figure 6 (page 23). For the Guadalupe River below Comfort, a curve showing variation of mean annual flood with miles above mouth was drawn and is shown in Figure 7 (page 23.)

Flood magnitudes at sites below points indicated on these streams can be determined as outlined under "Regional Application" on page 16, except that values of the mean annual flood are taken from Figure 6 or 7. It will be noted that the Guadalupe River lies in two regions (D and E). The composite frequency curve for the region in which a site is located is used in determining flood magnitudes.

Those streams falling in the second category are main stems of:

Canadian River
Red River
Sabine River below Big Sandy Creek
Neches River below Flat Creek
Angelina River below East Fork Angelina River
West Fork Trinity River below Clear Fork Trinity River and
Trinity River
Clear Fork Brazos River below Paint Creek, and Brazos River
Colorado River below Beals Creek
Colorado River below Austin
Nueces River below West Nueces River
Frio River below Dry Frio River
Rio Grande above Falcon Dam
Pecos River below Red Bluff Reservoir.

For this group, families of curves were drawn showing the relation of discharge for selected flood frequencies to drainage area or miles above mouth. The curves are shown in Figures 8 through 19 (pages 24 through 30). Flood magnitudes for selected recurrence intervals at sites on these rivers may be taken directly from the family of curves by first determining the contributing drainage area above the site of the distance upstream from the mouth. River

miles used in this analysis are those determined by the U. S. Army Corps of Engineers or, for the Rio Grande, the International Boundary and Water Commission.

An example of the use of Figures 8 through 19 is given below.

Assume that it is desired to prepare a flood-frequency curve for a point on the Sabine River below the mouth of Sandy Creek.

1. The drainage area at this point is determined as 7,104 square miles from Texas Water Commission Circular No. 62-02 entitled, "Drainage Areas of Texas Streams, Sabine River Basin and Sabine-Neches Coastal Area."

2. From Figure 10 the magnitudes of floods having recurrence intervals of 2.33, 10, 25, and 50 years for a drainage area of 7,104 square miles are 28,500, 64,000, 83,000, and 100,000 cfs, respectively.

3. The discharges determined in step 2 are then plotted against corresponding recurrence intervals on plotting paper similar to that shown in Figure 2, or some other suitable plotting paper, and a smooth curve drawn through the plotted points.

4. If it is desired to determine the magnitude of a flood having a specific recurrence interval (25 years for example), this value is taken directly from Figure 10 as 83,000 cfs.

5. Recurrence intervals of predetermined discharges at the site are determined by either interpolating between curves on Figure 10, or entering the frequency curve drawn in step 3 with the discharge and reading the recurrence interval from the time (recurrence interval) scale.

In general, flood-frequency relations are shown for natural conditions. For the lower reaches of some of the major rivers in Texas, peak flows have been materially affected by a relatively constant degree of regulation during most of the period for which records have been collected. Frequency curves for regulated conditions for portions of the main stem of these rivers have been drawn. Data upon which these curves are based are explained in the following sections.

Colorado River

Since storage began in Buchanan Reservoir in 1937 and in Lake Travis in September 1940, peak discharges below Austin have been materially affected by storage. Peak flows on the lower reaches of the Colorado River are caused largely by runoff from tributary streams below Austin. The family of curves shown in Figure 15 is based on peaks under regulated conditions for the period 1941-60. Owing to the relatively short period of record available, frequency relations are defined only to a recurrence interval of 25 years.

Rio Grande

Peak flows of the Rio Grande are affected to some extent by reservoirs on the main stem and on tributary streams. Elephant Butte Reservoir on the Rio Grande in New Mexico (capacity, 2,206,800 acre-feet, survey of 1957) completed in 1916 and La Boquilla Reservoir on the Rio Conchos in Mexico (capacity, 2,417,500 acre-feet) built in 1914, were the first reservoirs constructed in the basin that would affect peak flows below El Paso. Although several other large reservoirs have been built in the basin since 1916, their effect on peak flows of Rio Grande main stem between El Paso and Falcon Dam is probably not appreciable. Since completion of Falcon Dam in 1953, peak flows below this point have been largely regulated. The family of curves shown in Figure 18 is based on observed data for the period 1916-60. No attempt was made to adjust them to natural conditions. Peak discharge data for the historical flood of 1865 were used in the definition of frequency relations. Owing to regulation by Falcon Reservoir and a large amount of floodflows bypassing gaging stations along the lower reach of the Rio Grande, flood-frequency relations are not defined below the dam.

Pecos River

Peak flows on the Pecos River from the New Mexico-Texas State line to the gaging station near Sheffield are affected by regulation by several upstream reservoirs. Flood-frequency relations shown in Figure 19 are based on regulated conditions for the period 1939-60, and are defined only to a 25-year recurrence interval. Peak flows at the mouth of Pecos River are almost entirely due to runoff from the area below Sheffield and are not materially affected by regulation. On the basis of records collected at gaging stations near Comstock and near Shumla, the magnitude of a flood having a recurrence interval of 50 years is about 200,000 cfs. Peak discharge of 948,000 cfs for the unprecedented flood of June 28, 1954, at the gaging station near Comstock was about five times as great as the 50-year flood and more than eight times the previous maximum discharge experienced during the period of record beginning in 1901. This flood originated in the area below Sheffield.

SUMMARY

Methods outlined in this report may be used to predict the most probable value of flood magnitudes for selected recurrence intervals over a long period of time. The report cannot be used to predict the date of occurrence of any future flood and does not imply that a flood having a specific recurrence interval will occur on schedule at regular intervals. It is possible that several large floods may occur within a period of a few years. On the other hand, several years may pass without experiencing a major flood.

In general, flood-frequency relations defined in this report are based on natural flow conditions in the report area, and are not applicable for streams whose peak flows are materially affected by manmade changes. Curves presented are based on all available data through the 1960 water year. A great deal of historical data has been collected in Texas which were used in the analysis. The composite frequency curves (Figure 3) cannot be used with confidence beyond 50 years, nor should curves showing relation of mean annual flood to drainage area be extended above or below the limits of the curves.

Frequency curves for the main stem of Colorado River below Austin, Rio Grande between El Paso and Falcon Dam, and Pecos River below Red Bluff Reservoir are based on observed data during the periods indicated, with no attempt being made to adjust these data to natural unregulated conditions. The effect of regulation on peak flows was relatively constant during the periods on which the curves were based.

Owing to the paucity of long-term records on drainage areas less than about 100 square miles, frequency relations for these areas are not as well defined as for the larger drainage areas.

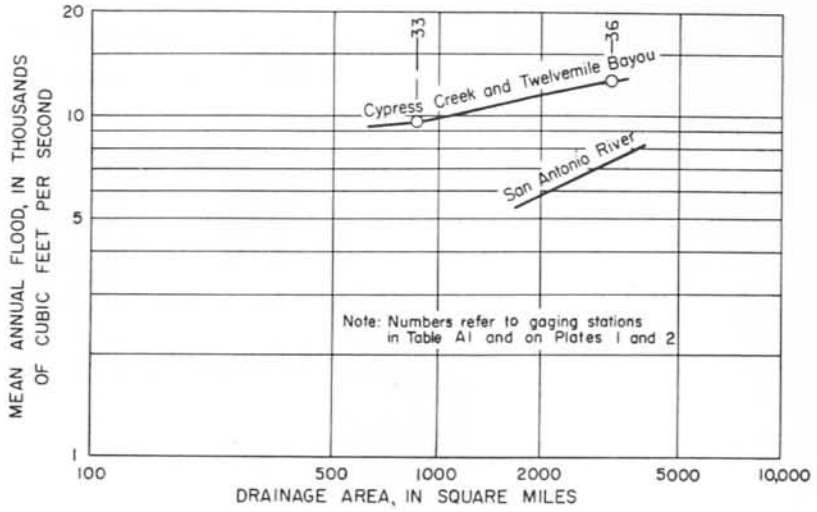

Figure 6

Variation of Mean Annual Flood With Drainage Area on Main Stems of Cypress Creek and Twelvemile Bayou Below Boggy Creek, and San Antonio River Below Medina River

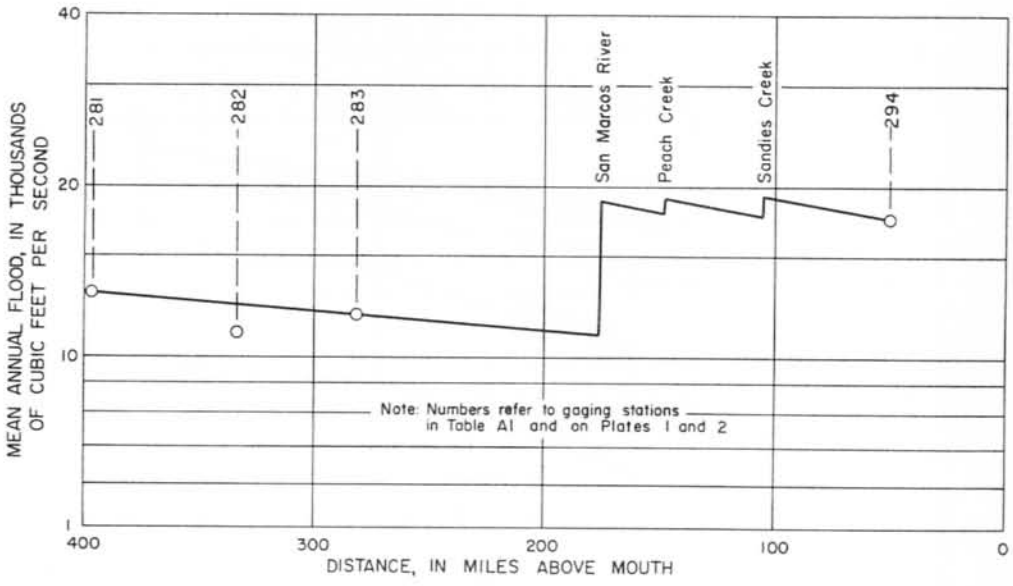

Figure 7

Variation of Mean Annual Flood With Miles Above Mouth on Main Stem of Guadalupe River Below Comfort

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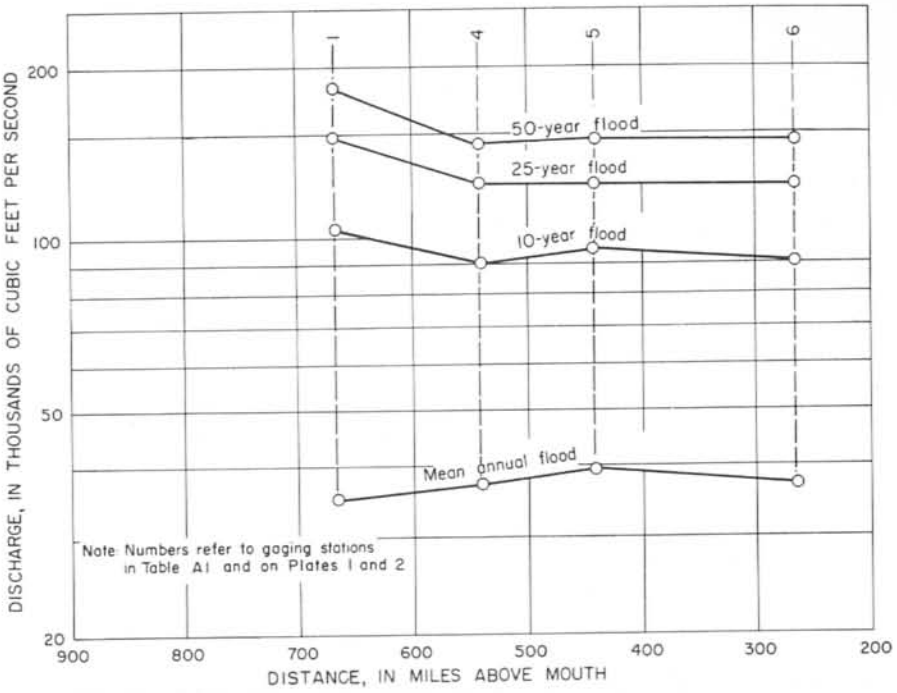

Figure 8

Relation of Discharge for Selected Flood Frequencies to Miles Above Mouth, Canadian River Main Stem

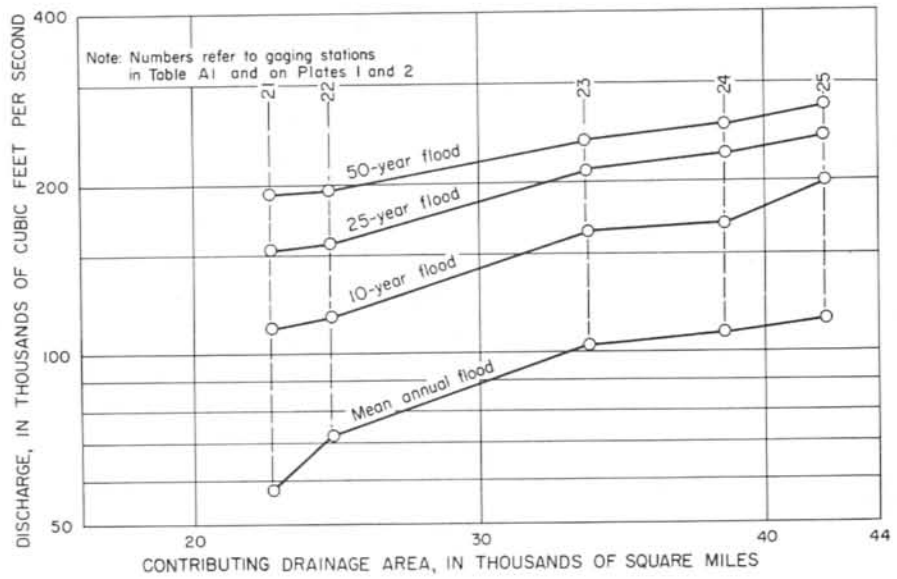

Figure 9

Relation of Discharge for Selected Flood Frequencies to Contributing Drainage Area, Red River Main Stem

142

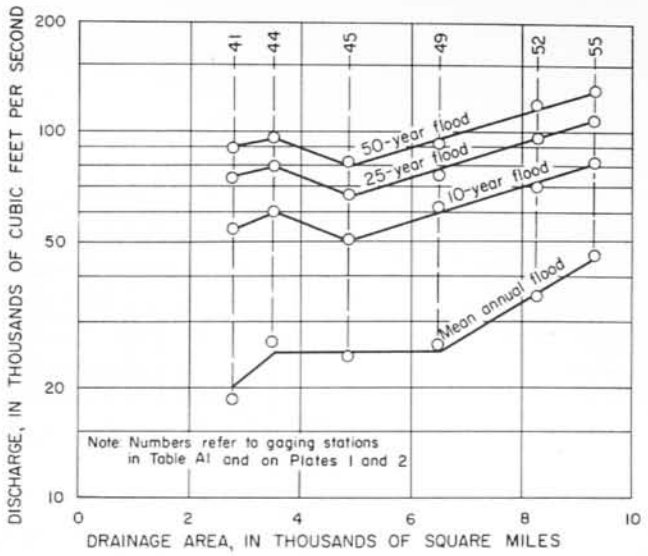

Figure 10

Relation of Discharge for Selected Flood Frequencies to Drainage Area, Sabine River Main Stem Below Big Sandy Creek

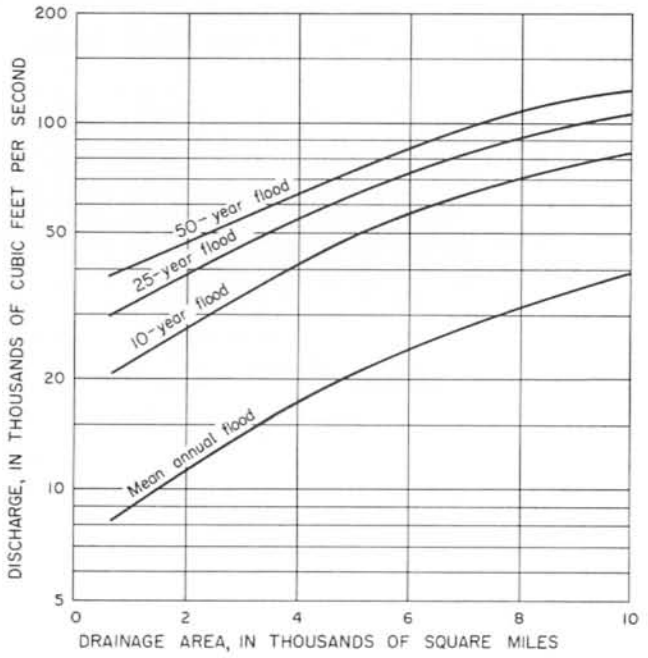

Figure 11

Relation of Discharge for Selected Flood Frequencies to Drainage Area, Neches River Main Stem Below Flat Creek and Angelina River Main Stem Below East Fork Angelina River

142

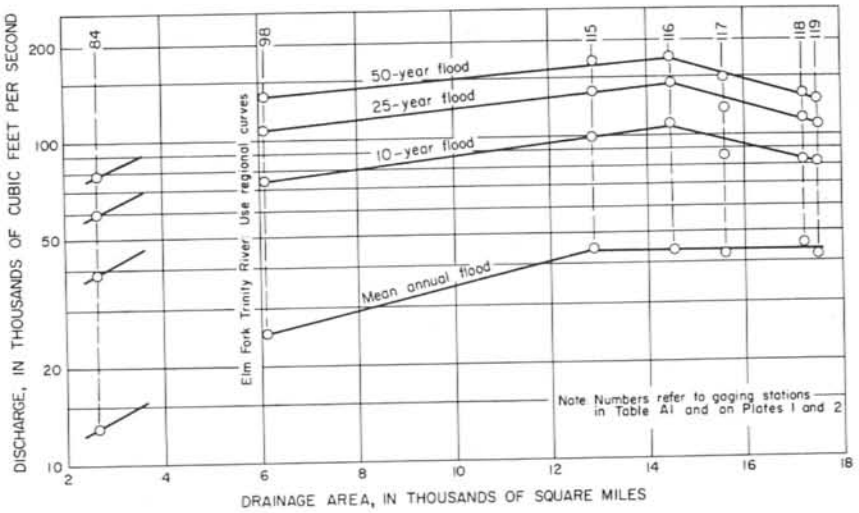

Figure 12

Relation of Discharge for Selected Flood Frequencies to Drainage Area, West Fork Trinity River Below Clear Fork Trinity River, and Trinity River Main Stem

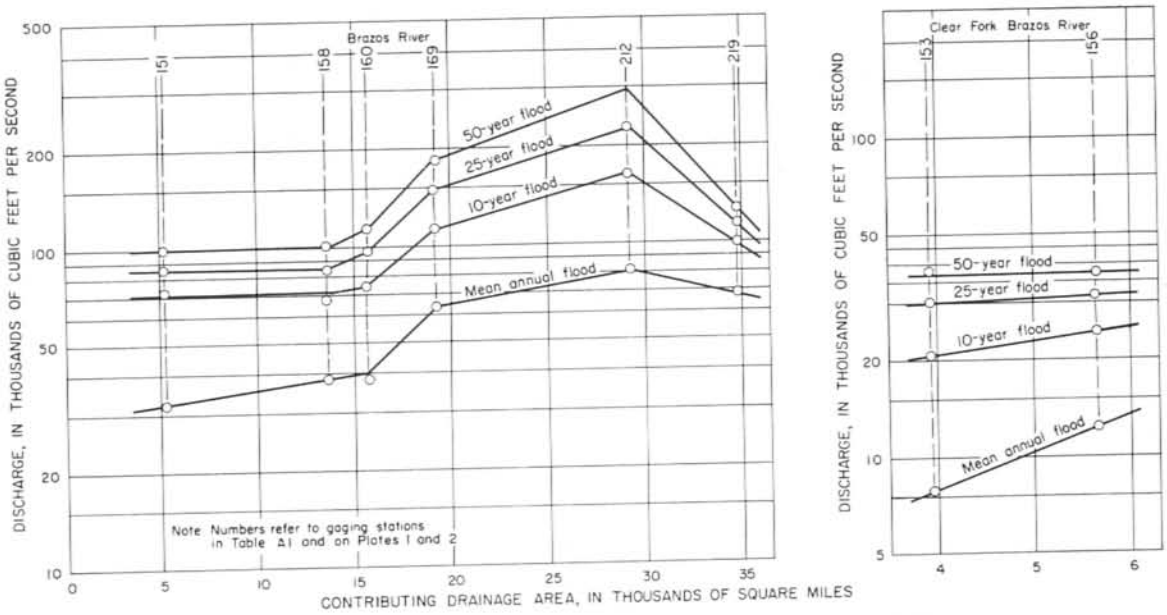

Figure 13

Relation of Discharge for Selected Flood Frequencies to Contributing Drainage Area, Clear Fork Brazos River Below Paint Creek, and Brazos River Main Stem

142

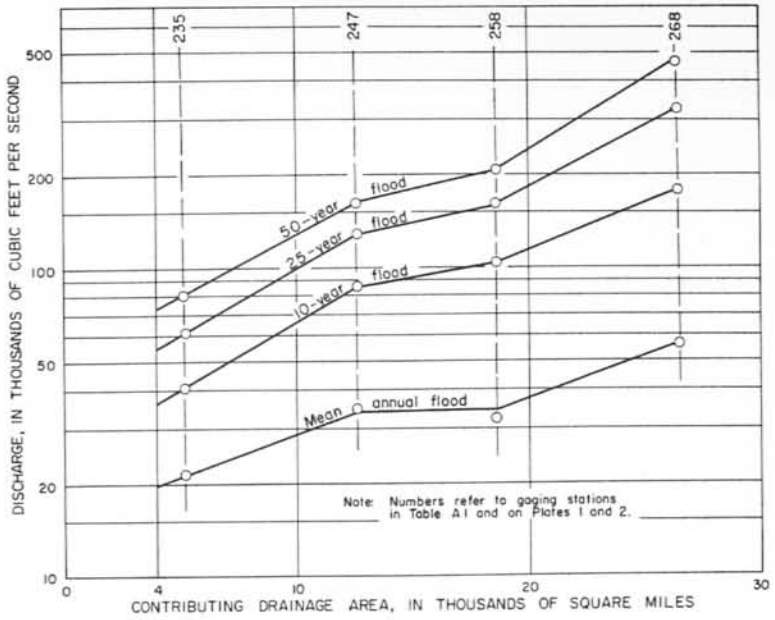

Figure 14

Relation of Discharge for Selected Flood Frequencies to Contributing Drainage Area, Colorado River Main Stem Between Beals Creek and Austin

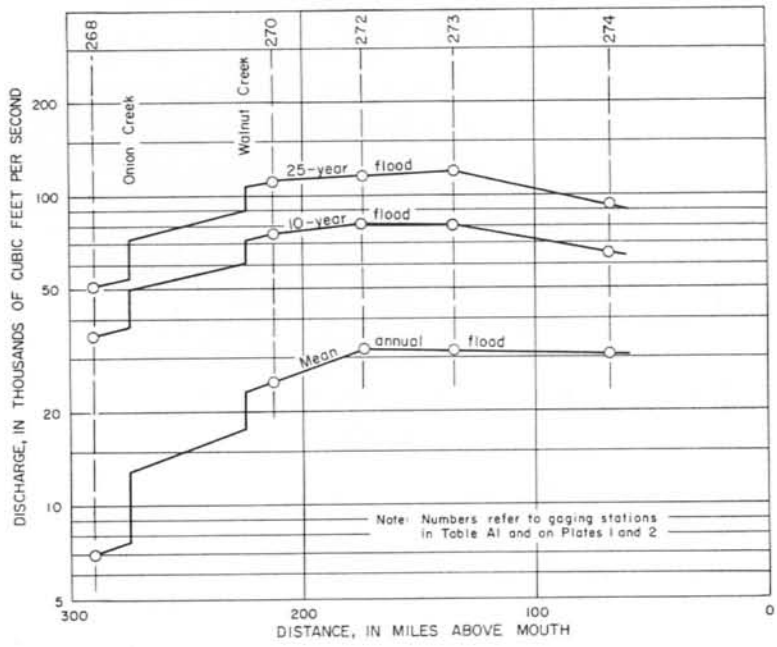

Figure 15

Relation of Discharge for Selected Flood Frequencies to Miles Above Mouth for Regulated Conditions, Colorado River Main Stem Below Austin (1941-60)

142

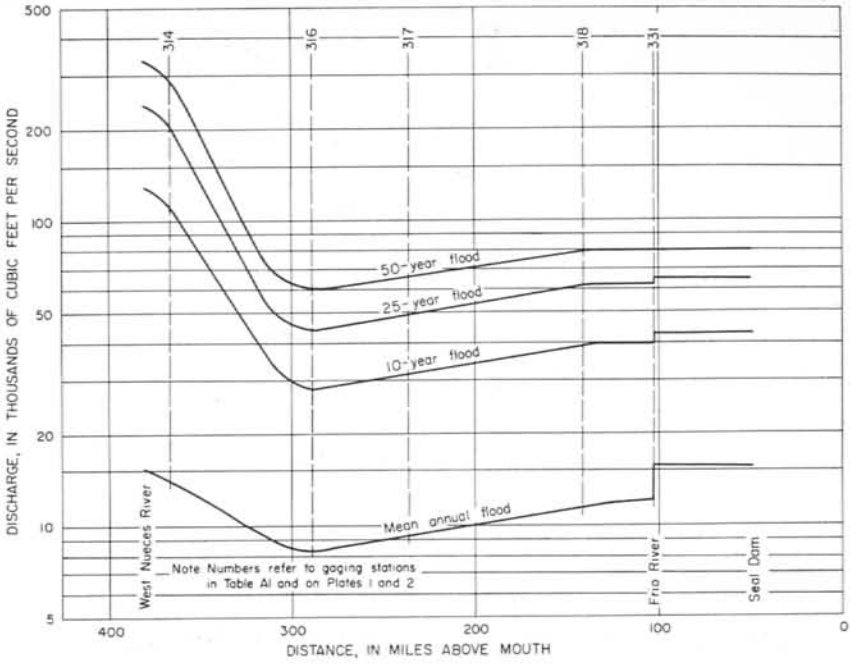

Figure 16

Relation of Discharge for Selected Flood Frequencies to Miles Above Mouth, Nueces River Main Stem Below West Nueces River

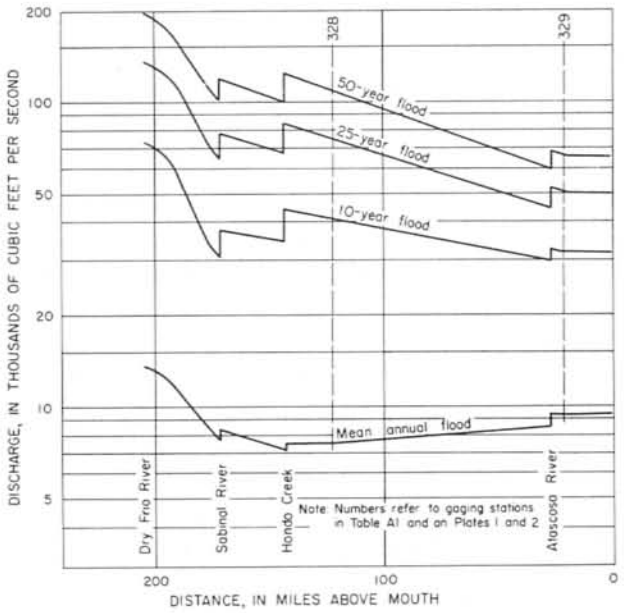

Figure 17

Relation of Discharge for Selected Flood Frequencies to Miles Above Mouth, Frio River Below Dry Frio River

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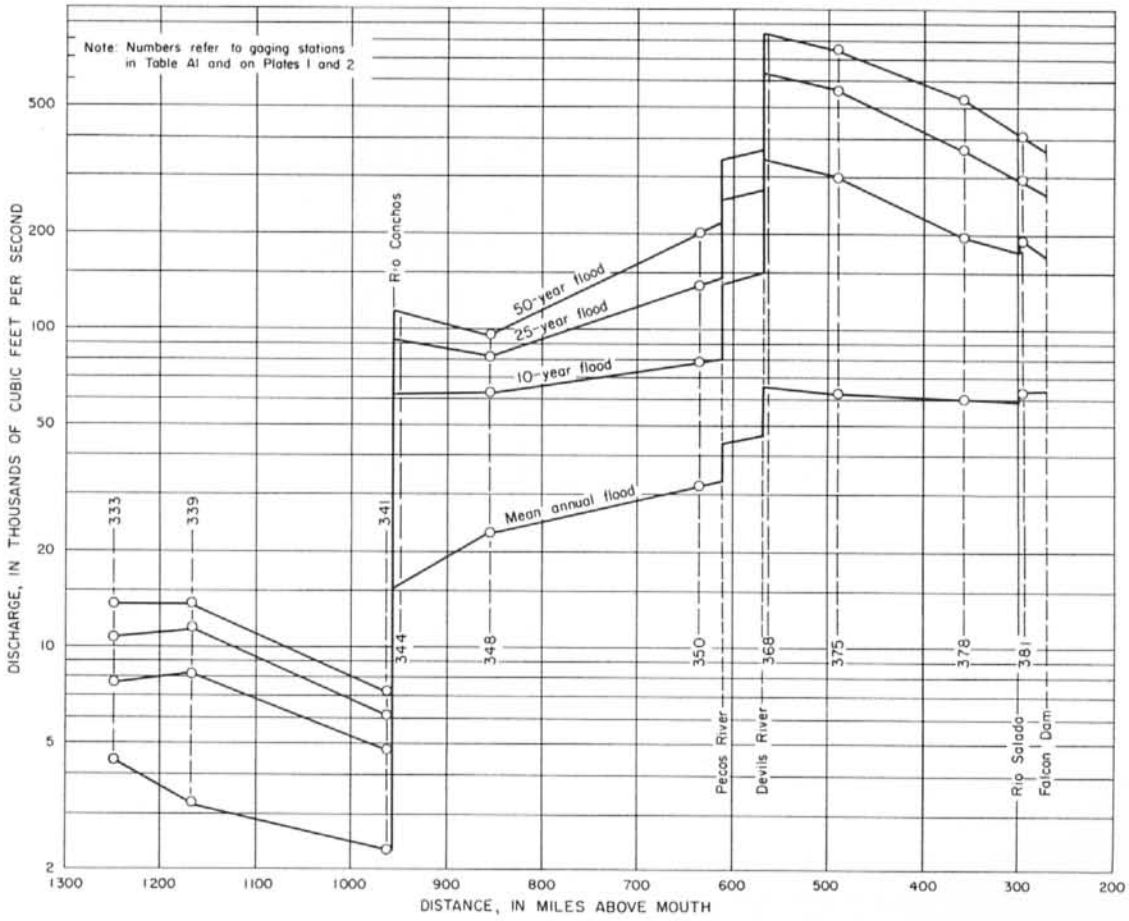

Figure 18

Relation of Discharge for Selected Flood Frequencies to Miles Above Mouth for Regulated Conditions, Rio Grande Main Stem Above Falcon Dam (1916-60)

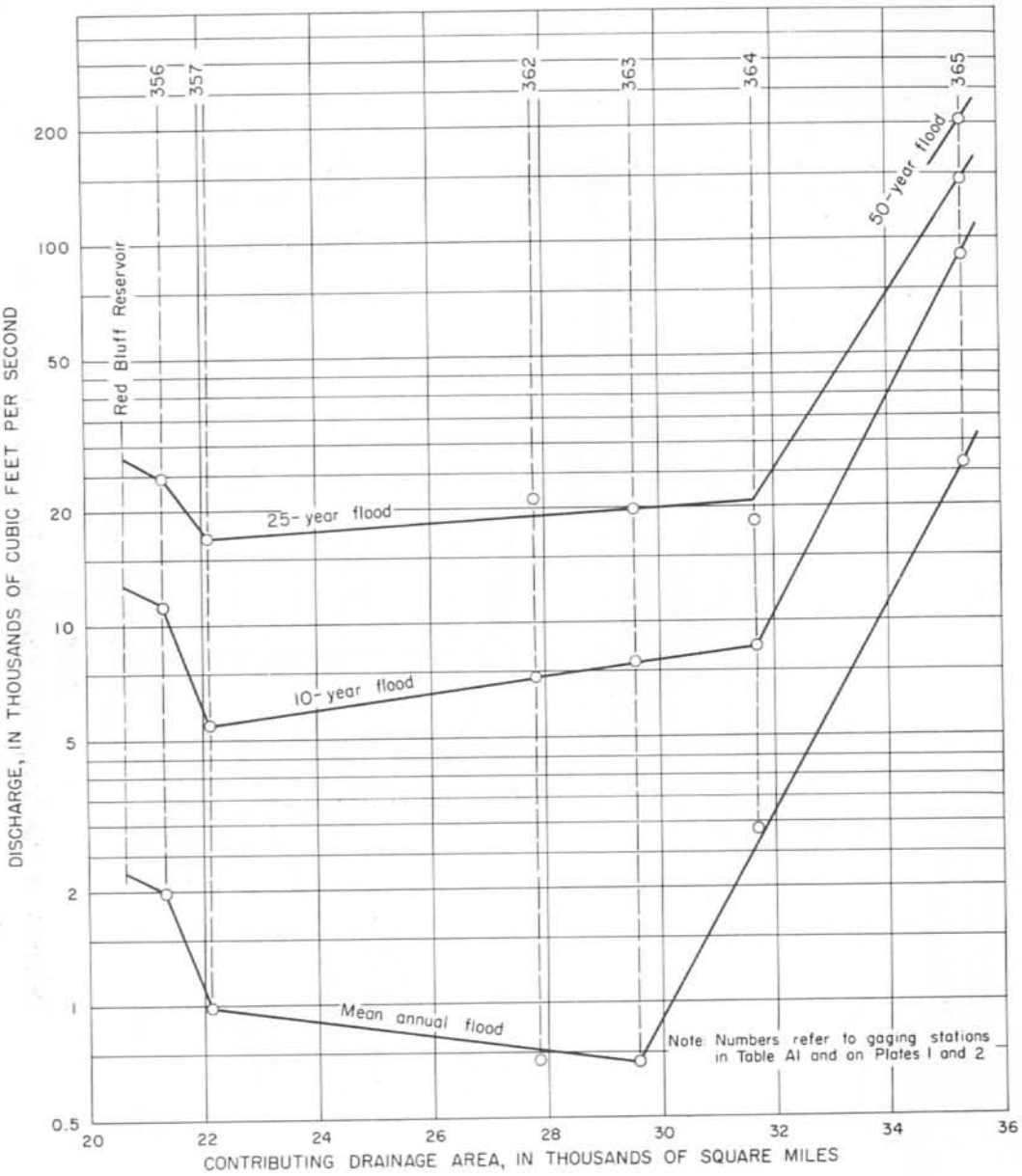

Figure 19

Relation of Discharge for Selected Flood Frequencies to Contributing Drainage Area for Regulated Conditions, Pecos River Main Stem Below Red Bluff Reservoir (1939-60)

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APPENDIX A

TABLES OF PEAK STAGES AND DISCHARGES, AND ILLUSTRATIONS COMPARING MAXIMUM TO 50-YEAR FLOODS

Maximum known flood stages and discharges in Texas are tabulated, together with other station data, in tables of peak stages and discharges. These data are summarized for regular gaging stations in Table A1 and for miscellaneous sites and short-term gaging stations in Table A2. Graphical comparisons of maximum known discharges and corresponding floods having recurrence intervals of 50 years, in each combination of flood-frequency region and hydrologic area portrayed on Plates 1 and 2, are shown in Figures A1 through A7.

Table A1.--Maximum floods at gaging stations in Texas

No.	Gaging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station $Q_{2.33}$ (cfs)	Areal $Q_{2.33}$ (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Arkansas River basin									
1	Canadian River at Logan, N. Mex.	-	a10,031	1904-60	35,000	35,000	Sept.30, 1904	36.5	278,000	*1.52
2	Unnamed tributary (watershed W-1) of Middle Alamosa Creek near Vega, Tex.	C2	.202	1938-43	-	-	Apr. 5, 1939	-	258	-
3	Unnamed tributary (watershed W-2) of Middle Alamosa Creek near Vega, Tex.	C2	.150	1938-43	-	-	May 30, 1938	-	141	-
4	Canadian River near Amarillo, Tex.	-	a15,376	1914-60 1924-25, 1938-60	37,100	37,100	May 1914 June 25, 1941	24.0 15.70	- 135,000	- 36
5	Canadian River near Canadian, Tex.	-	a18,178	1904-60 1938-60	39,000	39,000	Oct. 2, 1904 Sept.23, 1941	20.6 9.80	- 122,000	- 25
6	Canadian River at Bridgeport, Okla.	-	a20,428	1914-60 1945-60	36,700	36,700	May 3, 1914 June 23, 1948	19.4 14.60	- 150,000	- *1.03
7	Palo Duro Creek near Spearman, Tex.	C2	a440	1936-60	3,400	4,000	Sept. 4, 1938	22.5	34,000	*1.60
8	Wolf Creek at Lipscomb, Tex.	C2	a475	1938-44	5,700	4,200	Oct. 21, 1941	5.80	20,000	36
	Red River basin									
9	Tierra Blanca Creek near Umbarger, Tex.	C2	a575	1937-54	2,700	4,750	June 6, 1941	-	11,300	8.0
10	Prairie Dog Town Fork Red River near Canyon, Tex.	C2	a711	1904-51	-	5,400	May 16, 1951	20.31	15,200	11
11	North Tule Draw at reservoir near Tulia, Tex.	B7	a65	1941-60	1,290	1,140	May 15, 1951	-	5,430	24
12	Prairie Dog Town Fork Red River near Brice, Tex.	B7	a1,581	1906-51 1939-44, 1950-51,1960	19,800	17,500	1933 June 7, 1960	b14.8 12.20	- 49,000	- 24
13	Prairie Dog Town Fork Red River near Estelline, Tex.	B7	a2,524	1908-47 1924-25, 1938-47	21,500	26,100	May 1908 June 9, 1941	14 8.86	- 56,000	- 10
14	Salt Fork Red River near Wellington, Tex.	B7	a1,013	1938-60	-	13,000	May 16, 1957	19.00	146,000	*3.24
15	Salt Fork Red River at Mangum, Okla.	B7	a1,357	1938-60	17,500	16,000	June 16, 1938 May 16, 1957	14.7 -	- 72,000	- *1.31
16	Quitaque Creek near Quitaque, Tex.	B7	a35	1946-60	1,070	1,030	June 28, 1955 Aug. 4, 1957	8.62 -	- 6,060	- *1.48
17	Pease River near Crowell, Tex.	B7	a2,478	1891-47 1924-47	39,100	25,500	June 4, 1891 June 6, 1941	19.6 11.88	- 106,000	- *1.28
18	Wichita River at Wichita Falls, Tex.	-	3,140	1900-60	-	-	June 8, 1915	-	50,000	-
19	Little Wichita River near Archer City, Tex.	C2	481	1930-56 1932-56	3,500	4,240	June 1930 Oct. 31, 1941	28 26.18	- 17,900	- 26
20	Little Wichita River near Henrietta, Tex.	C2	1,037	1908-60 1953-60	-	7,000	1908 May 2, 1957	21 18.36	- 6,390	- 2.1
21	Red River near Terral, Okla.	-	a22,787	1891-1960	58,000	58,000	June 8, 1941	28.12	197,000	*1.06
22	Red River near Gainesville, Tex.	-	a24,846	1936-60	73,000	73,000	June 9, 1941 May 21, 1951	- 26.53	168,000 -	27 -
23	Red River near Colbert, Okla.	-	a33,841	1837-1960 1924-60	103,000	103,000	May 26, 1908 May 21, 1935	45.5 31.8	- 201,000	- 20
24	Red River at Arthur City, Tex.	-	a38,595	1891-1960	116,000	116,000	May 28, 1908	43.2	400,000	*1.60
25	Red River at Index, Ark.	-	a42,494	1916-60	129,000	129,000	Feb. 23, 1938	34.25	297,000	*1.10
26	South Sulphur River near Cooper, Tex.	A8	527	1943-60	10,900	12,600	Apr. 29, 1953	23.00	23,800	9.3
27	North Sulphur River near Cooper, Tex.	-	276	1915-60 1950-60	-	-	May 2, 1944 Apr. 29, 1953	26.6 25.86	- 42,800	- -
28	Whiteoak Creek near Talco, Tex.	A8	494	1870-1960 1950-60	-	11,800	Mar. 31, 1945 Apr. 28, 1958	25.3 19.52	- 26,000	- 15
29	Whiteoak Creek below Talco, Tex.	A8	579	1870-1950	17,000	13,200	Mar. 31, 1945	24.1	83,100	*2.05
30	Sulphur River near Darden, Tex.	A8	2,774	1865-1954	38,000	42,500	Apr. 1, 1945	37.56	157,000	*1.19
31	Cypress Creek near Pittsburg, Tex.	C8	366	1910-60	9,000	9,600	Mar. 30, 1945	27.32	58,500	*1.15
32	Boggy Creek near Daingerfield, Tex.	C8	72	1900-60	2,900	2,880	Apr. 27, 1958	17.80	28,900	*1.89
33	Cypress Creek near Jefferson, Tex.	C	850	1913-60	9,500	9,500	Apr. 1, 1945	28.78	57,100	*1.13
34	Kelly Bayou near Hosston, La.	A2	116	1945-60	1,470	1,670	Apr. 28, 1958	e22.72	4,460	30
35	Black Bayou near Gilliam, La.	A2	364	1943-59	3,500	3,520	Apr. 29, 1958	27.50	17,700	*1.67
36	Twelvemile Bayou near Dixie, La.	A	3,137	1943-60	12,800	12,600	May 5, 1958	35.65	38,400	50
	Sabine River basin									
37	Sabine River near Emory, Tex.	C1	888	1900-60 1953-60	-	13,800	June 1943 Apr. 27, 1957	25.7 25.06	- 74,000	- 50
38	Sabine River near Mineola, Tex.	C1	1,357	1890-1959	18,000	18,100	June 8, 1943	24.37	64,100	17
39	Lake Fork Sabine River near Quitman, Tex.	C1	585	1890-1960	12,200	10,300	Mar. 30, 1945	29.85	75,600	*1.38
40	Big Sandy Creek near Big Sandy, Tex.	C1	231	1875-1960	4,250	5,600	Mar. 31, 1945	d24.1	24,000	27
41	Sabine River near Gladewater, Tex.	-	2,791	1892-1960	18,500	20,400	Apr. 2, 1945	44.16	138,000	*1.53
42	Sabine River near Longview, Tex.	-	2,947	1905-6, 1924-32	-	21,200	May 22,23,1930	31.90	21,500	2.4
43	Cherokee Bayou near Elderville, Tex.	C1	120	1884-1948 1940-48	4,000	3,600	September 1913 Nov. 23, 1940	13.8 12.81	- 10,200	- 11
44	Sabine River near Tatum, Tex.	-	3,493	1884-1960	26,500	25,000	Apr. 4, 1945	33.80	125,000	*1.30
45	Sabine River at Logansport, La.	-	4,839	1884-1960	24,500	25,000	Apr. 8, 1945	44.07	92,000	*1.18
46	Tenaha Creek near Shelbyville, Tex.	C1	97.8	1884-1960 1952-60	-	3,100	Nov. 23, 1940 Mar. 11, 1953	15 13.85	- 15,200	- 40
47	Bayou San Patricio near Noble, La.	C1	154	1952-60	4,200	4,200	Sept.21, 1958	16.04	15,400	19
48	Bayou San Miguel near Zwolle, La.	C1	111	1949-60	4,000	3,400	June 3, 1950	15.75	15,000	30
49	Sabine River near Milam, Tex.	-	6,508	1884-1960	26,000	25,000	Apr. 12, 1945	48.87	83,400	30
50	Palo Gaucho Bayou near Hemphill, Tex.	C1	123	1907-60	-	3,600	July 1933 Apr. 29, 1953	26.6 22.50	- 17,000	- 36
51	Sabine River below Toledo Bend, near Burkeville, Tex.	-	7,482	1860-1960 1956-60	-	31,000	May 1884 May 15, 1957	35.9 32.43	- 52,900	- 5.7
52	Sabine River near Bon Wier, Tex.	-	8,229	1833-1960 1924-60	35,200	36,000	Apr. 23, 1913 May 19, 1953	30.5 25.70	- 115,000	- 50
53	Big Cow Creek near Newton, Tex.	C1	128	1907-60 1952-60	-	3,720	April 1922 Apr. 29, 1953	27.5 19.45	- 20,200	- *1.03
54	Cypress Creek near Buna, Tex.	A1	69.2	1952-60	-	2,470	Apr. 13, 1955	11.95	3,800	5.3
55	Sabine River near Ruliff, Tex.	-	9,329	1835-1960 1885-1960	46,000	44,200	May or June 1884 May 22, 1953	d22.2 19.98	- 121,000	- 45
56	Cow Bayou near Mauriceville, Tex.	A1	83.3	1940-60	-	2,800	Sept.23, 1958	16.71	4,300	5.4

See footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station $Q_{2.33}$ (cfs)	Areal $Q_{2.33}$ (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Neches River basin									
57	Unnamed tributary (watershed 3) near Tyler, Tex.	C1	0.0124	1933-41	-	-	May 9, 1936	-	8.1	-
58	Unnamed tributary (watershed 4) near Tyler, Tex.	C1	.0095	1931-35, 1937-41	-	-	July 11, 1941	-	32	-
59	Unnamed tributary (watershed 5) near Tyler, Tex.	C1	.0025	1933-41	-	-	May 8, 1936	-	11	-
60	Neches River near Neches, Tex.	-	1,145	1884-1960	8,000	9,200	May 1908	24.3	65,000	*1.58
61	Neches River near Alto, Tex.	-	1,945	1861-1960	9,200	11,000	May 1884	28.2	50,000	*1.08
62	Neches River near Diboll, Tex.	-	2,714	1874-1960	12,600	13,200	May 1884	21	110,000	*2.11
63	Neches River near Rockland, Tex.	-	3,637	1884-1960	14,800	16,400	May 1884	34.9	62,000	*1.03
64	Striker Creek near Summerfield, Tex.	C1	146	1908-49	4,200	4,100	Nov. 24, 1940	17.23	10,800	9.5
65	Mud Creek near Jacksonville, Tex.	C1	376	1885-1960	6,000	7,700	May 1908, December 1913	20	-	-
66	Angelina River near Lufkin, Tex.	-	1,600	1939-60 1884-1960 1924-34, 1940-60	10,700	10,200	May 3, 1944 May 1884 Feb. 24, 1932	14.09 26.5 16.26	23,400 - 38,200	12 - 30
67	Attoyac Bayou near Chireno, Tex.	C1	503	1865-1960	8,700	9,300	June 29, 1902	29.9	50,000	*1.01
68	Angelina River near Zavalla, Tex.	-	2,892	1883-1960 1952-60	-	13,800	June 1902 May 18, 1953	29.4 27.72	- 37,300	- 12
69	Angelina River at Horger, Tex.	-	3,510	1886-1960	17,600	16,000	August 1915	39.5	82,000	*1.39
70	Neches River at Town Bluff, Tex.	-	7,573	1884-1960	-	30,000	May 1884	86.8	120,000	*1.16
71	Neches River at Evadale, Tex.	-	7,952	1884-1960	31,000	31,000	May 1884	d26.2	125,000	*1.17
72	Village Creek near Kountze, Tex.	C1	861	1884-1960 1924-27, 1939-60	11,000	13,200	August 1915 Nov. 26, 1940	34 27.6	- 67,200	- 44
	Taylor Bayou basin									
73	Taylor Bayou near La Belle, Tex.	A1	267	1941-60 1952-60	-	6,100	1941 Feb. 4, 1952 Sept.23, 1958	11.3 - 9.93	- 7,600 -	- 3.3 -
74	Hillebrandt Bayou near Lovell Lake, Tex.	A1	132	1952-60 1954-60	-	3,800	February 1952 Sept.21, 1958	10.25 10.09	- 8,280	- 14
	Trinity River basin									
75	North Creek near Jacksboro, Tex.	C2	21.6	1915-60	-	-	Apr. 28, 1957	24.45	6,990	-
76	West Fork Trinity River near Jacksboro, Tex.	C2	683	1900-60	-	5,300	Apr. 27, 1957	32.10	35,100	*1.25
77	West Fork Trinity River at Bridgeport, Tex.	C2	1,147	1908-34	8,000	7,500	June 8, 1915	28.9	20,000	9.7
78	Big Sandy Creek near Bridgeport, Tex.	C3	332	1887-1960	4,000	8,600	June 10, 1941	e15.69	53,000	*1.16
79	West Fork Trinity River near Boyd, Tex.	-	1,729	1880-1960 1947-60	-	-	May 1908 Oct. 5, 1959	25 22.17	- 27,300	- -
80	West Fork Trinity River at Lake Worth Dam, above Fort Worth, Tex.	-	2,069	1922-34, 1949	-	-	Apr.28,29, 1923	5.62	-	-
81	Clear Fork Trinity River near Aledo, Tex.	C3	246	1858-1960 1948-60	5,000	6,900	April 1922 May 25, 1957	34 29.00	- 34,000	- 40
82	Clear Fork Trinity River near Benbrook, Tex.	C3	435	1922-60	-	10,400	May 17, 1949	28.72	82,900	*1.50
83	Clear Fork Trinity River at Fort Worth, Tex.	C3	526	1900-60	12,400	12,000	May 17, 1949	28.20	107,000	*1.68
84	West Fork Trinity River at Fort Worth, Tex.	-	2,627	1867-1960 1921-60	13,000	13,000	May 17, 1949 Apr. 25, 1922	f25.91 -	- 85,000	- *1.09
85	Marine Creek at Fort Worth, Tex.	C3	16.8	1907-60	2,500	1,800	Apr. 20, 1942	16.1	24,400	*2.57
86	Village Creek near Handley, Tex.	C3	126	1922-30 1925-30	-	4,400	April 1922 Dec. 17, 1928	28 17.90	- 16,500	- 19
87	West Fork Trinity River at Grand Prairie, Tex.	-	3,070	1900-59 1925-59	-	14,000	May 1908 May 17, 1949	30.6 g28.00	- 62,000	- 24
88	Mountain Creek near Grand Prairie, Tex.	C3	273	1922-33 1925-33	6,000	7,500	April 1922 Dec. 17, 1928	25 21.40	- 35,900	- 37
89	Elm Fork Trinity River near Sanger, Tex.	C3	379	1903-60 1949-60	9,000	9,500	May 1908 May 2, 1958	30.7 29.10	- 27,500	- 11
90	Isle du Bois Creek near Pilot Point, Tex.	C3	262	1900-60	6,100	7,200	May 1908 Apr. 26, 1957	d30.4 d28.2	- 22,700	- 13
91	Clear Creek near Sanger, Tex.	C3	296	1880-1960 1949-60	8,000	8,000	May 1908 Sept.13, 1950	31.5 24.80	- 18,200	- 7.2
92	Elm Fork Trinity River near Lewisville, Tex.	-	1,671	1907-60 1949-60	-	-	May 1908 Sept.15, 1950	33.8 30.75	- 21,700	- -
93	Denton Creek near Justin, Tex.	C3	409	1908-60 1950-60	-	10,000	May 1908 May 24, 1957	21.6 17.64	- 29,800	- 12
94	Denton Creek near Roanoke, Tex.	C3	621	1908-55 1924-55	14,000	13,700	May 1908 Apr. 20, 1942	31 30.2	- 49,700	- 18
95	Denton Creek near Grapevine, Tex.	C3	704	1924-60 1948-60	-	15,000	April 1942 Feb. 26, 1948	35.9 30.28	- 13,900	- 2.1
96	Elm Fork Trinity River near Carrollton, Tex.	C3	2,457	1866-1960	-	-	1866, May 25, 1908 Apr. 26, 1942	d17 g21.05	- 90,700	- -
97	Turtle Creek at Dallas, Tex.	C3	7.98	1924-60 1903-60	2,430	-	Oct. 1, 1959	8.10	4,650	-
98	Trinity River at Dallas, Tex.	-	6,120	1840-1960	25,100	25,100	May 25, 1908	52.6	184,000	*1.33
99	Honey Creek subwatershed No. 11 near McKinney, Tex.	C3	2.14	1953-60	-	-	May 1, 1958	-	1,860	-
100	Honey Creek subwatershed No. 12 near McKinney, Tex.	C3	1.26	1953-60	-	-	May 21, 1957	-	1,490	-
101	Honey Creek near McKinney, Tex.	-	39.0	1930-60 1951-60	-	-	June 1950 May 26, 1957	23.0 20.29	- 7,920	- -
102	East Fork Trinity River near McKinney, Tex.	C3	188	1913-60	-	-	April 1942	21	-	-
103	Sister Grove Creek near Princeton, Tex.	C3	115	1865-1960	3,400	4,200	July 1913 Apr. 26, 1957	22 16.28	- 9,080	- 6.6

See footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station $Q_{2.33}$ (cfs)	Areal $Q_{2.33}$ (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Trinity River basin--Continued									
104	East Fork Trinity River near Lavon, Tex...	-	799	1894-1960	-	-	1913, April 1942	22.3	-	-
				1949-60			May 26,27,1957	17.34	39,000	-
105	East Fork Trinity River near Rockwall, Tex.	C3	840	1920-60	24,000	17,000	Apr. 20, 1942	f24.82	h46,000	10
106	Unnamed tributary (watershed WI) near Garland, Tex.	C3	.0391	1939-46	-	-	May 29, 1946	-	51	-
107	Unnamed tributary (watershed WIII) near Garland, Tex.	C3	.0162	1939-46	-	-	May 29, 1946	-	45	-
108	Unnamed tributary (watershed WIV) near Garland, Tex.	C3	.0253	1939-42, 1944-46	-	-	May 29, 1946	-	121	-
109	East Fork Trinity River near Crandall, Tex.	-	1,257	1949-60	-	-	May 28, 1957	22.81	33,000	-
110	Trinity River near Rosser, Tex.....	-	8,162	1908-60	-	29,500	Apr. 23, 1942	141.55	j133,000	38
111	Trinity River at Trinidad, Tex.....	-	8,566	1908-60	-	30,300	Apr. 25, 1942	g49.8	-	-
112	Cedar Creek near Mabank, Tex.....	A3	734	1889-1960	22,000	15,300	May 30, 1945	25.43	44,800	46
113	Richland Creek near Richland, Tex.....	A4	737	1899-1960	28,000	21,700	December 1913	25.5	-	-
				1939-60			May 12, 1948	24.16	58,900	32
114	Chambers Creek near Corsicana, Tex.....	A3	971	1870-1960	19,500	18,900	Aug. 27, 1887	30	-	-
				1939-60			May 3, 1944	-	48,000	25
							May 3, 1958	28.10	-	-
115	Trinity River near Oakwood, Tex.....	-	12,912	1890-1960	45,000	44,000	May 1890	53	180,000	*1.07
116	Trinity River near Midway, Tex.....	-	14,484	1866-1960	44,000	44,000	May 1, 1942	48.58	k146,000	25
117	Trinity River at Riverside, Tex.....	-	15,619	1866-1960	43,000	44,000	May 5, 1942	52.75	121,000	19
118	Trinity River at Romayor, Tex.....	-	17,192	1908-60	46,000	44,000	May 9, 1942	g15.7	111,000	25
119	Trinity River at Liberty, Tex.....	-	17,539	1903-60	42,500	44,000	May 12, 1942	29.38	114,000	31
	San Jacinto River basin									
120	West Fork San Jacinto River near Conroe, Tex.	D1	809	1913-60	13,000	12,800	Nov. 25, 1940	25.85	110,000	*1.21
121	Spring Creek near Spring, Tex.....	D1	409	1879-1960	6,200	8,200	May 30, 1929	29.3	48,300	31
122	Cypress Creek near Westfield, Tex.....	D1	285	1875-1960	5,000	6,400	May 1929	22	26,000	14
123	West Fork San Jacinto River near Humble, Tex.	D1	1,741	1865-1954	17,000	21,400	May 31, 1929, Nov. 26, 1940	32.7	187,000	*1.23
124	East Fork San Jacinto River near Cleveland, Tex.	D1	325	1900-60	10,000	6,800	Nov. 24, 1940	g20.37	59,000	*1.22
125	Caney Creek near Splendora, Tex.....	D1	105	1885-1960	2,500	3,250	November 1940	22.0	-	-
				1944-60			Apr. 1, 1945	18.19	14,900	18
126	Peach Creek at Splendora, Tex.....	D1	117	1895-1960	3,800	3,500	Oct. 8, 1949	17.73	28,500	*1.15
127	San Jacinto River near Huffman, Tex.....	D1	2,800	1876-1953	30,000	29,600	Nov. 26, 1940	51.2	253,000	*1.20
128	Buffalo Bayou near Addicks, Tex.....	A1	293	1898-1960	-	6,500	December 1935	65.6	-	-
				1945-60			Aug. 29, 1945	51.23	11,200	7.2
129	Buffalo Bayou at Houston, Tex.....	A1	359	1835-1960	6,400	7,400	Dec. 9, 1935	54.4	40,000	*1.80
130	Whiteoak Bayou at Houston, Tex.....	A1	84.7	1919-60	3,200	2,800	Dec. 9, 1935	51.5	14,750	*1.76
131	Brays Bayou at Houston, Tex.....	A1	88.4	1911-60	4,600	2,920	June 1918	56.0	-	-
				1936-60			June 26, 1960	49.72	12,600	*1.44
132	Sims Bayou at Houston, Tex.....	A1	64.0	1953-60	-	2,320	June 26, 1960	29.76	8,030	*1.15
133	Greens Bayou near Houston, Tex.....	A1	72.7	1953-60	-	2,530	July 30, 1954	64.75	7,000	35
134	Halls Bayou at Houston, Tex.....	A1	24.7	1953-60	-	1,230	May 18, 1953	-	2,410	10
							July 30, 1954	60.65	-	-
	Clear Creek basin									
135	Clear Creek near Pearland, Tex.....	A1	38.4	1932-44, 1946-60	1,400	1,650	February 1932	g17.8	-	-
				1946-60			Mar. 18, 1957	-	2,170	3.7
	Chocolate Bayou basin									
136	Chocolate Bayou near Alvin, Tex.....	A1	88.1	1939-60	3,600	2,900	July 14, 1939	19.9	-	-
				1946-60			Oct. 8, 1949	g18.80	7,400	25
	Oyster Creek basin									
137	Oyster Creek near Angleton, Tex.....	A1	-	1900-60	-	-	December 1913	32	-	-
				1945-60			May 10, 1957	31.25	10,600	-
	Brazos River basin									
138	Double Mountain Fork Brazos River at Lubbock, Tex.	C2	-	1936-60	83	-	May 7, 1949	7.43	3,150	-
139	Double Mountain Fork Brazos River near Aspermont, Tex.	C6	a1,510	1899-1960	21,400	12,000	Sept.26, 1955	27.50	91,400	*1.44
140	White River at Plainview, Tex.....	C2	-	1880-1960	96	-	June 6, 1941	-	12,000	-
							July 8, 1960	9.38	-	-
141	Unnamed tributary (watershed 1) near Spur, Tex.	C6	.0180	1927-35, 1937-41, 1943-45	5.4	-	Sept. 8, 1929	-	14	-
142	Unnamed tributary (watershed 2) near Spur, Tex.	C6	.0147	1927-31, 1933-41, 1943-45	5.1	-	Sept.20, 1936	-	13	-
143	Unnamed tributary (watershed 3) near Spur, Tex.	C6	.0183	1927-33, 1935-44	3.9	-	Sept.20, 1936	-	13	-
144	Unnamed tributary (watershed 5) near Spur, Tex.	C6	.0091	1927-44	4.5	-	Sept. 9, 1929	-	12	-
145	Unnamed tributary (watershed 6) near Spur, Tex.	C6	.0083	1927-45	2.9	-	July 22, 1938	-	8.0	-
146	Unnamed tributary (watershed 11) near Spur, Tex.	C6	.0136	1931-45	2.2	-	Sept.20, 1936	-	7.2	-
147	Unnamed tributary (watershed 12) near Spur, Tex.	C6	.0131	1930-33, 1936,1938-43	2.8	-	July 3, 1943	-	2.7	-
148	Unnamed tributary (watershed 14) near Spur, Tex.	C6	.0133	1930-33, 1935-43	-	-	Sept.20, 1936	-	10	-

See footnote at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Caging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station Q2.33 (cfs)	Areal Q2.33 (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Brazos River basin--Continued									
149	Unnamed tributary (watershed 15) near Spur, Tex.	C6	0.0133	1930,1931, 1933,1936-44	-	-	Sept.20, 1936	-	5.2	-
150	Salt Fork Brazos River near Aspermont, Tex.	C6	a2,060	1900-60	20,100	14,500	Sept.25, 1955	14.92	52,200	18
151	Brazos River at Seymour, Tex.	-	a5,250	1906-60	33,200	33,200	1906,	21.00	-	-
							Sept.28, 1955			
				1924-60			Oct. 16, 1926	-	95,400	40
152	Clear Fork Brazos River at Nugent, Tex.	C2	2,220	1876-1960	9,480	11,400	1876	30.0	-	-
				1923-60			Sept. 8, 1932	27.05	47,000	25
153	Clear Fork Brazos River at Fort Griffin, Tex.	-	3,974	1876-1960	7,800	7,800	September 1900	38.0	-	-
				1924-60			Sept.10, 1932	35.09	33,600	34
154	Clear Fork Brazos River at Crystal Falls, Tex.	-	4,323	1900-47	-	8,600	1900	26	-	-
155	Hubbard Creek near Breckenridge, Tex.	C6	1,087	1925-60	-	9,600	July 20, 1953	34.2	-	-
				1955-60			May 26, 1957	34.00	34,500	18
156	Clear Fork Brazos River near Crystal Falls, Tex.	-	5,658	1877-1951	12,300	12,300	September 1900	d34	-	-
				1916-51			June 11, 1941	33.45	35,800	40
157	Brazos River near South Bend, Tex.	-	a12,360	1876-1960	-	37,500	1876	36.2	-	-
				1939-60			May 4, 1941	-	87,400	27
							Apr. 29, 1957	32.70	-	-
158	Brazos River near Palo Pinto, Tex.	-	a13,520	1876-1960	39,500	38,200	1876	-	-	-
				1924-60			June 16, 1930	g28.43	95,600	41
159	Palo Pinto Creek near Santo, Tex.	C3	567	1880-1960	15,400	12,700	May 26, 1957	31.05	45,100	17
160	Brazos River near Glen Rose, Tex.	-	a15,590	1924-60	38,000	40,000	May 18, 1935	g23.68	97,600	27
161	Paluxy Creek at Glen Rose, Tex.	C4	399	1877-1960	18,000	13,800	Apr. 17, 1908	27.2	59,000	28
162	Nolands River at Blum, Tex.	C4	276	1887-1960	11,100	10,500	May 8, 1922	d35.0	-	-
				1925,1947-60			May 17, 1949	g25.0	25,000	8
163	Brazos River near Whitney, Tex.	-	a16,950	1853-1960	-	46,500	May 9, 1922	d45	-	-
				1939-60			May 18, 1949	31.03	71,800	5.7
164	Aquilla Creek near Aquilla, Tex.	C4	309	1887-1960	8,800	11,400	Aug. 31, 1887	34	-	-
				1888-1960			Sept.27, 1936	33	74,200	*1.23
165	Green Creek subwatershed No. 1 near Dublin, Tex.	C4	3.18	1955-60	-	-	Apr. 30, 1956	-	9,910	-
166	Green Creek near Alexander, Tex.	C4	45.5	1910-60	-	-	May 23, 1952	28.0	55,800	-
167	North Bosque River near Clifton, Tex.	C4	971	1854-1960	24,100	26,300	Oct. 4, 1959	34.88	92,800	17
168	South Bosque River near Speegleville, Tex.	C4	388	1900-30	-	13,500	1900	31.5	-	-
				1924-30			June 14, 1927	29.37	54,500	24
169	Brazos River at Waco, Tex.	-	a19,260	1847-1960	64,000	64,000	Sept.27, 1936	40.9	246,000	*1.35
170	Watershed SW16 near Riesel, Tex.	C6	.0050	1938-43	-	-	Oct. 31, 1940	-	19	-
171	Cow Bayou at Mooreville, Tex.	C6	79.6	1900-60	-	1,780	May 1, 1944	31	-	-
				1955,1956, 1958-60			Oct. 4, 1959	23.86	7,960	30
172	Brazos River near Marlin, Tex.	-	a19,910	1913	-	65,000	Dec. 3, 1913	35.85	-	-
				1939-51			May 3, 1944	33.3	132,000	16
173	Watershed A near Riesel, Tex.	C6	.0656	1939-43	-	-	May 4, 1941	-	69	-
174	Watershed C near Riesel, Tex.	C6	.905	1939-43, 1949-60	295	-	Apr. 19, 1957	-	776	-
175	Watershed D near Riesel, Tex.	C6	1.73	1938-43, 1949-60	500	-	Apr. 19, 1957	-	1,150	-
176	Watershed SW14 near Riesel, Tex.	C6	.0047	1939-43	-	-	July 3, 1940	-	14	-
177	Brushy Creek watershed SW12 near Riesel, Tex.	C6	.0046	1938-43, 1948-60	-	-	June 10, 1941, Apr. 19, 1957	-	10	-
178	Watershed Y10 near Riesel, Tex.	C6	.0291	1939-43, 1946-60	21	-	June 10, 1941	-	73	-
179	Watershed Y6 near Riesel, Tex.	C6	.0255	1939-43, 1948-60	16	-	June 10, 1941	-	60	-
180	Watershed Y4 near Riesel, Tex.	C6	.125	1939-43, 1946-60	66	-	June 10, 1941	-	251	-
181	Watershed Y8 near Riesel, Tex.	C6	.0325	1939-43, 1949-60	20	-	June 10, 1941	-	69	-
182	Watershed Y2 near Riesel, Tex.	C6	.206	1939-60	120	-	May 1, 1944	-	542	-
183	Watershed Y7 near Riesel, Tex.	C6	.0625	1939-43, 1948-60	55	-	June 10, 1941	-	145	-
184	Watershed SW7 near Riesel, Tex.	C6	.0049	1939-43	-	-	Sept. 8, 1942	-	18	-
185	Watershed SW13 near Riesel, Tex.	C6	.0050	1939-43	-	-	Oct. 31, 1940	-	22	-
186	Watershed Y near Riesel, Tex.	C6	.483	1938-43, 1946-60	220	-	Apr. 19, 1957	-	791	-
187	Watershed G near Riesel, Tex.	C6	6.84	1938-43, 1958-60	850	-	Nov. 22, 1940	-	1,850	-
188	Watershed Z near Riesel, Tex.	C6	.484	1939-43	-	-	June 10, 1941	-	481	-
189	Watershed V near Riesel, Tex.	C6	9.16	1939-43	-	-	Nov. 22, 1940	-	1,650	-
190	Watershed SW18 near Riesel, Tex.	C6	.0048	1939-43	-	-	Oct. 31, 1940	-	23	-
191	Watershed SW11 near Riesel, Tex.	C6	.0050	1939-43	-	-	Oct. 31, 1940	-	22	-
192	Watershed SW17 near Riesel, Tex.	C6	.0047	1939-43, 1948-60	6.3	-	Oct. 31, 1940	-	21	-
193	Watershed SW5 near Riesel, Tex.	C6	.0048	1939-43	-	-	Oct. 31, 1940	-	20	-
194	Watershed W1 near Riesel, Tex.	C6	.275	1938-60	280	-	May 1, 1944	-	800	-
195	Watershed SW3 near Riesel, Tex.	C6	.0048	1939-43	-	-	June 10, 1941	-	15	-
196	Watershed W6 near Riesel, Tex.	C6	.0661	1939-43, 1946-60	63	-	June 10, 1941	-	170	-
197	Watershed SW2 near Riesel, Tex.	C6	.0042	1939-43	-	-	June 10, 1941	-	15	-
198	Watershed W10 near Riesel, Tex.	C6	.0308	1939-43, 1946-60	40	-	June 10, 1941	-	100	-
199	Watershed W2 near Riesel, Tex.	C6	.203	1938-60	150	-	May 1, 1944	-	633	-
200	Watershed SW6 near Riesel, Tex.	C6	.0048	1939-43	-	-	June 10, 1941	-	18	-
201	Leon River near Hasse, Tex.	C6	1,242	1858-1960	13,000	10,400	May 1908	27	-	-
				1939-60			May 24, 1952	-	38,500	19
							Oct. 4, 1959	21.7	-	-
202	Leon River near Hamilton, Tex.	C6	1,861	1858-1960	-	13,500	May 1906, December 1913	33.4	-	-
				1925-31			May 22, 1931	20.00	5,680	1.3
203	Leon River at Gatesville, Tex.	C6	2,279	1854-1960	-	15,400	May 1908	35	70,000	32

See footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station Q2.33 (cfs)	Areal Q2.33 (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Brazos River basin--Continued									
204	Cowhouse Creek at Pidcoke, Tex.	C5	475	1882-1960	12,800	11,800	Oct. 4, 1959	40.1	66,200	*1.06
205	Cowhouse Creek near Killeen, Tex.	C5	650	1890-1942	-	14,300	1900	34.0	-	-
				1925,1939-41			Nov. 23, 1940	23.94	26,200	5.0
206	Leon River near Belton, Tex.	C6	3,513	1913-60	18,500	20,600	December 1913	25	-	-
				1923-60			Apr. 22, 1945	24.41	56,500	10
207	Lampasas River at Youngsport, Tex.	C5	1,242	1873-1960	19,800	21,600	Sept. 8, 1873	44.2	-	-
				1925-60			May 13, 1957	36.4	84,000	21
208	Little River near Little River, Tex.	C6	5,253	1921	-	26,800	September 1921	50.85	-	-
				1924-29			Oct. 2, 1927	43.3	28,400	2.5
209	San Gabriel River at Georgetown, Tex.	D5	415	1852-1960	16,000	10,700	Sept.10, 1921	d36.1	160,000	*2.11
210	San Gabriel River at Circleville, Tex.	D5	602	1869-1957	-	13,800	Sept.10, 1921	41	-	-
				1925-34			Mar. 29, 1929	34.20	53,400	13
211	Little River at Cameron, Tex.	C6	7,000	1852-1960	33,000	32,000	Sept.10, 1921	d53.2	647,000	*3.81
212	Brazos River at Valley Junction, Tex.	-	a27,778	1905-60	-	-	Dec. 4, 1913	59.0	-	-
213	Brazos River near Bryan, Tex.	-	a29,160	1854-1960	80,000	80,000	Sept.12, 1921	54.0	-	-
				1931-60			May 4, 1944	43.20	172,000	12
214	Yegua Creek near Somerville, Tex.	C1	990	1875-1960	10,000	14,800	Dec. 5, 1913	d22	-	-
				1925-60			July 1, 1940	19.27	56,800	21
215	Navasota River near Easterly, Tex.	C1	949	1845-1960	15,000	14,300	June 1899	d24	90,000	*1.19
216	Navasota River near Bryan, Tex.	C1	1,439	1840-1960	-	19,000	June 29, 1899	19.5	-	-
				1951-60			Apr. 26, 1957	16.36	35,800	5.2
217	Brazos River near Hempstead, Tex.	-	a33,400	1899-1960	-	70,000	Dec. 9, 1913	d56.1	-	-
				1939-60			May 2, 1957	44.21	143,000	34
218	Brazos River near San Felipe, Tex.	-	a34,420	1914-57	-	68,000	Dec. 9, 1913	49	-	-
				1939-57			Nov. 25, 1940	41.1	152,000	*1.15
219	Brazos River at Richmond, Tex.	-	a34,780	1852-1960	67,800	67,800	Dec. 10, 1913	d48.2	-	-
				1903-6, 1923-60			June 6, 1929	d40.6	123,000	44
220	Brazos River near Juliff, Tex.	-	a34,860	1884-1960	-	67,700	Dec. 11, 1913	64.0	-	-
				1949-60			May 6, 1957	59.17	116,000	40
221	Big Creek near Needville, Tex.	A1	37.6	1913-60	1,650	1,620	August 1945	14.4	-	-
							June 26, 1960	-	10,400	*2.14
222	Fairchild Creek near Needville, Tex.	A1	24.9	1910-59	1,150	1,230	Oct. 31, 1959	12.8	-	-
				1947-54			May 18, 1953	12.0	2,560	13
223	Dry Creek near Richmond, Tex.	A1	11.4	1945-60	-	-	August 1945, May 1953	d15.1	-	-
							Oct. 15, 1957	10.13	1,790	-
				1947-50, 1957,1958						
224	Brazos River at East Columbia, Tex.	-	a35,300	1899-1954	-	-	Dec. 11, 1913	35.3	-	-
	San Bernard River basin									
225	San Bernard River near Boling, Tex.	A1	720	1900-60	-	11,800	December 1913	43.5	-	-
				1954-60			June 28, 1960	42.41	21,200	8.0
	Colorado River basin									
226	Bull Creek near Ira, Tex.	-	a419	1913-60	-	-	Sept. 7, 1932	23.0	-	-
				1948-54, 1959,1960			Apr. 12, 1954	m21.1	22,400	-
227	Bluff Creek near Ira, Tex.	C6	42.6	1906-60	1,020	1,190	1939	(o)	-	-
				1940-60			July 5, 1948	16.22	5,200	29
228	Colorado River near Ira, Tex.	C6	a1,027	1913-60	-	9,300	June 16, 1913	32	-	-
				1948-60			July 6, 1948	21.35	20,500	6.6
229	Deep Creek near Dunn, Tex.	C6	188	1881-1960	-	3,100	July 19, 1939	-	n36,400	*2.22
230	Colorado River at Colorado City, Tex.	C6	a1,492	1910-60	-	11,700	June 20, 1939	35.9	66,000	*1.06
231	Morgan Creek near Westbrook, Tex.	C6	a218	1882-1960	-	3,400	April 1922	30	-	-
				1955-60			May 13, 1957	21.92	7,180	6.2
232	Graze Creek near Westbrook, Tex.	C6	21.1	1919-59	-	-	June 1939	19.0	-	-
				1954-59			May 12, 1957	12.77	1,800	-
233	Champlin Creek near Colorado City, Tex.	C1	194	1898-1959	3,800	4,900	July 7, 1945	18.5	-	-
				1948-59			Oct. 25, 1947	-	10,200	6.2
234	Colorado River at Robert Lee, Tex.	-	a4,170	1907-58	-	20,000	Oct. 13, 1957	26.7	-	-
				1924-27, 1936-56			Sept. 6, 1926	g20.2	32,500	6.7
235	Colorado River at Ballinger, Tex.	-	a5,240	1882-1960	21,400	21,400	1884	d36	-	-
				1908-60			Sept.18, 1936	28.6	75,400	39
236	Elm Creek at Ballinger, Tex.	C1	471	1904-60	9,050	9,000	August 1906	p14.5	-	-
							Oct. 13, 1957	-	50,000	*1.05
237	South Concho River at Christoval, Tex.	E1	a344	1882-1960	5,560	7,200	Aug. 6, 1906	23	115,000	*1.45
238	Middle Concho River near Tankersly, Tex.	C6	a1,444	1900-60	10,700	11,500	April 1922	27.2	-	-
				1930-60			Sept.26, 1946	24.30	27,500	8.0
239	Spring Creek near Tankersly, Tex.	D1	a641	1853-1960	11,100	11,000	August 1882	26	-	-
				1930-60			Oct. 31, 1959	24.00	82,100	*1.05
240	South Concho River at San Angelo, Tex.	D1	a2,688	1853-1957	-	28,800	Aug. 6, 1906	29.7	-	-
				1932-57			Sept.17, 1936	23.4	111,000	13
241	North Concho River at Sterling City, Tex.	C6	a539	1891-1960	4,800	6,100	July 6, 1948	23.70	16,300	9.7
242	North Concho River near Carlsbad, Tex.	D1	a1,144	1853-1960	16,000	16,200	Sept.26, 1936	16.0	94,600	30
243	North Concho River at San Angelo, Tex.	D1	a1,402	1916-60	-	18,800	Sept.17, 1936	34.6	184,000	*1.38
244	Concho River near San Angelo, Tex.	D6	a4,097	1853-1960	26,000	22,700	Aug. 6, 1906	47.5	246,000	*1.53
245	Concho River near Paint Rock, Tex.	D6	a5,132	1853-1960	24,000	26,000	Sept. 7, 1936	41.3	301,000	*1.63
246	Mukewater Creek at Trickham, Tex.	E6	70.0	1919-60	-	1,650	1927	18	-	-
				1952-60			May 1, 1956	15.83	15,000	32
247	Colorado River at Winchell, Tex.	-	a12,680	1882-1960	35,000	34,000	Sept.19, 1936	d62.2	-	-
				1924-34, 1939-60			Oct. 15, 1930	d51.8	76,100	7.4
248	Deep Creek subwatershed No. 3 near Placid, Tex.	E6	3.42	1954-60	-	-	May 18, 1955	-	1,800	-
249	Deep Creek near Mercury, Tex.	E6	43.9	1890-1960	-	1,210	July 23, 1938	21.3	33,800	*2.53
250	Deep Creek subwatershed No. 8 (Dry Prong Deep Creek) near Mercury, Tex.	E6	4.32	1952-60	-	-	May 17, 1955	-	2,550	-
251	Dry Prong Deep Creek near Mercury, Tex.	E6	8.31	1924-60	-	-	May 17, 1955	9.00	2,000	-

See Footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station $Q_{2.33}$ (cfs)	Areal $Q_{2.33}$ (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Colorado River basin--Continued									
252	Hords Creek near Valera, Tex.	E6	53	1900-60 1948-60	-	1,380	July 5, 1932 Apr. 30, 1956	q23.0 14.73	- 3,860	- 5.4
253	Hords Creek at Coleman, Tex.	E6	107	1941-60	-	2,180	Apr. 30, 1956	21.50	25,100	*1.05
254	Pecan Bayou at Brownwood, Tex.	-	1,614	1900-60 1918,1924-60	-	-	September 1900 Oct. 14, 1930	21.7 16.92	- 31,600	- -
255	San Saba River at Menard, Tex.	E6	1,151	1880-1960 1916-60	11,000	10,000	June 6, 1899 July 23, 1938	d23.3 d22.2	- 130,000	- *1.18
256	Brady Creek at Brady, Tex.	E6	575	1882-1960	6,100	6,400	July 23, 1938	29.1	86,000	*1.22
257	San Saba River at San Saba, Tex.	E6	3,042	1899-1960	15,200	18,800	July 23, 1938	g45.18	203,000	50
258	Colorado River near San Saba, Tex.	-	a18,700	1876-1960	32,000	34,000	July 23, 1938	62.24	224,000	*1.10
259	North Llano River near Junction, Tex.	D1	914	1875-1960	16,000	14,000	Sept.16, 1936	d29.2	94,800	44
260	Llano River near Junction, Tex.	D1	1,874	1889-1960	16,000	22,300	June 14, 1935	r41.4	319,000	*2.02
261	Llano River near Castell, Tex.	D1	3,747	1889-1939	-	36,000	June 14, 1935	37.0	388,000	*1.52
262	Llano River at Llano, Tex.	D1	4,233	1879-1960	34,000	39,200	June 14, 1935	41.5	380,000	*1.37
263	Pedernales River at Stonewall, Tex.	E5	647	1876-1960	14,400	14,300	Sept.11, 1952	28.4	170,000	*1.08
264	Pedernales River near Johnson City, Tex.	E5	947	1859-1960	22,000	16,200	Sept.11, 1952	42.5	441,000	*2.20
265	Pedernales River near Spicewood, Tex.	E5	1,294	1925-39,1952	-	22,100	Sept.11, 1952	-	452,000	*1.86
266	Waller Creek at 38th Street, Austin, Tex.	D5	2.31	1956-60	-	-	May 26, 1957	5.75	596	-
267	Waller Creek at 23d Street, Austin, Tex.	D5	4.13	1954-60 1955-60	-	-	Oct. 23, 1953 June 12, 1957	8.0 5.85	- 2,050	- -
268	Colorado River at Austin, Tex.	-	a26,500	1833-1960	56,500	56,500	July 7, 1869	d46.0	550,000	*1.16
269	Onion Creek near Del Valle, Tex.	E5	337	1921-30 1924-30	-	9,400	Sept. 9, 1921 May 28, 1929	33.6 24.75	- 76,000	- 27
270	Colorado River at Smithville, Tex.	-	a27,980	1869-1960 1913-60	-	-	Dec. 4, 1913 June 16, 1935	da47.4 42.5	- 305,000	- -
271	Dry Creek at Buescher Lake near Smithville, Tex.	D5	1.48	1940-60	500	-	June 30, 1940	-	1,870	-
272	Colorado River at La Grange, Tex.	-	a28,520	1869 1935-55	-	-	July 9, 1869 June 17, 1935	56.7 50.84	- 255,000	- -
273	Colorado River at Columbus, Tex.	-	a29,170	1852-1960 1916-60	-	-	July 1869, Dec. 6, 1913 June 15, 1935	d41.6 d38.5	- 190,000	- -
274	Colorado River at Wharton, Tex.	-	a29,480	1869-1960 1919-60	-	-	July 12, 1869, Dec. 8, 1913 June 20, 1935	d38.9 d38.2	- 159,000	- -
275	Colorado River near Bay City, Tex.	-	a29,750	1869-1960	-	-	Dec. 10, 1913	d56.1	-	-
	Lavaca River basin									
276	Lavaca River at Hallettsville, Tex.	D5	101	1840-1960	7,400	4,400	June 30, 1940	40.6	93,100	*2.98
277	Lavaca River near Edna, Tex.	C1	887	1880-1960	12,000	13,600	May 25, 1936	33.8	83,400	*1.16
278	Navidad River near Ganado, Tex.	C1	1,116	1876-1960	12,800	16,000	May 27, 1936	39.8	94,000	*1.11
	Guadalupe River basin									
279	Guadalupe River at Hunt, Tex.	E1	276	1900-49	-	6,200	July 2, 1932	36.6	-	-
280	Johnson Creek near Ingram, Tex.	E1	115	1852-1960	1,400	3,450	July 2, 1932	35	138,000	*3.83
281	Guadalupe River at Comfort, Tex.	E1	836	1848-1960	13,000	13,000	July 16, 1900, July 1, 1932	d38.4	182,000	*1.27
282	Guadalupe River near Spring Branch, Tex.	E	1,282	1859-1960 1922-60	11,000	12,400	July 1869 July 3, 1932	53 42.10	- 121,000	- 40
283	Guadalupe River above Comal River, at New Braunfels, Tex.	E	1,516	1845-1960 1928-60	11,700	11,900	June 8, 1869, December 1913 June 15, 1935	38.0 32.95	- 101,000	- 28
284	Comal River at New Braunfels, Tex.	-	117	1869-1960	-	-	Oct. 17, 1870	37.65	-	-
285	Guadalupe River at New Braunfels, Tex.	E	1,624	1915-28	-	11,900	Sept.10, 1921	28.60	56,600	10
286	Blanco River at Wimberly, Tex.	E5	364	1869-1960	9,600	9,900	May 28, 1929	31.1	113,000	*1.04
287	San Marcos River at Luling, Tex.	E1	833	1859-1960 1940-60	13,300	13,100	1869 or 1870 Sept.12, 1952	40.4 34.95	- 57,000	- 9.2
288	Plum Creek near Lockhart, Tex.	E1	184	1900-30 1925-30	-	4,750	Dec. 3, 1913 Apr. 21, 1926	26.8 22.6	- 26,000	- 13
289	Plum Creek near Luling, Tex.	E1	356	1868-1960	8,550	7,400	July 1, 1936	25.7	78,500	46
290	San Marcos River at Ottine, Tex.	E1	1,249	1870-1943 1946-63	16,500	17,200	December 1913 May 29, 1929	44.0 43.32	- 202,000	- *1.07
291	Guadalupe River at Gonzales, Tex.	E	3,453	1900-60	-	17,400	May 29, 1929	38.32	-	-
292	Sandies Creek near Westhoff, Tex.	D5	560	1864-1960	-	13,000	July 2, 1936	33.1	93,000	50
293	Guadalupe River below Cuero, Tex.	D	4,923	1903-6, 1917-36	-	18,100	May 30, 1929	35.20	101,000	28
294	Guadalupe River at Victoria, Tex.	D	5,161	1833-1960	17,500	17,500	July 3, 1936	31.22	179,000	*1.44
295	Coleto Creek near Schroeder, Tex.	D5	365	1872-1960 1930-33, 1955-60	11,200	10,000	Oct. 16, 1946 Apr. 28, 1957	29.1 21.0	- 39,000	- 13
296	Coleto Creek near Victoria, Tex.	D5	514	1875-1960	13,600	12,200	Oct. 16, 1946	31.64	89,000	*1.03
	San Antonio River basin									
297	San Antonio River at San Antonio, Tex.	-	42	1819-1960	-	-	Sept.10, 1921	20.14	15,300	-
298	San Pedro Creek at San Antonio, Tex.	D1	2.64	1916-29	766	-	Sept. 9, 1921	8.60	2,020	-
299	Medina River near Pipe Creek, Tex.	D5	457	1880-1960 1923-35, 1953-60	15,000	11,300	1919 July 1, 1932	g42 d35.2	- 64,000	- 28
300	Medina River near San Antonio, Tex.	-	1,225	1852-1960 1940-60	-	-	(t) Apr. 29, 1946	55 39.23	- 31,800	- -
301	Calaveras Creek near Elmendorf, Tex.	-	77.2	1860-1960 1955-60	-	-	Sept.29, 1946 Sept.25, 1957	35 21.83	- 5,310	- -
302	San Antonio River at Calaveras, Tex.	D	1,786	1918-25	-	5,500	Sept.11, 1921	42.0	18,500	9.8
303	San Antonio River near Falls City, Tex.	D	2,071	1875-1960	-	5,900	Sept.29, 1946	33.80	47,400	*1.13

See footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station $Q_{2.33}$ (cfs)	Areal $Q_{2.33}$ (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	San Antonio River basin--Continued									
304	Cibolo Creek near Bulverde, Tex.	D1	198	1943-60	3,100	5,000	1943	25	-	-
				1946-60			May 2, 1958	22.5	21,100	15
305	Cibolo Creek at Selma, Tex.	D1	280	1869-1960	-	6,300	1869	26	-	-
				1946-60			May 3, 1958	21.7	49,200	*1.10
306	Cibolo Creek near Falls City, Tex.	D6	831	1890-1960	8,800	8,100	October 1913	d35	35,000	16
307	Escondido Creek subwatershed No. 1 near Kenedy, Tex.	C6	3.29	1955-60	-	-	Oct. 25, 1960	-	4,990	-
308	Escondido Creek at Kenedy, Tex.	C6	82.2	1887-1960	-	1,830	Aug. 29, 1946	24.2	12,300	*1.27
309	Dry Escondido Creek near Kenedy, Tex.	C6	9.43	1906-59	-	-	May 18, 1953	16	-	-
				1955-59			Apr. 21, 1957	10.53	706	-
310	San Antonio River at Goliad, Tex.	C	3,918	1870-1960	10,700	8,100	July 9, 1942	44.9	33,800	25
	Mission River basin									
311	Mission River at Refugio, Tex.	C6	643	1899-1960	8,000	6,900	July 7, 1942	33.3	41,700	*1.14
	Nueces River basin									
312	Nueces River at Laguna, Tex.	G1	764	1866-1960	11,000	12,300	Sept.24, 1955	32.70	307,000	*1.18
313	West Nueces River near Brackettville, Tex.	G1	700	1879-1960	11,000	11,700	June 14, 1935	40	550,000	*2.20
314	Nueces River below Uvalde, Tex.	-	1,947	1836-1960	15,000	14,000	June 14, 1935	36.9	616,000	*2.04
315	Nueces River near Cinonia, Tex.	-	2,150	1913-25	-	-	July 1913	53	-	-
316	Nueces River near Asherton, Tex.	-	4,062	1900-60	7,800	8,200	June 17, 1935	33	-	-
				1940-60			Oct. 6, 1959	30.88	28,500	11
317	Nueces River at Cotulla, Tex.	-	5,260	1879-1960	9,200	9,300	June 18, 1935	32.4	82,600	*1.25
318	Nueces River near Tilden, Tex.	-	8,192	1902-60	11,200	11,500	Oct. 11, 1946	26.46	70,000	34
319	Frio River at Concan, Tex.	F5	405	1869-1960	8,000	10,600	July 1, 1932	34.4	162,000	*1.05
320	Dry Frio River near Reagan Wells, Tex.	F5	117	1875-1960	-	4,800	1880	33	-	-
				1881-1960			June 14, 1935	26	64,700	44
321	Frio River below Dry Frio River, near Uvalde, Tex.	-	661	1887-1960	-	10,500	1894	35	-	-
				1952-60			June 17, 1958	19.7	53,000	10
322	Sabinal River near Sabinal, Tex.	F5	206	1892-1960	6,600	6,900	July 2, 1932	29	-	-
				1943-60			June 17, 1958	24.6	55,200	18
323	Sabinal River at Sabinal, Tex.	F5	247	1890-1960	-	7,800	Aug. 24, 1919	40	-	-
				1932-60			June 17, 1958	33.3	73,300	22
324	Hondo Creek near Tarpley, Tex.	F5	86.2	1907-60	-	4,000	June 17, 1958	28.2	69,800	*1.20
325	Hondo Creek near Hondo, Tex.	F5	132	1910-60	-	5,200	September 1919	25.8	-	-
				1953-60			June 17, 1958	23.4	71,700	46
326	Seco Creek near Utopia, Tex.	F5	53.2	1935-60	-	2,930	June 17, 1958	21.4	52,600	*1.24
327	Seco Creek near D'Hanis, Tex.	F5	87.4	1866-1960	5,200	4,000	May 1935	26.2	-	-
				1953-60			June 17, 1958	20.8	72,000	*1.24
328	Frio River near Derby, Tex.	-	3,493	1860-1960	7,000	7,600	July 4, 1932	29.45	230,000	*2.09
329	Frio River at Calliham, Tex.	-	5,491	1870-1960	9,200	9,400	July 6, 1932	39.5	70,000	*1.05
330	Atascosa River at Whitsett, Tex.	D6	1,171	1881-1960	5,000	10,100	September 1919	41	50,000	21
331	Nueces River near Three Rivers, Tex.	-	15,800	1875-1960	15,600	15,600	Sept.18, 1919	46.0	85,000	*1.06
332	Nueces River near Mathis, Tex.	-	16,660	1888-1960	-	-	Sept.20, 1919	40	59,000	-
	Rio Grande basin									
333	Rio Grande at El Paso, Tex.	-	a29,267	1828-1960	4,400	4,400	June 12, 1905	-	24,000	-
334	Rio Grande below American Dam.	-	a29,271	1828-1960	-	4,400	June 12, 1905	-	24,000	-
335	Rio Grande at Juarez, Chihuahua, Mexico.	-	a29,350	1938-60	-	4,300	July 14, 1950	10.83	-	-
							July 21, 1955	-	7,600	10
336	Rio Grande at Island Station near El Paso, Tex.	-	a29,951	1939-60	-	4,000	May 19, 1942	16.06	-	-
							Sept.14, 1958	-	7,050	7.4
337	Rio Grande at Tornillo Bridge near Fabens, Tex.	-	-	1924-37	-	3,800	Sept. 5, 1925	-	u6,500	5.8
338	Rio Grande at County Line Station near El Paso, Tex.	-	a30,610	1938-60	-	3,650	May 19, 1942	8.66	6,340	5.6
339	Rio Grande at Fort Quitman, Tex.	-	a32,035	1828-1960	3,200	3,200	June 20, 1905	-	17,000	6.0
340	Rio Grande at La Nutria, Tex.	-	a33,672	1935-41	-	2,600	Aug. 31, 1935	13.20	7,480	22
341	Rio Grande above Presidio, Tex. (upper Presidio station).	-	a34,988	1900-13, 1925-60	2,300	2,300	June 14, 1905	g9.12	14,000	-
342	Rio Conchos at Cuchillo Parado, Chihuahua, Mexico.	-	a28,147	1945-55	-	-	July 12, 1952	17.19	39,200	-
343	Rio Conchos near Ojinaga, Chihuahua, Mexico.	-	a29,267	1896-1960	-	-	Sept.11, 1904	-	162,000	-
344	Rio Grande above Presidio, Tex.	-	a64,265	1900-54	15,500	15,500	Sept.11, 1904	26.35	162,000	-
345	Alamito Creek near Presidio, Tex.	A2	1,504	1933-60	8,300	9,000	Sept.24, 1955	7.33	16,400	8.5
346	Rio Grande below Presidio, Tex.	-	a66,203	1955-60	-	16,000	Sept.28, 1958	21.26	-	-
							Oct. 1, 1958	-	54,300	7.7
347	Terlingua Creek near Terlingua, Tex.	C6	1,070	1932-60	11,500	9,600	May 24, 1935	17.59	34,900	18
348	Rio Grande at Johnson Ranch, Tex.	-	a70,715	1932-60	22,600	22,600	Oct. 3, 1932	24.6	97,000	*1.02
349	Rio Grande at Boquillas, Tex.	-	a75,954	1904-35	-	24,600	September 1904	32.4	156,000	-
350	Rio Grande at Langtry, Tex.	-	a84,795	1900-60	32,000	32,000	June 18, 1922	g56.9	204,000	*1.02
351	Pecos River near Malaga, N. Mex.	-	a19,190	1904-60	-	-	May 22, 1941	g32.1	-	-
							Sept.21, 1941	-	63,700	-
352	Pecos River at Red Bluff, N. Mex.	-	a19,540	1938-60	-	-	May 24, 1941	28.3	52,600	-
353	Delaware River near Red Bluff, N. Mex.	D6	689	1911-60	8,000	7,200	Oct. 2, 1955	27.0	81,400	*1.59
354	Pecos River near Angeles, Tex.	-	a20,540	1904-42	-	-	Oct. 5, 1904	-	65,000	-
355	Salt (Screwbean) Draw near Orla, Tex.	D6	464	1910-60	3,300	5,550	Oct. 2, 1955	29.1	40,600	*1.03
356	Pecos River near Orla, Tex.	-	a21,300	1938-60	2,000	2,000	Sept.29, 1941	20.74	23,700	23
357	Pecos River at Pecos, Tex.	-	a22,100	1899,1904, 1906,1916-20, 1923-25, 1940-54	1,000	1,000	Sept.30, 1941	17.68	22,200	**1.48
358	Madera Canyon near Toyahvale, Tex.	C6	53.8	1932-49	1,500	1,400	Sept.29, 1932	8.0	5,120	19
359	Limpia Creek near Fort Davis, Tex.	C6	303	1927-32	-	4,200	Aug. 30, 1932	10.42	14,200	15
360	Toyah Creek below Toyah Lake, near Pecos, Tex.	-	3,709	1932	-	-	September 1932	7.7	-	-
				1940-51			Aug. 7, 1940	4.17	5,850	-

See footnotes at end of table.

Table A1.--Maximum floods at gaging stations in Texas--Continued

No.	Gaging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Station Q2.33 (cfs)	Areal Q2.33 (cfs)	Maximum flood			
							Date	Gage height (feet)	Discharge	
									Cfs	Recurrence interval (years)
	Rio Grande basin--Continued									
361	Pecos River near Grandfalls, Tex.	-	a27,810	1917-25	-	750	Sept.25, 1919	9.6	13,000	16
362	Pecos River below Grandfalls, Tex.	-	a27,820	1923-25, 1940-56	700	750	Oct. 2, 1941	m20.98	22,000	25
363	Pecos River near Girvin, Tex.	-	a29,560	1932-60	700	700	Oct. 5, 1941	m20.49	20,000	25
364	Pecos River near Sheffield, Tex.	-	a31,660	1916	2,800	2,600	September 1916	v23.5	-	-
				1922-24, 1940-49			Oct. 8, 1941	16.75	13,800	15
365	Pecos River near Shumla, Tex.	-	a35,162	1900-60	26,000	26,000	June 28, 1954	g96.24	948,000	**6.54
366	Devils River near Juno, Tex.	G6	2,733	1882-1954	20,000	17,500	June 28, 1954	35.0	393,000	*1.05
367	Devils River near mouth.	G6	4,305	1900-60	26,000	25,000	Sept. 1, 1932	g36.60	597,000	*1.21
368	Rio Grande below Amistad damsite.	-	a126,423	1954-60	-	-	June 28, 1954	55.72	1,158,000	*1.38
369	Arroyo Las Vacas near Ciudad Acuna, Coahuila, Mexico.	-	358	1938-60	-	-	June 28, 1954	16.34	-	-
							June 30, 1954	-	25,780	-
370	Rio Grande near Del Rio, Tex.	-	a126,940	1900-54	-	65,500	June 28, 1954	38.25	1,140,000	*1.37
371	San Felipe Creek near Del Rio, Tex.	G1	46	1932-60	8,000	1,880	June 14, 1935	-	45,000	*1.12
							Sept.30, 1954	26.89	-	-
372	Pinto Creek near Del Rio, Tex.	C1	249	1929-60	7,000	5,800	June 24, 1948	32.0	186,000	*1.50
373	Rio San Diego at Jimenez, Coahuila, Mexico.	-	848	1932-60	9,000	-	Sept.18, 1941	g20.96	75,220	-
374	Rio San Rodrigo near El Moral, Coahuila, Mexico.	-	669	1932-60	5,500	-	Sept. 7, 1932	g16.08	81,200	-
375	Rio Grande at Eagle Pass, Tex.	-	a130,575	1746-1960	63,000	63,000	June 1865	g56.0	1,236,000	*1.65
376	Rio Escondido at Villa de Fuente, Coahuila, Mexico.	-	1,279	1932-60	5,000	-	June 29, 1936	g19.13	24,000	-
377	Rio Grande at San Antonio Crossing near Villa Guerroro, Coahuila, Mexico.	-	a132,347	1953-60	-	62,000	June 29, 1954	42.70	912,000	*1.33
378	Rio Grande at Laredo, Tex.	-	a135,976	1745-60	60,000	60,000	June 1865	w62.5	950,000	*1.79
379	Rio Salado at Las Tortillas, Tamaulipas, Mexico.	-	24,877	1954-60	-	-	Oct. 16, 1958	23.79	27,720	-
380	Rio Salado at Ciudad Guerrero, Tamaulipas, Mexico.	-	25,112	1900-13, 1923-51	-	-	Sept. 7, 1933	16.86	43,800	-
381	Rio Grande near Zapata, Tex.	-	a163,344	1932-53	64,000	64,000	Sept. 4, 1932	262.07	261,000	18
382	Rio Grande at Chapeno, Tex.	-	a164,538	1953-60	-	64,400	Aug. 27, 1953	9.72	22,600	-
383	Rio Alamo at Ciudad Mier, Tamaulipas, Mexico.	-	1,692	1753-1960	16,000	-	Sept.11, 1948	g33.56	144,800	-
384	Rio Grande at Roma, Tex.	-	a166,464	1746-1954	72,000	72,000	June 1865	d43.0	630,000	-
385	Rio San Juan at Santa Rosalia, Tamaulipas, Mexico.	-	12,013	1901-13, 1923-43	-	-	Aug. 30, 1909	d49.21	353,000	-
386	Rio Grande at Fort Ringgold, Rio Grande City, Tex.	-	a180,396	1865-1960	-	-	June 1865	-	590,000	-
387	Mission Branch south of McAllen, Tex.	-	-	1926-60	-	-	Sept. 7, 1932	g21.37	x38,710	-
388	Rio Grande below Anzalduas Dam.	-	a182,138	1952-60	-	-	Oct. 19, 1958	28.87	63,920	-
389	Hackney Branch south of McAllen, Tex.	-	-	1926-50	-	-	Sept. 8, 1932	g22.16	x29,120	-
390	Rio Grande at Hidalgo, Tex.	-	a182,146	1909	-	-	1909	g27.89	-	-
				1928-51,1959			Sept.7,Oct.2, 1932	g25.85	83,870	-
391	Rio Grande at Progreso Bridge, Tex.	-	a182,173	1954-60	-	-	Oct. 22, 1958	23.69	19,900	-
392	Rio Grande near San Benito, Tex.	-	a182,187	1954-60	-	-	Oct. 22, 1958	60.07	13,600	-
393	Rio Grande at Matamoras, Tamaulipas, Mexico.	-	a182,211	1900-14, 1923-54	-	-	June 27, 1903	-	36,320	-
394	Rio Grande at Lower Brownsville, Tex.	-	a182,215	1935-60	-	-	Sept.14, 1942	33.24	-	-
							Oct. 8, 1945	-	31,700	-

* Ratio of peak discharge to that of 50-year flood.
** Ratio of peak discharge to that of 25-year flood.
a Does not include noncontributing area.
b Site and datum used 1949-51.
c Occurred on following day.
d Present site and datum.
e Floods of 1906, 1915 reached about same stage.
f Affected by levee breaks.
g Site and datum then in use.
h Daily mean discharge. Peak probably exceeded the 64,800 cfs for flood of June 16, 1935.
i Maximum gage height just as levees broke.
j Daily mean discharge. Peak probably exceeded 150,000 cfs and is believed to be about the same as for flood of May 1908.
k Might have been exceeded by flood of 1890, prior to construction of levees.
m Affected by failure of dam.
n Slope-area measurement 8.0 miles upstream.
o Unknown.
p Affected by backwater.
q Flood of July or September 1900 was higher.
r At supplementary gage 5,330 ft upstream.
s Flood of July 8, 1869, was several feet higher.
t Probably occurred in July 1869.
u Maximum daily mean discharge.
v Site and datum in use prior to 1925.
w At site and datum used 1930-54.
x Flood flow from Rio Grande.

Table A2.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations

Flood region and hydrologic area	Stream and place of determination	Drainage area (sq mi)	Areal $Q_{2.33}$ (cfs)	Peak discharge			
				Date	Cfs	Cfs per sq mi	Recurrence interval (years)
	Arkansas River basin						
C2	Mustang Creek (Rita Blanca) 6.6 miles east of Perico	396	3,800	May 31, 1937	39,800	101	*1.98
C2	Red Deer Creek at State Highway 70, 2½ miles north of Pampa	3.4	-	May 16, 1951	3,430	1,010	-
C2	Bluff Creek 1 mile northwest of Miami	24.7	-	June 5, 1951	10,900	441	-
C2	Red Deer Creek tributary at U.S. Highway 60, 9.1 miles northeast of Miami.	1.0	-	June 5, 1951	1,610	1,610	-
C2	Palo Duro Creek at Hansford	440	3,970	June 4, 1936	18,100	41.2	32
	Red River basin						
C2	Prairie Dog Town Fork Red River in State park, 14 miles east of Canyon.	743	5,600	May 16, 1951	18,500	24.9	15
				July 8, 1960	a52,700	70.9	*1.77
B7	Mulberry Creek near Brice	296	5,200	July 16, 1960	50,700	171	*2.44
B7	Lake Creek near Lelia Lake	48.6	1,320	June 15, 1938	40,800	840	*7.73
B7	Lake Creek near Headly	68.5	1,700	June 15, 1938	64,700	945	*7.18
C2	McClellan Creek at State Highway 70, 15.2 miles west of Alanreed	62.4	1,100	May 16, 1951	8,720	140	*1.50
C2	McClellan Creek at reservoir near Alanreed	86	1,380	May 16, 1951	10,100	118	*1.38
C2	McClellan Creek 4 miles north of Alanreed	90	1,400	June 8, 1937	11,900	132	*1.60
C2	Hackberry Creek tributary No. 1 at State Highway 152, at Wheeler	2.0	-	June 5, 1951	1,460	730	-
C2	Hackberry Creek tributary No. 2 at State Highway 152, at Wheeler	1.2	-	June 5, 1951	2,340	1,950	-
C2	Hackberry Creek tributary No. 3 half a mile upstream from State Highway 152 bridge, near Wheeler.	2.4	-	June 5, 1951	2,920	1,220	-
C2	Hackberry Creek 1.2 miles north of Wheeler	12.1	-	June 5, 1951	5,560	460	-
C2	North Fork Little Wichita River near Archer City	222	2,510	Sept.10, 1929	4,950	22.3	5.6
A8	Sulphur River near Talco	1,365	25,500	May 3, 1958	50,600	37.1	11
	Sabine River basin						
C1	Flat Fork Creek near Center	58	2,160	July 24, 1933	42,200	728	*3.70
C1	Tenaha Creek 10 miles northeast of Shelbyville	374	7,700	July 24, 1933	117,000	313	*2.86
	Neches River basin						
-	Neches River at U.S. Highway 190 bridge, about 12 miles east of Woodville.	7,400	29,000	Feb. 15, 1946	61,300	8.3	8
	Trinity River basin						
C3	Big Fossil Creek at Haltom City	53.0	-	June 25, 1961	18,300	345	-
C3	Little Elm Creek near Aubrey	75.5	3,320	Apr. 26, 1957	7,830	104	7.8
C3	Duck Creek near Garland	31.6	-	Apr. 26, 1958	7,400	234	-
	San Jacinto River basin						
A1	Buffalo Bayou (below mouth of Whitecak Bayou) at Houston	(b)	-	Dec. 9, 1935	56,600	-	-
	Brazos River basin						
C2	Double Mountain Fork Brazos River near Slaton	(b)	-	Sept.21, 1936	1,070	-	-
C2	White River (Running Water Creek) at Plainview	(b)	-	June 6, 1941	12,000	-	-
C6	Salt Croton Creek at Aspermont	69	1,620	Oct. 17, 1960	9,220	134	*1.07
C6	Ku Creek at U.S. Highway 33, near Aspermont	3.2	-	Sept.25, 1955	3,000	938	-
C6	Gonzales Creek at Breckenridge	157	2,750	Sept.21, 1924	7,960	50.7	11
C4	Childress Creek 4½ miles north of China Springs	79	-	Sept.26, 1936	47,000	595	-
C4	Aquilla Creek near Gholson	372	15,200	Sept.27, 1936	84,500	227	*1.21
C4	North Bosque River at Stephenville	92.4	-	May 19, 1955	49,000	530	-
C4	North Bosque River at U.S. Highway 377, in Stephenville	93.3	-	May 23, 1952	40,000	429	-
C4	Green Creek half a mile above U.S. Highway 67, near Dublin	11.6	-	May 23, 1952	18,900	1,630	-
C4	North Bosque River at Hico	358	12,800	May 23, 1952	87,800	245	*1.29
C4	North Bosque River at Valley Mills	1,149	30,000	Oct. 4, 1959	107,000	93.1	17
C4	Bosque River at Lake Waco Dam, near Waco	1,660	39,000	Sept.27, 1936	96,000	57.8	8.5
C6	Cow Bayou subwatershed No. 4 near Bruceville	5.25	-	May 11, 1957	6,900	1,310	-
C6	Deer Creek at Chilton	81.8	1,820	Dec. 6, 1935	16,000	196	*1.66
C6	Seven Mile Draw at Ames	2.4	-	Sept.26, 1936	5,140	2,140	-
C5	Sulphur Creek near Lampasas	78.0	3,720	May 12, 1957	65,300	837	*3.31
C5	Burleson Creek 1.7 miles northwest of Lampasas	7.4	-	May 12, 1957	14,300	1,930	-
C5	Sulphur Creek 11.5 miles upstream from mouth	108	4,600	May 12, 1957	74,600	691	*3.06
C5	Sulphur Creek near Lampasas	112	4,700	Sept.27, 1936	30,400	271	*1.22
D5	Salado Creek near Salado	148	5,600	Sept.10, 1921	143,000	966	*3.59
C6	Little River just below confluence of Leon and Lampasas Rivers near Belton.	5,100	25,600	Sept.10, 1921	331,000	64.9	*2.43
D5	North San Gabriel River near Georgetown	240	7,600	Apr. 24, 1957	102,000	425	*1.89
D5	South San Gabriel River 1 mile downstream from U.S. Highway 183 near Leander.	120	4,900	Apr. 24, 1957	78,800	657	*2.26
D5	Brushy Creek at Round Rock	74.7	3,620	Sept.10, 1921	34,500	462	*1.34
	Colorado River basin						
C6	Deep Creek at Snyder	120	2,300	June 19, 1939	36,400	303	*2.98
C6	Colorado River 2½ miles northwest of Colorado City	1,759	13,000	June 20, 1939	66,500	37.8	45
C6	Colorado River 5 miles south of Colorado City	2,590	16,600	June 20, 1939	72,800	28.1	29
C1	Mountain Creek at Mountain Creek Reservoir at Robert Lee	25.5	1,240	Aug. 19, 1953	16,700	655	*2.54
C1	Cow Creek at bridge on State Highway 158, near Bronte	6.3	-	Aug. 19, 1953	5,200	825	-
C1	Oak Creek at U.S. Highway 277, near Blackwell	209	5,200	June 16, 1951	14,500	69.4	10
E1	Pecan Creek 2.3 miles above mouth, 10 miles south of San Angelo	81	2,800	Sept.15, 1936	30,500	377	49
D1	West Fork Grape Creek 2½ miles above mouth, 17.6 miles north-northwest of San Angelo.	17	-	Sept.17, 1936	14,200	835	-
D1	East Fork Grape Creek 1½ miles above mouth, 16.2 miles north-northwest of San Angelo.	32	1,480	Sept.17, 1936	23,500	734	*2.24
D1	Grape Creek 1 mile below confluence of East and West Forks, 15.2 miles north-northwest of San Angelo.	53	2,040	Sept.17, 1936	31,800	600	*2.19
D1	Grape Creek at Gulf, Colorado and Santa Fe RR., 4 miles southeast of Carlsbad.	79	2,700	Sept.17, 1936	45,600	577	*2.38
D1	Dry Creek 9½ miles above Gulf, Colorado and Santa Fe RR., 13 miles north of San Angelo.	14	-	Sept.17, 1936	24,600	1,760	-
D1	Dry Creek at Gulf, Colorado and Santa Fe RR bridge 8 miles northwest of San Angelo.	48	1,900	Sept.17, 1936	19,200	400	*1.42

See footnotes at end of table.

Table A2.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations--Continued

Flood region and hydrologic area	Stream and place of determination	Drainage area (sq mi)	Areal Q=2.33 (cfs)	Peak discharge			
				Date	Cfs	Cfs per sq mi	Recurrence interval (years)
	Colorado River basin--Continued						
D6	Kickapoo Creek near Paint Rock	289	4,040	July 23, 1938	48,100	166	*1.68
MC	Colorado River near Stacy	11,560	31,500	Sept.18, 1936	356,000	30.8	*2.47
E6	Salt Creek near Doole	88.2	1,900	July 23, 1938	20,400	231	47
E6	Deep Creek near Milburn	59.2	1,470	July 23, 1938	33,600	568	*2.07
E6	North Valley Prong San Saba River near Fort McKavett	328	4,400	Sept.16, 1936	38,800	118	30
E6	Middle Valley Prong San Saba River near Fort McKavett	188	3,080	Sept.16, 1936	20,900	111	18
E6	East Fork Terrett Draw 1½ miles above Coal Kiln Draw, 10¾ miles southwest of Fort McKavett.	19	-	Sept.16, 1936	12,100	637	-
E6	East Fork Terrett Draw a quarter of a mile below Coal Kiln Draw, 8¾ miles southwest of Fort McKavett.	33	1,010	Sept.16, 1936	18,700	567	*1.68
E6	West Fork Terrett Draw 1 mile above mouth, 6¼ miles southwest of Fort McKavett.	21	-	Sept.16, 1936	5,880	280	-
E6	Colston Draw 0.8 mile above mouth, 3½ miles south of Fort McKavett	24	-	Sept.16, 1936	10,000	417	-
E6	Terrett Draw near Fort McKavett	103	2,100	Sept.16, 1936	35,800	348	*1.55
E6	San Saba River near Fort McKavett	688	7,200	Sept.16, 1936	50,700	73.7	19
E6	Brady Creek at Brady	554	6,300	Oct. 6, 1930	48,400	87.4	23
E6	San Saba River near Richland Springs	2,757	17,400	July 22, 1938	181,000	65.5	44
E6	Richland Creek near Richland Springs	72.4	1,670	July 23, 1938	61,000	843	*3.32
E6	Bee Water Hole Branch at bridge on Farm to Market Road 501, 6 miles east of Cherokee.	4.7	-	Sept.10, 1952	2,850	606	-
E6	Cherokee Creek 4 miles south of Chapple	149	2,670	July 25, 1938	20,900	140	24
E6	Cherokee Creek 1.5 miles east of Chapple	162	2,800	Sept.11, 1952	46,000	284	*1.49
E6	North Llano River at Roosevelt	443	5,400	Sept.16, 1936	22,600	51.0	8.4
E6	West Fork Copperas Creek 5¾ miles north of Roosevelt	81	1,800	Sept.16, 1936	50,400	622	*2.55
E6	Copperas Creek 3 miles northeast of Roosevelt	118	2,300	Sept.16, 1936	98,900	838	*3.91
E6	Bear Creek near Junction	155	2,720	Sept.16, 1936	31,300	202	*1.05
E6	South Llano River in Edwards County, about 1 mile upstream from Seven Hundred Springs.	540	6,100	June 14, 1935	160,000	296	*2.38
E6	Paint Creek near Telegraph	218	3,400	June 14, 1935	69,300	318	*1.85
E6	South Llano River 3 miles downstream from Paint Creek near Telegraph	785	7,700	Sept.16, 1936	87,600	112	*1.03
E6	Llano River 8 miles southwest of Mason	2,600	16,600	Sept.10, 1952	26,700	10.3	3.2
E6	East Fork James River at old Knoxville	60.8	1,500	July 1, 1932	105,000	1,730	*6.36
E6	James River near Mason	336	4,480	July 2, 1932	85,900	256	*1.74
E6	Hickory Creek 8 miles east of Castell	157	2,720	Sept.10, 1952	50,300	320	*1.68
E6	Six Mile Creek 5½ miles west of Llano	24.5	-	Sept.10, 1952	10,500	429	-
E6	Johnson Creek at bridge on State Highway 29, near Llano	48.5	1,300	Sept.11, 1952	12,200	252	35
E6	Pecan Creek at Smathers Ranch, 6 miles northwest of Llano	47.7	1,280	Sept.11, 1952	11,900	249	34
E6	Catman Creek 1 mile downstream from State Highway 16, near Llano	22.1	-	Sept.11, 1952	9,960	451	-
E6	Wrights (or Mitchell) Creek 3 miles northeast of Llano	14.3	-	Sept.11, 1952	6,560	460	-
E6	Little Llano River near Lone Grove	52.0	1,350	Sept.10, 1952	21,800	419	*1.47
E6	Honey Creek 5 miles west of Kingsland	29	-	Sept.11, 1952	27,600	952	-
E6	Hog Branch downstream from State Highway 16, and 12 miles south of Llano.	5.90	-	Sept.10, 1952	3,470	588	-
E6	Hog Branch tributary at culvert on State Highway 16, and 12 miles south of Llano.	.4	-	Sept.10, 1952	482	1,205	-
E6	Coal Creek 5 miles northeast of Willow City	15.4	-	Sept.10, 1952	23,800	1,545	-
E6	Comanche Creek 3.6 miles south of Click	129	2,400	Sept.10, 1952	18,900	147	24
E5	Sandy Creek at Llano-Round Mountain road crossing, 11.5 miles northwest of Round Mountain.	332	9,300	Sept.11, 1952	163,000	491	*1.60
E5	Walnut Creek 0.6 mile upstream from Llano-Round Mountain road crossing, 9.2 miles northwest of Round Mountain.	19.6	-	Sept.10, 1952	16,400	837	-
E5	Walnut Creek 3½ miles above mouth, 11 miles west of Marble Falls	20.9	-	Sept.15, 1936	13,600	651	-
C5	Hamilton Creek 6 miles northeast of Marble Falls	67	3,400	Sept.15, 1936	29,100	434	*1.62
E5	Pedernales River 0.6 miles southeast of Morris Ranch in Gillespie County.	206	6,800	Sept.10, 1952	35,200	171	11
E5	Wolf Creek 3.5 miles upstream from mouth and 10 miles southwest of Fredericksburg.	33.8	2,200	Sept.10, 1952	25,200	746	*1.04
E5	Bear Creek 3.2 miles upstream from mouth and 7.9 miles southwest of Fredericksburg.	30.5	2,060	Sept.10, 1952	21,000	689	42
E5	Live Oak Creek in Oak Creek Park, 3.4 miles southwest of Fredericksburg	46.2	2,700	Sept.10, 1952	21,300	461	25
E5	Palo Alto Creek 4.5 miles northeast of Fredericksburg	36.9	2,310	Sept.10, 1952	22,000	596	36
E5	South Grape Creek 0.8 mile upstream from U.S. Highway 290, near Stonewall.	61.0	3,200	Sept.10, 1952	30,500	500	36
E5	Rocky Creek 0.4 mile downstream from U.S. Highway 290, near Rye	28.1	-	Sept.11, 1952	38,700	1,380	-
E5	North Grape Creek 2.1 miles southwest of Sandy, and 2.3 miles upstream from mouth.	85.7	3,920	Sept.10, 1952	117,000	1,370	*2.71
E5	Miller Creek at U.S. Highway 290, 7¼ miles southeast of Johnson City	51.3	2,850	Sept.10, 1952	34,700	676	*1.11
E5	Cypress Creek at Cypress Mill	52.1	2,900	Sept.10, 1952	6,210	119	4.0
E5	Little Barton Creek near Bee Cave	6.3	-	May 28, 1929	2,450	389	-
E5	Barton Creek near Austin	114	4,720	May 28, 1929	39,400	346	27
E5	East Branch Waller Creek between Harris and Landon Ave., at Austin	2.5	-	June 12, 1951	659	264	-
E5	West Branch Waller Creek between 26th and 26½ Sts. at Austin	1.3	-	June 12, 1951	890	685	-
E5	Waller Creek 300 ft below 21st St. at Austin	4.3	-	June 12, 1951	2,010	467	-
E5	Onion Creek near Dripping Springs	54.8	3,000	May 28, 1929	21,900	400	21
E5	Onion Creek at Buda	151	5,700	May 28, 1929	53,200	352	35
D5	Rabbs Creek near Ward	92.8	4,200	June 30, 1940	55,000	593	*1.85
D5	Buckners Creek near LaGrange	184	6,400	June 30, 1940	106,000	576	*2.33
	Lavaca River basin						
D5	Youngs Branch 2 miles east of Moulton	6.8	-	June 30, 1940	8,900	1,310	-
D5	Rocky Creek at Texas and New Orleans RR. bridge, near Hallettsville	116	4,800	June 30, 1940	74,700	644	*2.19
D5	West Navidad River 2½ miles south of Schulenburg	106	4,500	June 30, 1940	124,000	1,170	*3.88
	Guadalupe River basin						
E1	North Fork Guadalupe River 8½ miles upstream from Hunt	120	3,520	July 1, 1932	108,000	900	*2.79
E1	Bear Creek 2 miles above mouth, Kerr County	29.1	1,360	July 1, 1932	17,200	590	*1.15
E1	South Fork Guadalupe River 8 miles upstream from Hunt	60.3	2,220	July 1, 1932	84,300	1,400	*3.45
E1	Guadalupe River near Ingram	336	7,100	July 1, 1932	206,000	613	*2.64
E1	Guadalupe River 0.5 mile above State Highway 16, at Kerrville	570	10,100	July 1, 1932	196,000	344	*1.77

See footnotes at end of table.

Table A2.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations--Continued

Flood region and hydrologic area	Stream and place of determination	Drainage area (sq mi)	Areal $Q_{2.33}$ (cfs)	Peak discharge			
				Date	Cfs	Cfs per sq mi	Recurrence interval (years)
	Guadalupe River basin--Continued						
E1	Big Joshua Creek 2.5 miles 2.5 miles south of Waring	17.8	-	Sept.10, 1952	30,900	1,740	-
E1	Little Joshua Creek 1.8 miles southwest of Welfare	8.94	-	Sept.10, 1952	12,800	1,430	-
E1	Comal Creek (Blieders Creek) on Dean Word Ranch, near New Braunfels	17.9	-	Sept.11, 1952	8,480	473	-
E1	Dry Comal Creek at New Braunfels	94	3,000	Sept.11, 1952	35,000	373	*1.06
E5	Blanco River 1.8 miles west of Blanco	93.5	4,180	Sept.11, 1952	61,900	663	*1.35
E5	Hines Creek 1.5 miles upstream from mouth and 1.5 miles northwest of Blanco.	2.92	-	Sept.10, 1952	5,430	1,860	-
E5	Blanco River at Blanco	108	4,600	May 28, 1929	43,500	402	36
E5	Little Blanco River 1.6 miles upstream from U.S. Highway 281 near Twin Sisters.	21.9	-	Sept.10, 1952	19,900	910	-
E5	Little Blanco River 2.5 miles upstream from mouth, 8.2 miles east of Twin Sisters.	60.3	3,200	Sept.10, 1952	41,000	680	*1.16
E5	Blanco River near Kyle	430	11,000	May 28, 1929	139,000	323	*1.15
E5	Bunton Branch downstream from U.S. Highway 81, near Kyle	4.12	-	June 30, 1936	13,800	3,350	-
E1	O'Neil Creek near Leesville	30	1,400	July 1, 1936	30,000	1,000	*1.95
	San Antonio River basin						
D1	Alazan Creek upstream from Martinez Creek, at San Antonio	8.8	-	Sept.27, 1946	5,900	670	-
D1	Martinez Creek at San Antonio	6.3	-	Sept.27, 1946	3,950	628	-
D1	Alazan Creek below Martinez Creek in San Antonio	17.2	-	Sept.27, 1946	10,400	605	-
D1	Apache Creek at San Antonio	21.5	1,110	Sept.27, 1946	8,400	390	*1.07
D1	San Pedro Creek downstream from State Highway 16, in San Antonio	44.5	1,810	Sept.27, 1946	22,700	510	*1.76
D1	Salado Creek 1 mile below U.S. Highway 81, near San Antonio	161	4,300	Sept.27, 1946	50,000	310	*1.64
D5	North Fork Medina River near Lima School, 11 miles upstream from mouth.	54.0	2,960	July 1, 1932	40,200	744	*1.91
D5	Medina River near Medina	235	7,500	July 1, 1932	47,600	202	37
D1	Calaveras Creek near Elmendorf	24.6	1,200	Sept.27, 1946	58,000	2,360	*6.81
D1	Frederick Creek at Boerne	16.1	-	June 1, 1937	16,300	1,010	-
D1	Cibolo Creek 0.3 mile upstream from Balcones Creek and 5½ miles southwest of Boerne.	77.6	2,620	Sept.10, 1952	27,900	360	*1.50
D1	Cibolo Creek 2 miles northeast of Van Raub	115	3,420	June 1, 1937	58,900	512	*2.42
	Nueces River basin						
G1	Hackberry Creek on C. Gilmer Ranch, 8.7 miles east of Rocksprings	62	2,280	Sept.24, 1955	53,400	862	*1.10
G1	West Nueces River in vicinity of Kickapoo Springs	402	8,100	June 14, 1935	580,000	1,440	*3.37
G1	West Nueces River 8 miles north of Cline	680	13,500	June 14, 1935	536,000	609	*1.86
F5	East Fork Frio River below mouth of Bybee Creek and 7 miles north of Leakey.	75	3,620	July 1, 1932	89,500	1,200	*1.70
F5	Frio River at Rio Frio	(b)	-	July 1, 1932	128,000	-	-
F	Frio River about 5 miles upstream from Sabinal River	840	8,100	July 2, 1932	148,000	176	*1.26
F5	Sabinal River near Vanderpool	45.7	2,630	July 2, 1932	52,300	1,140	*1.37
F6	Hondo Creek at U.S. Highway 90, 5 miles east of Hondo	400	5,040	July 2, 1932	74,800	187	*1.02
F5	Seco Creek 11 miles upstream from D'Hanis	142	5,500	May 31, 1935	230,000	1,620	*2.88
F6	Seco Creek 2½ miles north of D'Hanis	169	2,860	July 2, 1932	35,800	212	38
D6	Leona River near Divot	565	6,300	July 4, 1932	49,300	87.2	*1.10
D	Frio River 7 miles north of Los Angeles	3,732	-	July 5, 1932	204,000	54.7	-
D6	Chacan Creek at Chacan Dam near Natalia	30.9	-	June 22, 1924	2,510	81.2	-
D6	Atascosa River at Benton	21.3	-	June 22, 1924	25,900	1,220	-
	Minor Coastal basins						
A2	San Diego Creek 1 mile upstream from Alice	349	3,400	Sept.14, 1951	6,370	18.2	9
A2	San Diego Creek at Alice	353	3,450	Sept.14, 1951	c4,350	12.3	-
A2	Tranquitas Creek (Acero) at Kingsville	54.3	1,000	Sept.15, 1951	4,790	88.2	*1.60
A2	Cibolo Creek at Falfurrias	95	1,450	Sept.15, 1951	3,460	36.4	20
	Rio Grande basin						
C6	South Fork Little Aguja Canyon near Toyahvale	(b)	-	September 1932	1,410	-	-
C6	Toyah Creek 3 miles downstream from Balmorhea	324	4,350	Sept. 7, 1932	26,100	80.7	*1.13
C6	Toyah Creek at Saragosa	(b)	-	Oct. 25, 1941	7,850	-	-
C6	Cherry Canyon near Toyahvale	70.8	1,650	Sept.29, 1932	5,320	75.0	14
C6	Salt Draw near Pecos	1,882	13,700	Aug. 6, 1940	19,900	10.6	3.6
C6	Barrilla Creek near Saragosa	612	6,600	Aug. 30, 1932	15,500	25.3	7.8
G6	Johnson Draw 2 miles north of Ozona	120	2,300	June 28, 1954	72,700	606	*1.48
G6	Mailtrail Creek 1 mile upstream from Highway 277 and 5 miles northeast of Loma Alta.	75.3	1,710	June 24, 1948	170,000	2,260	*4.67
G6	Little Red Bluff Creek 5.5 miles upstream from confluence with Red Bluff Creek, at Carta Valley.	10.3	-	June 24, 1948	30,000	2,910	-
G6	Dry Devils River 16.3 miles west of Carta Valley	740	7,400	June 24, 1948	460,000	622	*2.91
G6	Dry Devils River 1 mile above mouth in Val Verde County	747	7,500	Sept. 1, 1932	129,000	173	31

* Ratio of peak discharge to that of the 50-year flood.
a Result of dam failure.
b Not determined.
c Some of flow leaves basin above site and enters Laftas Creek.

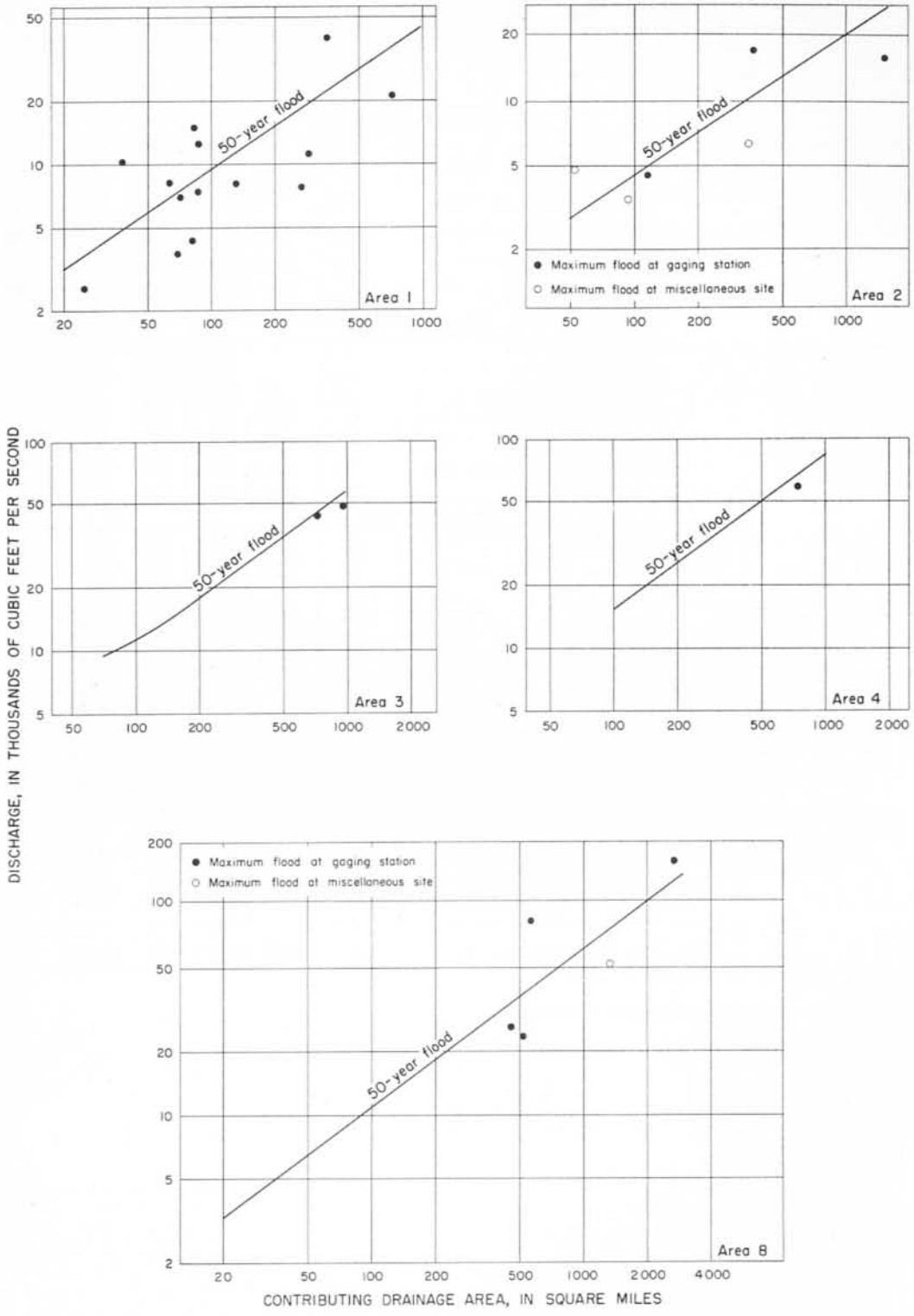

Figure A1

Relation of Maximum to 50-Year Flood in Region A

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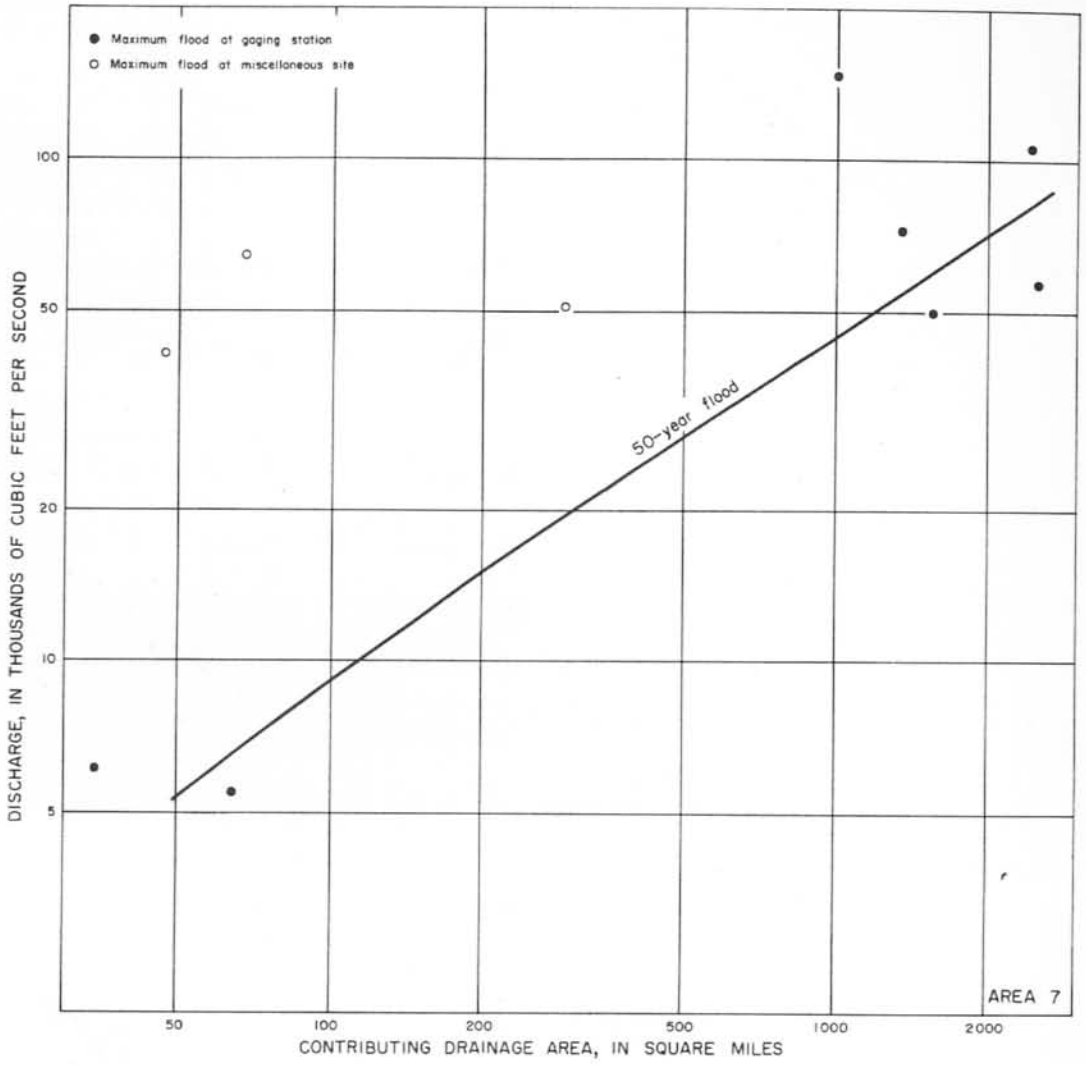


Figure A2

Relation of Maximum to 50-Year Flood in Region B

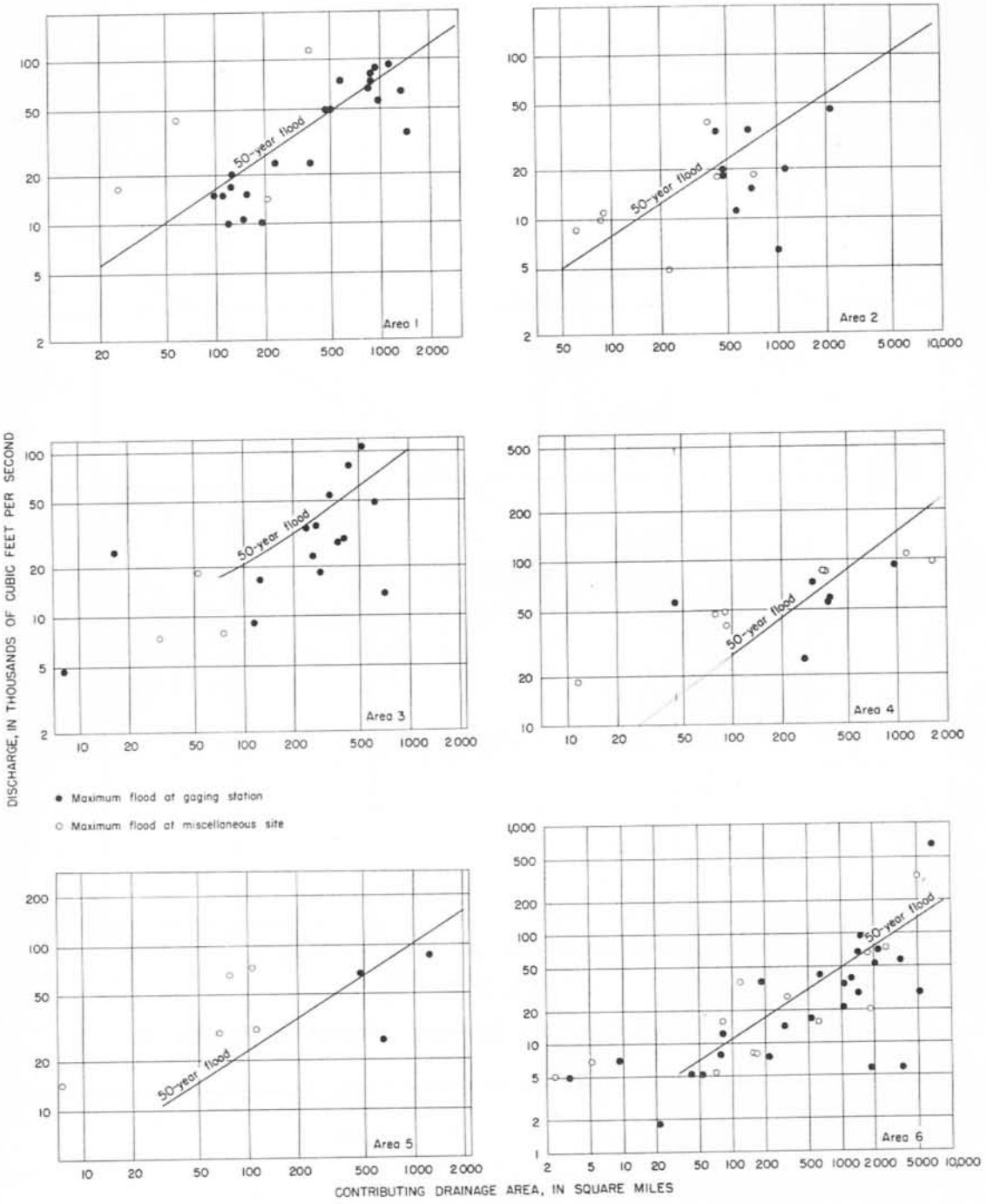


Figure A3

Relation of Maximum to 50–Year Flood in Region C

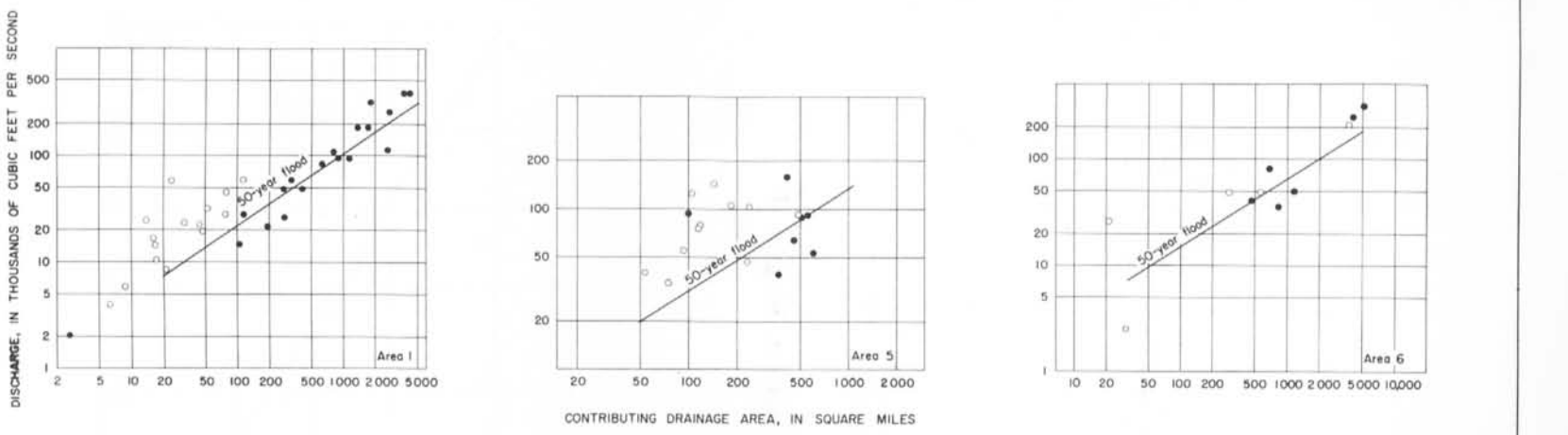


Figure A4

Relation of Maximum to 50-Year Flood in Region D

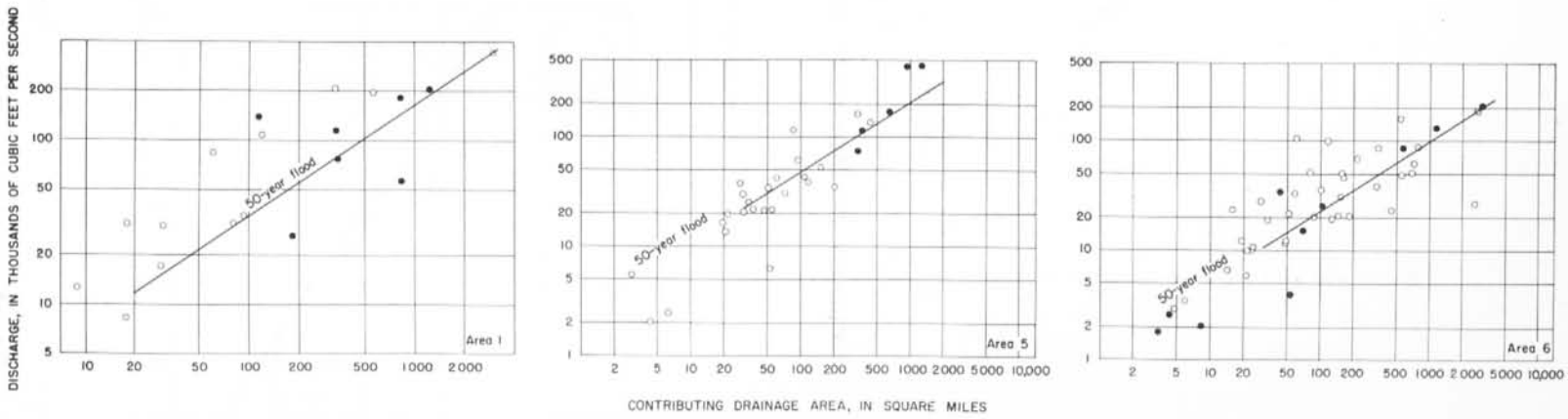


Figure A5

Relation of Maximum to 50-Year Flood in Region E

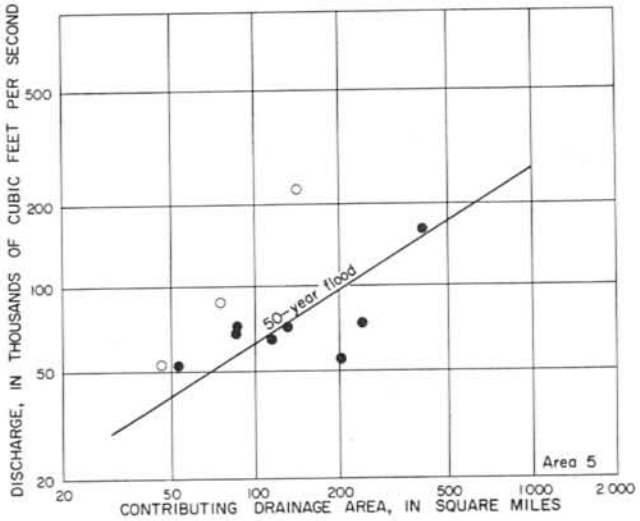


Figure A6

Relation of Maximum to 50-Year Flood in Region F

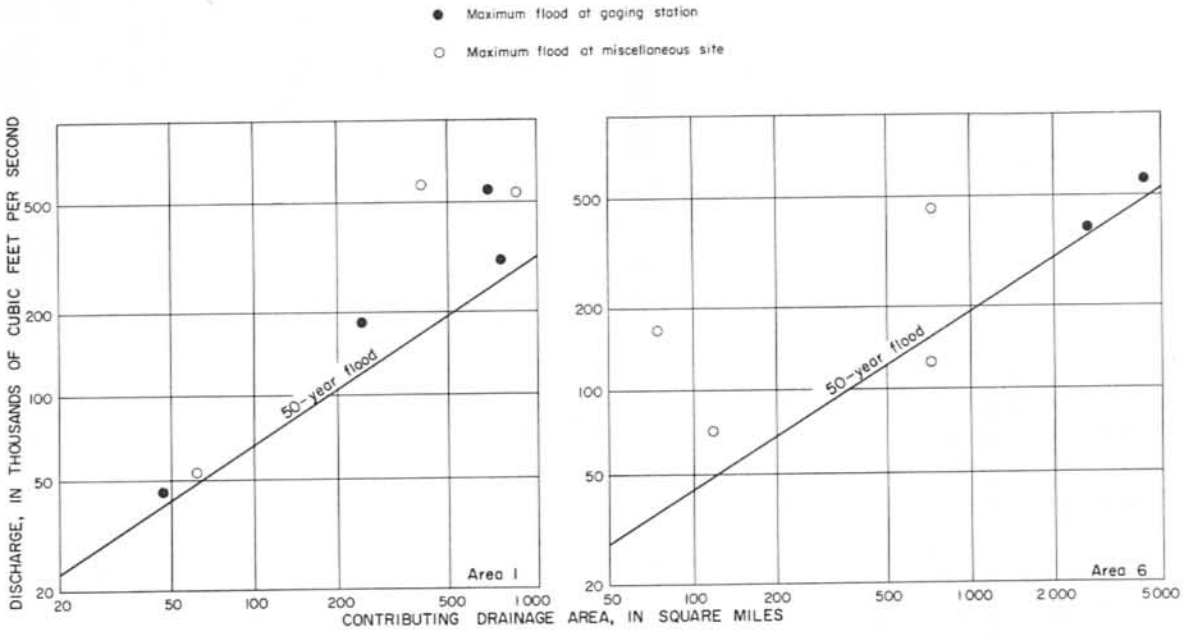


Figure A7

Relation of Maximum to 50-Year Flood in Region G

APPENDIX B

GAGING-STATION RECORDS LISTED BY BASIN AND IN DOWNSTREAM ORDER

GAGING-STATION RECORDS LISTED BY BASIN AND IN DOWNSTREAM ORDER

This section contains a brief description of all gaging stations for which flood data are included in this report. A tabulation of all peaks above a selected base is shown for most stations. Only the highest peak during the year--the annual flood--is shown for some stations.

Station records are presented in downstream order, in accordance with the system used in U. S. Geological Survey Water-Supply Papers since 1951. The number preceding the station name is a permanent reference number used in all U. S. Geological Survey Water-Supply Papers since 1958. The number in parenthesis following the station name is the station number used on Plate 1 and in Table A1.

The peaks are arranged by water years unless otherwise noted. Both peak stages and discharges are usually listed. In a few instances, only peak stage or discharge is shown. If the peak stage and discharge do not occur on the same day, the date of peak discharge is given with appropriate footnote to indicate the date of peak stage.

Peak discharges, unless otherwise noted, are instantaneous peaks expressed in cubic feet per second (cfs). In a few instances, only maximum daily mean discharges are available and are so listed with appropriate footnotes.

Underlining in the tables of peak stages and discharges has the following significance:

1. Line under "water year" column means a discontinuous record.

2. Line beginning at "date" column and continuing through "discharge" column means a change in site and datum.

3. Line in "date" and "discharge" column means a change in site without a change in datum.

4. Line in "gage height" column means a change in datum only.

5. No underlines are used for changes in site or datum if peaks have been adjusted to present conditions.

Depressions or closed basins in West Texas and New Mexico do not permit direct surface runoff to defined streams. Such areas have been deducted from the total drainage area above a gaging station to determine the area which contributes directly to surface runoff. Except for stations in the Rio Grande basin, both total and contributing drainage area are shown. Only contributing area is used in flood-frequency analyses. The bankfull stage has been noted in station descriptions where it has been determined. This is the stage at which one or both banks are overtopped in the vicinity of the gage and is sometimes referred to as flood stage.

An explanation of methods used in computation of streamflow data is given in each water-supply paper of the annual series of reports of the U. S. Geological Survey entitled "Surface Water Supply of the United States" and, since 1960,

in the U. S. Geological Survey report "Surface Water Records of Texas." Additional information can be found in standard texts and in U. S. Geological Survey Water-Supply Paper 888, entitled "Stream-Gaging Procedure."

Regular gaging-station records of less than 5 years in length at the end of the 1960 water year, records on irrigation and diversion canals, and records of spring flow are not included in this report. Those regular gaging stations in Texas for which records are not included are listed below. The station number is the U. S. Geological Survey's permanent reference number.

Station No.	Station	Period of record
7-2990	Mulberry Creek near Brice	1949-51
7-2995.7	Red River near Quanah	1960-
7-2998.5	Salt Fork Red River near Clarendon	1960-
7-3078	Pease River near Childress	1960-
7-3082	Pease River near Vernon	1960-
7-3085	Red River near Burkburnett	1925, 1960-
7-3117	North Fork Wichita River near Truscott	1960-
7-3118	South Fork Wichita River near Benjamin	1960-
7-3119	Wichita River near Seymour	1960-
7-3121	Wichita River near Mabelle	1960-
7-3122	Beaver Creek near Electra	1960-
7-3154	Little Wichita River near Ringgold	1959-
7-3432	Sulphur River near Talco	1957-
8- 172	Sabine River at Greenville	1959-
8- 173	South Fork Sabine River near Quinlan	1959-
8- 180	Sabine River near Golden	1924-25
8- 223	Murvaul Bayou near Gary	1958-
8- 315	Neches River near Reese	1924-27
8- 350	Mud Creek at Ponta	1924-27
8- 375	Arenoso Creek near San Augustine	1938-40
8- 390	Ayish Bayou at San Augustine	1924-25
8- 391	Ayish Bayou near San Augustine	*1959-
8- 488	Big Fossil Creek at Haltom City	1959-
8- 502	Elm Fork Trinity River subwatershed no. 6-0 near Muenster	1957-
8- 503	Elm Fork Trinity River near Muenster	1957-
8- 520	Elm Fork Trinity River near Denton	1924-27
8- 527	Little Elm Creek near Aubrey	1956-
8- 600	East Fork Trinity River above Pilot Grove Creek near Lavon	1949-53
8- 617	Duck Creek near Garland	1958-
8- 632	Pin Oak Creek near Hubbard	1956-
8- 775	Hickory Slough near Pearland	*1944-49
8- 785	Austin Bayou near Danbury	*1944-48
8- 800	Double Mountain Fork Brazos River near Rotan	1950, 1951
8- 810	Salt Fork Brazos River near Peacock	1950, 1951
8- 812	Croton Creek near Jayton	1959-
8- 815	Salt Croton Creek near Aspermont	1957-
8- 850	Paint Creek near Haskell	1950, 1951
8- 881	Salt Creek at Olney	1958, 1959

Station No.	Station	Period of record
8- 882	Salt Creek near Newcastle	1958-60
8- 883	Oak Creek near Graham	1958-
8- 937	North Bosque River at Stephenville	1958-
8- 952	North Bosque River at Valley Mills	1959-
8- 953	Middle Bosque River near McGregor	1959-
8- 954	Hog Creek near Crawford	1959-
8- 968	Cow Bayou subwatershed no. 4 near Bruceville	1956-
8- 980	Deer Creek at Chilton	1934-36
8-1060	Brushy Creek at Coupland	*1924-26
8-1070	Big Elm Creek near Temple	1934-36
8-1075	Big Elm Creek near Buckholts	1934-36
8-1080	North Elm Creek near Ben Arnold	1934-36
8-1160	Big Creek near Guy	1947-50
8-1164	Dry Creek near Rosenberg	1959-
8-1225	Morgan Creek near Colorado City	1947-49
8-1236.5	Beals Creek above Big Spring	1959-
8-1237	Beals Creek at Big Spring	1957, 1958
8-1238	Beals Creek near Westbrook	1958-
8-1592	Colorado River at Bastrop	1960
8-1676	Rebecca Creek near Spring Branch	1960
8-1678	Guadalupe River at Sattler	1960-
8-1713	Blanco River near Kyle	1956-
8-1724	Plum Creek at Lockhart	1959-
8-1745	Peach Creek near Dilworth	1930-33
8-1746	Peach Creek below Dilworth	1959-
8-1791	Red Bluff Creek near Pipe Creek	1956-
8-1824	Calaveras Creek subwatershed no. 6 near Elmendorf	1957-
8-1845	Cibolo Creek above Bracken	1946-51
8-1855	Cibolo Creek at Sutherland Springs	1924-29
8-1879	Escondido Creek subwatershed no. 11 (Dry Escondido Creek) near Kenedy	1958-
8-1997	Frio River near Frio Town	1924-27
8-2045	Leona River near Divot	1924-29
8-2075	Atascosa River near McCoy	†1951-57
8-3700	Rio Grande near Fort Hancock	1900-1903
8-4140	Pecos River near Porterville	1922-26
8-4310	Toyah Creek near Pecos	*1939-41, 1944, 1945
8-4315	Salt Draw near Pecos	*1939-41, 1944, 1945
8-4330	Barrilla Creek near Saragosa	*1925, 1926, 1932
8-4355	Pecos River below Barstow	1939-41

* Fragmentary
† Peaks not determined

7-2270. Canadian River at Logan, N. Mex. (1)
(Published as South Canadian River in 1904)

Location.--Lat 35°21'20", long 103°35'20", in NE¼ sec.15, T.13 N., R.33 E., on left bank half a mile south of Logan, 1½ miles upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 4½ miles upstream from Tucumcari Creek, and 5½ miles downstream from Ute Creek.

Drainage area.--11,141 sq mi, of which about 10,031 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 4, 1910, at site 1½ miles downstream at different datums; recording thereafter at present site. Prior to Oct. 21, 1928, at different datums and Oct. 21, 1928, to Sept. 30, 1934, at datum 1.54 ft lower. Altitude of present gage is 3,670 ft (from river-profile study).

Stage-discharge relation.--1904-5, 1908-10: Fairly well defined by current-meter and float measurements below 140,000 cfs and extended by logarithmic plotting.
1910-58: Fairly well defined by current-meter and float measurements below 75,000 cfs and extended by logarithmic plotting.

Historical data.--According to Ninth Biennial Report of State engineer, the flood of Sept. 30, 1904, is the greatest known.

Remarks.--Records for 1922 to Oct. 30, 1930, collected by State engineer of New Mexico. Peak discharges partly regulated by Conchas Reservoir since Dec. 29, 1938; prior to 1938 not appreciably affected by diversions for irrigation of several thousand acres. Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Sept.30, 1904	36.5	a278,000	1938	June 13, 1938	10.2	29,000
					June 26, 1938	9.25	21,000
1909	Sept. 6, 1909	-	a150,000		July 18, 1938	8.4	17,000
					Sept. 5, 1938	12.57	48,000
1910	Aug. 18, 1910	-	a45,000				
				1939	Oct. 10, 1938	10.39	28,000
1911	May 30, 1911	-	a27,000		May 5, 1939	8.9	19,000
					May 29, 1939	9.5	22,000
1912	June 11, 1912	10.0	14,000		July 29, 1939	7.8	14,000
	Aug. 21, 1912	11.0	18,000		Aug. 3, 1939	9.0	19,000
1913	June 12, 1913	20.00	97,000	1940	June 21, 1940	7.00	10,600
1914	May 1, 1914	-	207,000	1941	May 2, 1941	17.5	91,000
					May 23, 1941	16.2	78,000
1926	June 19, 1926	14.0	a40,000		May 30, 1941	14.8	64,000
					June 5, 1941	10.5	28,000
1927	July 30, 1927	10.8	18,500		June 18, 1941	6.0	14,000
	Aug. 5, 1927	9.9	14,000		June 25, 1941	8.8	18,000
	Aug. 11, 1927	10.0	15,000		July 10, 1941	9.4	21,000
					July 13, 1941	10.6	28,000
1928	June 10, 1928	10.8	19,000		July 17, 1941	8.3	14,000
					July 22, 1941	29.3	219,000
1929	Oct. 14, 1928	16.6	60,000		July 23, 1941	8.3	14,000
	July 10, 1929	15.9	59,000				
				1942	Apr. 24, 1942	13.90	54,400
1930	July 23, 1930	8.9	12,000		May 8, 1942	8.25	15,000
					May 15, 1942	7.8	12,000
1931	Oct. 3, 1930	14.9	51,000		July 1, 1942	8.4	12,500
	Oct. 11, 1930	19.0	90,000		Aug. 14, 1942	8.3	12,000
	Aug. 4, 1931	9.0	13,000		Sept. 3, 1942	12.7	33,000
					Sept.11, 1942	7.95	14,000
1932	June 25, 1932	10.02	a17,000		Sept.17, 1942	8.05	14,000
1934	Sept. 1, 1934	10.80	21,000	1943	Oct. 8, 1942	7.9	13,000
					Oct. 20, 1942	8.10	13,900
1935	May 18, 1935	9.4	22,000		Nov. 6, 1942	8.05	13,400
	June 28, 1935	10.9	31,000				
	Aug. 4, 1935	11.95	39,000	1944	June 1, 1944	8.74	11,400
1936	July 13, 1936	13.5	51,600	1945	Aug. 15, 1945	8.3	10,000
	Aug. 28, 1936	8.0	14,000				
				1946	May 28, 1946	14.23	50,000
1937	May 29, 1937	17.8	94,000		Sept.14, 1946	9.9	17,000
	June 3, 1937	18.91	110,000		Sept.16, 1946	9.7	16,000
	June 27, 1937	11.5	33,000				
				1947	Oct. 5, 1946	9.0	13,000
1938	May 30, 1938	9.7	24,000		Oct. 9, 1946	11.70	28,000

a Record incomplete, annual peak only.

Peak stages and discharges of Canadian River at Logan, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 15, 1947	9.1	13,000	1954	June 30, 1954	7.54	4,540
1948	June 2, 1948	9.56	14,200	1955	Oct. 7, 1954	11.00	18,500
	June 19, 1948	12.10	30,000		May 19, 1955	11.90	24,400
1949	May 16, 1949	8.59	11,000	1956	July 22, 1956	11.80	26,300
1950	June 11, 1950	10.2	16,000	1957	Aug. 5, 1957	11.25	18,800
	July 3, 1950	9.5	13,000				
	July 6, 1950	14.41	41,200	1958	May 25, 1958	10.05	12,900
	July 22, 1950	9.1	12,000		Sept. 4, 1958	10.65	13,800
	Aug. 1, 1950	9.8	15,000				
				1959	Aug. 15, 1959	9.22	9,970
1951	May 15, 1951	9.48	17,300				
	July 12, 1951	10.80	24,000	1960	July 9, 1960	13.08	24,300
					Aug. 10, 1960	11.65	20,000
1952	Aug. 22, 1952	9.00	11,000				
1953	Aug. 17, 1953	10.3	17,000				

7-2274.50. Unnamed tributary (watershed W-1) of Middle Alamosa Creek near Vega, Tex. (2)

Location.--Lat 35°18', long 102°25', 5 miles north of Vega, Oldham County.

Drainage area.--0.202 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	May 30, 1938	-	107	1941	May 20, 1941	-	29
1939	Apr. 5, 1939	-	258	1942	-	-	(a)
1940	May 27, 1940	-	1.3	1943	July 8, 1943	-	139

a Less than 0.1 cfs.

7-2274.55. Unnamed tributary (watershed W-2) of Middle Alamosa Creek near Vega, Tex. (3)

Location.--Lat 35°20', long 102°25', 6 miles north of Vega, Oldham County.

Drainage area.--0.150 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	May 30, 1938	-	141	1941	Aug. 23, 1941	-	28
1939	July 26, 1939	-	64	1942	Apr. 19, 1942	-	6.8
1940	May 27, 1940	-	15	1943	May 26, 1943	-	12

7-2275. Canadian River near Amarillo, Tex. (4)

Location.--Lat 35°28'10", long 101°52'45", near left bank on downstream side of pier of bridge on U.S. Highways 87 and 287, 1,500 ft downstream from Pitcher Creek, 1.7 miles downstream from Panhandle and Santa Fe Railway Co. bridge, 19 miles north of Amarillo, Potter County, and at mile 538.

Drainage area.--19,445 sq mi, of which about 15,376 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 5, 1938; recording and nonrecording thereafter. Prior to June 2, 1938, at site of old bridge 20 ft upstream at same datum. Datum of present gage is 2,989.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 100,000 cfs.

Bankfull stage.--21 ft.

Historical data.--Flood in May 1914, reached a stage of about 24.0 ft; a higher stage probably occurred during flood in October 1904, from information by local residents.

Remarks.--Some regulation by Conchas Reservoir since Dec. 28, 1938. Conchas Canal and Bell Ranch Canal divert from Conchas Reservoir for irrigation. Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Aug. 14, 1924	7.95	44,400	1942	June 1, 1942	6.97	15,000
					June 23, 1942	8.20	25,600
1925	July 29, 1925	7.10	18,800		July 2, 1942	7.55	16,800
	Aug. 7, 1925	9.15	34,700		July 21, 1942	7.65	21,900
	Sept.16, 1925	7.51	18,000		Aug. 15, 1942	7.15	15,500
					Sept. 3, 1942	8.80	25,600
1938	May 31, 1938	8.30	29,600		Sept. 6, 1942	8.30	22,400
	June 8, 1938	7.08	16,000				
	June 15, 1938	10.50	48,000	1943	Oct. 14, 1942	7.40	16,800
	June 18, 1938	7.80	23,600		Oct. 20, 1942	7.56	15,000
	June 27, 1938	7.40	17,800		July 9, 1943	8.57	19,800
	July 19, 1938	9.35	38,300				
	July 22, 1938	7.32	16,900	1944	June 25, 1944,	a8.10	12,500
	Sept. 6, 1938	10.40	46,700		Aug. 28, 1944		
1939	Oct. 10, 1938	9.91	43,000	1945	Aug. 15, 1945	8.67	18,300
	Jan. 8, 1939	8.70	29,600				
	Apr. 5, 1939	10.25	46,700	1946	May 29, 1946	9.80	30,300
	June 21, 1939	7.36	18,700				
	Aug. 2, 1939	8.20	23,600	1947	Oct. 7, 1946	10.00	39,500
	Aug. 4, 1939	8.15	24,600		Oct. 10, 1946	7.90	21,600
	Aug. 10, 1939	9.50	38,300		May 14, 1947	7.87	14,900
					May 20, 1947	7.90	16,800
1940	May 7, 1940	7.63	25,600				
	May 28, 1940	7.20	18,700	1948	June 20, 1948	7.70	14,500
	Aug. 8, 1940	8.36	26,600		June 24, 1948	8.30	22,200
	Sept. 5, 1940	7.67	17,800				
				1949	May 16, 1949	12.63	97,000
1941	May 3, 1941	11.70	72,300		May 18, 1949	6.94	15,000
	May 20, 1941	7.15	17,200		June 3, 1949	8.42	30,400
	May 23, 1941	9.00	59,300		June 11, 1949	7.20	17,300
	May 25, 1941	7.27	24,000		July 15, 1949	7.20	14,600
	May 31, 1941	8.98	38,300		July 27, 1949	7.30	17,300
	June 6, 1941	8.90	37,000				
	June 9, 1941	7.85	21,400	1950	June 22, 1950	7.65	25,600
	June 25, 1941	8.78	30,400		June 29, 1950	7.77	29,800
	July 3, 1941	8.15	25,600		July 5, 1950	7.18	24,500
	July 11, 1941	7.85	24,000		July 7, 1950	9.82	63,100
	July 13, 1941	9.60	47,000		July 21, 1950	7.87	33,600
	July 25, 1941	15.70	135,000		July 23, 1950	7.15	24,500
	Aug. 20, 1941	8.40	41,200		Aug. 2, 1950	7.18	23,000
	Aug. 23, 1941	7.40	32,900		Sept.11, 1950	8.95	45,500
	Sept.23, 1941	15.00	115,000		Sept.26, 1950	7.50	20,800
	Sept.30, 1941	9.69	60,900				
				1951	Mar. 16, 1951	9.56	27,700
1942	Oct. 23, 1941	9.50	45,500				
	Oct. 26, 1941	6.80	14,000	1952	Aug. 23, 1952	7.68	13,000
	Apr. 21, 1942	7.08	15,500				
	Apr. 25, 1942	9.15	38,300	1953	July 19, 1953	9.42	28,100
	May 17, 1942	7.05	15,000		Aug. 18, 1953	8.29	17,300

a Occurred June 2, 1944.

Peak stages and discharges of Canadian River near Amarillo, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 17, 1954	7.70	19,000	1958	July 6, 1958	11.30	48,600
	July 23, 1954	10.86	42,900		July 16, 1958	8.91	25,200
					July 21, 1958	8.00	18,100
1955	Oct. 8, 1954	7.87	30,000		July 26, 1958	8.95	17,800
	Apr. 30, 1955	10.95	47,600		Sept. 7, 1958	8.80	25,200
	May 19, 1955	8.40	28,200				
	June 19, 1955	7.16	20,500	1959	July 1, 1959	8.99	25,200
					Aug. 16, 1959	7.80	17,000
1956	May 24, 1956	9.46	27,400		Aug. 23, 1959	8.80	15,300
1957	May 24, 1957	12.82	66,900	1960	June 7, 1960	11.50	51,000
	Aug. 1, 1957	7.50	14,400		June 10, 1960	7.65	15,600
	Aug. 4, 1957	7.48	14,300		July 7, 1960	8.67	23,600
	Aug. 17, 1957	10.12	48,900		July 10, 1960	9.80	37,000
					Aug. 11, 1960	7.77	17,800
1958	June 18, 1958	7.98	18,100				
	July 3, 1958	8.02	18,100	1961	Oct. 18, 1960	7.10	16,700

7-2280. Canadian River near Canadian, Tex. (5)

Location.--Lat 35°55', long 100°22', near left bank on downstream side of pier of bridge on U.S. Highways 60 and 83, 500 ft downstream from Panhandle and Santa Fe Railway Co. bridge, 1.2 miles downstream from Red Deer Creek, 1.6 miles northeast of Canadian, Hemphill County, and at mile 434.

Drainage area.--22,866 sq mi, of which about 18,178 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 15, 1938; recording and nonrecording thereafter. Prior to Sept. 30, 1953, at site 300 ft upstream at same datum. Datum of present gages is 2,301.50 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent large shifts. Defined by current-meter measurements below 55,000 cfs in two channels.

Bankfull stage.--10 ft.

Historical data.--Maximum stage known, about 20.0 ft Oct. 2, 1904. Other high stages occurred May 2, 1914, and Oct. 5, 1923 (about 12 ft), and May 31, 1937 (11.2 ft). Elevation of 1904 flood determined by levels to point given by Mr. Charles Peet, observer, in 1924. Information on floods in 1914, 1923, and 1927 furnished by Chief Engineer, Office of Panhandle and Santa Fe Railroad.

Remarks.--Some regulation by Conchas Reservoir since Dec. 28, 1938. Conchas Canal and Bell Ranch Canal divert from Conchas Reservoir for irrigation. Base for partial-duration series, 8,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 16, 1938	5.91	9,600	1941	May 21, 1941	6.60	14,000
	May 18, 1938	6.62	16,400		May 24, 1941	8.25	49,100
	June 1, 1938	6.75	20,500		May 26, 1941	7.17	35,000
	June 9, 1938	7.18	34,600		May 31, 1941	7.62	47,600
	June 16, 1938	6.85	25,100		June 7, 1941	7.54	47,200
	June 28, 1938	6.40	17,400		June 9, 1941	8.55	85,200
	July 20, 1938	7.25	34,600		June 16, 1941	6.26	9,280
	Sept. 8, 1938	7.50	37,000		June 27, 1941	8.08	35,200
					July 5, 1941	8.15	52,300
1939	Oct. 11, 1938	7.20	46,600		July 12, 1941	6.38	9,540
	Jan. 9, 1939	7.56	48,300		July 15, 1941	7.15	20,600
	Apr. 6, 1939	7.61	53,700		July 20, 1941	6.80	16,300
	May 7, 1939	6.01	13,100		July 25, 1941	9.60	114,000
	June 13, 1939	7.06	35,800		Aug. 21, 1941	7.60	35,700
	June 22, 1939	7.94	68,600		Aug. 24, 1941	7.91	43,800
	June 29, 1939	7.68	55,600		Sept.23, 1941	9.80	122,000
	Aug. 3, 1939	6.70	21,300				
	Aug. 5, 1939	7.15	31,600	1942	Oct. 1, 1941	8.98	91,600
	Aug. 12, 1939	6.82	26,700		Oct. 7, 1941	6.64	25,000
					Oct. 12, 1941	5.78	10,300
1940	Nov. 26, 1939	6.70	11,400		Oct. 22, 1941	7.93	60,700
					Oct. 25, 1941	6.92	20,000
1941	Apr. 30, 1941	7.00	27,400		Oct. 29, 1941	6.46	13,400
	May 3, 1941	9.60	110,000		Apr. 20, 1942	7.35	21,600

Peak stages and discharges of Canadian River near Canadian, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 22, 1942	6.98	14,800	1950	Aug. 1, 1950	7.46	16,000
	Apr. 24, 1942	6.94	18,200		Aug. 29, 1950	7.58	19,100
	Apr. 26, 1942	8.08	41,900		Sept. 4, 1950	6.90	10,400
	May 11, 1942	6.30	19,800		Sept.12, 1950	7.20	13,600
	May 19, 1942	6.24	20,500		Sept.26, 1950	7.08	11,800
	June 2, 1942	6.55	12,200				
	June 8, 1942	8.40	44,300	1951	May 17, 1951	8.82	65,900
	June 22, 1942	6.05	14,900		June 5, 1951	7.75	19,900
	June 29, 1942	6.89	27,200		June 24, 1951	7.60	15,400
	July 4, 1942	6.24	14,200		Sept. 7, 1951	7.27	9,320
	Aug. 17, 1942	6.97	17,000				
	Sept. 4, 1942	7.75	38,600	1952	Aug. 26, 1952	7.50	10,700
	Sept. 7, 1942	6.98	25,200				
	Sept.13, 1942	6.35	10,600	1953	July 20, 1953	7.73	15,600
	Sept.20, 1942	6.50	9,410		July 23, 1953	7.61	14,700
1943	July 10, 1943	6.47	9,990	1954	May 24, 1954	7.18	9,050
					July 25, 1954	7.54	12,200
1944	Oct. 16, 1943	6.93	10,500				
	Oct. 22, 1943	6.71	13,900	1955	Oct. 9, 1954	7.35	18,900
	June 4, 1944	6.90	11,000		May 1, 1955	7.88	34,400
					May 20, 1955	8.43	56,800
1945	Oct. 2, 1944	7.02	8,660		June 8, 1955	7.43	17,800
					June 28, 1955	9.25	79,000
1946	May 30, 1946	7.50	33,000				
	Sept.12, 1946	8.12	49,400	1956	May 26, 1956	7.25	21,200
	Sept.18, 1946	6.58	11,900				
	Sept.21, 1946	6.84	11,200	1957	May 25, 1957	9.30	77,600
					June 2, 1957	6.86	9,640
1947	Oct. 5, 1946	7.98	46,500		July 30, 1957	6.78	11,300
	Oct. 7, 1946	8.26	58,100		Aug. 8, 1957	7.10	10,400
	Oct. 11, 1946	6.96	23,900		Aug. 18, 1957	7.40	16,400
	May 15, 1947	6.83	14,800		Sept.14, 1957	6.85	9,660
1948	June 5, 1948	6.77	10,700	1958	June 20, 1958	7.22	11,700
	June 7, 1948	6.75	10,300		July 5, 1958	7.16	12,800
	June 21, 1948	7.14	22,200		July 7, 1958	8.42	37,900
	June 25, 1948	7.01	20,100		July 17, 1958	7.47	17,300
	Aug. 15, 1948	6.75	14,000		July 21, 1958	8.42	37,900
	Aug. 17, 1948	6.60	11,400		July 28, 1958	7.14	14,500
					Aug. 1, 1958	7.80	38,100
1949	May 7, 1949	7.18	29,900		Sept. 8, 1958	7.48	20,200
	May 17, 1949	8.34	69,600				
	May 19, 1949	6.77	19,800	1959	May 5, 1959	7.25	15,700
	June 4, 1949	7.62	20,700		July 15, 1959	7.10	14,400
	June 8, 1949	6.92	9,970		Aug. 24, 1959	7.20	9,380
	June 13, 1949	6.40	10,100				
	July 13, 1949	6.85	11,700	1960	June 8, 1960	7.66	21,300
	July 16, 1949	6.50	8,910		June 9, 1960	7.71	23,500
					June 11, 1960	7.59	21,100
1950	July 8, 1950	7.84	24,400		July 6, 1960	7.30	14,500
	July 19, 1950	7.05	14,800				
	July 21, 1950	7.65	22,800	1961	Oct. 19, 1960	7.31	19,200
	July 24, 1950	6.98	13,000		June 7, 1961	6.63	10,400
	July 29, 1950	7.30	17,700				

·7-2285. Canadian River at Bridgeport, Okla. (6)

Location.--Lat 35°34'00", long 98°22'45", in SE¼SW¼ sec.28, T.13 N., R.11 W., near right bank on downstream side of pier of Chicago, Rock Island and Pacific Railroad Co. bridge, 1 mile north of Bridgeport, 2½ miles upstream from Lumpmouth Creek, and at mile 267.1.

Drainage area.--25,229 sq mi, of which about 20,428 sq mi contributes directly to surface runoff.

Gage.--Recording Oct. 1, 1944, to Sept. 30, 1947, and since Sept. 30, 1948; nonrecording Oct. 1, 1947, to Sept. 30, 1948. Prior to Oct. 1, 1947, at site a quarter of a mile downstream at same datum. Datum of present gage is 1,384.25 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended by logarithmic plotting.

Bankfull stage.--14 ft.

Historical data.--The flood in October 1904 probably exceeded that of 1914, from information by Corps of Engineers.

Remarks.--Some regulation by Conchas Reservoir. Records 1944-48 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 15,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 3, 1914	a19.4	-	1954	May 24, 1954	10.34	16,100
1915	April 1915	a15.9	-	1955	May 19, 1955	11.04	23,700
					May 22, 1955	11.63	31,200
1945	Sept.28, 1946	8.16	15,600				
				1956	Oct. 4, 1955	11.35	30,800
1946	June 29, 1946	7.40	7,900				
				1957	May 26, 1957	11.30	40,600
1947	Oct. 9, 1946	9.52	57,000		Aug. 20, 1957	8.71	12,600
	Oct. 13, 1946	7.50	20,800				
	May 12, 1947	8.14	26,700	1958	June 21, 1958	10.17	23,400
	May 16, 1947	8.77	35,000		July 8, 1958	10.73	31,400
	May 20, 1947	8.26	25,600		July 19, 1958	9.43	15,600
					July 23, 1958	10.10	22,800
1948	June 23, 1948	14.60	150,000				
				1959	May 26, 1959	10.10	18,800
1949	May 7, 1949	8.30	18,600		July 27, 1959	9.15	12,600
	May 19, 1949	9.93	42,000		Aug. 7, 1959	8.67	8,160
	June 5, 1949	9.00	21,800		Aug. 20, 1959	8.57	7,390
					Aug. 27, 1959	9.10	8,000
1950	July 9, 1950	9.38	21,900		Sept.24, 1959	12.10	57,100
	July 20, 1950	8.73	18,000				
	July 23, 1950	9.57	28,000	1960	Oct. 2, 1959	10.20	25,200
	Aug. 1, 1950	9.98	27,600		Dec. 19, 1959	9.52	16,100
	Aug. 30, 1950	8.91	15,300		Feb. 4, 1960	8.99	7,530
					Mar. 11, 1960	9.07	7,840
1951	May 17, 1951	11.74	65,000		June 10, 1960	10.30	17,200
	May 20, 1951	10.25	42,000		July 13, 1960	11.05	36,200
	June 7, 1951	8.55	20,100		July 24, 1960	8.44	8,760
	June 10, 1951	8.55	15,000		Aug. 13, 1960	9.62	17,200
					Aug. 20, 1960	8.50	8,900
1952	May 23, 1952	8.50	9,300				
1953	Aug. 22, 1953	9.77	9,800				

a Furnished by Chicago, Rock Island and Pacific Railroad Co.

7-2335. Palo Duro Creek near Spearman, Tex. (7)

Location.--Lat 36°12', long 101°19', near center of span on downstream side of bridge on State Highway 282, at abandoned town of Hansford, 6 miles west of Spearman, Hansford County, about 18 miles upstream from Horse Creek, and at mile 50.0.

Drainage area.--960 sq mi, approximately, of which about 440 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,961.63 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended by logarithmic plotting.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	June 4, 1936	21	26,100	1953	July 12, 1953	12.15	1,060
					July 19, 1953	16.93	8,550
1938	Sept. 4, 1938	22.5	34,000		July 23, 1953	11.66	844
1945	Sept.28, 1945	11.14	790	1954	June 8, 1954	11.91	985
	Sept.30, 1945	10.02	530		June 14, 1954	15.92	6,000
					July 23, 1954	12.04	840
1946	Sept.12, 1946	13.90	3,430				
				1955	Oct. 6, 1954	12.82	1,450
1947	Oct. 7, 1946	19.87	21,200		Apr. 30, 1955	16.25	6,660
	June 25, 1947	12.88	2,090		May 18, 1955	14.56	3,700
					July 14, 1955	14.53	3,700
1948	Oct. 7, 1947	11.20	820				
				1956	July 17, 1956	12.10	955
1949	May 16, 1949	12.70	1,960		July 19, 1956	12.60	1,290
	May 19, 1949	10.88	730		Aug. 20, 1956	12.11	785
1950	June 22, 1950	11.25	820	1957	Apr. 28, 1957	12.43	1,180
	July 18, 1950	12.98	2,220		May 16, 1957	11.38	695
	July 21, 1950	10.62	655		May 25, 1957	13.58	1,810
	July 29, 1950	11.30	1,110		June 1, 1957	12.12	955
	Aug. 1, 1950	13.50	3,580		July 25, 1957	11.01	616
	Sept.11, 1950	12.45	1,580		July 31, 1957	12.14	982
					Aug. 4, 1957	11.10	632
1951	May 14, 1951	13.03	1,770				
	May 17, 1951	15.32	4,930	1958	July 3, 1958	10.00	616
					July 7, 1958	11.40	860
1952	Apr. 20, 1952	14.12	3,060		July 23, 1958	13.01	1,540
	Aug. 7, 1952	10.58	578		Aug. 1, 1958	12.51	1,210
1953	June 4, 1953	13.12	1,750				

7-2350. Wolf Creek at Lipscomb, Tex. (8)

Location.--Lat 36°14', long 100°16', at bridge on State Highway 305 in northwest corner of Lipscomb, 2 miles upstream from Plum Creek and at mile 61.2.

Drainage area.--697 sq mi, of which about 475 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,377.06 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended on basis of velocity-area studies.

Bankfull stage.--4.5 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Wolf Creek at Lipscomb, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 1, 1938	5.35	3,090	1941	May 11, 1941	3.60	3,900
	May 16, 1938	3.10	2,330		May 20, 1941	3.10	2,750
	May 22, 1938	3.47	3,710		May 23, 1941	4.20	6,800
	June 7, 1938	3.27	2,460		June 9, 1941	4.50	11,000
	June 9, 1938	3.50	3,660		July 6, 1941	3.40	3,660
	June 15, 1938	3.80	5,030		Aug. 22, 1941	3.38	2,810
	Sept. 4, 1938	4.52	9,000		Sept.29, 1941	3.15	2,090
1939	Apr. 5, 1939	4.16	6,800	1942	Oct. 21, 1941	5.80	20,000
	June 12, 1939	3.25	2,620		Oct. 23, 1941	4.08	8,310
	June 13, 1939	3.23	2,520		June 9, 1942	3.40	3,460
	June 23, 1939	4.73	12,100		Aug. 12, 1942	2.85	2,360
	June 24, 1939	3.72	5,250		Sept. 6, 1942	2.68	2,030
	July 2, 1939	3.85	5,030				
	Aug. 7, 1939	4.00	6,070	1943	Sept. 4, 1943	a4.05	-
1940	June 10, 1940	3.80	4,780	1944	Aug. 16, 1944	a4.00	-
	Aug. 8, 1940	3.88	6,070				
	Sept. 2, 1940	3.95	6,300				

a Annual peak only.

RED RIVER BASIN

7-2955. Tierra Blanca Creek at reservoir, near Umbarger, Tex. (9)

Location.--Lat 34°55', long 102°96', at conduit tower just upstream from dam, 2 miles south of Umbarger, Randall County, and 20 miles upstream from Palo Duro Creek.

Drainage area.--2,075 sq mi, of which about 575 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 3,515.6 ft above mean sea level, datum of 1929. Auxiliary recording gage and weir 9 miles upstream from dam. Prior to Aug. 29, 1940, weir located about 7 miles upstream from dam.

Stage-discharge relation.--Peak inflow computed from rate of change in reservoir contents.

Historical data.--Flood of May 30, 1937, was highest known prior to completion of dam in 1938.

Remarks.--Reservoir capacity, 18,150 acre-ft. Reservoir used for recreational purposes. No regulation upstream from reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 30, 1937	-	a6,100	1947	May 15, 1947	-	2,200
				1948	June 24, 1948	-	43
1941	June 6, 1941	-	11,300	1949	May 7, 1949	-	2,200
1942	Oct. 24, 1941	-	2,580	1950	July 18, 1950	-	3,500
1943	Oct.2,16, 1942	-	1,000				
1944	June 13, 1944	-	332	1951	May 17, 1951	-	9,760
1945	Aug. 15, 1945	-	1,700	1952	July 18, 1952	-	239
				1953	Apr. 5, 1953	-	764
1946	Sept.13, 1946	-	1,280	1954	June 11, 1954	-	3,600

a By slope-area measurement.

7-2975. Prairie Dog Town Fork Red River near Canyon, Tex. (10)

Location.--Lat 35°01', long 101°54', 1.2 miles downstream from confluence of Palo Duro and Tierra Blanca Creeks, 2 miles upstream from Palo Duro Club Dam, and 3½ miles northeast of Canyon, Randall County.

Drainage area.--3,369 sq mi, of which about 711 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 12, 1924, 2.3 miles downstream at different datum; recording thereafter. Sept. 13, 1924, to Oct. 21, 1926, and Apr. 6, 1938, to May 20, 1942, at site 0.8 mile downstream at present datum. Datum of present gage is 3,455.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,000 cfs and by critical-depth determination at 15,200 cfs.

Historical data.--Highest known flood prior to reconstruction of Palo Duro Club Dam in May 1941, occurred May 30, 1937, when river reached a stage of 9.7 ft, from floodmarks, at site 0.8 mile downstream. According to local residents, the flood of May 16, 1951, was greatest since at least 1904 or 1905.

Remarks.--Flow partly regulated by several reservoirs upstream; the principal ones being Tierra Blanca Creek Reservoir near Umbarger (capacity, 18,150 acre-ft), and Amarillo City Lake on Palo Duro Creek (capacity, 5,120 acre-ft). The major portion of floodwater originating above these reservoirs ordinarily will be retained in them. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	July 4, 1924	1.70	800	1943	July 9, 1943	10.96	1,230
1925	June 24, 1925	2.62	500	1944	July 12, 1944	10.43	910
1926	May 27, 1926	3.82	1,460	1945	Aug. 15, 1945	9.14	219
1938	May 18, 1938	4.38	1,180	1946	-	-	0
1939	June 21, 1939	5.10	1,520	1947	Oct. 7, 1946	13.39	3,090
1940	May 7, 1940	4.86	1,420		May 15, 1947	11.86	1,870
1941	May 31, 1941	8.12	1,270	1948	Sept.21, 1948	9.18	237
	June 7, 1941	10.30	3,890	1949	Nov. 1, 1948	10.75	1,000
	June 9, 1941	9.35	2,610		May 7, 1949	10.02	608
	July 3, 1941	7.33	573		June 9, 1949	10.87	827
1942	Oct. 4, 1941	9.67	3,000	1951	May 16, 1951	a20.31	15,200
	Oct. 24, 1941	12.03	8,650				

a Annual peak only.

7-2980. North Tule Draw at reservoir, near Tulia, Tex. (11)

Location.--Lat 34°33', long 101°42', at walkway to conduit intake valve, 250 ft to left of concrete spillway, 1 mile upstream from mouth, and 3.2 miles northeast of Tulia, Swisher County.

Drainage area.--About 189 sq mi, of which about 65 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Nov. 26, 1940; recording thereafter. Prior to Sept. 29, 1939, at datum 70.5 ft higher. Altitude of present gage is 3,310 ft (by barometer).

Stage-discharge relation.--Peak inflow is based on change in reservoir contents, flow over spillway (computed from spillway rating curve), and computed flow through conduit.

Remarks.--Dam completed Jan. 15, 1939. Reservoir capacity, 654 acre-ft. No regulation upstream from reservoir. Only annual peaks are shown.

Peak stages and discharges of North Tule Draw at reservoir, near Tulia, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 6, 1941	-	985	1953	Apr. 5, 1953	-	987
1942	Oct. 4, 1941	-	3,110	1954	June 9, 1954	-	4,680
1943	July 9, 1943	-	1,140	1955	May 31, 1955	-	1,390
1944	July 11, 1944	-	389				
1945	July 5, 1945	-	80	1956	Oct. 2, 1955	-	54
				1957	June 18, 1957	-	984
1947	Oct. 5, 1946	-	1,370	1958	Aug. 1, 1958	-	122
1948	Aug. 3, 1948	-	390	1959	July 10, 1959	a91.77	563
1949	Apr. 19, 1949	-	1,380	1960	July 8, 1960	95.65	3,010
1951	May 15, 1951	-	5,430	1961	Oct. 12, 1960	b94.57	1,960
1952	July 17, 1952	-	38				

a Occurred July 15, 1959.
b Occurred Oct. 17, 1960.

7-2985. Prairie Dog Town Fork Red River near Brice, Tex. (12)

Location.--Lat 34°37'40", long 100°56'25", on downstream side of bridge on State Highway 70, half a mile downstream from Battle Creek, 1.5 miles upstream from Mulberry Creek, and 6 miles southwest of Brice, Hall County.

Drainage area.--6,082 sq mi, of which about 1,581 sq mi contributes directly to surface runoff.

Gage.--Recording Dec. 14, 1938, to June 30, 1944, and since Dec. 18, 1959; nonrecording Aug. 10, 1949, to July 31, 1951. At site 2.1 miles upstream Dec. 14, 1938, to June 30, 1944, at datum 2,076.08 ft above mean sea level, datum of 1929. At site 1.9 miles upstream Aug. 10, 1949 to July 31, 1951, at datum 6.0 ft lower. Datum of present gage not determined.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 5,000 cfs at sites used prior to 1959. At site used 1938 to 1944, extended by logarithmic plotting and slope-area measurements at gage heights 3.7 and 4.8 ft. At site used 1949 to 1951, extended by logarithmic plotting and slope-area measurement at gage height 10.32 ft. Defined by current-meter measurements below 7,000 cfs at present site.

Historical data.--According to local residents, the flood of 1933 was greatest known since at least 1906.

Remarks.--Slight regulation from three reservoirs on tributary streams (total capacity, 23,900 acre-ft). Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	-	a14.8	-	1944	June 29, 1944	3.20	10,400
1937	May 1937	a14.3	-	1950	July 15, 1950	8.50	9,730
1939	June 20, 1939	4.12	20,100	1951	May 16, 1951	b10.32	41,700
					May 16, 1951	9.10	24,500
1940	Sept. 4, 1940	4.84	30,300		May 17, 1951	8.63	19,300
1941	June 9, 1941	3.75	22,100	1957	June 1, 1957	19.2	-
	June 15, 1941	4.25	25,400	1960	June 7, 1960	12.20	49,000
1942	Oct. 4, 1941	5.18	42,100	1961	July 9, 1961	8.72	15,500
1943	Oct. 16, 1942	4.70	28,100				
	Apr. 16, 1943	4.00	19,000				

a Site and datum used 1949-51.
b From floodmark.

7-2995. Prairie Dog Town Fork Red River near Estelline, Tex. (13)

Location.--Lat 34°35', long 100°36', at downstream side of bridge on U.S. Highway 287, 180 ft upstream from Fort Worth and Denver Railway Co. bridge, 1.7 miles northwest of Estelline, Hall County, and 6.9 miles upstream from Baylor Creek.

Drainage area.--7,293 sq mi, of which about 2,524 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 16, 1938; recording and nonrecording gages thereafter. Jan. 10, 1924, to Sept. 10, 1925, at site 410 ft downstream. Datum of all gages is 1,754.60 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 14,000 cfs and extended above.

Historical data.--Maximum stage known, about 14 ft in May 1908, from information by local residents.

Remarks.--Slight regulation from three reservoirs on tributary streams (total capacity, 23,900 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Aug. 22, 1924	5.50	19,700	1942	Oct. 4, 1941	6.78	24,100
1925	July 30, 1925	5.60	21,500	1943	Oct. 17, 1942	8.50	51,200
				1944	July 12, 1944	5.96	5,360
1938	June 16, 1938	8.30	40,000	1945	July 10, 1945	6.50	12,600
1939	Jan. 8, 1939	6.00	9,500				
1940	Sept. 5, 1940	7.15	24,100	1946	Aug. 28, 1946	6.7	18,100
				1947	Oct. 7, 1946	8.08	38,600
1941	June 9, 1941	8.86	56,000				

7-3000. Salt Fork Red River near Wellington, Tex. (14)

Location.--Lat 34°57'25", long 100°13'30", near center of stream on downstream side of bridge on U.S. Highway 83, 4 miles downstream from Fort Worth and Denver (Burlington) Railway Co. bridge, 4.5 miles south of Lutie, and 6.5 miles north of Wellington, Collingsworth County.

Drainage area.--1,222 sq mi, of which about 1,013 sq mi contributes directly to surface runoff.

Gage.--Recording and nonrecording. Datum of gage is 1,941.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 12,000 cfs and extended on basis of slope-area measurement at 63,400 cfs.

Bankfull stage.--20 ft.

Remarks.--Small diversions above station for irrigation. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	-	17.5	-	1957	May 24, 1957	7.01	10,800
					Aug. 4, 1957	6.00	5,460
1953	July 19, 1953	13.90	63,400		Aug. 29, 1957	6.05	6,260
1954	May 11, 1954	7.01	6,080	1958	May 13, 1958	12.50	51,700
	May 24, 1954	7.65	8,640		July 6, 1958	6.15	7,080
	June 10, 1954	16.00	95,900				
				1959	May 22, 1959	7.05	7,400
1955	May 19, 1955	9.25	23,000		May 26, 1959	8.10	10,800
	June 2, 1955	7.62	12,800		July 6, 1959	6.85	5,560
	June 8, 1955	6.37	6,870				
	June 19, 1955	9.30	23,700	1960	June 9, 1960	8.80	16,300
1956	May 27, 1956	8.50	18,400	1961	Oct. 12, 1960	7.67	8,640
					Oct. 15, 1960	7.22	6,810
1957	Oct. 15, 1956	6.30	6,660		Oct. 18, 1960	6.78	5,060
	Apr. 28, 1957	8.86	21,000		June 3, 1961	9.10	16,300
	May 16, 1957	19.00	146,000		July 15, 1961	7.12	6,440

7-3005. Salt Fork Red River at Mangum, Okla. (15)

Location.--Lat 34°52', long 99°31', in SW¼SE¼ sec.34, T.5 N., R.22 W., near left bank on downstream side of pier of bridge on State Highway 34, half a mile south of Mangum, 13 miles downstream from Fish Creek, and at mile 35.5.

Drainage area.--1,566 sq mi, of which about 1,357 sq mi contributes directly to surface runoff.

Gage.--Nonrecording at site a quarter of a mile upstream at unknown datum during 1905-6 and at present site Oct. 1, 1937, to Nov. 8, 1938; recording thereafter. Datum of present gage is 1,490.87 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended above.

Bankfull stage.--9 ft.

Historical data.--Local residents indicate that flood in 1938 is maximum known.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 19, 1938	9.74	10,400	1951	May 17, 1951	10.79	13,200
	June 10, 1938	9.20	6,900		July 2, 1951	10.32	12,100
	June 16, 1938	14.7	60,000				
				1952	Apr. 21, 1952	8.62	3,030
1939	June 21, 1939	10.44	15,400				
				1953	June 5, 1953	10.13	9,100
1940	July 12, 1940	8.71	6,850		July 19, 1953	13.75	44,800
1941	Apr. 28, 1941	11.18	23,300	1954	May 12, 1954	8.95	7,180
	May 3, 1941	9.70	11,400		May 24, 1954	9.19	8,240
	May 20, 1941	10.50	17,400		June 10, 1954	13.30	38,100
	May 24, 1941	9.32	7,610				
	June 6, 1941	10.54	17,800	1955	May 11, 1955	9.02	7,390
	June 8, 1941	12.20	32,500		May 16, 1955	9.08	7,180
	June 29, 1941	9.80	11,400		May 19, 1955	10.77	16,600
	Sept.17, 1941	9.31	8,790		June 3, 1955	9.21	7,600
					June 8, 1955	9.75	10,300
1942	Oct. 4, 1941	8.86	5,700		June 19, 1955	10.61	15,400
	Oct. 23, 1941	9.47	8,370		Sept.18, 1955	8.81	6,190
1943	Oct. 15, 1942	10.45	15,800	1956	Oct. 4, 1955	10.20	13,100
	Oct. 17, 1942	8.92	6,000		May 2, 1956	11.34	19,800
					May 27, 1956	12.20	35,900
1944	June 1, 1944	9.92	9,240		July 17, 1956	10.10	19,100
	June 13, 1944	10.95	16,900				
				1957	Apr. 20, 1957	8.95	6,380
1945	June 5, 1945	8.77	6,160		Apr. 28, 1957	10.30	11,500
					May 8, 1957	9.30	7,390
1946	Apr. 29, 1946	9.68	10,500		May 16, 1957	14.55	72,000
					May 25, 1957	8.90	10,200
1947	May 12, 1947	11.35	21,400				
	May 15, 1947	9.00	9,200	1958	May 13, 1958	12.18	32,500
	May 20, 1947	8.96	8,660		May 17, 1958	8.23	6,100
	June 12, 1947	9.26	7,240				
	June 22, 1947	9.1	8,420	1959	May 8, 1959	8.82	6,500
	June 25, 1947	8.9	8,080		May 22, 1959	8.90	7,200
	July 18, 1947	9.70	8,660		May 26, 1959	10.06	12,300
					July 1, 1959	8.94	7,200
1948	June 21, 1948	11.77	21,500				
				1960	June 9, 1960	10.82	11,900
1949	Feb. 6, 1949	9.51	6,320				
	May 13, 1949	9.65	6,540	1961	Oct. 12, 1960	10.22	10,300
	May 18, 1949	10.56	11,900		Oct. 18, 1960	10.40	11,200
					June 3, 1961	11.30	17,200
1950	Sept.11, 1950	9.31	5,690				

7-3075. Quitaque Creek near Quitaque, Tex. (16)

Location.--Lat 34°14', long 101°07', on right bank about three-quarters of a mile upstream from W. F. Saul's ranchhouse, 1 mile downstream from Wilson Creek, 1½ miles upstream from Turkey Creek, 10 miles southwest of Quitaque, Briscoe County, and at mile 22.3.

Drainage area.--293 sq mi, of which about 35 sq mi contributes directly to surface runoff.

Gage.--Recording gage and concrete control. Datum of gage is 2,633.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended on basis of slope-area measurements at gage heights 2.70, 3.00, 5.59, 6.33, and 8.62 ft.

Bankfull stage.--9 ft.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept.19, 1946	2.77	423	1954	June 1, 1954	3.61	740
					Aug. 23, 1954	3.37	680
1947	May 8, 1947	3.57	720				
	May 10, 1947	5.59	1,720	1955	May 11, 1955	3.75	1,040
	May 16, 1947	3.40	660		May 18, 1955	6.15	2,000
					June 1, 1955	6.47	2,290
1948	Sept. 8, 1948	3.00	520		June 2, 1955	4.37	1,350
					June 28, 1955	8.62	4,470
1949	May 28, 1949	3.66	785				
	June 7, 1949	3.35	640	1956	May 27, 1956	3.28	700
					June 17, 1956	3.01	536
1950	June 11, 1950	3.03	536				
	July 23, 1950	3.20	600	1957	May 11, 1957	3.70	900
	Sept. 4, 1950	5.57	1,700		May 31, 1957	7.50	2,900
					Aug. 4, 1957	6.33	6,060
1951	May 17, 1951	3.08	556				
	Sept. 9, 1951	3.69	780	1958	June 23, 1958	2.32	812
1952	July 14, 1952	2.07	152	1959	June 5, 1959	2.09	613
					July 6, 1959	2.82	1,220
1953	Aug. 15, 1953	4.67	1,240		July 16, 1959	3.21	1,120
1954	May 10, 1954	4.11	970				

7-3080. Pease River near Crowell, Tex. (17)

Location.--Lat 34°06', long 99°41', at bridge on State Highway 283, 4 miles upstream from Raggedy Creek, 7 miles upstream from Kansas City, Mexico and Orient Railway (Santa Fe) bridge, 8 miles north of Crowell, Foard County, and at mile 43.9.

Drainage area.--3,037 sq mi, approximately, of which about 2,478 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 12, 1930, and May 18, 1935, to Feb. 11, 1939; recording Apr. 12, 1930, to May 17, 1935, and since Feb. 12, 1939. Datum of gage is 1,330.44 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 100,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	June 4, 1891	19.6	-	1928	May 16, 1928	6.10	7,900
				1929	May 12, 1929	6.68	37,200
1924	Aug. 22, 1924	8.20	29,700	1930	Apr. 29, 1930	5.43	3,000
1925	Sept.14, 1925	8.50	33,000				
				1931	June 9, 1931	8.85	36,900
1926	Sept.26, 1926	6.40	-	1932	July 6, 1932	8.90	37,400
1927	Oct. 3, 1926	9.92	48,800	1933	July 6, 1933	8.50	33,000

Peak stages and discharges of Pease River near Crowell, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Sept.14, 1934	7.10	16,000	1941	June 6, 1941	11.88	106,000
1935	May 17, 1935	12.06	74,700	1942	Apr. 28, 1942	10.95	75,800
				1943	June 5, 1943	8.08	40,600
1936	Sept.18, 1936	13.00	88,000	1944	June 14, 1944	9.85	52,300
1937	Aug. 22, 1937	9.00	38,500	1945	July 10, 1945	11.20	81,000
1938	June 25, 1938	8.1	40,000				
1939	June 21, 1939	11.00	63,200	1946	Sept.13, 1946	7.70	19,200
1940	May 28, 1940	7.62	24,400	1947	May 16, 1947	8.43	30,400

7-3125. Wichita River at Wichita Falls, Tex. (18)

Location.--Lat 33°54'30", long 98°32'05", near center of stream on downstream side of bridge on Beverly Drive in Wichita Falls, Wichita County, 4 miles upstream from Fort Worth and Denver Railway Co. bridge, about 7 miles upstream from Holliday Creek, and at mile 55.3.

Drainage area.--3,140 sq mi, of which 2,086 sq mi is above Lake Kemp Dam.

Gage.--Nonrecording. Prior to February 1902, at highway bridge about 4 miles downstream at different datum. Datum of present gage is 924.26 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Historical data.--Flood of June 18, 1915, is greatest known. Maximum stage between beginning of storage in Lake Kemp Oct. 1, 1922, and establishment of station Mar. 30, 1938, was that of Sept. 18, 1936.

Remarks.--Flow largely regulated by Lake Kemp (capacity, 461,800 acre-ft). Lake Kemp was completed in 1923 and has never filled. Floods listed herein since 1923 originated downstream from Lake Kemp. Water is diverted at diversion dam (capacity of diversion reservoir, about 40,000 acre-ft) about 50 miles upstream for irrigation in the vicinity of Wichita Falls. Forty-two thousand acres of land are available for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	July 21, 1900	12.10	16,740	1947	May 21, 1947	16.39	6,100
				1948	June 1, 1948	12.60	4,040
1901	May 17, 1901	19.40	37,440	1949	May 26, 1949	7.71	1,500
				1950	Aug. 4, 1950	21.42	9,000
1915	June 8, 1915	-	a50,000				
				1951	May 20, 1951	18.98	6,670
1936	Sept.18, 1936	20.6	-	1952	May 28, 1952	6.76	1,210
				1953	July 2, 1953	9.60	2,400
1938	June 10, 1938	17.00	7,240	1954	May 13, 1954	14.83	4,710
1939	Aug. 10, 1939	9.42	2,430	1955	Sept.27, 1955	18.12	7,200
1940	Aug. 15, 1940	10.17	2,830				
				1956	Oct. 5, 1955	20.88	9,510
1941	June 4, 1941	22.71	15,500	1957	May 3, 1957	18.27	7,200
1942	Oct. 3, 1941	24.00	17,800	1958	May 4, 1958	14.90	5,280
1943	Apr. 18, 1943	11.20	3,510	1959	June 24, 1959	13.51	4,500
1944	Mar. 1, 1944	5.42	720	1960	Oct. 4, 1959	16.57	5,820
1945	Sept.30, 1945	14.82	5,170				
				1961	Mar. 19, 1961	17.93	7,640
1946	Sept.14, 1946	7.18	1,470				

a Computed by Big Wichita River Irrigation Co.

7-3145. Little Wichita River near Archer City, Tex. (19)

Location.--Lat 33°40', long 98°36', near left bank on upstream side of pier of bridge on State Highway 79, 1.5 miles downstream from confluence of North and Middle Forks, 4.8 miles north of Archer City, Archer County, and at mile 45.5.

Drainage area.--481 sq mi, of which 275 sq mi is above Lake Kickapoo near Archer City.

Gage.--Recording gage and concrete control prior to Aug. 17, 1954, on downstream side of bridge; nonrecording thereafter at present site. Datum of gage is 934.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--22 ft.

Remarks.--Some regulation since Feb. 1, 1946, by Lake Kickapoo on North Fork (capacity, 106,000 acre-ft). Diversions from Lake Kickapoo for Wichita Falls municipal use. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	June 1930	a28	-	1944	Feb. 29, 1944	15.57	1,060
				1945	July 10, 1945	21.50	2,030
1932	July 7, 1932	21.88	2,380				
1933	May 26, 1933	25.01	7,840	1946	Oct. 1, 1945	21.46	2,150
1934	Mar. 3, 1934	22.50	2,510	1947	Dec. 12, 1946	22.82	2,680
1935	May 6, 1935	24.81	5,940	1948	Oct. 26, 1947	15.50	1,140
				1949	June 26, 1949	17.33	1,380
1936	Sept.17, 1936	25.67	13,000	1950	Aug. 2, 1950	25.91	15,100
1937	Mar. 14 or 15 1937	17.1	1,470				
				1951	May 20, 1951	18.81	1,330
1938	Mar. 30, 1938	22.46	2,780	1952	May 28, 1952	10.32	426
1939	May 17, 1939	16.98	1,660	1953	July 24, 1953	10.63	450
1940	June 17, 1940	21.58	2,610	1954	Oct. 26, 1953	24.48	4,400
				1955	Sept.26, 1955	25.50	9,600
1941	June 11, 1941	24.77	4,350				
1942	Oct. 31, 1941	26.18	17,900	1956	Oct. 4, 1955	23.63	b2,570
1943	Oct. 19, 1942	22.42	2,620				

a From information by State Highway Department.
b Records incomplete, probably maximum for year.

7-3150. Little Wichita River near Henrietta, Tex. (20)

Location.--Lat 33°50'00", long 98°12'30", on left bank at downstream side of bridge on State Highway 148, 1.5 miles northwest of Henrietta, Clay County, 4 miles upstream from Turkey Creek, and 5 miles upstream from Dry Fork Little Wichita River.

Drainage area.--1,037 sq mi.

Gage.--Nonrecording prior to June 26, 1953; recording gage and concrete control thereafter. Datum of gage is 831.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Remarks.--Some regulation by Lake Kickapoo since 1946. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	-	a21	-	1957	May 2, 1957	18.36	6,390
				1958	Nov. 10, 1957	17.23	3,390
1953	July 25, 1953	9.78	623	1959	June 23, 1959	16.82	2,570
1954	Oct. 26, 1953	17.91	5,890	1960	Oct. 8, 1959	16.78	2,570
1955	Sept.26, 1955	17.78	5,430				
				1961	Oct. 15, 1960	12.90	1,660
1956	Oct. 1, 1955	17.44	4,080				

a From information by State Highway Department.

7-3155. Red River near Terral, Okla. (21)

Location.--Lat 33°52'50", long 97°56'15", near center of stream on downstream side of pier of bridge on U.S. Highway 81, a quarter of a mile downstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 1.2 miles south of Terral, Jefferson County, 3.2 miles downstream from Little Wichita River, and at mile 872.

Drainage area.--28,723 sq mi, of which about 22,787 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 12, 1939; recording and nonrecording thereafter. Datum of gage is 770.31 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Subject to frequent shifts.

Historical data.--Floods in 1891 and May 1, 1908, are reported to have reached about the same stage as flood of May 19, 1935.

Remarks.--Some regulation since 1923 by Lake Kemp on Wichita River, in Baylor County, Tex. (capacity, 461,800 acre-ft), since 1946 by Lake Kickapoo on North Fork Little Wichita River in Archer County, Tex. (capacity, 106,000 acre-ft), and since 1943 by Lake Altus on North Fork Red River in Kiowa County, Okla. (capacity, 142,900 acre-ft). Base for partial-duration series, 21,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 19, 1935	a27.2	-	1947	May 19, 1947	20.14	82,000
					May 21, 1947	18.72	57,000
1938	May 5, 1938	16.95	29,500		May 24, 1947	17.78	44,400
	May 24, 1938	17.85	43,700		June 3, 1947	16.05	25,500
	June 10, 1938	17.65	40,900				
	June 18, 1938	17.48	39,500	1948	June 25, 1948	16.27	18,000
	June 27, 1938	16.60	28,400				
				1949	May 21, 1949	18.00	33,700
1939	June 23, 1939	18.14	43,000				
				1950	May 12, 1950	18.82	53,800
1940	July 2, 1940	16.62	22,400		July 24, 1950	16.90	21,700
	Aug. 19, 1940	16.63	21,800		July 26, 1950	17.58	28,400
					Aug. 2, 1950	17.36	26,200
1941	May 2, 1941	18.35	43,500		Sept.14, 1950	17.65	22,400
	May 5, 1941	25.57	134,000				
	May 13, 1941	19.27	57,800	1951	May 19, 1951	26.68	164,000
	May 23, 1941	20.76	74,600		June 3, 1951	15.85	21,200
	May 25, 1941	19.82	62,500		June 7, 1951	19.47	44,600
	June 3, 1941	19.40	54,700		June 13, 1951	16.71	25,500
	June 8, 1941	26.12	197,000		June 21, 1951	16.21	24,700
	June 11, 1941	22.97	119,000		July 4, 1951	16.60	27,100
	June 16, 1941	21.50	73,200				
				1952	May 19, 1952	17.00	30,300
1942	Oct. 3, 1941	20.26	76,000				
	Oct. 6, 1941	18.15	43,500	1953	Aug. 20, 1953	14.87	13,000
	Oct. 24, 1941	18.35	47,900				
	Oct. 31, 1941	21.45	91,000	1954	Oct. 25, 1953	19.55	57,300
	Nov. 2, 1941	18.05	50,100		May 14, 1954	21.42	85,800
	Apr. 9, 1942	18.90	54,900		May 26, 1954	18.40	36,800
	Apr. 21, 1942	17.63	32,700				
	Apr. 26, 1942	18.70	46,800	1955	May 21, 1955	22.44	109,000
	Apr. 30, 1942	18.80	47,900		June 22, 1955	19.51	42,800
	Sept.21, 1942	17.00	30,300		Sept.26, 1955	16.62	24,000
1943	Oct. 17, 1942	16.78	39,300	1956	Oct. 7, 1955	23.30	111,000
	Oct. 19, 1942	16.50	32,700		May 29, 1956	18.43	49,400
	May 12, 1943	17.38	41,300				
	May 20, 1943	16.34	28,700	1957	Apr. 22, 1957	17.73	41,400
	May 29, 1943	17.58	43,500		Apr. 27, 1957	18.26	45,800
	June 6, 1943	16.58	31,100		Apr. 30, 1957	19.39	62,500
					May 6, 1957	19.42	72,500
1944	June 16, 1944	17.20	38,700		May 10, 1957	18.12	52,800
					May 13, 1957	18.82	60,800
1945	Apr. 17, 1945	16.60	28,200		May 20, 1957	21.02	87,800
	July 12, 1945	16.42	26,100		May 23, 1957	18.11	46,200
	Sept.27, 1945	16.86	34,400		May 27, 1957	20.06	71,900
					May 31, 1957	16.73	27,100
1946	Oct. 1, 1945	19.62	66,200		June 4, 1957	22.72	110,000
1947	Apr. 17, 1947	16.25	29,100	1958	May 4, 1958	15.27	16,700
	May 14, 1947	17.85	40,800				

a Annual peak only.

Peak stages and discharges of Red River near Terral, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1959	May 24, 1959	17.14	34,200	1960	Dec. 19, 1959	16.24	25,200
	June 24, 1959	17.22	35,200		June 10, 1960	16.61	32,200
1960	Oct. 6, 1959	17.75	47,000	1961	Oct. 20, 1960	20.42	72,900

7-3160. Red River near Gainesville, Tex. (22)

Location.--Lat 33°44', long 97°10', in SW¼ sec.36, T.9 S., R.1 E., near center of span on downstream side of bridge on U.S. Highway 77, a quarter of a mile downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 5 miles downstream from Fish Creek, 7 miles north of Gainesville, and at mile 791.5.

Drainage area.--30,782 sq mi, of which about 24,846 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 17, 1939; recording thereafter. Datum of gage is 627.91 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft.

Remarks.--Information on peaks during short periods of no record in 1936-37 obtained from inspection of records for downstream stations. Some regulation since 1923 by Lake Kemp on Wichita River, since 1943 by Lake Altus on North Fork Red River, and since 1946 by Lake Kickapoo on North Fork Little Wichita River. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 24,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Dec. 5, 1935	-	(a)	1942	Oct. 4, 1941	22.32	156,000
	May 9, 1936	-	(a)		Oct. 25, 1941	13.66	44,000
	May 30, 1936	12.38	32,600		Nov. 1, 1941	20.36	136,000
	June 8, 1936	11.60	26,300		Apr. 9, 1942	16.11	67,700
	Sept.19, 1936	12.74	36,200		Apr. 21, 1942	13.35	47,000
	Sept.21, 1936	13.40	42,500		Apr. 24, 1942	15.65	72,000
	Sept.28, 1936	15.95	67,900		May 1, 1942	14.21	53,000
					Sept.22, 1942	11.26	31,000
1937	June 1, 1937	11.4	24,500				
	June 10, 1937	14.9	54,400	1943	Oct. 20, 1942	11.96	35,500
	Aug. 24, 1937	-	(a)		May 12, 1943	13.80	47,200
					May 21, 1943	12.00	32,000
1938	Oct. 14, 1937	-	(a)		May 30, 1943	13.37	43,100
	Feb. 17, 1938	15.67	65,400		June 7, 1943	12.30	33,100
	Mar. 30, 1938	14.20	50,400				
	May 6, 1938	11.80	29,000	1944	June 16, 1944	12.43	34,000
	May 22, 1938	12.00	30,800				
	May 24, 1938	15.82	67,600	1945	Mar. 15, 1945	14.40	52,000
	June 11, 1938	13.8	46,400		Mar. 19, 1945	12.65	40,000
	June 18, 1938	12.70	35,300		Apr. 2, 1945	12.05	28,000
	June 28, 1938	11.70	26,300		Apr. 17, 1945	13.10	31,700
					July 12, 1945	12.89	24,000
1939	June 24, 1939	13.07	38,900		Sept.28, 1945	13.00	35,000
1940	May 30, 1940	12.31	27,600	1946	Oct. 2, 1945	17.75	83,500
	July 3, 1940	13.23	37,500		May 31, 1946	12.60	28,200
	Aug. 16, 1940	11.95	24,300				
	Aug. 20, 1940	11.98	24,300	1947	Oct. 10, 1946	11.75	24,000
					Dec. 12, 1946	12.71	33,800
1941	Feb. 3, 1941	12.19	28,400		Apr. 16, 1947	12.65	33,000
	Apr. 18, 1941	12.58	28,000		May 15, 1947	14.25	41,800
	May 3, 1941	13.59	40,800		May 20, 1947	17.90	71,000
	May 6, 1941	20.43	116,000		May 26, 1947	15.48	52,300
	May 13, 1941	13.27	36,600				
	May 24, 1941	16.20	68,400	1948	June 26, 1948	13.80	24,400
	June 3, 1941	14.53	51,000				
	June 9, 1941	24.15	168,000	1949	May 22, 1949	14.44	44,000
	June 17, 1941	16.61	73,000		June 17, 1949	13.90	38,000
	June 28, 1941	13.06	35,600				
	July 3, 1941	12.28	28,500	1950	May 13, 1950	15.75	51,200

a A peak higher than the base probably occurred this date.

Peak stages and discharges of Red River near Gainesville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 24, 1950	13.54	25,700	1956	Oct. 8, 1955	21.70	106,000
	July 27, 1950	14.36	35,300		May 30, 1956	15.12	36,000
	Aug. 3, 1950	14.80	39,900				
	Aug. 24, 1950	13.94	27,700	1957	Apr. 23, 1957	15.76	43,600
	Aug. 28, 1950	14.98	46,000		Apr. 27, 1957	17.83	62,800
	Sept.13, 1950	15.14	46,000		May 1, 1957	18.57	68,500
					May 7, 1957	18.96	69,500
1951	May 21, 1951	26.53	146,000		May 11, 1957	16.66	48,100
	June 4, 1951	15.74	39,100		May 14, 1957	18.06	60,900
	June 8, 1951	17.50	55,300		May 20, 1957	b22.80	100,000
	June 14, 1951	15.63	39,300		May 28, 1957	b21.95	75,000
	June 22, 1951	13.86	24,700		June 5, 1957	b25.14	102,000
	July 4, 1951	15.11	34,000				
				1958	May 5, 1958	14.36	21,600
1952	May 20, 1952	13.00	32,300				
				1959	May 25, 1959	15.28	33,000
1953	Aug. 22, 1953	11.00	9,820		June 25, 1959	16.00	37,000
1954	Oct. 26, 1953	16.20	50,800	1960	Oct. 7, 1959	17.95	59,300
	May 15, 1954	19.32	74,200		Dec. 18, 1959	14.77	31,100
	May 27, 1954	15.67	41,800		June 11, 1960	16.00	34,000
1955	May 22, 1955	21.08	96,900	1961	Oct. 22, 1960	20.92	67,800
	June 22, 1955	16.90	49,900				

b Backwater from Lake Texoma.

7-3320. Red River near Colbert, Okla. (23)
(Published as "near Denison, Tex." prior to 1934)

Location.--Lat 33°49', long 96°31', in E½ sec.36, T.8 S., R.7 E., near center of span on downstream side of pier of former toll bridge, 1.3 miles downstream from Sand Creek, 2 miles south of Colbert, 2.9 miles downstream from Denison Dam, and at mile 723.0.

Drainage area.--39,777 sq mi, of which about 33,841 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 25, 1934; recording thereafter. Datum of gage was 13.00 ft higher 1906-8, 9.49 ft higher Oct. 1, 1923, to Sept. 30, 1931, and 9.71 ft higher Oct. 1, 1931, to Sept. 24, 1934. At site 0.6 mile upstream, datum was 13.00 ft higher 1909-17 and 10.00 ft higher during 1918-23 and Sept. 25, 1934, to July 28, 1942. Datum of present gage is 497.36 ft above mean sea level, datum of 1929. All stages adjusted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 180,000 cfs and extended above.

Bankfull stage.--35 ft.

Historical data.--In 1906, it was determined that highest stage known was 36.6 ft, date unknown (probably July 1876). According to local resident, the flood of May 26, 1908, was greatest known since at least 1837.

Remarks.--Gage-height records prior to 1934 collected by U.S. Weather Bureau. Stage-relation curve furnished by Corps of Engineers. Flow completely regulated since Oct. 31, 1943, by Lake Texoma (capacity, 5,530,300 acre-ft), with some prior regulation by construction operations. Base for partial-duration series, 38,000 cfs. Only annual peaks are shown prior to 1924 and subsequent to 1942.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 11, 1906	26.4	-	1918	Apr. 15, 1918	23.6	-
1907	May 27, 1907	25.1	-	1919	Oct. 29, 1918	26.1	-
1908	May 26, 1908	45.5	-	1920	(a)	25.4	-
1909	June 27, 1909	21.1	-				
				1921	Oct. 25, 1920	23.8	-
1912	June 20, 1912	21.8	-	1922	May 11, 1922	27.7	-
				1923	June 12, 1923	21.8	-
1914	Dec. 5, 1913	25.4	-				
1915	June 9, 1915	35.5	-	1924	Oct. 17, 1923	29.1	158,000
					Oct. 28, 1923	22.0	62,000
1916	Oct. 19, 1915	29.8	-		Nov. 15, 1923	20.3	42,200

a Oct. 11, 1919, May 18, 1920.

Peak stages and discharges of Red River near Colbert, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Apr. 26, 1924	20.7	48,800	1936	Sept.28, 1936	23.4	86,600
	Apr. 29, 1924	20.3	44,400				
				1937	June 11, 1937	21.6	57,200
1925	Sept.16, 1925	27.1	133,000				
				1938	Feb. 18, 1938	27.3	138,000
1926	Aug. 17, 1926	19.8	39,700		Mar. 29, 1938	23.8	93,800
					May 25, 1938	20.4	60,000
1927	Oct. 6, 1926	26.2	122,000		June 11, 1938	19.4	47,000
	Oct. 12, 1926	24.0	91,800				
	Apr. 11, 1927	21.3	53,700	1939	June 24, 1939	19.5	39,100
	Apr. 14, 1927	23.5	80,200				
	Apr. 18, 1927	24.7	99,600	1940	July 4, 1940	20.4	44,400
	Apr. 21, 1927	20.5	47,800				
	July 14, 1927	24.3	94,400	1941	Apr. 18, 1941	20.5	45,100
					May 3, 1941	19.9	40,600
1928	May 19, 1928	25.3	107,000		May 7, 1941	26.4	117,000
	June 18, 1928	20.2	45,400		May 24, 1941	22.3	67,000
	June 21, 1928	20.0	42,000		June 4, 1941	21.2	59,000
					June 10, 1941	31.8	182,000
1929	May 14, 1929	24.7	99,600		June 17, 1941	24.3	94,600
	Sept.12, 1929	21.3	57,300				
				1942	Oct. 5, 1941	30.0	162,000
1930	May 9, 1930	19.8	45,700		Oct. 25, 1941	21.6	59,000
	May 16, 1930	20.0	46,400		Nov. 1, 1941	28.3	149,000
	June 18, 1930	19.7	39,800		Apr. 9, 1942	25.2	106,000
					Apr. 25, 1942	32.0	183,000
1931	Oct. 16, 1930	22.3	66,900		May 1, 1942	22.0	66,200
	Dec. 7, 1930	20.2	46,500		May 6, 1942	19.9	44,300
1932	Jan. 7, 1932	19.5	38,600	1943	May 15, 1943	21.34	60,000
	Feb. 16, 1932	23.3	81,500	1944	June 22, 1944	12.33	5,640
	June 29, 1932	21.0	52,500	1945	May 3, 1945	22.12	47,700
	July 9, 1932	19.8	40,800				
				1946	Oct. 8, 1945	21.44	40,600
1933	Dec. 26, 1932	19.8	38,600	1947	May 29, 1947	24.00	69,200
	May 16, 1933	20.8	49,500	1948	July 12, 1948	18.57	34,500
	May 25, 1933	25.2	106,000	1949	June 14, 1949	18.35	32,800
				1950	Aug. 10, 1950	20.04	40,100
1934	Mar. 1, 1934	18.6	27,300				
				1951	May 26, 1951	21.02	48,300
1935	May 4, 1935	20.5	44,500	1952	Apr. 28, 1952	11.60	10,400
	May 12, 1935	20.2	39,500	1953	Aug. 10, 1953	11.33	9,650
	May 19, 1935	28.6	154,000	1954	May 16, 1954	18.92	37,700
	May 21, 1935	31.8	201,000	1955	June 23, 1955	19.45	42,300
	May 29, 1935	22.7	71,500				
	June 2, 1935	21.9	61,600	1956	Oct. 8, 1955	19.56	41,400
	June 15, 1935	24.6	97,400	1957	June 5, 1957	26.26	102,000
	June 18, 1935	22.3	67,100	1958	May 9, 1958	18.31	44,100
				1959	July 23, 1959	9.84	10,500
1936	Dec. 6, 1935	20.7	46,500	1960	Oct. 13, 1959	18.68	48,600
	May 9, 1936	21.4	61,600				
	Sept.22, 1936	20.5	41,500	1961	Oct. 21, 1960	16.20	33,800

7-3355. Red River at Arthur City, Tex. (24)

Location.--Lat 33°53', long 95°30', in NW¼ sec.11, T.8 S., R.17 E., near right bank on downstream side of pier of bridge on U.S. Highway 271 at Arthur City, 10.6 miles downstream from Muddy Boggy River, 26.0 miles upstream from Kiamichi River, and at mile 633.1.

Drainage area.--44,531 sq mi, of which about 38,595 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 25, 1940; recording thereafter. Prior to 1935, at railroad bridge 200 ft upstream at present datum. Datum of present gage is 380.07 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined in recent years by current-meter measurements below 200,000 cfs. Rating for 1906-11 extended above 41,000 cfs on basis of records for later years.

Bankfull stage.--26 ft.

Remarks.--Considerable regulation since 1943 by Lake Texoma, 92.8 miles above station. Records for 1936-58 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 50,000 cfs. Only annual peak stages are shown 1891-1905, 1912-35.

Peak stages and discharges of Red River at Arthur City, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	June 10, 1891	30.0	-	1941	May 4, 1941	18.16	57,000
1892	May 19, 1892	34.8	-		May 8, 1941	24.27	108,000
1893	Mar. 9, 1893	15.5	-		May 15, 1941	17.26	50,200
1894	Mar. 21, 1894	22.2	-		May 25, 1941	19.56	67,800
1895	July 13, 1895	25.0	-		June 5, 1941	18.56	64,600
					June 12, 1941	31.27	183,000
1897	May 14, 1897	21.9	-				
1898	May 8, 1898	21.1	-	1942	Oct. 7, 1941	28.00	148,000
1900	Nov. 25, 1899	28.6	-		Oct. 27, 1941	19.13	61,000
					Nov. 3, 1941	27.65	141,000
1901	Apr. 20, 1901	25.6	-		Apr. 10, 1942	27.85	142,000
1902	June 1, 1902	27.3	-		Apr. 21, 1942	24.12	115,000
1903	July 5, 1903	28.8	-		Apr. 26, 1942	31.55	199,000
1904	June 13, 1904	24.0	-		May 7, 1942	19.57	53,900
1905	May 31, 1905	25.1	-		June 11, 1942	18.90	58,000
1906	May 4, 1906	26.1	93,800	1943	May 15, 1943	22.40	94,400
	Aug. 13, 1906	23.0	67,200		May 18, 1943	21.20	81,200
					May 31, 1943	19.56	63,000
1907	May 29, 1907	23.2	68,800				
	June 2, 1907	21.0	53,300	1944	May 3, 1944	15.93	34,700
	July 12, 1907	20.8	52,000				
				1945	Feb. 22, 1945	21.25	80,000
1908	Apr. 12, 1908	22.0	60,000		Feb. 28, 1945	19.68	66,000
	May 14, 1908	21.0	53,300		Mar. 18, 1945	20.00	65,500
	May 28, 1908	43.2	400,000		Mar. 31, 1945	19.17	62,800
	June 7, 1908	32.1	170,000		Apr. 21, 1945	19.60	61,700
	June 20, 1908	28.6	121,000		June 13, 1945	21.92	91,000
					June 18, 1945	21.60	88,000
1909	Dec. 2, 1908	20.0	47,000		July 11, 1945	18.60	51,100
1910	Dec. 3, 1909	18.0	35,600	1946	Oct. 6, 1945	18.86	59,800
					Oct. 9, 1945	19.70	68,000
1911	July 24, 1911	16.5	28,200		Feb. 19, 1946	17.89	57,500
					Feb. 23, 1946	17.82	56,500
1912	Apr. 2, 1912	21.0	-				
1913	July 5, 1913	16.7	-	1947	Nov. 7, 1946	23.60	104,000
1914	Dec. 7, 1913	26.7	-		Dec. 12, 1946	21.67	86,700
1915	June 10, 1915	33.7	-		June 4, 1947	20.16	68,500
1916	Oct. 20, 1915	29.8	-	1948	Feb. 26, 1948	18.02	57,700
1917	June 2, 1917	16.0	-		May 12, 1948	20.46	75,000
1918	Apr. 16, 1918	22.0	-		July 13, 1948	19.42	64,500
1919	Oct. 30, 1918	22.0	-				
1920	May 19, 1920	24.2	-	1949	Jan. 25, 1949	17.34	55,900
1921	Oct. 27, 1920	21.7	-	1950	Jan. 14, 1950	17.55	50,000
1922	May 12, 1922	26.2	-		Feb. 13, 1950	20.02	69,400
1923	Sept.23, 1923	20.0	-		May 3, 1950	18.26	55,200
1924	Oct. 18, 1923	28.2	-		July 27, 1950	18.40	52,800
1925	Sept.18, 1925	25.0	-				
				1951	June 8, 1951	19.70	60,600
1926	Aug. 18, 1926	25.0	-		June 12, 1951	19.50	58,500
1927	Apr. 16, 1927	27.0	-		June 17, 1951	21.01	74,500
1928	May 21, 1928	24.7	-				
1929	May 15, 1929	26.7	-	1952	Apr. 23, 1952	21.74	93,400
1930	May 19, 1930	21.7	-				
				1953	Apr. 30, 1953	18.54	53,800
1931	Oct. 17, 1930	18.8	-				
1932	Feb. 18, 1932	25.0	-	1954	May 17, 1954	18.80	57,000
1933	May 27, 1933	25.0	-				
1934	Mar. 3, 1934	18.5	-	1955	June 24, 1955	17.30	42,200
1935	June 17, 1935	31.7	-	1956	Oct. 9, 1955	17.12	40,400
1936	Sept.29, 1936	22.8	95,200	1957	Apr. 28, 1957	23.70	99,200
					May 5, 1957	22.62	76,400
1937	July 12, 1937	20.6	71,800		May 14, 1957	22.30	79,200
					May 23, 1957	23.30	88,700
1938	Jan. 24, 1938	19.2	58,100		May 27, 1957	25.00	105,000
	Feb. 19, 1938	34.3	222,000		June 6, 1957	28.35	136,000
	Mar. 30, 1938	25.9	148,000		Sept.23, 1957	18.73	52,800
	May 26, 1938	18.8	54,500				
				1958	Nov. 6, 1957	19.45	55,200
1939	Apr. 17, 1939	19.6	58,100		May 3, 1958	26.35	120,000
1940	Apr. 7, 1940	17.82	51,000	1959	July 27, 1959	16.46	34,700
	May 24, 1940	18.35	55,200				
				1960	Oct. 14, 1959	19.20	56,800
1941	Apr. 19, 1941	19.13	63,800				
	Apr. 24, 1941	22.92	95,200	1961	Mar. 31, 1961	16.10	35,700

7-3370. Red River at Index, Ark. (25)

Location.--Lat 33°33'05", long 94°02'25", in SW¼ sec.7, T.14 S., R.28 W., on downstream side of pier of bridge on U.S. Highway 71 at Index, 2½ miles south of Ogden, 20.6 miles upstream from Little River, and at mile 485.3.

Drainage area.--48,030 sq mi, of which about 42,094 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 12, 1939, at present site or at Kansas City Southern Railway Co. bridge 1,100 ft upstream; recording at present site thereafter. Datum of gage is 246.87 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements since 1937.

Bankfull stage.--25 ft.

Remarks.--Considerable regulation by Lake Texoma, 241 miles above station since July 1942 (capacity, 5,530,300 acre-ft). Prior to 1951, records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 70,000 cfs. Only annual peak stages are shown prior to 1937.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	Apr. 19, 1918	24.5	-	1945	Mar. 2, 1945	24.17	120,000
1919	Oct. 31, 1918	22.0	-		May 20, 1945	22.63	110,000
1920	May 21, 1920	27.6	-		Apr. 1, 1945	28.05	152,000
					June 14, 1945	23.90	101,000
1921	June 27, 1921	23.5	-		June 22, 1945	c24.37	120,000
1922	May 15, 1922	26.3	-				
1923	Sept.24, 1923	23.3	-	1946	Oct. 11, 1945	20.80	76,400
1924	Dec. 18, 1923	27.0	-				
1925	May 1, 1925	20.5	-	1947	Nov. 9, 1946	23.74	110,000
					Dec. 15, 1946	23.47	108,000
1926	Aug. 21, 1926	23.5	-		May 2, 1947	20.40	76,500
1927	Apr. 23, 1927	30.8	-		June 4, 1947	20.50	74,700
1928	May 23, 1928	25.0	-				
1929	May 21, 1929	27.2	-	1948	May 13, 1948	21.40	84,000
1930	May 21, 1930	27.2	-				
				1949	Jan. 29, 1949	24.56	112,000
1931	Dec. 9, 1930	20.2	-				
1932	Feb. 21, 1932	27.4	-	1950	Jan. 16, 1950	20.98	78,800
1933	May 29, 1933	24.7	-		Feb. 3, 1950	20.52	71,200
1934	Mar. 4, 1934	20.5	-		Feb. 15, 1950	23.48	108,000
1935	May 25, 1935	31.1	-		May 4, 1950	22.78	87,000
					July 29, 1950	20.00	75,400
1936	Dec. 9, 1935	a22.1	-		Sept.18, 1950	21.23	74,000
1937	Oct. 1, 1936	24.00	88,100	1951	June 18, 1951	23.64	102,000
1938	Jan. 26, 1938	25.95	114,000	1952	Apr. 25, 1952	24.50	112,000
	Feb. 23, 1938	34.25	297,000				
	Apr. 2, 1938	27.55	139,400	1953	May 2, 1953	22.48	91,700
					May 17, 1953	20.50	76,400
1939	Apr. 19, 1939	21.2	70,600				
				1954	May 13, 1954	20.50	76,200
1940	May 26, 1940	19.7	70,100				
				1955	Mar. 23, 1955	17.86	56,500
1941	Apr. 20, 1941	b20.29	74,000				
	Apr. 26, 1941	24.27	108,000	1956	Feb. 20, 1956	d15.94	41,800
	May 10, 1941	23.36	94,100				
	June 16, 1941	27.83	145,000	1957	Apr. 30, 1957	26.92	128,000
					May 16, 1957	24.03	86,000
1942	Oct. 9, 1941	24.55	106,000		May 29, 1957	26.75	132,000
	Nov. 5, 1941	b25.90	128,000		June 8, 1957	28.56	154,000
	Apr. 14, 1942	28.33	145,000				
	Apr. 23, 1942	25.33	107,000	1958	May 6, 1958	25.32	145,000
	May 1, 1942	29.85	176,000				
				1959	July 29, 1959	17.00	48,400
1943	May 16, 1943	b24.35	112,000				
				1960	Oct. 16, 1959	18.43	61,000
1944	May 4, 1944	21.88	87,800				
				1961	Dec. 13, 1960	17.69	60,400
1945	Feb. 24, 1945	23.25	105,000				

a Maximum crest stage. Maximum stage occurred Sept. 30 on rise that created Oct. 1, 1936.
b Occurred on following day.
c Occurred on preceding day.
d Occurred Oct. 14, 1955.

7-3425. South Sulphur River near Cooper, Tex. (26)

Location.--Lat 33°21', long 95°36', on left bank of cut channel at downstream side of pile bent of bridge on State Highway 154, 0.6 mile downstream from Big Creek, 1.0 mile upstream from Brushy Creek, 3.5 miles downstream from Doctors Creek, and 5.7 miles southeast of Cooper, Delta County.

Drainage area.--527 sq mi.

Gage.--Nonrecording prior to Nov. 9, 1949; recording thereafter. Prior to May 14, 1955, at site 700 ft upstream at present datum. Datum of gage is 374.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Levees broke during flood of Apr. 29, 1953, at a gage height of 23 ft.

Historical data.--Leeves were broken by floods in 1935, 1939.

Remarks.--Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 7, 1943	18.55	7,390	1954	May 13, 1954	16.01	6,100
1944	May 2, 1944	20.40	13,000	1955	Oct. 25, 1954	19.19	10,000
1945	Feb. 21, 1945	19.20	9,560	1956	May 3, 1956	17.02	3,700
	Mar. 30, 1945	21.50	16,400				
	June 13, 1945	20.00	11,800	1957	Apr. 4, 1957	18.68	10,300
					Apr. 27, 1957	22.37	23,200
1946	Feb. 6, 1946	18.58	7,930		May 14, 1957	21.19	18,400
					May 27, 1957	19.63	13,000
1947	Nov. 4, 1946	21.02	14,800		June 5, 1957	19.43	12,400
					Sept.23, 1957	17.90	8,040
1948	May 12, 1948	18.60	7,930				
				1958	Nov. 6, 1957	22.36	23,200
1949	Jan. 27, 1949	20.60	13,600		Apr. 28, 1958	18.73	10,300
	Feb. 25, 1949	19.60	10,700		May 1, 1958	20.93	17,400
					May 3, 1958	20.28	15,200
1950	Feb. 3, 1950	20.76	14,100				
	Feb. 15, 1950	22.09	18,300	1959	July 28, 1959	15.63	3,310
	Sept.17, 1950	20.16	12,300				
				1960	Dec. 16, 1959	19.83	13,600
1951	June 13, 1951	19.47	10,300				
				1961	Dec. 11, 1960	18.69	10,300
1952	Apr. 23, 1952	20.49	13,300				
1953	Apr. 29, 1953	23.00	23,800				

7-3430. North Sulphur River near Cooper, Tex. (27)

Location.--Lat 33°28', long 95°35', on left bank at downstream side of bridge on State Highway 24, 4.9 miles upstream from Auds Creek, 7.3 miles upstream from Click Creek, and 8.6 miles northeast of Cooper, Delta County.

Drainage area.--276 sq mi.

Gage.--Nonrecording prior to Nov. 8, 1949; recording thereafter. At site 50 ft upstream at datum 4.00 ft higher prior to May 22, 1960. Datum of gage is 377.42 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Historical data.--Flood of 1944 was highest known since at least 1915; flood of 1932 reached about the same stage, from information by Corps of Engineers and local residents.

Remarks.--No regulation. This gage is on a rectified channel which extends 28 miles upstream and 18 miles downstream. The natural channel was greatly shortened in this reach resulting in high peak discharges and rapid runoff. Base for partial-duration series, 20,000 cfs.

Peak stages and discharges of North Sulphur River near Cooper, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 2, 1944	a26.6	-	1956	Feb. 17, 1956	21.8	32,300
					May 1, 1956	18.25	23,600
1950	Jan. 12, 1950	18.45	21,700				
	Jan. 31, 1950	21.30	28,000	1957	Apr. 1, 1957	19.15	31,500
	Feb. 12, 1950	23.15	32,000		Apr. 26, 1957	22.50	39,800
	May 2, 1950	22.55	30,700		May 13, 1957	22.30	39,200
	Sept.16, 1950	22.36	31,900		May 23, 1957	23.0	41,000
					May 26, 1957	17.8	28,000
1951	Feb. 20, 1951	18.10	22,400		Sept.22, 1957	16.17	24,000
	June 3, 1951	21.80	32,300				
	June 12, 1951	22.25	33,400	1958	Nov. 4, 1957	20.90	35,800
					May 2, 1958	22.35	39,500
1952	Apr. 12, 1952	18.55	24,500		June 16, 1958	17.55	27,500
	Apr. 22, 1952	21.15	30,800				
				1959	June 23, 1959	20.00	35,700
1953	Apr. 29, 1953	25.86	42,800		July 26, 1959	19.25	33,600
1954	May 12, 1954	20.13	28,000	1960	Dec. 15, 1959	b17.90	25,500
1955	Oct. 23, 1954	17.70	22,400	1961	Oct. 28, 1960	c20.25	27,000
	Mar. 20, 1955	21.34	31,000		Mar. 29, 1961	c22.30	33,000

a Annual peak only.
b Adjusted to present datum.
c At site 50 ft downstream from and at datum 4.00 ft lower than described gage.

7-3435. Whiteoak Creek near Talco, Tex. (28)

Location.--Lat 33°19', long 95°05', near center of main channel on downstream side of pier of bridge on U.S. Highway 271, 2 miles upstream from Ripley Creek, 2.7 miles south of Talco, Titus County, and 2.8 miles downstream from Lick Creek.

Drainage area.--494 sq mi.

Gage.--Recording. Datum of gage is 286.45 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Historical data.--According to local residents, the flood in 1945 was highest since at least 1870.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Mar. 21, 1945	a25.3	-	1956	May 4, 1956	14.80	1,660
1950	Feb. 3, 1950	18.97	23,300	1957	Apr. 28, 1957	18.32	14,900
	Feb. 13, 1950	18.73	20,100		May 15, 1957	18.41	15,800
1951	Feb. 20, 1951	17.15	5,250	1958	Nov. 6, 1957	19.13	21,600
1952	Apr. 23, 1952	18.68	19,700		Apr. 28, 1958	19.52	26,600
				1959	Feb. 16, 1959	17.78	10,100
1953	Apr. 30, 1953	18.38	15,800				
	May 18, 1953	17.90	10,700	1960	Dec. 17, 1959	18.66	18,200
1954	Oct. 27, 1953	17.08	4,040	1961	Dec. 9, 1960	18.15	13,400
1955	Jan. 17, 1955	17.26	5,000				

a Annual peak only.

7-3438. Whiteoak Creek below Talco, Tex. (29)

Location.--Lat 33°18', long 95°01', at bridge on county road, about 4 miles downstream from Ripley Creek, 5 miles upstream from Green Creek, and 6 miles southeast of Talco, Titus County.

Drainage area.--579 sq mi.

Gage.--Nonrecording. Datum of gage is 274.34 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood in 1945 is highest known since at least 1870.

Remarks.--Current-meter measurements and gage-height records furnished by Corps of Engineers. Base for partial-duration series, 8,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Dec. 29, 1937	-	24,200	1945	Mar. 1, 1945	-	20,200
	Jan. 23, 1938	20.40	44,000		Mar. 31, 1945	24.1	83,100
	Feb. 20, 1938	-	16,400		June 13, 1945	-	23,700
	Mar. 30, 1938	-	11,900		July 13, 1945	-	13,700
	Apr. 10, 1938	-	11,200				
	Apr. 17, 1938	-	17,200	1946	Oct. 10, 1945	-	24,500
					Jan. 12, 1946	-	11,000
1939	Feb. 28, 1939	16.30	9,000		Feb. 7, 1946	-	23,700
					May 25, 1946	-	15,300
1940	Apr. 9, 1940	16.24	8,580		June 1, 1946	18.51	26,100
1941	Dec. 29, 1940	-	13,800	1947	Nov. 7, 1946	18.22	23,700
	Mar. 9, 1941	-	14,500		May 19, 1947	-	13,700
	May 1, 1941	17.73	19,800				
				1948	Dec. 19, 1947	-	13,700
1942	Apr. 9, 1942	19.40	34,000		May 13, 1948	18.20	23,700
	Apr. 23, 1942	-	10,000				
	Apr. 27, 1942	-	9,700	1949	Jan. 28, 1949	17.70	19,800
					Feb. 26, 1949	-	14,400
1943	June 8, 1943	17.38	17,200		May 1, 1949	-	12,200
1944	Mar. 21, 1944	-	13,000	1950	Oct. 9, 1949	-	23,700
	May 3, 1944	18.62	26,700		Oct. 25, 1949	18.35	24,900
1945	Feb. 23, 1945	-	11,900				

7-3440. Sulphur River near Darden, Tex. (30)

Location.--Lat 33°15', long 94°37', near left bank on upstream side of bridge on U.S. Highway 67, 0.6 mile upstream from St. Louis Southwestern Railway bridge, 1 mile southwest of Darden, Bowie County, and at mile 105.

Drainage area.--2,774 sq mi.

Gage.--Nonrecording prior to Oct. 26, 1934, 0.6 mile downstream, and since Feb. 12, 1942, at present site; recording at site 780 ft downstream Oct. 26, 1934, to Feb. 12, 1942. Datum of all gages is 220.61 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--24 ft.

Historical data.--Flood in 1945 is highest known since at least 1865.

Remarks.--Gage-height record prior to Oct. 26, 1934, furnished by U.S. Weather Bureau (published as "near Naples"). Peaks prior to 1924 were obtained from publication "Floods in Louisiana, Magnitude and Frequency," December 1952. Only annual peaks are shown.

Peak stages and discharges of Sulphur River near Darden, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Apr. 10, 1910	21.8	4,200	1932	Jan. 9, 1932	29.10	34,700
				1933	Mar. 11, 1933	25.86	15,500
1911	Apr. 23, 1911	23.0	5,800	1934	Apr. 10, 1934	26.1	16,300
1912	Apr. 20, 1912	25.0	12,000	1935	Jan. 23, 1935	30.16	40,300
1913	Apr. 16, 1913	22.1	4,500				
1914	Mar. 31, 1914	29.6	46,300	1936	May 15, 1936	26.04	14,000
1915	Apr. 28, 1915	31.4	63,600	1937	Mar. 29, 1937	26.58	16,100
				1938	Jan. 25, 1938	34.9	92,900
1916	Feb. 3, 1916	27.0	23,600	1939	Apr. 1, 1939	27.42	20,300
1917	Mar. 8, 1917	23.7	7,400	1940	Apr. 11, 1940	27.23	19,700
1918	Apr. 21, 1918	26.6	20,600				
1919	Dec. 17, 1918	27.9	31,000	1941	May 3, 1941	31.5	60,600
1920	May 17, 1920	29.2	42,700	1942	Apr. 11, 1942	32.71	68,900
				1943	Mar. 17, 1943	27.8	23,000
1921	June 30, 1921	28.7	38,000	1944	May 5, 1944	31.71	57,900
1922	Apr. 30, 1922	28.2	33,400	1945	Apr. 1, 1945	37.56	157,000
1923	Feb. 7, 1923	24.7	10,800				
1924	Dec. 18, 1923	27.9	28,600	1946	Feb. 9, 1946	29.95	40,000
1925	May 4, 1925	25.1	13,000	1947	Nov. 9, 1946	32.22	63,200
				1948	May 15, 1948	29.43	34,400
1926	July 19,20,1926	26.1	17,800	1949	Jan. 30, 1949	30.77	44,000
1927	Dec. 26, 1926	29.0	36,500	1950	Feb. 5, 1950	31.27	51,100
1928	June 29, 1928	29.0	36,500				
1929	Dec. 21, 1928	30.3	46,200	1951	June 19, 1951	28.10	21,800
1930	May 19, 1930	31.7	67,200	1952	Apr. 25, 1952	31.45	54,400
				1953	May 2, 1953	30.70	47,000
1931	Mar. 10, 1931	23.5	8,100	1954	May 15, 1954	29.56	36,000

7-3445. Cypress Creek near Pittsburg, Tex. (31)

Location.--Lat 33°01'10", long 94°52'40", near center of stream at downstream side of pile bent of bridge on State Highway 11, 1,800 ft upstream from Louisiana & Arkansas Railway Co. bridge, 5.2 miles east of Pittsburg, Camp County, and at mile 110.

Drainage area.--366 sq mi.

Gage.--Recording. Prior to Nov. 12, 1954, at site 1,300 ft downstream at present datum. Datum of gage is 247.49 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended by logarithmic plotting.

Bankfull stage.--12 ft.

Historical data.--Flood in 1945 is highest since at least 1910.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	24	-	1950	Oct. 25, 1949	17.45	14,600
					Jan. 13, 1950	16.12	10,200
1943	June 8, 1943	14.62	6,570		Feb. 2, 1950	17.02	13,100
					Feb. 13, 1950	18.08	16,900
1944	May 2, 1944	18.73	19,200		May 3, 1950	17.57	15,100
					May 7, 1950	15.02	7,190
1945	Feb. 22, 1945	15.44	8,510		Sept.17, 1950	15.42	8,170
	Feb. 28, 1945	14.41	6,140				
	Mar. 30, 1945	27.32	58,500	1951	Feb. 19, 1951	13.75	4,280
	June 13, 1945	20.69	27,100				
				1952	Apr. 13, 1952	15.07	7,380
1946	Oct. 10, 1945	14.40	6,140		Apr. 23, 1952	18.03	16,600
	Jan. 9, 1946	15.38	8,510		May 29, 1952	14.77	6,680
	May 20, 1946	16.56	11,900				
	May 31, 1946	15.70	9,290	1953	May 16, 1953	17.78	13,700
1947	Nov. 10, 1946	14.02	5,300	1954	Jan. 16, 1954	12.78	3,140
1948	Dec. 16, 1947	14.87	6,680	1955	Mar. 22, 1955	13.46	2,550
	May 12, 1948	17.27	14,100				
				1956	Feb. 4, 1956	12.31	1,110
1949	Jan. 27, 1949	15.95	9,800				

Peak stages and discharges of Cypress Creek near Pittsburg, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Apr. 27, 1957	17.09	9,220	1958	May 4, 1958	15.94	6,820
	May 27, 1957	16.63	8,260				
	June 5, 1957	15.70	6,460	1959	Nov. 18, 1958	13.85	3,260
1958	Nov. 6, 1957	17.46	10,200	1960	Dec. 18, 1959	14.08	3,670
	Apr. 27, 1958	24.80	35,700				
	May 1, 1958	19.73	16,100	1961	Dec. 9, 1960	15.95	7,000

7-3450. Boggy Creek near Daingerfield, Tex. (32)

Location.--Lat 33°02'05", long 94°47'10", on right bank at downstream side of bridge on State Highway 11, a quarter of a mile upstream from Louisiana & Arkansas Railway Co. bridge, 3.8 miles west of Daingerfield, Morris County, 9 miles upstream from mouth, and at mile 11.5.

Drainage area.--72 sq mi.

Gage.--Recording. Prior to Oct. 1, 1954, at site 1,700 ft downstream at present datum. Datum of gage is 258.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--10 ft.

Historical data.--The flood in January 1938 is the second highest since at least 1900, from information by local residents.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	a16	-	1950	Feb. 2, 1950	11.10	4,770
					Feb. 12, 1950	12.59	10,100
1944	Feb. 29, 1944	9.33	1,240		Mar. 13, 1950	9.36	1,260
	Mar. 19, 1944	9.82	1,880		May 2, 1950	12.10	8,240
	Apr. 9, 1944	9.66	1,620		May 7, 1950	11.83	7,250
	May 2, 1944	12.40	9,650		May 14, 1950	9.23	1,040
	May 27, 1944	9.93	2,080		May 31, 1950	9.57	1,510
					Sept.17, 1950	12.97	10,100
1945	Dec. 29, 1944	9.91	2,040				
	Feb. 22, 1945	10.68	4,080	1951	Feb. 16, 1951	9.15	1,160
	Feb. 28, 1945	10.25	2,820		Feb. 19, 1951	9.20	1,210
	Mar. 4, 1945	9.85	1,930				
	Mar. 20, 1945	9.60	1,540	1952	Apr. 13, 1952	10.93	4,610
	Mar. 30, 1945	14.10	15,900		Apr. 23, 1952	10.68	3,700
	Apr. 2, 1945	11.10	5,070		May 30, 1952	9.00	1,070
	May 16, 1945	9.18	1,240				
	June 12, 1945	10.82	5,010	1953	Apr. 30, 1953	9.49	1,290
	June 25, 1945	10.15	2,960		May 16, 1953	11.05	4,290
1946	Jan. 10, 1946	9.28	1,000	1954	May 30, 1954	10.50	3,100
	May 1, 1946	9.55	1,250				
	May 14, 1946	10.50	2,860	1955	Mar. 22, 1955	10.80	2,540
	May 19, 1946	10.20	2,120				
	June 1, 1946	10.22	2,160	1956	Feb. 17, 1956	9.13	350
1947	Nov. 7, 1946	9.80	1,540	1957	Apr. 24, 1957	11.34	2,160
	Nov. 11, 1946	9.65	1,360		Apr. 27, 1957	11.59	2,600
	Nov. 27, 1946	9.70	1,420		June 25, 1957	10.53	1,260
1948	Nov. 23, 1947	9.45	1,160	1958	Nov. 6, 1957	12.09	3,600
	Dec. 8, 1947	9.95	1,750		Nov. 13, 1957	11.88	3,200
	Dec. 16, 1947	10.29	2,300		Jan. 21, 1958	11.13	1,900
	Jan. 2, 1948	9.50	1,200		Apr. 27, 1958	17.80	28,900
	Mar. 2, 1948	10.67	3,250		May 1, 1958	13.02	5,750
	Mar. 23, 1948	9.30	1,160		May 4, 1958	10.48	1,220
	Apr. 14, 1948	8.88	1,070				
	May 12, 1948	10.87	3,990	1959	Mar. 6, 1959	10.26	1,030
1949	Jan. 27, 1949	10.48	3,100	1960	Jan. 14, 1960	11.42	2,160
1950	Oct. 8, 1949	10.02	2,180	1961	Dec. 8, 1960	11.35	2,160
	Oct. 22, 1949	11.59	6,410		Dec. 11, 1960	11.48	2,400
	Oct. 25, 1949	11.62	6,510		Jan. 8, 1961	10.35	1,050
	Jan. 13, 1950	11.20	5,090				

a Annual peak only.

7-3460. Cypress Creek near Jefferson, Tex. (33)

Location.--Lat 32°45', long 94°29', at bridge on Farm Road 726, 1,500 ft downstream from Lake O' the Pines Dam, 8 miles west of Jefferson, Marion County, 14 miles upstream from Black Cypress Creek, and at mile 72.2.

Drainage area.--850 sq mi.

Gage.--Nonrecording prior to Nov. 2, 1933; recording thereafter. Prior to Dec. 9, 1955, at site 1,500 ft upstream at datum 183.7 ft higher. Datum of present gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 29,000 cfs and extended above.

Bankfull stage.--22 ft.

Remarks.--Flow slightly regulated by Ellison Creek Reservoir since January 1943 (capacity, 24,700 acre-ft), and completely regulated by Lake O' the Pines Dam since August 1957. Records for 1956 furnished by Corps of Engineers. Base for partial-duration series, 1,800 cfs. Only annual peaks are shown prior to 1925 and subsequent to 1955.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Mar. 23, 1913	a13.2	2,000	1933	May 5, 1933	15.05	3,250
1914	Apr. 4, 1914	a20.0	10,900				
1915	Apr28-29, 1915	a21.2	15,200	1934	Mar. 8, 1934	15.50	4,030
					Mar. 31, 1934	16.13	4,870
1916	Feb. 5, 1916	a16.3	4,600		May 12, 1934	12.84	1,970
1917	Apr. 30, 1917	a10.9	1,200				
1918	Apr. 24, 1918	a16.6	4,900	1935	May 8, 1935	20.31	13,200
1919	Mar. 25, 1919	a13.5	2,200		May 27, 1935	13.33	2,020
1920	Nov. 14, 1919	a20.1	11,000				
				1936	May 19, 1936	12.65	1,790
1921	Apr. 27, 1921	a17.1	5,500				
1922	Apr. 4, 1922	a19.2	8,900	1937	Jan. 26, 1937	17.30	6,430
1923	Feb. 5, 1923	a16.3	4,700		Mar. 12, 1937	14.70	3,010
1924	Jan. 1, 1924	a16.7	5,000				
				1938	Dec. 30, 1937	21.51	17,400
1925	May 5, 1925	12.80	1,820		Jan. 26, 1938	24.94	35,200
					Feb. 23, 1938	16.62	5,540
1926	Jan. 23, 1926	13.42	1,990		Apr. 4, 1938	14.70	2,820
	Mar. 17, 1926	14.01	2,160		Apr. 13, 1938	15.08	3,200
	Mar. 31, 1926	12.97	1,870		Apr. 21, 1938	16.80	5,250
	Apr. 5, 1926	13.40	1,990				
	July 17, 1926	16.70	5,900	1939	Mar. 2, 1939	16.65	5,250
1927	Dec. 28, 1926	14.75	3,120	1940	Apr.17, July 4, 1940	11.33	1,320
	Jan. 26, 1927	14.20	2,560				
	Feb. 14, 1927	13.40	2,050	1941	Jan. 2, 1941	15.80	3,720
	Mar. 13, 1927	16.90	6,200		Mar. 13, 1941	15.44	3,500
	Apr. 11, 1927	17.30	6,820		May 7, 1941	14.57	3,200
					June 23, 1941	14.16	2,460
1928	Apr. 29, 1928	13.40	2,050		June 29, 1941	14.02	2,370
	May 20, 1928	16.00	7,910				
	June 28, 1928	16.10	8,060	1942	Jan. 1, 1942	13.42	2,010
					Apr. 11, 1942	21.96	19,800
1929	Dec. 20, 1928	21.4	17,000		May 21, 1942	18.49	8,290
	Jan.10-11,1929	16.1	4,960				
	Jan. 20, 1929	12.90	1,840	1943	June 15, 1943	12.42	1,770
	Feb. 2, 1929	13.55	2,280				
	Mar. 10, 1929	13.75	2,400	1944	Mar. 4, 1944	15.65	3,710
	May 21, 1929	14.10	2,560		Mar. 25, 1944	15.85	3,910
					Apr. 14, 1944	16.28	4,410
1930	Feb. 12, 1930	13.90	2,380		May 4, 1944	24.13	30,800
	May 20, 1930	25.37	37,900		May 23, 1944	15.14	3,340
					June 2, 1944	14.38	2,760
1931	Apr. 5, 1931	11.40	1,300				
				1945	Jan. 1, 1945	18.32	7,040
1932	Dec. 24, 1931	15.85	4,000		Feb. 27, 1945	18.20	7,040
	Jan. 8, 1932	21.10	15,600		Mar. 4, 1945	19.22	9,400
	Jan. 17, 1932	16.40	4,860		Apr. 1, 1945	28.78	57,100
	Jan. 28, 1932	16.65	5,180		May 23, 1945	12.46	1,680
	Feb. 20, 1932	17.85	7,350		June 16, 1945	21.02	15,200
	Mar. 11, 1932	14.80	2,830				
				1946	Jan. 14, 1946	17.48	5,840
1933	Jan. 5, 1933	15.32	3,550		Feb. 15, 1946	16.03	4,200
	Jan. 28, 1933	12.80	1,840		Mar. 14, 1946	13.45	2,200
	Mar. 13, 1933	12.85	1,840				

a These values from gage-height relation curve between Geological Survey and U.S. Weather Bureau gage at Jefferson 12 miles downstream.

Peak stages and discharges of Cypress Creek near Jefferson, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 6, 1946	14.70	3,060	1950	Mar. 19, 1950	15.18	3,580
	May 19, 1946	18.07	6,720		May 5, 1950	20.90	14,100
	May 24, 1946	19.44	9,400		May 10, 1950	19.90	10,700
	June 3, 1946	21.08	15,600		Sept.20, 1950	20.34	12,100
1947	Nov. 15, 1946	16.17	4,400	1951	Feb. 24, 1951	17.06	5,570
	Dec. 2, 1946	14.73	3,060		Apr. 28, 1951	13.17	2,180
	Jan. 26, 1947	13.12	2,100				
	Mar. 20, 1947	12.51	1,810	1952	Apr. 17, 1952	18.02	6,750
	Apr. 9, 1947	13.09	2,100		Apr. 27, 1952	19.63	9,860
	Apr. 21, 1947	12.56	1,850		June 4, 1952	15.20	3,600
1948	Dec. 13, 1947	15.45	3,620	1953	May 6, 1953	14.61	3,100
	Dec. 21, 1947	17.06	5,320		May 19, 1953	21.67	17,500
	Jan. 8, 1948	14.59	3,060				
	Feb. 13, 1948	15.96	4,200	1954	Jan. 24, 1954	13.15	2,090
	Mar. 6, 1948	17.79	6,880		May 20, 1954	13.08	2,040
	Mar. 23, 1948	14.92	3,460				
	May 13, 1948	20.14	12,000	1955	Mar. 23, 1955	14.12	2,210
					Mar. 28, 1955	15.10	2,530
1949	Feb. 1, 1949	17.72	6,120		Apr. 14, 1955	13.02	1,860
	Mar. 5, 1949	12.90	1,940				
				1956	Mar. 4, 1956	195.50	1,220
1950	Oct. 15, 1949	14.07	2,730	1957	Apr. 27, 1957	205.61	16,000
	Oct. 28, 1949	20.56	12,900	1958	Apr. 29, 1958	201.30	5,190
	Jan. 17, 1950	20.50	12,700	1959	Apr.27-29, 1959	197.82	2,430
	Feb. 6, 1950	18.55	7,580	1960	Jan.21-24, 1960	199.1	b3,050
	Feb. 15, 1950	22.29	20,400				

b Maximum daily discharge.

7-3470. Kelly Bayou near Hosston, La. (34)

Location.--Lat 32°51'25", long 93°52'20", in SW¼NE¼ sec.36, T.22 N., R.15 W., near center of span on downstream side of bridge on U.S. Highway 71, 0.4 mile downstream from Willow Lake lateral, 2.0 miles south of Hosston, and 2.7 miles upstream from mouth.

Drainage area.--116 sq mi.

Gage.--Nonrecording prior to Feb. 2, 1953; recording thereafter. Datum of gage is 165.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Recording gage for station on Black Bayou near Gilliam used as an auxiliary gage for this station.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall.

Remarks.--Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Dec. 29, 1944	14.73	1,740	1948	Feb. 12, 1948	12.70	1,020
	Jan. 18, 1945	11.05	937		Mar. 2, 1948	12.33	962
	Feb. 20, 1945	9.85	756		Mar. 23, 1948	10.82	752
	Feb. 28, 1945	10.62	892		May 11, 1948	11.48	850
	Mar. 3, 1945	15.55	1,800		May 26, 1948	12.57	1,000
	Apr. 1, 1945	a16.20	1,600				
	Apr. 24, 1945	10.32	804	1949	Jan. 18, 1949	11.41	836
					Jan. 27, 1949	10.97	780
1946	Nov. 12, 1945	10.24	814		Apr. 26, 1949	11.30	822
	Jan. 9, 1946	a13.29	1,270				
	Feb. 10, 1946	10.76	815	1950	Jan. 16, 1950	13.73	967
	Mar. 7, 1946	13.46	1,460		Feb. 13, 1950	14.47	1,110
	Mar. 15, 1946	10.21	768		May 2, 1950	14.16	1,100
	May 13, 1946	14.68	1,730				
	May 25, 1946	14.31	1,550	1951	Jan. 14, 1951	10.01	513
	May 31, 1946	a14.61	1,470				
				1952	Feb. 20, 1952	10.29	809
1947	Nov. 5, 1946	11.18	966		Apr. 13, 1952	11.34	994
	Nov. 11, 1946	14.40	1,660				
	Nov. 26, 1946	10.40	805	1953	Mar. 12, 1953	13.55	1,520
	Mar. 13, 1947	11.60	1,050		Apr. 24, 1953	10.24	837
	Mar. 23, 1947	12.93	1,330		Apr. 29, 1953	11.69	956
	Apr. 11, 1947	10.33	786		May 15, 1953	a14.53	1,340
	May 17, 1947	11.94	1,120				

a Occurred on different date.

Peak stages and discharges of Kelly Bayou near Hosston, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Jan. 15, 1954	11.31	1,040	1958	Nov. 15, 1957	a13.10	970
	May 12, 1954	9.50	714		Jan. 22, 1958	11.96	921
					Apr. 28, 1958	a22.72	4,460
1955	Mar. 21, 1955	11.07	1,050		July 7, 1958	11.40	962
	May 20, 1955	10.15	870				
	May 24, 1955	13.44	1,520	1959	Feb. 14, 1959	12.15	1,070
					May 25, 1959	10.59	820
1956	Feb. 2, 1956	11.86	1,200				
				1960	Dec. 16, 1959	11.46	977
1957	Feb. 1, 1957	10.25	880		Jan. 14, 1960	11.58	1,010
	Apr. 4, 1957	11.64	1,040		Mar. 2, 1960	13.42	1,560
	Apr. 29, 1957	17.18	1,720		Dec. 8, 1960	14.44	1,510
	June 5, 1957	12.62	1,070				
				1961	June 25, 1961	11.34	853
1958	Nov. 8, 1957	11.58	916		Sept.13, 1961	10.77	860

a Occurred on different date.

7-3475. Black Bayou near Gilliam, La. (35)

Location.--Lat 32°48'55", long 93°52'15", in SE¼NW¼ sec.13, T.21 N., R.15 W., near left bank on downstream side of bridge on State Highway 170, 0.2 mile downstream from Red Bayou and 2 miles southwest of Gilliam.

Drainage area.--364 sq mi.

Gage.--Nonrecording prior to Dec. 12, 1948; recording thereafter. Datum of gage is 155.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Auxiliary nonrecording gage Jan. 26, 1945, to Oct. 25, 1949, and recording gage thereafter at site 5.5 miles downstream at same datum.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall.

Remarks.--Base for partial-duration series, 2,000 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 19, 1943	a9.96	983	1952	Apr. 13, 1952	14.78	2,120
1944	May 4, 1944	22.60	6,270				
1945	Apr. 2, 1945	25.73	5,630	1953	Mar. 12, 1953	16.03	2,630
					Apr. 29, 1953	15.89	2,570
1946	June 1, 1946	20.37	3,610		May 19, 1953	20.52	4,090
1947	Nov. 12, 1946	18.04	4,010				
				1954	Jan. 16, 1954	13.50	1,760
1948	Feb. 11, 1948	16.72	2,820				
	Mar. 26, 1948	14.96	2,740	1955	May 24, 1955	16.63	3,150
	May 12, 1948	14.15	3,050				
	May 25, 1948	16.05	2,710	1956	Feb. 3, 1956	13.60	1,650
1949	Jan. 27, 1949	15.18	2,740	1957	Apr. 6, 1957	18.51	2,980
	Apr. 27, 1949	13.93	2,070		Apr. 29, 1957	22.00	8,200
					June 5, 1957	17.34	3,830
1950	Jan. 17, 1950	18.46	3,790				
	Feb. 16, 1950	19.87	5,650	1958	Nov. 18, 1957	19.36	3,770
	May 5, 1950	17.07	3,180		Jan. 23, 1958	16.58	2,470
					Apr. 29, 1958	27.50	17,700
1951	Feb. 20, 1951	b15.75	1,560				
				1959	Feb. 15, 1959	15.36	2,500
1952	Mar. 10, 1952	14.40	2,240				

a Occurred Jan. 8, 1943.
b Occurred Oct. 1, 1950.
Note.--Peak stage frequently occurrs at different time or on different date than peak discharge.

7-3480. Twelvemile Bayou near Dixie, La. (36)

Location.--Lat 32°38'45", long 93°52'40", in NW¼NW¼ sec.14, T.19 N., R.15 W., near right bank on downstream side of pier of bridge on State Highway 173, 0.1 mile downstream from Cottonwood Bayou, 4.2 miles southwest of Dixie, 5.5 miles downstream from Caddo Lake, and 17.3 miles upstream from mouth.

Drainage area.--3,137 sq mi.

Gage.--Nonrecording prior to Sept. 5, 1947; recording thereafter. Prior to Sept. 30, 1950, at datum 2.0 ft higher. Datum of present gage is 143.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Discharge computed by using submergence, as determined from auxiliary gage, as a factor during periods of backwater from Red River. Moderate shifts occur.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Jan. 9, 1943	14.82	4,070	1950	Sept.25, 1950	24.36	13,300
1944	Mar. 6, 1944	23.93	11,400	1951	Oct. 1, 1950	24.78	11,200
	Apr. 1, 1944	23.77	11,200		Mar. 2, 1951	21.83	a8,060
	May 9, 1944	30.21	26,600				
				1952	Feb.13-14, 1952	17.6	a5,500
1945	Jan. 7, 1945	25.46	13,800		Mar. 11, 1952	19.19	6,310
	Mar. 13, 1945	27.57	a18,000		Apr.26-27, 1952	23.60	a9,790
	Apr. 5, 1945	33.65	34,900				
	June 24, 1945	22.31	a9,370	1953	Mar. 14, 1953	20.89	7,360
					May 1, 1953	21.17	7,580
1946	Jan. 21, 1946	24.61	12,900		May 24, 1953	29.83	19,800
	Feb. 23, 1946	23.28	11,100				
	Mar. 30, 1946	17.40	6,220	1954	May 13, 1954	14.90	a4,270
	May 1, 1946	17.48	6,270				
	June 9, 1946	27.90	19,500	1955	Apr. 1, 1955	20.13	a6,850
					Apr. 14, 1955	18.82	a6,100
1947	Nov. 19, 1946	22.59	10,400		May 25, 1955	22.30	8,490
	Jan. 23, 1947	17.87	6,630				
	Mar. 16, 1947	18.41	6,930	1956	Feb. 9, 1956	15.41	4,580
	Mar. 23, 1947	18.50	6,990				
	Apr. 12, 1947	20.65	8,480	1957	May 4, 1957	32.59	a26,100
	May 22, 1947	18.00	6,690		June 16, 1957	25.60	a10,100
1948	Dec. 26, 1947	17.80	6,570	1958	Oct. 24, 1957	15.98	a5,600
	Feb. 19, 1948	22.26	10,600		Nov.21-25, 1957	26.05	a14,200
	Mar. 11, 1948	23.08	11,500		Jan.26,27, 1958	22.41	a9,450
	May 22, 1948	22.40	10,700		Mar. 24, 1958	14.72	a5,000
					May 5, 1958	35.65	38,400
1949	Feb. 6, 1949	20.18	8,400		June 27, 1958	19.00	a7,240
	Apr. 3, 1949	15.28	5,260				
	Apr. 28, 1949	15.91	5,550	1959	Apr.22-24,1959	20.25	8,200
1950	Nov. 5, 1949	20.41	8,580	1960	Mar. 5, 1960	21.49	8,870
	Jan. 22, 1950	25.04	14,200				
	Feb. 21, 1950	27.31	18,600	1961	Dec. 16, 1960	26.40	15,400
	May 15, 1950	24.56	13,600				

a Mean daily discharge.
Note.--Peak stage frequently occurs at different time or on different date than peak discharge.

8-175. Sabine River near Emory, Tex. (37)

Location.--Lat 32°46'23", long 95°47'56", on left bank at downstream side of bridge on State Highway 19, 3.5 miles upstream from Sandy Creek, 7 miles south of Emory, Rains County 9.4 miles downstream from McBee Creek, and at mile 501.

Drainage area.--888 sq mi.

Gage.--Recording. Datum of gage is 350.28 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 46,200 cfs.

Bankfull stage.--9 ft.

Historical data.--Flood in June 1943 reached the highest stage since at least 1900, from information by local resident and Texas Highway Department.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges of Sabine River near Emory, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 1943	25.7	-	1957	May 15, 1957	16.12	23,700
					May 27, 1957	17.84	22,200
1953	Apr. 30, 1953	20.26	34,400		June 6, 1957	15.70	13,400
	May 17, 1953	15.61	13,700	1958	Nov. 8, 1957	17.37	18,800
1954	Jan. 18, 1954	14.63	8,800		Apr. 28, 1958	20.27	35,400
					May 3, 1958	17.98	22,900
1955	Oct. 26, 1954	13.88	5,950				
				1959	Apr. 19, 1959	14.50	8,230
1956	May 4, 1956	14.60	8,610				
				1960	Oct. 4, 1959	16.32	11,300
1957	Mar. 20, 1957	14.72	9,560		Dec. 17, 1959	16.17	19,200
	Apr. 3, 1957	14.76	9,750				
	Apr. 27, 1957	25.06	74,000	1961	Dec. 8, 1960	12.83	5,390
	May 3, 1957	15.68	13,300				

8-185. Sabine River near Mineola, Tex. (38)

Location.--Lat 32°36'45", long 95°29'10", near center of main channel on downstream side of pier of bridge on U.S. Highway 69, 3.2 miles south of Mineola, Wood County, 4.5 miles upstream from Missouri Pacific Railroad bridge, and at mile 461.

Drainage area.--1,357 sq mi.

Gage.--Recording. Datum of gage is 304.16 ft above mean sea level, datum of 1929. Prior to Dec. 12, 1955, at site 50 ft upstream at present datum.

Stage-discharge relation.--Defined by current-meter measurements below 68,000 cfs.

Bankfull stage.--16 ft.

Historical data.--Based on information from local resident, the flood of June 8, 1943, reached the highest stage since 1890.

Remarks.--Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 25, 1938	20.6	a36,000	1948	May 14, 1948	18.69	21,300
1939	June 25, 1939	8.24	b488	1949	Jan. 29, 1949	17.77	12,800
					Feb. 27, 1949	18.77	21,800
1940	Apr. 11, 1940	17.75	10,100				
				1950	Feb. 5, 1950	19.82	29,600
1941	May 9, 1941	17.90	12,100		Feb. 15, 1950	19.55	27,800
	June 14, 1941	18.59	16,900		May 7, 1950	18.14	14,800
1942	Apr. 11, 1942	21.63	45,600	1951	June 18, 1951	17.42	8,960
	Apr. 23, 1942	20.92	39,100				
	May 22, 1942	17.69	12,500	1952	Apr. 26, 1952	18.28	16,000
					May 28, 1952	17.68	11,200
1943	June 8, 1943	24.37	64,100				
				1953	May 2, 1953	19.91	32,300
1944	Mar. 3, 1944	17.55	12,400		May 17, 1953	18.65	20,800
	Mar. 23, 1944	17.65	13,200				
	May 4, 1944	20.65	39,700	1954	Jan. 21, 1954	17.24	7,150
	May 31, 1944	17.40	11,200				
				1955	Oct. 29, 1954	16.78	4,850
1945	Feb. 24, 1945	18.58	21,200				
	Apr. 1, 1945	24.00	76,000	1956	May 8, 1956	17.03	5,580
	June 15, 1945	20.64	39,700				
				1957	Apr. 29, 1957	22.15	52,000
1946	Feb. 9, 1946	18.53	19,400		May 17, 1957	18.50	18,700
	June 2, 1946	20.60	37,800		May 29, 1957	18.65	19,600
1947	Nov. 7, 1946	20.75	39,700	1958	Nov. 10, 1957	18.87	21,800
	Dec. 16, 1946	17.74	11,200		Apr. 30, 1958	20.60	36,000
1948	Dec. 19, 1947	17.57	11,100	1959	Apr. 22, 1959	.17.70	10,000
	Jan. 5, 1948	17.72	18,300				

a Annual peak only.
b Maximum May 12 to Sept. 30; probably exceeded during period of no record.

8-190. Lake Fork Sabine River near Quitman, Tex. (39)

Location.--Lat 32°46', long 95°28', near center of main channel at upstream side of bridge on State Highway 37, half a mile downstream from Dry Creek and 2.5 miles south of Quitman, Wood County.

Drainage area.--585 sq mi.

Gage.--Nonrecording. At site 1,000 ft downstream prior to May 1, 1986. Datum of gage is 317.42 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 49,000 cfs.

Bankfull stage.--23 ft.

Historical data.--Flood of Mar. 30, 1945, reached the highest stage since at least 1890, from information by local residents.

Remarks.--Base for partial-duration series, 6,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	July 1895	a25.9	-	1950	Oct. 25, 1949	20.85	19,800
					Jan. 15, 1950	17.71	8,030
1925	May 14, 1925	14.50	1,920		Feb. 3, 1950	21.81	24,800
					Feb. 13, 1950	21.49	22,900
1926	Apr. 23, 1926	17.60	7,160		Mar. 14, 1950	17.46	7,310
					May 2, 1950	19.10	12,700
1940	May 30, 1940	17.42	6,030		July 29, 1950	17.20	6,600
1941	Dec. 28, 1940	18.25	9,200	1951	Feb. 20, 1951	16.88	5,810
	Mar. 8, 1941	18.13	8,820				
				1952	Apr. 14, 1952	17.50	7,420
1942	Apr. 9, 1942	23.00	28,400		Apr. 23, 1952	20.36	17,900
	Apr. 22, 1942	18.80	11,600		May 26, 1952	17.40	7,140
	Apr. 27, 1942	18.20	9,200				
	May 19, 1942	17.70	7,470	1953	Apr. 30, 1953	21.05	20,700
					May 17, 1953	19.75	15,000
1943	June 7, 1943	25.90	51,600				
				1954	Jan. 18, 1954	17.00	6,100
1944	May 3, 1944	21.21	20,700				
				1955	Oct. 26, 1954	16.40	4,680
1945	Feb. 23, 1945	18.60	10,900				
	Feb. 28, 1945	19.40	13,800	1956	May 5, 1956	15.20	2,200
	Mar. 30, 1945	29.85	75,600				
	June 13, 1945	21.60	23,400	1957	Apr. 5, 1957	18.28	9,800
					Apr. 28, 1957	20.38	17,800
1946	Oct. 10, 1945	18.20	9,540		May 1, 1957	17.90	8,600
	Jan. 10, 1946	17.90	8,600		May 15, 1957	18.15	9,380
	Feb. 7, 1946	20.00	16,200		May 27, 1957	19.90	15,800
	Mar. 28, 1946	18.00	9,540		June 5, 1957	17.82	8,360
	May 25, 1946	19.20	13,100				
	May 31, 1946	20.16	17,000	1958	Nov. 7, 1957	19.01	12,300
					Apr. 28, 1958	24.38	39,400
1947	Nov. 7, 1946	19.98	14,600		May 1, 1958	20.76	19,600
	Apr. 14, 1947	17.80	7,420				
				1959	Feb. 16, 1959	18.45	10,200
1948	Dec. 17, 1947	18.46	10,500		Apr. 20, 1959	17.50	7,420
	May 12, 1948	20.66	19,200				
				1960	Dec. 17, 1959	20.20	17,000
1949	Jan. 28, 1949	18.20	8,900				
	Feb. 26, 1949	18.62	10,200	1961	Dec. 9, 1960	18.86	11,900
	Apr. 30, 1949	17.80	7,140		Mar. 29, 1961	18.30	9,860

a Local resident stated flood in 1895 same as flood in 1943.

8-195. Big Sandy Creek near Big Sandy, Tex. (40)

Location.--Lat 32°36'12", long 95°05'32", near center of channel on downstream side of pier of bridge on State Highway 155, 0.8 mile upstream from St. Louis Southwestern Railway Lines bridge, 1.3 miles northeast of Big Sandy, Upshur County, and 7.1 miles upstream from mouth.

Drainage area.--231 sq mi.

Gage.--Nonrecording prior to Oct. 5, 1940; recording thereafter. At site 0.7 mile upstream at datum 3.00 ft higher prior to Nov. 27, 1951. Datum of gage is 278.38 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs.

Bankfull stage.--17 ft.

Historical data.--Flood of Mar. 31, 1945, reached the highest stage since at least 1875, from information by local resident.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	-	a21	-	1949	July 24, 1949	15.30	1,960
1938	January 1938	b22.1	-	1950	Jan.14-15, 1950	17.36	3,830
					Feb. 4-5, 1950	14.58	1,530
1939	Feb. 28, 1939	c14.24	1,190		Feb. 14, 1950	18.43	5,640
					May 4, 1950	17.99	5,120
1940	May 31, 1940	14.75	1,400		May 8, 1950	14.98	1,840
					July 30, 1950	15.72	2,240
1941	Mar. 10, 1941	14.30	1,390				
				1951	Feb. 21, 1951	14.71	1,600
1942	Apr. 10, 1942	16.20	4,840				
	May 20, 1942	17.33	4,040	1952	Apr. 24, 1952	17.27	4,620
					May 31, 1952	13.62	1,550
1943	Dec. 30, 1942	15.43	2,200				
	June 8, 1943	17.63	4,240	1953	May 17, 1953	18.60	7,270
1944	May 3, 1944	18.88	6,570	1954	Jan. 20, 1954	11.26	695
1945	Dec. 31, 1944	14.82	1,780	1955	Mar. 24, 1955	13.52	1,590
	Feb. 23, 1945	15.19	2,090				
	Mar. 3, 1945	15.35	2,210	1956	Feb. 10, 1956	8.62	281
	Mar. 31, 1945	d22.4	24,000				
	June 13, 1945	19.41	8,050	1957	Apr. 27, 1957	17.71	5,260
1946	Jan. 11, 1946	16.64	3,110	1958	Nov. 9, 1957	13.47	1,900
	May 27, 1946	16.58	3,110		Apr. 28, 1958	21.30	12,900
	June 1, 1946	17.70	4,260		May 2, 1958	18.13	4,610
1947	Nov. 9, 1946	15.54	2,250	1959	Apr. 21, 1959	15.55	2,730
	Nov. 13, 1946	14.63	1,590				
				1960	Dec. 20, 1959	13.54	1,670
1948	Dec. 18, 1947	14.95	1,900		Jan. 17, 1960	13.26	1,590
	Jan. 4, 1948	14.50	1,600				
	Mar. 4, 1948	16.30	3,190	1961	Dec. 11, 1960	14.32	2,130
	May 14, 1948	16.38	3,340		Mar. 31, 1961	13.29	1,550
1949	May 1, 1949	16.08	2,690				

a Annual peak only, present site and datum.
b Present site and datum (probably backwater from Sabine River), from information by observer.
c Maximum Feb. 16 to Sept. 30; probably maximum for year.
d 24.1 ft, present site and datum.

8-200. Sabine River near Gladewater, Tex. (41)

Location.--Lat 32°32', long 94°57', on right bank on downstream side of bridge on U.S. Highway 271, half a mile downstream from Glade Creek, 1 mile southwest of Gladewater, Gregg County, and at mile 398.

Drainage area.--2,791 sq mi.

Gage.--Nonrecording prior to Oct. 13, 1933; recording thereafter. Datum of gage is 243.85 ft above mean sea level (Texas Reclamation bench mark based on Geological Survey datum).

Stage-discharge relation.--Defined by current-meter measurements below 91,000 cfs. Rating curve extended from 91,000 cfs to 138,000 cfs in 1945 on basis of partial measurements, estimates of flow based on area of floodway and estimated velocities based on velocities in the several channels at lower discharges. Estimates believed reliable and extension considered good.

Bankfull stage.--26 ft (U.S. Weather Bureau).

Historical data.--Flood of Apr. 2, 1945, reached highest stage since at least 1892, from information by local residents.

Remarks.--Base for partial-duration series, 6,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 1914	a41.7	b85,900	1946	Jan. 17, 1946	32.17	11,700
					Feb. 13, 1946	34.45	18,400
1915	August 1915	a40.7	b69,300		Apr. 5, 1946	29.70	8,100
					June 4, 1946	38.90	50,900
1932	January 1932	c39.4	b52,400				
				1947	Nov. 11, 1946	38.52	44,500
1933	Mar. 16, 1933	27.26	6,600		Dec. 22, 1946	29.64	8,020
					Apr. 20, 1947	31.37	10,300
1934	Mar. 13, 1934	26.20	6,610				
	Apr. 15, 1934	30.93	9,340	1948	Dec. 23, 1947	32.77	13,400
					Jan. 10, 1948	27.40	7,650
1935	Jan. 30, 1935	31.52	10,000		Feb. 16, 1948	27.40	7,380
	May 13, 1935	33.80	15,400		Mar. 10, 1948	32.37	12,400
	June 24, 1935	33.98	16,000		May 18, 1948	35.40	23,000
1936	May 12, 1936	23.36	5,090	1949	Feb. 5, 1949	31.43	9,680
					Mar. 4, 1949	33.69	15,100
1937	Mar. 17, 1937	27.20	6,770				
				1950	Nov. 2, 1949	31.80	9,970
1938	Jan. 2, 1938	35.78	25,500		Jan. 21, 1950	32.57	12,100
	Jan. 28, 1938	38.34	40,600		Feb. 9, 1950	35.70	23,100
	Feb. 25, 1938	34.64	20,200		Feb. 17, 1950	37.55	35,000
	Apr. 22, 1938	35.48	24,000		May 10, 1950	34.66	18,300
					May 23, 1950	28.60	6,910
1939	Mar. 5, 1939	28.75	7,860				
				1951	Mar. 1, 1951	28.00	6,600
1940	Apr. 18, 1940	26.21	6,450				
				1952	Apr. 29, 1952	35.08	20,000
1941	Dec. 4, 1940	31.94	10,600		June 3, 1952	31.84	10,600
	Jan. 4, 1941	33.47	15,200				
	Mar. 16, 1941	30.60	9,300	1953	May 5, 1953	35.62	22,400
	May 15, 1941	32.03	11,800		May 20, 1953	36.72	29,300
	June 19, 1941	34.75	21,000				
				1954	Jan. 26, 1954	26.60	6,200
1942	Apr. 13, 1942	39.08	46,200				
	Apr. 27, 1942	35.64	22,900	1955	Mar. 29, 1955	26.30	5,900
	May 26, 1942	33.00	14,300				
				1956	May 12, 1956	20.50	3,730
1943	June 11, 1943	41.15	66,200				
				1957	Apr. 13, 1957	29.98	7,980
1944	Mar. 2, 1944	29.30	7,310		May 1, 1957	40.35	58,900
	Mar. 30, 1944	29.79	8,180		June 1, 1957	35.82	23,500
	May 7, 1944	38.46	42,500				
	June 6, 1944	30.97	9,600	1958	Oct. 27, 1957	28.56	6,960
					Nov. 15, 1957	34.32	17,000
1945	Jan. 7, 1945	31.38	10,300		May 3, 1958	39.90	53,500
	Feb. 28, 1945	35.08	20,100				
	Mar. 5, 1945	36.73	27,100	1959	Apr. 28, 1959	30.92	8,980
	Mar. 25, 1945	31.15	9,000				
	Apr. 2, 1945	44.16	138,000	1960	Dec. 23, 1959	34.77	18,800
	June 17, 1945	38.10	42,500				
	July 21, 1945	29.95	8,350	1961	Dec. 14, 1960	34.93	b19,200

a From information by local resident.
b Annual peak only.
c From floodmark; determined in 1938.

8-205. Sabine River near Longview, Tex. (42)

Location.--Lat 32°28'00", long 94°46'50", just downstream from the International-Great Northern Railroad bridge, 3 miles southwest of Longview, Gregg County.

Drainage area.--2,947 sq mi.

Gage.--Nonrecording. At different datum prior to 1924. Datum of gage is 228.67 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 19, 1905	35.05	19,500	1927	Mar. 16, 1927	29.00	15,200
1906	Dec. 25, 1905	33.8	17,400	1928	Apr. 23, 1928	20.74	5,370
				1929	Dec. 26, 1928	29.95	17,300
1924	Dec. 25, 1923	26.5	9,350	1930	May 22,23,1930	31.90	21,500
1925	May 21, 1925	16.51	3,760				
				1931	Mar.14,15,1931	22.26	6,590
1926	May 4, 1926	24.37	8,410	1932	Jan. 13, 1932	30.0	17,300

8-210. Cherokee Bayou near Elderville, Tex. (43)

Location.--Lat 32°20', long 94°42', at bridge on county highway, 3.8 miles southeast of Elderville, Gregg County, 4.5 miles upstream from bridge on State Highway 149, and 19.3 miles upstream from mouth.

Drainage area.--120 sq mi.

Gage.--Recording. Datum of gage is 266.8 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 4,500 cfs and extended above by logarithmic plotting.

Historical data.--Flood in September 1913 was the maximum since at least 1884, from information by local resident. The date was determined from U.S. Weather Bureau rainfall records.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	September 1913	13.8	-	1944	May 2, 1944	12.64	9,700
1940	Aug. 28, 1940	6.60	1,370		May 23, 1944	7.36	2,000
1941	Nov. 23, 1940	12.81	10,200		May 28, 1944	6.49	1,250
	Dec. 8, 1940	6.54	1,250	1945	Dec. 7, 1944	6.32	1,000
	Dec. 13, 1940	6.19	1,000		Dec. 28, 1944	8.07	2,720
	Dec. 16, 1940	7.33	2,000		Jan. 1, 1945	6.55	1,290
	Dec. 27, 1940	7.86	2,520		Jan. 19, 1945	9.02	3,630
	Jan. 1, 1941	7.59	2,380		Mar. 4, 1945	8.92	3,520
	Jan. 25, 1941	6.24	1,140		Apr. 2, 1945	10.12	5,100
	Mar. 7, 1941	6.67	1,330		June 13, 1945	6.50	1,210
	May 7, 1941	7.23	2,050		June 24, 1945	6.63	1,340
					July 11, 1945	12.47	9,450
1942	Oct. 16, 1941	7.37	1,870				
	Nov. 1, 1941	6.74	1,490	1946	Oct. 6, 1945	7.35	2,000
	Nov. 23, 1941	7.59	2,240		Oct. 9, 1945	6.57	1,340
	Jan. 31, 1942	6.22	1,070		Dec. 4, 1945	6.54	1,290
	Apr. 9, 1942	7.73	2,380		Jan. 17, 1946	6.42	1,340
	May 19, 1942	9.14	3,750		Feb. 10, 1946	6.54	1,460
	June 15, 1942	7.33	2,000		Feb. 19, 1946	6.42	1,340
	Aug. 22, 1942	10.35	5,550		May 14, 1946	8.43	3,020
	Sept.11, 1942	6.16	1,210		May 31, 1946	8.11	2,720
					June 10, 1946	6.79	1,500
1943	Nov. 7, 1942	5.90	820				
				1947	Nov. 27, 1946	6.53	1,120
1944	Feb. 9, 1944	7.60	2,340		Jan. 20, 1947	6.63	1,290
	Feb. 27, 1944	7.63	2,290		Mar. 14, 1947	6.57	1,290
	Mar. 23, 1944	6.70	1,420		May 17, 1947	8.88	3,520
	Mar. 29, 1944	7.49	2,140				
	Apr. 9, 1944	6.49	1,250	1948	May 13, 1948	6.27	960

8-220. Sabine River near Tatum, Tex. (44)

Location.--Lat 32°22', long 94°28', near right bank on downstream side of pier of bridge on State Highway 43, 5 miles upstream from Potter Creek, 5.2 miles northeast of Tatum, Rusk County, 7 miles downstream from Cherokee Bayou, and at mile 339.

Drainage area.--3,493 sq mi.

Gage.--Nonrecording prior to Sept. 21, 1945; recording thereafter. Datum of gage is 204.18 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 66,000 cfs and extended above on basis of partly estimated measurement of 88,900 cfs.

Bankfull stage.--25 ft.

Historical data.--Flood of Apr. 4, 1945, reached the highest stage since at least 1884, from information by local residents.

Remarks.--Flow from 158 sq mi modified by Lake Cherokee since November 1948. Base for partial-duration series, 6,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	32	-	1947	May 19, 1947	20.96	8,500
1939	Mar. 12, 1939	20.2	7,200	1948	Dec. 30, 1947	22.26	10,000
					Feb. 23, 1948	19.62	7,390
1940	Apr. 22, 1940	16.72	5,240		Mar. 16, 1948	22.46	9,600
					May 24, 1948	25.20	15,300
1941	Nov. 25, 1940	25.65	13,800				
	Dec.10-11,1940	24.12	11,000	1949	Feb. 11, 1949	19.58	8,220
	Jan. 10, 1941	24.17	11,200		Mar. 10, 1949	22.13	10,600
	Mar. 24, 1941	20.95	8,010				
	May 21-22,1941	21.97	8,750	1950	Nov. 9, 1949	19.27	7,950
	June 27, 1941	24.95	12,400		Jan. 27, 1950	22.21	10,700
					Feb. 20, 1950	27.43	32,300
1942	Apr. 17, 1942	28.29	37,600		May 16, 1950	24.77	13,900
	Mar. 5, 1942	26.43	20,100				
	June 2, 1942	23.16	10,200	1951	Mar.5-6, 1951	17.02	6,330
	Aug. 24, 1942	23.40	10,400				
				1952	May 5, 1952	24.50	13,400
1943	June 14, 1943	29.84	50,500		June 10, 1952	19.60	8,220
1944	Mar. 1, 1944	22.24	9,640	1953	Mar. 14, 1953	19.33	7,980
	Mar.31 to Apr.1, 1944	21.54	8,550		May 23, 1953	27.08	28,500
	May 3-4, 1944	26.61	24,600	1954	May 14, 1954	17.20	6,460
	May 10, 1944	27.98	36,900				
	June 12, 1944	21.48	8,550	1955	Apr. 14, 1955	16.55	6,040
1945	Jan. 1, 1945	22.38	9,700	1956	May 4, 1956	21.35	9,940
	Jan. 21, 1945	20.95	8,400				
	Mar. 6, 1945	27.31	30,900	1957	May 3, 1957	30.61	70,500
	Apr. 4, 1945	33.80	123,000		June 5, 1957	26.91	27,600
	June 21, 1945	27.32	30,900				
	July 13, 1945	23.25	10,700	1958	Oct. 17, 1957	18.60	7,620
					Nov. 20, 1957	24.52	13,400
1946	Jan. 23, 1946	23.58	11,300		Jan. 23, 1958	18.20	7,620
	Feb. 21, 1946	25.40	16,200		May 5, 1958	30.12	67,500
	Apr. 10, 1946	19.42	7,180				
	May 16, 1946	22.47	9,800	1959	May 4, 1959	27.18	29,800
	June 7, 1946	28.21	41,600				
				1960	Dec. 30, 1959	23.31	12,700
1947	Nov. 15, 1946	27.77	36,600				
	Dec. 27, 1946	19.12	7,110	1961	Dec. 18, 1960	25.66	a17,700
	Apr. 27, 1947	21.04	8,500				

a Annual peak only.

8-225. Sabine River at Logansport, La. (45)

Location.--Lat 31°58'44", long 94°00'58", at Logansport, De Soto Parish, on left bank 4,600 ft upstream from bridge on U.S. Highway 84, 4,800 ft upstream from Texas and New Orleans Railroad Co. bridge, 4 miles upstream from Bayou Castor, and at mile 268.

Drainage area.--4,839 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1956; recording and supplementary wire-weight gage 4,600 ft downstream (used for gage heights above 24.0 ft) thereafter. Prior to Jan. 1, 1907, at datum 2.0 ft lower. Datum of gage is 147.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Subject to changes owing to backwater from Bayou Castor.

Bankfull stage.--25 ft (U.S. Weather Bureau).

Historical data.--Flood of Apr. 8, 1945, was highest since at least 1884.

Remarks.--Gage-height record collected in cooperation with U.S. Weather Bureau. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 7, 1884	39.4	-	1932	Feb. 23, 1932	35.6	41,100
				1933	July 27, 1933	a34.6	29,400
1904	Apr. 13, 1904	18.6	6,090	1934	Mar. 8, 1934	28.4	17,400
1905	May 26, 1905	33.8	33,600	1935	May 8, 1935	34.4	36,000
1906	Jan. 5, 1906	29.6	20,000	1936	Dec. 14, 1935	21.7	8,400
1907	May 31, 1907	24.5	10,800	1937	Jan. 29, 1937	24.6	11,800
1908	May 18, 1908	32.9	30,100	1938	Feb. 7, 1938	31.36	25,700
1909	Feb.19-20, 1909	19.0	6,330	1939	Mar. 4, 1939	26.03	13,600
1910	May 24-25, 1910	20.8	7,540	1940	Feb. 7, 1940	b23.28	8,060
1911	Apr. 29, 1911	20.0	6,980	1941	Nov. 27, 1940	35.91	38,800
1912	Apr. 9, 1912	27.7	16,200	1942	Apr. 24, 1942	31.98	27,000
1913	Mar. 18, 1913	25.5	11,900	1943	June 21, 1943	33.40	31,400
1914	May 10, 1914	34.4	36,000	1944	May 6, 1944	35.05	34,300
1915	May 5, 1915	36.9	47,000	1945	Apr. 8, 1945	44.07	92,000
1916	Feb. 3, 1916	26.4	13,800	1946	June 13, 1946	35.15	37,000
1917	Mar.11-12, 1917	16.8	5,100	1947	Nov. 22, 1946	32.17	25,400
1918	May 11, 1918	22.5	8,890	1948	Feb.15-16, 1948	25.16	13,200
1919	Jan. 6, 1919	24.4	10,700	1949	Mar. 16, 1949	21.08	9,380
1920	Jan. 27, 1920	33.3	31,600	1950	Feb. 25, 1950	32.70	28,900
1921	Apr. 29, 1921	35.7	41,600	1951	Feb. 22, 1951	18.75	7,620
1922	Apr. 2, 1922	33.6	32,800	1952	Feb. 17, 1952	24.00	13,000
1923	Apr. 8-9, 1923	25.8	12,200	1953	May 19, 1953	35.98	40,900
1924	June 3-4, 1924	26.90	14,000	1954	May 18, 1954	23.47	11,500
1925	May 25, 1925	12.24	3,100	1955	Apr. 18, 1955	24.60	12,600
1926	Apr. 25, 1926	29.6	23,000	1956	May 8, 1956	25.70	13,800
1927	Apr. 19, 1927	29.10	20,900	1957	May 7, 1957	39.41	61,300
1928	Apr. 29, 1928	22.4	9,860	1958	May 10-11, 1958	37.82	51,300
1929	June 10-11, 1929	25.2	12,000	1959	May 11, 1959	26.80	15,200
1930	May 29, 1930	34.1	34,800	1960	May 8, 1960	26.03	14,200
1931	May 4, 1931	24.6	10,800	1961	Dec. 15, 1960	29.67	19,500

a Occurred July 25, 1933; backwater from Bayou Castor.
b Occurred Feb. 11, 1940; backwater from Bayou Castor.

8-232. Tenaha Creek near Shelbyville, Tex. (46)

Location.--Lat 31°45'56", long 94°05'02", near center of span at downstream side of bridge on State Highway 87, 1 mile northwest of Shelbyville, Shelby County, 4.2 miles downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, and 5.0 miles upstream from Beauchamp Creek.

Drainage area.--97.8 sq mi.

Gage.--Nonrecording.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--9 ft.

Historical data.--Flood of Nov. 23, 1940, was highest since 1884, from information by local residents.

Remarks.--Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Nov. 23, 1940	15	-	1957	June 23, 1957	9.80	1,700
1952	Mar. 11, 1952	9.70	1,090	1958	Oct. 23, 1957	9.63	1,110
	Apr. 13, 1952	9.79	1,700		Nov. 8, 1957	11.20	4,240
	Apr. 24, 1952	10.10	a2,180		Nov. 18, 1957	9.40	880
					Nov. 23, 1957	9.85	1,440
1953	Mar. 11, 1953	13.85	15,200		Jan. 13, 1958	9.91	1,550
	Mar. 15, 1953	9.80	1,700		Jan. 21, 1958	10.05	1,800
	Apr. 29, 1953	13.63	13,900		May 4, 1958	10.80	3,360
	May 4, 1953	12.42	8,110		June 17, 1958	9.40	880
	May 12, 1953	13.00	10,500				
	May 17, 1953	12.00	6,600	1959	Apr. 19, 1959	10.44	2,600
1954	May 12, 1954	10.00	2,020	1960	Nov. 6, 1959	10.25	1,140
					Dec. 17, 1959	10.90	2,700
1955	Mar. 23, 1955	9.03	889		Feb. 25, 1960	10.30	1,200
	Apr. 10, 1955	9.40	1,090				
	Apr. 13, 1955	10.20	2,340	1961	Nov. 23, 1960	11.30	2,970
					Dec. 9, 1960	11.57	3,560
1956	Apr. 6, 1956	9.39	1,080		Jan. 8, 1961	12.20	5,550
					Jan. 13, 1961	10.17	1,200
1957	Apr. 4, 1957	9.40	880		Jan. 25, 1961	10.25	1,300
	Apr. 25, 1957	10.20	2,500		Mar. 17, 1961	13.33	10,900
	May 1, 1957	10.52	3,040		Mar. 31, 1961	10.00	1,050
	June 3, 1957	9.50	1,030		Sept.14, 1961	10.54	1,660

a Maximum Mar. 6 to Sept. 30; probably maximum for year.

8-235. Bayou San Patricio near Noble, La. (47)

Location.--Lat 31°43'15", long 93°42'25", in lot 38, T.9 N., R.13 W., near right bank on downstream side of bridge on U.S. Highway 171, 1.6 miles downstream from Kansas City Southern Railway bridge and 2.5 miles northwest of Noble.

Drainage area.--154 sq mi.

Gage.--Nonrecording and crest-stage gages prior to Oct. 5, 1955; recording thereafter. Datum of gage is 169.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 14, 1952	10.82	1,380	1955	Apr. 13, 1955	10.48	1,070
	Apr. 26, 1952	10.62	1,200		Aug. 6, 1955	10.65	1,200
1953	Feb. 24, 1953	10.43	1,070	1956	Apr. 7, 1956	11.53	2,280
	Mar. 11, 1953	13.66	6,500				
	Apr. 30, 1953	14.75	9,330	1957	Mar. 12, 1957	10.42	1,050
	May 5, 1953	13.35	5,740		Apr. 4, 1957	10.60	1,200
	May 17, 1953	14.70	9,180		Apr. 30, 1957	12.46	3,930
1954	May 13, 1954	11.94	2,900	1958	Nov. 22, 1957	10.87	1,430

Peak stages and discharges of Bayou San Patricio near Noble, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Jan. 22, 1958	10.82	1,380	1961	Dec. 10, 1960	10.91	1,480
	May 5, 1958	10.60	1,200		Jan. 9, 1961	12.43	3,920
	Sept.21, 1958	16.04	15,400		Jan. 27, 1961	10.89	1,480
1959	Apr. 20, 1959	12.13	3,350		Feb. 22, 1961	10.81	1,380
					Mar. 19, 1961	10.98	1,590
1960	Feb. 26, 1960	11.47	2,160		Mar. 29, 1961	12.03	3,170
	Mar. 28, 1960	10.52	1,110		Sept.14, 1961	11.66	2,470

8-240. Bayou San Miguel near Zwolle, La. (48)

Location.--Lat 31°39'10", long 93°39'10", in NE¼NW¼ sec.25, T.8 N., R.13 W., near right bank on downstream side of bridge on U.S. Highway 171, 1¼ miles northwest of Zwolle and 3½ miles upstream from Bayou Scie.

Drainage area.--111 sq mi.

Gage.--Nonrecording prior to Mar. 4, 1949; recording thereafter. Altitude of gage is 165 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 19, 1949	10.62	1,390	1954	Apr. 18, 1954	10.30	910
	Jan. 23, 1949	10.78	1,740		May 14, 1954	10.26	910
	Jan. 30, 1949	10.30	910				
	Feb. 27, 1949	10.40	1,010	1955	Apr. 13, 1955	10.21	830
	Mar. 26, 1949	11.76	4,100				
				1956	Apr. 8, 1956	10.24	862
1950	Dec. 20, 1949	10.32	930				
	Jan. 6, 1950	11.42	3,210	1957	Feb. 21, 1957	10.29	902
	Jan. 13, 1950	11.05	2,360		Mar. 14, 1957	10.62	1,390
	Jan. 18, 1950	10.94	2,100		Apr. 6, 1957	10.51	1,180
	Feb. 14, 1950	11.63	3,640		Apr. 30, 1957	11.51	3,490
	Feb. 23, 1950	10.86	1,920		June 26, 1957	10.35	960
	Mar. 2, 1950	11.92	4,490				
	May 3, 1950	11.78	4,230	1958	Nov. 24, 1957	11.00	2,000
	May 31, 1950	12.36	5,660		Jan. 22, 1958	11.87	3,720
	June 3, 1950	15.75	15,000		Mar. 8, 1958	10.30	1,230
					Sept.21, 1958	13.07	7,060
1951	Mar. 29, 1951	12.01	4,750				
	May 4, 1951	10.20	830	1959	Apr. 20, 1959	10.60	1,230
1952	Apr. 14, 1952	10.84	1,670	1960	Feb. 26, 1960	11.39	2,800
	Apr. 25, 1952	10.30	910				
				1961	Dec. 11, 1960	10.45	1,400
1953	Feb. 22, 1953	10.51	1,180		Jan. 8, 1961	12.90	6,600
	Mar. 11, 1953	14.09	11,000		Jan. 15, 1961	10.30	860
	Apr. 30, 1953	14.31	11,700		Feb. 19, 1961	10.64	1,320
	May 5, 1953	11.82	4,250				
	May 17, 1953	14.40	12,000				

8-244. Sabine River near Milam, Tex. (49)
(Published as "at Sabinetown" 1923-25)

Location.--Lat 31°28', long 93°45', on right bank 104 ft upstream from bridge on State Highway 21, 2.8 miles downstream from Patroon Bayou, 6.5 miles northeast of Milam, Sabine County, 7.2 miles upstream from Palo Gaucho Bayou, and at mile 195.

Drainage area.--6,508 sq mi.

Gage.--Nonrecording prior to Dec. 22, 1945; recording thereafter. Prior to Sept. 1, 1925, at site 7.4 miles downstream at different datum. Datum of gage is 97.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--36 ft.

Historical data.--Flood of Apr. 12, 1945, was highest since at least 1884. Flood of July 28, 1933, was second highest flood since 1884, from information by former observer. Flood in 1884 reached a stage about 2 ft lower than that of 1945, at ferry about 10 miles upstream, from information by local resident.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	47	-	1948	Feb.15-16, 1948	31.84	18,800
				1949	Mar. 29, 1949	30.37	17,400
1924	June 4, 1924	28.70	33,500	1950	June 5, 1950	43.42	42,400
1925	Jan. 17, 1925	10.90	7,420				
				1951	Mar. 30, 1951	29.14	16,100
1933	July 28, 1933	48.0	76,700	1952	Apr. 25, 1952	30.12	17,000
				1953	May 20, 1953	47.01	69,100
1939	Feb. 20, 1939	a31.68	17,700	1954	May 17, 1954	26.66	13,800
1940	Feb. 12, 1940	34.55	20,300	1955	Apr. 18, 1955	26.80	13,900
1941	Nov. 29, 1940	44.70	54,200	1956	Apr. 10, 1956	26.12	13,200
1942	Nov. 5, 1941	38.42	25,100	1957	May 1-2, 1957	45.05	59,400
1943	July 1, 1943	33.91	21,700	1958	May 16, 1958	43.27	41,600
1944	May 7, 1944	45.33	52,700	1959	Apr.23-24,1959	29.45	16,400
1945	Apr. 12, 1945	48.87	83,400	1960	Feb. 28, 1960	30.77	18,000
1946	Feb. 12, 1946	42.56	36,400	1961	Jan. 10, 1961	38.50	27,900
1947	Jan. 20, 1947	36.78	22,300				

a Maximum for Jan. 19 to Sept. 30, 1939; probably maximum for the year.

8-245. Palo Gaucho Bayou near Hemphill, Tex. (50)

Location.--Lat 31°23'10", long 93°50'08", near center of span at downstream side of bridge on State Highway 87, 0.2 mile upstream from Boregas Creek, 3.6 miles north of Hemphill, Sabine County, 4.2 miles downstream from Sandy Creek, and 13 miles upstream from Sabine River.

Drainage area.--123 sq mi.

Gage.--Nonrecording.

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended above by logarithmic plotting; occasional backwater effect from Boregas Creek.

Bankfull stage.--15 ft.

Historical data.--Flood of July 1933, was highest since at least 1907, from information by local residents.

Remarks.--Base for partial-duration series, 900 cfs.

Peak stages and discharges of Palo Gaucho Bayou near Hemphill, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	July 1933	a26.6	-	1957	Apr. 26, 1957	17.49	2,740
1950	June 1950	b23.0	-		May 1, 1957	18.36	3,920
1952	Apr. 14, 1952	16.70	c1,400	1958	Nov. 23, 1957	18.00	3,340
	Apr. 25, 1952	d18.40	1,000		Jan. 14, 1958	13.80	944
	May 29, 1952	14.50	1,080		Jan. 21, 1958	18.00	3,340
1953	Jan. 23, 1953	16.45	1,730		Apr. 30, 1958	13.90	962
	Feb. 21, 1953	16.58	1,880		Sept.21, 1958	18.20	3,620
	Mar. 15, 1953	15.70	1,390		Sept.28, 1958	19.00	5,000
	Apr. 29, 1953	22.50	17,000	1959	Apr. 18, 1959	19.70	6,480
	May 5, 1953	18.50	4,080	1960	Dec. 18, 1959	13.80	944
	May 18, 1953	21.06	10,700		Feb. 26, 1960	16.50	1,800
1954	Apr. 17, 1954	16.35	1,730	1961	Dec. 10, 1960	16.27	1,330
					Jan. 8, 1961	19.38	5,200
1955	Apr. 11, 1955	14.74	1,100		Jan. 14, 1961	16.70	1,500
	Apr. 14, 1955	16.79	1,880		Feb. 18, 1961	17.06	1,330
	May 21, 1955	15.59	1,360		Mar. 18, 1961	16.75	1,300
					Apr. 13, 1961	14.26	942
1956	Feb. 9, 1956	11.96	680		Sept.14, 1961	16.86	1,630
1957	Apr. 4, 1957	13.90	962				

a From information by local residents. b From information by State Highway Department. c Maximum for Mar. 7 to Sept. 30, 1952; probably maximum for year.
d Occurred Apr. 24; backwater from Boregas Creek.

8-260. Sabine River below Toledo Bend, near Burkeville, Tex. (51)

Location.--Lat 31°03'50", long 93°31'10", near left edge of low-water channel of bridge on State Highway 63, 200 ft downstream from Pearl Creek, 10 miles northeast of Burkeville, Newton County, 16 miles downstream from Bayou Toro, 23 miles downstream from proposed Toledo Bend Dam, and at mile 140.

Drainage area.--7,482 sq mi.

Gage.--Nonrecording prior to Aug. 23, 1958; recording thereafter. Datum of gage is 70.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft.

Historical data.--Flood in May 1884 was highest known since at least 1860, from information by local resident.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	35.9	-	1957	May 15, 1957	32.43	52,900
				1958	May 21-22, 1958	30.42	43,200
1945	Apr. 15, 1945	35.8	-	1959	Apr. 20-21, 1959	22.54	20,200
				1960	Feb. 27, 1960	22.22	20,800
1953	May 23, 1953	35.3	-				
				1961	Jan. 14, 1961	27.63	33,500
1956	Apr. 12, 1956	17.73	14,800				

8-285. Sabine River near Bon Wier, Tex. (52)

Location.--Lat 30°45'00", long 93°36'30", near left bank on downstream side of bridge on U.S. Highway 190, 0.7 mile upstream from Quicksand Creek, 0.8 mile upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 3.0 miles east of Bon Wier, Newton County, 2.4 miles upstream from Caney Creek, and at mile 98.

Drainage area.--8,229 sq mi.

Gage.--Nonrecording prior to Oct. 16, 1958; recording thereafter. At site 0.8 mile downstream prior to July 8, 1931. Datum of gage is 46.42 ft above mean sea level, datum of 1929. All gage heights adjusted to present site by stage-relation curve.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft (U.S. Weather Bureau).

Historical data.--Flood of Apr. 24, 1913, was highest since at least 1833, from information by Gulf, Colorado and Santa Fe Railway Co. and local residents. Floods occurring about 1844 and 1860 were higher than flood in May 1884, from information by local residents.

Remarks.--Gage heights for 1914-38 furnished by U.S. Weather Bureau. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	26	-	1937	Jan.25-26, 1937	18.5	22,700
				1938	Apr. 9, 1938	22.2	46,300
1913	Apr. 24, 1913	30.5	-	1939	Mar. 3, 1939	19.40	26,300
1914	Apr. 30, 1914	21.5	-	1940	Aug. 11, 1940	20.00	28,700
1915	Aug.24,25,28, 29, 1915	20.9	-	1941	Dec. 15, 1940	22.48	51,600
1916	Feb. 2, 1916	19.8	-	1942	Apr. 13, 1942	19.79	27,900
1917	Feb. 18, 1917	17.3	-	1943	July 5-7, 1943	16.28	18,500
1918	May 1,2, 1918	13.1	-	1944	May 8-10, 1944	22.33	54,500
1919	Mar. 30, 1919	20.7	-	1945	Apr17-18, 1945	23.10	75,500
1920	Jan. 28, 1920	23.0	-	1946	Feb. 20, 1946	21.75	44,500
1921	May 12-15, 1921	21.4	-	1947	Jan. 21, 1947	21.45	37,500
1922	Apr10,11, 1922	23.2	-	1948	Apr. 13, 1948	19.46	28,100
1923	Apr. 5,15, 1923	23.3	-	1949	Mar. 31, 1949	19.00	26,300
1924	Dec. 25, 1923	21.35	35,800	1950	June 6, 1950	23.35	73,400
1925	Jan. 19, 1925	a12.5	a10,000	1951	Apr. 1, 1951	18.05	23,400
1926	Nov. 9, 1925	21.30	35,800	1952	Apr. 25, 1952	20.72	33,200
1927	Apr. 21, 1927	21.6	38,900	1953	May 19, 1953	25.70	115,000
1928	Apr. 7, 1928	18.1	18,600	1954	May 3, 1954	16.45	20,000
1929	Mar. 26, 1929	21.30	35,800	1955	Aug. 6, 1955	19.65	29,700
1930	June14-15,1930	19.4	26,100	1956	Feb. 10, 1956	13.72	14,700
1931	Jan.16-18, 1931	19.2	24,600	1957	May 17-18, 1957	22.30	51,800
1932	Feb.28-29,1932	22.73	57,200	1958	May 23-25, 1958	21.22	39,600
1933	Aug. 2, 1933	23.04	63,000	1959	Oct. 2, 1958	19.38	28,900
1934	Mar.30-31,1934	21.4	35,200	1960	Feb.27-28,1960	17.10	23,300
1935	May 22, 1935	23.4	72,600	1961	Jan. 12, 1961	20.98	35,200
1936	Dec. 12, 1935	18.5	22,700				

a Estimated.

8-295. Big Cow Creek near Newton, Tex. (53)

Location.--Lat 30°49'10", long 93°47'05", near center of span at downstream side of bridge on State Highway 87, 2.6 miles southwest of Newton, Newton County, 5.0 miles downstream from Melhomes Creek, and 8.0 miles upstream from Whiteoak Creek.

Drainage area.--128 sq mi.

Gage.--Nonrecording prior to Dec. 19, 1957; recording thereafter. Datum of gage is 134.69 ft above mean sea level, datum of 1929 (levels by Topographic Division).

Stage-discharge relation.--Defined below 13,400 cfs by current-meter measurements.

Bankfull stage.--15 ft.

Historical data.--Flood in April 1922 was highest since at least 1907, from information by local resident.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	27.5	-	1958	Nov. 17, 1957	14.07	1,130
1952	Apr. 24, 1952	14.93	a1,790		Nov. 19, 1957	14.22	1,170
1953	Dec. 5, 1952	14.34	1,120		Nov. 23, 1957	14.77	1,520
	Apr. 29, 1953	19.45	20,200		Dec. 28, 1957	14.30	1,220
	May 5, 1953	14.87	1,630		Jan. 21, 1958	15.08	1,920
	May 18, 1953	18.47	13,800		Feb. 24, 1958	14.03	1,090
1954	May 3, 1954	15.40	2,150	1959	Sept.21, 1958	14.28	1,220
1955	Feb. 6, 1955	15.20	2,150		Feb. 3, 1959	14.89	1,660
	Apr. 13, 1955	15.34	2,480		Apr. 19, 1959	14.18	1,170
1956	Feb. 9, 1956	14.70	1,480	1960	July 27, 1959	14.55	1,360
1957	Mar. 12, 1957	14.10	1,060		Dec. 17, 1959	14.18	1,170
	Mar. 22, 1957	14.80	1,560	1961	Dec. 9, 1960	14.19	1,100
	Mar. 24, 1957	14.40	1,270		Jan. 1, 1961	14.16	1,100
	Apr. 29, 1957	14.38	1,270		Jan. 8, 1961	16.16	4,230
1958	Nov. 8, 1957	13.99	1,090		Jan. 25, 1961	14.44	1,180
					Feb. 18, 1961	14.36	1,180
					Mar. 18, 1961	15.20	1,770
					Sept.13, 1961	16.98	7,400

a Maximum for Apr. 16 to Sept. 30, 1952; probably maximum for the year.

8-300. Cypress Creek near Buna, Tex. (54)

Location.--Lat 30°25'45", long 93°54'20", near center of span at downstream side of bridge on State Farm Road 253, 1.0 mile downstream from unnamed tributary, 3.2 miles east of Buna, Jasper County, and 10 miles upstream from Little Cypress Creek.

Drainage area.--69.2 sq mi.

Gage.--Nonrecording prior to Oct. 23, 1957; recording thereafter. Datum of gage is 46 ft above mean sea level (State Highway Department bridge plans).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 23, 1952	11.93	a3,800	1954	May 1, 1954	10.30	1,520
	May 19, 1952	11.12	2,500		May 4, 1954	10.35	1,570
1953	Feb. 24, 1953	10.00	1,220		May 12, 1954	10.81	2,080
	Apr. 30, 1953	11.65	3,320	1955	Feb. 6, 1955	11.13	2,580
	May 19, 1953	11.14	2,560		Apr. 11, 1955	9.90	1,130
1954	Apr. 15, 1954	11.02	2,350		Apr. 13, 1955	11.95	3,800

a Maximum for Mar. 11 to Sept. 30, 1952; probably maximum for the year.

Peak stages and discharges of Cypress Creek near Buna, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Feb. 4, 1956	9.73	1,020	1959	Jan. 30, 1959	10.82	2,080
					Feb. 2, 1959	10.50	1,730
1957	Dec. 22, 1956	10.30	1,520		Feb. 25, 1959	9.81	1,100
	Mar. 18, 1957	10.55	1,780		Apr. 12, 1959	9.78	1,100
	May 2, 1957	10.15	1,370		July 26, 1959	10.68	1,960
	June 28, 1957	10.40	1,620				
	Sept.26, 1957	11.00	2,350	1960	Dec. 17, 1959	10.84	2,140
1958	Nov. 14, 1957	10.48	1,730	1961	Dec. 31, 1960	10.77	2,020
	Nov. 22, 1957	10.40	1,620		Jan. 8, 1961	11.36	2,880
	Feb. 23, 1958	9.95	1,160		Feb. 18, 1961	11.01	2,350
	Sept.22, 1958	10.95	2,420		Sept.14, 1961	10.06	1,210

8-305. Sabine River near Ruliff, Tex. (55)

Location.--Lat 30°18'10", long 93°44'40", near right bank at downstream side of bridge on State Highway 12, 2.4 miles north of Ruliff, Newton County, 4.2 miles upstream from the Kansas City Southern Railway Co. bridge, 4.5 miles downstream from Cypress Creek, and at mile 40.

Drainage area.--9,329 sq mi.

Gage.--Nonrecording prior to Dec. 9, 1948; recording thereafter. At site 4.2 miles downstream at datum 2.02 ft lower prior to Mar. 1, 1941. Datum of gage is 4.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11 ft.

Historical data.--Flood in May or June 1884 was highest since at least 1835, from information by local resident. The two greatest floods in the period 1884-1960 occurred in 1913 and 1953, from information by local resident.

Remarks.--Gage heights for August 1907 to October 1912, January to December 1917, and October 1918 to September 1924 (unpublished), furnished by Kansas City Southern Railway Co. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	-	a22.2	-	1936	Dec. 13, 1935	13.10	31,600
1888	-	a19	-	1937	Jan.27-28,1937	12.68	28,800
				1938	Apr.12-13, 1938	14.35	50,900
1908	Feb. 15, 1908	13.9	42,600	1939	Mar. 2-6, 1939	12.75	29,400
1909	June 8-9, 1909	11.7	14,800	1940	Aug. 12, 1940	14.40	52,000
1910	June 1-2, 1910	12.5	24,000				
				1941	Dec. 16, 1940	16.46	86,000
1911	May 6, 1911	12.0	17,700	1942	Apr. 12, 1942	14.98	38,500
1912	Dec. 30, 1911	13.9	42,600	1943	July 9-10, 1943	13.95	20,400
1913	Apr.26-29, 1913	19.5	110,000	1944	May 7-8, 1944	16.32	61,900
				1945	Apr. 22, 1945	17.59	85,300
1917	Feb. 26, 1917	11.1	11,600				
				1946	Feb.21-22, 1946	15.89	54,700
1919	June 30, 1919	13.0	30,600	1947	Jan. 22, 1947	15.80	52,900
1920	Jan. 31, 1920	13.6	38,400	1948	Feb.26-28,1948	14.56	28,600
				1949	Apr. 3, 1949	14.73	34,000
1921	May 15-16, 1921	12.5	24,000	1950	June 8-9, 1950	17.28	79,500
1922	Apr. 8-9, 1922	13.8	41,200				
1923	Apr. 15, 1923	15.5	67,000	1951	Apr. 3-4,1951	14.36	27,000
1924	June 11, 1924	12.8	28,000	1952	Apr. 27, 1952	15.57	49,300
1925	Jan.22-23, 1925	b12.30	22,000	1953	May 22, 1953	19.98	121,000
				1954	May 7, 1954	14.46	28,900
1926	Nov. 12, 1925	13.90	45,200	1955	Apr. 16, 1955	14.80	34,700
1927	Jan. 4, 1927	14.14	48,200				
1928	Apr. 12, 1928	12.50	25,000	1956	Feb. 13, 1956	14.08	23,400
1929	June 1, 1929	14.40	52,500	1957	May 20-21, 1957	15.96	53,800
1930	June 16-17,1930	12.40	23,700	1958	Sept.24-25, 1958	15.60	41,300
				1959	Oct. 3-4,1958	15.13	34,700
1931	Jan.16-17,1931	12.85	29,000	1960	Feb.29 to Mar.4, 1960	c14.54	23,400
1932	Mar. 2-3, 1932	15.10	62,800				
1933	Aug. 5, 1933	15.55	68,600				
1934	Mar. 29, 1934	14.15	47,100	1961	Jan. 11, 1961	16.42	52,400
1935	May 24-25,1935	16.10	76,600				

a Present site and datum.
b Maximum Jan. 19 to Sept. 30, 1925; probably maximum for the year.
c Occurred Mar. 1-2.

8-310. Cow Bayou near Mauriceville, Tex. (56)

Location.--Lat 30°11'05", long 93°54'40", near center of span at downstream side of bridge on State Highway 12, half a mile upstream from Kansas City Southern Railway Co. bridge, and 3 miles southwest of Mauriceville, Orange County.

Drainage area.--83.3 sq mi.

Gage.--Nonrecording prior to Oct. 23, 1957; recording thereafter. Datum of gage is 4.7 ft above mean sea level (State Highway Department bridge plans).

Stage-discharge relation.--Defined by current-meter measurements; subject to changes owing to channel shifting and backwater from railroad bridge downstream and from local runoff.

Bankfull stage.--12 ft.

Historical data.--Floods of Feb. 2, 1952, and Sept. 23, 1958, were highest since at least 1940, from information by State Highway Department.

Remarks.--Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Feb. 2, 1952	16.5	-	1958	Feb. 27, 1958	10.78	925
	Apr. 24, 1952	15.16	a3,380		Sept.23, 1958	16.71	4,300
1953	May 19, 1953	14.15	1,950	1959	Feb. 4, 1959	14.68	2,440
					Feb. 12, 1959	11.97	1,140
1954	Apr. 19, 1954	8.70	659		Feb. 25, 1959	12.16	1,180
					Apr. 12, 1959	12.97	1,390
1955	Feb. 9, 1955	10.72	962		July 27, 1959	14.17	1,970
	Apr. 15, 1955	10.70	928				
				1960	Feb. 21, 1960	8.47	617
1956	Feb. 9, 1956	11.20	1,050				
				1961	Jan. 2, 1961	13.01	1,370
1957	Dec. 24, 1956	b13.80	1,700		Jan. 9, 1961	15.56	2,900
	Mar. 21, 1957	12.30	1,230		Feb. 19, 1961	14.63	1,980
	May 2, 1957	b12.00	1,160		June 19, 1961	11.48	1,040
	June 30, 1957	12.21	1,260		July 12, 1961	11.96	1,140
1958	Nov. 26, 1957	11.84	1,100				

a Maximum for Mar. 10 to Sept. 30, 1952.
b Occurred on preceding day.

8-311.45. Unnamed tributary (watershed 3) of Prairie Creek near Tyler, Tex. (57)

Location.--Lat 32°28', long 95°25', 10 miles northwest of Tyler, Smith County.

Drainage area.--0.0124 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	July 19, 1933	-	1.3	1938	Jan. 23, 1938	-	3.2
1934	Apr. 5, 1934	-	1.1	1939	Feb. 25, 1939	-	.1
1935	May 5, 1935	-	2.0	1940	Nov. 25, 1940	-	.5
1936	May 9, 1936	-	8.1	1941	June 7, 1941	-	.6
1937	Nov. 15, 1937	-	1.1				

8-311.50. Unnamed tributary (watershed 4) of Prairie Creek near Tyler, Tex. (58)

Location.--Lat 32°28', long 95°25', 10 miles northwest of Tyler, Smith County.

Drainage area.--0.0095 sq mi; 0.0100 sq mi 1931 to Dec. 31, 1932; 0.0087 sq mi Jan. 1, 1933, to March 1939.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1931	June 16, 1931	-	19	1937	Nov. 15, 1937	-	26
1932	Dec. 23, 1932	-	17	1938	Mar. 28, 1938	-	20
1933	Mar. 30, 1933	-	25	1939	July 9, 1939	-	28
1934	Mar. 25, 1934	-	14	1940	June 28, 1940	-	31
1935	July 3, 1935	-	22	1941	July 11, 1941	-	32
1936	May 1936	-	(a)				

a No record for peak-producing storm of May 1936.

8-311.55. Unnamed tributary (watershed 5) of Prairie Creek near Tyler, Tex. (59)

Location.--Lat 32°28', long 95°25', 10 miles northwest of Tyler, Smith County.

Drainage area.--0.0035 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	Mar. 30, 1933	-	3.9	1938	Jan. 23, 1938	-	3.3
1934	Mar. 25, 1934	-	1.4	1939	July 9, 1939	-	1.8
1935	May 3, 1935	-	3.5	1940	June 28, 1940	-	3.4
1936	May 8, 1936	-	11	1941	June 7, 1941	-	3.5
1937	Apr. 20, 1937	-	2.9				

8-320. Neches River near Neches, Tex. (60)

Location.--Lat 31°53'32", long 95°25'50", near right bank on downstream side of pier of bridge on U.S. Highway 79, 1 mile downstream from Missouri Pacific Railroad bridge, 1.4 miles downstream from Walnut Creek, 4.4 miles northeast of Neches, Anderson County, and at mile 333.

Drainage area.--1,145 sq mi.

Gage.--Nonrecording prior to Oct. 27, 1945; recording thereafter. Datum of gage is 264.06 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 36,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--12 ft.

Historical data.--Flood in May 1908 was highest since that of May 1884, which was probably higher, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Neches River near Neches, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	24.3	-	1951	Feb.28 to Mar. 1, 1951	12.88	1,640
1939	Mar. 4, 1939	a14.51	2,220	1952	Apr. 27, 1952	15.88	6,700
1940	Apr. 13, 1940	10.81	834	1953	May 19, 1953	17.40	12,700
				1954	May 17, 1954	16.14	6,000
1941	June 12, 1941	16.43	8,400	1955	Mar. 27, 1955	15.26	4,300
1942	Apr. 12, 1942	16.30	14,400				
1943	June 12, 1943	15.24	4,060	1956	May 4, 1956	15.51	4,800
1944	May 4, 1944	20.27	23,600	1957	May 1, 1957	17.80	15,800
1945	Apr. 2, 1945	22.07	45,500	1958	May 1, 1958	18.45	19,200
				1959	May 7, 1959	16.24	8,400
1946	June 4, 1946	16.69	11,500	1960	Jan. 20, 1960	15.48	5,850
1947	Nov. 10, 1946	16.82	10,700				
1948	Mar. 7, 1948	15.91	6,780	1961	Dec. 11, 1960	17.89	16,300
1949	Apr. 16, 1949	14.67	5,800				
1950	Feb. 16, 1950	17.53	15,300				

a Maximum for Feb. 9 to Sept. 30, 1939; probably maximum for year.

8-325. Neches River near Alto, Tex. (61)

Location.--Lat 31°34'45", long 95°09'55", near left bank on downstream side of pier of bridge on State Highway 21, 600 ft downstream from Bowles Creek, 7½ miles southwest of Alto, Cherokee County, and at mile 274.

Drainage area.--1,945 sq mi.

Gage.--Recording. Datum of gage is 198.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1937.

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--16 ft.

Historical data.--Flood in May 1884 was highest since at least 1861, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	28.2	a50,000	1952	May 4, 1952	17.44	5,280
				1953	May 17, 1953	22.54	22,900
1944	May 7, 1944	b24.46	31,800	1954	May 23, 1954	17.28	3,560
1945	Apr. 4, 1945	26.85	42,800	1955	Apr. 3, 1955	16.55	3,340
1946	Feb. 10, 1946	18.46	8,400	1956	May 11, 1956	16.53	3,230
1947	Nov. 13, 1946	18.79	9,480	1957	May 1, 1957	22.92	23,600
1948	May 23, 1948	17.15	4,700	1958	May 6, 1958	22.09	19,300
1949	Apr. 23, 1949	16.22	3,480	1959	May 6, 1959	19.26	11,900
1950	Feb. 19, 1950	19.72	11,600	1960	Jan. 19, 1960	c17.48	4,710
1951	Mar. 31, 1951	12.88	1,600	1961	Dec. 15, 1960	20.71	16,800

a About.
b Maximum for Jan. 1 to Sept. 30, 1944; probably maximum for year.
c Occurred on Jan. 25, 1960.

8-330. Neches River near Diboll, Tex. (62)

Location.--Lat 31°08', long 94°48', near center of main span on upstream side of bridge on U.S. Highway 59, 630 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.9 miles downstream from Alabama Creek, 3.8 miles south of Diboll, Angelina County, and at mile 204.

Drainage area.--2,724 sq mi.

Gage.--Nonrecording. Prior to Sept. 25, 1943, at sites 500 to 630 ft upstream. Datum of gage is 134.46 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--10 ft.

Historical data.--Flood in May 1884 was highest since at least 1874, from information from local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	21	110,000	1946	Feb. 10, 1946	16.85	27,000
1900	-	19.9	80,000	1947	Nov. 19, 1946	15.30	13,300
				1948	Feb. 12, 1948	14.10	7,350
1922	April 1922	16.9	28,000	1949	Mar. 25, 1949	13.96	6,650
				1950	June 4, 1950	15.55	15,100
1924	Dec. 23, 1923	a15.40	14,800				
1925	Jan. 18, 1925	8.88	1,100	1951	Mar. 30, 1951	11.83	3,000
				1952	Apr. 24, 1952	13.67	6,040
1929	May 27, 1929	18.8	51,000	1953	May 19, 1953	16.35	21,600
				1954	May 13, 1954	13.82	6,400
1935	May 21, 1935	17.8	38,000	1955	Apr. 11, 1955	13.80	5,710
1939	Mar. 30, 1939	b11.46	2,550	1956	May 20-22,1956	12.09	3,090
1940	Dec. 23, 1939	15.10	12,100	1957	Apr. 30, 1957	16.48	23,100
				1958	May 10, 1958	15.76	16,600
1941	Nov. 28, 1940	16.53	22,800	1959	May 12, 1959	14.46	8,720
1942	Nov. 2, 1941	15.89	18,000	1960	Feb. 26, 1960	14.15	7,520
1943	Dec. 31, 1942	11.88	2,650				
1944	May 4, 1944	18.70	49,900	1961	Dec. 19, 1960	-	c18,500
1945	Apr. 8, 1945	17.95	40,800				

a Maximum Nov. 5, 1923, to Sept. 30, 1924; probably maximum for the year.
b Maximum Mar. 30 to Sept. 30, 1939; may have been exceeded during period of no record.
c About.

8-335. Neches River near Rockland, Tex. (63)

Location.--Lat 31°01'45", long 94°23'46", on left bank 2,100 ft upstream from Texas and New Orleans Railroad Co. bridge, 2,200 ft downstream from bridge on U.S. Highway 69, 1 mile north of Rockland, Tyler County, and 3.6 miles downstream from Billams Creek.

Drainage area.--3,637 sq mi.

Gage.--Nonrecording. Datum of gage is 91.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--22 ft (U.S. Weather Bureau).

Historical data.--Flood in May 1884 was highest since at least that date, from information by local residents.

Remarks.--Peaks shown for period 1904 to 1933 are maximum observed; gage heights furnished by U.S. Weather Bureau. Peaks beginning 1934 are momentary maximums or observed at crest. Only annual peaks are shown.

Peak stages and discharges of Neches River near Rockland, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	34.9	a62,000	1932	Feb. 24, 1932	26.7	33,600
				1933	Mar. 9, 1933	16.4	8,990
1904	May 9-10, 1904	14.5	7,750	1934	Mar. 7, 1934	20.80	12,400
1905	May 18, 1905	25.0	24,600	1935	May 22, 1935	28.90	39,700
1906	Jan. 11, 1906	15.5	8,450	1936	July 5, 1936	19.7	11,400
1907	May 12, 1907	23.3	17,200	1937	Jan. 24, 1937	13.70	7,190
1908	Nov. 23, 1907	26.1	30,400	1938	Apr. 17, 1938	22.82	15,900
1909	June 4, 1909	8.7	3,920	1939	Mar. 1, 1939	17.26	9,820
1910	Feb. 11, 1910	13.8	7,260	1940	Dec. 29, 1939	17.30	9,670
1911	May 2, 1911	18.8	10,800	1941	Nov. 30, 1940	25.50	25,900
1912	Mar.30-31, 1912	19.0	11,000	1942	Nov. 1, 1941	25.10	25,300
1913	Mar.16-17, 1913	19.0	11,000	1943	Jan.13-15, 1943	9.34	4,580
1914	May 17, 1914	23.2	16,900	1944	May 6, 1944	31.84	49,800
1915	May 8, 1915	24.8	25,600	1945	Apr. 11, 1945	28.37	37,800
1916	Mar. 8, 1916	25.2	25,600	1946	Feb.12-13, 1946	b26.56	32,300
1917	Feb. 17, 1917	6.5	2,620	1947	Mar. 15, 1947	22.92	17,700
1918	May 6, 1918	6.4	2,570	1948	Feb. 16, 1948	15.34	8,520
1919	July 1, 1919	23.2	16,900	1949	Mar. 28, 1949	18.58	11,500
1920	Jan. 27, 1920	27.1	35,800	1950	June 6, 1950	24.66	23,500
1921	Apr. 16, 1921	22.4	14,700	1951	Mar. 31, 1951	8.86	4,420
1922	Apr. 2, 1922	28.9	39,700	1952	May 27, 1952	13.78	8,120
1923	Apr. 15, 1923	27.4	37,500	1953	May 20, 1953	27.90	34,400
1924	June 2-5, 1924	22.1	14,200	1954	May 19, 1954	9.60	5,340
1925	Jan. 19, 1925	6.3	2,520	1955	Apr. 15, 1955	19.62	12,700
1926	Apr.26-27, 1926	22.7	15,100	1956	Apr. 8, 1956	6.02	3,220
1927	Apr. 21, 1927	22.0	14,100	1957	May 3, 1957	c25.34	29,700
1928	Mar.18-19, 1928	9.6	4,290	1958	Nov. 26, 1957	21.84	16,000
1929	June 1, 1929	26.8	34,200	1959	Apr. 20, 1959	17.62	11,000
1930	May 30, 1930	18.5	10,500	1960	Feb. 29, 1960	14.70	8,790
1931	Jan. 12, 1931	14.7	7,800	1961	Jan. 16, 1961	23.07	18,900

a Discharge estimated from rating curve extended above 50,000 cfs.
b Occurred Feb. 13.
c Occurred on following day.

8-337. Striker Creek near Summerfield, Tex. (64)

Location.--Lat 32°00'10", long 94°59'30", at bridge on U.S. Highway 79, 3½ miles downstream from Johnson Creek, and 6½ miles northeast of Summerfield, Cherokee County.

Drainage area.--146 sq mi.

Gage.--Nonrecording. Datum of gage is 287.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,700 cfs and extended above by velocity-area studies.

Historical data.--The peak in May 1908 was not exceeded between May 1908 and Nov. 24, 1940, from information by local resident.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	18	-	1942	Aug. 23, 1942	10.15	2,340
					Sept.11, 1942	9.86	2,120
1908	May 1908	16.0	-	1943	Dec. 28, 1942	9.18	1,620
1941	Nov. 24, 1940	17.23	10,800				
	Dec. 16, 1940	10.08	2,260	1944	Jan. 14, 1944	9.70	1,910
	Dec. 28, 1940	10.03	2,260		Feb. 10, 1944	11.30	3,180
	Apr. 3, 1941	9.53	1,850		Mar. 30, 1944	9.46	1,840
					May 2, 1944	16.10	9,450
1942	Oct. 16, 1941	11.50	3,390		May 23, 1944	11.11	3,090
	Nov. 1, 1941	10.69	2,730				
	Nov. 23, 1941	10.70	2,730	1945	Dec. 28, 1944	11.00	3,000
	Apr. 9, 1942	11.20	3,140		Jan. 19, 1945	12.00	4,000
	June 15, 1942	9.75	2,040		Mar. 4, 1945	10.92	2,910

Peak stages and discharges of Striker Creek near Summerfield, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 2, 1945	13.33	5,510	1947	Nov. 27, 1946	9.98	2,120
	July 12, 1945	15.00	7,800		May 17, 1947	12.85	4,910
1946	Oct. 6, 1945	11.10	2,910	1948	May 13, 1948	9.94	1,710
	Oct. 9, 1945	10.65	2,650				
	Feb. 10, 1946	9.80	1,910	1949	Apr. 11, 1949	9.42	1,380
	May 14, 1946	12.25	4,220				
	June 1, 1946	10.18	2,330				

8-345. Mud Creek near Jacksonville, Tex. (65)

Location.--Lat 31°58'40", long 95°09'40", on right bank on downstream side of pile bent of bridge on U.S. Highway 79, 0.6 mile downstream from Caney Creek, 3.9 miles downstream from another Caney Creek, 4 miles downstream from Missouri Pacific Railroad Co. bridge, and 6.9 miles east of Jacksonville, Cherokee County.

Drainage area.--376 sq mi.

Gage.--Recording. Datum of gage is 271.64 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs.

Bankfull stage.--7 ft.

Historical data.--Maximum stage since May 1884 occurred in May 1908 and December 1913; flood in May 1884 was higher, stage unknown; from information by local residents.

Remarks.--Flow slightly regulated by Lake Tyler on Prairie Creek since 1949 (capacity, 43,400 acre-ft). Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	20	-	1947	Nov. 6, 1946	9.65	5,820
					Nov. 26, 1946	8.63	3,290
1914	December 1913	20	-		Jan. 20, 1947	8.05	2,210
					Mar. 13, 1947	8.76	3,730
1932	Feb. 21, 1932	13	-		Apr. 15, 1947	8.09	2,400
					May 17, 1947	10.14	7,700
1939	May 18, 1939	a7.88	1,680		May 21, 1947	8.39	3,080
					June 1, 1947	7.90	2,170
1940	Aug. 29, 1940	8.20	2,240				
				1948	May 14, 1948	8.70	3,510
1941	Nov. 23, 1940	12.50	14,200				
	Dec. 15, 1940	8.60	3,120	1949	Apr. 11, 1949	7.68	1,690
	Dec. 29, 1940	8.68	2,950				
	Feb. 24, 1941	7.98	2,000	1950	Jan. 14, 1950	8.85	3,830
					Feb. 14, 1950	8.98	4,120
1942	Nov. 22, 1941	8.88	3,290		May 2, 1950	8.42	2,940
	Apr. 10, 1942	9.80	5,000		June 2, 1950	8.52	3,140
1943	Dec. 31, 1942	7.69	1,220	1951	Mar. 28, 1951	7.17	861
1944	Feb. 9, 1944	8.62	2,880	1952	Feb. 15, 1952	8.86	3,850
	Feb. 28, 1944	8.72	3,180		Apr. 15, 1952	7.94	2,090
	Mar. 29, 1944	8.02	2,020				
	May 3, 1944	14.09	23,400	1953	Mar. 12, 1953	9.21	4,640
					May 17, 1953	10.05	6,950
1945	Dec. 29, 1944	10.26	7,550				
	Jan. 18, 1945	9.37	4,980	1954	May 14, 1954	8.88	3,940
	Mar. 5, 1945	10.16	7,250				
	Apr. 2, 1945	10.66	8,890	1955	Mar. 23, 1955	8.65	3,200
	July 13, 1945	9.29	5,120		Apr. 13, 1955	8.46	2,900
1946	Oct. 7, 1945	9.45	4,980	1956	May 2, 1956	10.36	7,870
	Jan. 9, 1946	8.45	3,080				
	Feb. 10, 1946	8.27	2,680	1957	Apr. 25, 1957	9.30	4,400
	Mar. 27, 1946	7.83	2,120		Apr. 29, 1957	9.80	5,850
	May 13, 1946	9.38	5,680		May 1, 1957	10.12	7,040
	June 1-2, 1946	9.01	4,580		June 4, 1957	9.33	4,980

a Maximum for May 6 to Sept. 30, 1939; probably exceeded during period of no record.

Peak stages and discharges of Mud Creek near Jacksonville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Nov. 15, 1957	9.47	5,270	1960	Feb. 8, 1960	8.02	2,220
	Nov. 18, 1957	8.43	3,000		Mar. 3, 1960	8.99	3,940
	Jan. 20, 1958	8.44	3,000				
	May 1, 1958	10.57	8,550	1961	Dec. 9, 1960	10.28	7,700
1959	May 3, 1959	12.62	16,800		Jan. 6, 1961	9.13	4,520
	May 26, 1959	8.69	3,500		Jan. 24, 1961	8.44	2,720
					Feb. 22, 1961	8.48	3,100
1960	Dec. 16, 1959	7.91	2,040		Mar. 19, 1961	8.73	3,610
	Jan. 17, 1960	7.92	2,050		June 20, 1961	7.92	2,050

8-370. Angelina River near Lufkin, Tex. (66)

Location.--Lat 31°27'26", long 94°43'34", near right bank of downstream side of bridge on U.S. Highway 59, 200 ft upstream from Procella Creek, 1½ miles downstream from Bayou Loco, 1.5 miles upstream from Southern Pacific Railroad Co. bridge, and 8 miles north of Lufkin, Angelina County.

Drainage area.--1,600 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1934; recording thereafter. At site 1.5 miles downstream at datum 1.39 ft lower prior to Jan. 18, 1926. At site 1,400 ft upstream Jan. 18, 1926, to Sept. 30, 1934. Datum of gage is 164.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs.

Bankfull stage.--8 ft.

Historical data.--Flood in May 1884 was the highest since that date, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	a26.5	-	1944	May 7, 1944	18.55	29,600
				1945	Apr. 7, 1945	15.18	17,300
1908	May 1908	a25.0	-				
				1946	Feb. 9, 1946	13.13	9,760
1924	June 5, 1924	13.90	14,300	1947	May 24, 1947	13.07	10,500
1925	Jan.23-27,1925	8.60	642	1948	Feb. 22, 1948	11.76	5,630
				1949	Feb. 3, 1949	10.63	3,320
1926	Nov.19-21, 1925	15.99	21,900	1950	Feb. 18, 1950	13.44	11,000
1927	Apr. 15, 1927	13.85	10,700				
1928	Mar. 25, 1928	11.10	3,140	1951	Apr. 28, 1951	11.23	4,040
1929	May 31, 1929	13.06	8,160	1952	Apr. 24, 1952	11.34	4,270
1930	May 21, 1930	13.67	10,300	1953	May 19, 1953	16.48	22,000
				1954	May 23, 1954	11.30	4,180
1931	May 9, 1931	11.72	4,260	1955	Apr. 23, 1955	11.05	3,720
1932	Feb. 24, 1932	18.26	38,200				
1933	Apr. 7, 1933	12.69	7,100	1956	May 9, 1956	13.27	10,600
1934	Mar. 8, 1934	13.98	11,500	1957	May 2, 1957	15.92	19,900
				1958	May 8, 1958	13.50	13,000
1940	Feb. 19, 1940	11.06	3,960	1959	May 10, 1959	14.03	14,400
				1960	Mar. 10, 1960	12.00	5,180
1941	Nov. 28, 1940	17.97	31,300				
1942	Oct. 31, 1941	13.92	11,000	1961	Dec.14-15, 1960	14.69	15,500
1943	Jan. 8, 1943	9.94	2,200				

a Adjusted to present site and datum.

8-380. Attoyac Bayou near Chireno, Tex. (67)

Location.--Lat 31°30'15", long 94°18'15", on right bank on downstream side of pier of bridge on State Highway 21, 2.2 miles upstream from Amaladeros Creek, 2.8 miles east of Chireno, Nacogdoches County, 5.4 miles downstream from Arenoso Creek, and 41 miles upstream from mouth.

Drainage area.--503 sq mi.

Gage.--Nonrecording prior to July 31, 1939; recording thereafter, except nonrecording Sept. 6, 1957, to Oct. 27, 1958. Datum of gage is 169.58 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood of June 29, 1902, was highest since at least 1865, from information by local residents.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1902	June 29, 1902	29.9	50,000	1946	May 15, 1946	17.70	3,270
1915	August 1915	a25	a28,000	1947	Jan. 20, 1947	17.74	3,980
					Mar. 15, 1947	18.65	5,980
1924	Feb. 29, 1924	16.95	3,290		Apr. 10, 1947	18.96	6,750
	Apr. 29, 1924	17.13	3,440				
	June 3, 1924	b18.88	8,260	1948	Feb. 12, 1948	17.53	3,530
1925	Jan. 12, 1925	c13.48	926	1949	Mar. 26, 1949	17.08	2,910
1933	July 1, 1933	25.2	28,900	1950	Jan. 1, 1950	16.74	2,500
					Jan. 16, 1950	17.78	3,960
1940	Dec. 25, 1939	19.74	9,870		Mar. 3, 1950	17.40	3,310
	Feb. 7, 1940	19.56	9,560		May 3, 1950	18.06	4,500
	May 3, 1940	16.88	5,000		June 1, 1950	19.43	8,100
					June 4, 1950	19.11	7,200
1941	Nov. 24, 1940	25.97	31,900				
	Dec. 13, 1940	18.65	6,700	1951	Mar. 29, 1951	16.20	1,990
	Dec. 28, 1940	19.86	10,500				
	Feb. 24, 1941	16.63	2,660	1952	Apr. 26, 1952	15.63	1,680
	Mar. 10, 1941	16.53	2,540				
	May 7, 1941	18.42	6,020	1953	Mar. 12, 1953	22.63	18,700
	June 9, 1941	18.64	6,700		Apr. 30, 1953	20.86	12,700
					May 18, 1953	22.08	16,800
1942	Nov. 1, 1941	24.62	26,600				
	Nov. 25, 1941	16.17	5,360	1954	May 14, 1954	13.51	885
	Apr. 11, 1942	17.17	3,400				
	June 16, 1942	17.68	4,000	1956	Apr. 8, 1956	17.29	3,110
1943	Feb. 6, 1943	12.37	814	1957	Apr. 26, 1957	20.37	11,100
					May 2, 1957	21.34	14,300
1944	Jan. 18, 1944	17.25	2,540				
	Feb. 28, 1944	18.30	4,530	1958	Nov. 9, 1957	20.29	10,900
	Mar. 29, 1944	18.02	3,870		Nov. 26, 1957	16.99	2,690
	May 2, 1944	22.53	17,400		Jan. 23, 1958	17.60	3,580
	May 23, 1944	17.75	3,360		May 4, 1958	19.38	8,100
					Sept.22, 1958	21.4	14,500
1945	Dec. 8, 1944	17.74	3,360		Sept.28, 1958	19.00	6,900
	Dec. 31, 1944	18.64	5,340				
	Jan. 1, 1945	20.11	9,310	1959	Apr. 18, 1959	16.77	2,370
	Jan. 20, 1945	19.32	7,010				
	Apr. 5, 1945	20.12	9,310	1960	Feb. 27, 1960	16.85	3,040
1946	Jan. 8, 1946	18.20	4,310	1961	Dec. 10, 1960	20.55	10,200
	Jan. 16, 1946	18.10	4,090		Jan. 10, 1961	20.94	11,500
	Feb. 10, 1946	20.26	9,930		Feb. 23, 1961	17.83	3,580
	Mar. 15, 1946	17.43	2,840		Mar. 18, 1961	19.42	6,750
	Mar. 27, 1946	18.31	4,530		Mar. 30, 1961	18.65	5,100

a About.
b Maximum Jan. 24 to Sept. 30, 1924; probably maximum for the year.
c Maximum Oct. 1, 1924, to Aug. 29, 1925; probably maximum for the year.

8-385. Angelina River near Zavalla, Tex. (68)

Location.--Lat 31°13', long 94°18', near right bank on downstream side of pier of bridge on State Highway 147, just downstream from Harvey Bayou, 3 miles downstream from Attoyac Bayou, and 8½ miles northeast of Zavalla, Angelina County.

Drainage area.--2,892 sq mi.

Gage.--Recording. Datum of gage is 104.48 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft.

Historical data.--Flood of June 1902 was highest known since at least 1883. Second highest flood occurred in February 1932, stage unknown. Floods in 1941 and May 1944, reached about the same stage as the flood of May 18, 1953, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1902	June 1902	29.4	-	1957	May 3, 1957	27.23	32,700
				1958	Nov. 24, 1957	25.27	19,000
1952	Apr. 28, 1952	18.54	6,450	1959	May 16, 1959	22.73	10,800
1953	May 18, 1953	27.72	37,300	1960	Mar. 2, 1960	22.01	7,200
1954	May 3, 1954	14.25	4,140				
1955	Apr. 13, 1955	17.17	5,610	1961	Dec. 17, 1960	25.36	19,500
1956	May 16, 1956	19.85	8,050				

8-395. Angelina River at Horger, Tex. (69)

Location.--Lat 31°00'09", long 94°10'37", near left side of low-water channel, on downstream side of bridge on State Highway 63, a quarter of a mile east of Horger, Jasper County, 12 miles downstream from proposed McGee Bend Dam, 12.4 miles upstream from confluence with Neches River, and 25 miles upstream from Dam B on Neches River.

Drainage area.--3,510 sq mi.

Gage.--Nonrecording prior to Apr. 17, 1951; recording thereafter. Datum of gage is 68.54 ft above mean sea level, datum of 1929, adjustment of 1954.

Stage-discharge relation.--Prior to Apr. 16, 1951, defined below 46,700 cfs by current-meter measurements and extended above by logarithmic plotting. After Feb. 18, 1958, defined below 17,000 cfs by current-meter measurements, using fall as a factor.

Bankfull stage.--35 ft.

Historical data.--Flood in August 1915 was highest since 1885, from information by local residents. Floods in May 1884, and in 1885, were probably higher, from information by local residents.

Remarks.--Only annual peaks are shown. Since Apr. 17, 1951, peaks are affected by Dam B Reservoir.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	39.5	82,000	1935	May 11, 1935	33.10	29,100
1928	Apr. 11, 1928	a17.10	6,940	1936	Dec. 9, 1935	22.2	11,600
1929	May 30, 1929	34.50	33,300	1937	Jan. 25, 1937	19.60	9,040
1930	Feb. 8, 1930	20.76	9,960	1938	Apr. 11, 1938	30.32	24,400
				1939	Feb. 27, 1939	22.30	11,700
1931	Jan. 14, 1931	20.2	9,690	1940	Feb. 14, 1940	23.28	13,800
1932	Feb. 24, 1932	36.35	48,800				
1933	July 31, 1933	24.80	14,200	1941	Nov. 30, 1940	34.50	36,200
1934	Mar. 28, 1934	26.00	16,500	1942	Nov. 5, 1941	33.41	31,900

a Maximum for Mar. 7 to Sept. 30, 1928; probably maximum for year.

Peak stages and discharges of Angelina River at Horger, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Jan. 14, 1943	10.98	4,540	1951	Mar. 31, 1951	b18.03	10,200
1944	May 6, 1944	36.90	49,900				
1945	Apr. 8, 1945	29.07	22,400	1953	May 19, 1953	36.25	-
1946	Feb. 14, 1946	31.43	27,200	1958	Sept.27, 1958	c23.32	17,400
1947	Jan.20-21, 1947	26.20	18,100	1959	Apr. 20, 1959	23.56	17,700
1948	Feb. 18, 1948	20.47	11,500	1960	Feb. 26, 1960	19.23	9,640
1949	Mar.29-30, 1949	19.38	10,500				
1950	June 6, 1950	30.71	25,700	1961	Jan.15-16, 1961	25.70	20,300

b Maximum for Oct. 1, 1950, to Apr. 16, 1951; probably maximum for the year.
c Maximum for Feb. 19 to Sept. 30, 1958; probably exceeded by flood in November 1957.

8-405. Neches River at Town Bluff, Tex. (70)

Location.--Lat 30°47'36", long 94°10'28", on left bank 2,000 ft downstream from Dam B, half a mile northeast of Town Bluff, Tyler County, 2.5 miles upstream from Walnut Creek, 8 miles downstream from Wolf Creek, and at mile 113.

Drainage area.--7,573 sq mi.

Gage.--Recording prior to May 21, 1953, and after Dec. 3, 1954; nonrecording May 21, 1953, to Dec. 3, 1954. Datum of gage is at mean sea level, datum of 1929, Galveston-Houston supplementary adjustment.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--72 ft.

Historical data.--Flood of May 1884 is highest known, from information by Corps of Engineers.

Remarks.--Flow largely regulated by Dam B Reservoir, except during major floods. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	86.8	a120,000	1954	May 7, 1954	66.50	12,800
				1955	Apr. 13, 1955	73.22	21,000
1935	May 1935	82.56	-				
				1956	Feb. 10, 1956	65.55	12,200
1944	May 6, 1944	84.98	-	1957	May 6-7, 1957	80.04	62,000
				1958	Nov.28-29, 1957	c77.14	35,700
1946	February 1946	81.2	-	1959	Apr. 22, 1959	74.79	26,200
				1960	Feb. 29, 1960	71.14	21,100
1951	Apr. 1, 1951	b69.17	14,900				
1952	May 25, 1952	73.00	21,400	1961	Jan.17-19, 1961	77.14	35,700
1953	May 21-22,1953	82.85	90,900				

a Discharge estimated by Corps of Engineers.
b Maximum for Mar. 16 to Sept. 30, 1951; probably maximum for the year.
c Occurred Nov. 28, 1957.

8-410. Neches River at Evadale, Tex. (71)

Location.--Lat 30°20'55", long 94°05'00", near left bank on downstream side of pier of bridge on U.S. Highway 96, 200 ft upstream from Gulf, Colorado and Santa Fe Railway Co. bridge at Evadale, Jasper County, 600 ft downstream from Mill Creek, 15 miles upstream from Village Creek, and at mile 55.

Drainage area.--7,952 sq mi.

Gage.--Nonrecording prior to Dec. 8, 1948; recording thereafter. At datum 5.5 ft lower prior to Jan. 1, 1907. Datum of gage is 8.25 ft above mean sea level, datum of 1929, Galveston-Houston supplementary adjustment of 1936.

Stage-discharge relation.--Defined by current-meter measurements below 92,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--19 ft (U.S. Weather Bureau).

Historical data.--Flood of May 1884 was highest since at least that date, and second highest occurred in August 1915, from information furnished by Gulf, Colorado and Santa Fe Railway Co.

Remarks.--Some regulation by Dam B Reservoir 59 miles upstream, since June 1951. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	a26.2	125,000	1938	Apr. 18, 1938	18.32	39,200
				1939	Mar.6-7, 1939	16.08	21,400
1905	May 23-24, 1905	23.6	35,400	1940	Feb.20-23, 1940	16.38	22,600
1906	Jan.13-14, 1906	21.1	16,300	1941	Dec.5-6, 1940	20.78	59,600
1907	Oct. 19, 1906	b20.0	11,800	1942	Nov. 10, 1941	19.50	47,100
				1943	Jan.16-17, 1943	13.10	9,500
1915	August 1915	24.5	102,000	1944	May 11, 1944	23.58	92,100
				1945	Apr.15-16, 1945	19.89	53,000
1921	Apr.26-28, 1921	c17.1	26,800				
1922	Apr. 6, 1922	21.8	71,500	1946	Feb. 18, 1946	20.30	57,000
1923	Apr.19-20, 1923	21.5	68,500	1947	Jan. 25, 1947	17.88	34,600
1924	June 1-7, 1924	19.0	40,600	1948	Feb.24-25, 1948	16.10	22,800
1925	Jan. 21, 1925	13.94	9,750	1949	Apr. 4, 1949	16.28	24,400
				1950	June 11, 1950	19.26	46,600
1926	Apr.10-11, 1926	17.66	30,800				
1927	Mar. 16, 1927	17.34	27,800	1951	Apr. 4, 1951	14.53	15,400
1928	Apr. 15, 1928	14.50	11,800	1952	May 29-30, 1952	15.55	19,500
1929	June 1, 1929	22.20	83,800	1953	May 24, 1953	22.53	80,300
1930	Feb.13-15, 1930	16.15	20,600	1954	May 9, 1954	13.19	10,900
				1955	Apr. 17, 1955	16.10	23,200
1931	Jan.18-19, 1931	15.76	17,300				
1932	Feb.29 to Mar.1, 1932	21.45	73,400	1956	Feb. 13, 1956	13.18	10,900
				1957	May 10, 1957	20.55	55,300
1933	Mar. 14, 1933	16.07	19,900	1958	Dec. 2, 1957	18.41	35,600
1934	Feb. 11, 1934	16.70	24,800	1959	Apr. 25, 1959	16.98	28,600
1935	May 27-28, 1935	20.60	64,100	1960	Mar. 3, 1960	16.05	20,500
1936	Dec.14-15, 1935	16.30	21,300	1961	Jan.19-22, 1961	18.63	40,400
1937	Jan.28-29, 1937	15.42	19,300				

a Adjusted to present datum.
b Maximum for Oct. to Dec. 31, 1906; probably exceeded by rise in May 1907.
c Maximum for Apr. 1 to Sept. 30, 1921; probably maximum for year.

8-415. Village Creek near Kountze, Tex. (72)

Location.--Lat 30°23'43", long 94°15'45", on left bank 800 ft downstream from bridge on Farm Road 418, 1.2 miles upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 2.7 miles upstream from Cypress Creek, 3.2 miles northeast of Kountze, Hardin County, and 4½ miles downstream from Beech Creek.

Drainage area.--861 sq mi.

Gage.--Nonrecording prior to Apr. 30, 1939; recording thereafter. Prior to Apr. 30, 1939, inverted chain gage at site 1.2 miles downstream at datum 29.51 ft higher. Datum of gage is 25.12 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--12 ft.

Historical data.--Flood of August 1915 was highest known since 1884, from information by engineers of Gulf, Colorado and Santa Fe Railway Co.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	a25.2	-	1946	Feb. 12, 1946	18.04	10,700
1915	August 1915	a34	-	1947	Nov. 13, 1946	20.88	20,000
				1948	Feb. 28, 1948	12.48	2,500
1924	June 2, 1924	b-11.19	14,500	1949	Mar. 25, 1949	16.58	7,770
1925	Jan. 21, 1925	-17.80	2,800	1950	June 4, 1950	26.68	58,000
1926	Nov. 7, 1925	-12.88	12,800	1951	Apr. 1, 1951	13.21	3,090
1927	Dec. 29, 1926	-13.2	11,700	1952	Apr. 25, 1952	-	d8,000
				1953	May 1, 1953	25.6	47,700
1929	May 27, 1929	a32	-	1954	May 4, 1954	12.29	2,550
				1955	Apr. 14, 1955	16.75	8,190
1939	May 20, 1939	c6.44	633				
1940	July 4, 1940	15.15	4,300	1956	Feb. 12, 1956	12.62	2,720
				1957	May 2, 1957	17.96	10,800
1941	Nov. 26, 1940	27.6	67,200	1958	Jan.23-24, 1958	18.01	10,800
1942	Nov. 2, 1941	21.60	22,000	1959	Apr. 23, 1959	14.10	3,910
1943	July 20, 1943	16.36	6,870	1960	Dec. 20, 1959	15.87	6,140
1944	May 6, 1944	18.23	10,700				
1945	Apr. 4, 1945	20.21	16,700	1961	Sept.15, 1961	20.31	18,600

a Adjusted to present site and datum. b Maximum for May 14 to Sept. 30, 1924; probably maximum for the year. c Maximum for Apr. 30 to Sept. 30, 1939; probably exceeded during period of no record. d Estimated.

8-420. Taylor Bayou near LaBelle, Tex. (73)

Location.--Lat 29°52'30", long 94°09'34", near center of stream at downstream side of bridge on county road, 0.7 mile south of LaBelle, Jefferson County, 6.0 miles upstream (along rectified channel) from Hillebrandt Bayou, and 11.2 miles upstream (along rectified channel) from salt water gates and barge locks.

Drainage area.--267 sq mi.

Gage.--Recording. Datum of gage is 4.63 ft below mean sea level, datum of 1929, Houston supplementary adjustment of 1957 (determined by several comparisons of water surface with auxiliary gage 7.2 miles downstream during times of no flow and ideal weather conditions). Auxiliary recording gage 7.2 miles downstream and auxiliary nonrecording gages 8.3 and 11.2 miles downstream.

Stage-discharge relation.--Affected by backwater from Hillebrandt Bayou. Defined by current-meter measurements, using fall as a factor.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Taylor Bayou near LaBelle, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	-	a11.3	-	1956	Jan. 23, 1956	7.55	3,310
				1957	Dec. 24, 1956	d8.95	6,140
1946	-	b10.4	-	1958	Sept.24, 1958	d9.93	6,660
				1959	Feb. 3, 1959	d9.21	6,310
1952	Feb. 4, 1952	9.70	c7,600	1960	Aug. 15, 1960	7.40	3,280
1953	May 20, 1953	8.81	c4,910				
1954	May 26, 1954	8.51	4,130	1961	June 21, 1961	10.08	7,560
1955	Feb. 6, 1955	7.97	3,950				

a From information by Corps of Engineers. b From information on county bridge plans; 12.6 ft from information by local residents. c Maximum measured discharge. d Peak stage occurred on different date than peak discharge.

8-425. Hillebrandt Bayou near Lovell Lake, Tex. (74)

Location.--Lat 29°55'45", long 94°06'35", near center of stream at downstream side of bridge on county road, 1.3 miles southeast of Lovell Lake, Jefferson County, 4.4 miles upstream (along rectified channel) from Taylor Bayou.

Drainage area.--132 sq mi.

Gage.--Recording. Datum of gage is 4.63 ft below mean sea level, datum of 1929, Houston supplementary adjustment of 1957 (determined by several comparisons of water surface with auxiliary gage 5.6 miles downstream during times of no flow and ideal weather conditions). Auxiliary recording gage on Taylor Bayou 1.3 miles downstream from Hillebrandt Bayou; auxiliary nonrecording gages on Taylor Bayou 2.3 and 5.2 miles downstream from Hillebrandt Bayou.

Stage-discharge relation.--Affected by backwater from Taylor Bayou. Defined by current-meter measurements, using fall as a factor.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	February 1952	10.25	-	1957	Dec. 23, 1956	9.28	7,580
				1958	Sept.21, 1958	a10.09	8,280
1954	May 25, 1954	a8.17	2,930	1959	Feb. 2, 1959	a9.06	7,050
1955	Feb. 6, 1955	7.80	4,200	1960	Nov. 5, 1959	7.09	3,360
1956	Jan. 23, 1956	7.23	(b)	1961	June 20, 1961	a11.56	9,100

a Peak stage occurred on different date than peak discharge. b Discharge less than 1,000 cfs.

8-427. North Creek near Jacksboro, Tex. (75)

Location.--Lat 33°17', long 98°18', on left bank at downstream side of bridge on U.S. Highway 281, 1.5 miles upstream from Henderson Creek, 9.3 miles northwest of Jacksboro, Jack County, and 14 miles upstream from mouth.

Drainage area.--21.6 sq mi.

Gage.--Recording. Datum of gage is 1,016.33 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Historical data.--Flood of Apr. 28, 1957, was the highest since at least 1915, from information by local resident.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of North Creek near Jacksboro, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 3, 1956	21.58	5,700	1960	Oct. 3, 1959	19.65	4,830
1957	Apr. 28, 1957	24.45	6,990				
1958	Nov. 4, 1957	12.56	1,760	1961	July 16, 1961	15.23	2,840
1959	June 26, 1959	14.45	2,500				

8-428. West Fork Trinity River near Jacksboro, Tex. (76)

Location.--Lat 33°17'30", long 98°04'40", on left bank at downstream side of bridge on State Highway 24, 4 miles downstream from North Creek, 7 miles upstream from Carroll Creek, and 7 miles northeast of Jacksboro, Jack County.

Drainage area.--683 sq mi.

Gage.--Recording. Datum of gage is 869.28 ft above mean sea level (levels by State Highway Department).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--13 ft.

Historical data.--Flood of Apr. 27, 1957, was the highest since at least 1900, from information by local residents.

Remarks.--Since December 1951, flow from 28.5 sq mi above station has been partly controlled by six floodwater-retarding structures with a total combined capacity of 11,200 acre-ft below flood spillway crests. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	-	30	27,000	1957	Apr. 27, 1957	32.10	35,100
				1958	Nov. 5, 1957	20.51	3,030
1941	June 1941	30	27,000	1959	June 29, 1959	16.95	1,520
				1960	Oct. 4, 1959	22.95	6,800
1955	Sept.30, 1955	23	6,600				
				1961	Jan. 9, 1961	15.00	1,110
1956	June 5, 1956	a17.27	1,890				

a Maximum Mar. 1 to Sept. 30, 1956; probably maximum for year.

8-435. West Fork Trinity River at Bridgeport, Tex. (77)

Location.--Lat 33°12', long 97°47', at pumping plant of the Chicago, Rock Island & Pacific Railway (formerly Chicago, Rock Island & Gulf Railway), a quarter of a mile downstream from Balsora-Bridgeport highway suspension bridge, half a mile southwest of Bridgeport, Wise County, and 1¼ miles downstream from Gentry Creek.

Drainage area.--1,147 sq mi.

Gage.--Nonrecording. Datum of gage is 721.0 ft above mean sea level. At site a quarter of a mile upstream prior to July 10, 1924.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended above by logarithmic plotting. Relation for period prior to 1915 based on measurements obtained 1915 to 1930.

Bankfull stage.--21 ft (U.S. Weather Bureau).

Remarks.--Flow regulated by Bridgeport Reservoir since Apr. 1, 1932 (capacity, 270,900 acre-ft). Gage heights for periods 1908-15 and 1930-34 furnished by U.S. Weather Bureau. Only annual peaks are shown.

Peak stages and discharges of West Fork Trinity River at Bridgeport, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 25, 1908	28.7	19,600	1922	Apr. 26, 1922	21.91	9,800
1909	Oct. 23, 1908	15.5	4,080	1923	Apr. 25, 1923	25.7	14,700
1910	June 7, 1910	12.2	2,740	1924	Nov. 14, 1923	23.3	10,000
				1925	May 9, 1925	13.25	2,630
1911	Aug. 29, 1911	20.6	8,240				
1912	June 18, 1912	18.0	5,570	1926	Mar.21,22,1926	21.57	7,480
1913	May 8, 1913	13.4	3,220	1927	Mar. 1, 1927	20.98	6,820
1914	May 28, 1914	22.7	10,800	1928	June 27, 1928	16.86	3,760
1915	June 8, 1915	28.9	20,000	1929	May 16, 1929	19.8	5,550
				1930	June 19, 1930	22.4	8,600
1916	Apr. 2, 1916	22.72	10,800				
1917	Aug. 20, 1917	14.28	3,570	1931	Oct. 15, 1930	22.8	9,200
1918	Apr. 17, 1918	18.35	5,850	1932	Jan. 17, 1932	18.9	4,810
1919	Dec. 23, 1918	20.00	7,550	1933	Dec.26,27, 1932	12.9	2,380
1920	May 16, 1920	23.77	12,200	1934	Nov.17,18, 1933	9.2	1,170
1921	July 11, 1921	21.70	9,740				

8-440. Big Sandy Creek near Bridgeport, Tex. (78)

Location.--Lat 33°13', long 97°41', on downstream side of bridge on State Highway 24, 1.9 miles upstream from Greathouse Branch, 4.0 miles east of Bridgeport, Wise County, and 4.4 miles upstream from mouth.

Drainage area.--332 sq mi.

Gage.--Recording. Datum of gage is 727.44 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 22,000 cfs.

Bankfull stage.--9.5 ft.

Historical data.--Highest floods since at least 1887 were in 1908 and 1915 and reached about same stage as flood of June 10, 1941, from information by local residents.

Remarks.--Flow from 103 sq mi modified since May 1, 1956, by Amon Carter Reservoir (capacity, 20,050 acre-ft at elevation 920.0 ft). Construction of floodwater-detention reservoirs started in 1958, and by September 1960 flow from 10.5 sq mi partly controlled by five floodwater-detention reservoirs (combined capacity, 3,110 acre-ft at flood-spillway crests). Base for partial duration series, 1,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	-	15.7	-	1942	Apr. 24, 1942	13.10	23,000
					May 19, 1942	11.76	13,100
1915	-	15.7	-		June 6, 1942	9.60	3,500
					June 16, 1942	10.22	5,660
1937	Oct. 26, 1936	8.76	2,330				
				1943	Mar. 25, 1943	9.53	3,370
1938	Dec. 16, 1937	9.7	3,180		May 10, 1943	9.90	4,760
	Mar. 28, 1938	10.70	7,000		June 6, 1943	9.82	4,480
1939	Jan. 9, 1939	8.16	608	1944	Feb. 28, 1944	9.53	3,680
					Apr. 2, 1944	9.51	3,590
1940	June 10, 1940	9.23	2,450				
	July 3, 1940	9.65	3,680	1945	Mar. 15, 1945	11.34	12,000
	Aug. 17, 1940	9.84	4,340		Mar. 19, 1945	10.46	7,680
					Mar. 31, 1945	9.36	2,970
1941	Nov. 26, 1940	9.90	4,550		Apr. 16, 1945	9.48	3,470
	Feb. 2, 1941	9.28	2,380		July 9, 1945	10.36	6,140
	Apr. 16, 1941	10.73	7,760				
	Apr. 30, 1941	10.64	7,300	1946	Oct. 1, 1945	9.69	4,360
	June 10, 1941	15.69	53,000		Jan. 5, 1946	9.73	4,530
	June 15, 1941	10.80	8,160		Feb. 18, 1946	9.60	3,970
	June 28, 1941	9.94	4,690		Mar. 28, 1946	9.49	3,510
					May 13, 1946	9.33	2,850
1942	Oct. 4, 1941	13.14	23,000		May 15, 1946	8.99	1,700
	Oct. 31, 1941	9.19	2,100		June 1, 1946	9.39	3,090
	Apr. 8, 1942	12.42	17,300				
	Apr. 20, 1942	9.70	3,850	1947	Nov. 4, 1946	9.04	1,820

Peak stages and discharges of Big Sandy Creek near Bridgeport, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Dec. 11, 1946	9.91	5,300	1955	June 20, 1955	8.18	521
	Apr. 15, 1947	9.32	2,810				
	May 14, 1947	9.09	1,980	1956	May 3, 1956	7.58	296
1948	Dec. 7, 1947	9.28	2,660	1957	Apr. 26, 1957	13.05	29,300
					May 14, 1957	9.16	1,620
1949	June 15, 1949	9.13	2,120		May 19, 1957	9.42	2,680
					May 23, 1957	9.26	1,940
1950	Oct. 25, 1949	10.22	4,840		May 25, 1957	10.45	10,500
	May 2, 1950	9.35	1,800		June 2, 1957	10.30	9,620
	June 12, 1950	9.56	2,330		June 4, 1957	9.20	1,700
	June 30, 1950	9.64	2,580				
	July 15, 1950	9.37	1,850	1958	Nov. 5, 1957	9.25	2,420
	July 28, 1950	9.36	1,830		May 3, 1958	10.70	10,100
	Sept.20, 1950	9.70	2,780				
				1959	June 23, 1959	11.22	15,300
1951	June 4, 1951	10.20	4,750				
				1960	Oct. 4, 1959	11.96	20,900
1952	May 29, 1952	8.45	675				
				1961	Jan. 8, 1961	8.99	1,600
1953	May 16, 1953	8.28	570				
1954	Oct. 26, 1953	8.92	1,110				

8-445. West Fork Trinity River near Boyd, Tex. (79)

Location.--Lat 33°05'05", long 97°33'30", on right bank at downstream side of bridge on State Farm Road 730, 0.6 mile northeast of Boyd, Wise County, 3.5 miles downstream from Boggy Creek, and at mile 602.

Drainage area.--1,729 sq mi.

Gage.--Recording. At site 2.2 miles downstream at datum 5.48 ft lower prior to Dec. 14, 1954. Datum of gage is 660.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs.

Bankfull stage.--16 ft.

Historical data.--Flood in May 1908 was the highest since at least 1880. Local residents report a flood of about the same height in the period 1870-80.

Remarks.--Flow largely regulated by Bridgeport Reservoir since 1932 and Amon Carter Reservoir near Bowie since May 1956; combined capacity, 292,000 acre-ft. By Sept. 30, 1960, flow from 10.5 sq mi above this station and below Bridgeport Reservoir was partly controlled by five floodwater-detention reservoirs with a total combined capacity of 3,110 acre-ft below the flood spillway crests. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	25	-	1953	May 16, 1953	12.62	1,390
				1954	Oct. 26, 1953	14.57	2,000
1942	April 1942	20.6	-	1955	June 20, 1955	11.85	1,300
1947	Apr. 16, 1947	a15.53	2,480	1956	May 1, 1956	13.28	1,390
1948	Feb. 26, 1948	15.81	2,900	1957	Apr. 27, 1957	21.60	24,400
1949	May 17, 1949	14.79	2,330	1958	May 3, 1958	19.83	16,400
1950	July 28, 1950	18.20	6,650	1959	June 25, 1959	16.90	3,310
				1960	Oct. 5, 1959	22.17	27,300
1951	June 6, 1951	15.26	2,150				
1952	Oct. 28, 1951	10.17	817	1961	June 26, 1961	17.00	3,630

a Maximum during period Jan. 1 to Sept. 30, 1947; probably exceeded during period of no record.

8-455. West Fork Trinity River at Lake Worth Dam, above Fort Worth, Tex. (80)

Location.--Lat 32°48', long 97°25', in valve tower just above Lake Worth Dam, 4⅔ miles northwest of Tarrant County courthouse in Fort Worth.

Drainage area.--2,069 sq mi.

Gage.--Nonrecording prior to June 10, 1924; recording thereafter. At site half a mile upstream prior to June 10, 1924. Datum of gage is 594.3 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs.

Remarks.--Gage heights for years 1918, 1922-24 furnished by city of Fort Worth water department. Peak discharge for May 17, 1949, computed using rating furnished by Corps of Engineers. Flow partly regulated by Bridgeport Reservoir (capacity, 270,400 acre-ft) beginning Apr. 1, 1932; and entirely regulated by Eagle Mountain Reservoir (capacity, 182,700 acre-ft) since Feb. 28, 1934. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	Apr. 21, 1918	2.1	-	1929	May 17, 1929	2.13	7,120
				1930	May 13, 1930	2.15	7,120
1922	Apr. 26, 1922	3.0	-				
1923	Apr.28,29, 1923	3.62	-	1931	Oct. 19, 1930, Feb. 27, 1931	1.62	4,730
1924	Nov. 18, 1923	2.25	7,600				
1925	May 10, 1925	1.12	2,960	1932	Jan. 22 1932	1.67	4,880
				1933	June 1, 1933	1.21	3,140
1926	Sept. 6, 1926	1.52	4,300	1934	May 2, 1934	.35	520
1927	Apr. 25, 1927	1.89	5,900				
1928	July 3, 1928	1.22	3,180	1949	May 17, 1949	1.62	4,650

8-460. Clear Fork Trinity River near Aledo, Tex. (81)

Location.--Lat 32°38'25", long 97°33'50", on left bank 3 miles downstream from Turkey Creek, 3½ miles upstream from bridge on U.S. Highway 377, 4 miles southeast of Aledo, Parker County, and 11.8 miles upstream from Benbrook Dam.

Drainage area.--246 sq mi.

Gage.--Recording. Datum of gage is 723.33 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 17,500 cfs.

Bankfull stage.--18 ft.

Historical data.--Flood in April 1922 was the highest since at least 1858, from information by local resident.

Remarks.--Since Dec. 15, 1956, Lake Weatherford (capacity, 19,470 acre-ft above spillway crest) has modified runoff from 105 sq mi above gaging station. At end of 1960 water year, flow from 79.7 sq mi above station was partly controlled by 34 floodwater-detention reservoirs with a total combined capacity of 25,710 acre-ft below flood spillway crests. Base for partial-duration series, 3,000 cfs. Only annual peaks are shown subsequent to 1956.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	34	-	1952	Apr. 22, 1952	9.13	1,840
1948	Feb. 25, 1948	22.53	8,450	1953	May 16, 1953	10.58	2,330
				1954	Oct. 26, 1953	7.65	1,240
1949	Mar. 26, 1949	16.02	4,000				
	May 17, 1949	25.00	15,900	1955	May 19, 1955	16.42	4,170
	May 29, 1949	14.50	3,480				
	June 25, 1949	13.45	3,140	1956	May 1, 1956	10.85	2,390
1950	Oct. 24, 1949	17.41	4,620	1957	May 25, 1957	29.00	34,000
	May 2, 1950	14.08	3,350	1958	May 3, 1958	13.21	3,080
	May 14, 1950	13.64	3,200	1959	June 23, 1959	4.19	231
	Sept.20, 1950	13.83	3,260	1960	Oct. 4, 1959	20.15	6,250
1951	June 3, 1951	10.08	2,170	1961	Mar. 17, 1961	4.49	302

8-470. Clear Fork Trinity River near Benbrook, Tex. (82)

Location.--Lat 32°39'54", long 97°26'30", on left bank 1½ miles downstream from Benbrook Dam, 1.7 miles southeast of Benbrook, Tarrant County, and 2.9 miles upstream from Marys Creek.

Drainage area.--435 sq mi.

Gage.--Recording. Datum of gage is 604.22 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 10,600 cfs and by slope-area measurement at 82,900 cfs.

Bankfull stage.--18 ft.

Historical data.--Flood of May 17, 1949, reached highest stage since at least 1922. A large flood, probably of lesser magnitude, occurred in April 1922.

Remarks.--Flow regulated by Benbrook Reservoir since September 1952. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947a/	Sept.12, 1947	5.52	690	1956	Sept. 4, 1956	3.94	191
1948	Feb. 25, 1948	24.64	18,000	1957	June 26, 1957	11.28	4,350
1949	May 17, 1949	28.72	82,900	1958	May 17, 1958	11.01	4,120
1950	Feb. 1, 1950	14.10	6,250	1959	Aug.28, Sept.25, 1959	4.65	312
1951	June 3, 1951	7.75	2,150	1960	Oct. 8, 1959	6.59	1,330
1952	May 18, 1952	8.47	2,710				
1953	Apr. 29, 1953	3.84	174	1961	Sept.21, 1961	6.29	1,030
1954	July 23, 1954	3.78	154				
1955	Aug. 22, 1955	3.92	185				

a Period July 17 to Sept. 30.

8-475. Clear Fork Trinity River at Fort Worth, Tex. (83)

Location.--Lat 32°44'02", long 97°21'33", near right bank on downstream side of pier of bridge on Vickery Boulevard at Fort Worth, Tarrant County, 100 ft upstream from East-West Expressway bridge, 310 ft downstream from Texas and Pacific Railway Co. bridge, 3 miles upstream from mouth, 5 miles downstream from Marys Creek, and 10 miles downstream from Benbrook Dam.

Drainage area.--826 sq mi.

Gage.--Nonrecording prior to June 23, 1925; recording thereafter. At site 338 ft upstream at datum 8.37 ft higher prior to June 23, 1925. Datum of gage is 532.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and by contracted-opening measurement at 107,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood of May 17, 1949, reached highest stage since at least 1900.

Remarks.--Flow largely regulated since September 1952 by Benbrook Reservoir (433 sq mi drainage area above reservoir). Reservoir functioned as detention basin during period August 1950 to August 1952 when permanent storage began. Base for partial-duration series, 3,900 cfs. Only annual peaks are shown subsequent to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Apr. 25, 1922	a27.5	74,300	1927	April 1927	7.3	2,300
1924b/	May 26, 1924	4.95	5,800	1928	Oct. 1, 1927	6.87	4,300
	June 2, 1924	4.98	5,800		Apr. 2, 1928	19.83	17,400
					Apr. 5, 1928	10	7,900
1925	May 7, 1925	5.70	7,400				
	May 10, 1925	6.40	9,000	1929	Dec. 16, 1928	11.65	9,000
					Feb. 25, 1929	14.90	11,000
1926	May 19, 1926	8.90	6,870		May 30, 1929	8.57	3,900

a Data furnished by city engineer of Fort Worth; discharge by slope-area measurement.
b Period March to September.

Peak stages and discharges of Clear Fork Trinity River at Fort Worth, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)
1930	May 13, 1930	17.45	14,000
1931	Mar. 31, 1931	6.06	2,650
1932	Jan. 16, 1932	16.03	12,200
	Jan. 22, 1932	17.48	14,000
	Feb. 16, 1932	14.5	11,000
	Feb. 18, 1932	6.70	5,000
	July 6, 1932	7.60	3,930
	Sept. 5, 1932	20.08	18,000
1933	Mar. 5, 1933	8.46	4,660
	May 15, 1933	7.97	4,180
	July 30, 1933	11.30	7,320
1934	May 2, 1934	7.75	3,990
1935	May 4, 1935	14.44	10,200
	May 15, 1935	16.67	12,800
	May 18, 1935	19.88	17,400
	June 15, 1935	7.70	4,220
1936	Sept.27, 1936	16.40	12,400
1937	June 7, 1937	7.28	3,780
1938	Jan. 23, 1938	17.78	14,300
	Feb. 17, 1938	19.35	16,700
	Mar. 29, 1938	9.50	6,110
	Apr. 27, 1938	8.80	5,420
1939	May 16, 1939	6.97	3,400
1940	July 12, 1940	13.12	9,000
1941	Nov. 25, 1940	8.28	5,580
	Dec. 15, 1940	7.92	5,170
	Dec. 26, 1940	9.74	6,890
	Feb. 1 1941	15.42	11,800
	Feb. 23, 1941	7.65	4,840
	May 4, 1941	9.60	6,810
	June 10, 1941	11.92	8,530
	June 16, 1941	7.58	4,840
	Aug. 13, 1941	9.22	6,460
1942	Apr. 8, 1942	10.00	7,130
	Apr. 14, 1942	9.13	6,370
	Apr. 20, 1942	17.72	14,400
	Apr. 24, 1942	19.67	17,200
	Apr. 28, 1942	10.38	7,450
	May 19, 1942	20.36	18,200
	June 15, 1942	11.80	8,460
1943	Oct. 16, 1942	14.64	11,000
1943	May 10, 1943	7.36	4,610
	Sept. 4, 1943	8.27	5,580
1944	Feb. 28, 1944	7.00	4,130
	May 2, 1944	8.76	6,080
	May 29, 1944	9.12	6,370
1945	Feb. 12, 1945	8.08	5,280
	Feb. 21, 1945	18.76	16,200
	Feb. 27, 1945	12.88	9,360
	Mar. 12, 1945	7.93	5,170
	Mar. 30, 1945	22.10	27,000
	Apr. 1, 1945	17.00	13,600
	Apr. 22, 1945	8.80	6,080
	Apr. 24, 1945	8.35	5,680
1946	May 15, 1946	7.58	4,840
1947	Nov. 3, 1946	12.03	8,600
	Nov. 6, 1946	12.60	9,090
	Dec. 11, 1946	17.37	14,100
	June 21, 1947	10.20	7,290
1948	Feb. 25, 1948	19.14	16,800
	Mar. 1, 1948	8.42	5,680
1949	Feb. 24, 1949	9.12	5,880
	Mar. 25, 1949	14.90	10,900
	May 17, 1949	28.20	107,000
	May 26, 1949	19.46	16,400
	May 29, 1949	17.12	13,100
	June 25, 1949	11.55	7,970
1950	Oct. 25, 1949	7.88	4,740
	Feb. 1, 1950	11.00	7,490
	Feb. 12, 1950	8.68	5,500
	Apr. 16, 1950	8.95	5,790
	May 2, 1950	11.42	7,800
1951	June 3, 1951	5.93	2,760
1952	May 18, 1952	6.32	3,190
1953	July 17, 1953	5.43	2,180
1954	Oct. 26, 1953	4.33	1,040
1955	May 19, 1955	4.37	1,080
1956	May 1, 1956	5.36	2,070
1957	May 25, 1957	18.10	14,200
1958	May 3, 1958	8.22	5,030
1959	Oct. 8, 1958	6.20	3,060
1960	Oct. 4, 1959	8.50	5,320
1961	June 25, 1961	8.98	5,790

8-480. West Fork Trinity River at Fort Worth, Tex. (84)

Location.--Lat 32°45'40", long 97°19'55", on left bank 125 ft upstream from Texas Electric Service Co.'s concrete dam, 980 ft downstream from center line of Paddock Viaduct (North Main Street) at Fort Worth, Tarrant County, 2,600 ft downstream from Clear Fork Trinity River, and at mile 559.

Drainage area.--2,627 sq mi.

Gage.--Recording. At site 1,200 ft upstream prior to Aug. 21, 1954. At site 2,000 ft upstream Aug. 22, 1954, to Oct. 15, 1955. Datum of gage is 519.24 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs.

Bankfull stage--8 ft (U.S. Weather Bureau).

Historical data.--There was a major flood in June 1866. The highest stage since then was on May 17, 1949. Maximum discharge since 1920 occurred Apr. 25, 1922, discharge determined by slope-area measurement of peak flow by city engineer of Fort Worth. Maximum stages have been affected by levee construction, levee breaks, and during the period 1952-55, by major channel rectification.

Remarks.--Flow largely regulated by Bridgeport Reservoir since 1932, Eagle Mountain Reservoir since 1934, Benbrook Reservoir since 1952, and Lake Worth (combined capacity, 651,000 acre-ft at spillway crests). Base for partial-duration series, 4,000 cfs. Only annual peaks are shown subsequent to 1931.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1889	July 3, 1889	23.5	-
1900	September 1900	22.8	-
1908	May 1908	23.8	-
1915	June 10, 1915	21.4	-
1921	Feb. 19, 1921	6.11	5,160
	Apr. 5, 1921	10.11	9,480
1922	Apr. 4, 1922	8.00	7,500
	Apr. 25, 1922	a23.95	85,000
	May 9, 1922	21.15	41,300
1923	Apr. 29, 1923	14.98	14,000
	June 11, 1923	16.23	16,300
1924	Nov. 18, 1923	7.45	6,900
	Dec. 12, 1923	5.88	4,820
	Dec. 17, 1923	6.81	6,110
	Mar. 19, 1924	7.03	6,330
	Apr. 25, 1924	6.60	5,840
	May 26, 1924	6.23	5,330
	June 2, 1924	5.68	4,510
1925	May 7, 1925	6.80	6,100
	May 10, 1925	8.48	8,000
1926	Sept.6-7,1926	-	8,500
1927	Mar. 7, 1927	5.33	4,000
	Apr. 27, 1927	5.70	4,600
1928	Apr. 4, 1928	14.15	12,800
	June 27, 1928	7.29	6,710
1929	Dec. 17, 1928	8.00	7,500
	Feb. 25, 1929	11.80	10,800
	May 19, 1929	7.60	7,070
	May 30, 1929	5.43	4,130
1930	May 13, 1930	14.40	13,100
1930	June 23, 1930	5.60	4,390
1931	Oct. 20, 1930	5.60	4,390
	Feb. 27, 1931	5.52	4,270
1932	Sept. 5, 1932	16.95	18,200
1933	July 30, 1933	6.79	6,100
1934	May 3, 1934	5.12	3,600
1935	May 18, 1935	17.15	18,700
1936	Sept.27, 1936	12.50	11,400
1937	June 7, 1937	5.34	4,000
1938	Feb. 17, 1938	14.50	13,200
1939	May 16, 1939	5.20	3,750
1940	July 12, 1940	9.03	8,500
1941	Feb. 1, 1941	10.89	10,200
1942	Apr. 24, 1942	17.57	23,700
1943	Oct. 16, 1942	9.84	9,870
1944	May 29, 1944	7.37	7,080
1945	Mar. 30, 1945	19.25	31,200
1946	May 15, 1946	5.72	4,690
1947	Dec. 11, 1946	12.85	13,300
1948	Feb. 25, 1948	15.25	14,500
1949	May 17, 1949	b25.91	64,300
1950	May 2, 1950	8.50	7,360
1951	June 3, 1951	4.35	2,580
1952	May 18, 1952	4.52	2,830
1953	July 17, 1953	4.92	3,420
1954	Oct. 26, 1953	3.39	1,450
1955	May 19, 1955	3.32	1,360
1956	May 1, 1956	2.80	2,750
1957	May 25, 1957	8.66	26,800
1958	May 3, 1958	4.72	7,850
1959	June 22, 1959	4.00	5,650
1960	Oct. 8, 1959	3.92	5,370
1961	June 25, 1961	4.72	7,850

a Affected by levee failure; levees were breaking several hours before crest was reached at gage.
b Affected by failure of levees downstream.

8-485. Marine Creek at Fort Worth, Tex. (85)

Location.--Lat 32°48'16", long 97°21'48", on left bank at downstream side of bridge on Northwest 33d Street in Fort Worth, Tarrant County, 1.5 miles upstream from North Main Street, 2.2 miles upstream from St. Louis Southwestern Railway bridge, and 2.4 miles upstream from mouth.

Drainage area.--16.8 sq mi.

Gage.--Recording. Datum of gage is 562.60 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,700 cfs and by slope-area measurement at 24,400 cfs.

Historical data.--Flood of Apr. 20, 1942, is the highest since at least 1907. Large floods also occurred in 1908 and 1922 (stages not known), from information by local resident.

Remarks.--Flow from 3.7 sq mi partly regulated after Feb. 7, 1957, by Cement Creek Reservoir (total capacity, 3,950 acre-ft). Flow from 9.8 sq mi regulated by fixed outlet after Apr. 17, 1958, at Marine Creek Reservoir (total capacity, 15,370 acre-ft). Base for partial-duration series, 230 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 20, 1942	16.1	24,400	1956	Apr. 14, 1956	2.63	438
					May 1, 1956	3.40	1,060
1950	Sept.19, 1950	1.48	a51	1957	Apr. 19, 1957	2.65	242
1951	June 16, 1951	2.29	266		Apr. 20, 1957	4.30	1,610
					Apr. 23, 1957	3.50	756
1952	Apr. 22, 1952	1.38	37		Apr. 26, 1957	4.81	2,420
					May 13, 1957	3.38	660
1953	Apr. 23, 1953	2.37	305		May 24, 1957	5.47	4,300
	Apr. 28, 1953	2.31	275		May 25, 1957	5.55	4,600
					May 30, 1957	3.37	1,620
1954	Oct. 23, 1953	2.84	572		June 2, 1957	4.24	2,610
	Oct. 25, 1953	2.34	290		June 5, 1957	3.58	1,880
1955	June 16, 1955	2.48	350	1958	Apr. 26, 1958	1.65	310
	June 18, 1955	2.25	242		May 3, 1958	1.90	460

a Maximum during period July 5 to Sept. 30, 1950; may have been exceeded during period of no record.

8-490. Village Creek near Handley, Tex. (86)

Location.--Lat 32°42', long 97°13', at Fort Worth-Webb Road crossing, 3½ miles south of Handley, Tarrant County, 7 miles southeast of Fort Worth, and 8 miles upstream from mouth.

Drainage area.--126 sq mi.

Gage.--Nonrecording. Datum of gage is 504.98 ft above mean sea level (from county bench mark datum).

Stage-discharge relation.--Defined by current-meter measurements below 4,400 cfs and extended on basis of slope-area measurements at 4,800 and 9,400 cfs.

Bankfull stage.--17 ft.

Historical data.--Flood in April 1922 was reported to be the highest known.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	28	-	1927	Apr. 18, 1927	6.1	1,210
				1928	Oct. 1, 1927	15.73	9,400
1925	May 8, 1925	12.57	4,820	1929	Dec. 17, 1928	17.90	16,500
				1930	Feb. 22, 1930	3.73	a327
1926	May 19, 1926	11.5	4,180				

a Maximum for period October 1929 to March 1930; probably exceeded in May 1930.

8-495. West Fork Trinity River at Grand Prairie, Tex. (87)

Location.--Lat 32°45'45", long 96°59'40", on left bank at upstream side of bridge on Belt Line Road, 1.3 miles northeast of Grand Prairie, Dallas County, 4 miles upstream from Bear Creek, 7 miles upstream from Mountain Creek, and at mile 515.

Drainage area.--3,070 sq mi.

Gage.--Nonrecording Mar. 27, 1925, to Dec. 5, 1933, and recording Dec. 6, 1933, to May 24, 1956, at site in old channel 2,500 ft southeast of present site and at datum 2.56 ft higher. Nonrecording May 25, 1956, to Apr. 18, 1957, and recording thereafter at present site and datum. Datum of gage is 410.42 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 55,300 cfs.

Bankfull stage.--24.5 ft.

Historical data.--Flood in May 1908 was highest since at least 1900.

Remarks.--Flow largely regulated by Bridgeport Reservoir since 1932, Eagle Mountain Reservoir since 1934, Benbrook Reservoir since 1952, Lake Worth (capacity, 33,300 acre-ft), and Lake Arlington (capacity, 45,700 acre-ft) since 1957. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown subsequent to 1931.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a30.6	-	1938	Feb. 18, 1938	25.47	13,400
				1939	May 17, 1939	13.60	2,820
1922	April 1922	a29.0	-	1940	June 10, 1940	22.08	6,860
1925	May 8, 1925	25.00	b8,980	1941	June 11, 1941	23.40	11,400
				1942	Apr. 25, 1942	25.98	27,200
1926	Apr. 22, 1926	25.0	8,980	1943	Oct. 18, 1942	23.22	10,600
	Sept. 8, 1926	24.3	7,090	1944	May 30, 1944	21.43	8,600
				1945	Mar. 31, 1945	26.05	29,500
1927	Apr. 27, 1927	22.10	5,000				
				1946	May 30, 1946	22.95	11,300
1928	Oct. 2, 1927	23.50	5,800	1947	Dec. 12, 1946	23.22	12,000
	Apr. 5, 1928	24.04	6,520	1948	Feb. 27, 1948	22.91	11,000
	June 28, 1928	24.30	7,090	1949	May 17, 1949	28.00	62,000
				1950	May 3, 1950	21.91	9,890
1929	Dec. 17, 1928	25.30	10,000				
	Feb. 26, 1929	24.80	8,340	1951	June 4, 1951	15.90	5,300
	May 21, 1929	23.58	5,910	1952	Apr. 23, 1952	12.57	3,720
				1953	May 16, 1953	18.20	6,530
1930	May 14, 1930	25.95	15,200	1954	Oct. 26, 1953	7.10	1,550
				1955	May 20, 1955	14.57	4,660
1931	Dec. 5, 1930	22.4	5,700				
				1956	May 2, 1956	14.06	4,430
1932	Jan. 23, 1932	25.96	15,400	1957	May 26, 1957	28.25	59,200
1933	Mar. 6, 1933	23.78	6,910	1958	May 4, 1958	18.65	9,200
1934	May 5, 1934	14.21	2,670	1959	Oct. 9, 1958	11.38	4,870
1935	May 19, 1935	25.48	13,500	1960	Oct. 1, 1959	17.78	8,160
1936	Sept.28, 1936	23.83	7,820	1961	June 26, 1961	19.26	9,020
1937	June 7, 1937	19.10	4,910				

a Annual peak only.
b Maximum Mar. 27 to Sept. 30; probably maximum for year.

8-500. Mountain Creek near Grand Prairie, Tex. (88)

Location.--Lat 32°42', long 96°58', at former bridge on highway between Grand Prairie and Duncanville (now submerged by Mountain Creek Reservoir), 3½ miles southeast of Grand Prairie, Dallas County, 5½ miles upstream from mouth, and 10 miles southwest of Dallas, Dallas County.

Drainage area.--273 sq mi.

Gage.--Recording:. Datum of gage is 430.4 ft above mean sea level (Texas Reclamation Department datum).

Stage-discharge relation.--Defined by current-meter measurements below 4,000 cfs and by slope-area measurement at 35,900 cfs (includes 2,680 cfs flowing through break in levee).

Bankfull stage.--16 ft.

Historical data.--Highest stage known was about 25 ft in April 1922. During this flood the levee on right bank was topped at several low points. Subsequent channel changes would probably have resulted in a lower gage height for a similar flood.

Remarks.--Gage site was submerged by Mountain Creek Reservoir late in 1933. Base for partial-duration series, 3,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 9, 1925	17.63	3,300	1930	May 18, 1930	20.20	13,400
1926	Apr. 22, 1926	18.00	3,110	1931	Mar. 31, 1931	18.38	5,700
1927	Mar. 8, 1927	17.94	3,030	1932	Jan. 12, 1932	17.56	3,350
					Jan. 23, 1932	18.63	6,500
1928	Oct. 2, 1927	18.20	5,000		Feb. 17, 1932	18.04	4,400
	Apr. 5, 1928	17.65	3,350		Mar. 5, 1932	18.01	4,400
	June 10, 1928	17.83	3,800		Sept. 5, 1932	17.65	3,350
1929	Dec. 17, 1928	21.40	a35,900	1933	Jan. 8, 1933	17.82	3,800
	Apr. 20, 1929	18.21	b5,950		Feb. 28, 1933	17.65	3,350
	Apr. 25, 1929	17.90	c4,940		Mar. 6, 1933	18.45	5,700
					May 15, 1933	18.34	5,350
1930	May 13, 1930	20.41	18,800		May 26, 1933	17.60	3,350

a Includes 2,680 cfs flowing through break in levee half a mile above gage.
b Includes 950 cfs flowing through break in levee.
c Includes 840 cfs flowing through break in levee.

8-505. Elm Fork Trinity River near Sanger, Tex. (89)

Location.--Lat 33°23'25", long 97°05'10", on right bank on downstream side of pier of bridge on State Farm Highway 455, 4.1 miles downstream from Spring Creek, 5.0 miles upstream from Isle du Bois Creek, and 5.4 miles northeast of Sanger, Denton County.

Drainage area.--379 sq mi.

Gage.--Recording. Datum of gage is 553.93 ft above mean sea level, datum of 1929. At site 500 ft downstream prior to May 7, 1955.

Stage-discharge relation.--Defined by current-meter measurements below 11,800 cfs.

Bankfull stage.--25 ft.

Historical data.--Flood in May 1908 reached highest stage since at least 1903, from information by local resident.

Remarks.--Construction of floodwater-detention reservoirs started in 1954 and by September 1960 flow from 67.4 sq mi partly controlled by 26 floodwater-detention reservoirs (combined capacity, 22,360 acre-ft at flood spillway crests). Base for partial-duration series, 4,000 cfs.

Peak stages and discharges of Elm Fork Trinity River near Sanger, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a30.7	-	1956	May 1, 1956	8.15	424
1935	May 18, 1935	a29.7	-	1957	Apr. 3, 1957	23.99	7,220
					Apr. 23, 1957	23.40	6,490
1949b/	May 17, 1949	24.15	6,960		Apr. 26, 1957	27.45	20,800
	June 13, 1949	21.75	4,560		Apr. 29, 1957	24.65	8,300
					May 4, 1957	21.72	4,980
1950	Oct. 24, 1949	25.88	13,500		May 14, 1957	21.90	5,120
	Feb. 12, 1950	22.98	5,550		May 18, 1957	25.02	6,090
	May 2, 1950	24.75	8,440		May 25, 1957	27.15	18,600
	May 7, 1950	22.15	4,870		June 2, 1957	23.43	6,520
	June 11, 1950	22.26	4,960				
	Aug. 24, 1950	25.35	10,800	1958	Nov. 5, 1957	26.00	12,200
	Aug. 28, 1950	25.83	13,000		Nov. 8, 1957	22.80	5,870
	Aug. 30, 1950	22.73	5,300		Mar. 7, 1958	21.51	4,800
	Sept.14, 1950	27.14	20,100		Apr. 29, 1958	20.58	4,160
					May 2, 1958	29.10	27,500
1951	June 16, 1951	22.12	4,800		July 6, 1958	24.41	7,840
1952	Apr. 22, 1952	18.28	2,710	1959	June 23, 1959	27.59	20,000
					June 27, 1959	23.58	6,720
1953	Apr. 6, 1953	14.61	1,980	1960	Oct. 4, 1959	25.29	9,850
					Dec. 15, 1959	21.33	4,650
1954	Oct. 26, 1953	19.10	3,530		Jan. 14, 1960	23.31	6,380
1955	May 20, 1955	26.20	11,000	1961	Mar. 26, 1961	19.60	3,580

a Annual peak only; approximate. b Period April to September.

8-510. Isle du Bois Creek near Pilot Point, Tex. (90)

Location.--Lat 33°24'20", long 97°00'45", on left bank at downstream side of bridge on State Farm Highway 372, 2.4 miles downstream from Wolf Creek, 3.0 miles west of Pilot Point, Denton County, and 6.3 miles upstream from mouth.

Drainage area.--262 sq mi.

Gage.--Recording. At site 1 mile upstream at datum 4.22 ft higher prior to Feb. 8, 1958. Datum of gage is 555.48 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 15,000 cfs.

Bankfull stage.--24 ft.

Historical data.--Flood in May 1908 reached highest stage since at least 1900, from information by local resident.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a30.4	-	1957	Apr. 4, 1957	22.88	5,390
					Apr. 24, 1957	23.42	5,950
1949	May 18, 1949	23.43	b5,700		Apr. 26, 1957	c27.08	22,700
					May 1, 1957	19.42	3,130
1950	Jan. 14, 1950	20.58	2,900		May 4, 1957	21.22	4,010
	Feb. 13, 1950	22.12	3,840		May 14, 1957	20.66	3,690
	May 2, 1950	23.77	6,640		May 19, 1957	18.95	2,940
	Aug. 29, 1950	22.85	4,590		May 25, 1957	26.12	15,600
	Sept.13, 1950	26.35	17,200				
				1958	Nov. 6, 1957	23.70	6,310
1951	June 13, 1951	21.62	3,480		Nov. 8, 1957	21.0	3,880
	June 16, 1951	20.58	2,890		May 2, 1958	27.30	16,000
					June 17, 1958	19.73	3,340
1952	Apr. 23, 1952	21.05	3,130				
				1959	June 23, 1959	17.82	2,700
1953	Apr. 29, 1953	20.65	3,570				
	May 17, 1953	19.28	3,040	1960	Oct. 5, 1959	22.92	5,060
					Dec. 15, 1959	19.03	3,100
1954	May 13, 1954	19.87	3,280		July 14, 1960	19.66	2,930
				1961	Jan. 8, 1961	12.84	1,470
1955	May 21, 1955	21.65	4,100				
1956	May 1, 1956	9.91	754				

a Present site and datum, from information by local resident. b Maximum Apr. 12 to Sept. 30, 1949; probably maximum for year. c 28.2 ft, present site and datum.

8-515. Clear Creek near Sanger, Tex. (91)

Location.--Lat 33°20', long 97°11', on right bank at downstream side of bridge on U.S. Highway 77, 1,350 ft downstream from Duck Creek, 1.1 miles upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, and 1.8 miles south of Sanger, Denton County.

Drainage area.--296 sq mi.

Gage.--Recording. Datum of gage is 587.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,500 cfs.

Bankfull stage.--25 ft.

Historical data.--Highest flood since at least 1880 was in May 1908, followed by flood in May 1935, from information by local residents.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a31.5	-	1956	May 2, 1956	3.31	224
1935	May 1935	b29.0	-	1957	Apr. 3, 1957	19.35	5,840
					Apr. 23, 1957	18.84	5,500
1941	June 10, 1941	b28.5	-		Apr. 26, 1957	24.23	15,900
					Apr. 29, 1957	19.88	6,220
1949	May 17, 1949	c21.10	6,880		May 3, 1957	18.10	4,790
	June 13, 1949	21.08	6,880		May 13, 1957	16.58	4,050
					May 18, 1957	19.63	5,730
1950	Oct. 24, 1949	20.05	6,200		May 25, 1957	24.27	16,100
	Feb. 12, 1950	20.20	6,320		June 1, 1957	22.53	10,300
	May 2, 1950	22.04	8,980		June 3, 1957	16.62	4,070
	June 11, 1950	21.50	7,870				
	Sept. 4, 1950	19.00	5,700	1958	Nov. 5, 1957	20.44	6,620
	Sept.13, 1950	24.80	18,200		Nov. 7, 1957	15.07	3,640
					May 2, 1958	24.65	17,400
1951	June 12, 1951	9.95	1,950				
				1959	June 23, 1959	20.00	6,300
1952	Apr. 22, 1952	9.16	1,710		June 27, 1959	21.00	7,210
1953	May 16, 1953	11.58	2,510	1960	Oct. 4, 1959	20.70	8,280
					Jan. 14, 1960	16.06	4,640
1954	Oct. 26, 1953	18.10	5,250				
				1961	Mar. 26, 1961	11.16	2,330
1955	May 19, 1955	22.81	11,000				
	June 8, 1955	19.67	6,050				

a From relation of 1935 and 1908 flood crests at railroad bridge 1.1 miles downstream, approximate. Information from Gulf, Colorado and Santa Fe Railway Co.
b Annual peak only, from information by State Highway Department.
c Maximum Mar. 1 to Sept. 30, 1949; probably maximum for year.

8-530. Elm Fork Trinity River near Lewisville, Tex. (92)

Location.--Lat 33°02'45", long 96°57'40", on left bank at downstream side of pier of bridge on State Highway 121, 1.8 miles east of Lewisville, Denton County, 1.9 miles downstream from Garza-Little Elm Reservoir, and 8.3 miles upstream from Denton Creek.

Drainage area.--1,671 sq mi.

Gage.--Recording. Datum of gage is 432.39 ft above mean sea level, datum of 1929. Prior to Jan. 6, 1950, wire-weight gage 0.6 mile upstream at datum 3.26 ft lower.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--23 ft.

Historical data.--Local resident reported that the highest stage since at least 1907 occurred in 1908 and that the flood in April 1942 reached about the same stage as flood in 1936.

Remarks.--Flow largely regulated by Lake Dallas from January 1927 to October 1954 and regulated by Garza-Little Elm Reservoir since November 1954. Only annual peaks are shown.

Peak stages and discharges of Elm Fork Trinity River near Lewisville, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	33.8	-	1954	May 13, 1954	22.95	4,600
				1955	Oct. 2, 1954	10.32	874
1936	-	27.8	-				
				1956	May 1, 1956	8.58	595
1949	May 18, 1949	29.7	a13,200	1957	May 27, 1957	26.72	b11,400
1950	Sept.15, 1950	30.75	21,700	1958	May 17, 1958	24.09	5,440
				1959	July 20, 1959	8.93	666
1951	June 13, 1951	26.34	6,840	1960	Jan. 22, 1960	20.31	3,820
1952	Apr. 23, 1952	25.63	6,180				
1953	Apr. 29, 1953	27.00	6,880	1961	Mar.22,23,1961	18.45	3,100

a Maximum for period Mar. 1 to Sept. 30, 1949; probably maximum for year.
b Includes about 4,000 cfs passing over spillway of Garza-Little Elm Reservoir and bypassing gage.

8-535. Denton Creek near Justin, Tex. (93)

Location.--Lat 33°07', long 97°18', on right bank at downstream side of bridge on State Farm Highway 156, 100 ft upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 2.2 miles north of Justin, Denton County, 3.0 miles upstream from Olivers Creek, 12.9 miles upstream from Harriet Creek, and 32.9 miles upstream from Grapevine Dam.

Drainage area.--409 sq mi.

Gage.--Recording. Datum of gage is 606.66 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 20,200 cfs.

Bankfull stage.--9.5 ft.

Historical data.--Highest known stage occurred in 1908.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a21.6	-	1955	May 20, 1955	7.48	839
1935	May 1935	b20.6	-	1956	May 1, 1956	10.87	2,260
1950	Feb. 12, 1950	12.29	3,180	1957	Apr. 26, 1957	17.20	23,400
	May 1, 1950	15.67	7,920		May 13, 1957	14.32	4,840
	July 6, 1950	14.36	4,970		May 24, 1957	17.64	29,800
	July 27, 1950	14.46	5,060		June 3, 1957	14.85	5,760
	Sept. 5, 1950	12.88	3,630		June 5, 1957	15.14	6,380
	Sept.15, 1950	13.31	3,970				
				1958	Apr. 30, 1958	14.41	4,940
1951	June 12, 1951	12.24	3,140		May 2, 1958	16.70	17,300
1952	Apr. 22, 1952	7.61	872	1959	June 23, 1959	16.08	11,400
1953	May 16, 1953	9.96	1,230	1960	Oct. 5, 1959	15.87	8,970
1954	Oct. 26, 1953	8.15	1,120	1961	June 25, 1961	10.57	2,080

a Annual peak only; approximate.
b Annual peak only, at site 1,500 ft upstream; approximate.

8-540. Denton Creek near Roanoke, Tex. (94)

Location.--Lat 33°02', long 97°12', 1,100 ft downstream from bridge on U.S. Highway 377, 1,200 ft downstream from Texas & Pacific Railway bridge, 2.5 miles northeast of Roanoke, Denton County, and 8.5 miles downstream from Olivers Creek.

Drainage area.--621 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1928, at site 340 ft downstream; recording thereafter. Datum of gage is 523.55 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and extended above on basis of velocity-area studies.

Bankfull stage.--24 ft.

Historical data.--Maximum stage known to local residents (information obtained in 1939), that of May 1908.

Remarks.--Base for partial-duration series, 7,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	31	-	1944	May 2, 1944	18.94	7,720
1922	April 1922	26	-	1945	Feb. 21, 1945	26.58	23,200
					Feb. 27, 1945	23.55	13,300
1924	Dec. 12, 1923	20.65	9,700		Mar. 16, 1945	19.37	8,160
					Apr. 1, 1945	19.85	8,520
1925	May 9, 1925	17.10	6,950				
				1946	Feb. 18, 1946	21.27	10,000
1926	Mar. 21, 1926	18.10	7,650		May 30, 1946	20.58	9,300
1927	Apr. 19, 1927	14.10	4,980	1947	Nov. 6, 1946	19.02	7,800
					Dec. 11, 1946	19.00	7,800
1939a/	Apr. 16, 1939	18.58	8,000				
				1948	Feb. 25, 1948	24.78	16,300
1940	July 3, 1940	21.85	10,500				
				1949	May 17, 1949	25.90	20,000
1941	Nov. 25, 1940	19.04	7,800		May 26, 1949	20.24	8,900
	Dec. 15, 1940	21.37	10,100				
	Apr. 18, 1941	20.35	9,100	1950	Oct. 24, 1949	21.80	10,500
	June 11, 1941	28.90	39,300		May 2, 1950	24.90	16,600
					May 13, 1950	23.84	13,700
1942	Apr. 8, 1942	25.67	19,200		July 27, 1950	19.98	8,700
	Apr. 20, 1942	30.20	49,700				
	Apr. 25, 1942	27.84	31,300	1951	June 14, 1951	15.25	3,920
	May 19, 1942	25.56	16,800				
	June 6, 1942	19.08	7,890	1952	Apr. 22, 1952	15.74	4,060
	June 15, 1942	20.89	9,600				
				1953	May 15, 1953	18.79	6,830
1943	Mar. 25, 1942	21.61	10,300				
	May 10, 1943	25.67	19,200	1954	Oct. 26, 1953	13.46	3,570
1944	Feb. 28, 1944	20.65	9,300	1955	June 19, 1955	8.80	1,600

a Period Mar. 1 to Sept. 30.

8-550. Denton Creek near Grapevine, Tex. (95)

Location.--Lat 32°59'15", long 97°00'45", on left bank at downstream side of left pier of bridge on State Highway 121, 1.3 miles downstream from Bakers Branch, 4.3 miles downstream from Grapevine Dam, 5.0 miles northeast of Grapevine, Tarrant County, and 6.1 miles upstream from mouth.

Drainage area.--704 sq mi.

Gage.--Recording. Datum of gage is 439.11 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs.

Bankfull stage.--22 ft.

Historical data.--Local resident reported flood in May 1908 was slightly higher than flood in April 1942.

Remarks.--Flow regulated by Grapevine Reservoir since July 1953. Only annual peaks are shown.

Peak stages and discharges of Denton Creek near Grapevine, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	April 1942	35.9	-	1955	May 18, 1955	11.73	606
1948	Feb. 26, 1948	30.28	13,900	1956	May 1, 1956	11.04	508
1949	May 17, 1949	29.68	11,000	1957	May 19, 1957	21.91	2,400
1950	May 2, 1950	29.27	10,100	1958	June 30, 1958	20.16	2,500
				1959	July 20, 1959	17.65	1,790
1951	June 15, 1951	23.91	3,540	1960	Oct. 11, 1959	21.11	2,530
1952	Apr. 23, 1952	16.82	1,460				
1953	Apr. 28, 1953	16.22	1,340	1961	June 29, 1961	14.21	1,060
1954	June 15, 1954	12.90	771				

8-555. Elm Fork Trinity River near Carrollton, Tex. (96)

Location.--Lat 32°57'55", long 96°56'40", near left bank at downstream side of pier of highway bridge, 40 ft upstream from Carrollton Dam, 0.3 mile downstream from Denton Creek, 1 mile upstream from St. Louis Southwestern Railway Lines bridge, and 2.3 miles northwest of Carrollton, Dallas County.

Drainage area.--2,457 sq mi; 2,534 sq mi at site used July 7, 1938, to Sept. 30, 1955.

Gage.--Nonrecording prior to Nov. 14, 1934; recording thereafter. At site 8.5 miles downstream at datum 22.94 ft lower Apr. 15, 1939, to Sept. 30, 1955. Datum of gage is 433.40 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 79,000 cfs.

Bankfull stage.--6 ft (U.S. Weather Bureau).

Historical data.--Flood of May 25, 1908, reached the highest stage since 1866.

Remarks.--Beginning February 1928, flow modified by Lake Dallas (capacity, 194,000 acre-ft). Largely regulated by Grapevine Reservoir (capacity, 435,500 acre-ft) since July 1952 and by Garza-Little Elm Reservoir (capacity, 1,002,900 acre-ft) since November 1954. Base for partial-duration series, 8,100 cfs. Only annual peaks are shown subsequent to 1952.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1866	-	a17	-	1934	Mar. 1, 1934	6.10	7,460
1908	May 25, 1908	a17	-	1935	May 6, 1935	11.00	33,000
					May 19, 1935	13.00	82,100
1924	Dec. 14, 1923	12.75	76,000		June 16, 1935	9.35	18,200
	Mar. 20, 1924	8.00	13,000				
				1936	Dec. 7, 1935	7.45	10,800
1925	May 10, 1925	7.80	12,200		Sept.29, 1936	8.90	16,000
1926	July 29, 1926	6.74	8,660	1937	Oct. 26, 1936	7.28	10,500
1927	Mar. 2, 1927	7.80	12,100	1938	Jan. 24, 1938	8.50	14,400
	Apr. 19, 1927	6.70	8,660		Feb. 18, 1938	12.10	56,700
	July 15, 1927	8.60	15,200		Mar. 28, 1938	11.90	51,800
1928	Apr. 6, 1928	5.70	6,190	1939	Apr. 18, 1939	12.78	10,700
1929	Dec. 17, 1928	7.40	10,700	1940	June 17, 1940	12.33	8,980
	May 15, 1929	9.40	19,000		July 4, 1940	12.28	8,980
1930	May 14, 1930	7.20	10,100	1941	Nov. 27, 1940	12.24	8,740
					Dec. 17, 1940	12.91	11,600
1931	Dec. 5, 1930	6.46	8,100		Dec. 28, 1940	12.07	8,530
					Apr. 19, 1941	12.68	10,600
1932	Jan. 18, 1932	8.65	15,200		Apr. 24, 1941	12.28	8,980
	Jan. 23, 1932	11.30	30,600		June 12, 1941	20.53	76,400
	Feb. 17, 1932	10.80	27,200				
	Feb. 23, 1932	7.50	11,100	1942	Apr. 10, 1942	16.18	32,800
					Apr. 20, 1942	20.29	70,400
1933	Mar. 6, 1933	7.33	10,900		Apr. 26, 1942	21.05	90,700
	May 26, 1933	6.73	9,060		May 20, 1942	13.58	16,700

a Annual peak only; approximate.

Peak stages and discharges of Elm Fork Trinity River near Carrollton, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	June 8, 1942	12.59	10,600	1949	May 18, 1949	15.36	23,600
	June 17, 1942	12.69	11,200		June 14, 1949	14.82	20,200
1943	Mar. 26, 1943	14.13	18,600	1950	Oct. 26, 1949	13.04	10,500
	May 12, 1943	13.28	14,900		Jan. 14, 1950	12.89	10,000
					Feb. 2, 1950	12.82	9,650
1944	Feb. 29, 1944	13.15	12,400		Feb. 14, 1950	12.69	9,300
	May 3, 1944	13.32	13,600		May 4, 1950	15.17	22,300
					May 14, 1950	13.29	12,000
1945	Feb. 22, 1945	16.96	37,800		Sept.17, 1950	15.00	21,400
	Mar. 1, 1945	14.71	22,900				
	Mar. 18, 1945	12.69	10,600	1951	June 13, 1951	11.30	6,030
	Mar. 22, 1945	13.48	16,100				
	Mar. 31, 1945	13.04	13,600	1952	Apr. 24, 1952	10.84	5,740
	Apr. 4, 1945	13.73	18,000				
	June 14, 1945	11.83	8,010	1953	Apr. 30, 1953	11.42	6,130
	July 13, 1945	12.64	10,600	1954	May 14, 1954	8.12	4,370
				1955	Mar. 20, 1955	3.23	1,180
1946	Feb. 20, 1946	13.46	14,800				
	June 2, 1946	18.11	42,800	1956	May 1, 1956	3.66	2,740
				1957	June 5, 1957	8.54	13,700
1947	Nov. 8, 1946	13.74	15,800	1958	Apr. 27, 1958	6.65	7,720
	Dec. 13, 1946	14.95	23,000	1959	July 20, 1959	4.04	2,960
				1960	Oct. 4, 1959	4.95	4,200
1948	Feb. 27, 1948	16.59	27,600				
				1961	Mar.23-24,1961	4.25	3,080
1949	Feb. 25, 1949	12.43	8,530				

8-565. Turtle Creek at Dallas, Tex. (97)

Location.--Lat 32°48'26", long 96°48'08", on left bank 68 ft upstream from Hall Street Dam, 210 ft upstream from Hall Street at Dallas, Dallas County, and 2.0 miles north of Dallas County courthouse.

Drainage area.--7.98 sq mi.

Gage.--Recording. Datum of gage is 428.13 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above on basis of weir formula, $Q = 3.3\ L\ (H)^{3/2}$.

Bankfull stage.--4.5 ft.

Historical data.--Flood of Oct. 1, 1959, reached the highest stage since at least 1903.

Remarks.--Base for partial-duration series, 880 cfs. The creek basin is in a highly-developed urban area.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Aug. 27, 1947	a6.8	3,350	1953	Apr. 23, 1953	3.54	910
1948	May 11, 1948	4.68	1,630	1954	Apr. 11, 1954	5.17	1,980
					Apr. 12, 1954	6.40	2,980
1949	Jan. 24, 1949	5.46	2,220		Apr. 30, 1954	3.89	1,120
	Feb. 23, 1949	4.23	1,330		May 10, 1954	3.48	880
	May 16, 1949	6.15	2,800		May 12, 1954	3.80	1,060
	May 27, 1949	6.15	2,800		June 15, 1954	4.18	1,270
	June 13, 1949	5.50	2,220				
				1955	June 18, 1955	3.44	852
1950	Oct. 24, 1949	4.85	1,740				
	Feb. 1, 1950	4.40	1,420	1956	Apr. 29, 1956	3.80	1,060
	Feb. 12, 1950	3.72	1,000		May 1, 1956	4.84	1,740
	Apr. 29, 1950	3.80	1,060				
	May 1, 1950	5.29	2,060	1957	Nov. 2 or 3, 1956	3.58	940
	May 13, 1950	4.03	1,210		Mar. 17, 1957	3.58	910
1951	Sept.12, 1951	4.82	1,700		Apr. 24, 1957	5.79	2,460
					Apr. 26, 1957	7.30	3,850
1952	Apr. 21, 1952	5.23	1,980		May 1, 1957	4.14	1,270
	Apr. 22, 1952	4.37	1,390		May 12, 1957	7.14	3,650
	May 17, 1952	5.47	2,220		May 25, 1957	5.40	2,140
	July 18, 1952	3.65	970		May 25, 1957	4.07	1,210

a Annual peak only.

Peak stages and discharges of Turtle Creek at Dallas, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 15, 1957	3.62	940	1959	Sept.28, 1959	3.58	940
	Mar. 29, 1958	4.99	1,840				
	Apr. 26, 1958	6.54	3,070	1960	Oct. 1, 1959	8.10	4,650
	Apr. 29, 1958	4.00	1,180		Oct. 4, 1959	6.78	3,350
	May 2, 1958	5.09	1,910		Nov. 3, 1959	4.47	1,460
1959	Feb. 14, 1959	4.47	1,460	1961	Oct. 13, 1960	4.08	1,240

8-570. Trinity River at Dallas, Tex. (98)

Location.--Lat 32°47', long 96°48', on left bank on downstream side of left pier of Commerce Street viaduct at Dallas, Dallas County, 5½ miles downstream from confluence of West and Elm Forks, and at mile 500.

Drainage area.--6,120 sq mi.

Gage.--Nonrecording July 1, 1903, to Sept. 30, 1932; recording thereafter. Datum of gage is 368.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1954. At site 6 miles downstream at datum 3.08 ft lower July 21, 1930, to Sept. 30, 1932.

Stage-discharge relation.--Defined by current-meter measurements below 109,000 cfs.

Bankfull stage.--30 ft (U.S. Weather Bureau).

Historical data.--Flood of May 25, 1908, reached the highest stage since at least 1840.

Remarks.--Gage heights for period July 1903 to July 20, 1930, are Weather Bureau gage-height readings at Commerce Street Bridge at present datum. New channel and levees through Dallas completed in 1930. Discharge measurements made in April 1942 showed that channel rectification did not materially affect high water stage-discharge relation. Flow from 1,974 sq mi modified by Bridgeport, Eagle Mountain Reservoirs since 1934; from 433 sq mi by Benbrook Reservoir since 1952; from 694 sq mi by Grapevine Reservoir since 1952; and from 1,658 sq mi by Garza-Little Elm Reservoir since 1954. Base for partial-duration series, 11,000 cfs. Only annual peaks are shown subsequent to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1840	-	a51	-	1913	May 7, 1913	22.4	5,300
1866	-	a52	-	1914	Dec. 6, 1913	38.4	44,500
1871	-	a47	-	1915	June 12, 1915	37.5	39,690
1889	-	a41	-	1916	Apr. 3, 1916	39.8	54,700
1890	-	a45	-	1917	May 29, 1917	27.6	8,600
1903	July 7, 1903	b32.1	c12,300	1918	Apr. 20, 1918	29.8	9,710
1904	Mar. 27, 1904	27.2	7,630	1919	Nov. 9, 1918	38.2	50,300
1905	May 23, 1905	35.1	22,600	1920	May 12, 1920	39.4	54,000
1906	May 18, 1906	34.9	21,400	1921	Oct. 26, 1920	31.20	11,100
					Jan. 15, 1921	33.24	14,500
1907	June 8, 1907	30.4	10,200		Feb. 21, 1921	33.54	15,200
					Apr. 7-8, 1921	34.30	18,200
1908	May 25, 1908	52.6	184,000				
				1922	Apr. 5, 1922	36.58	32,200
1909	Oct. 26, 1908	28.1	8,220		Apr. 27, 1922	42.35	75,100
					May 9, 1922	41.67	69,600
1910	Apr. 10, 1910	22.7	5,800				
				1923	Apr. 29, 1923	31.88	12,000
1911	Aug. 30, 1911	25.5	8,600		June 12, 1923	37.45	37,900
1912	Apr. 4, 1912	28.7	8,680	1924	Dec. 15, 1923	38.20	43,100

a From graph based on data credited to P. M. Churchill, U.S. Engineers Office, Dallas, Tex.; approximate.
b Maximum for period July 1 to Sept. 30, 1903.
c Maximum daily discharge.

Peak stages and discharges of Trinity River at Dallas, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Mar. 21, 1924	34.06	17,200	1942	June 16, 1942	33.77	19,500
1925	May 11, 1925	34.15	17,700	1943	Oct. 19, 1942	34.37	20,900
					Mar. 26, 1943	34.52	21,300
1926	Apr. 23, 1926	31.55	11,500		Apr. 9, 1943	30.59	11,900
					May 12, 1943	32.03	14,300
1927	Mar. 9, 1927	31.6	11,600		June 7, 1943	30.68	11,700
	Apr. 21, 1927	33.1	14,000				
				1944	Mar. 1, 1944	32.22	12,100
1928	Apr. 6, 1928	32.20	11,200		May 2, 1944	34.87	22,700
					May 30, 1944	33.67	16,600
1929	Dec. 18, 1928	37.20	34,800				
	Feb. 27, 1929	32.5	13,000	1945	Feb. 14, 1945	30.78	12,100
	May 17, 1929	34.10	19,200		Feb. 23, 1945	40.62	50,000
	June 1, 1929	31.4	11,600		Mar. 1, 1945	38.08	34,500
					Mar. 13, 1945	31.87	13,600
1930	May 14, 1930	36.20	34,200		Mar. 23, 1945	33.83	17,600
					Mar. 31, 1945	40.96	52,900
1931	Dec. 6, 1930	25.84	9,210		Apr. 23, 1945	31.33	12,800
					June 14, 1945	32.00	12,300
1932	Jan. 24, 1932	33.35	44,000		July 14, 1945	31.53	13,000
	Feb. 19, 1932	31.43	28,400				
	Sept. 7, 1932	28.21	13,400	1946	Feb. 20, 1946	33.88	17,900
					May 16, 1946	31.97	13,800
1933	Dec. 25, 1932	32.91	15,400		May 30, 1946	40.35	38,300
	Mar. 7, 1933	33.80	17,800		June 2, 1946	40.60	38,900
	May 16, 1933	31.57	12,900				
	May 26, 1933	31.63	13,600	1947	Nov. 8, 1946	35.97	21,700
	Aug. 1, 1933	34.68	16,100		Dec. 13, 1946	38.54	34,000
					June 22, 1947	36.60	24,000
1934	Mar. 2, 1934	29.61	10,000		Aug. 27, 1947	32.72	14,800
1935	May 6, 1935	34.97	25,100	1948	Dec. 8, 1947	32.08	14,000
	May 20, 1935	42.10	76,700		Dec. 16, 1947	33.46	16,900
	June 18, 1935	33.86	20,900		Jan. 2, 1948	30.83	12,200
					Feb. 27, 1948	40.50	46,300
1936	Sept.28, 1936	35.15	25,900				
				1949	Feb. 24, 1949	37.27	25,900
1937	Oct. 26, 1936	29.45	d10,100		Mar. 27, 1949	33.57	13,300
					May 18, 1949	46.93	82,500
1938	Jan. 24, 1938	36.31	31,100		May 28, 1949	34.06	14,400
	Feb. 19, 1938	41.15	67,500		June 15, 1949	36.00	21,400
	Mar. 30, 1938	38.54	45,000				
				1950	Oct. 26, 1949	34.42	15,200
1939	Apr. 19, 1939	29.75	10,800		Jan. 14, 1950	33.57	12,800
					Feb. 3, 1950	37.13	25,000
1940	June 16, 1940	33.85	18,100		Feb. 13, 1950	35.85	20,200
	July 4, 1940	32.42	14,300		May 4, 1950	38.10	28,800
					May 15, 1950	35.15	18,000
1941	Nov. 26, 1940	32.28	15,900		Sept.18, 1950	35.53	19,100
	Dec. 16, 1940	33.53	18,000				
	Dec. 28, 1940	33.25	17,500	1951	June 17, 1951	31.36	9,350
	Feb. 3, 1941	31.50	14,600	1952	Apr. 23, 1952	28.70	7,570
	Feb. 25, 1941	31.66	15,000	1953	May 16, 1953	34.57	16,600
	Apr. 20, 1941	30.73	13,500	1954	May 12, 1954	24.82	4,640
	May 6, 1941	33.31	17,700	1955	May 20, 1955	26.12	6,010
	June 3, 1941	32.43	16,100				
	June 12, 1941	42.90	77,000	1956	May 2, 1956	29.45	7,320
				1957	May 26, 1957	41.72	75,300
1942	Apr. 10, 1942	37.55	37,000	1958	Apr. 27, 1958	34.60	23,200
	Apr. 21, 1942	45.25	100,000	1959	June 23, 1959	27.22	7,590
	Apr. 26, 1942	45.56	111,000	1960	Oct. 5, 1959	35.37	21,400
	May 20, 1942	37.64	34,600				
	June 8, 1942	31.48	14,600	1961	June 26, 1961	32.27	12,200

d Maximum peak discharge; maximum discharge during the year, 17,000 cfs at 12:01 a.m. Oct. 1, 1936; stage falling.

8-575. Honey Creek subwatershed No. 11 near McKinney, Tex. (99)

Location.--Lat 33°18'10", long 96°41'30", near center of dam on unnamed tributary of Honey Creek, 1.5 miles west of Farm Road 543 and 8.4 miles northwest of McKinney, Collin County.

Drainage area.--2.14 sq mi.

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

Remarks.--Peak discharge based on maximum inflow (average for 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 15, 1953	-	a268	1957	May 13, 1957	-	1,000
					May 18, 1957	-	383
1954	Apr. 30, 1954	-	221		May 21, 1957	-	1,630
	June 8, 1954	-	235		May 22, 1957	-	423
	June 15, 1954	-	224		May 23, 1957	-	999
					May 25, 1957	-	1,080
1955	Feb. 19, 1955	-	b42		May 26, 1957	-	1,550
1956	Feb. 17, 1956	-	264	1958	Apr. 29, 1958	-	572
	May 1, 1956	-	256		Apr. 30, 1958	-	718
					May 1, 1958	-	1,880
1957	Mar. 31, 1957	-	308		May 3, 1958	-	217
	Apr. 19, 1957	-	551				
	Apr. 21, 1957	-	487	1959	July 24, 1959	-	156
	Apr. 23, 1957	-	383				
	Apr. 24, 1957	-	469	1960	Aug. 26, 1960	-	320
	Apr. 26, 1957	-	695				
	May 3, 1957	-	418	1961	May 1, 1961	-	1,320
	May 12, 1957	-	385				

a No rainfall record for adjusting maximum inflow. b Average for 30-minute interval.

8-580. Honey Creek subwatershed No. 12 near McKinney, Tex. (100)

Location.--Lat 33°18'20", long 96°40'15", near center of dam on unnamed tributary of Honey Creek, 0.5 mile west of Farm Road 543 and 7.8 miles northwest of McKinney, Collin County.

Drainage area.--1.26 sq mi.

Gage.--Recording. Datum of gage is 623.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 28, 1953	-	a423	1957	May 16, 1957	-	176
	May 15, 1953	-	a194		May 18, 1957	-	422
					May 21, 1957	-	1,490
1954	June 8, 1954	-	196		May 22, 1957	-	340
	June 15, 1954	-	212		May 23, 1957	-	891
					May 25, 1957	-	1,110
1955	Oct. 23, 1954	-	b123		May 26, 1957	-	1,420
1956	Feb. 17, 1956	-	b295	1958	Apr. 29, 1958	-	1,170
					Apr. 30, 1958	-	744
1957	Apr. 19, 1957	-	824		May 1, 1958	-	1,410
	Apr. 21, 1957	-	247		May 3, 1958	-	190
	Apr. 23, 1957	-	544				
	Apr. 24, 1957	-	581	1959	July 24, 1959	-	(c)
	Apr. 25, 1957	-	296				
	Apr. 26, 1957	-	674	1960	June 8, 1960	-	288
	May 3, 1957	-	408				
	May 13, 1957	-	523	1961	May 1, 1961	-	589

a No rainfall records for adjusting maximum inflow. b Average for 30-minute interval. c Not determined.

8-585. Honey Creek near McKinney, Tex. (101)

Location.--Lat 33°17', long 96°39', on right bank at downstream side of bridge, 4.5 miles downstream from Haw Branch, 5.6 miles upstream from mouth, and 6.0 miles northwest of McKinney, Collin County.

Drainage area.--39.0 sq mi.

Gage.--Recording. Datum of gage is 563.68 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,620 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood in 1950 (probably June) reached highest stage since at least 1930, from information by local resident.

Remarks.--Between 1951 and July 1957, 12 floodwater-retarding structures were built. These structures have a total floodwater-detention capacity of 8,320 acre-ft below the flood spillway crests and partly control the flow from 20.9 sq mi above the station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 1950	23.0	-	1956	May 1, 1956	14.27	1,410
				1957	May 26, 1957	20.29	7,920
1951	Aug. 23, 1951	a1.55	8.8	1958	May 2, 1958	18.70	4,580
1952	Apr. 22, 1952	16.65	2,500	1959	June 23, 1959	7.76	384
1953	May 15, 1953	16.65	2,540	1960	Nov. 4, 1959	11.81	982
1954	May 12, 1954	16.66	2,510				
1955	Feb. 19, 1955	15.74	2,050	1961	May 1, 1961	13.10	1,280

a Maximum for period July to September 1951; probably exceded during period of no record.

8-590. East Fork Trinity River near McKinney, Tex. (102)

Location.--Lat 33°12'15", long 96°35'41", on right bank at downstream side of bridge on State Highway 24, 1.2 miles northeast of McKinney, Collin County, 2.8 miles downstream from Honey Creek, 7.2 miles upstream from Wilson Creek, and 22.4 miles upstream from Lavon Dam.

Drainage area.--188 sq mi.

Gage.--Recording. Datum of gage is 511.69 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Highest current-meter measurement, 23,900 cfs. Prior to 1958, stage-discharge relation above 2,000 cfs indefinite because of insufficient information regarding stages in overflow channel.

Bankfull stage.--14 ft.

Historical data.--Flood in April 1942 reached the highest stage since at least 1913, from information by local residents.

Remarks.--Construction of first floodwater-detention reservoir above station was completed August 1951, and by September 1960 flow from 34.9 sq mi was partly controlled by 19 floodwater-detention reservoirs (combined capacity, 13,770 acre-ft at flood spillway crests). Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	April 1942	21	-	1950	Sept.13, 1950	16.34	-
1950	Jan. 13, 1950	15.96	-	1951	June 3, 1951	16.29	-
	Feb. 1, 1950	15.91	-		June 12, 1951	16.02	-
	Feb. 12, 1950	16.15	-		June 15, 1951	15.39	-
	Apr. 30, 1950	14.90	1,870		June 19, 1951	14.63	1,370
	May 2, 1950	16.68	-				
	May 14, 1950	14.65	1,400	1952	Apr. 23, 1952	15.65	-
	June 11, 1950	17.23	-				
	Aug. 29, 1950	15.81	-	1953	Apr. 24, 1953	14.73	1,360

Peak stages and discharges of East Fork Trinity River near McKinney, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 29, 1953	16.43	-	1957	May 16, 1957	15.35	-
	May 16, 1953	15.90	-		May 18, 1957	15.65	-
					May 23, 1957	16.58	-
1954	Apr. 12, 1954	14.73	1,360		May 26, 1957	16.67	(a)
	May 1, 1954	14.62	1,230		June 2, 1957	14.75	1,420
	May 12, 1954	16.23	-				
				1958	Nov. 5, 1957	15.90	5,070
1955	Feb. 20, 1955	14.39	1,010		Nov. 18, 1957	14.91	1,590
					Mar. 7, 1958	14.63	1,320
1956	Feb. 18, 1956	14.97	1,680		Apr. 27, 1958	14.65	1,320
	May 2, 1956	15.32	-		Apr. 29, 1958	16.33	6,370
					May 2, 1958	16.87	14,100
1957	Apr. 1, 1957	14.70	1,370				
	Apr. 19, 1957	17.03	-	1959	June 24, 1959	14.27	824
	Apr. 23, 1957	16.67	-				
	Apr. 26, 1957	17.18	-	1960	July 15, 1960	15.20	2,070
	Apr. 30, 1957	16.05	-				
	May 4, 1957	15.65	-	1961	Jan. 8, 1961	15.10	1,890
	May 13, 1957	16.60	-		May 1, 1961	14.89	1,580

a Measured discharge, 23,900 cfs at 16.65 ft gage height.

8-595. Sister Grove Creek near Princeton, Tex. (103)

Location.--Lat 33°12', long 96°29', on right bank at upstream side of highway bridge, 1.4 miles northeast of Princeton, Collin County, 2.3 miles downstream from Stiff Creek, 5 miles upstream from mouth, and 15 miles upstream from Lavon Dam.

Drainage area.--115 sq mi.

Gage.--Recording. Datum of gage is 487.52 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 3,800 cfs.

Bankfull stage.--13 ft.

Historical data.--Highest stage since at least 1865 occurred in July 1913, from information by local resident.

Remarks.--By Sept. 30, 1960, the flow from 48.4 sq mi above this station was partly controlled by 30 floodwater-detention reservoirs with a total combined capacity of 16,550 acre-ft below flood spillway crests. The first of these reservoirs was completed in 1953. Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	July 1913	22	-	1956	May 2, 1956	14.00	1,130
1950	Jan. 13, 1950	14.75	2,400	1957	Apr. 24, 1957	14.86	2,850
	Feb. 1, 1950	14.67	2,100		Apr. 26, 1957	16.28	9,080
	Feb. 12, 1950	15.08	3,360		May 1, 1957	14.38	1,870
	May 2, 1950	15.77	5,700		May 14, 1957	14.42	1,950
	Sept.14, 1950	14.71	2,210		May 22, 1957	15.50	4,900
					May 26, 1957	15.82	6,400
1951	June 3, 1951	15.04	3,230				
	June 12, 1951	14.94	2,910	1958	Nov. 6, 1957	14.60	2,300
					May 2, 1958	15.70	5,800
1952	Apr. 23, 1952	14.34	1,440				
				1959	June 24, 1959	13.20	580
1953	Apr. 29, 1953	15.40	4,440				
				1960	Dec. 16, 1959	14.20	1,560
1954	May 13, 1954	14.37	1,140				
				1961	Mar. 29, 1961	13.85	875
1955	Mar. 21, 1955	13.23	564				

8-610. East Fork Trinity River near Lavon, Tex. (104)

Location.--Lat 33°01'23", long 96°28'32", on left bank at downstream side of bridge on State Highway 78, 150 ft downstream from St. Louis Southwestern Railway Lines bridge, 3,500 ft downstream from Lavon Dam, and 2.5 miles west of Lavon, Collin County.

Drainage area.--779 sq mi.

Gage.--Recording. Datum of gage is 429.58 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,490 cfs.

Bankfull stage.--14 ft.

Historical data.--Floods in 1913 and 1942 were the highest since at least 1894, from information by St. Louis Southwestern Railway Co. and local residents.

Remarks.--Flow regulated by Lavon Reservoir since September 1953. A gage-height record has been obtained at this site since Feb. 10, 1949, but discharges above 1,600 cfs (13.0 ft) were not computed for period February 1949 to September 1953 because of unknown inflow from Pilot Grove Creek.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	-	22.3	-	1954	July 25, 1954	9.37	556
1942	April 1942	22.3	-	1955	May 21, 1955	6.42	264
1949	Feb. 25, 1949	a14.65	-	1956	May 5, 1956	13.37	1,390
1950	May 2, 1950	16.17	-	1957	May 26,27, 1957	17.34	b39,000
				1958	May 14, 1958	14.66	5,830
1951	June 4, 1951	15.41	-	1959	Oct. 1, 1958	9.04	516
1952	Apr. 23, 1952	14.10	-	1960	Feb. 11, 1960	13.53	1,460
1953	Apr. 29, 1953	15.68	-	1961	Jan. 21, 1961	14.54	1,980

a Maximum for period Feb. 10 to Sept. 30, 1949, probably maximum for year.
b From records of released flow from Lavon Reservoir furnished by Corps of Engineers.

8-615. East Fork Trinity River near Rockwall, Tex. (105)

Location.--Lat 32°55'25", long 96°30'20", near center of span on downstream side of bridge on State Farm Highway 7, 3 miles southeast of Rockwall, Rockwall County, 8 miles upstream from Muddy Creek, and at mile 44.2.

Drainage area.--840 sq mi.

Gage.--Nonrecording. Datum of gage is 404.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 36,300 cfs and by slope-area measurement of 64,800 cfs. Computation of discharge was discontinued Sept. 30, 1954, but collection of daily gage heights has continued and an occasional discharge measurement has been made.

Bankfull stage.--10 ft (U.S. Weather Bureau).

Historical data.--Maximum stage known since construction of levees in 1920, 24.82 ft Apr. 26, 1942, while levees were breaking.

Remarks.--Flow largely regulated since September 1953 by Lavon Reservoir (777 sq mi drainage area above reservoir). Only annual peaks are shown subsequent to 1953. Base for partial-duration series, 6,100 cfs.

Peak stages and discharges of East Fork Trinity River near Rockwall, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	24.6	-	1941	June 11, 1941	21.0	43,200
1924	Dec. 15, 1923	15.40	7,390	1942	Apr. 9, 1942	20.50	43,200
	Apr. 27, 1924	15.80	8,850		Apr. 20, 1942	24.82	846,000
	May 31, 1924	15.40	7,390		May 20, 1942	13.81	8,620
1925	May 12, 1925	13.67	2,970	1943	Mar. 14, 1943	13.45	6,940
1926	June 2, 1926	16.31	11,200		Mar. 26, 1943	15.03	17,500
	July 14, 1926	18.98	23,000		Apr. 10, 1943	13.40	6,720
	July 29, 1926	15.20	7,200		May 29, 1943	13.80	8,620
					June 6, 1943	14.40	12,500
1927	Dec. 22, 1926	15.60	8,600	1944	Mar. 19, 1944	14.75	6,910
	Mar. 2, 1927	17.10	14,400		May 3, 1944	18.95	28,500
	Apr. 9, 1927	14.86	6,270				
	Apr. 15, 1927	15.95	10,000	1945	Feb. 14, 1945	15.40	8,200
	July 15, 1927	17.25	14,900		Feb. 22, 1945	20.80	42,800
					Feb. 26, 1945	19.38	30,400
1928	Apr. 6, 1928	17.45	15,800		Mar. 14, 1945	15.20	9,320
	Apr. 28, 1928	15.93	9,650		Mar. 31, 1945	17.10	18,600
					June 13, 1945	20.22	37,700
1929	Dec. 19, 1928	16.94	12,000		July 13, 1945	14.98	8,200
	Feb. 27, 1929	15.70	7,550				
	May 11, 1929	16.45	10,000	1946	Oct. 10, 1945	16.67	14,000
	May 14, 1929	19.40	23,000		Feb. 6, 1946	14.58	6,800
	May 31, 1929	15.51	6,560		Feb. 20, 1946	16.19	15,000
					May 25, 1946	14.80	9,250
1930	May 20, 1930	15.04	6,030		May 31, 1946	20.90	43,600
1931	Mar. 2, 1931	14.20	3,590	1947	Nov. 5, 1946	18.62	27,300
					Dec. 12, 1946	19.90	35,300
1932	Jan. 7, 1932	15.52	6,180		May 9, 1947	13.98	6,700
	Jan. 18, 1932	17.92	18,000				
	Jan. 23, 1932	20.9	42,300	1948	Dec. 17, 1947	14.80	9,250
	Feb. 17, 1932	19.03	26,600		Jan. 2, 1948	14.40	7,900
	July 8, 1932	17.40	16,200		Feb. 27, 1948	16.75	18,000
					May 12, 1948	17.30	20,400
1933	Dec. 25, 1932	16.26	10,500				
	Mar. 7, 1933	16.80	12,700	1949	Jan. 26, 1949	17.05	19,000
					Feb. 25, 1949	17.30	20,400
1934	Mar. 4, 1934	15.70	8,000		Mar. 26, 1949	14.80	9,250
					May 17, 1949	15.00	9,950
1935	May 6, 1935	19.25	28,100		June 14, 1949	14.10	7,000
	May 20, 1935	16.21	10,200				
	June 16, 1935	23.39	64,800	1950	Oct. 27, 1949	13.90	6,400
					Jan. 15, 1950	16.80	18,000
1936	Dec. 9, 1935	15.20	6,300		Feb. 2, 1950	17.75	23,000
					Feb. 14, 1950	16.65	16,700
1937	Jan. 16, 1937	15.70	8,100		May 3, 1950	19.80	34,500
					Sept.16, 1950	15.35	11,600
1938	Jan. 25, 1938	17.20	18,800				
	Feb. 18, 1938	22.60	57,800	1951	June 5, 1951	17.10	16,500
	Mar. 29, 1938	19.40	32,800		June 13, 1951	16.60	14,100
1939	Apr. 6, 1939	16.90	17,000	1952	Apr. 24, 1952	14.18	7,050
	Apr. 17, 1939	18.45	26,000				
				1953	Apr. 30, 1953	18.40	24,200
1940	Apr. 7, 1940	19.60	31,800				
	Apr. 30, 1940	15.50	9,000	1954	Apr. 12, 1954	11.00	2,560
	June 19, 1940	14.80	6,560	1955	Feb. 20, 1955	6.12	322
	July 4, 1940	15.40	8,300				
				1956	May 1, 1956	13.00	5,000
1941	Dec. 16, 1940	15.66	9,350	1957	May 26, 1957	20.80	44,000
	Dec. 29, 1940	14.66	6,290	1958	May 14-15, 1958	13.36	6,600
	Apr. 25, 1941	15.60	9,000	1959	July 21, 1959	9.64	1,300
	May 6, 1941	16.80	13,900	1960	Dec. 16, 1959	11.18	2,560
	June 4, 1941	15.86	10,100				

a Daily mean discharge.

8-616.45. Unnamed tributary (watershed WI) of Duck Creek near Garland, Tex. (106)

Location.--Lat 32°50', long 96°37', 5.6 miles south of Garland, Dallas County.

Drainage area.--0.0391 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	June 19, 1939	-	1.0	1943	June 6, 1943	-	42
1940	Apr. 6, 1940	-	9.6	1944	May 1, 1944	-	5.0
				1945	Mar. 30, 1945	-	32
1941	June 13, 1941	-	6.6				
1942	Apr. 20, 1942	-	29	1946	May 29, 1946	-	51

8-616.5. Unnamed tributary (watershed WIII) of Duck Creek near Garland, Tex. (107)

Location.--Lat 32°50', long 96°37', 5.1 miles south of Garland, Dallas County.

Drainage area.--0.0162 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 29, 1939	-	0.3	1943	June 6, 1943	-	36
1940	Dec. 31, 1940	-	20	1944	May 1, 1944	-	7.2
				1945	Mar. 29, 1945	-	25
1941	Apr. 22, 1941	-	15				
1942	Apr. 20, 1942	-	41	1946	May 29, 1946	-	45

8-616.55. Unnamed tributary (watershed WIV) of Duck Creek near Garland, Tex. (108)

Location.--Lat 32°50', long 96°37', 5.8 miles south of Garland, Dallas County.

Drainage area.--0.0253 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 16, 1939	-	19	1944	May 30, 1944	-	37
				1945	June 12, 1945	-	49
1940	May 17, 1940	-	44				
1941	Oct. 1, 1941	-	21	1946	May 29, 1946	-	121
1942	May 19, 1942	-	57				

8-620. East Fork Trinity River near Crandall, Tex. (109)

Location.--Lat 32°38', long 96°29', on right bank at downstream side of bridge on U.S. Highway 175, 4,500 ft downstream from Mustang Creek, 1.8 miles northwest of Crandall, Kaufman County, 2.9 miles upstream from Little Buffalo Creek, and at mile 13.8.

Drainage area.--1,257 sq mi.

Gage.--Recording. Datum of gage is 343.69 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs.

Bankfull stage.--13 ft.

Remarks.--Flow largely regulated by Lavon Reservoir (capacity, 423,400 acre-ft at top of taintor gates) since September 1953. By Sept. 30, 1960, flow from 66.4 sq mi above this station and below Lavon Reservoir partly controlled by 25 floodwater-detention reservoirs with a total combined capacity of 21,950 acre-ft below the flood spillway crests. The first of these reservoirs was completed in February 1955. Base for partial-duration series, 6,100 cfs. Only annual peaks are shown subsequent to 1953.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 15, 1949	21.10	a20,800	1953	May 2, 1953	19.87	16,400
					May 17, 1953	16.59	9,460
1950	Jan. 17, 1950	16.76	9,090				
	Feb. 4, 1950	20.12	17,800	1954	May 14, 1954	15.02	4,600
	Feb. 16, 1950	17.40	10,500	1955	June 19, 1955	11.48	688
	May 4, 1950	22.12	24,000				
	May 14, 1950	16.19	7,790	1956	May 3, 1956	15.45	6,340
	Sept.19, 1950	15.96	7,410	1957	May 28, 1957	22.81	33,000
				1958	Apr. 27, 1958	b17.81	11,800
1951	June 4, 1951	16.90	8,420	1959	Feb. 16, 1959	12.78	1,240
	June 7, 1951	18.12	12,000	1960	Dec. 17, 1959	15.43	4,720
	June 16, 1951	18.45	12,900				
				1961	Jan. 9, 1961	15.38	4,960
1952	Apr. 26, 1952	15.32	4,800				

a Maximum June 13 to Sept. 30, 1949; may have been exceeded during period of no record.
b Prior to levee break.

8-625. Trinity River near Rosser, Tex. (110)

Location.--Lat 32°25'40", long 96°27'50", on left bank at downstream side of left pier of bridge on State Highway 34, 2.5 miles south of Rosser, Kaufman County, 8.5 miles downstream from East Fork Trinity River, and at mile 451.

Drainage area.--8,162 sq mi.

Gage.--Nonrecording at site 1.7 miles upstream at datum 6.94 ft higher prior to Nov. 22, 1938; recording thereafter. Datum of gage is 302.65 ft above mean sea level, datum of 1929.

Discharge relation.--Defined by current-meter measurements below 89,400 cfs.

Bankfull stage.--26 ft (U.S. Weather Bureau).

Historical data.--Discharge for flood in May 1908 is believed to have been about the same as that for the flood of Apr. 23, 1942.

Remarks.--Flow largely regulated by reservoirs above Dallas and by Lavon Reservoir on East Fork Trinity River. Levee system constructed in 1916. By Sept. 30, 1960, flow from 101 sq mi above this station and below stations Trinity River at Dallas and East Fork Trinity River near Lavon was partly controlled by 39 floodwater-detention reservoirs with a total combined capacity of 34,300 acre-ft below flood spillway crests. Base for partial-duration series, 13,000 cfs. Only annual peaks are shown subsequent to 1953.

Peak stages and discharges of Trinity River near Rosser, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a33	-	1948	Mar. 2, 1948	34.78	33,700
1925	May 13, 1925	27.35	16,800	1949	Jan. 29, 1949	31.00	19,400
					Feb. 27, 1949	34.01	35,000
1939	Apr. 21, 1939	29.57	11,500		Mar. 30, 1949	30.13	15,600
					May 21, 1949	38.04	51,900
1940	July 8, 1940	30.24	13,800		June 17, 1949	32.78	27,600
1941	Dec. 20, 1940	31.67	20,800	1950	Jan. 18, 1950	30.40	16,800
	May 10, 1941	30.93	17,600		Feb. 5, 1950	35.95	42,300
	June 16, 1941	39.51	55,300		Feb. 16, 1950	31.88	25,800
					May 6, 1950	34.89	37,300
1942	Apr. 23, 1942	b41.55	c133,000		Sept.22, 1950	30.60	17,600
	May 22, 1942	30.93	28,500				
	June 19, 1942	30.12	18,200	1951	June 6, 1951	29.85	14,800
					June 17, 1951	30.86	18,800
1943	Mar. 29, 1943	30.92	22,900				
	June 8, 1943	30.76	22,200	1952	May 24, 1952	27.95	11,100
1944	May 6, 1944	32.36	39,000	1953	May 3, 1953	31.31	20,800
1945	Feb. 25, 1945	37.14	47,000	1954	May 15, 1954	24.36	7,830
	Apr. 2, 1945	33.50	66,600	1955	May 21, 1955	21.09	6,060
	June 16, 1945	b31.88	36,000				
	July 14, 1945	30.18	16,200	1956	May 4, 1956	26.43	9,620
				1957	May 29, 1957	38.00	56,000
1946	Feb. 24, 1946	30.94	18,200	1958	May 3, 1958	33.63	34,000
	June 4, 1946	39.45	54,800	1959	June 24, 1959	26.55	10,200
				1960	Oct. 8, 1959	30.43	15,600
1947	Nov. 10, 1946	36.42	40,900				
	Dec. 16, 1946	34.94	34,200	1961	Jan. 10, 1961	28.25	12,000

a Annual peak, at present site and datum; from information by Corps of Engineers.
b Maximum gage height just prior to levee breaks.
c Maximum day; levees broken, peak probably about 150,000 cfs.

8-627. Trinity River at Trinidad, Tex. (111)

Location.--Lat 32°08', long 96°06', at pumphouse of Texas Power and Light Co. reservoir at Trinidad, Henderson County, 0.6 mile downstream from St. Louis Southwestern (Cotton Belt) Railway Lines bridge, and 1.0 mile downstream from bridge on State Highway 31.

Drainage area.--8,566 sq mi.

Gage.--Nonrecording. Datum of gage is 239.21 ft above mean sea level, datum of 1929. At site 0.6 mile upstream at datum 0.81 ft higher prior to Oct. 30, 1951. At site 1.0 mile upstream at datum 1.28 ft higher Oct. 30, 1951, to June 19, 1955. Zero of gage raised 0.47 ft to compensate for high-water slope.

Bankfull stage.--28 ft (U.S. Weather Bureau).

Remarks.--Records published by U.S. Weather Bureau. Only annual peak stages are shown. Peak stages based on daily readings and more frequent readings during period of high water. Flow partly regulated by upstream reservoirs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a48.3	-	1925	May 17, 1925	38.3	-
1914	Dec. 11, 1913	41.4	-	1926	Apr. 28, 1926	34.1	-
1915	May 3, 1915	38.8	-	1927	Mar. 13, 1927	37.0	-
				1928	Oct. 8, 1927	35.3	-
1916	Apr. 9, 1916	40.5	-	1929	May 22, 1929	39.6	-
1917	June 1, 1917	24.0	-	1930	May 21, 1930	42.7	-
1918	Apr. 25, 1918	28.5	-				
1919	Nov. 17, 1918	37.6	-	1931	Mar. 9, 1931	29.5	-
1920	May 18, 1920	41.5	-	1932	Jan. 29, 1932	41.2	-
				1933	Mar. 14, 1933	34.3	-
1921	Jan. 22, 1921	34.4	-	1934	Apr. 11, 1934	33.2	-
1922	May 15, 1922	39.9	-	1935	May 25, 1935	42.6	-
1923	June 18, 1923	39.3	-				
1924	Dec. 21, 1923	38.5	-	1936	June 1, 1936	b24.5	-

a Present site and datum.
b Maximum crest stage; maximum stage occurred Sept. 30, 1936, prior to peak of Oct. 1, 1936.

Peak stages and discharges of Trinity River at Trinidad, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Oct. 1, 1936	36.0	-	1949	May 23, 1949	41.1	-
1938	Feb. 24, 1938	44.8	-	1950	Feb. 8, 1950	40.4	-
1939	Apr. 25, 1939	27.7	-				
1940	July 13, 1940	33.4	-	1951	June 22, 1951	35.1	-
				1952	Apr. 25, 1952	31.4	-
1941	June 19, 1941	45.4	-	1953	May 22, 1953	35.2	-
1942	Apr. 25, 1942	49.8	-	1954	May 17, 1954	26.1	-
1943	Apr. 2, 1943	36.4	-	1955	May 23, 1955	21.0	-
	June 12, 1943	36.4	-				
1944	May 9, 1944	38.6	-	1956	May 6, 1956	27.9	-
1945	Apr. 4, 1945	44.1	-	1957	June 1, 1957	44.4	-
				1958	May 6, 1958	40.8	-
1946	June 7, 1946	43.8	-	1959	May 14, 1959	30.1	-
1947	Nov. 12, 1946	41.4	-	1960	Jan. 11, 1960	32.0	-
1948	Mar. 5, 1948	40.0	-				

8-630. Cedar Creek near Mabank, Tex. (112)

Location.--Lat 32°19'45", long 96°10'05", on right bank at downstream side of bridge on State Farm Highway 85, 3 miles downstream from Lacys Fork and 4½ miles southwest of Mabank, Kaufman County.

Drainage area.--734 sq mi.

Gage.--Recording. Datum of gage is 285.54 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and by slope-area measurement at 35,400 cfs.

Bankfull stage.--17 ft.

Historical data.--Flood of Mar. 30, 1945, reached the highest stage since at least 1889, from information by local residents.

Remarks.--Base for partial-duration series, 5,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Sept.29, 1936	23.5	a35,400	1947	Nov. 7, 1946	19.93	19,700
					Apr. 10, 1947	20.18	20,900
1939	Feb. 27, 1939	14.31	3,720				
				1948	Dec. 9, 1947	19.00	16,100
1940	Apr. 8, 1940	16.67	9,000		Dec. 17, 1947	17.48	10,600
	May 19, 1940	15.40	5,900		Mar. 2, 1948	15.90	6,170
					May 13, 1948	18.83	15,300
1941	Nov. 24, 1940	17.61	11,600				
	Dec. 29, 1940	16.09	7,440	1949	Feb. 25, 1949	19.78	19,300
	Mar. 9, 1941	15.84	6,740				
	May 7, 1941	16.06	7,440	1950	Feb. 3, 1950	17.58	11,600
	June 13, 1941	16.19	7,680		Feb. 13, 1950	20.96	25,800
	June 17, 1941	19.12	16,800		Apr. 20, 1950	15.65	5,600
					May 4, 1950	17.69	11,900
1942	Apr. 9, 1942	22.06	29,400				
	Apr. 21, 1942	19.40	18,000	1951	June 5, 1951	15.43	5,120
	Apr. 25, 1942	18.68	15,400				
	May 20, 1942	18.68	15,400	1952	Apr. 23, 1952	19.31	18,600
	June 11, 1942	15.30	5,650		May 25, 1952	18.00	12,300
1943	Mar. 27, 1943	16.17	7,520	1953	Apr. 30, 1953	19.62	19,800
	June 7, 1943	21.69	27,600		May 16, 1953	20.60	24,000
1944	May 3, 1944	21.78	28,000	1954	May 13, 1954	16.60	8,000
1945	Dec. 29, 1944	15.84	5,580	1955	Mar. 22, 1955	14.96	4,720
	Feb. 22, 1945	17.88	11,900				
	Mar. 1, 1945	16.91	8,610	1956	May 4, 1956	15.86	6,170
	Mar. 30, 1945	25.43	44,800				
	June 13, 1945	20.65	22,600	1957	Apr. 5, 1957	16.30	7,140
	July 12, 1945	19.39	17,600		Apr. 25, 1957	20.70	24,700
					Apr. 28, 1957	21.07	26,300
1946	Feb. 7, 1946	17.15	9,560		May 15, 1957	17.47	11,100
	Feb. 21, 1946	15.49	5,490		May 24, 1957	16.97	9,220
	May 31, 1946	20.82	23,500				

a Slope-area measurement at site 12 miles downstream.

Peak stages and discharges of Trinity River at Riverside, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1866	-	a50.5	-	1931	May 1, 1931	29.3	33,200
				1932	Feb. 22, 1932	38.8	56,300
1884	June 7, 1884	a50	-	1933	Mar. 6, 1933	23.8	22,800
				1934	Mar. 4, 1934	33.8	42,700
1903	Mar. 10, 1903	b47.0	46,000	1935	May 21, 1935	41.8	61,200
1904	May 9, 1904	25.5	19,200				
1905	May 19, 1905	42.3	57,500	1936	Dec. 9, 1935	30.2	35,300
				1937	Oct. 13, 1936	24.6	25,300
1906	Jan. 6, 1906	28.9	23,200	1938	Mar. 9, 1938	34.6	44,700
1907	June 2, 1907	31.1	37,200	1939	Feb. 26, 1939	24.20	24,600
1908	June 11, 1908	c49.7	100,000	1940	Dec. 23, 1939	29.65	35,200
1909	Nov. 7, 1908	11.0	7,200				
1910	May 25, 1910	22.3	21,900	1941	Nov. 26, 1940	40.09	52,200
				1942	May 5, 1942	52.75	121,000
1911	Apr. 26, 1911	20.0	18,500	1943	June 22, 1943	23.15	23,700
1912	Mar. 25, 1912	24.3	25,100	1944	May 11, 1944	47.75	83,000
1913	July 20, 1913	13.0	9,400	1945	Apr. 9, 1945	51.83	116,000
1914	May 16, 1914	47.8	88,000				
1915	May 9, 1915	39.1	54,800	1946	June 19, 1946	33.40	40,200
				1947	Mar. 13, 1947	33.26	40,000
1916	May 23, 1916	34.3	43,700	1948	May 24, 1948	26.30	28,500
1917	July 25, 1917	13.1	9,500	1949	Mar. 11, 1949	24.50	25,800
1918	Apr. 30, 1918	20.7	19,500	1950	Feb. 22, 1950	35.10	43,000
1919	Nov. 29, 1918	28.1	31,600				
1920	Jan. 26, 1920	37.9	51,800	1951	June 28, 1951	16.91	13,700
				1952	May 5, 1952	21.86	21,900
1921	Apr. 10, 1921	36.0	47,400	1953	May 16, 1953	37.00	46,900
1922	May 4, 1922	46.7	82,000	1954	May 12, 1954	20.10	17,800
1923	Apr. 14, 1923	35.2	45,600	1955	Apr. 10, 1955	26.00	26,600
1924	Apr. 28, 1924	36.7	49,000				
1925	May 24, 1925	16.6	12,800	1956	May 11, 1956	17.90	15,800
				1957	May 4, 1957	49.75	97,700
1926	Apr. 23, 1926	38.1	52,200	1958	May 14, 1958	44.85	66,800
1927	Apr. 15, 1927	36.2	47,900	1959	Apr. 13, 1959	23.45	25,100
1928	June 14, 1928	21.20	18,600	1960	Jan. 19, 1960	25.35	28,100
1929	June 1, 1929	46.10	76,100				
1930	May 29, 1930	45.8	79,000	1961	Jan. 15, 1961	34.25	44,400

a Present site and datum.
b 39.3 ft, converted to present datum.
c 50.1 ft, adjusted to present site.

8-665. Trinity River at Romayor, Tex. (118)

Location.--Lat 30°25'30", long 94°51'05", near right bank on downstream side of bridge on State Highway 105, 1.9 miles south of Romayor, Liberty County, 2.0 miles downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, and 4.1 miles downstream from Big Creek.

Drainage area.--17,192 sq mi.

Gage.--Nonrecording prior to September 1943; recording thereafter. May 1924 to September 1943, inverted chain gage at site 2.0 miles upstream at datum 53.57 ft higher. Datum of gage is 35.92 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--28 ft.

Historical data.--Flood of May 9, 1942, was highest since at least 1908.

Remarks.--For statement regarding regulation, see Trinity River near Oakwood. Gage heights for 1915-17 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	June 1908	a34.3	-	1926	Apr. 27, 1926	-20.90	46,900
				1927	Apr. 18, 1927	-22.84	40,900
1914	May 1914	a33.2	-	1928	June 15, 1928	-33.87	17,400
1915	Aug. 20, 1915	ab26.1	-	1929	May 31, 1929	-16.30	81,100
1916	May 5, 1916	a32.4	-	1930	June 2, 1930	-18.85	59,400
1917	July 27, 1917	a10.7	-				
				1931	Dec. 6, 1930, Feb. 10, 1931	-28.40	25,000
1924	June 4, 1924	-23.20	39,700				
1925	May 25, 1925	-37.54	11,800	1932	Feb. 25, 1932	+20.50	58,000

a Adjusted to present site and datum.
b Maximum for July 28 to Sept. 30, 1915; may have been exceeded during period of no record.

Peak stages and discharges of Trinity River at Romayor, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Mar. 8, 1933	-28.05	31,500	1948	May 26, 1948	20.83	28,500
1934	Mar. 5, 1934	-23.30	44,400	1949	Apr. 23, 1949	22.07	31,900
1935	May 23, 1935	-19.05	72,000	1950	June 4, 1950	27.18	49,100
1936	Dec. 9, 1935	-22.60	47,000	1951	June 29, 1951	13.96	15,100
1937	Oct. 16, 1936	-31.15	23,000	1952	Apr. 24, 1952	20.64	28,300
1938	Mar. 12, 1938	-24.20	41,300	1953	May 19, 1953	28.50	51,900
1939	Feb. 27, 1939	-27.60	31,200	1954	May 13, 1954	16.96	18,800
1940	Dec. 25, 1939	-29.10	27,400	1955	Apr. 13, 1955	23.15	34,000
1941	Nov. 26, 1940	-18.60	61,200	1956	May 12, 1956	14.12	14,600
1942	May 9, 1942	-15.70	111,000	1957	May 10, 1957	32.20	93,000
1943	Jan. 8, 1943	-32.30	24,100	1958	May 18, 1958	29.00	58,200
1944	May 15, 1944	32.35	69,000	1959	Apr. 19, 1959	23.03	35,200
1945	Apr. 13, 1945	33.49	106,000	1960	Feb. 25, 1960	20.66	29,300
1946	Feb. 11, 1946	27.72	49,400	1961	Jan. 15, 1961	27.06	49,000
1947	Mar. 15, 1947	27.55	48,800				

8-670. Trinity River at Liberty, Tex. (119)

Location.--Lat 30°03'25", long 94°49'05", near center of channel on upstream side of bridge on U.S. Highway 90 in Liberty, Liberty County, 450 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 40.

Drainage area.--17,539 sq mi.

Gage.--Nonrecording. At site 450 ft upstream prior to June 23, 1934. Datum of gage is 2.22 ft below mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--24 ft (U.S. Weather Bureau).

Historical data.--Flood of May 12, 1942, was the greatest since at least 1903.

Remarks.--Gage-height record furnished by U.S. Weather Bureau. For statement regarding regulation, see Trinity River near Oakwood. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 1905	26.9	-	1934	Mar. 7, 1934	26.5	-
				1935	May 25, 1935	26.9	-
1906	Jan. 13, 1906	25.0	-				
1907	June 7, 1907	26.0	-	1936	Dec. 13, 1935	26.4	-
1908	June 19, 1908	28.1	-	1937	Oct. 15, 1936	24.6	-
1909	June 4, 1909	16.3	-	1938	May 1, 1938	26.5	-
1910	May 29, 1910	22.3	-	1939	Mar. 1, 1939	24.9	-
				1940	June 12, 1940	25.5	30,100
1911	May 1, 1911	23.2	-				
1912	Apr. 18, 1912	24.0	-	1941	Dec. 17, 1940	27.1	61,500
1913	Mar. 16, 1913	23.0	-	1942	May 12, 1942	29.38	114,000
1914	May 29, 1914	28.3	-	1943	June 24, 1943	24.05	19,600
1915	May 19, 1915	27.3	-	1944	May 18, 1944	27.81	64,000
				1945	Apr. 15, 1945	28.80	104,000
1916	May 10, 1916	27.4	-				
1917	July 28, 1917	13.8	-	1946	June 25, 1946	27.52	43,000
1918	May 3, 1918	22.2	-	1947	Mar. 17, 1947	27.39	42,300
1919	July 4, 1919	27.0	-	1948	May 28, 1948	26.10	26,700
1920	Feb. 2, 1920	28.4	-	1949	Apr. 24, 1949	25.90	28,100
				1950	Feb. 26, 1950	27.80	47,800
1921	Apr. 30, 1921	27.2	-				
1922	May 10, 1922	28.6	-	1951	June 30, 1951	20.26	14,800
1923	Apr. 20, 1923	27.6	-	1952	Apr. 25, 1952	25.20	24,300
1924	Dec. 29, 1923	27.5	-	1953	May 23, 1953	28.02	53,200
1925	May 26, 1925	17.5	-	1954	May 14, 1954	22.65	18,500
				1955	Apr. 15, 1955	26.85	32,800
1926	May 1, 1926	27.4	-				
1927	Apr. 21, 1927	27.4	-	1956	May 13, 1956	20.85	14,200
1928	June 18, 1928	21.5	-	1957	May 12, 1957	29.26	88,100
1929	June 2, 1929	28.3	-	1958	May 21, 1958	28.35	58,800
1930	June 4, 1930	26.9	-	1959	Apr. 20, 1959	26.65	31,200
				1960	Jan. 21, 1960	26.67	32,000
1931	Feb. 12, 1931	24.2	-				
1932	Feb. 28, 1932	26.8	-	1961	Jan. 17, 1961	28.28	52,400
1933	Mar. 11, 1933	25.0	-				

8-650. Trinity River near Oakwood, Tex. (115)

Location.--Lat 31°38'50", long 95°47'20", on left bank at downstream side of bridge on U.S. Highways 79 and 84, 1½ miles upstream from Missouri Pacific Railroad Co. bridge, 6 miles northeast of Oakwood, Leon County, and at mile 313.

Drainage area.--12,912 sq mi.

Gage.--Nonrecording prior to Oct. 8, 1934; recording thereafter. Prior to July 15, 1938, at site 1½ miles downstream at datum 1.06 ft lower. Datum of gage is 175.06 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 155,000 cfs, subsequent to 1924.

Bankfull stage.--40 ft (U.S. Weather Bureau).

Historical data.--Flood in May 1890 was the highest and flood of June 4, 1908, was second highest since that date, from information in local newspapers.

Remarks.--Some regulation by reservoirs above Dallas and by Lavon Reservoir on East Fork Trinity River since Sept. 14, 1953. Some minor regulation by 117 floodwater-detention reservoirs above the station and below stations Trinity River at Dallas and East Fork Trinity River near Lavon built during period 1952-60. Gage-height record for period 1905-34 furnished by U.S. Weather Bureau, and adjusted to present site and datum. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	May 1890	53	180,000	1933	June 3, 1933	37.6	16,900
				1934	Apr. 13, 1934	40.9	24,200
1905	May 20, 1905	43.1	48,000	1935	May 24, 1935	44.16	48,400
1906	June 1, 1906	40.5	34,000	1936	Dec. 12, 1935	39.93	21,500
1907	June 5, 1907	41.4	38,000	1937	Oct. 4, 1936	43.6	41,400
1908	June 4, 1908	52.2	164,000	1938	Feb. 27, 1938	45.35	63,200
1909	Nov. 3, 1908	24.3	7,000	1939	June 27, 1939	36.95	16,700
1910	May 26, 1910	32.3	14,000	1940	July 10, 1940	38.49	17,900
1911	Apr. 26, 1911	25.1	7,500	1941	Nov. 28, 1940	46.07	70,800
1912	Apr. 1, 1912	32.3	14,000		June 22, 1941	46.50	70,800
1913	July 16, 1913	29.0	10,500	1942	Apr. 29, 1942	51.64	153,000
1914	Dec. 9, 1913	50.1	130,000	1943	June 15, 1943	41.39	29,200
1915	Apr. 29, 1915	46.9	88,000	1944	May 5, 1944	48.97	111,000
				1945	Apr. 3, 1945	50.86	140,000
1916	Apr. 14, 1916	44.4	60,000				
1917	July 22, 1917	28.2	9,800	1946	June 10, 1946	44.78	54,000
1918	June 15, 1918	22.7	6,200	1947	Nov. 16, 1946	44.10	54,000
1919	Nov. 22, 1918	42.7	47,000	1948	May 17, 1948	44.32	50,100
1920	May 22, 1920	46.4	80,000	1949	Mar. 5, 1949	42.35	33,500
				1950	Feb. 17, 1950	44.80	56,600
1921	Jan. 23, 1921	39.8	31,000				
1922	May 2, 1922	43.7	54,000	1951	June 26, 1951	35.34	14,600
1923	June 24, 1923	40.0	32,000	1952	Apr. 30, 1952	41.35	25,800
1924	Dec. 26, 1923	43.8	50,800	1953	May 20, 1953	44.19	49,700
1925	May 22, 1925	32.2	13,000	1954	May 18, 1954	32.77	12,600
				1955	Mar. 25, 1955	30.15	11,600
1926	May 2, 1926	38.9	20,500				
1927	Apr. 23, 1927	40.9	29,200	1956	May 9, 1956	36.64	15,800
1928	Apr. 17, 1928	35.9	17,000	1957	Apr. 28, 1957	48.87	91,800
1929	June 3, 1929	45.7	68,000	1958	May 7, 1958	48.79	95,400
1930	May 23, 1930	46.9	84,400	1959	May 18, 1959	41.70	29,600
				1960	Dec. 25, 1959	40.12	23,300
1931	Dec. 13, 1930	37.7	18,800				
1932	Feb. 25, 1932	44.8	57,600	1961	Dec. 13, 1960	45.29	62,900

8-655. Trinity River near Midway, Tex. (116)

Location.--Lat 31°04'40", long 95°42'00", near center of channel and on upstream side of bridge on State Highway 21, 5 miles northeast of Midway, Madison County, 8.5 miles downstream from Boggy Creek, and at mile 230.

Drainage area.--14,484 sq mi.

Gage.--Nonrecording. Datum of gage is 118.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--42 ft.

Historical data.--Maximum stage since 1866 and prior to construction of levees in 1916 occurred in May 1890, from information by local residents. Floods of 1866 and June 9, 1908, were about the same, from information by local residents.

Remarks.--For statement regarding regulation, see Trinity River near Oakwood (station 8-650). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1866	May 1866	44	-	1947	Nov. 22, 1946	41.91	39,200
				1948	May 22, 1948	37.12	29,100
1890	May 1890	45	-	1949	Mar. 10, 1949	34.20	25,600
				1950	Feb. 21, 1950	44.08	48,300
1908	June 9, 1908	44.3	-				
				1951	June 28, 1951	22.98	13,500
1930	May 27, 1930	46.7	-	1952	May 4, 1952	29.80	20,600
				1953	May 26, 1953	42.97	42,800
1939	June 29, 1939	24.13	a14,600	1954	May 19, 1954	21.40	11,900
1940	May 23, 1940	30.10	19,000	1955	Oct. 29, 1954	19.35	10,200
1941	June 26, 1941	45.80	65,200	1956	May 11, 1956	24.80	14,800
1942	May 1, 1942	48.58	146,000	1957	May 1, 1957	47.55	103,000
1943	June 20, 1943	31.94	23,000	1958	May 10, 1958	46.79	100,000
1944	May 8, 1944	47.11	108,000	1959	May 21, 1959	31.10	25,700
1945	Apr. 6, 1945	48.50	145,000	1960	Jan. 18, 1960	33.00	25,500
1946	June 16, 1946	43.96	44,500	1961	Jan. 18, 1961	43.26	44,000

a Maximum Apr. 1 to Sept. 30, 1939; may have been exceeded during period of no record.

8-660. Trinity River at Riverside, Tex. (117)

Location.--Lat 30°52', long 95°24', near center of channel on upstream side of bridge on State Highway 45, 1,200 ft upstream from Missouri Pacific Railroad Co. bridge, 0.5 mile north of Riverside, Walker County, three-quarters of a mile downstream from Harmon Creek, 12 miles upstream from White Rock Creek, and at mile 182.

Drainage area.--15,619 sq mi.

Gage.--Nonrecording. At site 1,200 ft downstream prior to May 6, 1941. At datum 7.7 ft lower prior to July 1, 1903. Datum of gage is 89.86 ft above mean sea level, datum of 1929, Galveston-Houston supplementary adjustment of 1936.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--40 ft (U.S. Weather Bureau).

Historical data.--Flood of May 5, 1942, was greatest since at least 1866. The Houston Post of June 11, 1884, reports "The rise of 1866 is said to have been the highest known to the oldest inhabitant in this vicinity (Riverside) and the rise (June 7, 1884) approached to within four inches of it."

Remarks.--Gage heights prior to 1941 furnished by U.S. Weather Bureau. For statement regarding regulation, see Trinity River near Oakwood. Only annual peaks are shown.

Peak stages and discharges of Cedar Creek near Mabank, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 16, 1957	17.67	11,900	1960	Dec. 16, 1959	18.51	12,600
	Nov. 8, 1957	17.19	10,000		Jan. 7, 1960	16.62	6,770
	Apr. 28, 1958	23.14	35,200				
	May 4, 1958	19.7	20,000	1961	Dec. 9, 1960	19.67	17,700
					Jan. 9, 1961	17.94	10,400
1959	Feb. 16, 1959	16.65	7,300		Mar. 28, 1961	17.33	8,600
	Apr. 21, 1959	17.79	12,000		June 27, 1961	18.84	13,800
	May 12, 1959	16.53	7,000				

8-635. Richland Creek near Richland, Tex. (113)

Location.--Lat 31°57', long 96°25', at downstream side of bridge on U.S. Highway 75, 800 ft upstream from Texas and New Orleans Railroad Co. bridge, 1 mile north of Richland, Navarro County, and 3.5 miles downstream from Pin Oak Creek.

Drainage area.--737 sq mi.

Gage.--Recording except Feb. 15, 1958, to Jan. 28, 1959, when nonrecording gage was used. June 8, 1955, to Feb. 14, 1958, and since Feb. 6, 1959, supplementary recording gage used for floodflows, 3,900 ft to right of main-channel gage. Datum of gage is 299.12 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 54,800 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood in December 1913 reached the highest stage since at least 1899, from information by Texas and New Orleans Railroad Co.

Remarks.--Construction of floodwater-detention reservoirs started in 1956 and by September 1959 flow from 19.6 sq mi partly controlled by 13 floodwater-detention reservoirs (combined capacity, 7,770 acre-ft at flood spillway crests). Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	25.5	-	1950	Feb. 13, 1950	21.67	12,100
1939	June 20, 1939	22.54	a33,500	1951	Sept.13, 1951	20.36	3,000
1940	Apr. 7, 1940	20.64	10,600	1952	Apr. 23, 1952	21.52	13,500
					May 25, 1952	21.27	12,100
1941	Nov. 24, 1940	22.42	43,000				
	Feb. 3, 1941	20.73	15,200	1953	Mar. 11, 1953	21.48	12,000
	Mar. 7, 1941	20.67	14,200		May 13, 1953	22.30	29,500
	May 6, 1941	20.63	13,600				
				1954	May 13, 1954	20.60	4,600
1942	Apr. 9, 1942	21.42	26,000				
	Apr. 26, 1942	22.43	39,600	1955	Mar. 22, 1955	20.38	3,740
1943	May 8, 1943	20.90	16,600	1956	May 2, 1956	22.05	28,100
1944	May 2, 1944	23.40	55,000	1957	Apr. 21, 1957	23.11	44,600
					Apr. 24, 1957	22.95	42,500
1945	Mar. 4, 1945	20.80	13,400		May 14, 1957	-	14,000
	Mar. 31, 1945	23.40	55,000				
	July 13, 1945	21.12	14,700	1958	May 3, 1958	22.52	33,400
1946	May 13, 1946	20.91	15,200	1959	May 12, 1959	21.73	14,000
					June 25, 1959	21.95	23,400
1947	Jan. 19, 1947	21.36	22,400				
	Mar. 8, 1947	20.80	13,200	1960	Oct. 5, 1959	21.65	13,400
	Apr. 14, 1947	20.72	12,100				
				1961	Dec. 9, 1960	22.04	26,600
1948	Mar. 3, 1948	21.11	12,000		Jan. 9, 1961	22.19	34,600
	May 12, 1948	24.16	58,900				
1949	May 27, 1949	15.88	1,740				

a Maximum Mar. 17 to Sept. 30, 1939; probably maximum for year.

8-645. Chambers Creek near Corsicana, Tex. (114)

Location.--Lat 32°06'30", long 96°22'15", on right bank at downstream side of bridge on State Highway 31, 500 ft upstream from St. Louis Southwestern Railway Lines bridge, 6,000 ft upstream from city of Corsicana diversion dam, 6 miles east of Corsicana, Navarro County, and 17 miles upstream from Richland Creek.

Drainage area.--971 sq mi.

Gage.--Recording. Datum of gage is 394.26 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 42,300 cfs.

Bankfull stage.--23 ft.

Historical data.--Flood of Aug. 27, 1887, reached the highest stage since at least 1870, from information by local residents.

Remarks.--Storage began in 1956 in South Prong Reservoir (capacity, 13,500 acre-ft) on South Prong Waxahachie Creek above this station. At the end of 1959, flow from 37.1 sq mi above this station was partly controlled by 17 floodwater-detention reservoirs with a total combined capacity of 13,200 acre-ft below the flood spillway crests, of which 10,570 acre-ft is floodwater-detention capacity and 2,630 acre-ft is sediment-storage capacity. Base for partial-duration series, 13,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1887	Aug. 27, 1887	a30	-	1951	June 5, 1951	22.73	6,060
1914	December 1913	a27.5	54,000	1952	Apr. 23, 1952	24.80	26,000
					May 25, 1952	23.70	14,200
1939	June 20, 1939	23.26	b14,400				
				1953	May 16, 1953	23.49	10,200
1940	Apr. 7, 1940	23.20	18,400				
				1954	May 13, 1954	22.19	3,700
1941	Nov. 24, 1940	24.40	25,400				
	Feb. 3, 1941	22.96	13,400	1955	May 21, 1955	20.33	2,350
	May 6, 1941	23.08	14,800				
				1956	May 4, 1956	21.35	2,860
1942	Apr. 9, 1942	23.65	19,900				
	Apr. 21, 1942	23.10	14,800	1957	Apr. 22, 1957	25.90	23,000
	Apr. 25, 1942	25.36	37,400		Apr. 24, 1957	25.80	22,300
	May 20, 1942	23.35	17,000		May 3, 1957	24.84	16,100
	Sept.10, 1942	22.95	13,400		May 15, 1957	24.62	15,900
					May 24, 1957	25.94	23,200
1943	Sept. 6, 1943	23.76	16,000				
				1958	Apr. 27, 1958	25.31	19,000
1944	May 3, 1944	27.19	48,000		May 1, 1958	25.44	19,700
					May 3, 1958	28.10	38,200
1945	Feb. 22, 1945	23.72	14,200		Sept.20, 1958	25.98	23,600
	Mar. 31, 1945	25.72	32,900				
	June 13, 1945	25.51	30,900	1959	May 11, 1959	26.31	25,600
					June 25, 1959	24.43	13,700
1946	Feb. 19, 1946	23.45	12,000				
				1960	Oct. 6, 1959	25.08	17,800
1947	June 22, 1947	24.17	18,200		Dec. 16, 1959	24.66	14,900
1948	May 12, 1948	24.27	18,200	1961	Jan. 9, 1961	25.09	17,800
1949	Feb. 25, 1949	23.28	9,140				
1950	Feb. 13, 1950	23.34	11,000				

a From information by local resident.
b Maximum Mar. 17 to Sept. 30, 1939; probably maximum for year.

8-680. West Fork San Jacinto River near Conroe, Tex. (120)

Location.--Lat 30°14'41", long 95°27'26", near right bank at downstream side of pier of bridge on U.S. Highway 75, 285 ft upstream from Missouri Pacific Railroad Co. bridge, 3½ miles downstream from Lake Creek, 4½ miles south of Conroe, Montgomery County, and at mile 79.

Drainage area.--809 sq mi.

Gage.--Nonrecording prior to July 13, 1939; recording thereafter. Datum of gage is 100.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 and 1943.

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and extended above on basis of area and velocity studies.

Bankfull stage.--14 ft.

Historical data.--Flood of Nov. 25, 1940, was highest since at least 1913. Information for floods in 1913, 1922, and 1929, from Missouri Pacific Railroad Co.

Remarks.--Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1941.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	25.2	101,000	1947	May 21, 1947	14.21	5,450
1922	May 1922	24.2	80,000	1948	Mar. 2, 1948	11.28	3,320
1924	May 30, 1924	a20.0	38,000	1949	Feb. 28, 1949	15.78	11,000
1925	Jan. 19, 1925	6.4	638		Mar. 22, 1949	14.51	6,640
					Apr. 23, 1949	13.46	5,470
1926	Apr. 22, 1926	24.2	80,000				
1927	Apr. 17, 1927	19.2	32,700	1950	Feb. 15, 1950	15.52	9,500
					June 3, 1950	19.42	37,000
1929	May 30, 1929	21.7	55,000				
				1951	Mar. 28, 1951	7.78	1,920
1940	June 12, 1940	16.11	13,100				
				1952	Apr. 25, 1952	15.30	9,150
1941	Nov. 25, 1940	25.85	110,000				
	Dec. 13, 1940	18.00	27,500	1953	Apr. 30, 1953	14.70	7,250
	Feb. 4, 1941	14.67	6,150		May 16, 1953	15.95	12,000
	Mar. 9, 1941	14.91	6,950		May 20, 1953	15.30	9,150
	Apr. 24, 1941	17.18	21,200				
	June 12, 1941	17.59	24,300	1954	Dec. 22, 1953	9.88	3,180
	June 17, 1941	14.84	5,500				
				1955	Feb. 7, 1955	15.90	11,700
1942	Nov. 2, 1941	16.38	15,200				
	Apr. 10, 1942	16.46	15,600	1956	Apr. 9, 1956	8.79	2,580
	May 15, 1942	15.17	6,200				
				1957	May 1, 1957	15.95	14,000
1943	May 31, 1943	12.97	4,480				
				1958	Oct. 16, 1957	14.42	9,000
1944	Jan. 16, 1944	14.86	6,800		Nov. 10, 1957	12.44	5,630
	Feb. 1, 1944	16.10	10,400		Nov. 24, 1957	15.50	13,100
	May 26, 1944	13.90	5,120		Jan. 23, 1958	11.70	5,000
					May 5, 1958	14.62	8,500
1945	Dec. 7, 1944	16.45	16,300				
	Jan. 21, 1945	15.72	10,400	1959	Apr. 13, 1959	16.38	16,000
	Feb. 7, 1945	13.95	5,220		Apr. 19, 1959	16.56	17,200
	Apr. 2, 1945	18.63	32,600				
	May 12, 1945	14.65	6,220	1960	Dec. 19, 1959	12.65	5,540
	Aug. 30, 1945	19.35	41,100		Feb. 27, 1960	13.64	6,710
					June 27, 1960	17.98	25,800
1946	Jan. 8, 1946	14.82	6,650		July 21, 1960	13.90	7,200
	Jan. 18, 1946	15.34	8,600				
	Mar. 14, 1946	17.67	25,100	1961	Oct. 30, 1960	15.90	13,600
	Mar. 28, 1946	14.65	6,220		Nov. 24, 1960	15.84	13,100
	May 16, 1946	15.00	7,300		Dec. 11, 1960	13.68	7,600
	May 22, 1946	14.88	6,950		Jan. 2, 1961	11.90	5,270
	June 4, 1946	14.60	6,100		Jan. 10, 1961	13.65	7,400
					Jan. 15, 1961	15.50	11,800
1947	Nov. 6, 1946	17.95	27,500		Feb. 18, 1961	14.76	9,900
	Nov. 10, 1946	15.70	10,400		Feb. 23, 1961	15.40	11,400
	Nov. 18, 1946	14.33	5,580		July 13, 1961	13.00	6,410
	Jan. 20, 1947	14.28	5,580		Sept.13, 1961	15.00	10,600
	May 15, 1947	17.75	25,900				

a Maximum for May 7 to Sept. 30, 1924; may have been exceeded during period of no record.

8-685. Spring Creek near Spring, Tex. (121)

Location.--Lat 30°06'37", long 95°26'10", near left bank at downstream side of bridge on U.S. Highway 75, 4,500 ft upstream from Missouri Pacific Railroad Co. bridge, 2.4 miles northeast of Spring, Harris County, and 4 miles downstream from Willow Creek.

Drainage area.--409 sq mi.

Gage.--Nonrecording prior to Jan. 5, 1946; recording thereafter. Datum of gage is 78.10 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood of May 30, 1929, was highest since at least 1879, from floodmarks identified by local resident.

Remarks.--Base for partial-duration series, 1,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 30, 1929	29.3	48,300	1947	May 20, 1947	16.02	3,240
1939	June 3, 1939	a8.75	838	1948	Mar. 3, 1948	11.00	1,430
1940	June 12, 1940	16.42	3,420	1949	Feb. 27, 1949	16.12	3,490
					Mar. 22, 1949	13.18	2,210
1941	Nov. 25, 1940	28.6	42,700		Apr. 24, 1949	16.74	3,850
	Decl3-14, 1940	24.30	19,300				
	Jan. 16, 1941	14.05	2,330	1950	Oct. 8, 1949	21.58	9,710
	Feb. 25, 1941	15.20	3,010		Dec. 18, 1949	13.40	2,280
	Mar. 8, 1941	16.30	3,690		Jan. 12, 1950	15.52	3,190
	Mar. 22, 1941	19.10	7,080		Jan. 19, 1950	12.04	1,820
	Apr. 24, 1941	27.07	32,800		Feb. 14, 1950	17.52	4,510
	May 6, 1941	12.85	1,620		Apr. 19, 1950	14.13	2,570
	May 29, 1941	13.46	1,980		Apr. 26, 1950	11.37	1,630
	June 8, 1941	14.55	2,440		June 4, 1950	25.44	19,300
	June 11, 1941	16.02	3,420		June 7, 1950	18.12	5,170
	Sept.25, 1941	17.50	5,220				
				1951	Sept.24, 1951	5.38	407
1942	Oct. 16, 1941	12.65	1,780				
	Nov. 1, 1941	18.94	6,230	1952	Apr. 14, 1952	16.55	4,130
	Apr. 9, 1942	22.78	14,200		Apr. 25, 1952	14.17	2,650
	Apr. 25, 1942	13.34	1,870				
				1953	Apr. 30, 1953	15.50	3,200
1943	Jan. 15, 1943	14.43	2,430		May 5, 1953	14.43	2,600
	July 30, 1943	20.09	8,000		May 13, 1953	12.15	1,760
					May 17, 1953	16.12	3,570
1944	Jan. 30, 1944	13.90	2,250		May 20, 1953	20.71	8,760
	Feb. 15, 1944	14.60	2,520				
	Mar. 19, 1944	18.15	5,260	1954	Dec. 22, 1953	10.76	1,400
	May 30, 1944	15.80	3,030				
				1955	Feb. 8, 1955	16.06	3,570
1945	Dec. 7, 1944	19.28	6,540				
	Jan. 20, 1945	20.20	7,710	1956	Feb. 11, 1956	5.48	408
	Feb. 14, 1945	13.10	2,110				
	Apr. 2, 1945	24.54	16,100	1957	May 1, 1957	17.54	4,600
	Apr. 21, 1945	16.90	3,880				
	May 12, 1945	18.40	5,480	1958	Oct. 17, 1957	-	b3,500
	May 22, 1945	14.55	2,520		Nov.24,25,1957	17.5	4,600
	Aug. 30, 1945	27.79	31,100		Jan. 15, 1958	13.5	2,450
					Jan. 22, 1958	18.20	5,260
1946	Jan. 7, 1946	18.62	5,700		Jan. 26, 1958	12.92	2,200
	Jan. 17, 1946	16.29	3,790		Jan. 31, 1958	12.38	2,000
	Feb. 10, 1946	16.42	3,480		Feb. 25, 1958	12.92	2,200
	Feb. 20, 1946	18.01	5,040		May 6, 1958	14.49	2,850
	Mar. 15, 1946	16.22	3,360				
	Mar. 28, 1946	13.35	2,140	1959	Apr. 12, 1959	18.90	6,080
	May 15, 1946	14.27	2,490		Apr. 20, 1959	19.38	6,720
	May 21, 1946	22.97	12,200		May 13, 1959	17.84	4,820
	June 2, 1946	12.85	1,930				
	July 4, 1946	19.50	6,800	1960	Feb. 27, 1960	13.35	2,280
					May 1, 1960	-	b2,000
1947	Nov. 6, 1946	21.77	10,000		June 27, 1960	24.70	20,700
	Nov. 11, 1946	21.33	9,400		July 22, 1960	13.33	2,240
	Nov. 18, 1946	20.35	7,970				
	Jan. 4, 1947	13.65	2,200	1961	Oct. 28, 1960	18.51	5,640
	Jan. 10, 1947	14.59	2,610		Nov. 20, 1960	16.31	4,020
	Jan. 19, 1947	15.70	3,100		Nov. 23, 1960	14.75	3,260

a Maximum for Apr. 1 to Sept. 30, 1939; may have been exceeded during period of no record.
b Estimated.

Peak stages and discharges of Spring Creek near Spring, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1961	Dec. 10, 1960	14.93	5,300	1961	Feb. 23, 1961	17.32	4,580
	Jan. 2, 1961	-	-		June 20, 1961	18.31	5,440
	Jan. 10, 1961	-	-		July 11, 1961	13.58	2,740
	Jan. 15, 1961	16.38	4,070		July 15, 1961	13.06	2,540
	Feb. 18, 1961	22.17	10,700		Sept.14, 1961	21.24	9,180

8-690. Cypress Creek near Westfield, Tex. (122)

Location.--Lat 30°02'08", long 95°25'44", near left bank at downstream side of pile bent of bridge on U.S. Highway 75, 0.9 mile upstream from Senger Gully, 1.8 miles northwest of Westfield, Harris County, 2.0 miles upstream from Missouri Pacific Railroad Co. bridge, and 11.0 miles upstream from mouth.

Drainage area.--285 sq mi.

Gage.--Recording. At datum 12.00 ft higher prior to Mar. 17, 1951. Datum of gage is 63.89 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--22 ft.

Historical data.--Maximum stage since at least 1875 occurred in May 1929, from information by local residents. Information for flood in November 1940 from State Highway Department.

Remarks.--Between July 1950 and March 1951, the channel below gage was straightened considerably and the streambed at gage was lowered about 3 ft. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 1929	22	a26,000	1953	Apr. 29, 1953	12.90	1,590
1941	November 1940	20	a15,000		May 4, 1953	18.80	4,010
1945	Nov. 27, 1944	12.90	1,500		May 13, 1953	20.44	4,730
	Dec. 7, 1944	15.83	3,760		May 18, 1953	22.39	5,700
	Jan. 20, 1945	16.36	4,700	1954	July 30, 1954	27.90	10,600
	Apr. 3, 1945	16.42	4,700	1955	Feb. 6, 1955	16.00	2,800
	Apr. 21, 1945	13.84	1,900	1956	Jan. 22, 1956	9.60	589
	Aug. 31, 1945	19.03	10,700	1957	Mar. 21, 1957	14.12	1,670
1946	Dec. 26, 1945	13.10	1,580		Apr. 30, 1957	17.34	2,920
	Jan. 9, 1946	13.29	1,660	1958	Oct. 15, 1957	24.8	7,440
	Jan. 18, 1946	12.78	1,470		Nov. 22, 1957	14.84	2,080
	Feb. 11, 1946	13.44	1,700		Jan. 20, 1958	19.94	4,500
	Feb. 21, 1946	13.59	1,800	1959	Apr. 11, 1959	19.82	4,240
	May 22, 1946	16.72	5,260		Apr. 20, 1959	13.84	1,740
1947	Nov. 6, 1946	17.12	6,520		May 13, 1959	14.06	1,810
	Nov. 12, 1946	15.74	4,040		May 23, 1959	13.59	1,630
	Nov. 16, 1946	15.52	3,620	1960	June 28, 1960	29.13	10,600
	Jan. 17, 1947	13.26	1,660		July 17, 1960	14.95	1,820
	May 24, 1947	13.33	1,660		July 22, 1960	16.70	2,400
1948	Dec. 17, 1947	6.95	424	1961	Oct. 20, 1960	14.40	1,640
1949	Feb. 28, 1949	13.13	1,580		Oct. 31, 1960	18.04	2,900
1950	Oct. 8, 1949	21.44	22,100		Nov. 20, 1960	15.50	1,980
	Feb. 13, 1950	14.02	2,160		Dec. 9, 1960	15.48	1,980
	June 5, 1950	17.10	5,940		Dec. 31, 1960	14.44	1,640
1951	Sept.24, 1951	11.04	976		Feb. 17, 1961	23.18	5,580
1952	Apr. 12, 1952	21.58	5,270		Feb. 22, 1961	17.15	2,580
	Apr. 23, 1952	14.90	2,360		June 20, 1961	21.93	4,800
	May 18, 1952	16.03	3,650		July 10, 1961	24.19	6,240
1953	Apr. 24, 1953	12.84	1,560		Sept.12, 1961	25.13	6,880

a About.

8-695. West Fork San Jacinto River near Humble, Tex. (123)

Location.--Lat 30°01'37", long 95°15'28", at bridge on U.S. Highway 59, 970 ft upstream from Texas and New Orleans Railroad bridge, half a mile downstream from Spring Creek, and 2½ miles north of Humble, Harris County.

Drainage area.--1,736 sq mi prior to July 17, 1933; 1,741 sq mi thereafter.

Gage.--Nonrecording prior to Mar. 6, 1939; recording thereafter. At site 1,800 ft downstream prior to July 17, 1933. All gages at datum 30.53 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 150,000 cfs and extended above by logarithmic plotting. Flood of Nov. 26, 1940, affected by backwater from East Fork San Jacinto River and it is believed that flood of May 31, 1929, occurred under similar conditions.

Bankfull stage.--15 ft.

Historical data.--Floods in September 1900, May 31, 1929, and Nov. 26, 1940, were highest since at least 1865 and all reached about the same stage, from information by local resident.

Remarks.--Station discontinued as a streamflow station Sept. 30, 1954, owing to backwater from Lake Houston. Base for partial-duration series, 8,900 cfs. Only annual peaks are shown prior to 1934.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	August 1908	a30	-	1945	Dec. 8, 1944	14.41	22,500
					Jan. 20, 1945	13.54	15,200
1929	May 31, 1929	a32.7	187,000		Apr. 3, 1945	22.45	47,300
1930	Feb. 5, 1930	12.10	11,700		Apr. 21, 1945	11.46	10,600
					May 13, 1945	11.66	11,000
1931	Dec. 8, 1930	10.58	9,040		May 22, 1945	10.68	9,000
1932	Feb. 23, 1932	14.82	17,400		Aug. 31, 1945	22.65	48,700
1933	Mar. 9, 1933	10.40	8,720	1946	Jan. 7, 1946	11.76	11,500
1934	Feb. 13, 1934	13.1	13,800		Jan. 18, 1946	11.73	11,300
	Mar. 4, 1934	17.5	24,600		Feb. 21, 1946	11.40	10,600
	Apr. 8, 1934	15.2	18,800		Mar. 15, 1946	14.76	18,500
					May 17, 1946	11.52	10,600
1935	Apr. 27, 1935	12.78	13,200		May 21, 1946	15.31	19,800
	May 7, 1935	27.26	68,100		June 4, 1946	10.66	9,000
	May 21, 1935	22.10	40,600		July 4, 1946	11.00	9,600
1936	Dec. 9, 1935	23.74	47,600	1947	Nov. 7, 1946	21.21	40,100
	May 27, 1936	15.7	20,000		Nov. 11, 1946	16.76	21,700
	July 4, 1936	14.90	17,600		Nov. 18, 1946	13.51	14,400
					Jan. 20, 1947	11.42	10,400
1937	Mar. 15, 1937	9.40	6,480		Mar. 15, 1947	13.17	14,400
1938	May 19, 1938	12.00	11,100	1948	Mar. 3, 1948	9.27	5,640
1939	Mar. 1, 1939	11.4	9,780	1949	Mar. 1, 1949	12.58	14,200
					Mar. 22, 1949	11.82	11,300
1940	June 13, 1940	13.87	15,600		Apr. 25, 1949	11.36	10,400
1941	Nov. 26, 1940	32.7	187,000	1950	Oct. 8, 1949	21.29	40,600
	Dec. 14, 1940	23.10	52,300		Dec. 18, 1949	11.07	9,740
	Mar. 10, 1941	10.82	9,400		Jan. 1, 1950	10.64	8,900
	Mar. 22, 1941	12.82	13,700		Feb. 15, 1950	13.30	14,700
	Apr. 25, 1941	23.10	52,300		June 4, 1950	20.82	38,200
	June 13, 1941	16.76	23,900				
	Sept.25, 1941	12.65	13,000	1951	Mar. 29, 1951	6.40	2,620
1942	Nov. 1, 1941	14.77	20,000	1952	Apr. 12, 1952	11.46	10,000
	Apr. 10, 1942	16.16	22,300		Apr. 26, 1952	11.44	9,800
1943	July 31, 1943	13.30	14,900	1953	Apr. 30, 1953	-	b14,000
					May 5 or 6,1953	-	b13,000
1944	Jan. 17, 1944	10.78	9,600		May 19, 1953	15.11	18,500
	Feb. 1, 1944	12.96	14,000				
	Mar. 20, 1944	12.98	14,000	1954	July 30, 1954	14.00	15,600
	May 26, 1944	12.14	11,700				

a Adjusted for slope to present site.
b Estimated.

8-700. East Fork San Jacinto River near Cleveland, Tex. (124)

Location.--Lat 30°20'11", long 95°06'14", near left bank at downstream side of pile bent of bridge on State Highway 105, 1,880 ft downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 1¼ miles west of Cleveland, Liberty County, and 4.3 miles downstream from Winter Creek.

Drainage area.--325 sq mi.

Gage.--Recording. At site 1,800 ft upstream at datum 5.00 ft higher prior to Sept. 13, 1955. Datum of gage is 107.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Stage-discharge relation.--Defined by current-meter mrasurements below 27,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--13 ft.

Historical data.--Flood of Nov. 24, 1940, is the highest since at least 1900. Information for floods of Mar. 18, 1914, and May 5, 1935, from local resident.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Mar. 18, 1914	17.4	-	1949	Mar. 22, 1949	11.44	5,080
1935	May 5, 1935	19.9	53,500		Apr. 23, 1949	11.62	5,400
1939	Apr. 29, 1939	a1.94	140	1950	Oct. 5, 1949	13.52	9,980
					Dec. 18, 1949	9.02	2,660
1940	June 12, 1940	10.70	3,630		Jan. 18, 1950	11.65	5,480
					Feb. 14, 1950	10.87	4,320
1941	Nov. 24, 1940	20.37	59,000		June 4, 1950	14.80	14,700
	Dec. 13, 1940	15.15	17,700	1951	Mar. 29, 1951	3.94	819
	Feb. 4, 1941	9.72	2,640				
	Apr. 24, 1941	14.44	13,800	1952	Apr. 25, 1952	8.70	2,480
	May 7, 1941	10.07	2,990				
	June 8, 1941	13.54	10,300	1953	Apr. 30, 1953	14.52	13,400
	June 12, 1941	13.28	9,700		May 16, 1953	10.20	3,560
					May 19, 1953	12.82	8,120
1942	Nov. 1, 1941	15.42	18,900				
	Apr. 10, 1942	12.72	7,950	1954	July 31, 1954	4.55	835
	May 13, 1942	12.62	7,700				
				1955	Feb. 7, 1955	12.00	6,200
1943	Dec. 28, 1942	12.51	7,450				
	Jan. 14, 1943	10.00	2,890	1956	Feb. 10, 1956	9.45	1,070
1944	Feb. 1, 1944	8.73	2,240	1957	Apr. 30, 1957	14.62	4,080
1945	Dec. 7, 1944	12.80	8,400	1958	Oct. 17, 1957	15.42	5,370
	Jan. 2, 1945	10.59	3,800		Nov. 24, 1957	18.07	12,500
	Jan. 21, 1945	10.09	3,400		Dec. 30, 1957	14.61	4,050
	Feb. 7, 1945	10.64	3,800		Jan. 22, 1958	14.37	3,770
	Apr. 2, 1945	16.32	38,000				
				1959	Apr. 13, 1959	15.78	5,550
1946	Jan. 7, 1946	10.54	3,650		Apr. 19, 1959	20.38	20,600
	Feb. 10, 1946	10.42	3,550				
	Feb. 21, 1946	9.44	2,840	1960	Feb. 27, 1960	13.83	3,030
	May 16, 1946	13.63	11,000		June 28, 1960	16.65	7,960
	July 3, 1946	11.84	5,820				
				1961	Oct. 30, 1960	16.20	7,010
1947	Nov. 6, 1946	17.29	28,000		Nov. 23, 1960	16.88	8,740
	Nov. 11, 1946	11.99	6,800		Dec. 11, 1960	13.61	2,830
	Jan. 10, 1947	9.79	2,930		Jan. 9, 1961	14.72	4,200
	Jan. 19, 1947	10.85	4,110		Jan. 15, 1961	13.56	2,830
	Mar. 14, 1947	13.70	11,800		Feb. 19, 1961	16.50	7,700
					Feb. 23, 1961	13.20	2,610
1948	Apr. 27, 1948	5.64	1,060		June 19, 1961	13.33	2,580
					Sept.13, 1961	17.22	9,600
1949	Feb. 27, 1949	13.48	9,680				

a Maximum Apr. 27 to Sept. 30, 1939; may have been exceeded during period of no record.

8-705. Caney Creek near Splendora, Tex. (125)

Location.--Lat 30°15'36", long 95°18'08", near right bank at downstream side of pile bent of county road bridge, 4 miles downstream from Gulf, Colorado and Santa Fe Railway Co. bridge and 8 miles west of Splendora, Montgomery County.

Drainage area.--105 sq mi.

Gage.--Recording. Datum of gage is 123.44 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--10 ft.

Historical data.--Flood in November 1940 was the highest since at least 1885, from information by local resident.

Remarks.--Base for partial-duration series, 1,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 1935	a19.3	-	1951	Mar. 28, 1951	6.73	742
1941	November 1940	a22.0	-	1952	Apr. 13, 1952	10.45	1,600
					Apr. 24, 1952	10.27	1,560
1944	Feb. 15, 1944	10.30	b1,380		May 25, 1952	10.54	1,630
	May 23, 1944	10.02	1,320				
				1953	Apr. 30, 1953	14.01	4,600
1945	Dec. 6, 1944	14.20	5,180		May 15, 1953	9.52	1,330
	Jan. 1, 1945	11.64	2,360		May 19, 1953	10.07	1,500
	Jan. 19, 1945	15.10	5,820				
	Feb. 6, 1945	12.58	3,300	1954	July 31, 1954	6.00	718
	Apr. 1, 1945	18.19	14,900				
				1955	Feb. 7, 1955	10.52	1,720
1946	Jan. 6, 1946	11.06	2,000				
	Feb. 10, 1946	10.50	1,630	1956	Feb. 9, 1956	8.35	1,190
	Feb. 19, 1946	10.73	1,740				
	May 16, 1946	13.16	3,940	1957	Apr. 30, 1957	7.74	1,190
	July 3, 1946	14.07	5,040				
				1958	Oct. 15, 1957	11.2	2,480
1947	Nov. 6, 1946	15.41	7,020		Nov. 23, 1957	-	c1,700
	Nov. 10, 1946	12.97	3,700		Dec. 28, 1957	7.96	1,300
	Nov. 17, 1946	12.22	2,900		Jan. 13, 1958	8.44	1,440
	Jan. 8, 1947	10.51	1,630		Jan. 21, 1958	10.95	2,340
	Jan. 18, 1947	11.77	2,520		Apr. 12, 1958	-	c1,800
	Mar. 14, 1947	11.40	2,210		Apr. 18, 1958	15.9	9,520
1948	Apr. 26, 1948	7.37	852	1960	Feb. 25, 1960	8.40	1,740
					June 27, 1960	15.90	9,680
1949	Feb. 26, 1949	14.73	5,880		July 21 or 22, 1960	-	c2,200
	Mar. 22, 1949	14.02	4,900				
	Apr. 27, 1949	10.41	1,580	1961	Oct. 29, 1960	14.39	6,720
1950	Oct. 5, 1949	10.20	1,690		Nov. 19, 1960	9.45	1,740
	Oct. 8, 1949	15.21	6,700		Nov. 23, 1960	8.62	1,500
	Oct. 13, 1949	9.59	1,480		Jan. 1, 1961	7.92	1,320
	Dec. 15, 1949	9.17	1,350		Jan. 8, 1961	8.53	1,480
	Jan. 11, 1950	9.27	1,380		Jan. 13, 1961	9.55	1,810
	Jan. 17, 1950	12.92	3,590		Feb. 17, 1961	13.33	4,100
	Feb. 13, 1950	11.60	2,400		Feb. 22, 1961	7.67	1,320
	May 15, 1950	9.63	1,500		June 19, 1961	9.48	1,780
	May 28, 1950	9.40	1,420		July 13, 1961	8.95	1,620
	June 3, 1950	15.38	6,980		Sept.13, 1961	15.01	7,000

a From floodmarks; adjusted for slope to present site.
b Maximum Jan. 18 to Sept. 30, 1944; probably maximum for the year.
c Estimated.

8-710. Peach Creek at Splendora, Tex. (126)

Location.--Lat 30°13'57", long 95°10'05", at right bank on downstream side of pile bent of bridge on county road between Splendora and Conroe, about 1,500 ft west of depot at Splendora, Montgomery County, 2.5 miles upstream from Texas and New Orleans Railroad Co. bridge, 2.5 miles upstream from bridge on U.S. Highway 59, and 9.7 miles upstream from Caney Creek.

Drainage area.--117 sq mi.

Gage.--Recording. Datum of gage is 86.61 ft above mean sea level, datum of 1929, Galveston-Houston supplementary adjustment of 1936.

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs and by slope-area measurement at 28,500 cfs.

Bankfull stage.--7 ft.

Historical data.--Flood of Oct. 8, 1949, was highest since at least 1895. Information for flood in November 1940 from local residents.

Remarks.--Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	November 1940	17.3	24,700	1950	June 3, 1950	9.39	1,880
1944	Mar. 19, 1944	9.14	1,600	1951	Mar. 28, 1951	4.80	216
	May 23, 1944	8.25	1,040				
	May 26, 1944	a10.73	2,890	1952	Apr. 23, 1952	8.28	1,130
1945	Dec. 6, 1944	9.44	1,840	1953	Apr. 30, 1953	13.40	7,000
	Jan. 19, 1945	9.41	1,840		May 5, 1953	9.95	2,440
	Feb. 5, 1945	10.22	2,530		May 15, 1953	8.54	1,280
	Apr. 1, 1945	13.85	7,980				
	Aug. 28, 1945	10.34	2,710	1954	July 30, 1954	8.24	800
1946	Feb. 9, 1946	9.98	2,200	1955	Feb. 7, 1955	7.90	840
	Feb. 19, 1946	9.22	1,640				
	May 16, 1946	8.47	1,150	1956	Feb. 9, 1956	3.82	134
	June 1, 1946	8.92	1,430				
	July 3, 1946	10.03	2,280	1957	June 5, 1957	7.80	920
1947	Nov. 5, 1946	13.70	7,540	1958	Oct. 16, 1957	9.88	2,350
	Nov. 11, 1946	13.36	6,880		Nov. 23, 1957	8.41	1,190
	Nov. 17, 1946	8.35	1,090		Jan. 31, 1958	9.72	2,170
	Jan. 17, 1947	9.52	1,880				
	Mar. 13, 1947	8.08	915	1959	Apr. 12, 1959	9.55	1,860
					July 26, 1959	9.10	1,480
1948	Apr. 27, 1948	5.85	341				
				1960	June 26, 1960	9.19	1,380
1949	Feb. 26, 1949	9.42	1,900				
	Mar. 22, 1949	11.61	4,280	1961	Oct. 19, 1960	9.20	1,180
	Mar. 30, 1949	8.68	1,370		Oct. 29, 1960	12.88	5,000
					Nov. 19, 1960	8.72	995
1950	Oct. 8, 1949	17.73	28,500		Jan. 8, 1961	9.57	1,340
	Oct. 12, 1949	10.42	2,880		Jan. 13, 1961	9.12	1,140
	Dec. 18, 1949	8.80	1,440		Feb. 17, 1961	13.33	6,110
	Jan. 1, 1950	8.45	1,220		Feb. 22, 1961	8.92	1,060
	Jan. 12, 1950	10.72	3,190		June 20, 1961	12.11	3,540
	Feb. 13, 1950	9.31	1,830		July 13, 1961	9.27	1,200
	May 14, 1950	8.85	1,480		Sept.12, 1961	13.51	6,500

a Maximum Nov. 19, 1943, to Sept. 30, 1944; probably maximum for the year.

8-715. San Jacinto River near Huffman, Tex. (127)

Location.--Lat 29°59'41", long 95°07'42", at Beaumont, Sour Lake & Western Railway bridge, 0.4 mile downstream from confluence of East and West Forks and 3.4 miles southwest of Huffman, Harris County.

Drainage area.--2,800 sq mi.

Gage.--Nonrecording prior to July 10, 1941; recording thereafter. Datum of gage is 1.93 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--30 ft.

Historical data.--Flood of Nov. 26, 1940, was the highest since at least 1876, from information by local residents.

Remarks.--Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1876	April 1876	a48.8	-	1946	Jan. 8, 1946	23.30	15,500
					Jan. 18, 1946	22.38	14,000
1922	April 1922	41.8	-		Feb. 10, 1946	23.37	15,700
					Feb. 20, 1946	23.62	16,100
1929	May 31, 1929	a50.3	237,000		Mar. 16, 1946	26.53	22,800
					May 18, 1946	24.66	18,300
1937	Mar. 15, 1937	23.3	15,300		May 22, 1946	26.65	23,000
					July 4, 1946	27.30	24,800
1938	May 20, 1938	21.9	12,600				
				1947	Nov. 7, 1946	38.92	92,100
1939	Mar. 1, 1939	23.7	16,800		Nov. 11, 1946	32.12	46,500
					Nov. 18, 1946	26.03	23,000
1940	June 14, 1940	25.0	18,500		Jan. 20, 1947	24.68	21,000
					Mar. 16, 1947	26.04	22,500
1941	Nov. 26, 1940	51.2	253,000				
	Dec. 14, 1940	38.6	89,400	1948	Mar. 4, 1948	16.22	5,930
	Mar. 21, 1941	27.2	24,600				
	Apr. 25, 1941	37.45	78,600	1949	Mar. 1, 1949	25.35	24,000
	June 14, 1941	30.66	36,300		Mar. 23, 1949	24.88	20,200
	Sept.25, 1941	29.48	31,800		Apr. 25, 1949	22.70	14,500
1942	Nov. 2, 1941	33.08	47,600	1950	Oct. 9, 1949	38.61	89,500
	Apr. 11, 1942	30.82	36,700		Dec. 18, 1949	23.80	18,100
	Apr. 25, 1942	23.72	16,400		Jan. 2, 1950	22.80	16,300
					Jan. 12, 1950	22.24	15,300
1943	Jan. 14, 1943	22.43	14,000		Jan. 20, 1950	21.67	14,400
	July 30, 1943	27.43	25,100		Feb. 14, 1950	26.36	23,900
					June 5, 1950	33.17	48,400
1944	Feb. 2, 1944	23.15	14,500				
	Mar. 20, 1944	25.83	20,000	1951	Mar. 29, 1951	14.81	4,710
	May 27, 1944	26.25	21,500				
				1952	Apr. 13, 1952	22.06	15,100
1945	Dec. 8, 1944	27.80	26,200		Apr. 26, 1952	21.70	14,400
	Jan. 21, 1945	26.80	23,500				
	Apr. 3, 1945	38.88	92,100	1953	May 1, 1953	25.58	22,100
	Apr. 22, 1945	22.58	14,300		May 5, 1953	24.88	20,500
	Sept. 1, 1945	33.80	51,800		May 19, 1953	28.46	30,000

a Annual peak only.

8-735. Buffalo Bayou near Addicks, Tex. (128)

Location.--Lat 29°45'42", long 95°36'20", near right bank at downstream side of pile bent of bridge on Dairy-Ashford road over rectified channel, 1.8 miles downstream from South Mayde Creek, 2.6 miles southeast of Addicks, Harris County, 3.0 miles downstream from outlet works of Addicks Reservoir, and 3.2 miles downstream from outlet works of Barker Reservoir.

Drainage area.--293 sq mi (during extreme floods when the capacity of drainage ditches is exceeded, the drainage area is defined by natural ridge lines and is 310 sq mi).

Gage.--Recording. On natural channel at site 1,200 ft to right of present gage prior to Feb. 2, 1948. Datum of gage is 0.31 ft below mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected by increased capacity of new channel that was dug 1,200 ft to left of natural channel. Flow was diverted into this channel Jan. 14, 1948.

Historical data.--Flood in December 1935 was highest since at least 1896, information from local residents.

Remarks.--Floodflow is regulated by two flood-detention reservoirs, Barker Reservoir near Addicks, Tex. (completed February 1945), and Addicks Reservoir near Addicks, Tex. (completed December 1948). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	December 1935	a85.6	-	1953	May 19, 1953	65.72	4,050
				1954	July 31, 1954	65.96	4,340
1945	Aug. 29, 1945	81.23	11,200	1955	Feb. 7, 1955	60.70	2,550
1946	May 20, 1946	79.61	7,240	1956	Apr. 10, 1956	54.95	910
1947	Nov. 6, 1946	78.42	4,730	1957	Mar. 18, 1957	63.24	3,300
1948	Dec. 16, 1947	71.45	2,070	1958	Oct. 17, 1957	71.05	6,470
1949	Apr. 23, 1949	62.58	3,640	1959	Apr. 12, 1959	69.44	5,460
1950	Oct. 9, 1949	64.69	4,430	1960	June 28, 1960	73.51	6,820
1951	Mar. 27, 1951	55.78	1,130	1961	June 21. 1961	70.63	5,510
1952	Apr. 13, 1952	60.77	2,670				

a From floodmarks, adjusted for slope to site 1,200 ft right of present gage.

8-740. Buffalo Bayou at Houston, Tex. (129)

Location.--Lat 29°45'42", long 95°23'54", near left bank of low-water channel at downstream side of pier of Waugh Drive Bridge, in Houston, Harris County, 0.41 mile upstream from Texas and New Orleans Railroad Co. bridge, and 3.1 miles upstream from Whiteoak Bayou.

Drainage area.--359 sq mi. During extreme floods when capacity of drainage ditches is exceeded, the drainage area is defined by natural ridge lines and is 362 sq mi.

Gage.--Recording. Datum of gage is 4.08 ft below mean sea level, datum of 1929, unadjusted for ground surface subsidence resulting from heavy ground-water withdrawals.

Stage-discharge relation.--Defined by current-meter measurements below 10,800 cfs. Relation affected by varying amounts of backwater from discharge from storm sewers and Whiteoak Bayou since April 1957 as a result of channel rectification. Rectification increased capacity of channel.

Historical data.--Flood of Dec. 9, 1935, was highest since at least 1835. Second highest flood occurred May 31, 1929. The following is quoted from Special Hydrology Report, Buffalo Bayou, Texas Flood Control Project, by U.S. Engineers, Galveston, Tex., November 1938: "The city of Houston was founded in 1835. The first flood of consequence thereafter was in 1845. One major flood has occurred in each of the years 1875, 1879, 1907, 1929, and 1935. The most destructive of these floods was that of December 1935. Records of stages and photographs, made by old residents, indicated that the flood discharges in order of increasing magnitude were about as follows: 1854, 1907, 1875, 1879, 1929, and 1935. No discharge measurements were made of any floods prior to 1929 and all conclusions as to the relative sizes of earlier floods are based on statements contained in the newspapers published at the time and photographs of a foundation wall on Buffalo Bayou at the foot of Fannin Street, one block downstream from Main Street. Although the water surface is shown lower for the 1929 flood (lower than 1879 flood), it is believed that the large changes in the Buffalo Bayou channel below Main Street are responsible for lowering the water plane and that the discharges for the two floods were about the same. The 1935 flood crest exceeded previous flood crests by about 6 feet at Fannin Street and exceeded the 1929 flood crest by 8 feet."

Remarks.--Floodflow regulated by Barker and Addicks Reservoirs (see Buffalo Bayou near Addicks, Tex.). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 31, 1929	48.9	a19,000	1949	Apr. 24, 1949	22.63	3,420
				1950	Oct. 8, 1949	27.85	6,500
1936	Dec. 9, 1935	54.4	b40,000				
1937	Apr. 1, 1937	15.84	792	1951	Mar. 28, 1951	17.57	1,700
1938	May 19, 1938	31.30	8,490	1952	Apr. 14, 1952	19.91	2,380
1939	July 15, 1939	21.10	2,530	1953	May 18, 1953	26.00	4,800
1940	June 18, 1940	17.80	1,390	1954	Aug. 2, 1954	24.28	4,080
				1955	Feb. 8, 1955	20.44	2,310
1941	June 11, 1941	27.83	6,220				
1942	July 7, 1942	27.75	6,220	1956	Jan. 23, 1956	14.65	820
1943	Aug. 1, 1943	22.10	3,070	1957	Mar. 19, 1957	21.98	2,900
1944	Nov. 2, 1943	31.03	6,810	1958	Oct. 18, 1957	22.5	7,200
1945	Aug. 30, 1945	34.23	10,900	1959	Apr. 12, 1959	21.20	6,060
				1960	June 28, 1960	c23.30	7,270
1946	May 21, 1946	27.45	6,260				
1947	Nov. 7, 1946	27.57	6,400	1961	Feb. 18, 1961	d24.90	5,750
1948	Dec. 17, 1947	18.26	2,130				

a Discharge at bridge on Capitol Avenue 2 miles downstream, from rating curve extended above 15,300 cfs, stage-discharge relation materially affected by interference of bridge; furnished by city of Houston.
b Discharge furnished by engineer for Harris County.
c Occurred June 26, 1960.
d Occurred Sept. 12, 1961.

8-745. Whiteoak Bayou at Houston, Tex. (130)

Location.--Lat 29°46'31", long 95°23'54", near right bank at downstream side of pier of Yale Street Bridge, in Houston, Harris County, 80 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.5 miles upstream from Little Whiteoak Bayou, and 4.1 miles upstream from mouth.

Drainage area.--84.7 sq mi. During extreme floods when capacity of drainage ditches is exceeded, the drainage area is defined by natural ridge lines and is 92.0 sq mi.

Gage.--Recording. Datum of gage is 4.08 ft below mean sea level, datum of 1929, unadjusted for ground surface subsidence resulting from heavy ground-water withdrawals.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of Dec. 9, 1935, was highest since at least 1919, information from local resident. Second highest flood occurred May 31, 1929, from information furnished by engineer for Harris County. The drainage area of Whiteoak Bayou is roughly parallel to that of Buffalo Bayou and records indicate that when there is a major flood on Buffalo Bayou there is a major flood on Whiteoak Bayou (see station 8-740).

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 31, 1929	47.0	a9,360	1946	Sept.27, 1946	27.34	1,010
1936	Dec. 9, 1935	51.5	b14,750	1947	Nov. 6, 1946	37.33	4,120
					Nov. 11, 1946	32.88	2,520
1937	July 23, 1937	29.35	887		Nov. 17, 1946	26.95	1,100
					Jan. 18, 1947	28.62	1,430
1938	Dec. 16, 1937	29.56	1,040		May 24, 1947	28.24	1,180
	Feb. 19, 1938	30.60	1,240				
	May 7, 1938	37.98	3,570	1948	Dec. 13, 1947	24.12	534
1939	July 13, 1939	33.40	1,960	1949	Feb. 26, 1949	28.28	1,270
					Apr. 23, 1949	31.35	1,920
1940	June 11, 1940	27.20	632				
				1950	Oct. 4, 1949	27.07	1,050
1941	Nov. 25, 1940	37.00	3,220		Oct. 8, 1949	37.65	3,650
	Dec. 14, 1940	31.17	1,390		Dec. 18, 1949	29.09	1,420
	Jan. 15, 1941	30.38	1,210		Jan. 1, 1950	32.58	2,480
	Mar. 20, 1941	36.37	2,950		Feb. 13, 1950	29.47	1,500
	Apr. 24, 1941	34.70	2,350		June 6, 1950	27.16	1,060
	June 11, 1941	39.02	4,300				
	Sept.17, 1941	31.94	1,560	1951	Mar. 27, 1951	24.99	714
	Sept.24, 1941	40.27	5,100				
				1952	Feb. 1, 1952	25.79	835
1942	Nov. 1, 1941	35.70	2,680				
	July 6, 1942	36.98	4,400	1953	Dec. 4, 1952	26.76	1,000
					May 4, 1953	26.77	1,000
1943	Dec. 28, 1942	27.47	1,010		May 15, 1953	29.55	1,520
	July 29, 1943	36.38	3,660		May 18, 1953	31.38	1,920
					Aug. 30, 1953	27.35	1,040
1944	Nov. 2, 1943	42.45	8,600				
	Jan. 2, 1944	29.97	1,520	1954	Nov. 18, 1953	27.27	1,090
	Jan. 14, 1944	30.73	1,700		July 31, 1954	36.80	3,890
	Mar. 16, 1944	32.67	2,460				
	Mar. 19, 1944	32.20	2,240	1955	Feb. 6, 1955	29.05	1,690
	May 23, 1944	28.87	1,300				
	May 29, 1944	32.50	2,240	1956	Jan. 22, 1956	27.28	1,300
					July 10, 1956	27.31	1,320
1945	Nov. 25, 1944	31.55	1,960				
	Dec. 6, 1944	30.02	1,560	1957	Mar. 17, 1957	35.43	3,060
	Jan. 19, 1945	33.08	2,380		Apr. 28, 1957	35.18	2,990
	Apr. 2, 1945	31.87	2,040		Sept.25, 1957	28.44	1,290
	June 14, 1945	30.13	1,580				
	Aug. 28, 1945	38.80	4,330	1958	Oct. 15, 1957	40.58	5,320
					Nov. 22, 1957	26.81	1,000
1946	Dec. 3, 1945	29.34	1,410		Jan. 20, 1958	30.83	1,780
	Dec. 23, 1945	29.48	1,450		June 19, 1958	29.20	1,440
	Jan. 6, 1946	28.50	1,240		Sept.21, 1958	27.88	1,200
	Feb. 19, 1946	28.26	1,200				
	May 20, 1946	37.13	3,660	1959	Feb. 2, 1959	33.09	23.80
	May 26, 1946	29.59	1,470		Feb. 16, 1959	(c)	-
	June 1, 1946	33.98	2,630		Apr. 10, 1959	32.24	2,210
	June 8, 1946	27.80	1,100		May 23, 1959	35.33	3,030

a Annual peak only; computed on basis of current-meter measurement at stage 1 ft below crest, furnished by city of Houston.
b Annual peak only, furnished by engineer for Harris County.
c Peak above the base, stage and discharge unknown.

Peak stages and discharges of Whiteoak Bayou at Houston, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1959	July 25, 1959	30.05	1,600	1961	Oct. 19, 1960	32.92	2,570
	Aug. 26, 1959	39.18	4,510		Oct. 29, 1960	31.50	2,150
	Sept.22, 1959	33.72	2,550		Nov. 18, 1960	33.62	2,040
					Dec. 9, 1960	30.60	1,880
1960	Oct. 13, 1959	27.35	1,040		Dec. 31, 1960	29.62	1,590
	Oct. 31, 1959	28.27	1,290		Jan. 7, 1961	27.27	1,060
	Nov. 1, 1959	32.92	2,460		Feb. 5, 1961	29.44	1,530
	Dec. 15, 1959	31.82	2,320		Feb. 17, 1961	39.45	7,380
	Dec. 31, 1959	28.22	1,260		Feb. 21, 1961	31.80	2,240
	Feb. 3, 1960	27.45	1,060		June 19, 1961	36.33	4,180
	Feb. 21, 1960	27.22	1,020		June 25, 1961	29.20	1,480
	June 26, 1960	40.58	4,380		July 12, 1961	35.49	3,700
	July 20, 1960	30.08	1,800		Sept.12, 1961	40.37	5,700
1961	Oct. 5, 1960	29.80	1,640				

8-750. Brays Bayou at Houston, Tex. (131)

Location.--Lat 29°41'49", long 95°23'43", at bridge on Main Street, in Houston, Harris County, 1.6 miles upstream from Harris Gully, and 11.6 miles upstream from Buffalo Bayou.

Drainage area.--89.1 sq mi prior to Nov. 26, 1959; 88.4 sq mi thereafter. During extreme floods when capacity of drainage ditches is exceeded, the drainage area is defined by natural ridge lines and is 100 sq mi.

Gage.--Recording. At site 0.8 mile upstream at same datum after Nov. 26, 1959. Datum of gage is 3.90 ft below mean sea level, datum of 1929, unadjusted for ground surface subsidence resulting from heavy ground-water withdrawals.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected by channel improvements of July 1923 to January 1926, flood control work on bayou at various times between 1936 and 1956, and channel lining project that began in 1956 and was still incomplete at the end of the 1960 water year.

Historical data.--Flood in June 1919 was maximum since at least 1911, from information by engineer for city of Houston.

Remarks.--Partial urbanization of the drainage basin as well as channel improvements have changed flood characteristics in recent years. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	June 1919	56.0	-	1946	Sept.27, 1946	48.24	3,880
				1947	Nov. 5, 1946	46.25	4,360
1922	March 1922	55.3	-	1948	Dec. 13, 1947	38.44	1,440
				1949	Feb. 26, 1949	42.60	2,340
1924	Dec. 23, 1923	53.0	-	1950	Oct. 8, 1949	51.49	5,340
1929	May 31, 1929	50.4	a11,100	1951	Mar. 28, 1951	34.58	786
				1952	Feb. 1, 1952	38.79	1,850
1936	May 25, 1936	47.0	b6,600	1953	May 18, 1953	42.72	3,580
1937	Dec. 10, 1936	34.88	1,270	1954	Nov. 18, 1953	43.20	3,680
1938	May 17, 1938	43.27	4,530	1955	Feb. 4, 1955	42.38	3,300
1939	July 12, 1939	48.02	6,800				
1940	Feb. 17, 1940	36.73	1,340	1956	May 2, 1956	36.38	1,180
				1957	Mar. 17, 1957	43.65	4,660
1941	Sept.24, 1941	47.62	6,460	1958	Oct. 15, 1957	47.48	5,100
1942	Oct. 31, 1941	44.58	4,590	1959	Apr. 9, 1959	43.80	7,760
1943	July 29, 1943	48.22	6,280	1960	June 26, 1960	49.72	12,600
1944	Nov. 2, 1943	50.60	8,120				
1945	Aug. 28, 1945	c51.70	5,590	1961	Sept.11, 1961	41.62	6,320

a From current-meter measurement at Lawndale Avenue Bridge 8 miles downstream, furnished by city of Houston. There may have been considerable inflow between gage site and Lawndale Ave.
b Maximum for period May 25 to Sept.30, 1936; may have been exceeded during period of no record.
c Occurred at different time than peak discharge.

8-755. Sims Bayou at Houston, Tex. (132)

Location.--Lat 29°40'27", long 95°17'21", on left bank at downstream side of bridge on State Highway 35, in southeast section of Houston, Harris County, 5.6 miles upstream from mouth.

Drainage area.--64.0 sq mi.

Gage.--Recording. Datum of gage is 0.61 ft below mean sea level, datum of 1929, adjustment of 1957.

Stage-discharge relation.--Defined by current-meter measurements. Channel was rectified January 1957.

Bankfull stage.--25 ft.

Remarks.--Base for partial-duration series, 850 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Dec. 22, 1952	15.75	900	1959	Feb. 14, 1959	15.67	1,780
	Jan. 22, 1953	15.05	-		Feb. 24, 1959	17.92	2,530
	Feb. 1, 1953	14.88	-		Apr. 10, 1959	23.40	3,690
	Feb. 24, 1953	15.07	-		May 23, 1959	17.27	1,880
	May 18, 1953	21.35	2,270		July 25, 1959	23.91	3,860
	Aug. 30, 1953	19.82	1,800		Aug. 23, 1959	12.95	880
					Aug. 26, 1959	21.17	3,010
1954	Nov. 19, 1953	18.30	1,410		Sept.24, 1959	15.70	1,480
	Dec. 20, 1953	17.05	1,100				
				1960	Oct. 14, 1959	13.91	1,060
1955	Feb. 6, 1955	21.14	2,730		Oct. 31, 1959	16.50	1,680
					Dec. 16, 1959	18.82	2,290
1956	Jan. 31, 1956	13.62	478		Dec. 31, 1959	14.14	1,100
					Feb. 21, 1960	13.34	940
1957	Mar. 17, 1957	22.12	4,540		June 26, 1960	29.76	8,030
	Mar. 28, 1957	10.24	-		Aug. 24, 1960	16.80	1,750
	Apr. 29, 1957	18.00	2,830				
				1961	Oct. 19, 1960	14.86	1,000
1958	Oct. 15, 1957	23.22	5,050		Oct. 29, 1960	15.90	1,200
	Nov. 13, 1957	12.42	1,070		Dec. 8, 1960	15.29	1,080
	Nov. 23, 1957	13.9	1,420		Dec. 14, 1960	16.81	1,380
	Jan. 20, 1958	14.48	1,610		Dec. 31, 1960	18.70	1,830
	Jan. 23, 1958	12.05	851		Jan. 7, 1961	19.36	2,030
	Feb. 23, 1958	12.9	1,120		Feb. 6, 1961	17.37	1,510
	July 2, 1958	12.90	1,120		Feb. 17, 1961	14.55	948
	Sept.21, 1958	18.90	3,180		June 19, 1961	24.28	3,960
					July 10, 1961	20.15	2,230
1959	Feb. 2, 1959	20.51	3,370		July 12, 1961	20.82	2,440
	Feb. 11, 1959	14.11	1,300		Sept.12, 1961	a28.62	3,220

a Backwater from tides caused by hurricane Carla.

8-760. Greens Bayou near Houston, Tex. (133)

Location.--Lat 29°55'05", long 95°18'24", on right bank at downstream side of bridge on U.S. Highway 59, 10.5 miles northeast of Houston, Harris County, and 12.0 miles upstream from Halls Bayou.

Drainage area.--72.7 sq mi.

Gage.--Recording. At site 100 ft upstream prior to Oct. 9, 1958. Datum of gage is 0.66 ft below mean sea level, datum of 1929, adjustment of 1957.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--60 ft.

Remarks.--Channel was rectified prior to installation of gage. Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 3, 1953	54.65	1,090	1955	Feb. 4, 1955	56.94	1,740
	May 13, 1953	55.79	1,430				
	May 15, 1953	55.54	1,340	1956	Oct. 6, 1955	53.31	748
	May 18, 1953	61.38	3,280		Aug. 27, 1956	57.09	1,400
1954	July 30, 1954	64.75	7,000	1957	Mar. 17, 1957	59.03	1,840

Peak stages and discharges of Greens Bayou near Houston, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Apr. 29, 1957	55.29	860	1960	Dec. 16, 1959	60.67	1,520
	Sept.26, 1957	57.82	1,490		June 26,27,1960	63.92	2,530
1958	Oct. 16, 1957	62.82	3,410	1961	Oct. 19, 1960	58.94	1,100
	Nov. 22, 1957	55.85	974		Oct. 29, 1960	58.67	1,060
	Jan. 20, 1958	59.67	2,060		Nov. 18, 1960	61.35	1,700
					Dec. 9, 1960	59.53	1,560
1959	Feb. 2, 1959	57.84	1,110		Dec. 31, 1960	56.65	900
	Apr. 9, 1959	56.98	930		Jan. 7, 1961	56.46	880
	Apr. 12, 1959	58.97	1,430		Feb. 17, 1961	64.09	4,240
	May 11, 1959	58.05	1,160		Feb. 21, 1961	58.67	1,360
	May 23, 1959	61.32	2,380		June 19, 1961	61.10	2,080
	July 25, 1959	59.71	1,660		July 12, 1961	63.25	3,420
	Aug. 27, 1959	60.82	2,090		Sept.12, 1961	65.75	6,120
1960	Oct. 14, 1959	58.47	1,290				

8-765. Halls Bayou at Houston, Tex. (134)

Location.--Lat 29°51'42", long 95°20'05", on right bank at downstream side of bridge on Jensen Drive (formerly U.S. Highway 59), in northeast section of Houston, Harris County, 11.0 miles upstream from mouth.

Drainage area.--24.7 sq mi.

Gage.--Recording. Datum of gage is 0.66 ft below mean sea level, datum of 1929, adjustment of 1957.

Stage-discharge relation.--Defined by current-meter measurements below 2,100 cfs. Channel was rectified prior to installation of gage. It was rectified again in June 1956, lowering channel about 2 ft.

Bankfull stage.--58 ft.

Remarks.--Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Dec. 4, 1952	52.74	446	1959	Apr. 11, 1959	54.27	950
	Dec. 30, 1952	51.65	310		May 11, 1959	54.86	1,080
	May 4, 1953	52.98	610		May 23, 1959	58.10	1,980
	May 13, 1953	53.42	690		July 6, 1959	51.71	524
	May 15, 1953	54.38	910		July 20, 1959	53.20	742
	May 18, 1953	59.05	2,410		July 25, 1959	57.61	1,810
					Aug. 26, 1959	56.52	1,480
1954	Nov. 18, 1953	53.05	610				
	Jan. 10, 1954	51.98	430	1960	Oct. 14, 1959	52.17	588
	Jan. 14, 1954	51.35	343		Dec. 15, 1959	52.84	678
	July 30, 1954	60.65	2,020		Dec. 31, 1959	49.77	318
					June 26, 1960	58.79	2,230
1955	Jan. 18, 1955	51.95	430		July 20, 1960	53.22	742
	Feb. 6, 1955	56.62	1,530				
	Aug. 8, 1955	55.23	1,120	1961	Oct. 19, 1960	51.41	594
					Oct. 29, 1960	52.63	850
1956	Jan. 22, 1956	51.53	357		Nov. 18, 1960	53.90	1,200
					Nov. 20, 1960	49.75	340
1957	Mar. 17, 1957	52.14	572		Dec. 9, 1960	53.45	1,100
	Apr. 29, 1957	52.51	620		Dec. 14, 1960	49.35	300
	Sept.25, 1957	50.81	426		Dec. 31, 1960	51.77	682
					Jan. 7, 1961	51.83	682
1958	Oct. 15, 1957	57.09	1,280		Jan. 12, 1961	49.81	352
	Nov. 22, 1957	51.73	525		Feb. 5, 1961	51.17	562
	Jan. 20, 1958	53.43	732		Feb. 17, 1961	56.88	2,370
	Jan. 23, 1958	49.55	324		Feb. 21, 1961	51.48	610
	Feb. 22, 1958	50.03	344		June 12, 1961	49.68	310
	Sept.20, 1958	-	a560		June 19, 1961	57.48	2,050
					July 3, 1961	52.96	790
1959	Feb. 2, 1959	56.04	1,340		July 9, 1961	52.88	772
	Feb. 11, 1959	50.36	378		July 12, 1961	58.29	2,370
	Feb. 15, 1959	(b)	-		July 17, 1961	49.63	300
	Feb. 25, 1959	(b)	-		Sept.12, 1961	60.50	3,400

a Estimated.
b Peak above base; stage and discharge unknown.

8-780. Chocolate Bayou near Alvin, Tex. (136)

Location.--Lat 29°22'10", long 95°19'20", on right bank 800 ft downstream from bridge on Farm Road 1462 and 5.9 miles southwest of Alvin, Brazoria County.

Drainage area.--88.1 sq mi.

Gage.--Nonrecording prior to June 12, 1952; recording thereafter, except nonrecording Feb. 10, 1958, to May 3, 1959. At sites 1,360, 1,400, and 900 ft upstream on old channel at datum 3.00 ft higher prior to May 4, 1959. Datum of gage is 10.31 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 3,300 cfs and extended above by logarithmic plotting. Relationship affected by channel rectification in summer of 1955 and in October 1957.

Bankfull stage.--15 ft.

Historical data.--Flood of July 14, 1939, was highest known in recent years, from information by local residents. U.S. Weather Bureau records show very heavy rains in the area in October 1913 and August 1915.

Remarks.--Records prior to Jan. 14, 1947, are for low flow only. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	July 14, 1939	19.9	-	1955	Feb. 7, 1955	15.97	1,860
1946	May 22, 1946	(a)	-	1956	May 2, 1956	3.72	247
	June 3, 1946	b15.72	1,190				
	June 10, 1946	(a)	-	1957	Mar. 18, 1957	17.10	4,280
	July 7, 1946	(a)	-		Mar. 21, 1957	11.56	1,270
	Sept.30, 1946	(a)	-		Apr. 30, 1957	12.97	1,580
					June 3, 1957	9.15	878
1947	Nov. 8, 1946	(a)	-		June 7, 1957	11.28	1,210
	Nov. 18, 1946	(a)	-				
	Nov. 30, 1946	(a)	-	1958	Oct. 16, 1957	13.25	4,100
	Aug. 26, 1947	15.86	1,210		Nov. 14, 1957	6.18	906
					Nov. 23, 1957	10.12	1,830
1948	Feb. 25, 1948	14.76	1,080		Jan. 20, 1958	7.33	990
					Jan. 24, 1958	7.50	1,040
1949	Feb. 27, 1949	12.96	980				
	Apr. 23, 1949	12.99	980	1959	Feb. 25, 1959	15.14	2,130
					May 23, 1959	9.12	848
1950	Oct. 8, 1949	18.80	7,400		July 26, 1959	18.88	2,770
	Dec. 12, 1949	11.97	846		Aug. 27, 1959	19.03	3,370
	Dec. 18, 1949	16.60	2,520				
	Jan. 12, 1950	12.10	863	1960	Nov. 1, 1959	17.72	2,850
	Feb. 14, 1950	15.76	1,700		Dec. 16, 1959	13.81	1,820
					Jan. 1, 1960	8.90	812
1951	Sept.14, 1951	12.66	935		Feb. 22, 1960	11.57	1,330
					June 27, 1960	18.46	2,920
1952	Apr. 1, 1952	16.33	2,250				
	Apr. 23, 1952	16.30	2,200	1961	Dec. 9, 1960	10.05	938
	May 29, 1952	16.25	2,150		Dec. 15, 1960	11.88	1,290
					Dec. 29, 1960	12.37	1,390
1953	May 19, 1953	15.94	1,860		Jan. 1, 1961	13.82	1,750
	June 30, 1953	13.15	1,010		Jan. 8, 1961	15.84	2,300
	Aug. 31, 1953	16.69	2,660		Feb. 6, 1961	10.38	992
					June 19, 1961	20.10	3,970
1954	Nov. 19, 1953	16.93	3,010		July 12, 1961	19.60	3,510
	Dec. 21, 1953	11.75	863		Sept.13, 1961	19.46	3,460

a Peak above the base of 800 cfs probably occurred.
b Maximum for period Mar. 5 to Sept.30, 1946; may have been exceeded during period of no record.

8-770. Clear Creek near Pearland, Tex. (135)

Location.--Lat 29°35'50", long 95°17'12", at bridge on State Highway 35, 0.7 mile downstream from Gulf, Colorado and Santa Fe Railway bridge, 1.2 miles upstream from Hickory Slough, 2.3 miles north of Pearland, Brazoria County, and about 30 miles upstream from Clear Lake.

Drainage area.--38.4 sq mi, planimetered by Harris County Flood Control District from survey by Corps of Engineers in 1943. Drainage area not applicable for low flows: a large area of rice land above station is irrigated with water from the Brazos River; also, drainage ditches and canals used by irrigators are changed at times, thereby changing the drainage area.

Gage.--Nonrecording prior to June 9, 1948; recording thereafter. At datum 5.80 ft higher prior to Apr. 23, 1952. Datum of gage is 29.29 ft above mean sea level, datum of 1929, adjustment of 1957.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--14 ft.

Historical data.--Flood information begins in February 1932, when flood reached a stage of 17.8 ft, present datum, from information by State Highway Department. U.S. Weather Bureau records indicate that the rainfall during the tropical storm of August 1945 was greater than that of February 1932. State Highway information is that the water did not flow over the road (elevation, about 20.0 ft, present datum).

Remarks.--Because of channel rectification in 1952, there is no relation between flood peaks prior to April 1952 and subsequent flood peaks. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	February 1932	a17.8	-	1953	May 18, 1953	10.06	866
					Aug. 31, 1953	11.51	1,130
1944b/	Sept.28, 1944	10.0	710				
				1954	Nov. 18, 1953	9.19	717
1946c/	May 19, 1946	9.9	700				
	June 1, 1946	9.97	710	1955	Feb. 6, 1955	14.00	1,350
	June 9, 1946	10.3	740				
	Sept.28, 1946	11.4	880	1956	May 2, 1956	8.26	469
1947d/	Aug. 25, 1947	10.10	710	1957	Mar. 18, 1957	16.80	2,170
					Apr. 29, 1957	14.09	1,370
1948	Feb. 24, 1948	7.94	551				
				1958	Oct. 16, 1957	17.16	1,640
1949	Nov. 16, 1948	10.77	759		Sept.21, 1958	13.24	952
	Feb. 26, 1949	9.98	665				
	Apr. 22, 1949	10.04	665	1959	Feb. 2, 1959	16.45	1,490
	July 16, 1949	9.56	625		Feb. 11, 1959	11.79	747
					Feb. 15, 1959	11.30	679
1950	Oct. 5, 1949	12.24	1,280		Feb. 24, 1959	15.10	1,270
	Oct. 8, 1949	13.18	1,840		Apr. 11, 1959	14.47	1,160
	Dec. 18, 1949	11.28	855		May 23, 1959	11.75	747
	Jan. 2, 1950	11.60	975		July 25, 1959	16.70	1,550
	Feb. 13, 1950	9.84	649		Aug. 27, 1959	16.15	1,460
	June 6, 1950	10.12	678				
				1960e/	Oct. 31, 1959	14.02	1,080
1951	Sept.14, 1951	5.59	267		Dec. 16, 1959	13.85	1,050
1952	July 17, 1952	7.86	673				

a Present datum.
b Period July 28 to Sept. 30, 1944.
c Period Mar. 4 to Sept. 30, 1946.
d Periods October 1946, April to September 1947.
e Period Oct. 1 to Dec. 31, 1959.

8-790. Oyster Creek near Angleton, Tex. (137)

Location.--Lat 29°09'30", long 95°28'30", near center of low-water channel at downstream side of bridge on State Highway 35, 2.8 miles west of Angleton, Brazoria County, 4.1 miles upstream from Missouri Pacific Railroad Co. bridge, and 4.4 miles downstream from another Missouri Pacific Railroad Co. bridge.

Gage.--Recording. At site 500 ft downstream prior to Apr. 30, 1958. Datum of gage is 1.31 ft below mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Historical data.--Flood in December 1913 was highest since at least 1900. Information for this flood and flood of Dec. 5, 1940, from Texas Highway Department and local residents.

Remarks.--At extreme high stages the Brazos River overflows into Oyster Creek above station. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	32	-	1953	Sept. 1, 1953	18.50	753
1941	Dec. 5, 1940	30.7	-	1954	Nov. 21, 1953	24.98	1,900
1945	Apr. 2, 1945	20.25	935	1955	Feb. 7, 1955	16.12	532
	Aug. 29, 1945	19.86	866				
				1956	May 12, 1956	10.76	173
1946	Dec. 24, 1945	17.59	652				
	Jan. 16, 1946	17.20	634	1957	Mar. 21, 1957	18.15	888
	Feb. 19, 1946	18.04	720		May 10, 1957	31.25	10,600
	Mar. 14, 1946	15.56	500		June 9, 1957	17.64	888
	May 23, 1946	17.77	634				
	June 3, 1946	20.80	1,010	1958	Oct. 16, 1957	18.76	1,050
	June 10, 1946	23.06	1,470		Oct. 23, 1957	14.84	570
	July 7, 1946	22.94	1,450		Nov. 14, 1957	15.00	580
					Nov. 24, 1957	17.44	862
1947	Nov. 7, 1946	26.25	2,230		Jan. 25, 1958	-	a500
	Nov. 17, 1946	21.12	1,080		Feb. 23, 1958	15.26	602
	Nov. 29, 1946	22.95	1,470		Sept.22, 1958	18.26	844
	Mar. 19, 1947	16.30	564				
	May 25, 1947	21.65	1,180	1959	Feb. 25, 1959	22.40	1,600
					July 26, 1959	19.78	1,090
1948	Feb. 25, 1948	17.70	643		Aug. 28, 1959	21.38	1,400
1949	Apr. 21, 1949	20.50	992	1960	Dec. 17, 1959	19.26	1,010
					Jan. 2, 1960	16.00	550
1950	Oct. 5, 1949	24.22	1,530		June 28, 1960	18.95	876
	Oct. 12, 1949	28.92	2,320				
	Dec. 19, 1949	21.48	1,130	1961	Oct. 20, 1960	15.72	517
	Jan. 12, 1950	18.00	700		Oct. 27, 1960	16.20	561
	Feb. 14, 1950	17.99	700		Dec. 10, 1960	15.75	506
					Dec. 16, 1960	18.23	828
1951	Mar. 27, 1951	16.16	537		Jan. 1, 1961	21.40	1,400
					Jan. 8, 1961	23.24	1,770
1952	Feb. 2, 1952	16.26	548		Feb. 7, 1961	16.60	605
	Apr. 2, 1952	18.22	720		June 21, 1961	26.41	2,360
	Apr. 24, 1952	18.46	753		July 14, 1961	27.26	2,540
	May 30, 1952	16.00	524		Sept.13, 1961	27.99	2,660
1953	May 19, 1953	21.60	1,140				

a Estimated.

8-795. Double Mountain Fork Brazos River at Lubbock, Tex. (138)

Location.--Lat 33°35'05", long 101°49'40", in Mackenzie State Park in Lubbock, Lubbock County, 1.9 miles downstream from Yellowhouse Canyon.

Gage.--Recording. Datum of gage is 3,132.7 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Flow over spillway defined by current-meter measurements below 120 cfs and by slope-area measurements at 875 and 3,150 cfs.

Historical data.--Flood in 1939 was the highest since the dam had been completed in 1936, from information obtained from park engineer in September 1939.

Remarks.--Gage is located on a small pool (capacity, 29.5 acre-ft). There are several small dams upstream from this pool (combined capacity, less than 100 cfs). Figures of peak discharges represent inflow into pool computed on basis of flow-over-spillway (gage height, 4.17 ft), and volumetric change in pool contents with no correction for evaporation, transpiration, or seepage.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 23, 1939	5.32	-	1947	Oct. 7, 1946	0.84	138
1940	-	-	0	1948	-	-	0
				1949	May 7, 1949	7.43	3,150
1941	June 6, 1941	6.73	892	1950	-	-	0
1942	Sept. 7, 1942	6.30	427				
1943	Oct. 17, 1942	5.01	39	1951	May 19, 1951	6.53	643
1944	May 11, 1944	6.08	285		June 15, 1951	6.1	290
1945	-	-	0				
				1960	July 9, 1960	6.70	-
1946	-	-	0				

8-805. Double Mountain Fork Brazos River near Aspermont, Tex. (139)

Location.--Lat 33°00', long 100°11', near right bank on downstream side of bridge on U.S. Highway 83, 8 miles downstream from Mountain Creek and 10 miles south of Aspermont, Stonewall County.

Drainage area.--7,980 sq mi, approximately, of which about 1,510 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 8, 1939; recording thereafter. Altitude of gage is 1,628 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 76,000 cfs.

Bankfull stage.--Not subject to overflow.

Historical data.--Flood of Sept. 26, 1955, was highest and flood of Oct. 15, 1926, was second highest since 1899, according to local residents.

Remarks.--Base for partial-duration series, 8,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Apr. 24, 1924	7.50	-	1930	May 3, 1930	8.1	9,790
					May 13, 1930	16.00	37,200
1925	Apr. 7, 1925	12.38	25,700				
	Apr. 27, 1925	10.0	15,400	1931	Dec. 5, 1930	6.80	6,820
	Sept.11, 1925	8.5	11,100				
				1932	Aug. 31, 1932	9.50	13,200
1926	Aug. 22, 1926	15.00	33,200		Sept. 6, 1932	13.0	26,400
1927	Oct. 3, 1926	11.00	18,600	1933	May 25, 1933	8.25	9,860
	Oct. 15, 1926	18.14	52,000		Aug. 1, 1933	8.00	9,120
1928	July 26, 1928	8.84	11,600	1934	Apr. 18, 1934	7.9	8,880
					Sept.24, 1934	8.00	9,120
1929	May 17, 1929	9.80	14,700				
	Sept. 8, 1929	8.70	11,400	1935	June 1, 1935	a16.8	-
1930	Apr. 28, 1930	10.5	17,000	1939	June 20, 1939	10.65	17,900

a Annual peak only; information by local resident.

Peak stages and discharges of Double Mountain Fork Brazos River near Aspermont, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 10, 1940	7.10	9,530	1950	May 11, 1950	7.64	10,800
	Aug. 16, 1940	10.25	16,900		Sept. 5, 1950	9.65	16,100
1941	Apr. 15, 1941	12.43	30,500	1951	June 11, 1951	7.08	9,390
	Apr. 30, 1941	8.25	15,100		Aug. 23, 1951	6.99	9,180
	May 3, 1941	12.08	29,400				
	May 22, 1941	8.45	15,800	1952	May 28, 1952	6.08	7,130
	May 24, 1941	11.10	25,600				
	May 27, 1941	6.20	9,080	1953	May 12, 1953	6.02	7,820
	June 16, 1941	7.95	14,400				
	July 25, 1941	6.88	11,000	1954	Oct. 4, 1953	10.15	18,100
					Apr. 13, 1954	15.73	34,900
1942	Oct. 1, 1941	7.60	13,000		May 12, 1954	12.71	22,900
	Oct. 3, 1941	10.10	21,900				
	Oct. 15, 1941	11.22	26,000	1955	Mar. 20, 1955	7.86	10,600
	Sept.20, 1942	8.00	14,400		May 18, 1955	13.45	28,400
					May 23, 1955	11.20	20,500
1943	Oct. 17, 1942	9.00	17,900		July 20, 1955	10.67	18,800
					Sept.26, 1955	27.50	91,400
1944	May 22, 1944	6.44	9,080				
	July 22, 1944	7.22	11,300	1956	Oct. 3, 1955	12.53	25,200
					Oct. 5, 1955	7.97	12,800
1945	June 5, 1945	6.56	9,720				
	July 10, 1945	7.58	13,000	1957	May 12, 1957	13.00	27,000
					May 18, 1957	7.76	10,800
1946	Oct. 7, 1945	8.92	18,100		June 2, 1957	7.67	10,600
	Aug. 29, 1946	8.90	15,400		June 18, 1957	9.39	15,300
1947	Oct. 9, 1946	8.55	15,100	1958	Oct. 8, 1957	7.38	9,360
	May 12, 1947	10.08	20,400		May 13, 1958	10.45	17,900
	May 16, 1947	9.00	16,500				
				1959	June 4, 1959	11.20	24,100
1948	Feb. 27, 1948	7.14	11,300		July 1, 1959	12.47	25,200
	May 31, 1948	6.54	9,400				
	June 24, 1948	10.20	22,200	1960	July 7, 1960	16.00	35,200
	July 5, 1948	9.13	18,300				
	July 23, 1948	7.56	12,000	1961	Oct. 19, 1960	23.98	74,600
					June 8, 1961	7.85	10,300
1949	Nov. 1, 1948	6.96	11,000		June 16, 1961	11.65	22,000
	May 26, 1949	6.56	9,720		July 13, 1961	10.39	17,900
	June 11, 1949	7.72	13,400				
	Sept.14, 1949	8.14	14,800				

8-807. White River at Plainview, Tex. (140)

Location.--Lat 34°10'50", long 101°42'00", on downstream side of bridge on Broadway Street in Plainview, Hale County, 0.4 mile upstream from Atchison, Topeka and Santa Fe Railway Co. bridge, and 6 miles downstream from confluence of Running Water Draw and an unnamed tributary.

Gage.--Recording except for period prior to June 20, 1939, and May 4, 1960, to Feb. 17, 1961. Datum of gage is 3,341.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 800 cfs, contracted-opening measurement at 9,130 cfs, and slope-area measurement at 12,000 cfs.

Historical data.--The highest discharge since at least 1880 occurred June 6, 1941; the highest stage occurred July 8, 1960. According to local residents, a major flood occurred in 1890 which may have been the second highest.

Remarks.--Base for partial-duration series, 15 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	May 1926	6.5	a1,100	1941	Nov. 24, 1940	2.23	19
					May 2, 1941	2.12	15
1937	May 24, 1937	6.0	a760		May 21, 1941	2.14	17
					May 23, 1941	2.19	17
1939	Jan. 9, 1939	5.5	a400		May 25, 1941	4.35	246
					May 28, 1941	6.00	760
1940	Feb. 18, 1940	2.05	13		May 31, 1941	6.04	760

a Annual peak only.

Peak stages and discharges of White River at Plainview, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 2, 1941	5.99	760	1948	Aug. 15, 1948	2.82	46
	June 6, 1941	8.75	12,000				
	June 16, 1941	4.03	259	1949	Apr. 19, 1949	2.37	22
	June 18, 1941	5.20	589		May 7, 1949	2.67	36
	June 25, 1941	3.30	124				
	July 3, 1941	3.27	120	1950	Apr. 16, 1950	2.38	22
	July 5, 1941	2.87	72		July 6, 1950	3.12	71
	July 23, 1941	2.45	31				
	July 26, 1941	4.90	480	1951	May 17, 1951	6.87	1,070
	Aug. 24, 1941	3.57	160				
	Sept.30, 1941	2.27	19	1952	Apr. 20, 1952	2.85	23
1942	Oct. 5, 1941	5.90	782	1953	July 18, 1953	2.71	16
	Oct. 23, 1941	4.51	338				
	Oct. 26, 1941	5.87	763	1957	Apr. 20, 1957	4.10	169
	Oct. 31, 1941	3.13	85		May 25, 1957	5.04	395
	Apr. 17, 1942	3.05	76		June 1, 1957	6.10	760
	Apr. 25, 1942	2.72	44		June 14, 1957	4.15	178
	June 26, 1942	3.43	122		Aug. 4, 1957	4.90	352
1943	Oct. 16, 1942	2.21	19	1958	June 29, 1958	3.08	38
	Oct. 19, 1942	2.65	40				
	July 9, 1943	2.67	43	1959	June 4, 1959	5.80	650
					July 1, 1959	4.19	186
1944	May 26, 1944	2.12	16		July 12, 1959	4.70	298
	June 12, 1944	3.14	86		July 17, 1959	5.44	528
1945	Dec. 4, 1944	1.39	1.8	1960	July 8, 1960	9.38	a9,130
1946	Sept.13, 1946	2.14	16	1961	May 18, 1961	3.10	31
					May 25, 1961	2.88	16
1947	Oct. 9, 1946	4.46	310		June 15, 1961	3.28	39
	Dec. 12, 1946	6.02	830		July 9, 1961	3.85	126
	May 7, 1947	6.30	970		July 15, 1961	3.67	100
	May 11, 1947	5.30	560		July 22, 1961	4.11	171
	June 30, 1947	2.94	55				

a Annual peak only.

8-809.33. Unnamed tributary (watershed 1) of Duck Creek near Spur, Tex. (141)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0180 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	June 1, 1927	-	4.5	1937	Aug. 24, 1937	-	7.1
1928	Aug. 4, 1928	-	5.7	1938	June 25, 1938	-	2.3
1929	Sept. 8, 1929	-	14	1939	Oct. 8, 1939	-	1.0
1930	Aug. 7, 1930	-	2.4	1940	Nov. 24, 1940	-	3.1
1931	May 25, 1931	-	.3	1941	Sept.17, 1941	-	10
1932	June 20, 1932	-	13	1942	June 14, 1942	-	-
1933	Aug. 2, 1933	-	1.5	1943	July 3, 1943	-	8.0
1934	Sept.15, 1934	-	2.8	1944	June 25, 1944	-	1.7
1935	June 7, 1935	-	7.6	1945	July 10, 1945	-	4.9
1936	Sept.20, 1936	-	-				

8-809.35. Unnamed tributary (watershed 2) of Duck Creek near Spur, Tex. (142)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0147 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	June 1, 1927	-	1.6	1937	Aug. 24, 1937	-	9.4
1928	May 18, 1928	-	3.7	1938	July 21, 1938	-	8.5
1929	Sept. 8, 1929	-	6.2	1939	Oct. 8, 1939	-	1.9
1930	Aug. 7, 1930	-	2.2	1940	Aug. 17, 1940	-	4.3
1931	May 25, 1931	-	1.8	1941	June 15, 1941	-	9.9
1932	June 20, 1932	-	-				
1933	Aug. 2, 1933	-	2.9	1943	July 3, 1943	-	9.4
1934	Sept.15, 1934	-	4.6	1944	June 25, 1944	-	6.2
1935	May 17, 1935	-	5.1	1945	June 4, 1945	-	9.9
1936	Sept.20, 1936	-	13				

8-809.37. Unnamed tributary (watershed 3) of Duck Creek near Spur, Tex. (143)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0183 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	June 1, 1927	-	2.7	1937	Aug. 24, 1937	-	6.6
1928	May 18, 1928	-	5.1	1938	July 22, 1938	-	6.8
1929	Sept. 8, 1929	-	11	1939	Oct. 8, 1939	-	.8
1930	Dec. 4, 1930	-	1.5	1940	Nov. 25, 1940	-	.4
1931	May 25, 1931	-	.6	1941	Sept.17, 1941	-	5.9
1932	June 20, 1932	-	8.5	1942	Sept.19, 1942, Oct. 17, 1942	-	(a)
1933	May 24, 1933	-	.7				
1934	Sept.15, 1934	-	-	1943	July 3, 1943	-	.8
1935	May 17, 1935	-	4.4	1944	June 25, 1944	-	(a)
1936	Sept.20, 1936	-	13				

a Less than 0.1 cfs.

8-809.39. Unnamed tributary (watershed 5) of Duck Creek near Spur, Tex. (144)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0091 sq mi; 0.0086 sq mi prior to Jan. 1, 1936.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges of unnamed tributary (watershed 5) of Duck Creek near Spur, Tex.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	June 1, 1927	-	4.0	1936	Sept.20, 1936	-	8.7
1928	Aug. 4, 1928	-	5.6	1937	Aug. 24, 1937	-	4.0
1929	Sept. 9, 1929	-	12	1938	July 22, 1938	-	2.7
1930	Aug. 7, 1930	-	3.2	1939	Oct. 8, 1939	-	.1
				1940	Aug. 17, 1940	-	2.0
1931	May 25, 1931	-	2.2				
1932	June 20, 1932	-	11	1941	Sept.17, 1941	-	5.1
1933	June 24, 1933	-	3.1	1942	Sept.19, 1942	-	2.2
1934	Sept.15, 1934	-	8.0	1943	July 3, 1943	-	5.0
1935	May 17, 1935	-	5.8	1944	June 25, 1944	-	2.0

8-809.41. Unnamed tributary (watershed 6) of Duck Creek near Spur, Tex. (145)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0083 sq mi; 0.0094 sq mi prior to spring 1936.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	June 1, 1927	-	0.5	1937	Aug. 21, 1937	-	6.3
1928	May 18, 1928	-	.9	1938	July 22, 1938	-	8.0
	Aug. 4, 1928			1939	Oct. 8, 1939	-	1.4
1929	Sept. 8, 1929	-	1.8	1940	Aug. 17, 1940	-	6.8
1930	Dec. 4, 1930	-	.7				
				1941	Apr. 29, 1941	-	6.4
1931	June 29, 1931	-	.1	1942	June 15, 1942	-	2.7
				1943	July 3, 1943	-	-
1933	Aug. 2, 1933	-	.2	1944	June 25, 1944	-	5.2
1934	-	-	0	1945	June 4, 1945	-	6.2
1935	June 23, 1935	-	1.8				

8-809.43. Unnamed tributary (watershed 11) of Duck Creek near Spur, Tex. (146)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0136 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1931	May 25, 1931	-	0.4	1939	Oct. 8, 1939	-	0.4
1932	June 20, 1932	-	5.6	1940	Aug. 17, 1940	-	1.3
1933	July 6, 1933	-	.1				
1934	Sept.15, 1934	-	2.2	1941	Apr. 29, 1941	-	3.9
1935	May 17, 1935	-	2.3	1942	Sept.19, 1942	-	1.7
				1943	July 3, 1943	-	5.0
1936	Sept.20, 1936	-	7.2	1944	June 25, 1944	-	2.1
1937	Aug. 21, 1937	-	2.0	1945	June 4, 1945	-	2.8
1938	July 21, 1938	-	1.9				

8-809.45. Unnamed tributary (watershed 12) of Duck Creek near Spur, Tex. (147)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0131 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1930	-	-	0	1937	Aug. 21, 1937	-	-
				1938	-	-	0
1931	-	-	0	1939	Oct. 8, 1939	-	(a)
1932	-	-	0	1940	Nov. 24, 1940	-	.2
1933	-	-	0				
1934	Sept.15, 1934	-	-	1941	Sept.18, 1941	-	1.4
1935	May 17, 1935	-	-	1942	June 14, 1942	-	.4
				1943	July 3, 1943	-	2.7
1936	Sept.20, 1936	-	2.5	1944	June 25, 1944	-	(a)

a Less than 0.1 cfs.

8-809.47. Unnamed tributary (watershed 14) of Duck Creek near Spur, Tex. (148)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0133 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1930	Dec. 4, 1930	-	0.4	1937	Aug. 24, 1937	-	2.8
				1938	June 4, 1938	-	2.0
1931	May 25, 1931	-	1.1	1939	Oct. 8, 1939	-	.9
1932	June 20, 1932	-	6.0	1940	Nov. 24, 1940	-	1.6
1933	July 6, 1933	-	1.3				
1934	Sept.15, 1934	-	-	1941	Apr. 29, 1941	-	5.2
1935	May 17, 1935	-	2.8	1942	June 14, 1942	-	2.6
				1943	July 3, 1943	-	5.8
1936	Sept.20, 1936	-	10				

8-809.49. Unnamed tributary (watershed 15) of Duck Creek near Spur, Tex. (149)

Location.--Lat 33°28', long 100°53', 1 mile west of Spur, Dickens County.

Drainage area.--0.0133 sq mi.

Gage.--Recording.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service. Only annual (calendar year) peaks are shown.

Peak stages and discharges of unnamed tributary (watershed 15) of Duck Creek near Spur, Tex.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1930	Oct. 23, 1930	-	0.1	1937	Aug. 24, 1937	-	0.8
				1938	-	-	0
1931	-	-	0	1939	Oct. 8, 1939	-	(a)
1932	June 20, 1932	-	-	1940	Nov. 24, 1940	-	.5
1933	-	-	0				
1934	Sept.15, 1934	-	-	1941	Sept.18, 1941	-	3.0
1935	June 7, 1935	-	-	1942	June 14, 1942	-	.4
				1943	July 3, 1943	-	2.3
1936	Sept.20, 1936	-	5.2	1944	June 25, 1944	-	(a)

a Less than 0.1 cfs.

8-820. Salt Fork Brazos River near Aspermont, Tex. (150)

Location.--Lat 33°20', long 100°14', near left bank on downstream side of pier of bridge on U.S. Highway 83, 5½ miles downstream from Salt Croton Creek, and 13.2 miles northwest of Aspermont, Stonewall County.

Drainage area.--4,830 sq mi, approximately, of which about 2,060 sq mi contributes directly to surface runoff.

Gage.--Nonrecording Dec. 5, 1923, to Aug. 29, 1925, at site 6.8 miles downstream at different datum; recording after June 15, 1939. Datum of gage is 1,588.70 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 29,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Historical data.--Flood of Sept. 25, 1955, was maximum stage since at least 1900.

Remarks.--Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	a14.4	-	1947	May 16, 1947	11.35	27,400
					May 22, 1947	10.10	21,700
1924	June 21, 1924	7.80	11,600				
				1948	June 24, 1948	8.31	12,800
1925	Apr. 27, 1925	11.80	24,000		June 28, 1948	8.09	12,800
1935	November 1934	a13.7	-	1949	May 17, 1949	8.23	11,100
1938	May 1938	a10.6	-	1950	Sept. 5, 1950	9.05	11,100
1939	June 19, 1939	10.44	24,300	1951	June 16, 1951	6.70	6,520
	Aug. 8, 1939	8.40	16,700				
				1952	July 16, 1952	6.55	6,390
1940	Apr. 28, 1940	8.35	16,000				
	Aug. 16, 1940	11.05	26,600	1953	Aug. 18, 1953	8.90	13,800
	Aug. 29, 1940	7.60	13,700				
				1954	Oct. 24, 1953	11.20	27,500
1941	Apr. 14, 1941	10.10	22,400		Oct. 26, 1953	8.37	13,600
	Apr. 30, 1941	10.20	23,600		Apr. 13, 1954	7.95	12,000
	May 3, 1941	10.39	24,300		May 11, 1954	8.12	12,400
	May 21, 1941	8.38	16,700		May 24, 1954	12.64	35,600
	May 24, 1941	7.92	14,800				
	June 16, 1941	10.40	23,600	1955	May 11, 1955	8.00	12,400
	Sept.30, 1941	8.30	14,800		Sept.25, 1955	14.92	52,200
1942	Oct. 3, 1941	10.44	23,600	1956	Oct. 3, 1955	10.65	24,200
	Oct. 15, 1941	9.15	19,800		Oct. 5, 1955	8.16	15,300
	Oct. 22, 1941	7.93	15,600		May 27, 1956	9.00	16,200
1943	Oct. 17, 1942	7.00	11,800	1957	May 12, 1957	8.80	16,200
					May 18, 1957	12.10	32,600
1944	Sept.27, 1944	10.22	23,200		June 1, 1957	7.86	12,800
1945	June 12, 1945	8.90	18,600	1958	Oct. 14, 1957	7.16	7,760
	July 13, 1945	9.54	20,900				
				1959	June 4, 1959	10.04	21,800
1946	June 20, 1946	8.18	14,400				
	June 29, 1946	7.96	13,400	1960	July 7, 1960	7.98	11,400
	Aug. 28, 1946	10.95	25,500				
				1961	Oct. 19, 1960	10.74	24,200
1947	May 10, 1947	8.78	14,800		June 16, 1961	9.74	19,200

a Annual peak only; information by local resident. b At present site and datum.

8-825. Brazos River at Seymour, Tex. (151)

Location.--Lat 33°34', long 99°16', near left bank on downstream side of pier of bridge on U.S. Highways 277 and 283, three-quarters of a mile upstream from Wichita Valley Railway bridge, 1 mile southwest of courthouse in Seymour, Baylor County, and at mile 832.

Drainage area.--14,490 sq mi, approximately, of which about 5,250 sq mi contributes directly to surface runoff.

Gage.--Nonrecording Nov. 30, 1923, to July 6, 1932, and May 14, 1937, to Jan. 30 1939; recording July 7, 1932, to May 13, 1937, and subsequent to Jan. 30, 1939. Datum of gage is 1,240.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 48,000 cfs and by slope-area measurement at 95,400 cfs prior to 1955; defined by current-meter measurements below 63,000 cfs thereafter.

Bankfull stage.--Not subject to overflow.

Historical data.--Maximum discharge since 1906 occurred on Oct. 16, 1926.

Remarks.--Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	-	a21	-	1935	June 5, 1935	5.75	12,800
					June 30, 1935	5.90	13,700
1924	Apr. 25, 1924	7.4	21,000		Sept. 9, 1935	7.30	23,800
	June 10, 1924	7.35	17,800				
				1936	Sept.19, 1936	5.83	13,100
1925	Apr. 8, 1925	6.1	11,400		Sept.23, 1936	10.58	53,300
	Apr. 25, 1925	6.65	14,700		Sept.28, 1936	7.03	21,400
	Apr. 27, 1925	9.50	40,200				
	Sept.11, 1925	9.0	35,600	1937	Aug. 22, 1937	8.62	34,800
	Sept.15, 1925	7.2	19,400				
				1938	Feb. 16, 1938	7.20	26,300
1926	Apr. 21, 1926	7.2	19,400		June 26, 1938	5.87	13,100
	May 19, 1926	6.3	12,700				
	May 29, 1926	6.7	15,400	1939	June 20, 1939	8.00	30,500
	June 19, 1926	8.0	26,400				
	July 26, 1926	6.3	12,700	1940	Aug. 17, 1940	8.80	32,100
	Aug. 23, 1926	12.3	68,800				
	Aug. 29, 1926	13.77	82,600	1941	Apr. 16, 1941	9.94	37,900
					Apr. 30, 1941	6.91	18,900
1927	Oct. 5, 1926	5.95	14,100		May 4, 1941	12.45	62,200
	Oct. 16, 1926	15.16	95,400		May 22, 1941	6.14	15,200
					May 24, 1941	9.14	35,400
1928	May 18, 1928	7.00	23,000		June 16, 1941	7.68	27,800
	July 26, 1928	5.7	12,200				
				1942	Oct. 2, 1941	5.84	12,900
1929	June 6, 1929	7.0	20,200		Oct. 4, 1941	9.48	36,200
	Sept. 9, 1929	11.0	54,000		Oct. 16, 1941	10.30	43,300
					Oct. 25, 1941	6.44	16,700
1930	Apr. 28, 1930	12.0	62,400		Sept.20, 1942	6.70	17,200
	May 3, 1930	5.1	13,200				
	May 11, 1930	6.0	17,100	1943	Oct. 17, 1942	6.95	18,900
	May 14, 1930	10.0	41,400				
	June 14, 1930	13.0	79,600	1944	July 23, 1944	5.10	8,480
1931	Oct. 5, 1930	6.5	17,300	1945	July 12, 1945	5.96	9,780
	Oct. 13, 1930	6.70	18,500				
	Dec. 5, 1930	5.9	13,700	1946	Aug. 30, 1946	6.55	15,500
1932	Nov. 17, 1931	6.10	16,200	1947	May 13, 1947	10.52	31,400
	June 23, 1932	5.75	12,800		May 17, 1947	12.66	49,700
	July 22, 1932	5.55	11,600		May 23, 1947	7.26	12,300
	Sept. 1, 1932	8.70	35,700				
	Sept. 7, 1932	11.40	61,000	1948	June 29, 1948	6.67	11,800
					July 6, 1948	7.14	13,300
1933	May 25, 1933	6.20	15,600				
	Aug. 2, 1933	8.40	33,100	1949	June 12, 1949	8.17	18,600
1934	Apr. 19, 1934	4.28	5,450	1950	May 11, 1950	6.71	13,100
					Sept. 6, 1950	8.40	16,700
1935	Nov. 20, 1934	6.62	18,300				
	Apr. 23, 1935	6.68	19,100	1951	Aug. 23, 1951	4.79	6,750
	May 16, 1935	6.04	14,600				
	May 19, 1935	8.45	33,100	1952	May 28, 1952	4.80	7,180
	June 2, 1935	11.55	63,000				

a From information by local resident.

Peak stages and discharges of Brazos River at Seymour, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	July 19, 1953	8.10	20,000	1957	May 19, 1957	10.10	28,000
					June 2, 1957	7.85	16,600
1954	Oct. 25, 1953	7.92	17,500		June 19, 1957	6.90	12,800
	Oct. 27, 1953	6.50	11,300				
	Apr. 14, 1954	9.34	19,500	1958	Oct. 8, 1957	5.81	11,100
	May 13, 1954	10.90	22,500		May 14, 1958	6.85	16,000
	May 25, 1954	9.43	21,500				
				1959	June 5, 1959	9.27	26,000
1955	May 20, 1955	8.90	18,000		July 3, 1959	9.23	25,400
	May 24, 1955	7.80	14,300				
	July 21, 1955	7.70	13,700	1960	Oct. 3, 1959	7.14	14,500
	Sept.28, 1955	21.00	71,200		July 8, 1960	10.67	23,600
1956	Oct. 5, 1956	16.98	50,500	1961	Oct. 20, 1960	16.54	45,800
	May 28, 1956	6.70	12,000		June 17, 1961	9.26	18,000
					July 10, 1961	5.94	11,700
1957	Apr. 30, 1957	7.56	15,300		July 14, 1961	6.62	13,700
	May 13, 1957	8.90	21,500				

8-840. Clear Fork Brazos River at Nugent, Tex. (152)

Location.--Lat 32°41'25", long 99°40'10", on right bank 33 ft downstream from centerline of bridge on Farm to Market Road 1193 at Nugent, Jones County, 2 miles downstream from Elm Creek, and 4 miles upstream from Deadman Creek.

Drainage area.--2,220 sq mi.

Gage.--Nonrecording prior to Dec. 12, 1933, at site 575 ft downstream; recording thereafter. Datum of gage is 1,531.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 25,000 cfs.

Bankfull stage.--23 ft.

Remarks.--Flow slightly regulated by reservoir storage in the Elm and Sweetwater Creek basins. Base for partial-duration series, 2,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1876	-	a30.0	-	1930	May 13, 1930	12.09	5,980
					May 18, 1930	6.9	2,340
1900	-	a24	-		June 16, 1930	9.6	4,120
					Sept.10, 1930	10.5	4,750
1923	May 1923	a24.5	-				
				1931	Dec. 6, 1930	12.42	6,220
1924	Apr. 26, 1924	6.95	2,460		Feb. 9, 1931	7.40	2,860
	May 15, 1924	6.9	2,400				
	May 26, 1924	11.65	5,800	1932	Oct. 14, 1931	12.4	6,000
					Oct. 24, 1931	15.1	8,200
1925	May 10, 1925	11.3	5,560		Apr. 24, 1932	12.6	6,160
	Sept.26, 1925	7.4	2,740		Apr. 29, 1932	7.50	2,680
					May 7, 1932	17.2	9,990
1926	Apr. 10, 1926	7.2	2,600		May 12, 1932	10.8	4,820
	June 19, 1926	15.50	9,620		June 29, 1932	25.3	28,700
					July 4, 1932	12.8	6,320
1927	Dec. 7, 1926	8.7	3,650		Sept. 3, 1932	17.0	9,810
	Apr. 14, 1927	13.50	7,520		Sept. 8, 1932	27.05	47,000
	Apr. 22, 1927	12.2	6,320				
	Sept.29, 1927	6.88	2,400	1933	Dec. 24, 1932	8.55	3,370
					May 15, 1933	9.80	4,150
1928	May 12, 1928	16.70	10,200		May 25, 1933	8.3	3,180
	May 16, 1928	15.8	9,290				
	May 20, 1928	18.0	11,500	1934	Nov. 21, 1933	5.20	1,330
	June 13, 1928	7.2	2,530				
	June 23, 1928	7.0	2,400	1935	Nov. 20, 1934	10.64	4,390
	July 27, 1928	12.6	6,390		May 16, 1935	13.66	6,580
	Aug. 4, 1928	10.2	4,540		May 19, 1935	21.60	14,600
					May 23, 1935	7.55	2,580
1929	May 26, 1929	7.25	2,530		June 2, 1935	22.43	16,100
	Sept.11, 1929	11.38	5,420		June 6, 1935	11.70	5,140
					June 16, 1935	19.36	11,700
1930	May 4, 1930	7.70	2,860		Sept. 3, 1935	11.80	5,210

a Annual peak only; information by local resident.

Peak stages and discharges of Clear Fork Brazos River at Nugent, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Sept.28, 1936	23.10	17,600	1949	Oct. 11, 1948	9.02	3,120
1937	Aug. 19, 1937	9.00	3,400	1950	May 27, 1950	10.19	3,400
1938	Mar. 28, 1938	9.94	3,940	1951	June 11, 1951	7.72	2,160
	May 22, 1938	21.35	14,300				
	June 27, 1938	8.68	3,220	1952	May 24, 1952	5.00	920
	July 22, 1938	12.23	5,490				
	July 25, 1938	19.40	11,700	1953	July 17, 1953	7.72	2,150
1939	May 18, 1939	11.52	5,000	1954	May 12, 1954	7.61	2,100
	June 22, 1939	15.05	7,600				
				1955	Sept.25, 1955	11.5	4,000
1940	May 22, 1940	8.17	2,930		Sept.27, 1955	12.68	4,740
	June 30, 1940	7.33	2,400				
	Aug. 18, 1940	14.15	6,960	1956	May 2, 1956	7.08	1,850
1941	Apr. 16, 1941	9.37	3,640	1957	Feb. 9, 1957	14.37	6,140
	May 4, 1941	14.18	6,960		Apr. 26, 1957	18.04	8,570
	May 22, 1941	12.18	5,490		May 2, 1957	14.20	6,050
	June 12, 1941	7.20	2,350		May 10, 1957	11.80	4,440
					May 12, 1957	21.10	13,000
1942	Oct. 16, 1941	12.38	5,630		May 19, 1957	16.45	8,190
	Oct. 26, 1941	8.47	3,020		May 26, 1957	24.17	19,500
					June 4, 1957	20.60	12,700
1943	Oct. 18, 1942	12.05	5,350				
				1958	July 8, 1958	5.30	932
1944	July 25, 1944	6.87	2,020				
				1959	May 9, 1959	11.63	4,300
1945	July 9, 1945	9.16	3,350				
	July 12, 1945	10.58	4,200	1960	Oct. 5, 1959	8.18	2,240
	Aug. 10, 1945	7.39	2,320				
				1961	June 17, 1961	9.02	2,620
1946	Sept.15, 1946	b7.12	1,960		July 24, 1961	12.07	4,100
					Sept. 5, 1961	14.57	5,450
1947	May 23, 1947	9.42	3,610				
1948	Oct. 27, 1947	13.87	6,720				

b Occurred on Oct. 11, 1945.

8-855. Clear Fork Brazos River at Fort Griffin, Tex. (153)

Location.--Lat 32°56', long 99°13', on right bank just downstream from pier of bridge on old Fort Griffin-Throckmorton road, half a mile northeast of Fort Griffin, Shackelford County, 5,100 ft upstream from bridge on U.S. Highway 283, and 1.3 miles upstream from Mill Creek.

Drainage area.--3,974 sq mi.

Gage.--Nonrecording prior to June 23, 1932; recording thereafter. Datum of gage is 1,174.09 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--31 ft.

Historical data.--Flood in September 1900 was the highest since July 1876; flood in July 1876 was probably higher; information from local residents.

Remarks.--Base for partial-duration series, 3,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	September 1900	a38.0	-	1927	Apr. 15, 1927	15.40	5,040
					Apr. 23, 1927	14.2	4,400
1924	May 28, 1924	15.50	5,100				
	Sept.17, 1924	13.2	3,840	1928	May 14, 1928	21.6	8,900
					May 18, 1928	25.8	11,700
1925	May 11, 1925	18.35	6,820		May 21, 1928	26.42	12,100
	Sept.12, 1925	15.8	5,280		July 28, 1928	17.7	6,150
	Sept.25, 1925	14.0	4,300		Aug. 6, 1928	13.4	4,410
1926	June 21, 1926	27.0	12,500	1929	May 17, 1929	12.95	4,260

a Annual peak only; information by local resident.

Peak stages and discharges of Clear Fork Brazos River at Fort Griffin, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Sept.13, 1929	16.43	5,710	1942	Oct. 17, 1941	29.36	15,100
					Oct. 27, 1941	12.17	4,120
1930	Apr. 30, 1930	18.5	6,900		Oct. 30, 1941	22.79	9,720
	May 15, 1930	22.7	9,620				
	May 23, 1930	17.2	6,130	1943	Oct. 20, 1942	17.11	6,410
	June 15, 1930	33.90	25,700		June 9, 1943	11.88	3,980
	Sept.11, 1930	17.5	6,300				
				1944	May 30, 1944	11.05	3,600
1931	Oct. 23, 1930	12.5	4,080				
	Dec. 7, 1930	18.0	6,600	1945	Apr. 12, 1945	14.94	5,340
					July 13, 1945	12.18	4,120
1932	Oct. 16, 1931	15.9	5,540				
	Oct. 25, 1931	22.1	9,240	1946	Sept.26, 1946	19.68	7,800
	Apr. 25, 1932	13.7	4,450				
	May 9, 1932	20.75	8,360	1947	Oct. 11, 1946	11.95	4,030
	June 6, 1932	15.5	5,380		May 13, 1947	20.64	8,340
	June 28, 1932	12.00	3,970		May 25, 1947	18.67	7,240
	July 1, 1932	33.23	21,600				
	July 5, 1932	16.95	6,060	1948	Oct. 29, 1947	15.18	5,350
	July 7, 1932	15.82	5,500		May 26, 1948	12.89	4,200
	Sept. 4, 1932	24.49	11,000				
	Sept.10, 1932	35.09	33,600	1949	May 9, 1949	16.02	4,940
1933	Dec. 25, 1932	18.16	6,720	1950	May 29, 1950	13.00	3,700
	May 26, 1933	18.95	7,140				
				1951	June 13, 1951	10.62	3,020
1934	Oct. 15, 1933	10.58	3,410				
				1952	June 2, 1952	5.58	1,300
1935	May 20, 1935	32.07	18,600				
	June 4, 1935	29.14	15,000	1953	July 1, 1953	23.05	8,650
	June 8, 1935	14.96	5,170		July 16, 1953	19.25	6,500
	June 17, 1935	24.48	11,000		July 20, 1953	31.20	17,200
	June 29, 1935	23.57	10,300				
	Sept. 5, 1935	16.41	5,760	1954	Oct. 26, 1953	13.70	4,090
					May 11, 1954	19.68	6,750
1936	Sept.20, 1936	12.83	4,290		May 17, 1954	14.85	4,520
	Sept.29, 1936	28.52	14,400				
				1955	Sept.25, 1955	31.24	17,200
1937	Aug. 21, 1937	9.65	3,010				
				1956	May 28, 1956	13.83	4,120
1938	Feb. 18, 1938	15.58	5,420				
	Mar. 29, 1938	19.84	7,700	1957	Feb. 9, 1957	26.45	11,400
	May 24, 1938	28.49	14,400		Apr. 25, 1957	27.77	13,300
	June 13, 1938	15.66	5,460		Apr. 28, 1957	33.76	30,300
	July 23, 1938	15.27	5,290		May 15, 1957	29.00	14,800
	July 27, 1938	25.14	11,400		May 21, 1957	23.60	9,350
					May 28, 1957	32.78	20,900
1939	May 18, 1939	21.02	8,580		June 6, 1957	26.50	11,400
	June 23, 1939	22.14	9,260				
				1958	Sept.27, 1958	17.77	5,860
1940	Oct. 26, 1939	12.89	4,440				
	May 23, 1940	18.14	6,920	1959	May 10, 1959	17.41	5,090
	June 24, 1940	16.08	5,660		June 5, 1959	18.42	5,580
	Aug. 19, 1940	21.06	8,640				
				1960	Oct. 3, 1959	19.03	5,630
1941	Apr. 17, 1941	18.76	7,300		July 7, 1960	17.31	4,840
	Apr. 30, 1941	19.24	7,520		July 10, 1960	20.92	6,600
	May 4, 1941	31.90	18,300		July 14, 1960	19.33	5,810
	May 12, 1941	23.06	9,920				
	May 22, 1941	23.45	10,100	1961	June 18, 1961	18.88	5,220
	June 10, 1941	28.92	14,600		July 9, 1961	19.44	5,400
	June 17, 1941	13.36	4,660		July 25, 1961	22.69	6,950
					Sept. 7, 1961	18.89	5,220
1942	Oct. 4, 1941	12.42	4,210				

Peak stages and discharges of Hubbard Creek near Breckenridge, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	May 10, 1957	31.73	14,200	1959	June 4, 1959	25.22	5,930
	May 12, 1957	32.97	17,400				
	May 19, 1957	30.00	9,800	1960	Oct. 4, 1959	31.64	14,900
	May 26, 1957	34.00	34,500				
				1961	Jan. 8, 1961	25.03	5,860
1958	Oct. 14, 1957	33.22	18,500		June 6, 1961	32.07	14,800
	May 3, 1958	27.29	6,270		June 16, 1961	26.44	7,100
	July 7, 1958	33.19	21,500		July 10, 1961	25.46	6,240
1959	May 9, 1959	27.00	7,000				

8-870. Clear Fork Brazos River near Crystal Falls, Tex. (156)

Location.--Lat 32°54', long 98°50', on right bank at site of abandoned Texas Co. pumping plant, about 5,000 ft upstream from concrete dam, 2½ miles downstream from Hubbard Creek, and 3½ miles northeast of Crystal Falls, Stephens County.

Drainage area.--5,658 sq mi; 5,640 sq mi at site used prior to 1928.

Gage.--Nonrecording prior to Aug. 6, 1932; recording thereafter. At site 12½ miles downstream at different datum prior to Aug. 31, 1925. At site 2½ miles downstream at different datum July 1, 1928, to Aug. 6, 1932. Datum of gage is 1,055.25 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended by logarithmic plotting.

Historical data.--Maximum stage since 1876 occurred in September 1900, from information by local residents. A flood in 1876 was probably higher. A large flood is reported to have occurred about Sept. 1, 1886, stage unknown, from information by local residents.

Remarks.--Records for 1916-20 and 1924-25, were formerly published as "near Eliasville." Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	September 1900	a34	-	1930	Oct. 14, 1929	13.8	8,220
					May 1, 1930	11.8	6,780
1916	Apr. 2, 1916	17.5	6,240		May 14, 1930	25.1	17,100
	May 2, 1916	18.2	6,630		May 23, 1930	11.0	6,220
					June 17, 1930	22.93	15,200
1917	Oct. 18, 1916	10.8	2,710				
				1931	Oct. 6, 1930	13.73	8,140
1918	May 18, 1918	20.9	8,240		Oct. 15, 1930	29.73	20,500
	June 8, 1918	17.5	6,240		Oct. 24, 1930	20.5	11,200
	Sept. 5, 1918	18.8	6,980		Dec. 5, 1930	16.1	9,910
1919	Oct. 24, 1918	18.1	6,580	1932	Oct. 14, 1931	25.5	15,600
	Oct. 27, 1918	20.7	8,120		Oct. 24, 1931	19.0	10,400
	Mar. 25, 1919	20.5	8,000		Dec. 21, 1931	16.1	8,520
	May 27, 1919	27.2	12,500		May 8, 1932	20.1	11,100
	July 21, 1919	22.2	9,060		May 30, 1932	19.1	10,400
	Aug. 21, 1919	19.6	7,460		June 11, 1932	11.60	6,080
					June 29, 1932	20.1	11,100
1920	Oct. 21, 1919	10.9	2,800		July 3, 1932	28.07	17,900
					July 7, 1932	13.64	7,080
1924	May 29, 1924	17.99	8,100		Sept. 8, 1932	28.10	22,700
	Sept.18, 1924	21.62	11,200		Sept.12, 1932	27.93	22,300
	Sept.21, 1924	24.30	13,600				
				1933	Dec. 27, 1932	11.33	6,520
1925	May 7, 1925	22.0	11,600		May 15, 1933	20.47	13,700
	May 13, 1925	15.32	6,080		May 26, 1933	16.50	10,400
1928	July 27, 1928	29.6	21,500	1934	Mar. 26, 1934	8.63	4,520
	Aug. 5, 1928	11.80	6,780				
	Aug. 24, 1928	13.10	7,710	1935	May 16, 1935	16.52	10,400
	Aug. 31, 1928	13.8	8,220		May 19, 1935	23.68	16,600
					June 5, 1935	19.34	12,700
1929	May 13, 1929	13.95	8,360		June 15, 1935	15.36	9,510
	May 18, 1929	17.7	11,100		June 19, 1935	16.03	9,960
	Sept.11, 1929	13.4	7,930		June 30, 1935	20.98	14,200

a Present site and datum.

8-860. Clear Fork Brazos River at Crystal Falls, Tex. (154)

Location.--Lat 32°54', long 98°54', at Walker-Caldwell Water Co.'s pumping pla. a quarter of a mile north of Crystal Falls, Stephens County, 1 mile upstream from Hubbard Creek, and 10 miles north of Breckenridge.

Drainage area.--4,323 sq mi.

Gage.--Nonrecording. Datum of gage is 1,082 ft above mean sea level, from plans of Walker-Caldwell Water Co.'s dam. Datum lowered 1.0 ft Aug. 14, 1924. All gage heights given herein are referred to 1924 datum.

Stage-discharge relation.--Defined by current-meter measurements below 6,800 cfs and extended to 15,000 cfs on basis of comparison with records for station "near Crystal Falls." High-stage measurements were not obtainable and curve was not extended above 7.5 ft. Stage affected at times by backwater from Hubbard Creek.

Historical data.--Stage of about 26 ft occurred in 1900, from information obtained in 1924 from local residents.

Remarks.--Gage-heights furnished by Walker-Caldwell Water Co. Unless otherwise noted, gage heights are maximum observed. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Apr. 30, 1922	ab19.25	-	1936	Sept.29, 1936	b16.00	-
1923	Apr. 26, 1923	15.10	-	1937	Aug. 23, 1937	2.86	-
1924	Oct. 18, 1923	6.55	12,200	1938	May 25, 1938	9.55	-
1925	May 7, 1925	b5.70	9,400	1939	May 17, 1939	6.30	-
				1940	June 24, 1940	8.90	-
1926	June 19, 1926	12.70	-				
1927	Apr. 13, 1927	c7.50	14,900	1941	June 11, 1941	b23.30	-
1928	July 28, 1928	c13.1	-	1942	Apr. 8, 1942	13.65	-
1929	May 18, 1929	4.70	-	1943	Oct. 18, 1942	14.75	-
1930	June 17, 1930	b11.50	-	1944	May 30, 1944	3.24	-
				1945	July 14, 1945	3.75	-
1931	Oct. 14, 1930	14.30	-				
1932	Sept.12, 1932	de19.75	-	1946	Sept.27, 1946	4.05	-
1933	May 15, 1933	f9.65	-	1947	May 14, 1947	5.00	-
1934	Oct. 16, 1933	2.90	-				
1935	May 21, 1935	13.60	-				

a Period Nov. 12, 1921, to Sept. 30, 1922. b Crest. c From graph based on gage readings. d Period Oct. 1, 1931, to Mar. 31, 1932, July 1 to Sept. 30, 1932. e Gage readings doubtful or affected by backwater f Period Jan. 29 to Sept. 30, 1933.

8-865. Hubbard Creek near Breckenridge, Tex. (155)

Location.--Lat 32°50'15", long 98°57'00", near right bank on downstream side of pier of bridge on U.S. Highway 183, 2.3 miles downstream from Big Sandy Creek, 6.8 miles northwest of Breckenridge, Stephens County, 7 miles upstream from Gonzales Creek, and 8 miles upstream from mouth and Clear Fork Brazos River.

Drainage area.--1,087 sq mi.

Gage.--Recording after Apr. 15, 1955. At site 300 ft upstream prior to July 16, 1959.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--32 ft.

Historical data.--The flood of July 20, 1953, was higher than any previous flood since at least 1925, according to Jules A. Ward, local resident.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	July 20, 1953	34.2	-	1956	May 2, 1956	25.03	8,200
1955	May 20, 1955	30.98	12,800	1957	Feb. 8, 1957	32.37	17,500
	June 16, 1955	24.40	5,960		Apr. 26, 1957	33.85	34,100
	Aug. 5, 1955	25.87	7,480		Apr. 29, 1957	32.67	16,400
	Sept.25, 1955	31.38	11,200		May 5, 1957	30.40	12,100

Peak stages and discharges of Clear Fork Brazos River near Crystal Falls, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Sept. 3, 1935	11.00	6,310	1941	Aug. 25, 1941	18.05	10,300
	Sept. 6, 1935	11.56	6,730				
				1942	Oct. 4, 1941	19.30	11,400
1936	May 3, 1936	13.35	8,010		Oct. 18, 1941	20.26	12,100
	May 28, 1936	10.65	6,030		Nov. 1, 1941	16.23	9,550
	Sept.18, 1936	15.90	9,880		Apr. 9, 1942	25.80	18,800
	Sept.29, 1936	26.60	20,000		May 20, 1942	12.84	7,500
					Sept. 8, 1942	18.92	11,100
1937	July 20, 1937	9.31	b5,060				
				1943	Oct. 18, 1942	27.75	22,200
1938	Mar. 27, 1938	18.27	11,800				
	Apr. 25, 1938	12.00	7,010	1944	May 2, 1944	9.27	5,100
	May 25, 1938	17.96	11,600				
	July 24, 1938	16.88	10,700	1945	Oct. 4, 1944	15.38	9,080
	July 28, 1938	15.07	9,280		Mar. 19, 1945	14.12	8,300
					July 6, 1945	10.93	6,260
1939	May 17, 1939	17.27	11,000				
	May 28, 1939	11.29	6,520	1946	Aug. 28, 1946	13.60	8,000
	June 20, 1939	14.30	8,680		Sept.14, 1946	13.22	7,760
	June 24, 1939	13.54	8,080				
				1947	May 14, 1947	11.26	6,520
1940	May 8, 1940	15.48	9,580				
	June 16, 1940	13.41	8,010	1948	Oct. 26, 1947	12.93	7,560
	June 25, 1940	20.92	14,100		May 27, 1948	12.87	7,560
	Aug. 18, 1940	17.93	11,500				
				1949	May 18, 1949	17.72	10,400
1941	Nov. 25, 1940	11.98	7,050		June 12, 1949	14.40	8,480
	Apr. 18, 1941	10.88	6,440		June 15, 1949	11.85	6,850
	May 1, 1941	11.12	6,560				
	May 4, 1941	31.43	30,500	1950	Oct. 25, 1949	12.42	7,240
	May 12, 1941	23.75	15,900		May 27, 1950	15.60	9,200
	May 22, 1941	29.35	25,700		July 15, 1950	13.78	8,120
	June 11, 1941	33.45	35,800		July 28, 1950	13.74	8,060
	June 16, 1941	11.56	6,830				
	July 11, 1941	12.08	7,100	1951	May 25, 1951	12.07	7,030
	Aug. 23, 1941	16.16	9,270		June 17, 1951	17.00	10,000

b Maximum peak discharge; maximum discharge during year, 11,200 cfs at 12:01 a.m. Oct. 1, 1936, stage falling.

8-880. Brazos River near South Bend, Tex. (157)

Location.--Lat 33°01'30", long 98°38'50", near left bank on left side of pier of bridge on State Highway 67, 0.3 mile upstream from Wichita Falls and Southern Railroad bridge, 1.6 miles downstream from Clear Fork Brazos River, 2.0 miles northeast of South Bend, Young County, and at mile 758.

Drainage area.--21,600 sq mi, approximately, of which about 12,360 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 23, 1939; recording thereafter. Datum of gage is 1,002.98 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--26 ft.

Remarks.--Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1876	-	a36.2	-	1940	Aug. 18, 1940	16.55	42,400
1900	Sept.24, 1900	b29.5	-	1941	Apr. 17, 1941	13.91	32,400
					May 1, 1941	14.17	35,700
1930	June 16, 1930	b35.5	-		May 4, 1941	27.35	87,400
					May 12, 1941	12.16	27,500
1939	May 18, 1939	9.87	18,800		May 23, 1941	17.57	50,900
	June 21, 1939	12.75	30,000		June 10, 1941	16.26	44,300
	June 24, 1939	10.06	15,600		June 17, 1941	14.44	36,500
					Aug. 26, 1941	9.43	11,900
1940	May 9, 1940	10.23	17,800				
	June 16, 1940	10.89	20,600	1942	Oct. 5, 1941	11.64	25,300
	June 24, 1940	11.03	19,200		Oct. 5, 1941	16.03	44,200

a Annual peak only; from Texas State Highway Department and Corps of Engineers.
b Annual peak only; from information by local resident.

Peak stages and discharges of Brazos River near South Bend, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Oct. 17, 1941	16.87	50,700	1953	Aug. 20, 1953	15.12	14,200
	Oct. 25, 1941	11.37	23,300				
	Oct. 30, 1941	13.28	31,100	1954	Oct. 24, 1953	14.83	15,900
	Apr. 8, 1942	13.99	32,700		Oct. 27, 1953	17.47	23,300
	Apr. 20, 1942	11.72	23,300		Apr. 14, 1954	13.18	14,300
	Apr. 24, 1942	9.85	15,700		May 13, 1954	19.15	32,200
	Sept. 8, 1942	9.86	16,100		May 26, 1954	14.28	17,400
	Sept.21, 1942	9.80	16,100				
				1955	May 21, 1955	15.89	22,000
1943	Oct. 18, 1942	15.45	38,400		May 25, 1955	11.83	11,800
					June 4, 1955	12.78	11,200
1944	June 12, 1944	8.67	8,890		June 18, 1955	13.05	12,000
					Sept.26, 1955	28.73	50,500
1945	Mar. 20, 1945	11.17	13,100		Sept.30, 1955	27.10	47,700
1946	Aug. 31, 1946	11.54	14,400	1956	Oct. 6, 1955	21.75	37,200
	Sept.15, 1946	12.60	15,600				
1947	Dec. 12, 1946	10.50	11,200	1957	Feb. 9, 1957	15.59	21,500
	May 14, 1947	15.90	27,600		Apr. 29, 1957	32.70	66,000
	May 19, 1947	17.60	33,800		May 5, 1957	19.05	28,100
	May 25, 1947	14.90	24,200		May 14, 1957	22.15	37,400
					May 19, 1957	20.73	33,200
1948	June 29, 1948	12.58	16,700				
	July 7, 1948	11.40	13,200	1958	Oct. 15, 1957	12.07	13,700
					May 4, 1958	10.87	11,100
1949	May 17, 1949	11.94	14,300		July 7, 1958	14.34	18,700
	June 12, 1949	11.78	14,300				
	Sept.15, 1949	10.16	11,400	1959	June 5, 1959	14.40	21,200
					July 3, 1959	11.51	13,000
1950	May 13, 1950	10.15	11,300				
	July 15, 1950	10.60	11,300	1960	Oct. 4, 1959	17.46	29,000
	Sept. 7, 1950	11.64	15,500		July 9, 1960	14.25	18,800
1951	June 17, 1951	12.30	14,600	1961	Oct. 22, 1960	19.90	34,100
					June 7, 1961	14.75	19,700
1952	May 30, 1952	8.17	3,540		June 18, 1961	15.04	20,300
					July 11, 1961	14.16	18,200
1953	July 1, 1953	18.40	22,300		July 15, 1961	12.40	12,200
	July 20, 1953	20.92	29,400				

8-890. Brazos River near Palo Pinto, Tex. (158)
(Published as "near Mineral Wells" prior to December 1933)

Location.--Lat 32°51'45", long 98°18'10", at bridge on Palo Pinto-Graford highway, 300 ft downstream from Dark Valley Creek, 6½ miles north of Palo Pinto, Palo Pinto County, 20 miles downstream from Possum Kingdom Dam, and at mile 667.

Drainage area.--22,760 sq mi, approximately, of which about 13,520 sq mi contributes directly to surface runoff. At site used prior to December 1933, drainage area, 23,100 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 1, 1933; recording thereafter. At site 19 miles downstream at datum 38.19 ft lower prior to Dec. 1, 1933. Datum of gage is 831.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Highest stage known occurred in 1876 and was several feet higher than the flood of June 16, 1930, according to data from the Corps of Engineers. Highest stage since 1876 was that of June 16, 1930.

Remarks.--Flow largely regulated since March 1941 by Possum Kingdom Reservoir and several smaller reservoirs having a combined total capacity of 946,500 acre-ft. Base for partial-duration series, 15,000 cfs. Only annual peaks are shown subsequent to 1940 water year.

Peak stages and discharges of Brazos River near Palo Pinto, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924a/	Apr. 27, 1924	9.30	15,600	1935	May 6, 1935	8.28	15,000
	Sept.22, 1924	10.50	17,100		May 20, 1935	15.60	47,200
1925	Apr. 29, 1925	12.85	29,300		June 3, 1935	13.27	36,800
	May 7, 1925	15.30	43,400		June 7, 1935	10.42	24,100
	May 11, 1925	10.9	19,100		June 16, 1935	13.40	37,200
	Sept.13, 1925	15.6	45,200		July 1, 1935	10.35	26,200
	Sept.16, 1925	10.9	19,100		Sept. 6, 1935	8.88	17,600
	Sept.26, 1925	10.5	17,100		Sept.10, 1935	10.29	23,600
1926	June 21, 1926	13.9	34,300	1936	Sept.17, 1936	13.70	38,600
	Aug. 25, 1926	12.0	25,500		Sept.28, 1936	-	b36,000
	Aug. 31, 1926	15.23	40,900	1937	Aug. 23, 1937	10.9	26,200
1927	Oct. 8, 1926	10.6	18,100	1938	Feb. 17, 1938	11.02	26,600
	Oct. 18, 1926	17.35	55,000		Mar. 29, 1938	12.56	33,700
	Dec. 8, 1926	10.4	17,200		May 23, 1938	8.61	16,300
	Apr. 14, 1927	10.6	18,100		July 27, 1938	8.45	15,500
	July 14, 1927	9.9	15,000	1939	May 17, 1939	8.68	16,800
1928	May 20, 1928	12.1	25,800		June 22, 1939	10.70	25,400
	May 23, 1928	11.6	23,000				
	July 26, 1928	11.50	22,500	1940	June 17, 1940	9.69	21,100
	July 29, 1928	12.50	28,300		June 25, 1940	9.50	15,900
1929	May 13, 1929	10.0	15,400		Aug. 18, 1940	14.46	42,200
	May 19, 1929	12.5	28,300	1941	May 26, 1941	14.53	38,500
	Sept.10, 1929	17.0	66,200	1942	Oct. 5, 1941	17.3	51,200
1930	Apr. 30, 1930	14.8	45,000	1943	Oct. 17, 1942	17.42	46,600
	May 13, 1930	19.4	55,700	1944	Sept. 5, 1944	5.70	5,710
	June 16, 1930	28.43	95,600	1945	July 10, 1945	7.50	10,700
1931	Oct. 6, 1930	13.7	30,000	1946	Sept.29, 1946	7.87	11,700
	Oct. 13, 1930	13.90	31,400	1947	May 19, 1947	10.45	21,100
	Oct. 23, 1930	10.20	16,200	1948	Dec. 7, 1947	8.09	12,800
	Dec. 6, 1930	10.4	16,200	1949	June 14, 1949	8.26	11,800
1932	Oct. 15, 1931	11.1	17,400	1950	July 27, 1950	10.50	18,600
	Oct. 25, 1931	10.5	16,600	1951	Sept. 8, 1951	4.68	3,020
	May 7, 1932	10.5	16,600	1952	June 26,Aug.8, 1952	4.42	2,690
	June 30, 1932	10.7	17,000	1953	May 15, 1953	5.23	3,860
	July 4, 1932	15.8	41,600	1954	May 14, 1954	12.56	25,700
	July 6, 1932	12.3	24,600	1955	Sept.27, 1955	20.53	51,800
	Sept. 2, 1932	15.1	37,700				
	Sept. 9, 1932	19.40	59,000	1956	Oct. 1, 1955	17.22	40,200
	Sept.14, 1932	12.5	25,100	1957	Apr. 29, 1957	28.87	85,400
				1958	July 6, 1958	14.61	31,500
1933	May 26, 1933	15.33	39,100	1959	July 5, 1959	7.46	9,260
1934	Apr. 5, 1934	6.85	9,320	1960	Oct. 4, 1959	10.94	19,000
1935	Nov. 23, 1934	8.30	15,000	1961	Oct. 23, 1960	11.87	21,700

a Period Jan. 31 to Sept. 30, 1924.
b Estimated maximum daily discharge.

8-905. Palo Pinto Creek near Santo, Tex. (159)

Location.--Lat 32°37'50", long 98°10'50", on left bank 0.5 mile upstream from Texas and Pacific Railway Co. bridge, 2.4 miles downstream from Big Sunday Creek, 2.6 miles northeast of Santo, Palo Pinto County, 2.8 miles upstream from Wasser Creek, 4.4 miles upstream from Buck Creek, and 7.9 miles upstream from mouth.

Drainage area.--567 sq mi.

Gage.--Nonrecording prior to Apr. 13, 1951; recording thereafter. Datum of gage is 762.63 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 17,000 cfs and by slope-area measurement at 45,100 cfs.

Bankfull stage.--25 ft.

Historical data.--Maximum stage since at least 1880 occurred May 8, 1922, and May 26, 1957. Flood of May 8, 1922, reached about the same stage as in 1957, from information by the Texas and Pacific Railway Co., but probably was slightly lower according to statements by local residents.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges of Palo Pinto Creek near Santo, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 7, 1925	8.35	3,600	1957	May 3, 1957	16.15	7,490
					May 9, 1957	11.32	4,940
1951a/	May 25, 1951	7.42	3,100		May 12, 1957	17.40	8,240
	June 16, 1951	9.88	4,350		May 18, 1957	14.16	6,360
					May 24, 1957	20.84	10,700
1952	May 18, 1952	16.49	7,900		May 26, 1957	31.05	45,100
1953	May 16, 1953	12.54	5,650	1958	Oct. 14, 1957	20.83	10,700
	July 18, 1953	8.38	3,600		Nov. 6, 1957	11.63	5,180
					Nov. 25, 1957	6.78	2,780
1954	Oct. 4, 1953	13.90	6,350		May 1, 1958	20.94	10,800
	Oct. 23, 1953	15.30	7,180		June 21, 1958	6.70	2,730
	Nov. 3, 1953	6.35	2,600		July 7, 1958	25.84	16,900
	May 11, 1954	9.86	4,350				
				1959	June 27, 1959	5.86	2,280
1955	May 1, 1955	25.68	17,100				
	June 15, 1955	8.56	3,700	1960	Oct. 1, 1959	21.34	11,200
					Oct. 4, 1959	30.54	36,800
1956	May 1, 1956	26.08	17,600		Jan. 6, 1960	9.75	4,230
					May 23, 1960	7.90	3,330
1957	Dec. 20, 1956	17.56	8,360				
	Feb. 6, 1957	9.95	4,230	1961	Jan. 8, 1961	14.12	6,330
	Apr. 23, 1957	8.54	5,550		June 16, 1961	15.11	6,860
	Apr. 27, 1957	18.07	8,650		June 18, 1961	12.54	5,530
	Apr. 29, 1957	20.90	10,800				

a Period Apr. 13 to Sept. 30, 1951.

8-910. Brazos River near Glen Rose, Tex. (160)

Location.--Lat 32°16'15", long 97°39'45", at bridge on U.S. Highway 67, 600 ft downstream from Georges Creek, 4.4 miles upstream from Paluxy Creek, 6 miles northeast of Glen Rose, Somervell County, and at mile 511.

Drainage area.--24,830 sq mi, approximately, of which about 15,590 sq mi contributes directly to surface runoff.

Gage.--Nonrecording at site 2.5 miles downstream prior to May 8, 1931; recording thereafter. At site 2.4 miles downstream May 8, 1931, to Sept. 30, 1957. Present gage used as supplementary flood gage for 1957. Datum of gage is 567.82 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Remarks.--Base for partial-duration series, 30,000 cfs. Stages affected by backwater from Paluxy Creek at times and, since 1945, by medium-water bridge 2.5 miles downstream. Peaks partly affected by Possum Kingdom Reservoir since March 1941. Only annual peaks are shown subsequent to 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a27	-	1928	May 20, 1928	10.4	27,700
					July 27, 1928	10.1	26,600
1922	May 1922	29.5	-		July 29, 1928	10.2	26,900
1924	Oct. 17, 1923	13.00	37,500	1929	May 20, 1929	10.0	25,200
	Oct. 30, 1923	10.0	26,200		Sept.12, 1929	13.42	38,400
	Nov. 15, 1923	8.5	20,600				
				1930	May 1, 1930	13.1	37,200
1925	Apr. 30, 1925	11.1	30,300		May 14, 1930	16.4	51,200
	May 8, 1925	15.1	45,700		June 17, 1930	19.60	68,300
	May 12, 1925	9.9	25,800				
	Sept.13, 1925	13.9	41,000	1931	Oct. 7, 1930	12.18	31,700
					Oct. 15, 1930	9.9	23,000
1926	Apr. 24, 1926	9.3	23,600				
	June 21, 1926	13.2	38,300	1932	Oct. 16, 1931	9.11	22,300
	Aug. 25, 1926	8.8	21,800		May 8, 1932	11.72	31,300
	Aug. 31, 1926	11.9	33,300		July 4, 1932	13.01	35,600
					Sept. 3, 1932	12.15	32,100
1927	Oct. 7, 1926	9.0	22,500		Sept. 7, 1932	10.92	27,100
	Oct. 19, 1926	14.0	41,400		Sept.10, 1932	16.37	49,300
1928	Oct. 2, 1927	9.3	24,000	1933	May 27, 1933	13.19	36,600
	Apr. 4, 1928	b13.6	-				
	May 17, 1928	8.7	21,400	1934	Mar. 4, 1934	4.11	5,240

a About.
b Backwater from Paluxy and/or Squaw Creeks.

Peak stages and discharges of Brazos River near Glen Rose, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 5, 1935	11.27	28,600	1942	Apr. 26, 1942	19.23	66,400
	May 15, 1935	13.29	37,000	1943	Oct. 18, 1942	17.47	54,100
	May 18, 1935	23.68	97,800	1944	May 2, 1944	10.21	24,100
	June 4, 1935	10.78	26,900	1945	Mar. 30, 1945	13.85	39,200
	June 8, 1935	c11.4	29,800				
	June 17, 1935	10.09	24,500	1946	Sept.27, 1946	8.24	11,500
	July 2, 1935	10.07	23,700	1947	Dec. 12, 1946	16.89	38,900
	Sept.11, 1935	e9.2	20,400	1948	Feb. 25, 1948	8.68	12,500
				1949	May 17, 1949	26.7	74,000
1936	Sept.18, 1936	14.50	42,400	1950	July 28, 1950	11.92	20,700
	Sept.25, 1936	11.45	29,000				
	Sept.27, 1936	19.42	67,300	1951	June 18, 1951	5.05	5,680
				1952	May 24, 1952	14.19	27,900
1937	June 9, 1937	9.93	d22,200	1953	May 17, 1953	5.21	5,920
				1954	May 15, 1954	17.34	25,600
1938	Jan. 23, 1938	11.67	30,200	1955	Sept.30, 1955	19.74	42,300
	Feb. 18, 1938	10.85	26,500				
	Mar. 29, 1938	15.12	45,200	1956	Oct. 9, 1955	15.78	e30,600
				1957	May 27, 1957	33.89	87,400
1939	June 23, 1939	9.85	22,600	1958	May 2, 1958	21.00	36,100
				1959	July 8, 1959	11.50	8,900
1940	Aug. 19, 1940	13.62	38,300	1960	Oct. 5, 1959	28.10	65,500
1941	Nov. 25, 1940	14.90	44,200	1961	June 19, 1961	16.80	21,700

c From graph based on Weather Bureau readings at gage 1,680 ft downstream.
d Maximum peak discharge; maximum discharge during year, 31,100 cfs 12:01 a.m. Oct. 1, 1936, stage falling.
e Maximum peak discharge, maximum discharge during year, 41,400 cfs 12:01 a.m. Oct. 1, 1955, stage falling.

8-915. Paluxy Creek at Glen Rose, Tex. (161)

Location.--Lat 32°13'50", long 97°46'30", on left bank at downstream side of pier of bridge on U.S. Highway 67, 1 mile upstream from Cross Branch, 1.2 miles southwest of Glen Rose, Somervell County, and 4.7 miles upstream from mouth.

Drainage area.--399 sq mi.

Gage.--Nonrecording at site 1.8 miles downstream at datum 13.62 ft lower prior to May 14, 1947; recording thereafter. Datum of gage is 609.66 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs 1923-25; defined by current-meter measurements below 32,000 cfs and extended to 59,000 cfs by logarithmic plotting subsequent to May 1947.

Historical data.--Flood of Apr. 17, 1908, was the greatest since at least 1877, from information by local resident.

Remarks.--Base for partial-duration series, 4,000 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	Apr. 17, 1908	a27.2	59,000	1952	Apr. 21, 1952	9.06	4,460
					May 23, 1952	22.3	36,200
1919	November 1918	a26	53,000				
				1953	May 15, 1953	8.64	3,930
1922	May 21, 1922	a26.0	53,000				
				1954	Apr. 12, 1954	10.00	5,510
1924	Apr. 25, 1924	7.10	-		June 16, 1954	9.59	5,030
1925	Nov. 20, 1924	3.30	-				
				1955	May 19, 1955	22.5	37,000
1947	Sept.15, 1947	7.16	b2,580		Sept.23, 1955	16.9	18,100
1948	Feb. 25, 1948	13.92	11,000	1956	May 1, 1956	16.6	17,300
	May 27, 1948	9.05	4,350				
				1957	Apr. 26, 1957	24.12	44,000
1949	Feb. 24, 1949	9.69	5,150		Apr. 28, 1957	11.94	8,040
	Apr. 25, 1949	9.40	4,790		Apr. 30, 1957	9.27	4,680
	May 17, 1949	25.1	48,500		May 3, 1957	15.15	13,900
					May 13, 1957	12.23	8,520
1950	Oct. 24, 1949	9.18	4,570		May 18, 1957	9.24	4,570
					May 23, 1957	14.15	11,900
1951	June 3, 1951	8.80	4,130		May 25, 1957	15.85	15,300

a Present site and datum, from information by local resident.
b Maximum May 16 to Sept. 30, 1947; may have been exceeded during period of no record.

Peak stages and discharges of Paluxy Creek at Glen Rose, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	July 6, 1958	9.5	4,900	1960	May 4, 1960	8.79	4,300
1959	Apr. 19, 1959	8.22	3,530	1961	July 17, 1961	8.63	4,100
1960	Oct. 4, 1959	25.4	50,000				

8-920. Nolands River at Blum, Tex. (162)

Location.--Lat 32°09'02", long 97°24'10", 60 ft upstream from bridge on State Farm Road 67, 0.5 mile downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 0.6 mile northwest of Blum, Hill County, 2.8 miles downstream from Mustang Creek, and 3.2 miles upstream from Rock Creek.

Drainage area.--276 sq mi.

Gage.--Nonrecording prior to July 8, 1949; recording thereafter. At site 0.5 mile upstream at datum 5 ft higher prior to May 29, 1949. Datum of gage is 551.48 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 15,200 cfs and extended to 25,000 cfs by logarithmic plotting.

Bankfull stage.--27 ft.

Historical data.--Flood of May 8, 1922 was highest and flood in 1887 was second highest since at least 1887; from information by local residents.

Remarks.--Backwater occurs when Whitney Reservoir is at high stages. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 8, 1922	a35.0	-	1955	May 19, 1955	12.53	8,200
					Sept.23, 1955	10.93	6,290
1925	May 13, 1925	10.4	7,000				
				1956	Aug. 31, 1956	13.29	9,160
1948	Dec. 7, 1947	15.60	12,700				
	Feb. 25, 1948	11.30	7,090	1957	Apr. 21, 1957	9.91	5,210
	May 11, 1948	14.18	10,900		Apr. 23, 1957	17.12	14,000
	July 5, 1948	11.56	7,480		Apr. 24, 1957	18.15	15,400
					Apr. 27, 1957	15.48	11,800
1949	Feb. 24, 1949	12.0	8,000		May 13, 1957	b18.63	-
	Feb. 25, 1949	13.0	9,300				
	May 17, 1949	24.0	25,000	1958	Oct. 15, 1957	11.02	6,400
	May 26, 1949	22.9	23,200		Nov. 5, 1957	12.41	8,080
	May 29, 1949	15.53	11,400		Apr. 27, 1958	10.58	5,960
					Apr. 30, 1958	14.63	10,700
1950	Feb. 1, 1950	10.09	5,100		May 3, 1958	15.16	11,500
	Feb. 12, 1950	15.93	11,900		Sept.19, 1958	14.49	10,600
1951	June 3, 1951	11.84	7,410	1959	Apr. 19, 1959	12.02	7,600
	June 12, 1951	14.84	11,000		June 23, 1959	12.68	8,440
	June 16, 1951	10.30	5,630				
				1960	Oct. 4, 1959	22.50	22,400
1952	Apr. 21, 1952	11.85	7,360		Jan. 5, 1960	12.10	7,720
	May 23, 1952	11.42	6,880				
				1961	Jan. 7, 1961	13.29	9,160
1953	Nov. 24, 1952	11.54	7,000		Mar. 17, 1961	12.94	8,680
	Apr. 28, 1953	9.73	5,000		June 17, 1961	10.47	5,850
	May 16, 1953	15.34	11,600		June 25, 1961	9.84	5,100
1954	Apr. 12, 1954	5.12	1,050				

a Present site and datum.
b Backwater from Whitney Reservoir.

8-930. Brazos River near Whitney, Tex. (163)

Location.--Lat 31°50'30", long 97°19'30", on right bank 3,000 ft upstream from Iron Creek, 1.0 mile downstream from Coon Creek, 3.4 miles downstream from Whitney Dam, 7.5 miles south of Whitney, Hill County, and at mile 439.

Drainage area.--26,190 sq mi, approximately, of which about 16,950 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1948; recording thereafter. At site 8.3 miles upstream at datum 14.67 ft higher prior to Oct. 1, 1948. Datum of gage is 417.39 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of May 9, 1922, was highest since at least 1853; information by local residents.

Remarks.--Flow regulated from March 1941 to December 1951 by Possum Kingdom Reservoir, and by Whitney Reservoir thereafter. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 9, 1922	a45	-	1950	Feb. 12, 1950	13.46	15,600
1939	June 19, 1939	19.16	39,800	1951	June 12, 1951	12.78	13,300
1940	Aug. 20, 1940	19.92	36,500	1952	Apr. 21, 1952	9.43	4,720
				1953	June 26, 1953	7.84	1,860
1941	May 5, 1941	23.93	50,300	1954	May 17, 1954	16.39	22,300
1942	Apr. 25, 1942	27.9	60,100	1955	Sept.30, 1955	15.53	19,200
1943	Oct. 18, 1942	24.86	49,900				
1944	May 1, 1944	29.3	66,400	1956	Oct. 3, 1955	16.17	21,600
1945	Mar. 30, 1945	24.51	49,800	1957	May 28, 1957	27.34	58,200
				1958	May 10, 1958	18.18	26,100
1946	June 1, 1946	13.08	13,600	1959	July 17, 1959	9.21	4,780
1947	Nov. 4, 1946	19.60	33,500	1960	Oct. 10, 1959	18.58	28,800
1948	Feb. 25, 1948	17.96	28,300				
1949	May 18, 1949	31.03	71,800	1961	June 21, 1961	14.28	16,600

a Present site and datum.

8-935. Aquilla Creek near Aquilla, Tex. (164)

Location.--Lat 31°51', long 97°12', on right bank just upstream from pier of bridge on Abbot-Aquilla county road, three-quarters of a mile upstream from Palls Branch, and 1 mile southeast of Aquilla, Hill County.

Drainage area.--309 sq mi.

Gage.--Recording. Datum of gage is 451.48 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 7,200 cfs and by slope-area measurement (adjusted to gage site) at 74,200 cfs.

Bankfull stage.--26 ft.

Historical data.--Flood of Sept. 27, 1936, was the highest since flood of Aug. 31, 1887, from information by local residents.

Remarks.--Base for partial-duration series, 4,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1887	Aug. 31, 1887	34	-	1941	Nov. 23, 1940	25.48	6,900
					Nov. 25, 1940	24.69	6,290
1936	Sept.27, 1936	33	a74,200		Dec. 11, 1940	23.14	5,260
					Feb. 2, 1941	27.17	8,560
1939	Feb. 25, 1939	23.58	5,560		Feb. 24, 1941	22.90	5,140
	June 19, 1939	b28.16	9,860		Apr. 16, 1941	26.24	7,500
					Apr. 23, 1941	23.43	5,440
1940	Apr. 6, 1940	27.30	8,690		May 5, 1941	26.08	8,200

a 84,500 cfs by slope-area measurement at point 9 miles downstream; discharge adjusted to gage site, 74,200 cfs.
b Maximum for Dec. 15, 1938, to Sept. 30, 1939; probably maximum for year.

Peak stages and discharges of Aquilla Creek near Aquilla, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 15, 1941	22.98	5,200	1952	May 24, 1952	26.61	7,550
1942	Apr. 6, 1942	24.63	6,120	1953	Dec. 19, 1952c	28.16	12,900
	Apr. 8, 1942	24.34	5,910		May 12, 1953	24.40	5,400
	Apr. 20, 1942	25.88	7,200				
	Apr. 25, 1942	28.94	16,000	1954	May 19, 1954	22.88	4,660
	May 19, 1942	23.64	5,460				
	June 14, 1942	22.39	4,770	1955	May 19, 1955	23.32	4,850
	Sept. 8, 1942	26.04	7,300				
				1956	May 1, 1956	27.05	7,550
1943	Apr. 8, 1943	25.63	6,910				
	May 8, 1943	24.69	6,190	1957	Apr. 23, 1957	27.70	10,800
					Apr. 25, 1957	25.05	5,740
1944	May 2, 1944	30.84	34,200		Apr. 27, 1957	24.85	5,600
					May 13, 1957	25.18	5,820
1945	Jan. 18, 1945	23.95	5,450				
	Feb. 19, 1945g	26.68	8,260	1958	Oct. 14, 1957	23.01	4,500
	Feb. 21, 1945g	25.93	7,180		Nov. 6, 1957g	24.91	5,640
	Mar. 29, 1945	23.18	4,920		Mar. 7, 1958	24.44	5,310
	Mar. 30, 1945	27.09	9,000		Apr. 27, 1958	27.02	8,500
	Apr. 2, 1945	24.24	5,590		May 1, 1958	28.47	14,200
	Apr. 22, 1945	27.62	10,400		May 3, 1958	29.32	18,500
	June 13, 1945	23.91	5,380				
	July 11, 1945	28.64	14,700	1959	May 11, 1959	23.56	4,830
					June 6, 1959	25.60	6,100
1946	Mar. 13, 1946	25.75	7,060				
				1960	Oct. 5, 1959	26.90	8,240
1947	Apr. 9, 1947	26.81	8,440		Jan. 5, 1960	23.58	4,830
					May 5, 1960	25.52	6,030
1948	May 11, 1948	26.72	8,260				
				1961	Dec. 7, 1960	24.87	5,640
1949	May 27, 1949	20.36	3,540		Jan. 8, 1961	29.05	16,700
					Jan. 12, 1961	24.33	5,240
1950	Apr. 17, 1950	20.51	3,580		Feb. 6, 1961	25.20	5,630
					Feb. 20, 1961	23.55	4,830
1951	June 12, 1951	27.24	8,690		June 24, 1961	26.92	8,240
					July 3, 1961	26.47	7,340
1952	Apr. 22, 1952	27.97	12,000		July 17, 1961	24.99	5,700

c Approximately, from weather records.

8-940. Green Creek subwaterahed No. 1 near Dublin, Tex. (165)

Location.--Lat 32°10'00", long 98°20'30", near center of dam on main headwater channel of Green Creek, three-quarters of a mile downstream from county road, 1.0 mile east of Farm Road 219, and 4.0 miles north of Dublin, Erath County.

Drainage area.--3.18 sq mi.

Gage.--Recording. Datum of gage is 1,408.00 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 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. Base for partial-duration series, 125 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 18, 1955	-	a3,390	1958	Oct. 13, 1957	-	181
	Sept.23, 1955	-	136		Nov. 3, 1957	-	305
					July 22, 1958	-	552
1956	Apr. 30, 1956	-	b9,910				
				1959	June 23, 1959	-	b259
1957	Apr. 26, 1957	-	887		June 26, 1959	-	430
	Apr. 28, 1957	-	262				
	May 13, 1957	-	500	1960	Oct. 3, 1959	-	1,400
	May 18, 1957	-	378		May 4, 1960	-	229
	May 23, 1957	-	760				
	May 25, 1957	-	876	1961	July 9, 1961	-	c227

a First appreciable inflow since dam was completed in April 1955.
b Not adjusted for rainfall on water surface.
c Annual peak only.

8-945. Green Creek near Alexander, Tex. (166)

Location.--Lat 32°04'20", long 98°14'00", at downstream side of bridge on State Highway 6, 0.2 mile upstream from Missouri, Kansas, Texas Railroad Co. bridge, 1.0 mile upstream from Cottonwood Creek, and 1.7 miles northwest of Alexander, Erath County.

Drainage area.--45.5 sq mi.

Gage.--Crest-stage gage prior to May 27, 1958; recording and crest-stage gage thereafter. Datum of gage is 1,172 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 920 cfs and by contracted-opening measurements at 23,900 and 55,800 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood of May 23, 1952, reached highest stage since at least 1910, from information by local resident. Also a local resident stated there was a very high flood in 1918.

Remarks.--Between 1954 and September 1956, eight floodwater-retarding structures were built. These structures have a total floodwater-detention capacity of 7,840 acre-ft below flood spillway crests and partly control the flow from 22.8 sq mi above the station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 23, 1952	28.0	55,800	1958	October 1957	8.49	1,170
				1959	June 26, 1959	5.70	274
1955	May 19, 1955	13.24	4,000	1960	Oct. 4, 1959	12.14	3,190
1956	Apr. 30, 1956	23.95	23,900	1961	Jan. 7, 1961	6.80	580
1957	Apr. 26, 1957	14.76	5,400				

8-950. North Bosque River near Clifton, Tex. (167)

Location.--Lat 31°47'10", long 97°34'00", near left bank on downstream side of left pier of bridge on State Highway 215, 0.5 mile northeast of Clifton, Bosque County, and 2.9 miles downstream from Meridian Creek.

Drainage area.--971 sq mi; 957 sq mi at site 1.1 miles upstream.

Gage.--Nonrecording prior to Oct. 1, 1955, Apr. 23, 1957, to Mar. 26, 1958, Oct. 1, 1959, to Sept. 30, 1960. Recording Oct. 1, 1955, to Apr. 22, 1957, and Mar. 27, 1958, to Sept. 30, 1959. At site 1.1 miles upstream at datum 17.02 ft higher October 1923 to Sept. 30, 1955, Apr. 23, 1957, to Mar. 26, 1958. Datum of gage is 605.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 40,000 cfs and by contracted-opening measurement at 92,900 cfs.

Bankfull stage.--32 ft.

Historical data.--Flood of Oct. 4, 1959, is the greatest since at least 1854.

Remarks.--Flow from 46.2 sq mi above station partly controlled by 13 flood-detention reservoirs, built 1951-57. Base for partial-duration series, 8,300 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1887	August 1887	a27	-	1927	May 13, 1927	10.15	15,200
				1928	Apr. 4, 1928	8.56	12,700
1922	May 9, 1922	b25	-	1929	Sept. 8, 1929	16.8	26,000
				1930	May 18, 1930	12.00	18,500
1924	Apr. 26, 1924	9.65	14,300				
1925	May 10, 1925	5.98	7,760	1931	Oct. 6, 1930	16.30	25,900
				1932	Feb. 18, 1932	15.4	24,300
1926	Apr. 10, 1926	7.08	10,400	1933	May 25, 1933	13.80	21,400

a About 34 ft, present site and datum.
b About 32 ft, present site and datum.

Peak stages and discharges of North Bosque River near Clifton, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Apr. 6, 1934	8.20	12,000	1953	Nov. 25, 1952	4.25	3,990
1935	May 18, 1935	21.3	38,300				
				1954	June 16, 1954	4.48	4,570
1936	Sept.27, 1936	19.8	32,400				
1937	Oct. 25, 1936	11.20	16,900	1955	May 19, 1955	14.0	21,300
1938	Jan. 23, 1938	21.82	38,500		Sept.23, 1955	7.66	11,100
1939	June 19, 1939	15.46	24,500				
1940	Apr. 7, 1940	4.68	4,970	1956	May 2, 1956	27.82	29,900
1941	May 5, 1941	22.10	36,400	1957	Apr. 21, 1957	-	c17,000
1942	Sept. 7, 1942	17.70	27,800		Apr. 23, 1957	-	c36,000
1943	Oct. 17, 1942	13.30	20,100		Apr. 27, 1957	22.48	37,400
1944	May 2, 1944	21.9	36,000		May 3, 1957	18.80	29,800
1945	Apr. 22, 1945	23.2	39,000		May 13, 1957	18.4	29,100
					May 18, 1957	11.15	16,700
1946	Mar. 13, 1946	8.65	12,800				
1947	Nov. 4, 1946	5.75	7,270	1958	Apr. 30, 1958	17.55	14,800
					May 2, 1958	28.60	32,200
1948	Feb. 25, 1948	19.9	31,900				
	May 11, 1948	8.05	11,700	1959	June 5, 1959	11.45	6,280
	June 24, 1948	8.48	12,600				
				1960	Oct. 4, 1959	34.88	92,800
1949	Apr. 20, 1949	6.89	9,550		Jan. 5, 1960	13.70	9,210
	May 17, 1949	10.20	15,200				
				1961	Jan. 7, 1961	18.76	14,900
1950	Sept. 5, 1950	7.04	9,750		Jan. 12, 1961	17.96	13,800
					Feb. 5, 1961	18.66	16,000
1951	June 3, 1951	4.26	4,100		Feb. 20, 1961	13.40	8,820
					June 18, 1961	13.0	8,300
1952	Apr. 21, 1952	8.10	11,900				
	May 24, 1952	21.60	35,400				

c Computed on basis of comparison with Nolands River at Blum, Tex.

8-955. South Bosque River near Speegleville, Tex. (168)

Location.--Lat 31°31', long 97°15', at highway bridge half a mile downstream from Hog Creek, 2 miles south of Speegleville, McLennan County, 3 miles upstream from confluence with North Bosque River, and 6 miles west of Waco, Tex.

Drainage area.--388 sq mi.

Gage.--Nonrecording. Altitude of gage is 420 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and by slope-area measurement at 54,500 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	31.5	-	1927	June 14, 1927	29.37	54,500
				1928	June 4, 1928	20.26	20,900
1924	May 26, 1924	a17.75	15,600	1929	May 28, 1929	11.10	5,480
1925	Sept.12, 1925	7.37	1,520	1930	May 10, 1930	b11.80	6,350
1926	Apr. 21, 1926	26.0	38,400				

a Maximum observed during period March to September 1924.
b Maximum observed during period October 1929 to May 1930.

8-965. Brazos River at Waco, Tex. (169)

Location.--Lat 31°33'40", long 97°07'45", at Washington Avenue Bridge in Waco, McLennan County, 2½ miles downstream from Bosque River, and at mile 404.

Drainage area.--28,500 sq mi, approximately, of which about 19,260 sq mi contributes directly to surface runoff.

Gage.--Nonrecording September 1898 to March 1918 and May 1922 to February 1925; recording March 1918 to May 1922 and after Feb. 13, 1925. Datum of gage is 356.80 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--27 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1847, that of Sept. 27, 1936.

Remarks.--Gage heights for periods Jan. 1, 1912, to Sept. 30, 1912, and May 6, 1922, to Feb. 12, 1925, obtained from U.S. Weather Bureau. Flow partly regulated by reservoirs above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 22, 1884	32.03	-	1927	June 14, 1927	26.4	62,000
1885	May 28, 1885	34.63	-	1928	Apr. 4, 1928	18.95	24,800
				1929	Sept.13, 1929	20.66	31,300
1887	May 31, 1887	32.13	-	1930	May 18, 1930	26.90	74,800
1890	Apr. 26, 1890	31.43	-	1931	Oct. 7, 1930	31.4	93,500
				1932	Feb. 19, 1932	26.95	62,500
1897	Mar. 29, 1897	32.93	-	1933	July 30, 1933	23.05	41,100
				1934	Apr. 6, 1934	24.00	45,400
1899	June 30, 1899	34.38	117,000	1935	May 19, 1935	34.90	112,000
1900	Sept.28, 1900	25.70	69,800				
				1936	Sept.27, 1936	40.9	246,000
1901	May 19, 1901	14.75	22,600	1937	Oct. 26, 1936	20.3	26,600
1902	July 26, 1902	32.1	106,000	1938	Jan. 24, 1938	30.75	88,400
1903	Feb. 27, 1903	20.45	43,600	1939	June 20, 1939	24.10	43,500
1904	Oct. 1, 1903	14.7	22,400	1940	June 29, 1940	20.78	38,500
1905	May 14, 1905	28.6	85,800				
				1941	May 5, 1941	29.24	68,800
1906	June 6, 1906	19.8	40,900	1942	Apr. 25, 1942	35.70	126,000
1907	July 15, 1907	11.4	13,500	1943	Oct. 18, 1942	27.68	67,400
1908	May 25, 1908	36.7	142,000	1944	May 2, 1944	36.60	137,000
1909	June 18, 1909	15.1	23,500	1945	Apr. 22, 1945	36.70	144,000
1910	Dec. 2, 1909	16.8	29,200				
				1946	Mar. 13, 1946	20.73	37,600
1911	July 18, 1911	18.5	35,400	1947	Nov. 4, 1946	17.78	29,600
1912	Aug. 7, 1912	16.2	24,800	1948	Feb. 26, 1948	20.48	36,800
1913	May 7, 1913	14.5	19,000	1949	May 18, 1949	27.27	71,400
1914	Dec. 3, 1913	39.7	211,000	1950	Feb. 13, 1950	15.67	16,700
1915	Apr. 26, 1915	26.0	73,300				
				1951	June 13, 1951	15.88	18,300
1916	Apr. 2, 1916	33.8	113,000	1952	May 25, 1952	18.13	25,500
1917	Oct. 19, 1916	14.32	17,600	1953	May 12, 1953	25.97	61,100
1918	Apr. 15, 1918	17.5	30,000	1954	May 17, 1954	17.54	22,600
1919	Nov. 9, 1918	36.4	125,000	1955	May 19, 1955	18.68	23,600
1920	Oct. 23, 1919	27.9	78,100				
				1956	May 2, 1956	22.94	46,100
1921	June 11, 1921	18.0	31,100	1957	Apr. 20, 1957	32.33	101,000
1922	May 10, 1922	35.9	122,000	1958	May 3, 1958	28.10	70,600
1923	Apr. 27, 1923	24.6	66,900	1959	June 25, 1959	12.32	10,600
1924	Dec. 13, 1923	20.2	41,900	1960	Oct. 5, 1959	29.73	80,900
1925	May 9, 1925	21.1	49,300				
				1961	Jan. 8, 1961	26.82	62,800
1926	June 22, 1926	19.30	40,500				

8-967. Sandy Creek watershed SW-16 near Riesel, Tex. (170)

Location.--Lat 31°28'37", long 96°53'22", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0050 sq mi.

Gage.--Recording. Datum of gage is 536.9 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 2-foot Parshall flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 15, 1938	-	1.3	1941	June 10, 1941	-	14
1939	May 17, 1939	-	6.1	1942	Sept. 8, 1942	-	12
1940	Oct. 31, 1940	-	19	1943	June 5, 1943	-	12

8-970. Cow Bayou at Mooreville, Tex. (171)

Location.--Lat 31°18'45", long 97°08'16", on right bank at downstream side of county bridge, 500 ft downstream from confluence of North Cow Bayou and South Cow Bayou, 0.8 mile north of Mooreville, Falls County, and 5.0 miles northwest of Chilton.

Drainage area.--79.6 sq mi.

Gage.--Nonrecording prior to June 10, 1958; recording thereafter. Datum of gage is 399.58 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Stage-discharge relation.--Defined by current-meter measurements below 4,500 cfs and extended above to 7,960 cfs on basis of logarithmic plotting.

Bankfull stage.--14 ft.

Historical data.--Maximum stage since at least 1900, that of May 1, 1944.

Remarks.--Flow from 28.0 sq mi above station is partly controlled by nine floodwater-detention structures with a total combined capacity, of 9,770 acre-ft below spillway crest. First structure completed in April 1955; last structure completed in June 1958. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 1, 1944	31	-	1958	Oct. 14, 1957	22.85	6,460
				1959	June 24, 1959	22.95	6,700
1955	Apr. 9, 1955	21.65	5,100	1960	Oct. 4, 1959	23.86	7,960
1956	May 1, 1956	19.39	3,280	1961	Dec. 8, 1960	21.80	5,300
1957	May 12, 1957	29.4	-				

8-975. Brazos River near Marlin, Tex. (172)

Location.--Lat 31°17'20", long 96°58'10", at bridge on State Highway 139, 1 mile upstream from Deer Creek and 4.5 miles southwest of Marlin, Falls County.

Drainage area.--29,150 sq mi, approximately, of which about 19,910 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 312.15 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--30 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 3, 1913	35.85	-	1944	May 3, 1944	33.3	132,000
				1945	Apr. 23, 1945	31.65	120,000
1936	Sept.28, 1936	35.21	-				
				1946	Mar. 14, 1946	18.10	38,700
1939	May 18, 1939	20.6	48,400	1947	May 21, 1947	14.40	25,200
1940	Aug. 21, 1940	16.50	32,300	1948	Feb. 26, 1948	17.35	35,900
				1949	May 19, 1949	22.9	61,600
1941	May 6, 1941	25.82	73,100	1950	Feb. 13, 1950	13.2	19,200
1942	Apr. 26, 1942	31.1	110,000				
1943	Oct. 19, 1942	22.2	57,500	1951	June 13, 1951	11.70	16,800

8-982. Brushy Creek watershed A near Riesel, Tex. (173)

Location.--Lat 31°32'10", long 96°53'33", 4.8 miles northeast of Riesel, McLennan County.

Drainage area.--0.0656 sq mi.

Gage.--Recording. Datum of gage is 573.3 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for a 10-foot Parshall flume and checked by current meter.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. The drainage area is artificially controlled, therefore no gage heights are shown. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	June 19, 1939	-	15	1942	Sept. 8, 1942	-	35
1940	Nov. 22, 1940	-	24	1943	June 5, 1943	-	35
1941	May 4, 1941	-	69				

8-982.03. Brushy Creek watershed C near Riesel, Tex. (174)

Location.--Lat 31°31'11", long 96°53'34", at bridge on county road, 3.8 miles northeast of Riesel, McLennan County.

Drainage area.--0.905 sq mi.

Gage.--Recording. Datum of gage is 532.4 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. The drainage area is artificially controlled, therefore no gage heights are shown. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	June 19, 1939	-	105	1952	May 23, 1952	-	210
1940	Nov. 22, 1940	-	485	1953	Mar. 12, 1953	-	309
				1954	May 11, 1954	-	438
1941	June 10, 1941	-	514	1955	Mar. 21, 1955	-	117
1942	Sept. 8, 1942	-	438				
1943	June 5, 1943	-	216	1956	May 1, 1956	-	123
				1957	Apr. 19, 1957	-	776
1949	June 15, 1949	-	88	1958	Sept.19, 1958	-	467
1950	Feb. 12, 1950	-	385	1959	June 23, 1959	-	365
				1960	Dec. 7, 1960	-	152
1951	Sept.13, 1951	-	105				

8-982.06. Brushy Creek watershed D near Riesel, Tex. (175)

Location.--Lat 31°30'38", long 96°53'22", at bridge on county road, 3.2 miles northeast of Riesel, McLennan County.

Drainage area.--1.73 sq mi.

Gage.--Recording. Datum of gage is 518.8 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. The drainage area is artificially controlled, therefore no gage heights are shown. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 15, 1938	-	201	1952	May 23, 1952	-	470
1939	June 19, 1939	-	90	1953	May 12, 1953	-	828
1940	Nov. 22, 1940	-	795	1954	May 11, 1954	-	806
				1955	Mar. 21, 1955	-	168
1941	June 10, 1941	-	839				
1942	Sept. 8, 1942	-	515	1956	Nov. 4, 1956	-	134
1943	June 5, 1943	-	302	1957	Apr. 19, 1957	-	1,150
				1958	Sept.19, 1958	-	-
1949	June 15, 1949	-	235	1959	June 23, 1959	-	676
1950	July 15, 1950	-	604	1960	Dec. 7, 1960	-	269
1951	Sept.13, 1951	-	571				

8-982.09. Brushy Creek watershed SW-14 near Riesel, Tex. (176)

Location.--Lat 31°28'59", long 96°53'27", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0047 sq mi.

Gage.--Recording. Datum of gage is 541.8 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 17, 1939	-	3.1	1942	June 11, 1942	-	13
1940	July 3, 1940	-	14	1943	June 5, 1943	-	9.6
1941	June 10, 1941	-	12				

8-982.12. Brushy Creek watershed SW-12 near Riesel, Tex. (177)

Location.--Lat 31°28'48", long 96°52'59", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0046 sq mi.

Gage.--Recording. Datum of gage is 531.7 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 16, 1938	-	1.3	1951	Sept.13, 1951	-	(a)
1939	-	-	0	1952	Dec. 30, 1952	-	0.6
1940	Nov. 24, 1940	-	2.8	1953	Mar. 12, 1953	-	6.5
				1954	May 11, 1954	-	.1
1941	June 10, 1941	-	10	1955	Apr. 21, 1955	-	.5
1942	June 11, 1942	-	5.4				
1943	Mar. 24, 1943	-	.1	1956	-	-	0
				1957	Apr. 19, 1957	-	10
1948	Apr. 25, 1948	-	.3	1958	Feb. 22, 1958	-	.4
1949	Apr. 27, 1949	-	.1	1959	June 23, 1959	-	2.1
1950	Feb. 12, 1950	-	6.8	1960	Jan. 13, 1960	-	1.3

a Less than 0.1 cfs.

8-982.15. Brushy Creek watershed Y-10 near Riesel, Tex. (178)

Location.--Lat 31°28'31", long 96°53'10", on Blacklands Experimental Watershed, 2.3 miles east of Riesel, McLennan County.

Drainage area.--0.0291 sq mi; 0.0328 sq mi prior to Jan. 1, 1956.

Gage.--Recording. Datum of gage is 539 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	12	1951	June 16, 1951	-	2.5
1940	Nov. 22, 1940	-	52	1952	May 23, 1952	-	24
				1953	May 12, 1953	-	19
1941	June 10, 1941	-	73	1954	May 11, 1954	-	20
1942	June 11, 1942	-	59	1955	Mar. 21, 1955	-	35
1943	June 5, 1943	-	21				
				1956	Nov. 4, 1956	-	2.4
1946	May 12, 1946	-	34	1957	Apr. 19, 1957	-	70
1947	Mar. 18, 1947	-	6.8	1958	May 3, 1958	-	6.0
1948	Apr. 25, 1948	-	19	1959	June 23, 1959	-	13
1949	July 4, 1949	-	20	1960	June 26, 1960	-	7.3
1950	Feb. 12, 1950	-	19				

8-982.18. Brushy Creek watershed Y-6 near Riesel, Tex. (179)

Location.--Lat 31°28'26", long 96°53'09", on Blacklands Experimental Watershed, 2.2 miles east of Riesel, McLennan County.

Drainage area.--0.0255 sq mi; 0.0327 sq mi prior to Jan. 1, 1956.

Gage.--Recording. Datum of gage is 538 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 17, 1939	-	16	1952	May 23, 1952	-	11
1940	Nov. 22, 1940	-	55	1953	May 12, 1953	-	11
				1954	May 11, 1954	-	11
1941	June 10, 1941	-	80	1955	Mar. 21, 1955	-	19
1942	Sept. 8, 1942	-	67				
1943	June 5, 1943	-	7.8	1956	Nov. 4, 1956	-	2.8
				1957	Apr. 19, 1957	-	27
1948	Apr. 25, 1948	-	12	1958	Oct. 21, 1958	-	2.3
1949	July 4, 1949	-	20	1959	June 23, 1959	-	17
1950	Feb. 12, 1950	-	20	1960	Dec. 8, 1960	-	3.3
1951	Sept.13, 1951	-	2.3				

8-982.21. Brushy Creek watershed Y-4 near Riesel, Tex. (180)

Location.--Lat 31°28'30", long 96°52'54", on Blacklands Experimental Watershed, 2.4 miles east of Riesel, McLennan County.

Drainage area.--0.125 sq mi.

Gage.--Recording. Datum of gage is 524 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 10-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	46	1951	Sept.13, 1951	-	(a)
1940	Nov. 22, 1940	-	187	1952	May 23, 1952	-	31
				1953	May 12, 1953	-	46
1941	June 10, 1941	-	251	1954	May 11, 1954	-	50
1942	Sept. 8, 1942	-	197	1955	Mar. 21, 1955	-	83
1943	June 5, 1943	-	24				
				1956	Nov. 4, 1956	-	9.7
1946	May 12, 1946	-	111	1957	Apr. 19, 1957	-	203
1947	Mar. 18, 1947	-	23	1958	May 3, 1958	-	12
1948	Apr. 25, 1948	-	48	1959	June 23, 1959	-	64
1949	July 4, 1949	-	72	1960	Dec. 7, 1960	-	15
1950	Feb. 12, 1950	-	76				

a Less than 0.1 cfs.

8-982.24. Brushy Creek watershed Y-8 near Riesel, Tex. (181)

Location.--Lat 31°28'22", long 96°52'54", on Blacklands Experimental Watershed, 2.5 miles east of Riesel, McLennan County.

Drainage area.--0.0325 sq mi.

Gage.--Recording. Datum of gage is 537 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 18, 1939	-	13	1952	May 23, 1952	-	15
1940	Nov. 22, 1940	-	52	1953	May 12, 1953	-	20
				1954	May 11, 1954	-	16
1941	June 10, 1941	-	69	1955	Mar. 21, 1955	-	28
1942	Sept. 8, 1942	-	60				
1943	June 5, 1943	-	15	1956	May 1, 1956	-	.6
				1957	Apr. 19, 1957	-	68
1949	July 4, 1949	-	17	1958	Feb. 23, 1958	-	2.7
1950	Feb. 12, 1950	-	14	1959	June 23, 1959	-	37
				1960	Dec. 7, 1960	-	5.0
1951	June 16, 1951	-	.4				

8-982.27. Brushy Creek watershed Y-2 near Riesel, Tex. (182)

Location.--Lat 31°28'30", long 96°52'46", on Blacklands Experimental Watershed, 2.5 miles east of Riesel, McLennan County.

Drainage area.--0.206 sq mi.

Gage.--Recording. Datum of gage is 518 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 15-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	71	1950	Feb. 12, 1950	-	126
1940	Nov. 22, 1940	-	291				
				1951	June 16, 1951	-	(a)
1941	June 10, 1941	-	406	1952	May 23, 1952	-	56
1942	Sept. 8, 1942	-	327	1953	Mar. 12, 1953	-	74
1943	June 5, 1943	-	35	1954	May 11, 1954	-	64
1944	May 1, 1944	-	542	1955	Mar. 21, 1955	-	138
1945	Mar. 3, 1945	-	170				
				1956	Nov. 4, 1956	-	13
1946	May 12, 1946	-	208	1957	Apr. 19, 1957	-	344
1947	Mar. 18, 1947	-	45	1958	May 3, 1958	-	17
1948	Apr. 25, 1948	-	110	1959	June 23, 1959	-	106
1949	July 4, 1949	-	118	1960	Dec. 7, 1960	-	23

a Less than 0.1 cfs.

8-982.3. Brushy Creek watershed Y-7 near Riesel, Tex. (183)

Location.--Lat 31°28'08", long 96°52'49", on Blacklands Experimental Watershed, 2.5 miles east of Riesel, McLennan County.

Drainage area.--0.0625 sq mi.

Gage.--Recording. Datum of gage is 544 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 18, 1939	-	24	1952	May 23, 1952	-	24
1940	Nov. 22, 1940	-	120	1953	May 12, 1953	-	65
				1954	May 11, 1954	-	58
1941	June 10, 1941	-	145	1955	Mar. 21, 1955	-	73
1942	Sept. 8, 1942	-	92				
1943	June 5, 1943	-	21	1956	Nov. 4, 1956	-	3.6
				1957	Apr. 19, 1957	-	127
1948	Apr. 25, 1948	-	55	1958	May 3, 1958	-	9.7
1949	July 4, 1949	-	51	1959	June 23, 1959	-	71
1950	Feb. 12, 1950	-	80	1960	Jan. 13, 1960	-	10
1951	June 16, 1951	-	5.2				

8-982.33. Brushy Creek watershed SW-7 near Riesel, Tex. (184)

Location.--Lat 31°28'11", long 96°52'59", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0049 sq mi.

Gage.--Recording. Datum of gage is 552.6 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	3.3	1942	Sept. 8, 1942	-	18
1940	Oct. 30, 1940	-	12	1943	May 30, 1943	-	13
1941	June 10, 1941	-	16				

8-982.36. Brushy Creek watershed SW-13 near Riesel, Tex. (185)

Location.--Lat 31°28'41", long 96°52'48", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0050 sq mi.

Gage.--Recording. Datum of gage is 535.8 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 17, 1939	-	4.9	1942	June 11, 1942	-	18
1940	Oct. 31, 1940	-	22	1943	June 5, 1943	-	5.5
1941	June 10, 1941	-	11				

8-982.39. Brushy Creek watershed Y near Riesel, Tex. (186)

Location.--Lat 31°28'36", long 96°52'36", on Blacklands Experimental Watershed, 2.7 miles east of Riesel, McLennan County.

Drainage area.--0.483 sq mi.

Gage.--Recording. Datum of gage is 505.8 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges of Brushy Creek watershed Y near Riesel, Tex.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 16, 1938	-	231	1951	June 16, 1951	-	6.2
1939	May 20, 1939	-	122	1952	May 23, 1952	-	122
1940	Nov. 22, 1940	-	707	1953	Mar. 12, 1953	-	143
				1954	May 11, 1954	-	137
1941	June 10, 1941	-	760	1955	Mar. 21, 1955	-	290
1942	Sept. 8, 1942	-	570				
1943	June 5, 1943	-	78	1956	Nov. 4, 1956	-	9.3
				1957	Apr. 19, 1957	-	791
1946	May 12, 1946	-	551	1958	May 3, 1958	-	34
1947	Mar. 18, 1947	-	100	1959	June 23, 1959	-	178
1948	Apr. 25, 1948	-	212	1960	Dec. 7, 1960	-	47
1949	July 4, 1949	-	312				
1950	Feb. 12, 1950	-	402				

8-982.42. Brushy Creek watershed G near Riesel, Tex. (187)

Location.--Lat 31°28'59", long 96°52'06", 3.2 miles east of Riesel, McLennan County.

Drainage area.--6.84 sq mi.

Gage.--Recording, with auxiliary slope recorder for high flows. Datum of gage is 478 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Stage-discharge relation is affected by rate of change in stage, and peak stage occurred from 5 to 30 minutes after peak discharge. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 23, 1938	6.08	795	1943	June 5, 1943	3.80	309
1939	May 20, 1939	2.84	88				
1940	Nov. 22, 1940	8.48	1,850	1958	Sept.19, 1958	6.96	707
				1959	June 23, 1959	9.00	1,680
1941	June 10, 1941	7.94	1,500	1960	Dec. 7, 1960	6.38	680
1942	Sept. 8, 1942	7.87	1,100				

8-982.45. Brushy Creek watershed Z near Riesel, Tex. (188)

Location.--Lat 31°28'08", long 96°51'44", at bridge on county road, 3.7 miles southeast of Riesel, McLennan County.

Drainage area.--0.484 sq mi.

Gage.--Recording. Datum of gage is 492.0 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. The drainage area is artificially controlled, therefore no gage heights are shown. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	84	1942	Sept. 8, 1942	-	234
1940	Nov. 22, 1940	-	425	1943	Apr. 8, 1943	-	15
1941	June 10, 1941	-	481				

8-982.48. Brushy Creek watershed V near Riesel, Tex. (189)

Location.--Lat 31°27'54", long 96°50'59", 4.4 miles southeast of Riesel, McLennan County.

Drainage area.--9.16 sq mi.

Gage.--Recording, with auxiliary slope recorder for high flows. Datum of gage is 453.4 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Stage-discharge relation is affected by rate of change in stage, and peak stage occurred from 5 to 30 minutes after peak discharge. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 23, 1938	11.58	886	1941	June 10, 1941	12.63	1,360
1939	May 20, 1939	5.12	295	1942	Sept. 8, 1942	10.93	1,000
1940	Nov. 22, 1940	12.90	1,650	1943	June 5, 1943	4.44	236

8-982.51. Brushy Creek watershed SW-18 near Riesel, Tex. (190)

Location.--Lat 31°28'04", long 96°53'07", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0048 sq mi.

Gage.--Recording. Datum of gage is 561.0 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	1.6	1942	Sept. 8, 1942	-	13
1940	Oct. 31, 1940	-	23	1943	June 5, 1943	-	4.2
1941	June 10, 1941	-	15				

8-982.54. Brushy Creek watershed SW-11 near Riesel, Tex. (191)

Location.--Lat 31°28'02", long 96°53'04", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0050 sq mi.

Gage.--Recording. Datum of gage is 559.0 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges of Brushy Creek watershed SW-11 near Riesel, Tex.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	1.8	1942	Sept. 8, 1942	-	12
1940	Oct. 31, 1940	-	22	1943	June 5, 1943	-	1.4
1941	June 10, 1941	-	14				

8-982.57. Brushy Creek watershed SW-17 near Riesel, Tex. (192)

Location.--Lat 31°27'45", long 96°53'14", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0047 sq mi.

Gage.--Recording. Datum of gage is 550.0 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 18, 1939	-	2.5	1952	May 23, 1952	-	1.9
1940	Oct. 31, 1940	-	21	1953	Mar. 12, 1953	-	4.6
				1954	May 11, 1954	-	2.6
1941	June 10, 1941	-	19	1955	Mar. 21, 1955	-	3.7
1942	Sept. 8, 1942	-	18				
1943	June 10, 1943	-	13	1956	Nov. 4, 1956	-	.1
				1957	Apr. 19, 1957	-	10
1948	Apr. 25, 1948	-	11	1958	Aug. 24, 1958	-	.6
1949	July 4, 1949	-	3.8	1959	June 23, 1959	-	6.5
1950	Feb. 12, 1950	-	11	1960	Jan. 13, 1960	-	1.2
1951	June 16, 1951	-	.5				

8-982.6. Brushy Creek watershed SW-5 near Riesel, Tex. (193)

Location.--Lat 31°27'46", long 96°53'00", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0048 sq mi.

Gage.--Recording. Datum of gage is 546.6 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 17, 1939	-	2.3	1942	Dec. 26, 1942	-	14
1940	Oct. 31, 1940	-	20	1943	June 5, 1943	-	9.6
1941	June 10, 1941	-	19				

8-982.63. Brushy Creek watershed W-1 near Riesel, Tex. (194)

Location.--Lat 31°27'27", long 96°52'48", on Blacklands Experimental Watershed, 2.2 miles southeast of Riesel, McLennan County.

Drainage area.--0.275 sq mi.

Gage.--Recording. Datum of gage is 520.4 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 15-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion conditions, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. The drainage area is artificially controlled, therefore no gage heights are shown. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 16, 1938	-	106	1950	Feb. 12, 1950	-	334
1939	May 20, 1939	-	67				
1940	Nov. 22, 1940	-	472	1951	June 16, 1951	-	23
				1952	May 23, 1952	-	94
1941	June 10, 1941	-	603	1953	May 12, 1953	-	211
1942	Sept. 8, 1942	-	476	1954	May 11, 1954	-	236
1943	June 5, 1943	-	192	1955	Mar. 21, 1955	-	268
1944	May 1, 1944	-	800				
1945	Mar. 3, 1945	-	319	1956	Nov. 4, 1956	-	44
				1957	Apr. 19, 1957	-	509
1946	May 12, 1946	-	382	1958	Aug. 24, 1958	-	55
1947	May 20, 1947	-	78	1959	June 23, 1959	-	335
1948	Apr. 25, 1948	-	287	1960	Oct. 18, 1960	-	35
1949	July 4, 1949	-	245				

8-982.66. Brushy Creek watershed SW-3 near Riesel, Tex. (195)

Location.--Lat 31°27'29", long 96°53'12", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0048 sq mi.

Gage.--Recording. Datum of gage is 553.8 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	1.4	1942	Sept. 8, 1942	-	9.2
1940	Nov. 22, 1940	-	10	1943	June 5, 1943	-	8.9
1941	June 10, 1941	-	15				

8-982.69. Brushy Creek watershed W-6 near Riesel, Tex. (196)

Location.--Lat 31°27'24", long 96°53'11", on Blacklands Experimental Watershed, 2.5 miles southeast of Riesel, McLennan County.

Drainage area.--0.0661 sq mi.

Gage.--Recording. Datum of gage is 538 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	12	1951	June 16, 1951	-	6.0
1940	Nov. 22, 1940	-	107	1952	May 23, 1952	-	38
				1953	Mar. 12, 1953	-	62
1941	June 10, 1941	-	170	1954	May 11, 1954	-	46
1942	Sept. 8, 1942	-	96	1955	Mar. 21, 1955	-	70
1943	June 5, 1943	-	43				
				1956	-	-	0
1946	May 12, 1946	-	84	1957	Apr. 19, 1957	-	133
1947	May 20, 1947	-	20	1958	Feb. 23, 1958	-	3.8
1948	Apr. 25, 1948	-	65	1959	June 23, 1959	-	68
1949	July 4, 1949	-	66	1960	Dec. 7, 1960	-	11
1950	Feb. 12, 1950	-	80				

8-982.72. Brushy Creek watershed SW-2 near Riesel, Tex. (197)

Location.--Lat 31°27'21", long 96°53'13", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0042 sq mi.

Gage.--Recording. Datum of gage is 544.0 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	1.3	1942	Sept. 8, 1942	-	12
1940	Oct. 31, 1940	-	8.0	1943	June 5, 1943	-	12
1941	June 10, 1941	-	15				

8-982.78. Brushy Creek watershed W-10 near Riesel, Tex. (198)

Location.--Lat 31°27'12", long 96°53'00", on Blacklands Experimental Watershed, 2.8 miles southeast of Riesel, McLennan County.

Drainage area.--0.0308 sq mi.

Gage.--Recording. Datum of gage is 540 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 6-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	-	5.8	1951	June 18, 1951	-	9.9
1940	Nov. 22, 1940	-	63	1952	May 23, 1952	-	27
				1953	May 12, 1953	-	34
1941	June 10, 1941	-	100	1954	May 11, 1954	-	42
1942	Sept. 8, 1942	-	58	1955	Mar. 21, 1955	-	32
1943	June 5, 1943	-	28				
				1956	Nov. 4, 1956	-	16
1946	May 12, 1946	-	63	1957	Apr. 19, 1957	-	84
1947	May 20, 1947	-	35	1958	Aug. 24, 1958	-	6.2
1948	Apr. 25, 1948	-	52	1959	June 23, 1959	-	39
1949	July 4, 1949	-	50	1960	Oct. 18, 1960	-	8.1
1950	Feb. 12, 1950	-	44				

8-982.81. Brushy Creek watershed W-2 near Riesel, Tex. (199)

Location.--Lat 31°27'19", long 96°52'55", on Blacklands Experimental Watershed, 2.2 miles southeast of Riesel, McLennan County.

Drainage area.--0.203 sq mi.

Gage.--Recording. Datum of gage is 521.2 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 15-foot Parshall flume, modified with weir for measuring low flows.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 16, 1938	-	30	1950	Feb. 12, 1950	-	210
1939	May 20, 1939	-	31				
1940	Nov. 22, 1940	-	334	1951	June 18, 1951	-	10
				1952	May 23, 1952	-	63
1941	June 10, 1941	-	488	1953	May 12, 1953	-	96
1942	Sept. 8, 1942	-	267	1954	May 11, 1954	-	148
1943	June 5, 1943	-	66	1955	Mar. 21, 1955	-	128
1944	May 1, 1944	-	633				
1945	Mar. 3, 1945	-	243	1956	Nov. 4, 1956	-	21
				1957	Apr. 19, 1957	-	370
1946	May 12, 1946	-	275	1958	May 3, 1958	-	14
1947	May 20, 1947	-	55	1959	June 23, 1959	-	245
1948	Apr. 25, 1948	-	135	1960	Dec. 7, 1960	-	28
1949	July 4, 1949	-	160				

8-982.84. Brushy Creek watershed SW-6 near Riesel, Tex. (200)

Location.--Lat 31°27'13", long 96°52'47", on Blacklands Experimental Watershed, 2 miles east of Riesel, McLennan County.

Drainage area.--0.0048 sq mi.

Gage.--Recording. Datum of gage is 525.7 ft above mean sea level.

Stage-discharge relation.--Defined by theoretical rating for 3-foot H-flume.

Remarks.--Records furnished by U.S. Department of Agriculture, Agricultural Research Service, Blacklands Experimental Watershed at Riesel, Tex. Detailed information is available from the Riesel office regarding basin shape and slope, type of soils, erosion condition, watershed conditions (kind of soil cover) that bear a relationship to hydrology, and rainfall. Only annual (calendar year) peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	May 18, 1939	-	6.9	1942	Dec. 26, 1942	-	14
1940	Oct. 31, 1940	-	16	1943	June 5, 1943	-	4.0
1941	June 10, 1941	-	18				

8-995. Leon River near Hasse, Tex. (201)

Location.--Lat 31°57'28", long 98°27'32", at bridge on U.S. Highways 67 and 377, 500 ft upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 0.3 mile upstream from Walnut Creek, 2.1 miles northeast of Hasse, Comanche County, and 2.2 miles downstream from Rush Creek.

Drainage area.--1,242 sq mi.

Gage.--Recording. Datum of gage is 1,115.01 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--10 ft.

Historical data.--Maximum stage since at least 1858, that of May 1908. Flood of May 1908 was 9.1 ft higher than that of May 1952 at site 2½ miles upstream, from information by local residents.

Remarks.--Flow partly regulated by Leon Reservoir since June 1954. Base for partial-duration series, 2,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	27	-	1944	May 2, 1944	16.34	12,100
1939	June 20, 1939	a17.04	15,900	1945	Feb. 21, 1945	13.76	3,840
					Mar. 30, 1945	17.23	16,900
1940	June 16, 1940	b13.75	3,500	1946	Feb. 18, 1946	12.96	2,510
1941	Nov. 26, 1940	c15.06	6,190				
	Feb. 2, 1941	15.86	10,800	1947	Nov. 5, 1946	13.66	3,640
	Feb. 24, 1941	14.52	5,540				
	May 5, 1941	16.80	14,900	1948	July 6, 1948	10.27	1,160
	May 12, 1941	16.92	15,400				
	Aug. 24, 1941	15.40	8,700	1949	Feb. 24, 1949	13.16	3,230
	Aug. 28, 1941	15.14	7,740		May 17, 1949	17.29	16,700
					June 15, 1949	16.83	14,000
1942	Apr. 9, 1942	16.31	13,000				
	Apr. 26, 1942	14.89	7,200	1950	July 15, 1950	12.52	2,440
	Apr. 29, 1942	13.64	3,500				
	May 20, 1942	15.24	8,500	1951	June 4, 1951	11.90	1,950
	Sept. 7, 1942	16.20	12,100				
				1952	May 24, 1952	21.49	38,500
1943	Oct. 19, 1942	17.72	16,400				
				1953	May 16, 1953	11.36	1,610
1944	Feb. 29, 1944	13.37	3,070				

a Maximum Jan. 1 to Sept. 30, 1939; probably maximum for year.
b Backwater.
c Backwater; occurred on previous day.

Peak stages and discharges of Leon River near Hasse, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Apr. 13, 1954	13.90	4,500	1958	Oct. 17, 1957	14.04	3,940
					May 3, 1958	13.83	3,590
1955	Apr. 12, 1955	14.15	5,030				
	May 19, 1955	16.77	13,400	1959	July 22, 1959	12.25	2,090
1956	May 1, 1956	20.18	30,700	1960	Oct. 4, 1959	21.72	36,100
1957	Apr. 27, 1957	18.38	21,200	1961	Jan. 8, 1961	13.69	3,820
	May 13, 1957	16.20	10,800		Feb. 6, 1961	13.13	2,920
	May 18, 1957	15.59	8,670		June 19, 1961	13.11	2,920
	May 24, 1957	15.66	8,910				

8-1000. Leon River near Hamilton, Tex. (202)

Location.--Lat 31°47'19", long 98°07'16", on downstream side of bridge on U.S. Highway 281, 2.2 miles upstream from Mesquite Creek, 3.6 miles downstream from Bear Creek, and 5.9 miles north of Hamilton, Hamilton County.

Drainage area.--1,861 sq mi.

Gage.--Nonrecording. At site 1.4 miles downstream at datum 3.13 ft lower Jan. 7, 1925, to Sept. 30, 1931. Datum of gage is 960.38 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--22 ft.

Historical data.--Maximum stages since at least 1858 occurred in May 1908 and December 1913, and according to a local resident they reached about the same stage.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	a33.4	-	1928	June 15, 1928	16.00	3,960
				1929	Sept. 8, 1929	17.20	4,480
1911	September 1911	a32.0	-	1930	May 18, 1930	18.00	4,820
1914	December 1913	a33.4	-	1931	May 22, 1931	20.00	5,680
1925	May 9, 1925	15.9	3,920	1960	October 1959	29.1	-
1926	Apr. 12, 1926	17.0	4,390	1961	Feb. 20, 1961	16.06	4,160
1927	May 13, 1927	10.5	1,720				

a Present site and datum.

8-1005. Leon River at Gatesville, Tex. (203)

Location.--Lat 31°26'05", long 97°45'35", on right bank just downstream from pier of bridge on U.S. Highway 84 in Gatesville, Coryell County, 0.1 mile downstream from Dodds Creek and 5.3 miles upstream from Cottonwood Creek.

Drainage area.--2,279 sq mi.

Gage.--Nonrecording prior to Feb. 8, 1951; recording thereafter. Datum of gage is 723.85 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs and extended to 70,000 cfs by logarithmic plotting.

Bankfull stage.--27 ft.

Historical data.--Maximum discharge since 1854 occurred in May 1908, from information by local residents. Flood of December 1913 was second highest since 1854 prior to flood of Oct. 4, 1959, from information by local residents. Relationship between 1913 and 1959 floods is not known but they are probably of about equal magnitude.

Remarks.--Base for partial-duration series, 3,300 cfs.

Peak stages and discharges of Leon River at Gatesville, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 1908	35	70,000	1957	May 29, 1957	29.71	15,900
1951	June 14, 1951	9.93	1,740	1958	Oct. 15, 1957	22.32	5,260
					Feb. 23, 1958	19.18	3,960
1952	May 18, 1952	16.35	3,590		May 2, 1958	18.73	3,780
	May 24, 1952	17.53	3,940		May 4, 1958	26.03	7,680
	May 28, 1952	24.79	7,230				
				1959	June 6, 1959	15.80	2,820
1953	May 12, 1953	24.60	7,030				
				1960	Oct. 4, 1959	34.14	51,200
1954	Oct. 23, 1953	13.49	2,690		Oct. 6, 1959	30.75	25,900
					Oct. 15, 1959	17.50	3,480
1955	Feb. 19, 1955	17.30	3,880		Jan. 7, 1960	17.81	3,580
	May 19, 1955	28.10	10,600				
	May 24, 1955	18.75	4,280	1961	Dec. 8, 1960	18.67	3,900
	Sept.25, 1955	16.97	3,660		Jan. 8, 1961	21.44	4,950
					Jan. 12, 1961	23.34	5,980
1956	May 1, 1956	31.06	25,300		Feb. 5, 1961	22.68	5,620
	May 4, 1956	28.71	12,400		Mar. 17, 1961	18.22	3,720
					June 16, 1961	24.10	6,470
1957	Apr. 25, 1957	24.02	6,150		June 18, 1961	21.62	5,050
	Apr. 28, 1957	29.42	14,700		July 3, 1961	19.40	4,140
	May 5, 1957	16.38	3,380		July 10, 1961	17.22	3,370
	May 13, 1957	31.30	27,100		July 17, 1961	20.52	4,550
	May 18, 1957	28.89	13,000				

8-1010. Cowhouse Creek at Pidcoke, Tex. (204)

Location.--Lat 31°17'05", long 97°53'05", on left bank 125 ft downstream from bridge on Farm Road 116, 0.1 mile downstream from Beehouse Creek, 0.6 mile northeast of Pidcoke, Coryell County, and 4.9 miles upstream from Table Rock Creek.

Drainage area.--475 sq mi.

Gage.--Recording. Datum of gage is 736.7 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs and by slope-area measurement at 55,800 cfs.

Bankfull stage.--38 ft.

Historical data.--Flood of Oct. 4, 1959, reached highest stage since at least 1882, from information by local resident.

Remarks.--Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	37.5	a47,000	1957	May 13, 1957	37.93	49,400
					May 18, 1957	17.90	8,710
1944	-	37.5	a47,000		May 26, 1957	13.55	5,000
					June 18, 1957	12.02	3,880
1951	June 12, 1951	9.65	2,760				
				1958	Oct. 14, 1957	19.40	10,600
1952	Apr. 21, 1952	15.87	7,360		Feb. 22, 1958	18.34	9,520
	May 18, 1952	18.72	9,900		Mar. 7, 1958	11.44	3,880
	May 24, 1952	17.56	8,890		May 3, 1958	20.21	11,400
1953	Mar. 12, 1953	14.68	6,360	1959	June 27, 1959	11.75	4,160
	Apr. 24, 1953	12,67	4,790				
	May 12, 1953	26.97	19,000	1960	Oct. 4, 1959	40.1	66,200
					Oct. 14, 1959	11.79	4,160
1954	Oct. 23, 1953	6.92	1,300		Jan. 5, 1960	14.93	6,520
					Feb. 3, 1960	10.95	3,600
1955	Feb. 19, 1955	15.23	6,760				
	Apr. 9, 1955	19.09	10,300	1961	Oct. 5, 1960	12.93	4,930
	May 19, 1955	29.70	23,000		Oct. 14, 1960	18.98	10,200
					Dec. 8, 1960	15.86	7,360
1956	Oct. 2, 1955	12.80	4,720		Jan. 8, 1961	15.23	6,760
	May 1, 1956	38.76	55,800		Feb. 5, 1961	18.27	9,520
	Aug. 20, 1956	18.34	9,520		Feb. 20, 1961	11.38	3,680
					Mar. 16, 1961	15.61	7,090
1957	Apr. 19, 1957	16.00	7,450		June 16, 1961	18.02	9,250
	Apr. 24, 1957	20.3	11,300		July 3, 1961	16.32	7,720
	Apr. 26, 1957	35.8	39,200		July 10, 1961	17.90	9,160

a Annual peak only.

8-1015. Cowhouse Creek near Killeen, Tex. (205)

Location.--Lat 31°12', long 97°43', at Potters Bridge in Coryell County, 3.8 miles downstream from House Creek and 6.0 miles north of Killeen, Bell County.

Drainage area.--650 sq mi.

Gage.--Nonrecording prior to Aug. 31, 1935; recording thereafter. Altitude of gage is 600 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs and extended on basis of conveyance studies.

Bankfull stage.--28 ft.

Historical data.--Flood in 1900 was the highest since at least 1890, from information by local resident.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	34.0	-	1940	June 18, 1940	15.30	11,700
1925	May 10, 1925	6.50	a2,400	1941	Nov. 23, 1940	23.94	26,200
				1942	Apr. 30, 1942	30.5	-
1939	May 17, 1939	13.24	b9,220				

a Maximum during period October 1924 to August 1925; probably maximum for year.
b Maximum during period February to September 1939; probably maximum for year.

8-1025. Leon River near Belton, Tex. (206)

Location.--Lat 31°04'15", long 97°26'30", on left bank 1,400 ft upstream from bridge on Farm Road 817, 2,000 ft upstream from concrete dam, 1 mile upstream from bridge on U.S. Highway 81, 2 miles northeast of Belton, Bell County, 3.2 miles downstream from Belton Dam, and 5.0 miles upstream from Nolan Creek.

Drainage area.--3,513 sq mi.

Gage.--Nonrecording prior to May 20, 1931; recording thereafter. Datum of gage is 476.68 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood in December 1913 reached highest stage since at least that date, information from local residents.

Remarks.--Flow regulated by Belton Reservoir (drainage area above reservoir, 3,439 sq mi) 3.2 miles upstream since Mar. 8, 1954. Only annual peaks are shown subsequent to 1953. Base for partial-duration series, 8,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	25	60,000	1927	Apr. 13, 1927	8.75	10,000
					June 5, 1927	8.60	9,650
1921	September 1921	21	41,000		June 14, 1927	10.80	15,400
					June 21, 1927	8.45	9,150
1924	Dec. 12, 1923	8.6	9,550				
	May 26, 1924	8.80	10,100	1928	Oct. 2, 1927	15.05	27,100
1925	May 10, 1925	7.30	6,410	1929	May 29, 1929	9.32	11,400
					Sept. 7, 1929	8.7	9,900
1926	Oct. 16, 1925	8.95	10,600				
	Nov. 6, 1925	12.40	19,900	1930	May 10, 1930	10.60	14,900
	Mar. 10, 1926	10.00	13,200		May 18, 1930	9.90	12,900
	Apr. 19, 1926	10.55	14,800				
	Apr. 22, 1926	12.50	20,100	1931	Oct. 6, 1930	15.55	26,900
1927	Feb. 9, 1927	8.2	8,650	1932	Feb. 19, 1932	10.16	13,600

Peak stages and discharges of Leon River near Belton, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Mar. 5, 1932	8.84	9,660	1942	June 10, 1942	11.05	16,300
	May 9, 1932	12.30	20,300		Sept. 8, 1942	9.48	12,000
	May 16, 1932	11.47	17,700		Sept.11, 1942	9.48	12,000
1933	May 25, 1933	10.41	14,000	1943	Oct. 18, 1942	10.15	14,000
					Oct. 25, 1942	8.72	9,810
1934	Apr. 6, 1934	10.73	15,200				
				1944	Feb. 8, 1944	9.72	12,400
1935	May 4, 1935	9.43	10,700		Feb. 26, 1944	10.94	15,500
	May 16, 1935	17.08	30,800		May 2, 1944	21.92	44,200
	June 16, 1935	10.43	14,000		May 9, 1944	13.58	22,700
	Sept. 9, 1935	9.78	12,400		May 26, 1944	22.22	45,500
	Sept.26, 1935	13.55	22,700		May 28, 1944	12.45	19,600
					June 6, 1944	11.86	18,200
1936	Dec. 6, 1935	11.65	17,400				
	Apr. 28, 1936	9.12	10,450	1945	Jan. 18, 1945	10.70	15,000
	May 24, 1936	9.92	12,900		Feb. 21, 1945	9.00	10,600
	May 27, 1936	10.90	15,500		Mar. 3, 1945	11.37	16,900
	Sept.28, 1936	20.00	38,000		Mar. 30, 1945	9.35	11,600
					Apr. 1, 1945	8.65	9,550
1937	Oct. 4, 1936	8.60	9,150		Apr. 22, 1945	24.41	56,500
	Dec. 3, 1936	9.38	11,300				
	Dec. 6, 1936	9.46	11,600	1946	Dec. 2, 1945	9.25	11,100
	July 11, 1937	9.17	10,700		Mar. 13, 1946	15.95	28,300
					May 15, 1946	9.82	12,700
1938	Jan. 23, 1938	13.0	21,200		May 30, 1946	13.65	22,700
	Feb. 17, 1938	11.4	16,900				
	July 22, 1938	11.4	16,900	1947	Mar. 19, 1947	10.52	14,500
	July 24, 1938	14.65	25,100				
				1948	Feb. 26, 1948	8.95	10,600
1939	May 17, 1939	9.05	10,200				
				1949	Mar. 21, 1949	19.20	36,400
1940	June 19, 1940	8.53	8,900		Apr. 25, 1949	12.30	19,300
	June 29, 1940	9.03	10,200				
				1950	Sept. 4, 1950	10.28	13,900
1941	Nov. 25, 1940	14.16	24,200				
	Dec. 11, 1940	11.30	16,600	1951	May 25, 1951	6.22	4,220
	Dec. 15, 1940	9.42	11,600				
	Jan. 13, 1941	8.50	9,290	1952	Apr. 22, 1952	8.53	9,290
	Feb. 2, 1941	11.83	18,000				
	Feb. 24, 1941	8.40	9,030	1953	May 13, 1953	10.49	14,500
	Mar. 6, 1941	12.30	19,300				
	May 3, 1941	9.11	10,900	1954	Oct. 23, 1953	5.56	3,160
	May 6, 1941	10.92	15,500	1955	May 11, 1955	3.01	267
	May 9, 1941	10.35	14,200				
	May 22, 1941	9.16	11,100	1956	May 8, 1956	8.39	9,030
	June 16, 1941	8.60	9,550	1957	June 19, 1957	9.12	8,490
	July 12, 1941	9.25	11,100	1958	Oct. 22, 1957	8.15	6,470
				1959	June 28, 1959	6.57	3,120
1942	Apr. 25, 1942	16.58	29,600	1960	Oct. 22, 1959	9.42	8,820
	Apr. 28, 1942	16.03	28,200				
	May 7, 1942	8.34	8,780	1961	Mar. 8, 1961	8.26	6,260
	May 20, 1942	9.97	13,400				

8-1040. Lampasas River at Youngsport, Tex. (207)

Location.--Lat 30°57'21", long 97°42'42", on left bank 500 ft upstream from county road low-water crossing, 0.5 mile east of Youngsport, Bell County, and 4.4 miles downstream from Rocky Creek.

Drainage area.--1,242 sq mi.

Gage.--Nonrecording prior to Mar. 13, 1931; recording thereafter. Datum of gage is 633.46 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 40,000 cfs and extended on basis of discharge measurement at highway bridge 22 miles downstream. Low-water crossing constructed in November 1957 at site of old bridge 500 ft downstream from gage has changed the stage-discharge relation considerably below 25 ft.

Bankfull stage.--32 ft.

Historical data.--Flood of Sept. 8, 1873, was greatest since at least that date.

Remarks.--Base for partial-duration series, 5,800 cfs.

Peak stages and discharges of Lampasas River at Youngsport, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1873	Sept. 8, 1873	44.2	-	1941	Mar. 26, 1941	8.70	7,220
1914	Dec. 2, 1913	33.6	-		Apr. 28, 1941	8.60	7,010
1925	May 15, 1925	6.62	3,020		May 3, 1941	12.40	13,200
					May 22, 1941	9.50	8,790
1926	Oct. 16, 1925	12.60	13,400	1942	Apr. 20, 1942	11.42	11,800
	Nov. 6, 1925	22.0	26,100		Apr. 25, 1942	20.5	24,000
	Mar. 10, 1926	11.0	11,200		Apr. 28, 1942	15.8	17,600
	Apr. 10, 1926	16.0	17,900		May 7, 1942	8.5	6,800
	Apr. 21, 1926	10.3	10,200		May 14, 1942	8.65	7,070
	July 22, 1926	11.5	12,000		May 19, 1942	12.9	13,600
					June 6, 1942	12.7	13,500
1927	Feb. 9, 1927	8.30	6,780		June 10, 1942	15.7	17,500
	Apr. 13, 1927	7.90	5,920		Sept. 8, 1942	8.7	7,200
	June 14, 1927	11.2	11,500	1943	Oct. 18, 1942	10.52	10,500
	July 24, 1927	8.00	6,140				
				1944	Feb. 26, 1944	10.60	10,500
1928	Oct. 2, 1927	23.70	28,700		May 2, 1944	24.70	30,300
					May 9, 1944	14.87	16,400
1929	Sept. 7, 1929	14.0	15,200		May 26, 1944	33.40	52,800
					May 28, 1944	15.50	17,200
1930	May 5, 1930	8.2	6,570		June 6, 1944	16.17	18,100
	May 10, 1930	10.2	10,000		Aug. 30, 1944	8.55	7,360
	May 18, 1930	13.4	14,400				
				1945	Jan. 18, 1945	11.13	11,400
1931	Oct. 6, 1930	20.30	23,800		Feb. 13, 1945	8.17	6,570
	Dec. 5, 1930	12.6	13,400		Feb. 21, 1945	9.30	8,590
	June 18, 1931	6.7	7,540		Mar. 3, 1945	10.62	10,600
					Apr. 21, 1945	13.8	15,000
1932	Feb. 19, 1932	10.30	10,200		June 4, 1945	8.34	6,780
	May 9, 1932	12.0	12,600		Sept.29, 1945	12.20	12,900
	May 16, 1932	11.8	12,400				
	Sept. 3, 1932	13.7	14,800	1946	Nov. 10, 1945	7.92	5,920
					Dec. 2, 1945	7.86	5,920
1933	May 25, 1933	16.12	19,400		Mar. 13, 1946	7.94	5,920
					May 15, 1946	7.88	5,920
1934	Jan. 3, 1934	9.20	7,640				
	Apr. 6, 1934	12.05	12,400	1947	Mar. 18, 1947	9.12	8,250
	Sept. 9, 1934	9.90	8,830				
				1948	Feb. 25, 1948	12.01	12,600
1935	Feb. 8, 1935	8.25	6,150				
	May 5, 1935	14.0	15,200	1949	Mar. 21, 1949	23.06	27,800
	May 16, 1935	18.79	21,700		Apr. 25, 1949	12.20	12,900
	May 18, 1935	29.98	42,000		Apr. 28, 1949	13.67	14,800
	June 3, 1935	13.67	14,800		June 15, 1949	12.00	12,600
	June 16, 1935	8.75	7,430				
	Sept. 9, 1935	21.67	25,700	1950	Sept. 4, 1950	10.79	10,900
	Sept.25, 1935	23.34	28,000				
				1951	May 25, 1951	6.09	2,750
1936	Dec. 6, 1935	10.40	10,400				
	Apr. 28, 1936	17.55	20,100	1952	Apr. 22, 1952	16.84	19,000
	May 8, 1936	16.9	19,100		May 18, 1952	11.17	11,500
	May 24, 1936	14.4	15,800		May 24, 1952	11.54	12,000
	May 27, 1936	19.0	22,000		May 28, 1952	8.70	7,840
	Sept.16, 1936	14.64	16,000				
	Sept.28, 1936	33.5	53,200	1953	Dec. 19, 1952	9.27	8,590
					May 13, 1953	26.56	33,600
1937	Dec. 3, 1936	7.95	6,540		May 16, 1953	8.85	7,720
	July 10, 1937	14.50	15,900				
				1954	Oct. 23, 1953	6.53	3,430
1938	Nov. 9, 1937	9.14	8,000				
	Jan. 23, 1938	19.10	22,100	1955	Nov. 15, 1954	13.42	14,700
	Feb. 17, 1938	15.5	17,200		May 19, 1955	22.62	27,000
	Apr. 15, 1938	8.45	6,590		June 6, 1955	14.39	15,800
	May 20, 1938	8.05	5,720				
	June 9, 1938	8.20	6,150	1956	May 2, 1956	16.14	18,000
	July 24, 1938	24.88	30,700				
				1957	Mar. 21, 1957	10.59	10,400
1939	July 1, 1939	8.0	5,720		Apr. 20, 1957	8.95	8,000
					Apr. 24, 1957	30.3	44,900
1940	Oct. 10, 1939	8.90	7,640		Apr. 27, 1957	27.6	38,100
	June 24, 1940	8.55	7,010		May 13, 1957	36.4	64,000
	June 29, 1940	10.10	9,850		May 10, 1957	9.62	8,990
	July 1, 1940	12.32	13,000		May 26, 1957	9.54	8,860
					June 2, 1957	9.35	8,560
1941	Nov. 24, 1940	18.55	21,400				
	Dec. 11, 1940	16.42	18,400	1958	Oct. 14, 1957	21.52	23,900
	Dec. 15, 1940	10.43	10,300		Feb. 23, 1958	18.22	16,600
	Jan. 13, 1941	9.48	8,790		May 3, 1958	18.33	16,900
	Feb. 1, 1941	13.58	14,700		June 22, 1958	18.22	16,600
	Mar. 6, 1941	12.05	12,600				

Peak stages and discharges of Lampasas River at Youngsport, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1959	June 24, 1959	14.73	9,400	1961	Oct. 5, 1960	13.66	7,400
	June 27, 1959	14.25	8,400		Oct. 14, 1960	18.88	18,200
					Oct. 29, 1960	14.66	9,400
1960	Oct. 4, 1959	35.2	70,600		Dec. 8, 1960	13.90	7,800
	Dec. 15, 1959	15.03	10,000		Jan. 8, 1961	13.25	6,400
	Jan. 6, 1960	13.08	6,280		Feb. 6, 1961	15.18	10,400

8-1045. Little River near Little River, Tex. (208)

Location.--Lat 30°58', long 97°21', at Missouri-Kansas-Texas Railroad Co. bridge, 2 miles south of Little River, 4½ miles below confluence of the Leon and Lampasas Rivers, and 9 miles south of Temple, Bell County.

Drainage area.--5,253 sq mi.

Gage.--Nonrecording. Datum of gage is 400.32 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended by logarithmic plotting.

Remarks.--Base for partial-duration series, 8,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	September 1921	50.85	-	1926	Apr. 22, 1926	41.3	24,100
					July 23, 1926	34.4	10,000
1924	Dec. 13, 1923	37.0	14,700				
				1927	Feb. 10, 1927	37.6	16,100
1925	Sept.12, 1925	22.2	5,140		Apr. 14, 1927	35.40	13,500
					June 14, 1927	37.7	16,300
1926	Oct. 17, 1925	54.6	10,200				
	Nov. 6, 1925	41.2	23,900	1928	Oct. 2, 1927	43.3	28,400
	Mar. 11, 1926	36.8	14,400				
	Apr. 11, 1926	41.0	23,400	1929	May 27, 1929	33.4	a9,120

a Maximum Oct. 1, 1928, to May 27, 1929; probably exceeded during period of no record.

8-1050. San Gabriel River at Georgetown, Tex. (209)

Location.--Lat 30°39'10", long 97°39'20", on left bank 100 ft downstream from Missouri-Kansas-Texas Railroad Co. bridge, 1½ miles downstream from confluence of North and South Forks, and 1½ miles northeast of Georgetown, Williamson County.

Drainage area.--415 sq mi.

Gage.--Nonrecording prior to July 23, 1934; recording thereafter. At site 1 mile upstream at different datum prior to Aug. 31, 1925. Datum of gage is 643.24 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 24,000 cfs, contracted-opening measurement at 155,000 cfs and slope-area measurement at 160,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood of Sept. 10, 1921, was greatest since at least 1852; flood of Apr. 24, 1957, second highest.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges of San Gabriel River at Georgetown, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Sept.10, 1921	a36.1	160,000
1925	May 10, 1925	7.00	3,000
1935	May 10, 1935	8.35	7,750
	May 15, 1935	8.80	8,580
	May 18, 1935	15.45	25,100
	June 1, 1935	7.36	5,820
	June 3, 1935	8.11	7,150
	June 15, 1935	15.25	24,500
	June 22, 1935	8.50	7,950
	Sept. 6, 1935	8.30	7,550
	Sept. 9, 1935	10.25	11,600
	Sept.25, 1935	11.53	14,600
1936	Dec. 6, 1935	12.80	17,800
	May 8, 1936	9.75	10,800
	May 24, 1936	10.56	12,600
	May 27, 1936	14.90	23,600
	Sept.16, 1936	17.70	32,400
	Sept.27, 1936	15.10	24,200
1937	Dec. 6, 1936	6.93	5,130
	July 10, 1937	11.96	16,300
1938	Nov. 9, 1937	10.88	13,600
	Dec. 16, 1937	7.33	5,840
	Jan. 23, 1938	15.15	24,800
	Apr. 25, 1938	7.56	6,400
	Apr. 27, 1938	8.73	8,600
1939	June 6, 1939	3.97	903
1940	Oct. 10, 1939	9.83	11,000
	Apr. 6, 1940	8.11	7,400
	May 22, 1940	7.94	7,000
	June 30, 1940	18.46	34,500
1941	Oct. 31, 1940	7.83	6,800
	Nov. 23, 1940	16.95	30,000
	Dec. 11, 1940	10.68	13,100
	Dec. 15, 1940	7.50	6,200
	Jan. 13, 1941	8.88	9,000
	Feb. 1, 1941	12.03	16,300
	May 18, 1941	8.24	7,600
	Apr. 23, 1941	12.30	17,100
	Apr. 26, 1941	10.60	12,800
	May 3, 1941	11.70	15,500
	June 3, 1941	12.05	16,300
1942	Apr. 20, 1942	9.80	11,000
	Apr. 25, 1942	10.00	11,400
	May 25, 1942	7.78	6,800
	June 6, 1942	8.88	9,000
	June 10, 1942	12.93	18,600
	Sept. 9, 1942	9.13	9,420
1943	Oct. 4, 1942	8.31	7,800
	Oct. 18, 1942	8.32	7,800
1944	Jan. 25, 1944	6.43	4,280
	Feb. 8, 1944	6.68	4,790
	Feb. 25, 1944	6.68	4,790
	Mar. 22, 1944	7.55	6,400
	May 1, 1944	14.27	22,300
	May 25, 1944	12.80	18,400
	June 6, 1944	19.49	37,500
	Sept. 7, 1944	8.72	8,600
1945	Dec. 5, 1944	6.94	5,150
	Jan. 18, 1945	9.54	10,300
	Apr. 1, 1945	8.72	8,600
	Apr. 21, 1945	7.08	5,480
1945	June 4, 1945	8.00	7,200
	June 18, 1945	8.30	7,800
1946	Feb. 18, 1946	7.82	6,800
	Mar. 13, 1946	6.56	4,620
	Apr. 23, 1946	8.30	7,800
	May 16, 1946	6.80	4,960
	Sept.26, 194	[illegible]	8,000
1947	Nov. 3, 194	9.14	9,420
	Nov. 16, 194	9.73	10,700
	Dec. 11, 194	13.80	21,000
	Apr. 12, 194	6.40	4,280
1948	Apr. 15, 1948	10.06	11,400
	May 11, 1948	11.07	14,000
	May 26, 1948	6.96	5,130
1949	Apr. 19, 1949	6.43	4,280
	Apr. 28, 1949	7.70	6,600
	June 15, 1949	6.93	5,130
1950	May 11, 1950	6.87	5,080
1951	Sept.13, 1951	7.03	5,350
1952	Apr. 22, 1952	9.46	10,300
	May 24, 1952	6.92	5,130
	May 28, 1952	9.85	11,000
1953	Dec. 19, 1952	11.24	14,300
	Dec. 30, 1952	8.01	7,200
	Apr. 24, 1953	8.70	8,600
	Apr. 29, 1953	10.88	13,600
	May 13, 1953	7.74	6,600
	May 15, 1953	8.14	7,400
1954	Oct. 23, 1953	15.25	24,200
1955	May 18, 1955	11.46	12,400
	June 5, 1955	9.18	7,600
	July 17, 1955	6.90	4,120
	Aug. 12, 1955	8.88	7,000
1956	May 2, 1956	7.18	5,660
1957	Apr. 20, 1957	7.00	4,380
	Apr. 23, 1957	14.00	17,600
	Apr. 24, 1957	34.10	155,000
	Apr. 27, 1957	8.83	9,440
	Apr. 28, 1957	11.06	14,500
	May 13, 1957	9.08	9,990
	June 1, 1957	10.07	12,200
	June 5, 1957	6.87	5,550
	June 12, 1957	9.29	10,500
1958	Oct. 14, 1957	10.19	11,900
	Feb. 22, 1958	14.07	21,800
	May 3, 1958	6.86	5,130
1959	Aug. 31, 1959	5.66	3,080
1960	Oct. 4, 1959	26.25	71,500
	Oct. 13, 1959	8.41	8,000
	Dec. 15, 1959	16.90	29,700
	Feb. 3, 1960	6.99	5,300
1961	Oct. 14, 1960	7.60	6,400
	Oct. 28, 1960	9.80	11,000
	Feb. 5, 1961	11.39	14,800
	Feb. 16, 1961	14.53	22,800
	July 13, 1961	10.66	13,100

a Present site and datum.

8-1055. San Gabriel River at Circleville, Tex. (210)

Location.--Lat 30°39', long 97°26', at highway bridge half a mile northwest of Circleville, Williamson County, half a mile upstream from Missouri-Kansas-Texas Railroad Co. bridge, and 5½ miles northwest of Taylor.

Drainage area.--602 sq mi.

Gage.--Nonrecording. Datum of gage is 505.27 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 44,000 cfs.

Bankfull stage.--26 ft.

Historical data.--Flood of Sept. 10, 1921, reached the highest stage since at least 1869, from information by local residents.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Sept.10, 1921	a41	-
1925	May 7, 1925	11.50	3,370
	Sept.12, 1925	12.44	3,930
1926	Oct. 13, 1925	15.4	5,240
	Oct. 16, 1925	15.6	5,360
	Nov. 6, 1925	18.0	6,800
	Jan. 16, 1926	26.8	19,700
	Mar. 10, 1926	16.9	6,140
	Mar. 25, 1926	12.8	4,000
	Mar. 30, 1926	12.6	3,840
	Apr. 10, 1926	10.0	2,620
	Apr. 21, 1926	28.70	27,200
	May 2, 1926	13.7	4,420
	May 7, 1926	26.4	18,400
1927	Oct. 23, 1926	11.6	3,400
	Feb. 9, 1927	20.4	8,260
	Mar. 29, 1927	12.2	3,900
	Apr. 8, 1927	16.2	5,720
	Apr. 13, 1927	15.0	5,200
	Apr. 19, 1927	20.3	8,200
	June 6, 1927	20.3	8,200
1928	Oct. 2, 1927	32.75	46,400
1929	Apr. 8, 1929	11.2	2,860
	May 25, 1929	17.2	6,320
	May 29, 1929	34.20	53,400
1930	May 10, 1930	33.20	48,400
	May 18, 1930	24.90	13,700
1931	Oct. 6, 1930	24.75	13,500
	Jan. 17, 1931	17.95	6,800
	Feb. 22, 1931	17.00	6,200
1932	Mar. 5, 1932	15.6	5,360
	May 16, 1932	11.0	2,750
	Sept. 3, 1932	13.2	3,960
1933	July 30, 1933	12.98	3,850
1934	Feb. 8, 1934	23.32	10,800
1957	Apr. 24, 1957	b37.5	-

a Annual peak only, from floodmark; determined in 1956.
b Annual peak only, from floodmark; determined in 1957.

8-1065. Little River at Cameron, Tex. (211)

Location.--Lat 30°50', long 96°57', on right bank at site of old McCowan Bridge, 2,020 ft upstream from bridge on U.S. Highway 77, 1 mile upstream from Gulf, Colorado and Santa Fe Railway Co. bridge, and 2 miles southeast of Cameron, Milam County.

Drainage area.--7,000 sq mi.

Gage.--Nonrecording prior to Oct. 9, 1933; recording thereafter. At site 1½ miles upstream at different datum prior to Sept. 30, 1922. At bridge on U.S. Highway 77, 2,020 ft downstream at datum 1.58 ft lower Apr. 9, 1926, to Oct. 9, 1933. Datum of gage is 281.89 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 110,000 cfs and extended on basis of slope-area measurement at 647,000 cfs.

Bankfull stage.--34 ft.

Historical data.--According to local residents, the flood of Sept. 10, 1921, was the greatest since 1852 and reached about the same stage as a flood in 1852.

Remarks.--Some regulation by Belton Reservoir on Leon River (drainage area above reservoir, 3,499 sq mi) since Mar. 8, 1954. Only annual peaks are shown subsequent to 1954. Base for partial-duration series, 11,000 cfs.

Peak stages and discharges of Little River at Cameron, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	a49.0	-
1918	Apr. 17, 1918	30.4	16,500
1919	Dec. 26, 1918	30.2	15,900
	Jan. 23, 1919	29.8	15,200
	June 18, 1919	29.4	14,500
	June 29, 1919	30.1	15,700
	Sept.24, 1919	28.2	12,900
1920	Oct. 13, 1919	31.5	28,000
	Oct. 18, 1919	27.4	12,200
	Nov. 13, 1919	29.0	13,900
	Jan. 14, 1920	30.5	16,900
	Jan. 24, 1920	31.6	30,000
	May 17, 1920	31.4	26,300
	Aug. 9, 1920	30.5	16,900
1921	May 10, 1921	28.7	13,500
	July 12, 1921	29.0	13,900
	Sept.10, 1921	b49.5	647,000
1922	Mar. 30, 1922	31.0	20,800
	Apr. 5, 1922	34.7	92,000
	Apr. 28, 1922	33.5	68,000
	May 2, 1922	34.6	90,000
	May 17, 1922	30.2	15,900
1923	Apr. 13, 1923	33.2	21,500
1924	Dec. 14, 1923	34.55	34,100
	Feb. 28, 1924	32.1	16,900
	Apr. 11, 1924	27.7	12,300
	Apr. 27, 1924	26.9	11,700
	May 31, 1924	31.5	15,800
1925	Sept.14, 1925	14.2	4,290
1926	Oct. 15, 1925	27.9	13,300
	Oct. 17, 1925	26.6	11,600
	Nov. 8, 1925	33.1	19,300
	Jan. 15, 1926	33.0	19,300
	Mar. 11, 1926	30.8	15,000
	Apr. 13, 1926	31.6	13,800
	Apr. 22, 1926	36.98	61,000
	May 8, 1926	34.0	20,500
1927	Feb. 11, 1927	31.32	13,500
	June 23, 1927	30.8	13,100
1928	Oct. 5, 1927	33.67	18,000
	Feb. 23, 1928	29.0	11,800
1929	Apr. 10, 1929	33.9	19,500
	May 29, 1929	40.7	138,000
1930	May 11, 1930	37.0	61,000
	May 19, 1930	35.4	34,200
	May 24, 1930	31.6	13,800
1931	Oct. 8, 1930	34.00	20,800
	Jan. 19, 1931	28.9	11,800
1932	Jan. 5, 1932	31.2	12,700
	Feb. 22, 1932	33.6	16,700
	May 12, 1932	33.6	16,700
	May 19, 1932	31.9	13,500
	Sept. 4, 1932	34.10	19,000
1933	May 28, 1933	24.60	8,820
1934	Feb. 10, 1934	26.76	11,800
	Apr. 6, 1934	34.37	31,700
1935	May 6, 1935	32.97	18,400
	May 20, 1935	37.40	82,000
	June 16, 1935	36.46	72,900
	Sept.11, 1935	32.16	13,900
	Sept.29, 1935	33.04	18,400
1936	Dec. 8, 1935	33.97	27,700
	May 26, 1936	36.30	67,900
	May 28, 1936	36.40	70,400
	July 1, 1936	33.55	23,200
	Sept.29, 1936	38.75	107,000
1937	Oct. 8, 1936	29.68	11,900
	Dec. 8, 1936	32.23	13,900
1938	Dec. 31, 1937	28.75	11,000
	Jan. 24, 1938	35.48	50,400
	Jan. 31, 1938	28.30	11,500
	Feb. 19, 1938	31.94	13,500
	Apr. 28, 1938	34.02	27,700
	May 9, 1938	28.40	11,100
	July 28, 1938	34.90	40,200
1939	May 19, 1939	30.65	12,400
1940	Apr. 29, 1940	30.14	12,100
	May 24, 1940	33.53	23,200
	July 1, 1940	36.65	67,100
1941	Nov. 25, 1940	37.35	82,000
	Dec. 13, 1940	34.48	34,200
	Dec. 16, 1940	34.96	41,700
	Jan. 15, 1941	34.72	37,200
	Feb. 5, 1941	34.10	28,800
	Mar. 8, 1941	33.30	20,900
	Mar. 19, 1941	33.14	19,600
	Apr. 25, 1941	31.74	15,300
	Apr. 30, 1941	33.30	20,900
	May 4, 1941	33.98	27,700
	May 12, 1941	33.05	18,800
	May 20, 1941	33.20	20,000
	May 25, 1941	30.85	12,600
	June 5, 1941	28.40	11,100
	June 12, 1941	29.56	11,800
	July 12, 1941	33.90	26,600
	July 16, 1941	31.90	13,500
1942	Apr. 9, 1942	35.95	27,200
	Apr. 21, 1942	30.62	12,400
	Apr. 28, 1942	34.14	29,400
	Apr. 30, 1942	33.72	24,600
	May 20, 1942	31.25	12,800
	June 12, 1942	34.58	35,700
	Sept. 9, 1942	36.32	67,900
1943	Oct. 20, 1942	26.35	9,920
1944	Feb. 28, 1944	29.67	12,400
	Mar. 24, 1944	32.00	14,500
	May 4, 1944	36.52	72,900
	May 11, 1944	33.72	24,600
	May 27, 1944	37.24	81,000
	June 8, 1944	33.97	27,200
1945	Dec. 6, 1944	31.88	14,400
	Jan. 19, 1945	34.10	28,800
	Feb. 23, 1945	29.13	12,100
	Mar. 6, 1945	30.98	13,300
	Apr. 2, 1945	33.40	21,700
	Apr. 23, 1945	37.44	82,000
	June 19, 1945	31.62	13,900
1946	Feb. 20, 1946	31.60	13,900
	Mar. 16, 1946	32.33	15,100
	Apr. 24, 1946	31.58	13,900
	May 16, 1946	31.55	13,900
	May 20, 1946	28.15	11,500
	June 1, 1946	27.38	11,000
1947	Nov. 17, 1946	33.28	20,800
	Dec. 13, 1946	32.77	17,200
	Jan. 19, 1947	33.68	24,600
	Mar. 20, 1947	27.80	11,300
1948	May 13, 1948	23.06	8,670
1949	Mar. 23, 1949	28.55	13,300
	Apr. 21, 1949	30.94	15,200

a Present site and datum.
b 55.2 ft, present site and datum.

Peak stages and discharges of Little River at Cameron, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Apr. 26, 1949	35.32	42,400
	Apr. 29, 1949	32.80	19,300
1950	Feb. 13, 1950	31.10	15,400
1951	June 5, 1951	15.49	5,010
1952	Apr. 24, 1952	28.53	13,200
	May 29, 1952	27.09	12,300
1953	May 16, 1953	34.00	28,200
1954	Oct. 25, 1953	31.38	19,100
	Oct. 27, 1953	35.03	41,700
	Dec. 3, 1953	34.63	36,400
1955	May 21, 1955	26.15	10,200
1956	May 4, 1956	23.12	8,160
1957	Apr. 25, 1957	39.56	116,000
1958	Oct. 15, 1957	38.90	103,000
1959	Apr. 12, 1959	21.20	7,290
1960	Oct. 6, 1959	37.07	71,500
1961	Oct. 30, 1960	35.97	55,000

8-1085. Brazos River at Valley Junction, Tex. (212)
(Published as "at Lewis" prior to 1905)

Location.--Lat 30°49'30", long 96°39'12", at downstream side of bridge on U.S. Highway 79, 0.6 mile downstream from International and Great Northern railroad bridge, 1.8 miles southwest of Valley Junction Depot, Robertson County, and 3.0 miles downstream from the Little River.

Drainage area.--37,018 sq mi (U.S. Weather Bureau), of which 27,778 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. At sites 0.6 mile upstream prior to July 18, 1956. At datum 4.00 ft higher prior to Mar. 23, 1918, except unknown datum prior to 1905 (all peak stages subsequent to 1899 shown herein are adjusted to present datum). Datum of gage is 220.29 ft above mean sea level, datum of 1929.

Bankfull stage.--44 ft (U.S. Weather Bureau).

Remarks.--Records published by Geological Survey for 1898, 1899; by U.S. Weather Bureau from 1905 to present. Flow partly regulated by upstream reservoirs. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1898	Apr. 19, 1898	a21.2	-
1899	Oct. 1, 1898	b7.35	-
1905	May 2, 1905	c44.6	-
1906	June 7, 1906	28.3	-
1907	May 31, 1907	20.0	-
1908	May 27, 1908	54.9	-
1909	June 19, 1909	19.8	-
1910	May 23, 1910	24.0	-
1911	July 19, 1911	26.6	-
1912	Mar. 6, 1912	27.5	-
1913	May 8, 1913	20.1	-
1914	Dec. 4, 1913	59.0	-
1915	Apr. 24, 1915	54.0	-
1916	Apr. 4, 1916	32.6	-
1917	Oct. 20, 1916	13.0	-
1918	Apr. 17, 1918	20.0	-
1919	Nov. 10, 1918	34.8	-
1920	Oct. 24, 1919	36.5	-
1921	Sept.12, 1921	58.2	-
1922	Apr. 6, 1922	49.4	-
1923	Apr. 28, 1923	25.6	-
1924	Dec. 15, 1923	28.0	-
1925	May 10, 1925	16.0	-
1926	Apr. 23, 1926	29.5	-
1927	June 15, 1927	19.4	-
1928	June 5, 1928	17.5	-
1929	May 30, 1929	45.3	-
1930	May 20, 1930	38.3	-
1931	Oct. 8, 1930	31.7	-
1932	Feb. 20, 1932	32.7	-
1933	May 29, 1933	24.5	-
1934	Apr. 7, 1934	32.7	-
1935	May 21, 1935	48.5	
1936	May 29, 1936	d33.4	-
1937	Oct. 1, 1936	47.6	-
1938	Jan. 25, 1938	39.6	-
1939	May 19, 1939	25.3	-
1940	July 2, 1940	26.3	-
1941	Nov. 26, 1940	47.4	-
1942	Apr. 28, 1942	39.8	-
1943	Oct. 20, 1942	27.0	-
1944	May 4, 1944	50.4	-
1945	Apr. 24, 1945	47.7	-
1946	May 16, 1946	24.2	-
1947	Jan. 19, 1947	22.2	-
1948	May 13, 1948	18.6	-
1949	May 20, 1949	25.1	-
1950	Feb. 13, 1950	19.6	-
1951	June 14, 1951	15.0	

a Maximum during period February to September 1898; probably maximum for year.
b Maximum during period October 1898 to February 1899; probably exceeded during period of no record.
c Maximum for period March to September 1905; probably maximum for year.
d Maximum peak stage; maximum stage occurred Sept. 30, 1936, stage rising.

Peak stages and discharges of Brazos River at Valley Junction, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 26, 1952	19.5	-	1957	Apr. 26, 1957	45.1	-
1953	May 14, 1953	29.3	-	1958	Oct. 16, 1957	39.0	-
1954	Dec. 4, 1953	20.9	-	1959	May 24, 1959	12.4	-
1955	May 21, 1955	19.1	-	1960	Oct. 8, 1959	34.5	-
1956	May 3, 1956	18.5	-				

8-1090. Brazos River near Bryan, Tex. (213)
(Published as "near College Station" prior to Sept. 11, 1925)

Location.--Lat 30°37', long 96°29', on left bank 2.4 miles downstream from Little Brazos River, 5 miles downstream from Texas and New Orleans Railroad Co. bridge, 9 miles southwest of Bryan, Brazos County, and at mile 285.

Drainage area.--38,400 sq mi, approximately, of which about 29,160 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 25, 1932; recording thereafter. At site 7½ miles downstream at different datum prior to Sept. 11, 1925. At site 3,000 ft upstream Sept. 11, 1925, to Oct. 24, 1932. Datum of gage is 192.33 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 160,000 cfs.

Bankfull stage.--40 ft.

Historical data.--Maximum stage since at least 1854, 54 ft Sept. 12, 1921, present site and datum.

Remarks.--Some regulation of flow by reservoirs above Waco since 1951 and by Belton Reservoir on Leon River since 1954. Only annual peaks are shown subsequent to 1950. Base for partial-duration series, 33,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1854	-	a51	-	1920	Sept. 9, 1920	32.0	48,300
				1921	Sept.12, 1921	e54.0	-
1900	Nov. 23, 1899	29.6	b50,500	1922	Mar. 31, 1922	28.0	38,800
	Jan. 12, 1900	19.0	b38,400		Apr. 7, 1922	49.0	121,000
	Apr. 11, 1900	42.4	b135,000		Apr. 12, 1922	27.5	37,800
	May 1, 1900	42.2	b132,000		Apr. 29, 1922	47.4	115,000
	May 11, 1900	32.3	b59,900		May 4, 1922	48.0	118,000
	June 3, 1900	32.3	b59,000		May 13, 1922	44.9	103,000
	Sept.30, 1900	35.0	b71,000		May 16, 1922	43.5	95,900
1901	Nov. 8, 1900	23.7	b37,300		May 23, 1922	32.0	51,500
1902	Aug. 1, 1902	34.0	b65,900	1923	Apr. 13, 1923	33.2	56,300
					Apr. 28, 1923	28.2	43,400
1914	Dec. 5, 1913	a51	-				
				1924	Dec. 14, 1923	37.6	70,700
1919	Nov. 11, 1918	41.0	69,300		Feb. 29, 1924	28.4	44,500
	Dec. 25, 1918	31.9	50,100				
	Jan. 25, 1919	27.0	37,800	1925	May 10, 1925	32.9	58,000
	Feb. 4, 1919	24.8	33,000				
	Apr. 1, 1919	30.0	44,300	1926	Nov. 7, 1925	-	35,600
	June 28, 1919	32.2	48,500		April 1936	-	d50,000
	July 24, 1919	26.4	35,300				
	Aug. 23, 1919	30.8	45,500	1927	June 22, 1927	22.8	43,800
	Sept.24, 1919	30.0	44,900				
				1928	Oct. 4, 1927	21.3	38,700
1920	Oct. 12, 1919	31.3	48,600		Feb. 25, 1928	19.6	33,000
	Oct. 18, 1919	36.0	59,400				
	Oct. 25, 1919	41.5	70,500	1929	May 20, 1929	44.4	-
	Nov. 11, 1919	37.9	64,700				
	Nov. 30, 1919	26.6	39,000	1930	May 12, 1930	43.2	-
	Jan. 13, 1920	29.0	44,400		May 20, 1930	47.1	-
	Jan. 25, 1920	30.0	47,000		June 20, 1930	-	-
	May 12, 1920	26.0	34,000				
	May 19, 1920	34.0	53,200	1931	Oct. 9, 1930	29.4	66,300

a About; present site and datum, from information Texas and New Orleans Railroad Co. and local residents.
b Maximum daily discharge.
c Present site and datum.
d Estimated.

Peak stages and discharges of Brazos River near Bryan, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Dec. 7, 1930	24.4	49,300	1942	Oct. 8, 1941	21.97	45,500
	Jan. 20, 1931	19.8	33,000		Apr. 10, 1942	27.96	65,000
					Apr. 22, 1942	24.70	48,400
1932	Jan. 6, 1932	22.7	39,100		Apr. 28, 1942	38.48	103,000
	Feb. 21, 1932	32.65	75,100		May 13, 1942	24.96	53,000
	May 11, 1932	25.2	47,700		May 21, 1942	29.00	69,000
	May 17, 1932	27.4	55,600		June 13, 1942	22.84	43,500
	Sept. 5, 1932	26.0	50,500		June 17, 1942	23.20	44,100
	Sept.12, 1932	23.0	40,100		Sept. 9, 1942	31.60	74,600
1933	May 26, 1933	19.3	35,500	1943	Oct. 20, 1942	26.00	53,800
	May 29, 1933	20.82	40,900				
				1944	May 4, 1944	43.20	172,000
1934	Mar. 26, 1934	19.3	35,500		May 29, 1944	30.43	74,600
	Apr. 7, 1934	31.05	79,600				
				1945	Jan. 20, 1945	25.84	55,000
1935	May 7, 1935	30.7	58,200		Feb. 23, 1945	25.55	55,400
	May 22, 1935	42.30	139,000		Mar. 4, 1945	26.43	58,600
	June 16, 1935	e30.7	e58,200		Apr. 1, 1945	29.52	71,000
	Sept.10, 1935	22.6	36,000		Apr. 24, 1945	41.70	139,000
1936	Dec. 7, 1935	27.7	62,100	1946	Dec. 3, 1945	19.28	35,900
	May 29, 1936	31.5	75,000		Feb. 20, 1946	20.4	38,800
	July 2, 1936	19.4	34,800		Mar. 15, 1946	24.96	57,400
	Sept.20, 1936	19.2	35,400		May 17, 1946	25.20	57,400
1937	Oct. 1, 1936	41.96	133,000	1947	Nov. 6, 1946	19.72	36,100
					Jan. 19, 1947	22.35	46,400
1938	Jan. 26, 1938	37.48	103,000		May 21, 1947	18.65	33,800
	Feb. 20, 1938	28.42	64,400				
	Mar. 31, 1938	21.6	42,000	1948	May 13, 1948	18.04	30,000
	Apr. 16, 1938	20.5	37,500				
	Apr. 30, 1938	22.4	44,600	1949	Apr. 27, 1949	21.75	42,300
	June 18, 1938	22.35	44,400		May 20, 1949	24.98	53,200
	July 30, 1938	19.95	33,300				
				1950	Feb. 14, 1950	22.25	43,800
1939	May 19, 1939	26.25	54,200				
	June 21, 1939	20.10	34,100	1951	June 14, 1951	13.02	15,600
				1952	May 26, 1952	19.24	33,500
1940	July 2, 1940	26.80	57,900	1953	May 14, 1953	28.82	65,200
				1954	Dec. 4, 1953	19.96	34,000
1941	Nov. 27, 1940	42.50	150,000	1955	May 21, 1955	17.57	30,700
	Dec. 13, 1940	23.00	45,500				
	Dec. 17, 1940	29.10	69,400	1956	May 4, 1956	18.44	33,100
	Jan. 15, 1941	23.45	46,900	1957	Apr. 26, 1957	42.08	137,000
	Feb. 4, 1941	31.42	78,600	1958	Oct. 16, 1957	39.16	104,000
	Feb. 25, 1941	22.02	42,100	1959	Apr. 12, 1959	12.54	14,200
	Mar. 8, 1941	21.47	40,400	1960	Oct. 7, 1959	35.32	93,000
	May 7, 1941	33.26	86,200				
	May 28, 1941	21.62	40,800	1961	Dec. 10, 1960	34.32	88,000
	June 17, 1941	27.20	61,800				
	July 13, 1941	20.90	38,500				

e Estimated.

8-1100. Yegua Creek near Somerville, Tex. (214)

Location.--Lat 30°19'18", long 96°30'27", near center of span at downstream side of bridge on State Highway 36, 760 ft downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 2 miles south of Somerville, Burleson County, and 5 miles upstream from Davidson Creek.

Drainage area.--990 sq mi.

Gage.--Inverted chain gage at railway bridge 760 ft upstream at datum 34.30 ft higher prior to Jan. 30, 1934; recording gage thereafter. Datum of gage is 199.21 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Historical data.--Flood of Dec. 5, 1913, reached highest stage since at least 1875, from information by Gulf, Colorado and Santa Fe Railway Co. and local residents. Second highest stage since 1875 occurred July 1, 1940.

Remarks.--Base for partial-duration series, 1,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 5, 1913	a22	-	1934	Apr. 21, 1934	7.82	2,510
1925	July 7, 1925	-30.70	30	1935	Dec. 29, 1934	8.08	2,900
1926	Oct. 16, 1925	-21.20	16,700		Feb. 15, 1935	7.20	1,780
	Oct. 25, 1925	-25.80	3,810		May 8, 1935	10.92	8,000
	Oct. 31, 1925	-22.40	12,200		May 21, 1935	10.20	6,180
	Nov. 8, 1925	-25.20	4,850		Sept. 9, 1935	8.32	2,700
	Nov. 19, 1925	-26.00	3,490	1936	Dec. 9, 1935	7.94	2,400
	Jan. 4, 1926	-27.38	1,690		May 25, 1936	15.17	23,500
	Mar. 12, 1926	-26.4	2,930		July 3, 1936	13.80	18,100
	Mar. 23, 1926	-24.45	6,450				
	Mar. 31, 1926	-25.28	4,670	1937	Jan. 13, 1937	6.68	1,330
	Apr. 10, 1926	-27.00	2,170				
	Apr. 22, 1926	-18.02	34,600	1938	Oct. 19, 1937	8.50	3,120
	May 11, 1926	-25.9	3,650		Nov. 11, 1937	7.02	1,570
					Nov. 24, 1937	7.60	2,090
1927	Nov. 4, 1926	-27.10	1,920		Dec. 24, 1937	8.38	2,970
	Dec. 10, 1926	-24.25	6,950		Jan. 11, 1938	6.83	1,450
	Feb. 12, 1927	-27.30	1,680		Jan. 26, 1938	10.94	9,620
	Mar. 23, 1927	-27.37	1,560		Apr. 21, 1938	8.79	3,750
	Apr. 13, 1927	-22.6	11,600		Apr. 27, 1938	12.96	15,600
	July 2, 1927	-27.06	1,920		May 9, 1938	7.30	1,910
1928	Feb. 24, 1928	-26.70	2,440	1939	Feb. 27, 1939	6.70	1,330
1929	Dec. 13, 1928	-26.8	2,310	1940	June 19, 1940	7.69	2,160
	Apr. 15, 1929	-24.35	6,450		July 1, 1940	19.27	56,800
	May 20, 1929	-27.44	1,560				
	May 30, 1929	-17.02	41,200	1941	Nov. 7, 1940	8.53	3,160
					Nov. 26, 1940	12.16	12,500
1930	Nov. 11, 1929	-25.54	4,230		Dec. 14, 1940	11.60	10,800
	May 19, 1930	-24.40	6,450		Dec. 29, 1940	7.65	1,870
					Jan. 15, 1941	8.64	3,400
1931	Nov. 30, 1930	-26.00	3,450		Feb. 26, 1941	7.30	1,500
	Dec. 6, 1930	-25.50	4,130		Mar. 6, 1941	9.98	6,000
	Jan. 13, 1931	-24.42	6,700		Mar. 20, 1941	9.87	5,640
	Feb. 10, 1931	-27.1	2,050		Apr. 25, 1941	8.04	2,410
	Feb. 18, 1931	-27.00	2,050		May 6, 1941	9.86	5,640
	Mar. 2, 1931	-26.22	3,290		June 12, 1941	11.13	9,120
	May 4, 1931	-27.4	1,560		July 13, 1941	13.00	16,100
1932	Jan. 7, 1932	-21.54	15,500	1942	Nov. 3, 1941	7.07	1,440
	Jan. 13, 1932	-24.15	6,950		Apr. 9, 1942	10.66	7,900
	Jan. 28, 1932	-27.20	3,140				
	Feb. 22, 1932	-21.82	14,550	1943	May 31, 1943	6.64	1,050
	Mar. 6, 1932	-25.12	5,050				
	Sept.10, 1932	-26.72	2,440	1944	Jan. 3, 1944	7.78	2,190
	Sept.25, 1932	-27.41	1,560		Jan. 30, 1944	9.80	5,410
					Feb. 14, 1944	7.40	1,730
1933	Jan. 31, 1933	-25.0	4,400		Feb. 28, 1944	7.44	1,780
	Mar. 8, 1933	-27.22	1,540		Mar. 25, 1944	7.26	1,560
					May 23, 1944	8.46	3,050
1934	Jan. 28, 1934	-24.75	4,680				
	Feb. 11, 1934	8.23	3,100	1945	Nov. 19, 1944	7.64	1,900
	Mar. 3, 1934	12.17	11,900		Nov. 26, 1944	10.37	7,250
	Apr. 9, 1934	9.67	5,400		Dec. 8, 1944	9.67	5,100

a Present site and datum.

Peak stages and discharges of Yegua Creek near Somerville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Dec. 29, 1944	9.40	4,610	1955	Feb. 6, 1955	7.97	2,380
	Jan. 7, 1945	8.60	3,270				
	Jan. 19, 1945	10.35	7,000	1956	Feb. 10, 1956	7.23	1,580
	Apr. 2, 1945	10.42	6,750				
	Apr. 22, 1945	8.80	3,570	1957	Apr. 27, 1957	13.61	17,300
	June 20, 1945	8.10	2,380		May 12, 1957	7.19	1,520
	Aug. 30, 1945	12.00	11,600		June 8, 1957	7.92	2,500
					June 17, 1957	7.92	2,500
1946	Jan. 16, 1946	8.98	3,890		Sept.28, 1957	8.05	2,700
	Feb. 20, 1946	8.70	3,420				
	Mar. 13, 1946	12.53	13,600	1958	Oct. 16, 1957	12.01	11,600
	May 20, 1946	7.80	2,190		Oct. 25, 1957	9.77	5,300
					Nov. 24, 1957	9.13	4,150
1947	Nov. 20, 1946	9.55	4,900		Jan. 14, 1958	7.79	2,070
	Jan. 19, 1947	7.03	1,430		Jan. 25, 1958	8.06	2,440
	Mar. 14, 1947	10.26	6,510		Feb. 25, 1958	11.75	10,900
	Mar. 21, 1947	7.98	2,440		Apr. 30, 1958	10.74	7,510
	May 20, 1947	8.42	2,980		May 5, 1958	9.16	4,150
	Aug. 26, 1947	15.62	29,600		May 7, 1958	8.72	3,420
					July 8, 1958	8.48	3,120
1948	Feb. 9, 1948	6.44	898		Sept.24, 1958	9.53	4,900
1949	Feb. 27, 1949	10.60	7,250	1959	Oct. 3, 1958	7.12	1,440
	Apr. 24, 1949	9.05	3,980		Feb. 16, 1959	8.93	3,810
	Apr. 28, 1949	13.13	16,100		Apr. 12, 1959	11.53	9,820
					Apr. 19, 1959	10.14	6,050
1950	Oct. 23, 1949	8.10	2,570				
	Oct. 26, 1949	8.85	3,650	1960	Nov. 1, 1959	7.48	1,840
	Feb. 15, 1950	8.51	3,420		Dec. 17, 1959	7.94	2,380
	Apr. 18, 1950	9.90	5,620		Jan. 20, 1960	7.13	1,480
	May 2, 1950	7.46	1,780		Feb. 5, 1960	8.89	3,170
	June 7, 1950	10.24	5,600		Apr. 30, 1960	11.17	7,420
	Sept.19, 1950	8.24	2,770		June 26, 1960	11.24	7,420
1951	Mar. 29, 1951	6.24	764	1961	Oct. 30, 1960	12.66	12,300
					Nov. 23, 1960	9.68	4,670
1952	May 24, 1952	7.62	1,950		Dec. 11, 1960	10.07	5,410
	July 19, 1952	9.80	5,410		Jan. 2, 1961	7.93	2,120
					Jan. 9, 1961	8.83	3,300
1953	Jan. 1, 1953	9.00	3,890		Feb. 7, 1961	8.05	2,240
	May 1, 1953	8.85	3,270		Feb. 18, 1961	8.67	3,020
	May 16, 1953	10.00	5,000		June 19, 1961	14.37	19,100
					July 11, 1961	7.42	1,530
1954	Oct. 27, 1953	8.23	2,770		Sept.13, 1961	15.42	23,900

8-1105. Navasota River near Easterly, Tex. (215)

Location.--Lat 31°10'10", long 96°17'55", near center of span at downstream side of bridge on U.S. Highway 79, 1 mile upstream from Missouri Pacific Railroad Co. bridge, and 7 miles northeast of Easterly, Robertson County.

Drainage area.--949 sq mi.

Gage.--Inverted staff gage at railroad bridge 1 mile downstream at datum 24.86 ft higher prior to June 11, 1932; recording gage thereafter. Datum of gage is 276.42 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs and extended to 90,000 cfs by logarithmic plotting.

Bankfull stage.--15 ft.

Historical data.--Maximum stage since at least 1845 occurred in June 1899, from information by local residents.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	June 1899	a24	90,000	1926	Apr. 23, 1926	-9.10	17,600
1925	Sept.16, 1925	-12.6	2,540	1927	Dec. 11, 1926	-11.2	4,200
1926	Oct. 19, 1925	-12.3	2,650		Jan. 22, 1927	-9.4	15,200
	Nov. 7, 1925	-9.10	17,600		Feb. 9, 1927	-11.6	3,400
	Mar. 22, 1926	-9.70	13,000		Apr. 20, 1927	-11.8	3,060
					June 19, 1927	-11.4	3,800

a Present site and datum.

Peak stages and discharges of Navasota River near Easterly, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)
1928	Oct. 4, 1927	-9.20	16,800
	Feb. 25, 1928	-10.6	6,900
	June 8, 1928	-10.7	5,900
1929	Dec. 17, 1928	-10.3	8,800
	Apr. 15, 1929	-12.0	2,800
	May 15, 1929	-10.6	6,900
	May 30, 1929	-5.5	49,400
1930	May 12, 1930	-7.6	30,100
1931	Dec.4-6, 1930	-11.3	4,000
	Jan. 21, 1931	-10.4	8,100
	Feb. 6, 1931	-11.8	3,060
	Feb. 11, 1931	-11.4	3,800
	Feb. 17, 1931	-11.2	4,300
	Feb. 23, 1931	-11.0	5,100
1932	Jan. 5, 1932	-6.9	36,400
	Jan. 13, 1932	-10.0	10,300
	Feb. 21, 1932	-8.8	20,000
	Mar. 9, 1932	-12.0	2,800
	Sept. 5, 1932	21.9	58,100
1933	Jan. 10, 1933	14.46	3,210
	Apr. 1, 1933	15.35	5,110
	May 27, 1933	15.29	4,780
1934	Mar. 3, 1934	14.00	2,700
	Mar. 27, 1934	16.94	13,200
	Apr. 7, 1934	17.40	16,600
1935	Feb. 9, 1935	16.38	10,000
	Apr. 27, 1935	17.59	18,000
	May 6, 1935	16.95	13,800
	May 21, 1935	16.96	13,800
	June 19, 1935	14.70	3,440
1936	Oct. 25, 1935	15.30	4,840
	Dec. 7, 1935	20.29	41,700
	July 2, 1936	18.18	23,700
1937	Dec. 8, 1936	15.83	7,050
	Jan. 15, 1937	15.86	7,050
	Mar. 7, 1937	15.88	7,290
	Mar. 16, 1937	15.08	4,290
1938	Nov. 12, 1937	14.14	2,730
	Jan. 25, 1938	16.85	13,100
	Apr. 18, 1938	15.80	6,950
	June 22, 1938	14.77	3,700
1939	May 20, 1939	12.42	1,620
1940	May 25, 1940	12.75	1,880
	July 1, 1940	12.83	1,880
1941	Nov. 24, 1940	19.58	34,300
	Dec. 18, 1940	15.68	6,500
	Dec. 27, 1940	15.88	7,450
	Jan. 15, 1941	17.03	15,100
	Feb. 4, 1941	15.22	4,760
	Feb. 26, 1941	16.25	9,400
	Mar. 10, 1941	14.60	3,590
	June 11, 1941	14.95	4,200
1942	Apr. 11, 1942	14.88	4,100
	Apr. 29, 1942	14.03	2,860
	May 12, 1942	15.25	4,900
	May 19, 1942	17.53	18,800
	Sept.13, 1942	15.02	3,300
1943	Dec. 30, 1942	15.24	4,900
1944	Jan. 17, 1944	13.50	2,720
	Jan. 31, 1944	13.60	2,820
	Feb. 11, 1944	15.80	8,800
	Feb. 26, 1944	16.30	11,600
	Mar. 25, 1944	14.90	4,300
	May 2, 1944	22.13	60,300
	May 30, 1944	14.72	3,760
1945	Dec. 29, 1944	15.60	5,900
1945	Jan. 21, 1945	15.75	6,800
	Feb. 23, 1945	15.00	4,300
	Mar. 5, 1945	17.30	15,600
	Apr. 2, 1945	17.27	15,600
	Apr. 25, 1945	15.59	5,500
	Aug. 30, 1945	15.98	7,800
1946	Oct. 12, 1945	[illegible]	5,900
	Dec. 3, 1945	[illegible]	18,000
	Jan. 18, 1946	[illegible]	2,820
	Feb. 12, 1946	14.88	4,100
	Feb. 21, 1946	15.32	4,950
	Mar. 14, 1946	13.88	2,720
	Mar. 27, 1946	15.82	6,550
	May 14, 1946	18.29	23,200
	June 3, 1946	15.65	6,100
1947	Nov. 5, 1946	15.51	5,500
	Nov. 17, 1946	15.45	5,350
	Jan. 20, 1947	16.05	8,050
	Mar. 13, 1947	15.61	5,900
	Mar. 21, 1947	14.77	3,640
	May 10, 1947	16.13	8,550
	May 20, 1947	16.20	8,800
	June 1, 1947	14.92	4,100
1948	May 14, 1948	14.84	4,010
1949	Jan. 29, 1949	14.57	3,520
	Mar. 22, 1949	15.45	5,350
	Mar. 28, 1949	14.22	3,040
1950	Oct. 25, 1949	15.20	6,260
	Jan. 14, 1950	13.85	2,620
	Feb. 13, 1950	17.78	19,000
	Apr. 18, 1950	15.24	4,820
1951	Sept.17, 1951	7.85	710
1952	May 27, 1952	15.82	6,800
1953	Dec. 23, 1952	13.76	2,620
	Jan. 9, 1953	14.46	3,380
	Mar. 14, 1953	16.64	11,600
	May 17, 1953	18.57	25,700
1954	Dec. 3, 1953	16.09	8,300
1955	Apr. 10, 1955	12.70	1,930
1956	May 4, 1956	15.27	4,820
1957	Apr. 25, 1957	19.87	37,700
	May 13, 1957	19.45	32,900
	June 6, 1957	14.10	2,900
1958	Oct. 16, 1957	18.34	24,800
	Feb. 25, 1958	14.33	3,240
	May 6, 1958	15.52	5,000
	Aug. 27, 1958	15.60	5,200
	Sept.24, 1958	14.93	3,840
1959	Feb. 17, 1959	15.17	4,600
	Apr. 13, 1959	14.55	2,900
	May 13, 1959	17.03	10,400
	June 25, 1959	17.44	12,600
1960	Oct. 9, 1959	15.55	4,550
	Dec. 18, 1959	16.55	9,100
	Jan. 4, 1960	14.76	3,130
	Jan. 17, 1960	15.40	4,160
	May 1, 1960	15.10	3,560
1961	Dec. 9, 1960	19.54	33,000
	Jan. 9, 1961	17.90	18,600
	Jan. 14, 1961	16.59	9,800
	Feb. 8, 1961	16.75	10,700
	Feb. 19, 1961	15.94	6,200
	June 20, 1961	17.76	17,400
	July 11, 1961	14.02	2,820
	July 17, 1961	14.29	3,120

8-1110. Navasota River near Bryan, Tex. (216)

Location.--Lat 30°52'05", long 96°11'25", on right bank at upstream side of bridge on U.S. Highway 190, 2.5 miles upstream from Shepherd Creek and 17 miles northeast of Bryan, Brazos County.

Drainage area.--1,439 sq mi.

Gage.--Recording. Datum of gage is 224.45 ft above mean sea level, datum of 1929 (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Historical data.--Maximum stage since 1840 occurred in June 1899, from information by local residents.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1899	June 29, 1899	19.5	-
1951	Mar. 29, 1951	10.12	872
1952	May 31, 1952	12.52	3,900
1953	Jan. 6, 1953	11.87	3,150
	Mar. 16, 1953	13.56	8,260
	Apr. 29, 1953	13.02	5,700
	May 18, 1953	16.12	28,100
1954	Oct. 27, 1953	12.82	3,780
	Dec. 5, 1953	13.68	8,020
1955	Apr. 11, 1955	12.76	4,680
	Apr. 13, 1955	13.37	7,320
1956	May 8, 1956	12.92	3,060
1957	Apr. 26, 1957	16.36	35,800
	May 15, 1957	15.28	22,700
1958	Oct. 15, 1957	13.99	8,600
	Oct. 17, 1957	15.68	28,300
1958	Feb. 26, 1958	12.90	4,650
	May 9, 1958	13.10	4,250
	Sept. 1, 1958	12.77	3,090
	Sept.27, 1958	13.11	4,250
1959	Feb. 15, 1959	12.98	3,900
	Feb. 21, 1959	13.16	4,450
	Apr. 18, 1959	13.45	4,650
	May 16, 1959	13.73	5,950
	June 29, 1959	13.91	6,450
1960	Dec. 19, 1959	13.97	8,180
	Jan. 7, 1960	13.02	3,210
	Jan. 20, 1960	13.26	4,040
	May 4, 1960	13.05	3,300
1961	Oct. 30, 1960	13.20	3,800
	Nov. 22, 1960	13.69	6,240
	Nov. 25, 1960	13.52	5,260
	Dec. 11, 1960	16.25	31,200
	Jan. 11, 1961	14.94	17,400
	Feb. 10, 1961	14.14	9,520
	Feb. 22, 1961	13.62	5,820
	June 22, 1961	14.59	13,800

8-1115. Brazos River near Hempstead, Tex. (217)

Location.--Lat 30°07'25", long 96°11'00", at bridge on U.S. Highway 290, 4,500 ft upstream from Texas and New Orleans Railroad Co. bridge, 6.5 miles northwest of Hempstead, Waller County, 8 miles upstream from Caney Creek, and at mile 196.

Drainage area.--42,640 sq mi, approximately, of which about 33,400 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. At site 3 miles upstream at datum 5.00 ft higher from 1905 to 1922. At site 4,500 ft downstream at datum 5.80 ft lower from December 1938 to Nov. 1, 1940. Datum of gage is 117.90 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--40 ft.

Historical data.--Maximum stage known since at least 1899, that of Dec. 9, 1913.

Remarks.--Records partly regulated by reservoirs above Bryan since March 1941. Gage heights prior to 1939 furnished by U.S. Weather Bureau. Only annual peaks are shown.

Peak stages and discharges of Brazos River near Hempstead, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	July 4, 1899	a53.6	-	1939	May 19, 1939	32.43	58,000
				1940	July 3, 1940	42.8	83,100
1905	May 5, 1905	b40.5	-				
				1941	Nov. 30, 1940	44.04	116,000
1906	June 9, 1906	29.2	-	1942	Apr. 29, 1942	37.52	90,500
1907	June 3, 1907	30.6	-	1943	Oct. 21, 1942	27.40	47,100
1908	June 2, 1908	42.6	-	1944	May 7, 1944	d42.00	108,000
1909	June 20, 1909	16.0	-	1945	Apr. 26, 1945	d39.31	106,000
1910	May 24, 1910	21.5	-				
				1946	May 20, 1946	d35.30	85,300
1911	July 21, 1911	22.1	-	1947	Jan. 20, 1947	d26.73	57,000
1912	Mar. 7, 1912	23.6	-	1948	May 14, 1948	19.25	24,000
1913	May 10, 1913	19.2	-	1949	Apr. 29, 1949	d27.18	52,000
1914	Dec. 9, 1913	c52.8	-	1950	Feb. 14, 1950	d25.80	49,400
1915	Apr. 29, 1915	46.5	-				
				1951	June 15, 1951	14.45	13,800
1916	Apr. 5, 1916	30.7	-	1952	May 27, 1952	21.89	32,200
1917	Sept. 9, 1917	6.8	-	1953	May 18, 1953	35.40	79,200
1918	Apr. 19, 1918	19.0	-	1954	Dec. 5, 1953	22.19	31,800
1919	Nov. 12, 1918	31.3	-	1955	May 22, 1955	18.9	23,200
1920	Oct. 26, 1919	35.7	-				
				1956	May 5, 1956	18.20	24,800
1921	Sept.16, 1921	40.2	-	1957	May 2, 1957	44.21	143,000
1922	May 6, 1922	43.6	-	1958	Feb. 26, 1958	e38.31	91,800
				1959	Apr. 18, 1959	22.10	37,600
1929	June 2, 1929	a47.3	-	1960	Oct. 8, 1959	d32.29	74,000
1935	May 25, 1935	a42.9	-	1961	Jan. 15, 1961	35.10	78,200

a Adjusted to present site and datum from information by Texas and New Orleans Railroad Co. b. Maximum January to September 1905; probably maximum for year. c Estimated by U.S. Weather Bureau; 56.1 ft on Dec. 8, 1913, present site and datum, from information by Texas and New Orleans Railroad Co. d Discharge affected by rate of change in stage; peak stage occurred several hours later. e Occurred Oct.18, 1957.

8-1120. Brazos River near San Felipe, Tex. (218)

Location.--Lat 29°46'20", long 96°02'10", near center of span at right side of pier of bridge on U.S. Highway 90, 200 ft downstream from Missouri-Kansas-Texas Railroad bridge, 1.3 miles downstream from Irons Creek, 5.0 miles southeast of San Felipe Post Office, Austin County, and at mile 142.

Drainage area.--43,660 sq mi, approximately, of which about 34,420 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 17, 1940; recording thereafter. Datum of gage is 79.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur due to slope and to channel changes.

Bankfull stage.--40 ft.

Remarks.--During period October 1945 to September 1953, gage heights only were obtained. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 9, 1913	a49	-	1946	May 20, 1946	32.45	-
				1947	Aug. 28, 1947	24.47	-
1929	June 6, 1929	b44	-	1948	May 14, 1948	17.82	-
				1949	Apr. 29, 1949	24.48	-
1935	May 27, 1935	b39.5	-	1950	Feb. 15, 1950	22.97	-
1939	May 20, 1939	23.90	59,600	1951	June 16, 1951	14.02	-
1940	July 4, 1940	33.44	80,200	1952	May 27, 1952	19.55	-
				1953	May 19, 1953	31.2	-
1941	Nov. 25, 1940	41.10	152,000	1954	Dec. 5, 1953	19.60	29,500
1942	Apr. 9, 1942	c33.70	80,500	1955	May 23, 1955	16.91	19,600
1943	Oct. 22, 1942	24.70	46,900				
1944	May 8, 1944	36.82	106,000	1956	May 5, 1956	16.58	21,400
1945	Apr. 26, 1945	34.85	94,300	1957	May 3, 1957	39.45	124,000

a Information by local resident. b Computed on basis of comparative peaks for flood of Dec. 9, 1913, at Richmond, 43 miles downstream. c Occurred Apr. 30, 1942.

8-1140. Brazos River at Richmond, Tex. (219)
(Published as "at Rosenberg" October 1922 to September 1931)

Location.--Lat 29°35', long 95°45', near right bank on downstream side of pier of bridge on U.S. Highway 59 in Richmond, Fort Bend County, 925 ft downstream from Texas and New Orleans Railroad Co. bridge and at mile 93.

Drainage area.--44,020 sq mi, approximately, of which about 34,780 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 7, 1931; recording thereafter. At site 925 ft upstream at datum 0.90 ft higher January 1903 to June 1906. At site 7.6 miles upstream at datum 4.0 ft higher 1913 to September 1931. Datum of gage is 40.94 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--35 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1852, that of Dec. 10, 1913.

Remarks.--Flow partly regulated by upstream reservoirs since 1930. Gage heights furnished by U.S. Weather Bureau for water years 1915-31. Beginning 1944, loop curves were drawn to adjust for the change-in-stage effect. Boyer's method was used in 1953 and 1954, after which the loop-curve method was used again. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May 1884	a43.7	-	1934	Apr. 10, 1934	29.4	71,400
1885	June 13, 1885	a44.7	-	1935	May 27, 1935	36.12	90,900
1899	July 1899	a45.6	-	1936	May 31, 1936	33.1	g74,700
				1937	Oct. 5, 1936	32.17	77,100
1903	Mar. 7, 1903	-	b66,600	1938	Jan. 28, 1938	29.70	68,600
1904	May 11, 1904	-	b47,600	1939	May 21, 1939	20.52	41,900
1905	May 6, 1905	-	b65,600	1940	July 5, 1940	31.22	82,100
1906	June 9, 1906	-	c37,300	1941	Nov. 28, 1940	38.40	117,000
				1942	May 1, 1942	32.42	79,400
1914	Dec. 9, 1913	d56.4	-	1943	Oct. 22, 1942	22.17	45,500
1915	May 1, 1915	50.3	-	1944	May 8, 1944	h34.70	93,800
				1945	Apr. 27, 1945	i32.60	85,000
1916	May 6, 1916	30.7	-				
1917	Oct. 24, 1916	6.9	-	1946	May 20, 1946	130.1	82,500
1918	Apr. 17, 1918	15.0	-	1947	Aug. 28, 1947	j22.06	51,000
1919	July 1, 1919	e30.0	-	1948	May 15, 1948	13.22	22,100
1920	Jan. 26, 1920	f36.4	-	1949	Apr. 30, 1949	i21.49	56,000
				1950	Feb. 15, 1950	119.83	44,500
1921	Sept.16, 1921	37.7	-				
1922	May 9, 1922	49.8	-	1951	June 17, 1951	9.48	11,100
1923	Apr. 15, 1923	29.35	54,900	1952	May 28, 1952	15.75	34,400
1924	Dec. 16, 1923	33.0	64,800	1953	May 19, 1953	129.86	83,100
1925	May 12, 1925	17.1	24,200	1954	Oct. 30, 1953	k15.59	32,400
				1955	May 23, 1955	12.76	19,300
1926	Apr. 26, 1926	37.1	86,900				
1927	June 25, 1927	22.4	42,500	1956	May 6, 1956	12.25	m17,900
1928	Oct. 5, 1927	20.6	36,800	1957	May 5, 1957	37.13	119,000
1929	June 6, 1929	46.2	123,000	1958	Oct. 20, 1957	31.90	87,600
1930	May 23, 1930	36.8	78,800	1959	Apr. 19, 1959	19.19	39,200
				1960	Oct. 9, 1959	25.00	60,300
1931	Oct. 10, 1930	27.6	52,100				
1932	Feb. 24, 1932	31.85	80,500	1961	Jan. 16, 1961	29.66	78,800
1933	May 31, 1933	18.70	34,000				

a From Southern Pacific Railroad Co. at site 925 ft upstream, present datum. b Maximum daily. c Maximum daily for period Oct. 1, 1905 to June 30, 1906. d Maximum stage of 48.2 ft (present datum) occurred on Dec. 10, 1913, at point 1,000 ft upstream from present site. e Highest published by U.S. Weather Bureau; no gage readings from June to September except June 29, 30, July 1, 6, 24. f Probably highest; no gage readings published by U.S. Weather Bureau Oct. 1-18, 1919. g Discharge of 74,700 cfs also occurred Dec. 9, 1935. h Occurred May 10, 1944. i Discharge computed by adjusting for rate of change in stage; peak stage occurs several hours later. j Occurred Jan. 21, 1947. k Occurred Dec. 6, 1953. m Discharge of 17,900 cfs also occurred Oct. 14, 1955.

8-1145. Brazos River near Juliff, Tex. (220)

Location.--Lat 29°27'20", long 95°31'57", on left bank at South Texas Water Co.'s pumping plant, 3⅛ miles west of Juliff, Fort Bend County, 5½ miles downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, and at mile 67.

Drainage area.--44,100 sq mi, approximately, of which about 34,860 sq mi contributes directly to surface runoff.

Gage.--Recording since May 14, 1949. Datum of gage is mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 75,000 cfs. Above 75,000 cfs the total flow is impossible to measure and the discharge is estimated on basis of records for station at Richmond.

Historical data.--Flood of Dec. 11, 1913, was the greatest since at least 1884. Flood in July 1899, stage not known, was probably exceeded only by flood of Dec. 11, 1913. This information furnished by Mr. Dave Dickson of Juliff and considered very reliable.

Remarks.--Flow partly regulated by reservoirs 350 to 375 miles above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 11, 1913	a64.0	-	1952	May 28, 1952	39.02	32,100
				1953	May 19, 1953	55.49	c76,300
1922	May 10, 1922	a61.0	-	1954	Oct. 30, 1953	36.58	c28,700
				1955	May 24, 1955	d32.42	19,100
1929	June 7, 1929	a61.0	-				
				1956	May 6, 1956	e32.20	17,800
1941	Nov. 29, 1940	a61.5	-	1957	May 6,7, 1957	59.17	f116,000
				1958	Oct. 20, 1957	56.65	82,000
1949	May 22, 1949	41.07	b41,100	1959	Apr. 13, 1959	41.75	c43,900
1950	Feb. 15, 1950	43.26	c48,500	1960	June 27, 1960	52.30	c72,700
1951	June 17, 1951	28.20	10,300	1961	Jan. 17, 1961	55.10	74,600

a From floodmark 4 miles to left of gage; information from local resident. b Maximum for period May 14 to Sept. 30, 1949; probably exceeded during period of no record. c Discharge affected by rate of change in stage; peak stage occurred several hours later. d Occurred Feb. 8, 1955. e Occurred Oct. 11, 1955. f Maximum daily discharge.

8-1150. Big Creek near Needville, Tex. (221)

Location.--Lat 29°28'35", long 95°48'45", at bridge on State Highway 36, 1.5 miles downstream from Kunz Creek, 5½ miles north of Needville, Fort Bend County, and 10½ miles upstream from Fairchild Creek.

Drainage area.--37.6 sq mi.

Gage.--Nonrecording prior to Mar. 15, 1952, and May 29, 1959, to Mar. 29, 1960. Recording from Mar. 15, 1952, to May 28, 1959, and after Mar. 29, 1960. Datum of gage is 69.39 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--10 ft.

Historical data.--Maximum stage since 1913 is that of August 1945, from information by local resident.

Remarks.--Channel was rectified in April 1955, thereby greatly increasing its capacity. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	August 1945	14.4	-	1949	Apr. 20, 1949	10.13	596
					Apr. 22, 1949	10.41	864
1947	May 21, 1947	10.28	635		Apr. 25, 1949	9.95	560
	May 25, 1947	12.70	2,250		Aug. 7, 1949	10.08	583
1948	Dec. 13, 1947	10.08	582	1950	Oct. 4, 1949	10.01	580
	May 19, 1948	9.76	528		Oct. 8, 1949	12.99	2,660
					Dec. 15, 1949	10.08	583
1949	Feb. 26, 1949	10.17	596		Dec. 18, 1949	11.23	995

Peak stages and discharges of Big Creek near Needville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Feb. 13, 1950	10.75	782	1958	Jan. 23, 1958	7.57	1,150
					Feb. 22, 1958	5.60	680
1952	Apr. 12, 1952	11.26	1,200				
	Apr. 23, 1952	11.64	a1,440	1959	Oct. 10, 1958	5.64	680
	May 28, 1952	11.07	1,100		Feb. 2, 1959	9.96	1,720
					Feb. 11, 1959	9.48	1,720
1953	Dec. 30, 1952	9.25	590		Feb. 14, 1959	9.66	1,790
	May 13, 1953	9.34	615		Feb. 24, 1959	8.70	1,460
	May 15, 1953	10.89	1,290		Apr. 9, 1959	5.03	560
	May 18, 1953	10.80	1,230		Apr. 11, 1959	10.92	2,470
	Aug. 26, 1953	9.19	578		May 23, 1959	8.04	1,250
	Aug. 30, 1953	11.53	1,670		Aug. 26, 1959	10.45	1,620
	Sept. 3, 1953	10.77	1,230				
				1960	Oct. 31, 1959	14.03	8,900
1954	Nov. 19, 1953	9.52	652		Dec. 15, 1959	9.87	1,650
	Dec. 20, 1953	10.76	1,180		Dec. 31, 1959	7.10	705
					Apr. 25, 1960	7.01	685
1955	Feb. 6, 1955	10.28	1,030		June 26, 1960	13.81	10,400
					Aug. 22, 1960	6.94	665
1956	Jan. 22, 1956	4.98	900		Aug. 29, 1960	8.95	1,210
1957	Mar. 17, 1957	11.78	3,550	1961	Oct. 19, 1960	9.27	1,330
	Mar. 21, 1957	7.28	1,070		Oct. 29, 1960	9.75	1,590
	Mar. 31, 1957	7.60	1,150		Dec. 9, 1960	9.39	1,370
	Apr. 21, 1957	8.95	1,550		Dec. 30, 1960	9.28	1,330
	Apr. 29, 1957	10.72	2,290		Jan. 7, 1961	6.86	665
	Sept.25, 1957	4.77	526		Feb. 5, 1961	8.16	960
					Feb. 21, 1961	10.42	1,990
1958	Oct. 15, 1957	12.31	4,500		June 19, 1961	12.86	6,050
	Nov. 18, 1957	6.89	967		July 11, 1961	11.61	3,250
	Nov. 22, 1957	8.67	1,460		Sept.12, 1961	11.88	3,700
	Jan. 20, 1958	7.06	1,020				

a Maximum Mar. 15 to Sept. 30, 1952; probably maximum for year.

8-1155. Fairchild Creek near Needville, Tex. (222)

Location.--Lat 29°26'45", long 95°45'40", at downstream side of county road bridge, 3.0 miles upstream from mouth, and 5½ miles northeast of Needville, Fort Bend County.

Drainage area.--24.9 sq mi.

Gage.--Nonrecording. Datum of gage is 60.42 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs.

Historical data.--Flood of Oct. 31, 1959, is highest since 1910, from information by local residents.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	August 1945	12.5	-	1950	Feb. 13, 1950	9.27	966
1947	May 21, 1947	8.36	792	1951	Apr. 10, 1951	8.44	788
	May 24, 1947	8.10	732				
				1952	Feb. 1, 1952	7.96	700
1948	Dec. 13, 1947	5.80	312		Apr. 13, 1952	8.01	700
					Apr. 23, 1952	8.60	820
1949	Feb. 22, 1949	7.00	515		May 28, 1952	10.11	1,160
	Feb. 26, 1949	8.90	880				
	Mar. 9, 1949	7.67	643	1953	May 16, 1953	9.54	1,010
	Apr. 20, 1949	8.81	860		May 18, 1953	12.0	2,560
	Apr. 22, 1949	7.71	643		Aug. 30, 1953	10.90	1,450
					Sept. 2, 1953	8.98	900
1950	Oct. 4, 1949	8.30	760				
	Oct. 8, 1949	11.46	1,800	1954	Nov. 19, 1953	9.60	1,030
	Oct. 12, 1949	8.16	740		Dec. 20, 1953	8.05	700
	Dec. 10, 1949	8.15	740				
	Dec. 14, 1949	7.48	605	1960	Oct. 31, 1959	12.8	-
	Dec. 18, 1949	9.04	900				

8-1165. Dry Creek near Richmond, Tex. (223)

Location.--Lat 29°30'19", long 95°42'39", at downstream side of bridge on county road, 2.0 miles upstream from Farm Road 762, 2.3 miles south of Gulf, Colorado and Santa Fe Railway Co. bridge at Crabb, 6 miles upstream from Smither's Lake (Lake George) spillway, and 6.0 miles southeast of Richmond, Fort Bend County.

Drainage area.--11.4 sq mi.

Gage.--Nonrecording prior to June 30, 1950; recording thereafter. Datum of gage is 64.5 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943. At datum 1.50 ft higher prior to June 30, 1950.

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above on basis of area-velocity study and logarithmic plotting.

Remarks.--Channel rectified in 1952 and in 1956. It has been estimated that channel changes would affect the stage of floods of the magnitude of those in 1945 and in 1953 by as much as 2 or 3 ft. At site 2.2 miles upstream (Dry Creek near Rosenberg), less affected by channel rectification, the highest flood since at least 1932 was that of Oct. 31, 1959; the next two in order of magnitude are those of 1945 and 1953 from information by local residents. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	August 1945	a15.1	-	1950	June 6, 1950	8.10	250
1947b/	May 21, 1947	8.05	260	1953	May 1953	15.1	-
	May 25, 1947	9.00	382	1957	Mar. 17, 1957	8.40	1,200
1948	Dec. 13, 1947	7.23	173		Mar. 31, 1957	4.42	295
1949	Feb. 19, 1949	7.54	200		Apr. 21, 1957	7.16	862
	Feb. 22, 1949	8.10	290		Apr. 28, 1957	6.80	762
	Apr. 20, 1949	8.69	280		June 2, 1957	3.98	243
	Apr. 22, 1949	9.63	457	1958	Oct. 15, 1957	10.13	1,790
1950c/	Oct. 4, 1949	8.06	204		Nov. 18, 1957	5.60	452
	Oct. 8, 1949	11.50	720		Nov. 22, 1957	6.90	762
	Dec. 18, 1949	9.60	418		Jan. 20, 1958	4.75	318
	Feb. 13, 1950	8.75	312	1960	Oct. 31, 1959	14.1	-

a Present datum.
b Period May to September 1947.
c Period October 1949 to June 1950.

8-1170. Brazos River at East Columbia, Tex. (224)

Location.--Lat 29°09', long 95°37', near center of span at upstream side of bridge on State Highway 35 at East Columbia, Brazoria County, and 1 mile downstream from Yarners Creek.

Drainage area.--44,540 sq mi, approximately, of which about 35,300 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 2.95 ft below mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements, subject to changes due to changing slope.

Remarks.--During periods of extremely high water, upstream overbank flow may spill into one of the smaller channels in the vicinity, bypassing the channel at the gage. Some regulation of flow by reservoirs above Bryan. Only annual peaks are shown.

Peak stages and discharges of Brazos River at East Columbia, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	-	35.0	-	1944	May 12, 1944	33.63	-
				1945	Apr. 28, 1945	32.98	-
1914	Dec. 12, 1913	35.3	-				
				1946	May 22, 1946	31.76	67,500
1935	May 1935	33.8	-	1947	Jan. 21, 1947	a24.72	56,000
				1948	May 15, 1948	a14.10	25,600
1936	May 1936	33.3	-	1949	Apr. 30, 1949	24.41	47,100
				1950	Feb. 16, 1950	23.35	-
1939	May 22, 1939	22.7	-				
1940	July 6, 1940	a32.14	65,000	1951	June 17, 1951	10.60	-
				1952	May 28, 1952	20.70	-
1941	Dec. 5, 1940	34.12	-	1953	May 20, 1953	31.77	-
1942	May 1, 1942	32.55	71,000	1954	Oct. 31, 1953	16.60	-
1943	Oct. 23, 1942	23.9	42,000				

a Occurred at different time than peak discharge.

SAN BERNARD RIVER BASIN

8-1175. San Bernard River near Boling, Tex. (225)

Location.--Lat 29°18'45", long 95°53'35", near left bank at downstream side of pile bent of bridge on State Farm Highway 442, 2½ miles downstream from Snake Creek, and 4½ miles northeast of Boling, Wharton County.

Drainage area.--720 sq mi, approximately.

Gage.--Recording. Datum of gage is 30.7 ft above mean sea level (State Highway Department bridge plans).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--32 ft.

Historical data.--Flood in December 1913 was highest since at least 1900. Second highest flood occurred in September 1938. The third highest flood occurred in July 1929 and reached a stage just over the highway; however, highway has been raised several times, and elevation of flood cannot be verified. Information for these floods from local resident.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	43.5	-	1959	Feb. 2, 1959	23.88	5,050
					Feb. 15, 1959	23.46	4,850
1938	September 1938	43.3	-		Feb. 25, 1959	18.25	2,670
					Apr. 14, 1959	31.29	9,300
1954	May 15, 1954	a9.62	608		May 26, 1959	17.81	2,540
					Aug. 27, 1959	21.81	4,070
1955	Feb. 9, 1955	21.55	4,780				
	May 21, 1955	17.34	2,580	1960	Nov. 2, 1959	31.59	9,380
					Dec. 16, 1959	17.50	2,530
1956	Jan. 22, 1956	13.84	1,520		May 3, 1960	16.77	2,320
					June 28, 1960	42.41	21,200
1957	Mar. 21, 1957	30.45	9,260				
	Apr. 2, 1957	16.33	2,800	1961	Oct. 22, 1960	17.92	2,650
	Apr. 22, 1957	17.27	2,480		Oct. 30, 1960	20.22	3,380
	May 2, 1957	28.01	7,200		Dec. 10, 1960	18.62	2,860
					Jan. 1, 1961	21.14	3,720
1958	Oct. 18, 1957	40.50	18,300		Jan. 8, 1961	19.92	3,280
	Nov. 26, 1957	23.85	5,000		Feb. 9, 1961	16.46	2,240
	Jan. 24, 1958	23.71	5,050		Feb. 26, 1961	29.62	9,060
	Feb. 26, 1958	20.31	3,950		June 21, 1961	36.62	11,900
	May 7, 1958	16.60	2,180		July 13, 1961	26.41	5,630
	Sept.22, 1958	20.58	3,590		Sept.15, 1961	36.79	12,000
1959	Oct. 11, 1958	16.30	2,090				

a Maximum for period May 1 to Sept. 30, 1954; probably exceeded during period of no record.

8-1185. Bull Creek near Ira, Tex. (226)

Location.--Lat 32°36'02", long 101°05'40", on left bank 800 ft upstream from bridge on Farm to Market Road 2085, 1.9 miles upstream from Colorado River, 5.3 miles downstream from Chimney Creek, 5.5 miles west of Ira, Scurry County, 7.7 miles northwest of Cuthbert, and 8.3 miles downstream from Bull Creek diversion dam.

Drainage area.--419 sq mi (contributing area), of which 394 sq mi is above Bull Creek diversion dam, which diverts water from Bull Creek to Lake J. B. Thomas.

Gage.--Recording. Datum of gage is 2,169.15 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs and slope-area measurement at 22,400 cfs.

Bankfull stage.--14 ft.

Historical data.--Highest stage since 1913 occurred in June 1939.

Remarks.--Since December 1953, all flow from area above diversion dam except part of extreme high floods is diverted into Lake J. B. Thomas. Only annual peaks are shown subsequent to 1953. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept. 7, 1932	23.0	-	1950	May 2, 1950	3.71	705
					May 25, 1950	3.75	728
1939	June 1939	24	-		June 11, 1950	5.40	1,470
					Sept. 6, 1950	4.53	1,090
1947	May 1947	15.72	-				
				1951	July 1, 1951	3.33	542
1948	May 16, 1948	6.07	1,800		Aug. 23, 1951	7.11	2,280
	May 25, 1948	5.53	1,520				
	June 1, 1948	8.84	3,200	1952	Sept.23, 1952	1.88	116
	June 2, 1948	7.23	2,330				
	June 26, 1948	5.79	1,660	1953	Aug. 19, 1953	3.76	728
	July 6, 1948	11.70	4,940				
				1954	Apr. 12, 1954	a21.1	22,400
1949	Nov. 2, 1948	3.28	522				
	Apr. 19, 1949	3.97	862	1959	June 1, 1959	5.12	1,340
	May 8, 1949	3.27	534	1960	July 5, 1960	3.58	636
	June 9, 1949	4.03	862				
	Aug. 11, 1949	3.39	566	1961	Oct. 18, 1960	13.81	6,680

a Annual peak only; affected by failure of diversion dam 8.3 miles upstream.

8-1190. Bluff Creek near Ira, Tex. (227)

Location.--Lat 32°35'29", long 101°03'05", near left bank on downstream side of pier of abandoned county road bridge, 426 ft downstream from bridge on Farm to Market Road 1606, 1.8 miles upstream from mouth, 2.8 miles west of Ira, Scurry County, and 11.6 miles southwest of Snyder.

Drainage area.--42.6 sq mi.

Gage.--Recording. Datum of gage is 2,177.95 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs and by slope-area measurements at 2,380 and 5,200 cfs.

Bankfull stage.--7 ft.

Historical data.--Maximum stage since at least 1906 occurred in 1939, stage unknown. Flood in 1948 is the second highest since 1906.

Remarks.--Base for partial-duration series, 250 cfs.

Peak stages and discharges of Bluff Creek near Ira, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 16, 1948	11.92	2,380	1956	May 1, 1956	5.39	347
	May 25, 1948	8.80	1,410		May 23, 1956	6.85	788
	June 1, 1948	4.08	331		June 17, 1956	7.08	868
	July 5, 1948	16.22	5,200				
				1957	Feb. 7, 1957	10.50	1,820
1949	Apr. 19, 1949	4.04	320		Apr. 25, 1957	8.26	1,010
	May 7, 1949	4.73	468		Apr. 29, 1957	6.30	394
	June 8, 1949	3.78	266		May 10, 1957	8.60	1,120
	Aug. 17, 1949	4.83	488		May 12, 1957	6.84	538
	Aug. 20, 1949	3.87	280		May 17, 1957	8.77	1,190
					May 25, 1957	9.70	1,520
1950	May 2, 1950	4.09	331		May 31, 1957	6.98	580
	May 11, 1950	5.50	630				
	May 25, 1950	5.54	630	1958	Apr. 17, 1958	8.80	1,190
					June 2, 1958	5.86	296
1951	July 1, 1951	6.86	942		June 23, 1958	9.05	1,260
	Aug. 22, 1951	4.75	468				
				1959	June 1, 1959	7.21	644
1952	Sept.22, 1952	2.57	63		June 3, 1959	6.21	371
					June 5, 1959	6.16	360
1953	Aug. 18, 1953	4.52	404				
				1960	Oct. 3, 1959	6.53	394
1954	Apr. 12, 1954	5.82	460		July 5, 1960	9.80	1,560
	May 11, 1954	9.12	1,490				
				1961	Oct. 18, 1960	9.10	1,220
1955	May 10, 1955	7.38	964		June 8, 1961	8.95	1,150
	May 23, 1955	7.76	1,100		June 15, 1961	6.03	788
	June 20, 1955	5.98	520		July 13, 1961	8.45	936
1956	Oct. 5, 1955	6.74	756				

8-1195. Colorado River near Ira, Tex. (228)

Location.--Lat 32°32'18", long 101°03'12", on right bank 530 ft downstream from bridge on State Highway 350, 3¾ miles downstream from Bluff Creek, 4 miles upstream from Willow Creek, 4.5 miles southwest of Ira, Scurry County, and at mile 825.

Drainage area.--3,617 sq mi, of which 1,027 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 31, 1947; recording thereafter. Datum of gage is 2,136 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 10,000 cfs, and extended above by conveyance-slope method.

Bankfull stage.--8 ft.

Historical data.--Flood of June 16, 1913, was greatest since at least that data.

Remarks.--Flow largely regulated by Lake J. B. Thomas since July 1952; only annual peaks shown thereafter. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 16, 1913	32	-	1950	May 11, 1950	11.81	7,210
					May 25, 1950	5.45	1,550
1939	June 20, 1939	24.7	-		June 11, 1950	5.65	1,720
					Sept. 5, 1950	8.08	3,800
1947	May 1947	25.1	-		Sept. 6, 1950	7.35	3,210
					Sept.19, 1950	11.52	6,920
1948	May 16, 1948	8.29	3,980				
	May 25, 1948	8.37	4,060	1951	June 3, 1951	9.58	4,850
	June 1, 1948	8.15	3,890		July 2, 1951	9.93	5,440
	June 28, 1948	9.54	5,050		Aug. 21, 1951	10.46	6,220
	July 6, 1948	21.35	20,500				
	July 23, 1948	10.25	5,690	1952	Aug. 11, 1952	4.11	466
1949	Oct. 10, 1948	5.66	1,850	1959	July 17, 1959	4.82	1,120
	May 28, 1949	6.88	3,040	1960	July 5, 1960	5.72	1,780
	June 8, 1949	6.17	2,360				
	Sept.14, 1949	5.38	1,680	1961	Oct. 19, 1960	12.40	7,820

8-1205. Deep Creek near Dunn, Tex. (229)

Location.--Lat 32°33'50", long 100°53'55", at center of downstream side of bridge on State Farm to Market Road 1606, 2.0 miles northwest of Dunn, Scurry County, 3.0 miles upstream from Sulphur Draw, and 8.0 miles upstream from mouth.

Drainage area.--198 sq mi, of which 188 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 21, 1955; recording thereafter. Datum of gage is 2,172.17 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--14 ft.

Historical data.--Maximum discharge known since at least 1881, 36,400 cfs June 19, 1939, by slope-area measurement of peak flow at site 8.0 miles upstream. Flood in 1892 reached about same stage as that of June 19, 1939.

Remarks.--Base for partial-duration series, 850 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953 a/	Apr. 23, 1953	12.10	1,300	1957	May 8, 1957	12.00	1,280
	May 16, 1953	11.8	1,220		May 10, 1957	11.26	1,170
	Aug. 4, 1953	13.0	1,460		May 13, 1957	10.60	1,060
	Aug. 19, 1953	20.30	3,260		May 18, 1957	18.00	2,630
					May 25, 1957	21.17	3,850
1954	Apr. 12, 1954	14.94	1,860		May 31, 1957	20.71	3,630
	May 11, 1954	18.39	2,740				
				1958	Apr. 18, 1958	17.85	2,580
1955	Mar. 20, 1955	14.0	1,660				
	May 11, 1955	20.08	3,390	1959	June 3, 1959	22.18	4,350
	May 18, 1955	16.66	2,300		June 24, 1959	9.58	906
	May 23, 1955	22.90	4,700		July 1, 1959	19.50	3,030
	June 28, 1955	10.27	1,020				
	Sept.25, 1955	13.80	1,620	1960	July 6, 1960	16.8	2,170
1956	Oct. 3, 1955	16.47	2,240	1961	Oct. 18, 1960	11.65	1,180
					May 18, 1961	16.70	2,140
1957	Feb. 7, 1957	20.58	3,590		June 8, 1961	9.35	874
	Apr. 25, 1957	21.00	3,750		June 15, 1961	17.05	2,220
	Apr. 29, 1957	13.25	1,500		Sept.24, 1961	16.06	2,000

a Period April to September only; flood of Aug. 19, 1953, probably maximum for year.

8-1210. Colorado River at Colorado City, Tex. (230)

Location.--Lat 32°23'33", long 100°52'42", on right bank at Colorado City, Mitchell County, 3,517 ft upstream from bridge on U.S. Highway 80, 4,100 ft upstream from The Texas and Pacific Railway Co. bridge, 1.6 miles upstream from Lone Wolf Creek, and at mile 796.

Drainage area.--4,082 sq mi, of which 1,492 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 6, 1946; recording thereafter. Datum of gage is 2,030.16 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942. At site 1.4 miles downstream at different datum Nov. 28, 1923, to Aug. 31, 1925.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and by slope-area measurement at 66,000 cfs.

Bankfull stage.--8 ft.

Historical data.--Maximum stage since at least 1910 occurred on June 20, 1939.

Remarks.--Some regulation since 1952 by Lake J. B. Thomas. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges of Colorado River at Colorado City, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	May 14, 1924	a9.12	3,140	1953	Aug. 20, 1953	7.29	4,170
1925	Apr. 24, 1925	11.40	5,180	1954	Oct. 5, 1953	8.76	4,490
	Aug. 7, 1925	11.1	4,910		Apr. 13, 1954	15.60	10,500
	Aug. 11, 1925	10.68	4,550		May 11, 1954	12.86	8,070
1939	June 20, 1939	35.9	66,000	1955	May 11, 1955	14.34	8,360
					May 24, 1955	10.52	5,200
1946	Sept.15, 1946	b8.93	5,620		Sept.27, 1955	10.00	4,800
1947	Oct. 10, 1946	7.97	4,620	1956	May 1, 1956	8.54	3,680
	May 11, 1947	15.40	13,300				
	May 13, 1947	22.03	24,000	1957	Feb. 8, 1957	9.59	4,500
	May 16, 1947	9.34	6,000		Apr. 26, 1957	12.98	7,230
					Apr. 29, 1957	9.70	4,580
1948	Feb. 27, 1948	9.36	6,110		May 13, 1957	9.21	4,210
	July 6, 1948	22.37	24,900		May 18, 1957	13.59	7,750
	July 24, 1948	8.53	5,140		May 25, 1957	19.71	13,000
					May 31, 1957	17.21	10,800
1949	Oct. 9, 1948	6.42	3,330				
				1958	Apr. 18, 1958	10.76	5,040
1950	May 11, 1950	11.03	7,550				
	May 26, 1950	7.77	4,600	1959	June 4, 1959	9.16	3,600
	Sept.19, 1950	9.63	6,350				
				1960	July 7, 1960	9.72	3,160
1951	July 3, 1951	8.63	5,080				
	Aug. 22, 1951	8.66	5,390	1961	May 19, 1961	11.62	3,820
1952	July 16, 1952	5.84	2,740				

a Maximum Nov. 23, 1923, to Sept. 30, 1924; probably maximum for year.
b Maximum May 9 to Sept. 30, 1946; probably maximum for year.

8-1215. Morgan Creek near Westbrook, Tex. (231)

Location.--Lat 32°23'42", long 101°01'32", on left bank on downstream side of county road bridge (formerly Farm to Market Road 670), 1,000 ft upstream from bridge on Farm to Market Road 670 (relocated in 1960), 1.1 miles upstream from Graze Creek, 2.7 miles north of Westbrook, Mitchell County, and 14 miles upstream from mouth.

Drainage area.--250 sq mi, of which 218 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,076.64 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Historical data.--Maximum stage since at least 1882 occurred in April 1922.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	30	-	1957	May 18, 1957	17.77	3,250
					May 25, 1957	21.37	6,580
1941	-	27	-		June 1, 1957	13.92	1,610
					June 13, 1957	9.55	636
1954	May 11, 1954	21.8	-				
				1958	Apr. 20, 1958	9.42	512
1955	May 11, 1955	13.16	1,550				
	May 28, 1955	12.87	1,480	1959	July 18, 1959	12.98	1,270
	July 28, 1955	10.41	946				
	Aug. 21, 1955	8.68	652	1960	Oct. 4, 1959	11.43	819
					July 6, 1960	12.52	1,080
1956	Oct. 2, 1955	16.25	2,530		July 26, 1960	11.40	819
	May 1, 1956	11.12	1,080				
	July 21, 1956	8.80	668	1961	Oct. 16, 1960	12.03	946
	Aug. 1, 1956	8.86	684		Oct. 19, 1960	10.32	604
					May 19, 1961	17.07	2,490
1957	Apr. 26, 1957	17.32	3,000		June 5, 1961	13.96	1,340
	Apr. 29, 1957	19.12	4,140		June 9, 1961	11.74	802
	May 11, 1957	16.66	2,650		June 16, 1961	18.42	3,250
	May 13, 1957	21.92	7,180		July 25, 1961	19.07	3,730

8-1220. Graze Creek near Westbrook, Tex. (232)

Location.--Lat 32°25'03", long 101°01'10", 1.2 miles upstream from mouth and 4.2 miles north of Westbrook, Mitchell County.

Drainage area.--21.1 sq mi.

Gage.--Recording. Datum of gage is 2,092.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs and by slope-area measurement at 1,630 cfs.

Historical data.--Maximum stage since at least 1919, that of June 1939, from information by local resident.

Remarks.--Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 1939	19.0	-	1957	May 9, 1957	1.66	70
					May 11, 1957	2.27	130
1954	June 29, 1954	2.18	125		May 12, 1957	12.77	1,800
					May 18, 1957	4.88	372
1955	May 11, 1955	3.61	251		May 25, 1957	8.04	750
	May 23, 1955	2.70	170		May 31, 1957	3.28	224
	June 16, 1955	1.60	62				
	Aug. 21, 1955	2.03	110	1958	Nov. 5, 1957	1.55	54
					June 23, 1958	2.55	156
1956	Oct. 1, 1955	1.82	88		Sept.27, 1958	1.92	99
	May 1, 1956	12.23	1,620				
				1959	May 1, 1959	1.75	80
1957	Oct. 29, 1956	1.77	83		July 1, 1959	2.00	107
	Apr. 25, 1957	12.38	1,680		Sept.10, 1959	1.57	58
	Apr. 29, 1957	9.90	1,080				

8-1235. Champlin Creek near Colorado City, Tex. (233)

Location.--Lat 32°19', long 100°49', on right bank 600 ft downstream from South Fork, 5 miles southeast of Colorado City, Mitchell County, and 5½ miles upstream from mouth.

Drainage area.--194 sq mi.

Gage.--Nonrecording prior to July 5, 1949; recording thereafter. Datum of gage is 2,047.25 ft above mean sea level, datum of 1929 (State Highway Department Survey).

Stage-discharge relation.--Defined by current-meter measurements below 6,500 cfs and by slope-area measurements at 2,320, 8,500, and 9,660 cfs.

Historical data.--Flood in July 1945 is the greatest since at least 1898, from information by local residents.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 8, 1945	18.5	-	1954	May 11, 1954	7.60	4,520
					May 18, 1954	10.10	7,380
1947	May 10, 1947	14.5	-				
				1955	May 10, 1955	10.0	7,260
1948	Oct. 25, 1947	10.40	10,200		May 16, 1955	6.30	3,210
	May 24, 1948	4.82	2,140		July 17, 1955	6.24	3,110
	May 30, 1948	8.88	7,560				
	June 1, 1948	8.81	7,400	1956	May 1, 1956	10.22	7,500
	July 5, 1948	5.00	2,340		June 23, 1956	5.90	2,820
1949	May 17, 1949	5.05	2,390	1957	Apr. 19, 1957	10.60	8,850
	May 27, 1949	5.40	2,760		Apr. 26, 1957	7.95	5,410
					May 11, 1957	7.35	4,720
1950	July 31, 1950	4.23	1,620		May 18, 1957	6.11	3,270
					May 25, 1957	6.46	3,710
1951	May 18, 1951	7.58	5,530		June 2, 1957	9.97	8,010
	May 23, 1951	6.60	4,180		Sept.21, 1957	8.35	5,910
	June 3, 1951	6.78	4,410				
1952	Sept.22, 1952	3.04	729	1958	Oct. 8, 1957	3.98	1,310
1953	Sept. 3, 1953	3.82	1,260	1959	July 12, 1959	3.84	1,200

8-1240. Colorado River at Robert Lee, Tex. (234)
(Published as "near Robert Lee" 1923-27)

Location.--Lat 31°53'05", long 100°28'45", at bridge on State Highway 208 in Robert Lee, Coke County, half a mile upstream from Mountain Creek.

Drainage area.--15,770 sq mi, approximately, of which 4,170 sq mi contributes directly to surface runoff. (Prior to Apr. 18, 1939, 15,900 sq mi, approximately, at site 9 miles downstream.)

Gage.--Nonrecording prior to Sept. 27, 1939; recording thereafter. At site 9 miles downstream at different datum prior to Apr. 18, 1939. Datum of gage is 1,771.70 ft above mean sea level, datum of 1929 (levels by U.S. Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of Oct. 13, 1957, was the highest since at least 1907, and flood in April 1922 was second highest since at least 1907.

Remarks.--Records Apr. 18, 1939, to June 3, 1940, furnished by U.S. Bureau of Reclamation. Flow slightly regulated since April 1949 by Lake Colorado City, and since July 1952 by Lake J. B. Thomas. Base for partial-duration series, 7,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	a b25.5	-	1945	July 14, 1945	11.93	8,960
1924	Apr. 25, 1924	11.51	13,200	1946	Sept.14, 1946	14.98	13,500
1925	Apr. 26, 1925	15.9	22,700	1947	Oct. 10, 1946	12.60	9,940
	May 30, 1925	17.10	25,300		May 11, 1947	19.40	23,700
	Sept.12, 1925	12.7	15,800		May 14, 1947	17.54	18,100
	Sept.25, 1925	12.9	16,200		May 18, 1947	11.18	8,010
1926	Mar. 21, 1926	12.0	14,300	1948	Oct. 26, 1947	11.55	8,540
	Apr. 21, 1926	13.9	18,300		July 8, 1948	20.61	28,000
	May 30, 1926	9.10	8,390				
	June 19, 1926	12.00	14,300	1949	May 8, 1949	14.13	12,200
	Aug. 24, 1926	14.75	20,200		May 17, 1949	13.00	10,500
	Sept. 6, 1926	20.20	32,500		May 28, 1949	12.84	10,200
					June 8, 1949	11.68	8,680
1927	Oct. 14, 1926	9.80	9,790				
	Apr. 13, 1927	9.90	9,990	1950	May 12, 1950	12.25	9,450
1936	Sept.17, 1936	b26	-	1951	June 16, 1951	9.23	5,920
1939	June 22, 1939	21.70	b31,700	1952	Apr. 22, 1952	6.46	2,760
1940	June 29, 1940	18.63	23,000	1953	May 12, 1953	14.38	12,900
					May 15, 1953	10.95	8,200
1941	Apr. 17, 1941	18.50	22,400		July 15, 1953	12.68	10,500
	May 4, 1941	12.45	10,400		Aug. 19, 1953	20.15	24,200
	May 23, 1941	11.09	8,360				
	June 16, 1941	15.14	15,200	1954	Apr. 12, 1954	14.05	11,300
					Apr. 14, 1954	11.60	8,140
1942	Oct. 16, 1941	13.52	11,600		May 12, 1954	16.08	14,600
	Aug. 27, 1942	16.32	17,500		May 19, 1954	15.68	13,900
1943	Oct. 18, 1942	9.65	6,400	1955	May 12, 1955	10.84	7,940
1944	July 23, 1944	18.00	18,300	1956	May 1, 1956	10.97	8,200
1945	July 9, 1945	21.15	25,200	1958	Oct. 13, 1957	b26.7	-

a Present site and datum.
b Annual peak only.

8-1265. Colorado River at Ballinger, Tex. (235)

Location.--Lat 31°43'50", long 99°56'25", near left bank on downstream side of pier of bridge on U.S. Highway 83 in Ballinger, Runnels County, 2,000 ft upstream from Elm Creek and at mile 659.

Drainage area.--16,840 sq mi, approximately, of which about 5,240 sq mi contributes directly to surface runoff.

Gage.--Nonrecording at several sites upstream within 1 mile of present site at various datums prior to Nov. 29, 1930; recording thereafter. Datum of gage is 1,593.74 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Historical data.--Maximum stage since at least 1882, about 36 ft sometime in 1884, present site and datum. Flood of Aug. 6, 1906, reached a stage of 32.0 ft, present site and datum, from floodmarks (backwater from Elm Creek).

Remarks.--Flow slightly regulated by Lake Colorado City since 1949, Lake J. B. Thomas since 1952, Oak Creek Reservoir since 1953, and by Champion Creek Reservoir since 1958. Base for partial-duration series, 8,900 cfs. Only maximum daily stages and discharges are shown prior to 1922.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)
1908	Oct. 6, 1907	11.5	12,700
	Apr. 19, 1908	18.2	23,400
	May 17, 1908	12.8	14,800
	May 24, 1908	13.2	15,400
1909	May 24, 1909	6.4	4,860
1910	Dec. 1, 1909	12.9	14,900
1911	Feb. 19, 1911	15.0	18,300
	July 25, 1911	12.0	13,500
1912	Dec. 10, 1911	18.0	23,100
	May 9, 1912	10.0	10,300
	June 20, 1912	12.0	13,500
1913	Oct. 10, 1912	10.0	10,300
	May 4, 1913	18.4	23,700
	July 3, 1913	14.0	16,700
	Sept.26, 1913	16.0	19,900
1914	Oct. 5, 1913	14.0	16,700
	Nov. 23, 1913	20.0	26,300
	Dec. 5, 1913	17.0	21,500
	Apr. 29, 1914	10.0	10,300
	May 22, 1914	19.0	24,700
	May 27, 1914	10.0	10,300
	Aug. 26, 1914	10.0	10,300
1915	Apr. 28, 1915	12.0	13,500
	Aug. 1, 1915	10.0	10,300
1916	Sept.25, 1916	9.0	8,600
1917	Oct. 17, 1916	11.50	11,800
	June 3, 1917	10.5	11,100
1918	May 17, 1918	10.20	10,200
	June 4, 1918	12.15	12,800
1919	Oct. 10, 1918	12.00	12,500
	Oct. 22, 1918	14.10	15,200
	Oct. 28, 1918	14.50	15,800
	Nov. 7, 1918	11.90	12,400
	Mar. 24, 1919	15.25	16,700
	May 5, 1919	10.90	11,100
	May 24, 1919	11.50	11,800
	June 10, 1919	13.85	14,800
	June 16, 1919	11.60	12,000
	July 21, 1919	18.50	21,200
	Aug. 27, 1919	13.50	14,400
1920	Oct. 7, 1919	16.50	18,400
	Oct. 30, 1919	12.20	12,800
1920	May 17, 1920	12.20	12,800
	Aug. 21, 1920	13.35	14,300
	Aug. 24, 1920	14.78	16,100
	Sept. 7, 1920	12.80	13,500
1921	June 7, 1921	15.0	15,100
1922	Apr. 8, 1922	20.5	22,600
	Apr. 26, 1922	26.0	38,800
	May 2, 1922	17.80	18,800
	May 15, 1922	21.90	24,700
	June 4, 1922	10.8	9,600
1923	Apr. 12, 1923	19.50	18,300
	Apr. 20, 1923	17.6	15,900
	Apr. 25, 1923	24.81	30,500
	Apr. 27, 1923	23.81	27,100
1924	Oct. 16, 1923	11.70	9,070
	Apr. 25, 1924	19.93	18,900
	May 6, 1924	15.75	13,800
	May 14, 1924	14.50	12,200
1925	Apr. 27, 1925	21.10	20,900
	May 9, 1925	21.0	20,700
	May 31, 1925	18.0	16,400
	June 25, 1925	13.5	11,000
	Sept.13, 1925	12.2	9,620
	Sept.25, 1925	17.0	15,200
1926	Mar. 21, 1926	20.2	19,700
	Apr. 21, 1926	20.07	19,600
	June 20, 1926	15.2	12,600
	Aug. 25, 1926	17.1	15,000
	Sept. 7, 1926	23.9	26,500
1927	Oct. 14, 1926	16.1	13,700
	Dec. 6, 1926	12.5	9,650
	Apr. 13, 1927	15.3	12,800
	Sept.28, 1927	15.0	12,400
1928	May 13, 1928	22.5	23,800
	May 19, 1928	22.3	23,500
	June 22, 1928	13.0	10,200
	July 27, 1928	25.3	32,500
1929	May 26, 1929	23.80	26,300
	Sept.12, 1929	13.8	11,100
1930	Oct. 13, 1929	14.5	11,800
	May 5, 1930	21.4	21,600
	May 13, 1930	18.0	16,300
	June 14, 1930	27.45	42,100

a Maximum daily stages and discharges shown prior to 1922.
b Backwater from Elm Creek.

Peak stages and discharges of Colorado River at Ballinger, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Oct. 13, 1930	b19.5	14,300
	Dec. 5, 1930	13.3	12,500
1932	Oct. 23, 1931	b16.0	15,100
	Nov. 18, 1931	10.3	9,280
	Apr. 30, 1932	11.0	10,200
	May 8, 1932	b18.6	19,100
	May 10, 1932	b19.0	20,100
	May 29, 1932	14.10	14,100
	June 30, 1932	14.47	14,600
	Sept. 2, 1932	21.30	26,200
	Sept. 6, 1932	11.31	10,500
	Sept. 7, 1932	b20.58	16,800
	Sept.10, 1932	15.82	16,600
1933	May 29, 1933	6.53	4,700
1934	Oct. 12, 1933	6.90	5,180
1935	Feb. 8, 1935	b11.87	10,700
	Apr. 19, 1935	b17.94	18,100
	May 15, 1935	b22.68	26,600
	May 18, 1935	b26.25	45,300
	June 3, 1935	b23.34	26,400
	June 5, 1935	11.10	11,100
	June 15, 1935	17.90	21,000
	July 23, 1935	15.86	18,000
	Sept. 3, 1935	b25.88	39,500
	Sept. 5, 1935	b23.70	28,800
	Sept. 9, 1935	b18.67	20,600
1936	Sept.15, 1936	13.74	14,700
	Sept.18, 1936	20.6	75,400
	Sept.24, 1936	12.0	12,400
	Sept.27, 1936	22.70	33,500
1937	Aug. 23, 1937	9.60	9,110
1938	Apr. 24, 1938	13.72	14,700
	Apr. 27, 1938	10.30	10,100
	June 27, 1938	13.52	14,200
	July 26, 1938	17.75	21,100
1939	June 19, 1939	b21.40	16,000
	June 23, 1939	21.30	29,200
	June 29, 1939	11.5	11,700
	Aug. 4-5, 1939	b18.4	11,800
	Aug. 9, 1939	10.50	10,300
1940	Apr. 6, 1940	10.58	9,940
	June 30, 1940	18.20	21,800
1941	Apr. 18, 1941	16.09	17,900
	May 3, 1941	b20.52	19,800
	May 21, 1941	b20.88	20,000
	June 11, 1941	12.09	12,000
	June 16, 1941	b15.63	11,800
1942	Oct. 3, 1941	10.2	9,380
1942	Oct. 16, 1941	13.5	14,000
	Aug. 27, 1942	13.5	14,000
1943	Oct. 18, 1942	7.24	5,550
1944	July 24, 1944	14.50	15,400
1945	Oct. 4, 1944	12.90	13,200
	July 20, 1945	19.80	25,200
1946	Sept.15, 1946	13.75	14,400
1947	Dec. 11, 1946	12.64	12,700
	May 12, 1947	17.92	21,200
	May 18, 1947	11.85	11,600
1948	Oct. 26, 1947	10.15	9,380
	July 9, 1948	21.00	28,300
1949	Apr. 20, 1949	10.88	10,200
	May 8, 1949	15.10	16,400
	May 17, 1949	10.35	9,660
	May 28, 1949	14.17	15,000
1950	May 13, 1950	9.17	8,020
1951	May 25, 1951	11.01	10,500
	June 16, 1951	10.25	9,450
1952	June 1, 1952	8.92	7,700
1953	May 12, 1953	11.15	10,800
	Aug. 20, 1953	23.77	55,200
1954	Oct. 4, 1953	12.80	13,000
	Apr. 12, 1954	b23.50	21,200
	Apr. 28, 1954	11.50	11,200
	May 13, 1954	13.40	13,900
	May 19, 1954	13.10	13,400
	June 8, 1954	12.80	13,000
1955	May 18, 1955	b15.50	14,800
	May 19, 1955	b21.50	19,700
1956	May 1, 1956	21.40	14,000
1957	Oct. 19, 1956	11.10	10,600
	May 11, 1957	20.75	27,000
	May 18, 1957	18.45	20,200
	May 27, 1957	12.85	13,100
	June 2, 1957	19.60	24,800
1958	Oct. 14, 1957	27.9	59,000
1959	June 4, 1959	5.91	3,920
1960	Oct. 3, 1959	12.10	10,800
1961	Oct. 16, 1960	b14.11	12,700

b Backwater from Elm Creek.

8-1270. Elm Creek at Ballinger, Tex. (236)

Location.--Lat 31°45'00", long 99°56'50", on right bank 1,000 ft upstream from storage dam at Ballinger, Runnels County, and 1¼ miles upstream from mouth.

Drainage area.--471 sq mi.

Gage.--Recording. Datum of gage is 1,617.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--7 ft.

Historical data.--Flood in August 1906 reached a stage of 14.5 ft, affected by backwater from Colorado River; highest stage not affected by backwater from Colorado River since at least 1904 was that of Oct. 13, 1957.

Remarks.--Base for partial-duration series, 2,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	May 15, 1933	3.36	4,760	1943	Oct. 17, 1942	6.70	6,060
	May 24, 1933	2.73	3,250	1944	Aug. 18, 1944	5.88	3,540
1934	Apr. 4, 1934	2.09	1,940	1945	Oct. 4, 1944	6.69	6,060
1935	Feb. 9, 1935	5.84	3,420		June 4, 1945	6.30	4,690
	Apr. 19, 1935	8.30	13,900		July 7, 1945	6.98	7,060
	May 15, 1935	8.38	14,400				
	May 18, 1935	a8.76	17,300	1946	May 14, 1946	10.84	32,800
	May 30, 1935	5.89	3,020		Sept.14, 1946	6.45	5,180
	June 2, 1935	9.74	28,000				
	June 5, 1935	5.50	2,580	1947	June 13, 1947	5.07	1,580
	June 13, 1935	5.39	2,340				
	July 23, 1935	5.37	2,300	1948	Oct. 25, 1947	6.20	4,330
	Sept. 3, 1935	a10.30	31,000				
	Sept. 5, 1935	7.46	9,330	1949	May 8, 1949	5.48	2,410
	Sept. 9, 1935	7.80	11,100				
				1950	Sept. 5, 1950	7.28	8,510
1936	Sept.17, 1936	7.28	8,600				
				1951	May 22, 1951	7.26	8,010
1937	June 6, 1937	5.50	2,580		May 25, 1951	5.67	2,800
					Aug. 12, 1951	5.77	3,040
1938	Apr. 18, 1938	6.47	5,180				
	Apr. 27, 1938	5.45	2,480	1952	May 1, 1952	6.19	3,980
	May 3, 1938	5.92	3,540		Sept.10, 1952	7.36	8,600
1939	May 13, 1939	5.40	2,360	1953	May 13, 1953	5.64	2,780
	May 17, 1939	7.34	8,840		Aug. 19, 1953	7.18	8,140
	May 31, 1939	5.28	2,110				
	June 19, 1939	8.60	15,600	1954	Apr. 12, 1954	10.38	31,400
	Aug. 4, 1939	8.08	12,700		Apr. 30, 1954	5.49	2,430
					May 24, 1954	8.84	19,400
1940	Apr. 6, 1940	6.24	4,540		May 27, 1954	5.47	2,380
	May 22, 1940	7.57	9,830				
	May 23, 1940	6.55	5,520	1955	May 18, 1955	8.65	15,600
	June 8, 1940	6.47	5,180		Sept.25, 1955	5.74	3,020
	Aug. 16, 1940	7.02	7,270				
				1956	Oct. 3, 1955	6.22	4,330
1941	Apr. 15, 1941	5.74	3,160		May 1, 1956	11.90	38,500
	Apr. 19, 1941	6.67	5,880				
	Apr. 28, 1941	5.64	2,900	1957	May 11, 1957	6.17	4,230
	May 3, 1941	7.44	9,330		May 18, 1957	6.51	5,340
	May 21, 1941	7.98	12,200		May 26, 1957	6.59	5,690
	June 2, 1941	7.14	7,920		June 2, 1957	6.97	7,060
	June 6, 1941	5.72	3,040				
	June 10, 1941	5.94	3,680	1958	Oct. 13, 1957	14.20	50,000
	June 16, 1941	6.98	7,270				
				1959	June 24, 1959	5.73	3,000
1942	Oct. 3, 1941	5.94	3,680				
	Oct. 25, 1941	5.40	2,360	1960	Oct. 4, 1959	4.69	934
	Apr. 8, 1942	6.18	4,390				
	May 19, 1942	5.45	2,480	1961	June 5, 1961	8.60	5,690
	May 25, 1942	5.73	3,160		Sept. 5, 1961	6.30	4,650

a Backwater from Colorado River.

8-1280. South Concho River at Christoval, Tex. (237)

Location.--Lat 31°13', long 100°30', near center of stream on downstream side of center pier of Panhandle and Santa Fe Railway bridge at Christoval, Tom Green County, 12 miles upstream from Lake Nasworthy.

Drainage area.--409 sq mi, of which 344 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to July 17, 1930; recording thereafter. Datum of gage is 2,010.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and by slope-area measurement at 80,100 cfs.

Bankfull stage.--10 ft.

Historical data.--Flood of Aug. 6, 1906, was greatest since 1882, from information by local residents.

Remarks.--Base for partial-duration series, 160 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 6, 1906	23	115,000	1942	Oct. 15, 1941	6.30	3,180
					Aug. 23, 1942	9.78	9,450
1931	Oct. 5, 1930	10.91	12,700		Sept. 7, 1942	5.37	2,080
	Oct. 13, 1930	20.20	76,400				
	Feb. 2, 1931	4.83	2,030	1943	May 23, 1943	2.47	138
	Feb. 22, 1931	2.20	260				
	July 16, 1931	2.57	457	1944	Jan. 1, 1944	2.01	24
	Aug. 11, 1931	4.20	1,570				
				1945	July 6, 1945	9.96	9,970
1932	May 10, 1932	6.10	3,180				
	May 11, 1932	3.13	616	1946	Oct. 5, 1945	2.75	278
	July 3, 1932	11.18	13,700		June 19, 1946	3.62	834
	Aug. 2, 1932	2.71	542		June 21, 1946	7.45	4,740
	Sept. 1, 1932	4.39	1,720		June 23, 1946	2.92	398
					Sept.26, 1946	10.02	9,970
1933	May 14, 1933	2.24	278				
				1947	Nov. 1, 1946	2.76	290
1934	Apr. 15, 1934	5.60	2,370		Nov. 3, 1946	3.48	742
	Aug. 24, 1934	6.26	3,000		June 18, 1947	4.77	1,720
	Sept.21, 1934	2.98	492		July 18, 1947	2.65	235
1935	Apr. 25, 1935	2.10	176	1948	May 26, 1948	4.34	1,400
	May 9, 1935	8.77	7,200		July 6, 1948	3.18	554
	May 18, 1935	6.08	2,980		Sept.22, 1948	3.53	774
	May 23, 1935	6.30	3,180				
	June 1, 1935	4.70	1,760	1949	Oct. 16, 1948	3.31	632
	June 4, 1935	9.00	7,620		Mar. 21, 1949	6.68	3,640
	June 12, 1935	2.68	406		Apr. 28, 1949	5.70	2,580
	June 13, 1935	3.66	962		May 4, 1949	5.04	1,980
	Aug. 30, 1935	4.99	2,000		Sept.16, 1949	4.00	1,100
	Sept. 3, 1935	4.31	1,440				
	Sept. 5, 1935	9.48	8,740	1950	Oct. 24, 1949	9.58	8,920
	Sept. 8, 1935	2.63	387				
	Sept. 9, 1935	4.24	1,400	1951	Aug. 20, 1951	7.58	4,910
1936	May 18, 1936	3.16	634	1952	Apr. 23, 1952	2.11	45
	Sept.15, 1936	18.45	57,600				
	Sept.17, 1936	20.5	80,100	1953	Mar. 9, 1953	2.64	247
	Sept.26, 1936	17.12	46,400		July 16, 1953	5.52	2,550
	Sept.27, 1936	5.65	2,510		Aug. 31, 1953	5.96	3,000
1937	May 10, 1937	11.00	13,000	1954	Oct. 4, 1953	3.85	1,130
	Sept.25, 1937	2.26	271				
				1955	May 15, 1955	2.97	228
1938	Dec. 28, 1937	7.75	5,270		May 19, 1955	4.17	828
	July 20, 1938	15.50	34,900		June 29, 1955	4.83	1,360
	July 21, 1938	12.80	19,800		July 18, 1955	7.00	3,860
	July 23, 1938	21.95	100,000				
				1956	Apr. 30, 1956	6.74	3,520
1939	July 13, 1939	2.00	178		June 10, 1956	2.81	247
					Aug. 20, 1956	2.79	234
1940	Apr. 6, 1940	2.53	348				
	June 9, 1940	7.42	4,600	1957	Mar. 20, 1957	6.50	3,240
	June 19, 1940	3.10	607		Apr. 23, 1957	6.35	3,060
	June 29, 1940	1.99	181		Apr. 26, 1957	16.30	40,400
					May 9, 1957	20.82	84,000
1941	Mar. 26, 1941	3.22	573		May 11, 1957	8.48	6,690
	May 3, 1941	5.05	1,980		May 18, 1957	9.13	7,940
	Sept.18, 1941	3.16	534		May 27, 1957	8.42	6,580

Peak stages and discharges of South Concho River at Christoval, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 9, 1957	4.53	1,780	1960	Oct. 3, 1959	13.85	25,000
	Oct. 13, 1957	6.44	3,880		July 15, 1960	2.95	384
	Feb. 23, 1958	3.93	1,200		July 19, 1960	3.98	1,070
	June 17, 1958	10.73	12,000				
	June 24, 1958	4.91	1,930	1961	Oct. 16, 1960	4.41	1,440
	Sept.27, 1958	6.68	3,950		June 18, 1961	10.50	10,200
					Sept. 4, 1961	4.54	1,580
1959	Nov. 14, 1958	2.08	38				

8-1285. Middle Concho River near Tankersly, Tex. (238)

Location.--Lat 31°22'35", long 100°36'50", on left bank 220 ft upstream from bridge on U.S. Highway 67, 3 miles northeast of Tankersly, Tom Green County, and 9.5 miles upstream from Spring Creek.

Drainage area.--2,509 sq mi, of which 1,444 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,919.51 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--16 ft.

Historical data.--Flood in April 1922 was greatest since 1900, from information by State Highway Department.

Remarks.--Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	April 1922	27.2	-	1939	Apr. 27, 1939	10.4	3,040
					May 5, 1939	10.85	3,280
1931	Oct. 14, 1930	18.3	8,630				
	Apr. 18, 1931	7.38	1,790	1940	June 28, 1940	14.40	5,680
1932	May 11, 1932	22.45	15,200	1941	Mar. 26, 1941	8.74	2,120
	May 24, 1932	14.68	5,660		Apr. 15, 1941	11.45	3,640
	May 29, 1932	15.87	6,820		Apr. 27, 1941	11.45	3,640
	June 12, 1932	7.80	1,940		May 2, 1941	13.52	5,050
	July 3, 1932	15.41	6,420		May 21, 1941	23.92	23,400
	Sept. 7, 1932	12.70	4,400		June 3, 1941	16.20	6,940
	Sept.21, 1932	14.68	5,780		June 5, 1941	24.17	25,100
					June 10, 1941	14.35	5,680
1933	Dec. 23, 1932	1.96	63		Aug. 24, 1941	8.20	1,870
					Aug. 28, 1941	10.00	2,820
1934	Aug. 25, 1934	9.4	2,320				
				1942	Oct. 2, 1941	8.90	2,220
1935	Nov. 14, 1934	9.23	2,470		Aug. 23, 1942	11.77	3,880
	Feb. 8, 1935	16.55	7,480		Aug. 24, 1942	10.98	3,400
	Apr. 19, 1935	10.95	3,370				
	May 9, 1935	15.35	6,460	1943	May 23, 1943	7.17	1,450
	May 14, 1935	10.22	2,960				
	May 15, 1935	22.10	14,300	1944	June 6, 1944	10.90	3,340
	May 18, 1935	12.27	4,120		Sept. 6, 1944	18.60	8,700
	June 5, 1935	10.87	3,320				
	June 7, 1935	7.68	1,760	1945	July 7, 1945	12.05	4,000
	June 14, 1935	8.00	1,900		July 9, 1945	10.76	3,260
	July 23, 1935	9.30	2,520				
				1946	Aug. 21, 1946	8.65	2,070
1936	May 23, 1936	16.50	7,150		Sept.26, 1946	24.30	27,500
	May 29, 1936	17.10	7,580				
	Sept.15, 1936	8.10	1,820	1947	Oct. 9, 1946	15.65	6,520
	Sept.17, 1936	23.73	21,900		Dec. 11, 1946	16.09	6,870
	Sept.18, 1936	8.50	2,020		June 26, 1947	9.42	2,490
	Sept.25, 1936	15.60	6,520				
	Sept.26, 1936	24.2	26,300	1948	Dec. 3, 1947	9.93	2,820
					May 26, 1948	14.46	5,680
1937	May 31, 1937	21.90	13,700		July 6, 1948	23.73	21,900
	June 2, 1937	21.0	11,800		Sept.22, 1948	16.25	7,010
	June 7, 1937	7.90	1,720				
				1949	Apr. 19, 1949	19.05	9,060
1938	Apr. 24, 1938	23.75	22,700		Apr. 23, 1949	7.93	1,720

Peak stages and discharges of Middle Concho River near Tankersly, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Apr. 24, 1949	23.80	22,700	1955	Aug. 19, 1955	10.88	3,430
	Apr. 28, 1949	19.62	9,480				
	May 4, 1949	9.09	2,320	1956	Apr. 5, 1956	7.70	2,090
	June 7, 1949	12.76	4,560		May 1, 1956	9.56	2,930
					May 24, 1956	9.05	2,650
1950	June 6, 1950	8.40	1,970		July 6, 1956	7.66	2,090
	Aug. 2, 1950	10.33	2,990		Sept. 6, 1956	6.92	1,760
	Sept. 6, 1950	10.79	2,760				
	Sept.22, 1950	17.94	8,200	1957	Oct. 18, 1956	22.44	13,700
					Apr. 23, 1957	10.24	3,520
1951	Aug. 12, 1951	15.20	6,240		Apr. 28, 1957	16.90	8,220
	Aug. 21, 1951	14.70	5,890		May 12, 1957	21.18	12,000
					May 18, 1957	21.05	11,900
1952	May 28, 1952	12.68	4,480		June 2, 1957	10.25	3,550
1953	Mar. 9, 1953	11.90	4,640	1958	Oct. 13, 1957	23.78	22,500
	May 12, 1953	15.40	6,810		June 23, 1958	13.00	5,300
	Aug. 20, 1953	19.38	9,580		Sept.16, 1958	7.42	1,900
	Sept. 3, 1953	9.15	3,110				
				1959	May 23, 1959	9.40	2,800
1954	Oct. 3, 1953	18.33	9,840		June 4, 1959	13.30	5,370
	Apr. 13, 1954	12.00	5,250		July 18, 1959	15.20	6,860
	May 19, 1954	11.08	4,600		Sept.30, 1959	17.15	8,460
	May 25, 1954	8.20	2,910				
	June 29, 1954	9.60	3,710	1960	Oct. 3, 1959	23.59	21,100
1955	July 17, 1955	6.80	1,720	1961	Oct. 16, 1960	8.42	850
	Aug. 5, 1955	17.03	7,440				

8-1310. Spring Creek near Tankersly, Tex. (239)

Location.--Lat 31°21'30", long 100°32'05", on right bank 2.8 miles upstream from mouth and 6.5 miles east of Tankersly, Tom Green County.

Drainage area.--700 sq mi, of which 641 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,874.61 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 24,000 cfs and by slope-area measurement at 82,100 cfs.

Bankfull stage.--16 ft.

Historical data.--Maximum stage since at least 1853 occurred in August 1882.

Remarks.--Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	August 1882	26	-	1935	June 5, 1935	12.27	7,520
					June 13, 1935	5.40	1,180
1931	Oct. 14, 1930	17.34	16,100		July 23, 1935	11.30	6,220
	Apr. 18, 1931	6.98	2,120		Sept. 5, 1935	7.49	2,510
					Sept. 9, 1935	5.30	1,130
1932	Apr. 28, 1932	11.60	6,580				
	May 10, 1932	17.70	17,000	1936	June 13, 1936	4.87	912
	May 11, 1932	9.76	4,540		Sept.15, 1936	18.65	19,400
	May 13, 1932	5.84	1,360		Sept.17, 1936	20.3	23,900
	May 25, 1932	8.42	3,300		Sept.26, 1936	15.44	12,300
	May 29, 1932	6.95	2,120				
	July 3, 1932	17.64	16,800	1937	June 7, 1937	7.90	2,800
	Sept. 1, 1932	6.62	1,850				
				1938	Dec. 28, 1937	6.00	1,540
1933	May 13, 1933	2.68	233		Jan. 23, 1938	11.20	6,100
					Apr. 24, 1938	11.74	6,710
1934	June 4, 1934	3.49	381		June 8, 1938	6.32	1,720
					July 20, 1938	13.51	9,250
1935	Apr. 25, 1935	5.71	1,360		July 23, 1938	15.15	12,000
	May 10, 1935	10.97	5,870		July 25, 1938	5.70	1,360
	May 15, 1935	5.94	1,480				
	May 18, 1935	6.97	2,170	1939	Apr. 26, 1939	8.88	3,660
	June 1, 1935	5.29	1,130		May 4, 1939	14.58	11,000

Peak stages and discharges of Spring Creek near Tankersly, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 15, 1939	5.86	1,440	1949	May 4, 1949	8.67	2,960
	May 16, 1939	8.54	3,300		June 7, 1949	8.72	2,960
	June 23, 1939	4.91	935				
	July 13, 1939	6.92	2,100	1950	Oct. 24, 1949	10.07	4,220
	Aug. 6, 1939	7.72	2,660		Sept. 6, 1950	6.06	1,160
1940	Apr. 6, 1940	10.28	5,080	1951	Aug. 12, 1951	6.24	1,280
	June 7, 1940	5.78	1,420				
	June 29, 1940	6.58	1,910	1952	May 28, 1952	7.76	2,590
	Sept. 4, 1940	5.76	1,390				
				1953	Mar. 9, 1953	14.42	9,220
1941	Mar. 25, 1941	10.70	5,520		May 12, 1953	7.78	2,680
	Apr. 15, 1941	5.49	1,240		Aug. 20, 1953	10.16	4,250
	Apr. 27, 1941	6.50	1,840		Aug. 23, 1953	6.22	1,720
	May 2, 1941	10.13	4,860				
	May 21, 1941	7.44	2,440	1954	Apr. 14, 1954	6.27	1,780
	June 3, 1941	12.05	7,100		June 28, 1954	15.63	11,900
	Aug. 24, 1941	6.78	1,980				
				1955	May 18, 1955	11.70	6,100
1942	Oct. 1, 1941	5.74	1,390		July 18, 1955	18.75	19,900
	Oct. 15, 1941	8.16	3,040		Aug. 19, 1955	6.97	2,200
	Aug. 16, 1942	6.15	1,660				
	Aug. 23, 1942	21.37	26,900	1956	Apr. 30, 1956	10.93	5,600
	Sept. 7, 1942	6.50	1,840				
				1957	Apr. 23, 1957	7.00	2,370
1943	May 22, 1943	2.84	122		Apr. 27, 1957	20.74	27,100
					Apr. 29, 1957	5.72	1,560
1944	June 6, 1944	7.47	2,190		May 9, 1957	21.35	29,400
	Sept. 6, 1944	11.00	5,420		May 11, 1957	18.04	13,500
					May 18, 1957	15.25	12,000
1945	July 6, 1945	14.89	11,000		May 26, 1957	12.06	7,010
					June 1, 1957	12.50	7,600
1946	Apr. 30, 1946	6.50	1,420				
	Sept.26, 1946	19.93	22,800	1958	Oct. 9, 1957	12.05	8,300
					June 16, 1958	14.08	11,900
1947	Dec. 11, 1946	8.22	2,560		June 23, 1958	16.94	18,200
					Aug. 23, 1958	5.20	1,520
1948	May 26, 1948	10.14	4,250		Sept.27, 1958	8.62	2,880
	July 6, 1948	16.83	14,800				
	Sept.22, 1948	10.37	4,560	1959	June 19, 1959	4.37	1,520
					Sept.25, 1959	7.45	3,690
1949	Oct. 17, 1948	8.63	2,880		Sept.30, 1959	10.64	6,680
	Apr. 19, 1949	7.32	1,910				
	Apr. 24, 1949	12.22	6,710	1960	Oct. 3, 1959	24.00	82,100
	Apr. 28, 1949	14.33	9,950				

8-1325. South Concho River at San Angelo, Tex. (240)

Location.--Lat 31°26'45", long 100°25'30", at Lone Wolf Bridge, 400 ft upstream from San Angelo Waterworks dam, 0.5 mile south of San Angelo, Tom Green County, 1 mile upstream from North Concho River, and 7,470 ft downstream from bridge on U.S. Highways 87 and 277.

Drainage area.--3,866 sq mi, of which 2,688 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,802.94 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 51,000 cfs and by slope-area measurement at 111,000 cfs.

Historical data.--Flood of Aug. 6, 1906, was the greatest since at least 1853. Major floods are known to have occurred in August 1882, May 1884, and April 1900.

Remarks.--Flow partly regulated since Mar. 28, 1930, by Lake Nasworthy (capacity, 27,500 acre-ft), 6½ miles upstream. Base for partial-duration series, 6,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 6, 1906	29.7	-	1941	May 3, 1941	6.40	14,200
					May 21, 1941	7.42	19,400
1932	May 10, 1932	10.98	38,200		June 3, 1941	6.19	13,100
	May 25, 1932	6.30	13,600		June 6, 1941	8.23	23,500
	May 29, 1932	8.11	22,900		June 10, 1941	5.41	9,060
	July 3, 1932	8.86	26,600				
	Sept. 8, 1932	5.71	10,400	1942	Oct. 16, 1941	5.55	9,810
	Sept.22, 1932	5.50	9,440		Aug. 23, 1942	13.30	51,800
					Sept. 8, 1942	5.44	9,310
1933	Nov. 6, 1932	2.59	237				
				1943	May 23, 1943	4.71	5,980
1934	Apr. 5, 1934	6.00	12,000				
				1944	June 6, 1944	5.28	8,580
1935	Feb. 9, 1935	6.29	13,600		Sept. 6, 1944	6.14	12,900
	May 9, 1935	9.52	30,500				
	May 15, 1935	9.18	28,800	1945	Apr. 11, 1945	6.69	15,700
	May 17, 1935	8.11	22,900		July 6, 1945	7.81	21,500
	May 18, 1935	8.04	22,400		July 9, 1945	5.13	7,870
	June 3, 1935	6.98	17,200				
	June 5, 1935	8.03	22,400	1946	Apr. 30, 1946	6.58	15,200
	June 13, 1935	5.66	10,200		Sept.26, 1946	14.67	61,400
	July 23, 1935	5.84	11,200				
	Sept. 3, 1935	5.75	10,700	1947	Oct. 10, 1946	5.39	9,060
	Sept. 5, 1935	6.42	14,200		Dec. 11, 1946	6.21	13,100
	Sept. 9, 1935	5.37	8,740				
				1948	July 6, 1948	9.52	30,400
1936	May 24, 1936	5.89	11,400		Sept.22, 1948	4.79	6,380
	Sept.15, 1936	20.60	108,000				
	Sept.17, 1936	a23.4	111,000	1949	Mar. 21, 1949	4.80	6,680
	Sept.26, 1936	b19.94	-		Apr. 19, 1949	6.06	12,200
					Apr. 24, 1949	8.25	24,100
1937	May 10, 1937	5.84	10,200		Apr. 28, 1949	8.44	25,200
	May 31, 1937	6.32	13,700		May 4, 1949	4.83	6,880
	June 2, 1937	6.36	14,000		June 7, 1949	5.18	8,360
	June 8, 1937	5.40	8,970				
				1950	Oct. 24, 1949	6.88	16,600
1938	Dec. 29, 1937	5.52	9,440		Sept.22, 1950	5.13	8,140
	Jan. 25, 1938	5.36	8,740				
	Apr. 24, 1938	9.92	32,500	1951	Aug. 12, 1951	2.43	92
	July 20, 1938	9.14	28,200				
	July 23, 1938	17.15	80,100	1952	Mar. 28, 1952	2.12	17
1939	May 4, 1939	7.80	21,300	1953	Mar. 9, 1953	4.87	6,480
	Aug. 7, 1939	5.35	8,740		May 12, 1953	5.58	9,680
					Aug. 20, 1953	5.83	11,300
1940	June 29, 1940	5.50	9,440				
				1954	Oct. 4, 1953	c6.14	12,800
1941	Mar. 26, 1941	5.46	9,310				
	Apr. 27, 1941	5.45	9,310	1957	May 9, 1957	19.6	106,000

a Includes 2.4 ft backwater from North Concho River.
b Affected by backwater from North Concho River.
c Maximum for period Oct. 1-9, 1953; probably maximum for year.

8-1335. North Concho River at Sterling City, Tex. (241)

Location.--Lat 31°50', long 100°59', on right bank 100 ft upstream from bridge on State Farm to Market Highway 379, 0.3 mile south of Sterling City, Sterling County, 3.5 miles downstream from Lacy Creek, and 4 miles upstream from Sterling Creek.

Drainage area.--605 sq mi, of which 539 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 6, 1939; recording thereafter. Datum of gage is 2,242.36 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft.

Historical data.--Maximum stage since at least 1891, that of July 6, 1948.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	May 6, 1891	22.4	-	1952	Apr. 20, 1952	12.19	1,010
					May 31, 1952	15.62	2,260
1922	May 15, 1922	21.1	-				
				1953	June 26, 1953	11.05	760
1925	Apr. 25, 1925	21.4	-				
	Aug. 10, 1925	20.2	-	1954	Apr. 12, 1954	12.35	1,260
					Apr. 14, 1954	13.38	1,680
1940	June 9, 1940	9.00	553		Apr. 22, 1954	13.35	1,680
	June 24, 1940	11.78	1,150		Apr. 28, 1954	13.98	1,850
	June 29, 1940	12.03	1,200		May 11, 1954	16.15	6,000
	Sept. 3, 1940	9.50	646		May 16, 1954	14.47	2,020
					June 23, 1954	15.31	2,400
1941	Mar. 26, 1941	16.47	2,950				
	Apr. 26, 1941	10.62	878	1955	May 11, 1955	12.69	1,490
	June 16, 1941	11.80	1,150		July 16, 1955	11.43	1,170
	July 1, 1941	15.79	2,610				
				1956	May 8, 1956	9.27	523
1942	Oct. 15, 1941	13.82	1,780		May 24, 1956	14.05	1,650
					July 4, 1956	13.42	1,440
1943	July 14, 1943	9.90	726		July 25, 1956	12.41	1,140
1944	June 6, 1944	14.69	2,130	1957	Oct. 18, 1956	9.59	572
					Apr. 19, 1957	13.33	1,340
1945	July 6, 1945	14.35	2,010		Apr. 28, 1957	18.95	5,200
	July 8, 1945	23.52	15,600		May 9, 1957	9.75	624
	July 15, 1945	12.22	1,250		May 12, 1957	15.65	2,180
					May 18, 1957	10.65	748
1946	Sept. 4, 1946	5.56	197		May 23, 1957	17.44	3,460
					June 2, 1957	18.22	4,240
1947	May 11, 1947	15.68	2,300		Sept.12, 1957	12.83	1,200
					Sept.21, 1957	15.94	2,340
1948	Mar. 21, 1948	11.36	884				
	June 26, 1948	16.92	3,120	1958	Oct. 13, 1957	22.70	13,600
	July 6, 1948	23.70	16,300				
	Sept.22, 1948	12.54	1,070	1959	July 13, 1959	14.75	1,830
					July 17, 1959	12.02	950
1949	Apr. 19, 1949	18.89	6,100				
	Apr. 24, 1949	10.00	670	1960	Oct. 3, 1959	20.39	7,640
	Apr. 28, 1949	12.74	1,120		July 25, 1960	16.00	2,400
	May 8, 1949	16.54	2,800				
	May 16, 1949	17.20	3,400	1961	Oct. 16, 1960	14.56	1,830
	June 9, 1949	9.09	540		Oct. 18, 1960	9.78	520
	June 11, 1949	12.47	1,070		May 19, 1961	21.82	13,600
					July 4, 1961	12.60	930
1950	Apr. 16, 1950	17.63	5,860		July 22, 1961	22.23	14,200
	Sept.19, 1950	14.12	1,610				
1951	May 17, 1951	3.26	42				

8-1340. North Concho River near Carlsbad, Tex. (242)

Location.--Lat 31°36', long 100°39', near left bank on downstream side of pier of county road bridge, 0.6 mile southwest of Carlsbad, Tom Green County, 1.5 miles upstream from Mule Creek, and 16.2 miles upstream from San Angelo Dam.

Drainage area.--1,249 sq mi, of which 1,144 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 4, 1925, and from Sept. 27, 1936, to Feb. 7, 1937; recording Feb. 4, 1925, to Sept. 26, 1936, and after Feb. 7, 1937. At site 2½ miles upstream at datum 32.76 ft higher prior to Nov. 7, 1955. Datum of gage is 1,968.02 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and by slope-area measurements at 55,200 and 94,600 cfs.

Bankfull stage.--12 ft.

Historical data.--Maximum stage since 1853, that of Sept. 26, 1936. Stage not known for major flood in June 1853.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Apr. 26, 1925	12.10	29,500	1936	Sept.17, 1936	15.77	89,000
	Apr. 27, 1925	11.80	26,700		Sept.26, 1936	16.0	94,600
	May 8, 1925	8.70	8,600				
	May 30, 1925	14.45	60,100	1937	June 1, 1937	13.85	44,600
	June 25, 1925	5.43	1,740				
	Aug. 11, 1925	7.47	5,820	1938	Apr. 24, 1938	12.95	31,400
	Aug. 27, 1925	6.22	2,520		June 13, 1938	7.53	2,020
					July 20, 1938	7.37	1,730
1926	Mar. 21, 1926	14.1	53,800		July 22, 1938	7.23	1,570
	Mar. 30, 1926	6.46	3,200		July 25, 1938	8.88	4,650
	Apr. 21, 1926	7.32	4,900				
	Sept. 4, 1926	5.74	2,140	1939	Aug. 8, 1939	7.30	1,660
	Sept. 6, 1926	6.94	4,100				
				1940	Aug. 27, 1940	9.11	5,130
1927	Apr. 13, 1927	7.50	5,360		Sept. 3, 1940	8.50	3,780
	June 22, 1927	5.75	2,140				
	July 14, 1927	6.50	3,370	1941	Mar. 26, 1941	7.60	2,220
					Apr. 15, 1941	7.90	2,720
1928	May 13, 1928	6.25	2,880		Apr. 26, 1941	9.48	6,350
	July 21, 1928	7.24	5,130		May 2, 1941	7.67	2,300
	July 22, 1928	6.54	3,360		May 21, 1941	10.65	10,900
	July 24, 1928	8.24	7,100		June 5, 1941	13.90	45,400
	July 26, 1928	12.15	30,000		June 10, 1941	8.03	2,980
					July 2, 1941	7.53	2,140
1929	Mar. 21, 1929	7.53	5,360				
	May 7, 1929	8.22	7,100	1942	Aug. 23, 1942	8.02	2,890
1930	Oct. 13, 1929	7.17	4,680	1943	July 15, 1943	7.02	1,380
	May 4, 1930	5.48	1,800				
	May 18, 1930	7.29	4,900	1944	June 6, 1944	7.39	1,900
	June 13, 1930	12.9	37,900				
				1945	Apr. 11, 1945	7.18	1,590
1931	Oct. 13, 1930	7.35	1,920		July 8, 1945	13.33	36,600
					July 14, 1945	7.78	2,550
1932	Apr. 28, 1932	8.00	2,780				
	May 8, 1932	9.40	6,030	1946	Oct. 5, 1945	5.03	165
	May 10, 1932	11.5	16,900				
	May 24, 1932	8.60	3,990	1947	May 11, 1947	12.60	27,200
	May 29, 1932	9.85	7,600		May 16, 1947	8.00	2,890
	June 12, 1932	9.11	5,130				
	June 29, 1932	8.46	3,180	1948	June 26, 1948	8.22	3,230
	Sept. 6, 1932	9.60	6,700		July 6, 1948	14.14	49,500
1933	Dec. 24, 1932	4.83	101	1949	Apr. 19, 1949	11.30	15,500
1934	Aug. 25, 1934	9.80	7,400		Apr. 24, 1949	9.00	4,870
					May 8, 1949	7.75	2,460
1935	Nov. 14, 1934	8.06	2,880		May 16, 1949	8.26	3,320
	Nov. 19, 1934	8.35	3,460		May 19, 1949	7.53	2,140
	Feb. 8, 1935	9.34	5,870	1950	Apr. 17, 1950	7.74	2,450
	Apr. 19, 1935	8.64	4,100		May 11, 1950	7.37	1,880
	May 15, 1935	12.60	27,200		Aug. 1, 1950	7.29	1,760
	July 22, 1935	8.70	4,210		Sept. 5, 1950	8.18	3,200
	Sept. 3, 1935	8.05	2,880		Sept.22, 1950	9.20	5,410
1936	May 29, 1936	7.44	1,860	1951	May 17, 1951	8.26	3,340

Peak stages and discharges of North Concho River near Carlsbad, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	June 1, 1952	6.73	1,050	1957	Apr. 28, 1957	14.75	8,180
					May 12, 1957	13.87	7,380
1953	May 12, 1953	10.90	14,400		May 18, 1957	11.78	5,380
	May 15, 1953	7.02	1,510		May 23, 1957	11.04	4,640
	July 18, 1953	7.50	2,160		May 31, 1957	7.75	1,720
	Aug. 15, 1953	9.72	8,020		June 2, 1957	11.56	5,160
	Aug. 19, 1953	10.58	12,700		June 12, 1957	8.54	2,300
					Sept.22, 1957	13.52	6,600
1954	Oct. 4, 1953	8.19	3,420				
	Apr. 12, 1954	7.20	1,740	1958	Oct. 13, 1957	25.85	79,200
	Apr. 14, 1954	7.51	2,160		June 24, 1958	9.28	1,960
	May 12, 1954	8.57	4,200				
	May 18, 1954	7.46	2,080	1959	June 4, 1959	14.62	6,940
	June 7, 1954	8.50	4,080		July 18, 1959	8.95	1,820
					Sept.30, 1959	11.80	4,300
1955	May 12, 1955	7.56	2,240				
	July 17, 1955	7.93	2,920	1960	Oct. 4, 1959	13.77	6,220
1956	Apr. 30, 1956	7.66	1,650	1961	Feb. 15, 1961	11.25	4,300
	May 15, 1956	8.90	2,570		May 20, 1961	16.54	9,820
	May 23, 1956	11.26	5,090		July 23, 1961	14.57	7,570
1957	Oct. 17, 1956	10.20	3,800				

8-1350. North Concho River at San Angelo, Tex. (243)

Location.--Lat 31°27'56", long 100°26'51", near left bank on downstream side of pier of Sixth Street Bridge in San Angelo, Tom Green County, 3.4 miles downstream from San Angelo Dam, and 3.2 miles upstream from confluence with South Concho River.

Drainage area.--1,507 sq mi, of which 1,402 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 1, 1920; recording thereafter. At site 1.6 miles downstream at datum 11.02 ft lower prior to Feb. 12, 1929. At site 1.6 miles downstream at datum 13.02 ft lower Feb. 12, 1929, to Sept. 30, 1931. Datum of gage is 1,813.42 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and by slope-area measurement at 184,000 cfs.

Bankfull stage.--10 ft.

Historical data.--Greatest flood known occurred in June 1853; stage and discharge not known.

Remarks.--Since 1952, flow largely regulated by San Angelo Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 4, 1916	1.92	a814	1936	Sept.17, 1936	34.6	184,000
1917	Apr. 18, 1917	4.90	6,960				
1918	May 17, 1918	2.86	2,190	1948	July 7, 1948	18.30	33,700
1919	Oct. 21, 1918	5.7	9,220	1949	Apr. 19, 1949	11.15	16,100
1920	Oct. 7, 1919	5.0	7,240	1950	Sept.22, 1950	7.40	7,030
1921	Oct. 24, 1920	1.98	890	1951	Aug. 12, 1951	4.84	3,750
1922	Apr. 26, 1922	b19.3	-	1952	Aug. 1, 1952	2.68	286
1923	Apr. 24, 1923	-	1,730	1953	Aug. 20, 1953	3.73	1,610
1924	Apr. 25, 1924	11.35	24,500	1954	June 7, 1954	3.28	874
1925	May 30, 1925	18.70	43,000	1955	Aug. 4, 1955	2.99	530
1926	Mar. 21, 1926	12.80	28,500	1956	Aug. 19, 1956	4.70	3,230
1927	Apr. 13, 1927	3.20	2,840	1957	Apr. 26, 1957	3.15	1,010
				1958	Oct. 22, 1957	8.05	7,750
1929	May 9, 1929	5.05	4,300	1959	July 15, 1959	3.17	757
1930	June 13, 1930	22.52	47,000	1960	Oct. 3, 1959	3.16	746
1931	Oct. 13, 1930	b10.95	-	1961	Oct. 28, 1960	2.65	245

a Maximum during period November 1915 to September 1916; probably maximum for year.
b Affected by backwater.

8-1360. Concho River near San Angelo, Tex. (244)

Location.--Lat 31°27'10", long 100°24'40", on right bank 0.5 mile downstream from confluence of North Concho and South Concho Rivers and 1.8 miles southeast of San Angelo, Tom Green County.

Drainage area.--5,380 sq mi, of which 4,097 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 11, 1917; recording thereafter. Datum of gage is 1,776.79 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 105,000 cfs and by slope-area measurements at 164,000 and 230,000 cfs.

Bankfull stage.--26 ft.

Historical data.--Flood of Aug. 6, 1906, reached maximum stage since 1853. Other large floods occurred in June 1853, August 1882, and April 1900.

Remarks.--Floodflows are partly regulated since 1930 by Lake Nasworthy by operation of floodgates, and since 1952, the flow of North Concho River is largely regulated by San Angelo Reservoir. Only annual peaks shown after 1952. Base for partial-duration series, 5,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 6, 1906	47.5	246,000	1932	Sept. 1, 1932	10.16	6,420
					Sept. 8, 1932	13.25	10,000
1916	Sept. 1, 1916	13.0	9,700		Sept.22, 1932	11.70	8,190
1917	Apr. 18, 1917	13.7	10,600	1933	Dec. 24, 1932	2.36	286
1918	May 17, 1918	13.8	10,700	1934	Apr. 5, 1934	12.85	9,510
					Aug. 25, 1934	9.43	5,610
1919	Oct. 11, 1918	10.8	7,120				
	Oct. 21, 1918	13.20	9,990	1935	Feb. 9, 1935	14.20	11,300
	Mar. 24, 1919	11.90	8,430		May 9, 1935	25.96	30,000
	June 10, 1919	17.57	15,800		May 15, 1935	29.00	39,000
	July 8, 1919	26.6	31,800		May 18, 1935	21.00	20,600
					June 3, 1935	15.76	13,300
1920	Oct. 6, 1919	18.52	17,100		June 5, 1935	20.50	19,900
	June 23, 1920	11.41	7,830		July 23, 1935	13.10	9,870
					Sept. 3, 1935	13.10	9,870
1921	Aug. 31, 1921	14.70	11,900		Sept. 5, 1935	12.70	9,390
					Sept. 9, 1935	10.44	8,720
1922	Apr. 8, 1922	26.6	40,400				
	Apr. 26, 1922	36.8	92,000	1936	May 24, 1936	13.13	9,910
	May 17, 1922	15.0	12,300		Sept.15, 1936	43.6	180,000
	July 3, 1922	15.7	13,210		Sept.17, 1936	46.6	230,000
					Sept.26, 1936	42.6	164,000
1923	Aug. 23, 1923	9.60	5,800				
				1937	May 10, 1937	13.52	11,800
1924	Oct. 15, 1923	9.20	5,360		May 31, 1937	13.14	11,300
	Apr. 25, 1924	28.10	36,300		June 2, 1937	21.22	23,400
	May 26, 1924	27.20	33,600		June 8, 1937	11.37	9,020
1925	Apr. 26, 1925	16.2	13,900	1938	Dec. 29, 1937	11.87	9,510
	May 9, 1925	17.85	16,200		Jan. 23, 1938	11.35	8,860
	May 31, 1925	31.2	49,200		Apr. 24, 1938	30.40	49,000
					July 20, 1938	23.75	27,000
1926	Mar. 21, 1926	21.72	21,700		July 21, 1938	18.37	18,400
	Apr. 21, 1926	27.68	35,100		July 22, 1938	17.50	17,100
					July 23, 1938	35.90	65,100
1927	Oct. 15, 1926	6.37	2,730		July 25, 1938	16.32	15,400
1928	Oct. 1, 1927	23.35	25,400	1939	May 4, 1939	18.94	19,100
	July 27, 1928	15.60	13,100		Aug. 7, 1939	11.04	8,360
1929	Sept. 6, 1929	9.70	6,000	1940	June 29, 1940	26.05	34,400
1930	Oct. 13, 1929	9.48	5,690	1941	Mar. 26, 1941	11.30	8,730
	May 18, 1930	12.20	8,790		Apr. 27, 1941	12.07	9,770
	June 13, 1930	29.30	40,200		May 3, 1941	16.34	15,400
					May 21, 1941	23.04	25,600
1931	Oct. 13, 1930	32.65	57,600		June 3, 1941	13.96	12,200
					June 5, 1941	24.13	27,600
1932	Apr. 28, 1932	9.56	5,760		June 10, 1941	12.66	10,600
	May 10, 1932	29.90	42,600				
	May 25, 1932	17.38	15,600	1942	Oct. 16, 1941	12.24	9,900
	May 29, 1932	24.70	29,800		Aug. 23, 1942	30.88	51,500
	July 3, 1932	23.15	24,700		Aug. 24, 1942	10.91	8,240

Peak stages and discharges of Concho River near San Angelo, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Sept. 8, 1942	11.35	8,860	1949	Apr. 28, 1949	19.70	21,700
					May 4, 1949	9.00	6,100
1943	May 23, 1943	8.57	5,560		May 16, 1949	8.94	5,990
					June 7, 1949	9.85	7,060
1944	June 6, 1944	11.40	8,860				
	Sept. 6, 1944	13.97	12,200	1950	Oct. 24, 1949	16.06	15,700
					Sept.22, 1950	13.86	12,400
1945	Apr. 11, 1945	14.96	13,600				
	July 6, 1945	19.62	20,000	1951	Aug. 12, 1951	7.71	4,740
	July 9, 1945	18.54	18,500				
				1952	May 1, 1952	1.99	174
1946	Apr. 30, 1946	14.80	13,800				
	Sept.26, 1946	31.76	56,000	1953	Aug. 20, 1953	14.09	12,800
				1954	Oct. 4, 1953	15.55	14,600
1947	Oct. 9, 1946	10.70	8,210	1955	July 18, 1955	23.90	25,500
	Dec. 11, 1946	15.42	14,700				
	May 11, 1947	15.59	15,000	1956	Apr. 30, 1956	8.04	3,800
				1957	May 9, 1957	39.8	106,000
1948	July 6, 1948	30.0	47,500	1958	Oct. 13, 1957	19.06	19,600
	Sept.22, 1948	9.18	6,340	1959	Sept.30, 1959	18.35	17,700
				1960	Oct. 3, 1959	40.70	122,000
1949	Mar. 21, 1949	9.12	6,220				
	Apr. 19, 1949	19.04	20,500	1961	June 18, 1961	14.41	12,100
	Apr. 24, 1949	21.74	25,100				

8-1365. Concho River near Paint Rock, Tex. (245)

Location.--Lat 31°31', long 99°55', near left bank on downstream side of pier of bridge on U.S. Highway 83, 0.2 mile north of Paint Rock, Concho County, and 2 miles downstream from Kickapoo Creek.

Drainage area.--6,415 sq mi, of which 5,132 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 16, 1920, and from Oct. 2, 1936, to Jan. 14, 1940; recording Sept. 17, 1920, to Sept. 17, 1936, and after Jan. 14, 1940. At site 1.4 miles upstream at datum 13.16 ft higher prior to Sept. 18, 1936. At site 1,000 ft downstream at present datum Oct. 2, 1936, to May 18, 1938. Datum of gage is 1,574.43 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 100,000 cfs and by slope-area measurements at 146,000 and 301,000 cfs.

Bankfull stage.--26 ft.

Historical data.--Maximum stage known since at least 1853, that of Sept. 17, 1936. A large flood is known to have occurred in June 1853.

Remarks.--Floodflows slightly regulated by Lake Nasworthy on South Concho River and by San Angelo Reservoir on North Concho River. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	August 1882	39.9	201,000	1921	Sept. 1, 1921	6.74	4,370
1906	August 1906	39.5	176,000	1922	Apr. 8, 1922	13.90	21,900
					Apr. 25, 1922	15.83	28,100
1916	Sept. 2, 1916	8.20	8,700		Apr. 27, 1922	27.50	76,500
					May 3, 1922	12.5	17,800
1917	Apr. 18, 1917	8.50	7,150		May 15, 1922	10.12	11,300
					May 17, 1922	9.45	9,570
1918	May 18, 1918	11.50	15,000				
	June 3, 1918	10.15	11,500	1923	Sept. 5, 1923	8.76	8,190
1919	Oct. 11, 1918	11.0	13,600	1924	Apr. 26, 1924	14.64	24,000
	Oct. 22, 1918	13.0	19,200		May 26, 1924	14.16	22,900
	Nov. 7, 1918	12.0	16,400				
	May 24, 1919	11.00	13,600	1925	Oct. 9, 1924	10.70	12,800
	June 10, 1919	13.50	21,300		May 9, 1925	13.30	20,100
					May 31, 1925	20.15	42,000
1920	Oct. 7, 1919	12.00	16,900				

Peak stages and discharges of Concho River near Paint Rock, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Mar. 21, 1926	13.15	19,800	1942	Oct. 16, 1941	17.67	8,880
	Apr. 22, 1926	18.67	38,200		Aug. 24, 1942	26.94	37,400
	Aug. 19, 1926	9.20	9,100				
				1943	May 24, 1943	15.77	4,460
1927	Oct. 14, 1926	6.86	4,610				
				1944	Sept. 7, 1944	18.97	13,200
1928	Oct. 1, 1927	16.35	30,100				
	June 13, 1928	11.59	15,300	1945	July 7, 1945	21.36	21,300
	July 27, 1928	10.78	13,100		July 9, 1945	20.96	20,200
1929	Sept. 6, 1929	8.55	7,760	1946	Sept.27, 1946	25.57	32,700
1930	May 2, 1930	12.50	17,800	1947	Dec. 11, 1946	18.32	10,700
	June 14, 1930	15.50	26,900		May 11, 1947	19.33	14,300
					May 18, 1947	17.83	9,160
1931	Oct. 6, 1930	22.5	52,000		May 24, 1947	19.99	16,900
	Oct. 13, 1930	26.6	72,000				
				1948	July 7, 1948	27.37	40,600
1932	May 11, 1932	19.50	40,800				
	May 25, 1932	10.32	10,800	1949	Mar. 21, 1949	17.42	8,170
	May 29, 1932	12.66	16,300		Apr. 19, 1949	22.89	24,400
	July 4, 1932	14.10	19,700		Apr. 24, 1949	21.96	21,900
	Sept. 1, 1932	13.63	18,500		Apr. 29, 1949	21.05	19,000
	Sept. 8, 1932	9.02	8,160		May 28, 1949	28.70	37,000
1933	May 14, 1933	6.93	4,570	1950	Oct. 25, 1949	18.88	12,500
					Sept.23, 1950	18.28	10,700
1934	Apr. 5, 1934	14.05	19,500				
				1951	Aug. 13, 1951	15.37	3,550
1935	Apr. 18, 1935	10.06	11,000				
	Apr. 22, 1935	10.74	12,400	1952	May 31, 1952	16.16	5,080
	May 10, 1935	14.22	20,800				
	May 15, 1935	15.61	25,100	1953	Aug. 21, 1953	17.38	8,170
	May 18, 1935	17.20	30,800				
	June 5, 1935	11.30	13,800	1954	Oct. 4, 1953	18.00	9,650
	July 24, 1935	9.10	8,680		May 23, 1954	18.98	12,900
	Sept. 5, 1935	19.05	38,400				
				1955	May 17, 1955	22.75	24,100
1936	Sept.15, 1936	35.3	140,000		June 29, 1955	19.00	12,900
	Sept.17, 1936	41.3	301,000		July 19, 1955	21.05	19,000
	Sept.26, 1936	35.8	146,000				
				1956	May 14, 1956	16.64	6,060
1937	May 31, 1937	17.0	8,190				
	June 2, 1937	20.10	16,100	1957	Apr. 27, 1957	28.10	44,200
	June 8, 1937	17.0	8,190		May 10, 1957	31.95	79,300
					May 13, 1957	22.77	25,000
1938	Dec. 29, 1937	17.0	8,190		May 19, 1957	21.92	22,400
	Apr. 24, 1938	25.0	34,600		May 22, 1957	17.66	9,280
	July 21, 1938	22.3	22,400		May 27, 1957	23.83	28,100
	July 24, 1938	31.95	86,000		June 1, 1957	18.60	12,200
1939	May 5, 1939	18.98	12,800	1958	Oct. 15, 1957	19.50	15,100
					Oct. 23, 1957	17.24	8,000
1940	Apr. 6, 1940	18.92	12,800		June 17, 1958	18.93	13,100
	June 29, 1940	22.90	25,100		June 24, 1958	18.86	13,000
1941	Mar. 26, 1941	17.54	8,340	1959	June 4, 1959	17.28	8,280
	Apr. 28, 1941	17.69	8,880		Sept.30, 1959	19.67	15,700
	May 3, 1941	19.87	16,500				
	May 22, 1941	22.12	23,000	1960	Oct. 4, 1959	33.95	97,300
	June 4, 1941	18.63	11,800		Apr. 26, 1960	18.62	12,200
	June 6, 1941	22.78	24,900				
	June 11, 1941	18.18	10,400	1961	June 19, 1961	18.60	12,200

8-1375. Mukewater Creek at Trickham, Tex. (246)

Location.--Lat 31°36', long 99°13', on left bank at Trickham, Coleman County, 750 ft upstream from bridge on State Farm Road 1176, 2.9 miles upstream from Hay Creek, and 6.9 miles upstream from mouth.

Drainage area.--70.0 sq mi.

Gage.--Recording. Datum of gage is 1,394.54 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and by contracted-opening measurement at 15,000 cfs.

Bankfull stage.--8 ft.

Historical data.--Maximum stage since at least 1919 occurred in 1927, from information by local resident.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	-	18	-	1956	May 1, 1956	15.83	15,000
1951	May 22, 1951	11.40	4,900	1957	Mar. 20, 1957	4.44	628
					Apr. 19, 1957	5.08	855
1952	Apr. 22, 1952	4.68	708		Apr. 23, 1957	5.21	915
	May 18, 1952	4.69	708		Apr. 26, 1957	12.45	6,760
	May 24, 1952	5.82	1,140		May 11, 1957	8.17	2,560
					May 18, 1957	9.27	3,430
1953	Mar. 9, 1953	4.64	690		May 24, 1957	6.25	1,470
	May 12, 1953	5.25	920				
				1958	Aug. 24, 1958	4.57	670
1954	Oct. 4, 1953	6.79	1,620				
	Mar. 24, 1954	6.33	1,360	1959	June 2, 1959	5.10	947
	May 11, 1954	4.68	708		June 4, 1959	11.26	5,820
					June 26, 1959	6.08	1,370
1955	May 10, 1955	10.85	4,320		July 21, 1959	11.90	6,620
	May 18, 1955	8.52	2,460				
	June 5, 1955	4.70	727	1960	Oct. 4, 1959	5.57	1,150
	June 7, 1955	5.62	1,060		Jan. 5, 1960	4.30	620
	June 9, 1955	4.51	671		Jan. 14, 1960	4.27	610
	June 15, 1955	7.54	2,040				
	July 18, 1955	7.01	1,680	1961	June 3, 1961	6.46	1,550
	Sept.23, 1955	6.71	1,560		June 17, 1961	5.87	1,280

8-1380. Colorado River at Winchell, Tex. (247)

Location.--Lat 31°28'05", long 99°09'45", near left bank on downstream side of pier of bridge on U.S. Highway 377, 0.3 mile south of Winchell, Brown County, and 6.2 miles downstream from Home Creek.

Drainage area.--24,580 sq mi, approximately, of which 12,680 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 25, 1940; recording thereafter. At site 4.2 miles downstream at datum 10.14 ft lower November 1923 to September 1934. Datum of gage is 1,264.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--26 ft.

Historical data.--Maximum stages since at least 1882 occurred Sept. 19, 1936, and Aug. 8, 1906, from information by local resident.

Remarks.--Floodflow partly regulated by the following: Since July 1952 by Lake J. B. Thomas; since April 1949 by Lake Colorado City; since May 1953 by Oak Creek Reservoir; since 1930 by Lake Nasworthy; since February 1952 by San Angelo Reservoir; and since August 1958 by Champion Creek Reservoir. Base for partial-duration series, 18,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges of Colorado River at Winchell, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 8, 1906	a56.2	-	1947	May 12, 1947	26.85	22,400
					May 15, 1947	20.05	14,000
1922	April 1922	a48.0	-		May 18, 1947	23.63	18,300
					May 24, 1947	19.84	13,800
1924	Apr. 27, 1924	25.05	20,500				
1925	June 1, 1925	33.30	31,300	1948	July 9, 1948	39.68	46,000
1926	Apr. 23, 1926	36.1	35,100	1949	Mar. 21, 1949	26.60	22,100
1927	Apr. 21, 1927	28.1	24,400		Apr. 20, 1949	37.07	39,700
1928	July 29, 1928	35.10	33,700		Apr. 26, 1949	34.36	34,000
1929	May 26, 1929	31.2	28,400		Apr. 29, 1949	22.17	16,600
1930	June 15, 1930	38.3	42,300		May 9, 1949	23.60	18,300
					May 29, 1949	22.20	16,600
1931	Oct. 15, 1930	b48.71	76,100				
1932	May 12, 1932	38.6	41,800	1950	Oct. 25, 1949	15.94	9,880
1933	May 25, 1933	28.00	23,100				
1934	Apr. 6, 1934	29.90	25,600	1951	May 25, 1951	27.30	23,100
					June 12, 1951	18.01	12,000
1936	Sept.19, 1936	62.2	-				
				1952	May 1, 1952	27.73	23,700
1938	July 24, 1938	45.7	-		Sept.11, 1952	38.92	44,000
1939	May 17, 1939	19.1	12,700	1953	Mar. 9, 1953	19.18	13,200
	June 20, 1939	26.91	21,900		May 13, 1953	21.08	15,300
	June 24, 1939	28.68	24,300		Aug. 21, 1953	34.18	33,600
	Aug. 5, 1939	25.0	19,600				
				1954	Oct. 5, 1953	22.20	16,600
1940	Apr. 7, 1940	28.08	24,200		Apr. 13, 1954	33.00	31,700
	May 23, 1940	18.46	12,400		May 14, 1954	19.20	13,200
	June 9, 1940	19.57	13,600		May 20, 1954	21.68	16,000
	June 19, 1940	33.20	32,000		May 25, 1954	30.00	27,000
	June 30, 1940	30.82	28,200		June 9, 1954	18.50	12,400
1941	Apr. 18, 1941	22.24	16,600	1955	May 19, 1955	46.37	64,600
	Apr. 28, 1941	24.86	19,900		June 5, 1955	32.76	31,400
	May 4, 1941	32.43	30,700		June 7, 1955	30.35	27,600
	May 23, 1941	33.60	32,700		June 9, 1955	22.65	17,100
	June 3, 1941	22.87	17,400		July 19, 1955	30.35	27,600
	June 7, 1941	33.84	32,700		Sept.23, 1955	31.78	29,800
	June 11, 1941	22.30	16,700				
	June 16, 1941	21.66	15,900	1956	May 1, 1956	44.55	57,800
	June 27, 1941	25.92	21,200				
				1957	Oct. 19, 1956	21.62	15,900
1942	Oct. 17, 1941	20.0	14,000		Apr. 23, 1957	18.62	12,300
	Apr. 20, 1942	20.95	15,200		Apr. 27, 1957	37.78	40,400
	May 19, 1942	20.78	15,000		May 11, 1957	35.48	35,900
	Aug. 23, 1942	28.85	24,400		May 13, 1957	46.00	63,000
	Aug. 25, 1942	29.90	25,800		May 20, 1957	36.28	37,400
	Aug. 28, 1942	18.77	12,100		May 24, 1957	33.10	31,900
					May 28, 1957	29.15	25,700
1943	Oct. 18, 1942	13.97	7,670		June 4, 1957	31.05	28,600
1944	July 25, 1944	19.03	12,900	1958	Oct. 15, 1957	44.56	57,600
	Sept. 7, 1944	19.12	15,000				
				1959	June 4, 1959	31.80	29,800
1945	Oct. 4, 1944	20.12	14,200		July 21, 1959	19.50	13,000
	July 8, 1945	37.66	41,100				
				1960	Oct. 1, 1959	18.84	12,200
1946	May 16, 1946	28.38	24,700		Oct. 6, 1959	46.10	63,400
	Sept.28, 1946	26.00	21,300				
				1961	Oct. 17, 1960	21.12	14,700
1947	Dec. 12, 1946	21.07	15,300		Sept. 5, 1961	18.73	12,100

a Adjusted to present site and datum.
b Gage height, 51.8 ft present site and datum.

8-1390. Deep Creek subwatershed No. 3 near Placid, Tex. (248)

Location.--Lat 31°17'10", long 99°09'25", near right end of dam on tributary to Deep Creek, 2.8 miles southeast of Placid, McCulloch County.

Drainage area.--3.42 sq mi.

Gage.--Nonrecording prior to Nov. 30, 1953; recording thereafter. Datum of gage is 1,500.00 ft above mean sea level, datum of 1929.

Remarks.--Peaks are based on maximum inflow (average for 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustments made for reservoir losses. Base for partial-duration series, 100 cfs.

Peak stages and discharges of Deep Creek subwatershed No. 3 near Placid, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Oct. 4, 1953	-	ab742	1957	May 9, 1957	-	198
	May 11, 1954	-	130		May 11, 1957	-	600
					May 12, 1957	-	1,160
1955	Oct. 27, 1954	-	166		May 13, 1957	-	c469
	Nov. 14, 1954	-	c179		May 17, 1957	-	c384
	Feb. 4, 1955	-	c219		Sept. 3, 1957	-	188
	May 17, 1955	-	1,520		Sept.11, 1957	-	142
	May 18, 1955	-	1,500		Sept.21, 1957	-	208
	May 18, 1955	-	1,800				
	May 19, 1955	-	1,280	1958	Oct. 13, 1957	-	395
	June 5, 1955	-	c976		Oct. 15, 1957	-	132
	July 16, 1955	-	c169		Feb. 22, 1958	-	102
	Sept.11, 1955	-	c267		Mar. 6, 1958	-	448
	Sept.23, 1955	-	c718		May 16, 1958	-	241
					July 22, 1958	-	115
1956	Aug. 28, 1956	-	218				
				1959	June 3, 1959	-	938
1957	Oct. 19, 1956	-	229		June 26, 1959	-	287
	Mar. 20, 1957	-	568				
	Apr. 19, 1957	-	264	1960	Oct. 4, 1959	-	d280
	Apr. 23, 1957	-	543		Oct. 13, 1959	-	d200
	Apr. 26, 1957	-	c294				
	Apr. 28, 1957	-	323	1961	June 5, 1961	-	e235
	Apr. 29, 1957	-	296				

a Average for 1-hour interval; estimated. b Not adjusted for rainfall on water surface. c Average for 30-minute interval. d About; estimated. e Annual peak only.

8-1395. Deep Creek near Mercury, Tex. (249)

Location.--Lat 31°24'10", long 99°07'15", near left bank on downstream side of bridge on Farm Road 502, 1.5 miles upstream from Dry Prong Deep Creek and 2.3 miles southeast of Mercury, McCulloch County.

Drainage area.--43.9 sq mi.

Gage.--Nonrecording Oct. 1 to Nov. 25, 1953; recording thereafter. Datum of gage is 1,325.64 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,500 cfs and by slope-area measurements at 5,440 and 33,600 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood of July 23, 1938, was the highest since at least 1890, from information by local resident.

Remarks.--Between 1952 and 1953, five floodwater-retarding structures were built in the basin upstream from this station. These structures have a total floodwater-retarding capacity of 5,730 acre-ft below the flood spillway crests, and partly control the flow from 19.9 sq mi above the station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	-	21	-	1957	May 12, 1957	16.62	3,440
				1958	Nov. 2, 1957	13.07	1,770
1938	July 23, 1938	21.3	33,600	1959	June 3, 1959	14.96	2,450
				1960	Oct. 3, 1959	10.56	1,130
1954	Oct. 4, 1953	18.27	5,500				
1955	May 17, 1955	17.96	5,200	1961	June 8, 1961	6.77	307
1956	Aug. 28, 1956	15.13	2,540				

8-1400. Deep Creek subwatershed No. 8 (Dry Prong Deep Creek) near Mercury, Tex. (250)

Location.--Lat 31°23'05", long 99°08'30", near center of dam on Dry Prong Deep Creek, 1.9 miles southeast of Mercury, McCulloch County, and 3.5 miles upstream from mouth.

Drainage area.--4.32 sq mi.

Gage.--Recording. Datum of gage is 1,377.13 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peak discharges based on maximum inflow (average for 15-minute interval) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 18, 1952	-	ab500	1957	Mar. 20, 1957	-	c258
	Apr. 22, 1952	-	a120		Apr. 23, 1957	-	221
	May 18, 1952	-	a114		Apr. 26, 1957	-	c156
	May 24, 1952	-	a146		May 3, 1957	-	107
	Sept.11, 1952	-	a252		May 11, 1957	-	c150
					May 12, 1957	-	c894
1953	Nov. 9, 1952	-	a122		May 13, 1957	-	d260
	Nov. 25, 1952	-	a157		May 18, 1957	-	654
	Mar. 9, 1953	-	a107				
	May 12, 1953	-	ab900	1958	Nov. 2, 1957	-	521
					Feb. 22, 1958	-	190
1954	Oct. 4, 1953	-	1,570		Mar. 7, 1958	-	157
	Apr. 30, 1954	-	114		Aug. 23, 1958	-	104
	May 11, 1954	-	277				
				1959	June 3, 1959	-	332
1955	Oct. 27, 1954	-	c201		June 4, 1959	-	266
	Feb. 4, 1955	-	c126		June 26, 1959	-	221
	May 17, 1955	-	c2,550		July 21, 1959	-	185
	May 18, 1955	-	c1,270				
	June 5, 1955	-	c294	1960	Oct. 3, 1959	-	a323
	July 18, 1955	-	c151		Oct. 13, 1959	-	128
	Sept.23, 1955	-	1,440		Jan. 5, 1960	-	143
					Sept.23, 1960	-	274
1956	May 1, 1956	-	c141				
	May 24, 1956	-	c150	1961	Dec. 7, 1960	-	e217
	Aug. 28, 1956	-	557				

a Unadjusted for rainfall on water surface. b Estimated. c Average for 30-minute interval. d Average for 60-minute interval. e Annual peak only.

8-1405. Dry Prong Deep Creek near Mercury, Tex. (251)

Location.--Lat 31°24'10", long 99°08'10", near center of span on downstream side of bridge on Farm Road 502, 1.3 miles southeast of Mercury, McCulloch County, 1.7 miles downstream from floodwater-retarding structure, and 1.8 miles upstream from mouth.

Drainage area.--8.31 sq mi.

Gage.--Recording. Datum of gage is 1,339.02 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of May 17, 1955, is the highest since at least 1924, from information by local resident.

Remarks.--In December 1951, one floodwater-retarding structure was built on the creek at a site 1.7 miles upstream from this station. This structure has a total floodwater-retarding capacity of 1,410 acre-ft below flood spillway crest, and partly controls the flow from 4.32 sq mi above this station. Only annual peaks are shown.

Peak stages and discharges of Dry Prong Deep Creek near Mercury, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	July 23, 1938	8.7	-	1957	May 12, 1957	6.46	664
				1958	Nov. 2, 1957	4.85	253
1952	Apr. 18, 1952	5.80	105	1959	June 4, 1959	4.95	274
1953	May 12, 1953	5.30	293	1960	Oct. 3, 1959	4.65	226
1954	Oct. 4, 1953	7.94	776				
1955	May 17, 1955	9.00	2,000	1961	Feb. 5, 1961	5.91	129
1956	May 1, 1956	7.20	960				

8-1415. Hords Creek near Valera, Tex. (252)

Location.--Lat 31°50', long 99°33', on left bank 7,500 ft downstream from Hords Creek Reservoir, 5.5 miles north of Valera, Coleman County, and 7.0 miles west of Coleman.

Drainage area.--53 sq mi, approximately, of which 48 sq mi is above Hords Creek Dam.

Gage.--Recording. Datum of gage is 1,819.88 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs.

Bankfull stage.--8 ft.

Historical data.--Maximum stage since 1900, that of July 3, 1932. Flood in July or September 1900 was 3.7 ft higher than that of July 1932, 12 miles downstream from station.

Remarks.--Floodflows largely regulated by Hords Creek Reservoir since April 1948. At times, runoff results from rainfall on area between reservoir and gage site. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	July 3, 1932	23.0	-	1955	July 18, 1955	5.95	715
1948	July 31, 1948	8.60	1,490	1956	Apr. 30, 1956	14.73	3,860
1949	Aug. 9, 1949	8.06	1,320	1957	May 12, 1957	6.00	878
1950	Oct. 24, 1949	3.78	180	1958	June 21, 1958	4.06	236
				1959	July 21, 1959	8.10	1,320
1951	May 21, 1951	11.29	2,440	1960	Aug. 10, 1960	3.88	200
1952	Sept.10, 1952	4.05	234				
1953	July 15, 1953	4.46	326	1961	June 5, 1961	4.63	374
1954	Apr. 27, 1954	5.72	657				

8-1420. Hords Creek at Coleman, Tex. (253)

Location.--Lat 31°51', long 99°26', near right bank at downstream side of pier of bridge on U.S. Highways 84 and 283 and State Highway 206, 1 mile north of Coleman, Coleman County, 2.5 miles downstream from Batchelor Creek, and 12 miles downstream from Hords Creek Dam.

Drainage area.--107 sq mi, of which 48 sq mi is above Hords Creek Dam.

Gage.--Nonrecording Oct. 10, 1940, to May 22, 1946; recording thereafter. Datum of gage is 1,676.83 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942. At site 3,700 ft downstream at datum 6.38 ft lower prior to May 23, 1946.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs, by slope-area measurement at 8,600 cfs, and by contracted-opening measurement at 25,100 cfs.

Bankfull stage.--8 ft.

Historical data.--Maximum stage since at least 1876 occurred in July or September 1900 and reached a stage about 6.3 ft higher than that of Apr. 30, 1956, and flood of July 3, 1932, reached a stage 2.6 ft higher than that of Apr.30, 1956, at a point 6,000 ft downstream from present gage.

Remarks.--Floodflows largely regulated since 1948 by Hords Creek Reservoir. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 26, 1941	7.08	1,060	1951	May 25, 1951	6.49	1,570
	Apr. 27, 1941	11.54	4,130		June 12, 1951	11.88	4,900
	May 2, 1941	16.24	8,450				
	May 19, 1941	8.40	1,860	1952	May 17, 1952	7.17	1,890
	May 21, 1941	14.78	6,900				
	June 2, 1941	14.80	6,920	1953	May 15, 1953	4.58	780
	June 9, 1941	8.00	1,610		Aug. 17, 1953	4.29	670
	June 15, 1941	7.86	1,530				
	June 26, 1941	18.60	10,600	1954	Apr. 11, 1954	7.02	1,760
					Apr. 27, 1954	6.70	1,620
1942	Oct. 25, 1941	7.50	1,310		May 11, 1954	6.28	1,400
	Apr. 7, 1942	14.30	6,470				
	Apr. 19, 1942	8.25	1,760	1955	May 17, 1955	4.87	695
	Apr. 24, 1942	8.84	2,150		May 18, 1955	6.33	1,390
	May 19, 1942	9.42	2,540		May 19, 1955	6.08	1,260
	May 24, 1942	7.60	1,370		June 8, 1955	6.78	1,610
					July 18, 1955	7.30	1,890
1943	Oct. 17, 1942	11.90	4,420		Sept.23, 1955	5.94	1,200
	Sept. 5, 1943	7.20	1,130				
				1956	Apr. 5, 1956	7.08	1,580
1944	May 1, 1944	5.94	433		Apr. 30, 1956	21.50	25,100
					May 4, 1956	7.37	2,220
1945	Oct. 3, 1944	11.30	3,940				
	May 1, 1945	6.82	902	1957	Apr. 23, 1957	4.76	860
	June 7, 1945	14.78	6,900		Apr. 26, 1957	8.72	2,940
	July 1, 1945	6.96	986		Apr. 28, 1957	4.46	719
	July 6, 1945	13.56	5,800		May 11, 1957	4.62	788
	July 7, 1945	14.92	7,030		May 12, 1957	11.10	4,360
					May 13, 1957	7.76	2,440
1946	May 15, 1946	7.38	1,240		May 18, 1957	5.25	1,100
	May 18, 1946	7.26	1,170		May 23, 1957	11.95	4,900
					May 25, 1957	8.17	2,660
1947	Nov. 2, 1946	4.50	740		June 1, 1957	4.96	956
					June 2, 1957	6.47	1,740
1948	Apr. 25, 1948	5.23	1,030		June 12, 1957	5.26	1,100
	July 3, 1948	8.17	2,370				
	July 10, 1948	6.60	1,620	1958	June 21, 1958	6.80	1,580
	July 31, 1948	7.58	2,070				
				1959	May 22, 1959	5.68	1,320
1949	Apr. 25, 1949	5.41	1,110		July 20, 1959	11.04	4,300
	May 8, 1949	12.44	5,350		July 21, 1959	10.80	4,180
	Aug. 9, 1949	11.05	4,240				
				1960	Oct. 3, 1959	4.58	635
1950	Oct. 24, 1949	3.88	523		Aug. 10, 1960	4.65	677
1951	May 22, 1951	16.50	8,680	1961	June 5, 1961	8.45	2,770

8-1435. Pecan Bayou at Brownwood, Tex. (254)

Location.--Lat 31°44'10", long 98°58'30", on left bank at downstream side of pier of abandoned Gulf, Colorado and Santa Fe Railway Co. bridge, 1 mile north of Brownwood, Brown County, 6 miles downstream from Salt Creek, and 10 miles downstream from Brownwood Reservoir.

Drainage area.--1,614 sq mi.

Gage.--Nonrecording prior to July 11, 1929; recording thereafter. At site 2,000 ft downstream at datum 2.45 ft lower May 25 to June 4, 1917. At site 1,300 ft downstream at datum 3.49 ft lower June 8, 1917, to June 30, 1918. At site 1,300 ft downstream at datum 0.10 ft lower Oct. 16, 1923, to July 10, 1929. Datum of gage is 1,318.58 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5 ft.

Historical data.--Maximum stage known, 21.7 ft in September 1900. Flood of July 3, 1932, probably the greatest discharge known, reached a discharge of about 235,000 cfs as it entered Brownwood Reservoir (computed from rate of change of contents in reservoir).

Remarks.--Floodflow largely regulated since 1932 by Brownwood Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	May 18, 1918	16.06	28,000	1942	May 20, 1942	10.74	9,050
				1943	Oct. 18, 1942	12.47	12,300
1924	May 14, 1924	9.90	9,110	1944	May 1, 1944	3.80	2,560
1925	May 10, 1925	7.15	7,470	1945	July 8, 1945	11.96	11,000
1926	Apr. 22, 1926	9.00	8,350	1946	Sept.14, 1946	3.38	2,070
1927	Apr. 21, 1927	12.70	12,400	1947	Nov. 3, 1946	2.28	790
1928	May 20, 1928	14.30	18,300	1948	Dec. 7, 1947	3.12	1,710
				1949	May 17, 1949	10.36	8,780
1930	May 13, 1930	14.65	18,200	1950	Oct. 24, 1949	2.05	580
1931	Oct. 14, 1930	16.92	31,600	1951	June 12, 1951	15.18	20,200
1932	Oct. 13, 1931	15.18	20,900	1952	May 23, 1952	3.81	2,690
1933	May 11, 1933	7.15	6,930	1953	Apr. 28, 1953	5.20	4,760
1934	June 28, 1934	4.58	3,620	1954	Oct. 4, 1953	5.12	4,630
1935	Sept.10, 1935	12.47	11,600	1955	Sept.23, 1955	7.77	7,240
1936	Sept.28, 1936	14.26	16,500	1956	May 2, 1956	16.08	26,500
1937	June 6, 1937	3.82	2,580	1957	Apr. 26, 1957	14.78	17,400
1938	July 26, 1938	5.72	5,290	1958	Oct. 15, 1957	8.03	7,400
1939	June 20, 1939	10.20	9,700	1959	July 22, 1959	14.88	18,000
1940	Aug. 17, 1940	5.78	5,700	1960	Oct. 4, 1959	9.74	8,760
1941	May 4, 1941	15.00	19,800	1961	June 6, 1961	6.99	6,800

8-1445. San Saba River at Menard, Tex. (255)

Location.--Lat 30°55', long 99°48', on downstream side of bridge on U.S. Highway 83 in Menard, Menard County, 0.7 mile downstream from Las Moras Creek.

Drainage area.--1,151 sq mi.

Gage.--Nonrecording prior to Jan. 26, 1940; recording thereafter. At site 635 ft downstream at datum 2.20 ft lower prior to Mar. 13, 1924. At site 1,000 ft upstream at datum 2.00 ft higher Mar. 13, 1924, to Feb. 21, 1939. Datum of gage is 1,863.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 56,000 cfs and by slope-area measurement at 130,000 cfs.

Bankfull stage.--12 ft.

Historical data.--Maximum stage since at least 1880 occurred June 6, 1899.

Remarks.--Base for partial-duration series, 670 cfs. Only annual peaks are shown prior to 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	June 6, 1899	a23.5	-	1948	Aug. 1, 1948	8.15	2,240
					Sept. 9, 1948	8.07	2,390
1916	Apr. 1, 1916	3.00	195				
1917	June 3, 1917	3.90	425	1949	Apr. 19, 1949	11.44	6,310
1918	June 3, 1918	9.05	4,960		Apr. 25, 1949	9.20	3,340
1919	Nov. 8, 1918	13.60	14,300		May 5, 1949	6.15	708
1920	Aug. 24, 1920	8.00	3,690		May 28, 1949	6.15	708
					Sept.16, 1949	6.47	885
1921	Nov. 6, 1920	3.6	303				
1922	Apr. 26, 1922	18.00	44,000	1950	Oct. 24, 1949	9.21	3,350
1923	Sept. 5, 1923	12.40	10,900		July 13, 1950	7.91	2,000
1924	Nov. 1, 1923	12.09	10,200				
1925	May 29, 1925	9.30	6,750	1951	Aug. 20, 1951	9.38	3,540
1926	June 2, 1926	5.0	1,330	1952	Sept.10, 1952	5.81	535
1927	June 13, 1927	7.90	4,760				
1928	Oct. 2, 1927	6.4	2,780	1953	Aug. 5, 1953	10.21	4,150
1929	Sept. 6, 1929	5.54	1,840				
1930	Oct. 13, 1929	17.20	43,400	1954	Oct. 4, 1953	14.52	21,100
					Apr. 7, 1954	9.43	3,560
1931	Oct. 6, 1930	18.30	57,200		May 23, 1954	7.51	1,630
1932	Sept. 6, 1932	15.90	31,300				
1933	Dec. 30, 1932	2.42	123	1955	May 19, 1955	11.53	8,120
1934	Apr. 18, 1934	13.60	17,600		June 29, 1955	10.27	5,290
1935	Sept. 9, 1935	13.82	18,100		July 14, 1955	5.88	707
					July 18, 1955	7.20	1,710
1936	Sept.16, 1936	21.2	101,000		Aug. 19, 1955	10.78	6,110
1937	June 4, 1937	3.60	375		Aug. 30, 1955	8.33	2,900
1938	July 23, 1938	22.7	130,000				
1939	May 1, 1939	11.22	5,930	1956	May 1, 1956	17.54	**48,000**
					May 24, 1956	10.83	6,240
1940	June 9, 1940	6.39	855		July 3, 1956	8.10	2,410
	June 24, 1940	6.82	1,120				
	June 29, 1940	7.13	1,360	1957	Apr. 19, 1957	15.97	**41,000**
					Apr. 23, 1957	13.42	**19,300**
1941	Mar. 26, 1941	8.70	2,790		Apr. 26, 1957	13.92	**23,600**
	Apr. 27, 1941	10.30	4,630		Apr. 29, 1957	6.46	976
	May 3, 1941	11.70	7,000		May 9, 1957	12.39	**11,400**
	Sept.18, 1941	11.55	6,760		May 13, 1957	13.72	**21,200**
					May 18, 1957	13.18	**17,100**
1942	Oct. 2, 1941	7.67	1,760		May 22, 1957	12.23	**10,700**
	Oct. 5, 1941	17.60	49,200		May 27, 1957	12.44	**11,700**
	Sept. 3, 1942	12.22	8,700		May 31, 1957	7.25	1,950
	Sept. 8, 1942	9.54	3,670				
				1958	Oct. 13, 1957	14.88	**30,200**
1943	Oct. 17, 1942	15.67	30,800		Feb. 23, 1958	11.50	**8,840**
					June 17, 1958	16.70	**31,900**
1944	May 1, 1944	13.15	13,300				
				1959	Sept.29, 1959	7.30	1,160
1945	Oct. 4, 1944	12.35	9,320				
				1960	Oct. 4, 1959	13.45	**15,000**
1946	Sept.26, 1946	18.70	60,000		Oct. 13, 1959	6.63	692
1947	May 18, 1947	9.88	4,150	1961	June 18, 1961	13.20	**13,600**

a Present site and datum.

8-1450. Brady Creek at Brady, Tex. (256)

Location.--Lat 31°08'15", long 99°19'55", on left bank just upstream from bridge on U.S. Highway 377 on North Bridge Street in Brady, McCulloch County, 0.4 mile downstream from Live Oak Creek.

Drainage area.--575 sq mi.

Gage.--Nonrecording prior to July 9, 1940; recording thereafter. At site 3,600 ft upstream at datum 8.24 ft higher prior to July 9, 1940. All gage heights adjusted to present site and datum. Datum of gage is 1,646.50 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 38,000 cfs and by slope-area measurements at 50,300 and 86,000 cfs.

Bankfull stage.--11 ft.

Historical data.--Flood of July 23, 1938, was the highest and flood of Oct. 6, 1930, was the second highest since at least 1882.

Remarks.--Between 1954 and 1960, 39 floodwater-detention reservoirs were built, partly controlling flow from 249 sq mi. These reservoirs have a total capacity of 78,750 acre-ft below the flood spillway crests, of which 74,040 acre-ft is floodwater-detention capacity and 4,710 acre-ft is sediment-storage capacity. Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Oct. 6, 1930	25.9	50,300	1952	Sept.10, 1952	24.80	39,100
					Sept.17, 1952	9.08	1,250
1938	July 23, 1938	29.1	86,000				
				1953	Aug. 19, 1953	9.96	2,280
1940	Apr. 6, 1940	9.6	1,580				
	May 8, 1940	13.6	7,500	1954	May 24, 1954	9.38	1,430
	June 19, 1940	11.6	4,100				
				1955	May 11, 1955	10.31	2,830
1941	Apr. 27, 1941	16.81	15,500		May 17, 1955	21.85	29,500
	May 3, 1941	9.28	1,270		May 18, 1955	22.40	31,300
	June 7, 1941	9.87	1,840		June 4, 1955	10.33	2,900
	June 26, 1941	10.26	2,300		June 7, 1955	12.08	5,570
					June 29, 1955	9.08	1,340
1942	Oct. 1, 1941	12.14	4,960		July 16, 1955	10.31	2,830
	Oct. 5, 1941	10.19	2,240		July 18, 1955	11.30	4,240
					Aug. 18, 1955	9.26	1,500
1943	Oct. 17, 1942	9.79	1,780				
	June 5, 1943	10.13	2,180	1956	Feb. 8, 1956	9.02	1,230
					May 2, 1956	12.09	5,210
1944	May 28, 1944	10.65	2,820		May 24, 1956	10.80	3,240
	Sept. 7, 1944	12.03	4,800		Aug. 20, 1956	10.36	2,630
1945	Oct. 4, 1944	12.67	5,940	1957	Mar. 20, 1957	9.68	2,040
					Apr. 20, 1957	11.86	4,900
1946	Apr. 30, 1946	10.35	2,420		Apr. 23, 1957	11.66	4,580
	May 10, 1946	9.39	1,360		Apr. 27, 1957	13.90	8,810
	May 31, 1946	10.98	3,280		Apr. 29, 1957	11.25	3,960
					May 9, 1957	12.23	5,590
1947	May 18, 1947	10.64	2,820		May 11, 1957	13.09	7,190
	July 19, 1947	10.67	2,820		May 12, 1957	13.96	8,920
					May 18, 1957	10.36	2,720
1948	Dec. 7, 1947	9.95	1,940		May 23, 1957	10.93	3,510
	May 30, 1948	12.80	6,110		May 25, 1957	9.87	2,040
					May 27, 1957	12.00	5,140
1949	Mar. 21, 1949	9.38	1,360		June 2, 1957	9.22	1,230
	Apr. 19, 1949	12.84	5,770		Sept.12, 1957	13.05	7,190
	Apr. 26, 1949	11.81	4,480				
	Apr. 28, 1949	11.54	4,010	1958	Oct. 13, 1957	12.98	7,190
					Mar. 6, 1958	9.18	1,230
1950	Apr. 17, 1950	9.23	1,210				
				1959	June 6, 1959	10.90	3,450
1951	May 24, 1951	15.92	13,200		Sept.30, 1959	11.04	3,660
1952	May 1, 1952	9.96	2,280	1960	Oct. 4, 1959	11.50	4,240
	May 17, 1952	11.92	5,030		Oct. 13, 1959	9.72	1,850
	May 28, 1952	10.60	3,120				
	June 6, 1952	9.07	1,250	1961	Oct. 16, 1960	12.22	5,210

8-1460. San Saba River at San Saba, Tex. (257)

Location.--Lat 31°12'50", long 98°42'40", on right bank at downstream side of pier of bridge on State Highway 16, 1.2 miles north of San Saba, San Saba County, 4.8 miles downstream from China Creek, 5.0 miles upstream from Simpson Creek, and 15.5 miles upstream from mouth.

Drainage area.--3,042 sq mi.

Gage.--Nonrecording prior to Aug. 28, 1930, and Oct. 1, 1952, to July 8, 1953; recording Aug. 28, 1930, to Sept. 30, 1952, and after July 8, 1953. At site 2.4 miles upstream at datum 5.99 ft higher September 1915 to Aug. 27, 1930. At site 1.8 miles downstream at datum 8.80 ft lower Aug. 28, 1930, to Sept. 30, 1952. Datum of gage is 1,162.16 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs and by slope-area measurement at 203,000 cfs.

Bankfull stage.--24 ft.

Historical data.--Maximum stage since at least 1899, that of July 23, 1938. Flood of June 6, 1899, reached a stage of 42.6 ft, at site and datum of gage in use 1930-52.

Remarks.--Between 1954 and 1960, 48 floodwater-detention reservoirs were built controlling flow from 293 sq mi. These reservoirs have a total combined capacity of 88,240 acre-ft below the flood spillway crests, of which 82,690 acre-ft is floodwater-detention capacity and 5,550 acre-ft is sediment-storage capacity. Only annual peaks are shown prior to 1931. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	June 6, 1899	a42.6	-	1937	Oct. 26, 1936	20.30	5,110
					May 31, 1937	15.20	3,080
1916	May 1, 1916	15.7	4,150		June 5, 1937	19.23	4,730
1917	June 3, 1917	21.5	6,020				
1918	June 3, 1918	28.5	18,200	1938	Dec. 29, 1937	21.07	4,970
1919	Sept.23, 1919	30.7	30,500		Jan. 23, 1938	29.34	13,400
1920	Oct. 17, 1919	14.2	4,340		June 9, 1938	23.84	6,550
					July 23, 1938	45.18	203,000
1921	Nov. 26, 1920	4.4	745		July 31, 1938	22.90	5,990
1922	Apr. 26, 1922	36.5	71,000				
1923	Sept.17, 1923	29.0	20,500	1939	Jan. 12, 1939	13.4	2,190
1924	Nov. 2, 1923	19.6	6,500				
1925	May 11, 1925	15.0	4,660	1940	Apr. 7, 1940	17.94	5,330
	Aug. 27, 1925	15.0	4,660		May 9, 1940	22.25	5,570
					June 15, 1940	17.04	5,330
1926	Oct. 16, 1925	23.8	8,640		June 20, 1940	20.22	4,520
1927	Feb. 9, 1927	23.8	8,640				
1928	Oct. 2, 1927	23.5	8,460	1941	Apr. 28, 1941	33.25	27,200
1929	May 30, 1929	21.7	7,460		May 3, 1941	23.78	8,550
1930	Oct. 14, 1929	23.85	8,640		June 16, 1941	18.44	5,900
					June 27, 1941	24.30	7,510
1931	Oct. 7, 1930	35.15	44,800		Sept.20, 1941	16.73	5,230
	Oct. 14, 1930	30.30	15,600				
				1942	Oct. 6, 1941	32.84	25,200
1932	Feb. 19, 1932	20.64	5,320		Sept. 5, 1942	17.92	5,630
	May 11, 1932	32.16	23,800				
	July 2, 1932	34.33	34,000	1943	Oct. 18, 1942	30.60	16,800
	Sept. 8, 1932	28.50	11,100		June 5, 1943	31.59	20,400
1933	May 25, 1933	24.51	7,350	1944	May 2, 1944	20.46	4,670
					May 24, 1944	16.64	3,200
1934	Mar. 26, 1934	20.60	5,320				
	Apr. 6, 1934	32.92	27,200	1945	Oct. 5, 1944	20.47	4,780
	Apr. 19, 1934	24.62	7,450		Apr. 1, 1945	18.73	4,060
1935	Feb. 9, 1935	18.74	4,530	1946	May 17, 1946	15.79	3,140
	May 11, 1935	20.22	5,150		Sept.27, 1946	29.83	14,700
	May 16, 1935	28.75	11,600				
	May 18, 1935	35.08	43,400	1947	May 19, 1947	13.68	2,490
	June 6, 1935	19.77	4,990				
	June 15, 1935	36.5	64,000	1948	May 11, 1948	19.99	4,660
	Sept. 4, 1935	32.40	24,900				
	Sept.10, 1935	28.24	10,700	1949	Apr. 20, 1949	23.45	6,290
					Apr. 27, 1949	18.56	4,080
1936	May 27, 1936	17.08	3,900		Apr. 29, 1949	17.56	3,740
	July 8, 1936	19.03	4,650				
	Sept.17, 1936	36.67	67,200	1950	May 26, 1950	14.47	2,720
	Sept.27, 1936	35.56	50,400				

a Site and datum used 1930-52.

Peak stages and discharges of San Saba River at San Saba, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 25, 1951	27.98	12,500	1957	Apr. 24, 1957	26.05	13,600
					Apr. 27, 1957	27.20	18,200
1952	May 18, 1952	26.53	11,700		May 10, 1957	23.75	9,940
	May 29, 1952	20.17	4,750		May 13, 1957	28.23	27,500
	Sept.11, 1952	36.90	70,400		May 19, 1957	24.07	10,300
					May 23, 1957	18.92	6,090
1953	Dec. 30, 1952	7.85	1,500		May 26, 1957	16.86	4,950
					May 28, 1957	23.52	9,640
1954	Oct. 4, 1953	21.80	7,150		Sept.12, 1957	15.42	4,230
	May 25, 1954	12.15	3,180				
				1958	Oct. 14, 1957	28.76	32,000
1955	May 19, 1955	28.73	41,300		Feb. 24, 1958	20.15	6,940
	June 6, 1955	24.63	11,000		June 18, 1958	28.90	16,600
	June 7, 1955	22.60	9,040				
	July 19, 1955	17.48	5,280	1959	June 3, 1959	12.90	3,160
	Sept.24, 1955	14.08	3,640				
				1960	Oct. 1, 1959	13.07	3,480
1956	Apr. 30, 1956	28.33	30,800		Oct. 4, 1959	23.06	9,260
	May 2, 1956	28.55	35,600		Oct. 14, 1959	24.00	10,300
	May 25, 1956	13.82	3,520				
				1961	Oct. 16, 1960	13.17	3,520
1957	Apr. 20, 1957	26.37	14,500		June 19, 1961	24.50	11,500

8-1470. Colorado River near San Saba, Tex. (258)

Location.--Lat 31°13'05", long 98°33'50", on left bank at downstream side of pier of bridge on U.S. Highway 190, 5.2 miles downstream from San Saba River, 9.2 miles east of San Saba, San Saba County, and at mile 474.

Drainage area.--30,600 sq mi, approximately, of which about 18,700 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 17, 1925, and Mar. 19 to May 23, 1940; recording Apr. 17, 1925, to Mar. 18, 1940, and after May 23, 1940. At site 1.2 miles upstream at datum 1.92 ft higher October 1915 to October 1922. At site 44 miles downstream at different datum October 1923 to December 1934 (October 1923 to August 1930 used herein). At site 2,230 ft downstream at present datum Aug. 30, 1930, to May 23, 1940. Datum of gage is 1,096.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--30 ft.

Historical data.--Maximum stage known during period 1878 to July 22, 1938, that of Sept. 25, 1900.

Remarks.--Floodflow slightly regulated by six reservoirs in the Colorado River, Concho River, and Oak Creek basins above Winchell, and by two reservoirs in the Pecan Bayou basin; combined capacity, 872,400 acre-ft. Between 1954 and 1960, 65 floodwater-detention reservoirs were built controlling flow from 389 sq mi above this station and below the Winchell station. These reservoirs have a total combined capacity of 117,800 acre-ft below the flood spillway crests, of which 109,700 acre-ft is floodwater-detention capacity and 8,020 acre-ft is sediment-storage capacity. Only annual peaks are shown prior to 1931. Base for partial-duration series, 13,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Sept.25, 1900	a56.4	184,000	1926	Apr. 25, 1926	16.82	29,600
				1927	Apr. 23, 1927	14.55	18,900
1916	May 2, 1916	15.0	14,200	1928	Oct. 4, 1927	16.22	27,200
1917	Sept. 4, 1917	17.0	17,300	1929	May 29, 1929	17.4	35,000
1918	June 4, 1918	22.0	25,500	1930	June 16, 1930	16.92	31,600
1919	Nov. 10, 1918	41.35	77,100				
1920	Sept. 8, 1920	21.4	25,000	1931	Oct. 7, 1930	35.0	58,000
					Oct. 17, 1930	39.9	78,900
1921	June 10, 1921	17.4	18,000				
1922	Apr. 26, 1922	51.5	130,000	1932	Oct. 15, 1931	16.80	20,400
					Oct. 26, 1931	14.05	15,400
1924	Apr. 28, 1924	14.26	17,400		Feb. 19, 1932	13.53	14,500
1925	May 12, 1925	16.74	30,300				

a Present site and datum.

Peak stages and discharges of Colorado River near San Saba, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 11, 1932	26.85	39,800	1946	May 17, 1946	14.80	16,300
	June 1, 1932	15.56	18,300		Sept.29, 1946	14.80	16,300
	July 6, 1932	23.95	34,200				
	Sept. 5, 1932	18.53	23,600	1947	May 15, 1947	16.48	19,400
	Sept.10, 1932	19.95	26,400		May 20, 1947	15.17	17,000
1933	May 26, 1933	20.14	26,600	1948	July 11, 1948	23.78	34,100
1934	Apr. 6, 1934	29.48	45,300	1949	Mar. 22, 1949	16.09	18,600
					Apr. 22, 1949	22.77	32,800
1935	Feb. 11, 1935	12.67	13,700		Apr. 27, 1949	20.67	27,600
	Apr. 22, 1935	13.58	15,400		May 11, 1949	15.55	17,700
	May 19, 1935	41.00	86,000		May 30, 1949	13.76	14,500
	June 6, 1935	20.53	28,900				
	June 15, 1935	38.50	71,000	1950	May 14, 1950	9.92	8,010
	July 26, 1935	14.65	17,200				
	Sept. 9, 1935	25.50	38,800	1951	May 26, 1951	17.06	20,400
					June 14, 1951	18.20	22,400
1936	May 26, 1936	12.92	14,300				
	Sept.21, 1936	56.7	179,000	1952	May 2, 1952	13.41	13,600
					May 19, 1952	13.87	14,400
1937	Oct. 1, 1936	45.9	115,000		Sept.11, 1952	38.36	69,000
	June 1, 1937	12.95	14,500				
	June 8, 1937	14.79	17,900	1953	May 15, 1953	13.15	13,300
					Aug. 23, 1953	17.72	20,700
1938	Jan. 24, 1938	21.93	32,800				
	Apr. 27, 1938	14.27	17,000	1954	Oct. 5, 1953	20.03	24,900
	June 10, 1938	14.22	16,800		Apr. 15, 1954	17.49	20,400
	July 23, 1938	62.24	224,000		May 22, 1954	13.60	13,900
					May 26, 1954	15.94	17,600
1939	May 19, 1939	12.87	14,300				
	June 25, 1939	16.13	20,400	1955	Nov. 14, 1954	13.33	13,400
	Aug. 7, 1939	12.63	13,700		May 19, 1955	34.05	57,200
					June 6, 1955	21.43	27,600
1940	Apr. 8, 1940	15.81	19,800		July 20, 1955	18.50	22,100
	June 21, 1940	18.73	23,400		Sept.25, 1955	23.25	31,300
	July 2, 1940	17.31	20,800				
	Aug. 19, 1940	13.94	14,700	1956	May 3, 1956	32.75	54,100
1941	Apr. 20, 1941	14.95	16,700	1957	Apr. 21, 1957	13.84	14,200
	Apr. 28, 1941	24.75	38,400		Apr. 24, 1957	20.62	26,100
	May 6, 1941	26.18	42,600		Apr. 28, 1957	26.47	38,400
	May 24, 1941	20.28	26,700		May 14, 1957	37.34	66,200
	June 4, 1941	13.57	14,100		May 21, 1957	25.72	36,700
	June 8, 1941	19.03	24,000		May 29, 1957	23.59	32,100
	June 17, 1941	16.28	19,000		June 5, 1957	22.82	30,500
	June 28, 1941	15.00	16,700				
				1958	Oct. 17, 1957	28.95	44,400
1942	Oct. 6, 1941	19.54	25,000		June 19, 1958	15.20	16,500
	May 20, 1942	18.40	22,800				
	Aug. 24, 1942	17.03	20,300	1959	June 6, 1959	17.83	20,900
					July 23, 1959	16.00	17,800
1943	Oct. 19, 1942	18.55	23,200				
	June 6, 1943	15.00	16,700	1960	Oct. 6, 1959	28.38	43,000
					Oct. 14, 1959	16.41	18,500
1944	May 25, 1944	16.43	19,200				
				1961	June 20, 1961	19.19	23,400
1945	Oct. 5, 1944	14.14	15,000				
	July 10, 1945	22.63	32,300				

8-1485. North Llano River near Junction, Tex. (259)

Location.--Lat 30°30', long 99°47', on left bank 1,000 ft upstream from remains of old Wilson Dam, 3 miles northwest of Junction, Kimble County, and 4 miles upstream from confluence with South Llano River.

Drainage area.--914 sq mi.

Gage.--Nonrecording prior to Aug. 1, 1925, and Sept. 16, 1936, to June 22, 1940; recording Aug. 1, 1925, to Sept. 16, 1936, and after June 22, 1940. Datum of gage is 1,699.92 ft above mean sea level, datum of 1929. At site 550 ft downstream prior to Aug. 1, 1925, at site 520 ft downstream Aug. 1, 1925, to Sept. 16, 1936, and at various sites in vicinity of present gage from Sept. 16, 1936, to June 22, 1940. Although there has been no change in datum, gage readings at different sites vary greatly because of standing waves.

Stage-discharge relation.--Defined by current-meter measurements below 67,000 cfs and by slope-area measurement at 94,800 cfs.

Bankfull stage.--15 ft.

Historical data.--Maximum stage since at least 1875, that of Sept. 16, 1936. Maximum stage during period 1875 to Sept. 15, 1936, occurred in 1889.

Remarks.--Base for partial-duration series, 1,200 cfs. Only annual peaks are shown prior to 1926.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1889	-	a27	84,000	1936	Nov. 1, 1935	5.54	4,100
					May 26, 1936	4.02	2,480
1916	Oct. 1, 1915	1.75	117		Sept.16, 1936	b24.9	94,800
1917	May 21, 1917	2.96	700		Sept.25, 1936	9.6	21,200
1918	Apr. 15, 1918	15.2	45,200		Sept.27, 1936	8.0	14,000
1919	Sept.22, 1919	10.8	22,900				
1920	May 13, 1920	4.4	2,300	1937	Oct. 29, 1936	3.70	1,970
					June 1, 1937	3.10	1,410
1921	Oct. 1, 1920	1.64	78				
1922	Apr. 3, 1922	8.7	13,800	1938	Dec. 29, 1937	5.38	4,900
1923	Apr. 24, 1923	19.0	69,000		June 9, 1938	4.50	3,120
1924	Oct. 29, 1923	12.9	32,900		July 21, 1938	11.6	30,200
1925	May 29, 1925	19.03	69,000		July 22, 1938	24.4	68,600
					July 24, 1938	18.40	44,600
1926	Oct. 16, 1925	8.80	14,200				
				1939	July 13, 1939	15.40	33,000
1927	July 25, 1927	3.60	1,020		Aug. 9, 1939	7.76	8,780
1928	Oct. 1, 1927	16.0	50,000	1940	Oct. 10, 1939	7.60	8,320
	Oct. 30, 1927	5.06	3,380		May 23, 1940	4.80	2,450
	June 10, 1928	11.9	28,000		Aug. 18, 1940	5.00	2,810
	June 13, 1928	5.74	3,630				
				1941	Mar. 25, 1941	6.57	6,120
1929	May 24, 1929	4.12	1,530		Apr. 27, 1941	6.07	5,030
	Sept. 7, 1929	3.65	1,060		Aug. 25, 1941	4.67	2,180
1930	Apr. 24, 1930	5.45	3,920	1942	Aug. 22, 1942	16.52	37,200
					Aug. 31, 1942	3.80	1,040
1931	Oct. 6, 1930	20.9	82,300		Sept. 3, 1942	6.83	6,560
	Oct. 14, 1930	3.57	1,050		Sept. 7, 1942	6.82	6,560
	Apr. 29, 1931	4.91	2,520				
				1943	Oct. 17, 1942	6.55	6,120
1932	May 9, 1932	5.40	3,590		June 5, 1943	6.50	5,900
	May 16, 1932	4.00	1,470				
	July 3, 1932	6.06	4,860	1944	Apr. 30, 1944	10.38	15,600
	Sept. 1, 1932	18.0	62,000				
	Sept. 4, 1932	5.88	4,980	1945	Oct. 4, 1944	6.53	5,900
	Sept. 6, 1932	16.88	55,400				
				1946	Sept.26, 1946	5.20	3,190
1933	May 14, 1933	7.20	7,240				
	May 25, 1933	11.56	26,600	1947	May 11, 1947	4.58	2,090
					May 18, 1947	7.20	7,440
1934	Apr. 4, 1934	6.00	5,200		June 19, 1947	3.86	1,100
1935	June 2, 1935	4.42	1,940	1948	June 24, 1948	16.77	38,300
	June 5, 1935	11.64	26,600		June 26, 1948	5.98	3,920
	June 11, 1935	3.74	1,240		July 5, 1948	4.88	2,200
	June 12, 1935	5.98	4,720		July 6, 1948	4.18	1,460
	June 14, 1935	20.70	80,900		Sept. 9, 1948	6.60	5,220
	June 18, 1935	4.90	2,680				
	Sept. 4, 1935	12.88	32,900	1949	Feb. 25, 1949	4.57	1,810
	Sept. 9, 1935	10.97	23,800		June 12, 1949	5.18	2,580

a Present site.
b 29.2 ft at present site.

Peak stages and discharges of North Llano River near Junction, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 14, 1949	5.18	2,580	1957	May 16, 1957	5.77	3,850
					May 19, 1957	3.68	1,050
1950	Apr. 16, 1950	3.14	643		May 27, 1957	14.47	29,200
					May 31, 1957	6.58	5,500
1951	Aug. 20, 1951	6.72	5,500		Aug. 18, 1957	4.00	1,300
1952	May 18, 1952	5.40	2,860	1958	Oct. 14, 1957	11.76	19,900
					Oct. 15, 1957	9.62	13,200
1953	May 11, 1953	6.86	5,680		Feb. 22, 1958	10.60	16,000
					June 17, 1958	8.02	8,700
1954	May 24, 1954	2.75	370		June 22, 1958	4.78	2,290
					Sept. 7, 1958	8.38	9,700
1955	June 20, 1955	5.38	2,860				
	Aug. 12, 1955	4.00	1,300	1959	June 24, 1959	8.02	8,700
	Aug. 19, 1955	6.18	4,340		June 26, 1959	10.34	15,100
	Sept.23, 1955	5.57	3,080				
				1960	July 17, 1960	5.90	4,120
1956	Oct. 2, 1955	4.35	1,620		Aug. 15, 1960	6.72	5,700
	May 15, 1956	3.79	1,130				
				1961	June 16, 1961	8.87	11,000
1957	May 9, 1957	3.98	1,280		June 18, 1961	15.72	33,800
	May 13, 1957	6.58	5,500				

8-1500. Llano River near Junction, Tex. (260)

Location.--Lat 30°30', long 99°44', on right bank 250 ft north of old Kerrville-Junction road, half a mile downstream from point where slough diverts floodwater from main channel, 3 miles east of Junction, Kimble County, 4 miles downstream from confluence of North Llano and South Llano Rivers, and 4⅝ miles upstream from Johnson Fork.

Drainage area.--1,874 sq mi.

Gage.--Nonrecording prior to Aug. 14, 1925; recording thereafter. At site 5,330 ft upstream at datum 6.0 ft higher May 18, 1940, to Aug. 17, 1944 (used as supplementary gage for stages above 5 ft since Aug. 18, 1944). Datum of gage is 1,630.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 54,000 cfs and by slope-area measurements at 158,000 and 319,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Maximum stage since at least 1875 occurred June 14, 1935. There was a major flood in 1889, which was the highest known until 1935.

Remarks.--Base for partial-duration series, 1,500 cfs. Only annual peaks are shown prior to 1926.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	May 22, 1916	8.80	11,100	1930	Apr. 24, 1930	4.20	2,770
1917	May 11, 1917	1.88	192				
1918	Apr. 14, 1918	10.5	14,900	1931	Oct. 6, 1930	25.2	89,700
1919	Sept.24, 1919	17.0	35,700		Oct. 15, 1930	3.34	1,510
1920	May 14, 1920	10.0	13,700		Apr. 30, 1931	6.29	6,160
1921	Mar. 19, 1921	2.90	880	1932	May 9, 1932	4.90	3,230
1922	Apr. 3, 1922	10.97	16,100		May 16, 1932	3.48	1,560
1923	Sept.18, 1923	17.0	35,700		May 27, 1932	5.10	3,500
1924	Oct. 29, 1923	24.83	85,500		July 2, 1932	15.78	32,500
1925	May 29, 1925	23.3	76,900		Sept. 1, 1932	27.15	106,000
					Sept. 6, 1932	16.60	35,800
1926	Oct. 16, 1925	6.00	5,600		Sept.23, 1932	8.40	9,890
1927	July 23, 1927	2.50	607	1933	May 14, 1933	8.65	10,500
					May 25, 1933	10.68	15,800
1928	Oct. 1, 1927	16.1	32,000				
	Oct. 30, 1927	4.64	3,410	1934	Apr. 4, 1934	5.85	4,720
	June 10, 1928	5.8	5,310				
				1935	May 4, 1935	3.50	1,560
1929	May 24, 1929	3.38	1,560		May 18, 1935	6.00	5,000
	May 28, 1929	3.77	2,100		May 30, 1935	4.10	2,240

Peak stages and discharges of Llano River near Junction, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 2, 1935	4.10	2,240	1948	June 26, 1948	a14.98	22,500
	June 5, 1935	11.61	18,300		June 29, 1948	a7.39	4,300
	June 11, 1935	3.67	1,780		July 5, 1948	a19.25	36,800
	June 14, 1935	a41.4	519,000		Sept. 9, 1948	a7.50	4,500
	June 18, 1935	5.53	4,210				
	July 23, 1935	3.68	1,790	1949	Feb. 23, 1949	a10.62	12,100
	Sept. 5, 1935	13.32	23,700		Feb. 25, 1949	a9.78	9,960
	Sept. 9, 1935	12.60	21,400		Apr. 24, 1949	3.57	1,820
					June 15, 1949	3.37	1,560
1936	Nov. 2, 1935	5.17	3,650		Aug. 9, 1949	4.16	2,770
	May 26, 1936	4.30	2,510				
	Sept.16, 1936	a32.8	188,000	1950	Oct. 24, 1949	2.37	568
	Sept.25, 1936	9.00	11,300				
	Sept.28, 1936	8.50	10,100	1951	June 10, 1951	5.63	5,320
					Aug. 20, 1951	4.49	3,230
1937	Oct. 29, 1936	-	2,000				
				1952	May 18, 1952	4.07	2,540
1938	Dec. 29, 1937	11.35	23,800				
	Apr. 27, 1938	3.47	1,560	1953	May 11, 1953	5.52	5,030
	July 21, 1938	10.15	18,700				
	July 22, 1938	30.3	137,000	1954	June 29, 1954	4.42	3,090
	July 24, 1938	18.56	58,000				
	July 26, 1938	5.67	4,480	1955	June 20, 1955	4.11	2,620
	July 30, 1938	3.61	1,700		July 18, 1955	3.31	1,510
					Aug. 20, 1955	4.14	2,700
1939	Oct. 10, 1938	4.55	2,820		Sept.23, 1955	3.97	2,400
	May 1, 1939	3.98	2,130		Sept.24, 1955	a19.25	38,800
	July 13, 1939	21.85	74,400				
	Aug. 9, 1939	5.20	4,450	1956	Oct. 3, 1955	2.88	1,020
1940	Oct. 10, 1939	6.01	6,000	1957	Apr. 23, 1957	a8.24	5,780
	Oct. 26, 1939	5.48	4,980		Apr. 24, 1957	a16.75	27,200
	Oct. 27, 1939	5.34	4,720		Apr. 28, 1957	a10.93	11,900
	May 22, 1940	a6.39	2,860		May 13, 1957	a9.07	7,550
	Aug. 19, 1940	a6.00	2,260		May 16, 1957	a6.37	2,600
					May 17, 1957	a13.30	17,800
1941	Mar. 25, 1941	a7.07	3,940		May 19, 1957	a8.56	8,460
	Apr. 27, 1941	a9.05	7,250		May 27, 1957	a19.92	40,500
					June 1, 1957	a8.34	5,990
1942	Aug. 22, 1942	a20.05	43,000				
	Sept. 1, 1942	a6.99	4,020	1958	Oct. 14, 1957	a24.37	63,600
	Sept. 3, 1942	a7.30	4,530		Feb. 23, 1958	a14.60	20,600
	Sept. 8, 1942	a7.33	4,360		June 17, 1958	a9.15	8,290
					June 22, 1958	a8.51	7,400
1943	Oct. 17, 1942	a7.02	3,850		June 24, 1958	a7.46	5,490
	June 5, 1943	a10.47	10,000		Sept. 7, 1958	a10.76	11,600
	July 11, 1943	a7.03	3,940		Sept.16, 1958	a11.38	13,100
1944	May 1, 1944	a9.80	8,640	1959	June 24, 1959	a8.36	6,960
					June 26, 1959	a13.18	17,500
1945	Oct. 4, 1944	4.56	3,270				
				1960	July 17, 1960	4.19	2,850
1946	Sept.26, 1946	3.18	1,290		Aug. 10, 1960	a8.98	8,060
					Aug. 15, 1960	a19.00	35,500
1947	Oct. 9, 1946	3.68	1,870				
	May 18, 1947	5.29	4,540	1961	Oct. 29, 1960	3.29	1,520
					June 16, 1961	10.82	11,100
1948	June 24, 1948	a29.5	122,000		June 18, 1961	23.29	55,700

a Stage at supplementary gage.

8-1510. Llano River near Castell, Tex. (261)

Location.--Lat 30°43', long 98°53', 400 ft upstream from low-water concrete bridge, 4 miles upstream from Hickory Creek, and 4.5 miles east of Castell, Llano County.

Drainage area.--3,747 sq mi.

Gage.--Nonrecording prior to Sept. 3, 1930; recording Sept. 30, 1930, to June 14, 1935; nonrecording thereafter. Datum of gage is 1,121.77 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and by slope-area measurements at 59,500, 113,000, and 388,000 cfs.

Historical data.--Maximum stage prior to 1935 was in 1889.

Remarks.--Base for partial-duration series, 7,400 cfs.

Peak stages and discharges of Llano River near Castell, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1889	-	28.5	-	1932	Sept. 2, 1932	20.0	92,500
					Sept. 7, 1932	13.42	30,300
1924	Dec. 12, 1923	6.94	a7,230		Sept.23, 1932	8.85	11,000
1925	May 30, 1925	16.8	59,500	1933	May 25, 1933	11.93	22,800
1926	Oct. 16, 1925	11.00	16,000	1934	Apr. 5, 1934	10.95	19,300
	Nov. 6, 1925	11.90	21,400				
				1935	May 16, 1935	11.0	18,500
1927	Feb. 9, 1927	10.00	14,400		May 18, 1935	17.7	67,500
	June 5, 1927	9.1	11,500		June 5, 1935	10.54	16,600
					June 14, 1935	37.0	388,000
1928	Oct. 2, 1927	13.95	33,900		Sept. 5, 1935	10.9	18,100
	Oct. 31, 1927	10.20	15,100		Sept. 9, 1935	11.6	21,000
	June 11, 1928	10.5	16,300				
				1936	Sept.16, 1936	22.9	130,000
1929	May 28, 1929	11.25	16,900		Sept.27, 1936	21.6	113,000
	Sept. 7, 1929	12.90	27,300				
				1937	Oct. 25, 1936	5.15	3,720
1930	June 13, 1930	15.70	49,000				
	Sept.10, 1930	6.12	8,610	1938	Dec. 29, 1937	11.60	21,000
					Jan. 23, 1938	9.10	11,800
1931	Oct. 6, 1930	22.3	122,000		July 23, 1938	21.43	110,000
1932	July 2, 1932	18.7	78,200	1939	July 14, 1939	16.5	55,500

a Maximum during period Nov. 17, 1923, to Sept. 30, 1924; exceeded by peak of Oct. 29, 1923.

8-1515. Llano River at Llano, Tex. (262)

Location.--Lat 30°45', long 98°40', on right bank in Llano, Llano County, 0.4 mile downstream from bridge on State Highway 16 and 7 miles upstream from Little Llano River.

Drainage area.--4,233 sq mi.

Gage.--Recording. Datum of gage is 970.01 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 129,000 cfs and by slope-area measurement at 232,000 cfs.

Bankfull stage.--12 ft.

Historical data.--Maximum stage known since at least 1879, that of June 14, 1935.

Remarks.--Base for partial-duration series, 7,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 14, 1935	41.5	380,000	1946	Apr. 23, 1946	7.91	9,310
					May 16, 1946	7.73	8,770
1940	Apr. 6, 1940	8.98	9,700		May 17, 1946	10.47	18,200
	June 20, 1940	12.90	28,200				
	June 29, 1940	11.90	23,200	1947	Jan. 18, 1947	7.55	8,500
	June 30, 1940	11.70	22,200				
				1948	June 25, 1948	22.90	108,000
1941	Dec. 11, 1940	11.70	22,200		July 6, 1948	12.72	30,700
	Apr. 27, 1941	12.64	26,700				
	May 2, 1941	10.02	13,900	1949	Feb. 24, 1949	8.56	9,160
					Feb. 26, 1949	9.57	13,700
1942	Oct. 4, 1941	8.62	9,750		Apr. 25, 1949	9.78	14,600
	Oct. 10, 1941	8.36	9,100				
	Aug. 23, 1942	11.22	23,400	1950	May 16, 1950	7.49	7,770
1943	Nov. 6, 1942	9.02	13,600	1951	May 25, 1951	9.27	13,900
	June 5, 1943	16.92	50,600				
	July 11, 1943	7.75	8,940	1952	Apr. 21, 1952	9.01	11,600
					Sept.10, 1952	32.6	232,000
1944	May 25, 1944	8.24	10,100		Sept.18, 1952	9.66	11,500
1945	Jan. 18, 1945	7.61	8,500	1953	Dec. 30, 1952	10.02	9,720
					May 12, 1953	11.88	16,500
1946	Apr. 11, 1946	9.06	12,900				

Peak stages and discharges of Llano River at Llano, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Oct. 4, 1953	7.09	3,460	1957	May 27, 1957	16.39	47,200
					June 1, 1957	11.36	20,100
1955	May 18, 1955	14.26	33,600				
	May 19, 1955	19.00	72,000	1958	Oct. 14, 1957	21.78	83,700
	June 16, 1955	9.49	8,600		Feb. 23, 1958	13.39	25,800
	Sept.25, 1955	14.66	37,000		May 3, 1958	9.58	13,400
					June 18, 1958	7.92	7,900
1956	Aug. 31, 1956	5.82	1,850				
				1959	June 24, 1959	9.29	12,400
1957	Apr. 23, 1957	14.30	30,200		June 26, 1959	14.06	35,600
	Apr. 25, 1957	14.22	29,700		June 27, 1959	9.85	14,200
	Apr. 27, 1957	8.39	9,380				
	Apr. 29, 1957	9.54	10,200	1960	Oct. 4, 1959	22.28	103,000
	May 13, 1957	12.34	21,600		Aug. 11, 1960	8.12	8,480
	May 17, 1957	9.92	11,800		Aug. 16, 1960	16.7	53,600
	May 26, 1957	9.32	10,000				

8-1530. Pedernales River at Stonewall, Tex. (263)

Location.--Lat 30°15', long 98°40', on right bank in Stonewall, Gillespie County, 600 ft upstream from county road crossing, and 5 miles downstream from South Grape Creek.

Drainage area.--647 sq mi.

Gage.--Nonrecording. Datum of gage is 1,420.12 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and by slope-area measurements at 71,000 and 170,000 cfs.

Bankfull stage.--25 ft.

Historical data.--Flood of Sept. 11, 1952, reached the highest stage since at least 1876, from information by local resident.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1876a/	-	27.3	-	1930	June 13, 1930	4.00	2,880
1900	April 1900	b22	-	1931	Oct. 6, 1930	5.70	5,320
					Oct. 12, 1930	9.50	12,400
1906	May 1906	b19	-		Apr. 29, 1931	5.50	5,000
					May 7, 1931	4.00	2,880
1925	May 9, 1925	8.20	10,700		June 29, 1931	4.50	3,340
	Sept.12, 1925	4.50	3,390				
				1932	Nov. 22, 1931	7.15	7,870
1926	Oct. 16, 1925	7.48	8,950		Jan. 5, 1932	4.05	2,880
	July 22, 1926	6.80	7,380		Mar. 5, 1932	5.65	5,160
					May 7, 1932	4.40	3,400
1927	Feb. 9, 1927	6.80	7,380		July 2, 1932	11.80	18,800
	Mar. 20, 1927	4.05	2,750		Aug. 30, 1932	5.25	4,540
	Apr. 13, 1927	4.55	3,530		Sept. 2, 1932	3.95	2,880
	June 6, 1927	5.00	4,110		Sept.23, 1932	4.65	3,680
1928	Oct. 8, 1927	5.90	5,600	1933	May 25, 1933	4.22	3,140
	May 21, 1928	4.90	3,960				
				1934	Jan. 3, 1934	5.00	4,240
1929	May 24, 1929	5.90	5,640		May 24, 1934	4.50	3,540
	May 28, 1929	14.25	28,300				
	July 5, 1929	5.20	4,540	1944	Aug. 30, 1944	23.4	71,000
1930	May 10, 1930	7.50	8,420	1952	Sept.11, 1952	28.4	170,000
	May 18, 1930	12.50	21,400				

a By comparison with downstream station, this date should probably be 1869.
b About, from information by local resident.

8-1535. Pedernales River near Johnson City, Tex. (264)

Location.--Lat 30°18', long 98°24', near center of span at downstream side of bridge on U.S. Highway 281, 0.2 mile downstream from Flat Creek, 1.2 miles northeast of Johnson City, Blanco County, and 2.0 miles downstream from Buffalo Creek.

Drainage area.--947 sq mi.

Gage.--Nonrecording prior to Sept. 14, 1939, and Sept. 11, 1952, to June 29, 1953; recording Sept. 14, 1939, to Sept. 10, 1952, and since June 30, 1953. Datum of gage is 1,096.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements below 116,000 cfs and extended on basis of slope-area measurement at 441,000 cfs.

Bankfull stage.--40 ft.

Historical data.--Flood of Sept. 11, 1952, was greatest since at least 1859, according to information by local residents.

Remarks.--Base for partial-duration series, 4,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 1869	a33	-	1948	May 11, 1948	7.33	5,520
1940	Oct. 10, 1939	11.50	16,300	1949	Apr. 24, 1949	8.74	8,170
	Oct. 25, 1939	17.53	42,900		June 7, 1949	6.68	4,440
	Mar. 20, 1940	6.56	4,180				
	Apr. 6, 1940	10.27	12,200	1950	Aug. 28, 1950	5.79	2,910
	May 7, 1940	8.17	7,190				
	June 13, 1940	6.88	4,800	1951	June 12, 1951	10.18	11,800
	June 19, 1940	11.85	17,700				
	June 25, 1940	9.15	9,230	1952	May 27, 1952	10.68	13,500
	June 30, 1940	9.70	10,400		June 5, 1952	9.18	9,230
	July 3, 1940	7.04	4,980		June 30, 1952	8.08	7,000
					Sept.11, 1952	42.5	441,000
1941	Oct. 31, 1940	9.65	10,200				
	Dec. 11, 1940	11.18	15,200	1953	Dec. 19, 1952	14.70	32,200
	Dec. 15, 1940	11.05	14,500				
	Dec. 26, 1940	6.54	4,180	1954	Apr. 30, 1954	7.22	5,340
	Feb. 1, 1941	10.40	12,500				
	Mar. 18, 1941	10.20	11,900	1955	May 19, 1955	8.90	8,970
	Apr. 27, 1941	12.83	21,100		July 17, 1955	6.95	5,200
	May 2, 1941	10.96	14,500		Sept.24, 1955	10.67	13,600
	May 5, 1941	10.87	14,200				
	June 3, 1941	8.65	7,970	1956	Oct. 3, 1955	2.91	164
1942	Oct. 5, 1941	8.82	8,380	1957	Oct. 15, 1956	6.93	5,040
	Apr. 24, 1942	7.40	5,700		Mar. 20, 1957	7.10	5,380
	Aug. 22, 1942	14.10	26,600		Apr. 22, 1957	6.60	4,560
					Apr. 24, 1957	24.80	125,000
1943	Oct. 4, 1942	8.47	7,770		Apr. 27, 1957	8.62	8,350
	Oct. 18, 1942	14.25	27,000		May 15, 1957	7.53	6,150
	June 5, 1943	7.12	5,160		May 27, 1957	8.39	7,860
	July 11, 1943	8.87	8,590		June 1, 1957	9.25	9,780
					June 12, 1957	12.88	20,800
1944	May 25, 1944	14.10	26,600		Sept.22, 1957	12.00	17,700
	May 28, 1944	8.00	6,810				
	Aug. 28, 1944	11.45	15,900	1958	Oct. 15, 1957	11.30	15,600
	Aug. 30, 1944	26.10	104,000		Feb. 22, 1958	9.39	9,680
	Sept. 7, 1944	8.93	8,590		May 2, 1958	11.18	15,200
					June 17, 1958	17.45	50,200
1945	Dec. 4, 1944	9.34	9,450		June 22, 1958	7.15	4,980
	Jan. 18, 1945	8.86	8,590		Sept. 7, 1958	8.80	8,380
	Mar. 30, 1945	13.40	23,200		Sept.19, 1958	12.80	20,900
	Apr. 20, 1945	8.83	8,380				
	Apr. 24, 1945	9.24	9,230	1959	Apr. 11, 1959	8.83	8,550
	Sept.29, 1945	13.96	25,500		June 26, 1959	17.00	47,000
1946	Oct. 9, 1945	6.60	4,270	1960	Oct. 4, 1959	26.1	142,000
	Apr. 11, 1946	9.18	9,230		Oct. 14, 1959	6.99	4,850
	May 17, 1946	9.22	9,230		Dec. 15, 1959	7.18	5,210
	May 25, 1946	9.40	9,680		Feb. 3, 1960	8.33	7,350
1947	Oct. 9, 1946	7.08	5,160	1961	Oct. 16, 1960	7.04	4,930
	Nov. 4, 1946	8.32	7,380		Oct. 18, 1960	6.60	4,250
	Dec. 11, 1946	9.57	10,200		Oct. 29, 1960	11.08	15,600
	Jan. 17, 1947	6.83	4,620		Feb. 5, 1961	8.70	8,300
	June 24, 1947	7.71	6,240		Feb. 16, 1961	7.08	5,100
					June 18, 1961	10.05	11,800
1948	Apr. 13, 1948	8.78	8,380				

a From information by local residents.

8-1540. Pedernales River near Spicewood, Tex. (265)

Location.--Lat 30°25'15", long 98°04'50", in Travis County, 5.4 miles upstream from mouth and 8 miles southeast of Spicewood, Burnet County.

Drainage area.--1,294 sq mi.

Gage.--Nonrecording. Datum of gage is 624.88 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs and extended on basis of slope-area measurement at 155,000 cfs.

Bankfull stage.--40 ft.

Historical data.--Flood in 1869 reported to be between 40 and 50 ft, from information by local residents.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 10, 1925	4.85	1,360	1934	Apr. 6, 1934	11.72	11,400
1926	Oct. 16, 1925	13.40	16,400	1935	May 10, 1935	8.92	5,830
	Nov. 6, 1925	11.20	10,000		May 18, 1935	15.60	24,600
	Apr. 21, 1926	16.4	28,000		May 30, 1935	10.60	6,920
	May 7, 1926	6.2	2,480		June 1, 1935	9.90	7,500
	July 21, 1926	15.2	22,900		June 5, 1935	7.20	3,730
					June 15, 1935	32.0	105,000
1927	Feb. 9, 1927	12.90	14,800		June 22, 1935	12.70	14,500
	Mar. 20, 1927	8.42	4,980		Sept. 4, 1935	11.00	9,550
	Apr. 8, 1927	13.40	16,400		Sept. 9, 1935	18.20	35,400
	Apr. 14, 1927	6.10	2,390		Sept.25, 1935	13.2	15,700
	Apr. 19, 1927	8.70	5,440				
	June 6, 1927	11.4	10,300	1936	Dec. 6, 1935	11.9	11,930
					May 9, 1936	8.4	5,440
1928	Oct. 2, 1927	9.55	6,940		May 24, 1936	11.5	10,800
	Oct. 9, 1927	7.60	3,900		May 26, 1936	15.9	25,800
					July 1, 1936	21.0	47,900
1929	May 28, 1929	40.4	155,000		July 16, 1936	16.1	26,600
	July 3, 1929	6.65	2,950		July 22, 1936	5.76	2,480
	July 6, 1929	7.50	3,820		Sept.16, 1936	21.7	51,200
					Sept.27, 1936	28.4	85,300
1930	May 10, 1930	18.50	36,600				
	May 18, 1930	17.00	30,300	1937	Oct. 7, 1936	6.90	3,590
					Mar. 5, 1937	8.64	5,700
1931	Oct. 7, 1930	8.00	4,410		June 3, 1937	9.00	6,230
	Oct. 13, 1930	12.60	13,900		July 11, 1937	11.20	10,000
	Apr. 29, 1931	9.3	6,420				
	July 18, 1931	8.9	5,760	1938	Oct. 17, 1937	12.0	12,200
					Dec. 15, 1937	6.86	3,590
1932	Nov. 23, 1931	8.70	5,390		Jan. 23, 1938	12.90	14,800
	Mar. 5, 1932	13.82	17,800		Apr. 27, 1938	12.2	12,800
	July 3, 1932	14.00	18,500		May 23, 1938	5.9	2,570
	Sept. 3, 1932	9.10	5,990		June 10, 1938	6.05	2,660
					July 25, 1938	9.28	6,650
1933	May 26, 1933	5.65	2,020				
				1939	July 14, 1939	5.72	2,390
1934	Jan. 4, 1934	6.00	2,340				
	Jan. 27, 1934	6.20	2,520	1952	Sept.11, 1952	-	a452,000

a Annual peak only, by slope-area measurement at site 8.5 miles upstream.

8-1570. Waller Creek at 38th Street, Austin, Tex. (266)

Location.--Lat 30°17'49", long 97°43'36", on right bank 200 ft upstream from bridge at East 38th Street at Austin, Travis County, 1.1 miles upstream from West Branch of Waller Creek, and 3.3 miles upstream from Colorado River.

Drainage area.--2.31 sq mi.

Gage.--Recording. Datum of gage is 555.44 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--This station operated as research project for runoff from urban areas. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 1, 1956	3.94	a108	1959	Apr. 8, 1959	4.57	227
					July 20, 1959	4.57	227
1957	Mar. 20, 1957	4.51	214		July 21, 1959	4.81	287
	Apr. 24, 1957	4.56	225		Sept.23, 1959	5.41	468
	Apr. 26, 1957	4.95	326				
	Apr. 28, 1957	4.68	253	1960	Oct. 4, 1959	4.67	251
	May 26, 1957	5.75	596				
	June 3, 1957	4.85	298	1961	Oct. 16, 1960	4.58	230
	June 12, 1957	5.50	500		Oct. 18, 1960	4.45	201
					Oct. 29, 1960	7.77	1,970
1958	Oct. 14, 1957	5.54	518		Feb. 16, 1961	5.05	355
	Feb. 22, 1958	4.87	304		June 17, 1961	5.88	676
	Apr. 13, 1958	4.92	318		July 9, 1961	5.68	690
	Apr. 26, 1958	5.39	464		July 13, 1961	4.94	323
	May 2, 1958	4.63	241		July 17, 1961	4.94	323
	June 17, 1958	4.91	315				
	July 6, 1958	5.51	500				

a Maximum for period Apr. 1 to Sept. 30, 1956.

8-1575. Waller Creek at 23d Street at Austin, Tex. (267)

Location.--Lat 30°17'08", long 97°44'01", on San Jacinto Boulevard, 50 ft upstream from bridge on East 23d Street at Austin, Travis County, and 2.1 miles upstream from Colorado River.

Drainage area.--4.13 sq mi.

Gage.--Recording. Datum of gage is 509.95 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	June 12, 1951	-	a2,010	1957	June 12, 1957	5.85	2,050
1954	Oct. 23, 1953	b8.0	-	1958	Oct. 14, 1957	4.75	1,120
					Feb. 22, 1958	3.98	655
1955c/	May 18, 1955	5.40	1,640		Apr. 26, 1958	5.47	1,700
	May 19, 1955	4.17	762		May 2, 1958	4.58	1,010
					June 17, 1958	4.24	804
1956	May 1, 1956	3.90	615		July 6, 1958	5.02	1,340
1957	Mar. 11, 1957	3.93	630	1959	Oct. 22, 1958	4.29	834
	Mar. 20, 1957	4.85	1,200		Apr. 8, 1959	4.68	1,080
	Apr. 22, 1957	3.92	625		July 20, 1959	4.60	1,020
	Apr. 24, 1957	4.15	750		July 21, 1959	4.62	1,030
	Apr. 26, 1957	4.80	1,160		Sept.23, 1959	5.71	1,910
	Apr. 28, 1957	4.25	810				
	May 26, 1957	5.32	1,580	1960	Oct. 4, 1959	4.11	726
	June 3, 1957	3.94	635				

a Peak discharge determined by slope-area measurement half a mile downstream from gage.
b Annual peak only.
c January to September.

Peak stages and discharges of Waller Creek at 23d Street at Austin, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1961	Oct. 16, 1960	4.62	1,020	1961	June 17, 1961	5.55	1,620
	Oct. 29, 1960	7.96	3,710		July 9, 1961	6.28	2,170
	Feb. 16, 1961	4.37	872		July 12, 1961	5.70	1,730
	June 12, 1961	4.05	692				

8-1580. Colorado River at Austin, Tex. (268)

Location.--Lat 30°14'40", long 97°41'28", on right bank just upstream from bridge on U.S. Highway 183 in Austin, Travis County, 3.6 miles upstream from Walnut Creek, 3.8 miles downstream from Waller Creek, and at mile 290.

Drainage area.--38,400 sq mi, approximately, of which about 26,500 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 18, 1915; recording thereafter. Prior to June 19, 1939, various gages in vicinity of Congress Avenue Bridge 4.0 miles upstream at datum 14.6 ft higher. Datum of gage is 407.28 ft above mean level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--29 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1833 occurred July 7, 1869, from information by local resident.

Remarks.--Flow largely regulated by Buchanan Reservoir since May 1937 and by Lake Travis since September 1940 (drainage area above Lake Travis, 38,130 sq mi, approximately, of which 26,230 sq mi contributes directly to surface runoff). Only maximum daily stages and discharges are shown 1901-12, 1915. Only annual peaks are shown for other years.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 7, 1869	b46.0	550,000	1930	May 11, 1930	11.00	37,300
1899	June 8, 1899	23.8	113,000	1931	Oct. 7, 1930	22.50	97,600
1900	Apr. 7, 1900	27.4	c151,000	1932	Sept. 3, 1932	19.00	77,500
				1933	May 27, 1933	10.80	44,200
1901	July 13, 1901	10.20	28,700	1934	Apr. 6, 1934	11.62	45,300
1902	July 28, 1902	11.85	35,900	1935	June 15, 1935	41.2	481,000
1903	Feb. 27, 1903	11.3	33,700				
1904	June 8, 1904	10.35	31,500	1936	Sept.28, 1936	31.40	234,000
1905	Apr. 30, 1905	15.05	52,900	1937	Oct. 2, 1936	19.5	98,200
				1938	July 25, 1938	32.1	276,000
1906	Aug. 12, 1906	19.50	78,500	1939	July 15, 1939	10.54	20,400
1907	May 29, 1907	10.20	28,100	1940	June 30, 1940	17.44	45,700
1908	Apr. 23, 1908	21.60	100,000				
1909	June 4, 1909	10.60	29,700	1941	Apr. 29, 1941	18.55	47,600
1910	Sept. 9, 1910	10.00	27,400	1942	Sept. 8, 1942	5.48	5,800
				1943	Oct. 22, 1942	8.17	11,900
1911	Sept. 7, 1911	10.00	27,400	1944	May16,June26,1944	d6.94	4,230
1912	Dec. 14, 1911	7.5	17,400	1945	Aug. 6, 1945	11.14	18,400
1913	May 9, 1913	14.00	47,100				
1914	Dec. 4, 1913	27.00	164,000	1946	Apr. 25, 1946	9.61	14,200
1915	Sept.17, 1915	21.0	84,000	1947	Nov. 3, 1946	10.52	16,700
				1948	Aug. 11, 1948	6.55	4,060
1916	May 22, 1916	13.1	46,000	1949	June 11, 1949	5.15	3,940
1917	Oct. 21, 1916	5.20	11,100	1950	June 1, 1950	5.43	4,300
1918	Apr. 16, 1918	15.0	51,500				
1919	Nov. 9, 1918	19.5	74,800	1951	Aug. 7, 1951	5.39	3,710
1920	Oct. 11, 1919	13.68	50,300	1952	Sept.17, 1952	4.59	3,720
				1953	July 4, 1953	4.86	3,720
1921	Sept.10, 1921	19.40	75,700	1954	May 26, 1954	5.38	4,160
1922	May 1, 1922	22.60	120,000	1955	June 9, 1955	7.99	8,790
1923	May 1, 1923	13.04	50,200				
1924	Nov. 3, 1923	13.60	53,000	1956	Oct. 1, 1955	5.36	5,250
1925	May 31, 1925	9.30	32,000	1957	June 4, 1957	17.60	40,800
				1958	June 17, 1958	15.13	33,300
1926	Apr. 21, 1926	9.58	33,300	1959	Apr. 8, 1959	5.85	5,700
1927	Feb. 10, 1927	12.25	46,000	1960	Oct. 8, 1959	17.40	37,800
1928	Oct. 3, 1927	10.90	39,500				
1929	May 29, 1929	27.35	154,000	1961	Oct. 29, 1960	15.3	31,000

a Maximum daily gage heights and discharges are shown for 1901-12, and 1915; annual peaks are shown for other years. b Present site and datum. c Natural peak; peak caused by breaking of Austin Dam was 236,000 cfs. d Occurred on July 27, 1944.

8-1590. Onion Creek near Del Valle, Tex. (269)

Location.--Lat 30°11', long 97°39', at Del Valle-Creedmore highway crossing, 2 miles downstream from Williamson Creek and 2½ miles southwest of Del Valle, Travis County.

Drainage area.--337 sq mi.

Gage.--Nonrecording. Altitude of gage is about 420 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Sept. 9, 1921	33.6	-	1926	Apr. 21, 1926	16.05	24,300
					May 6, 1926	8.86	3,450
1924a/	May 26, 1924	9.50	6,900		July 22, 1926	8.10	2,380
	May 30, 1924	7.90	3,110				
	June 22, 1924	10.05	8,240	1927	June 14, 1927	7.60	1,780
1925	Sept.12, 1925	5.90	254	1928	Feb. 22, 1928	9.8	4,850
1926	Oct. 13, 1925	12.00	9,850	1929	May 28, 1929	24.75	76,000
	Oct. 16, 1925	9.60	4,500				
	Nov. 5, 1925	8.80	3,300	1930b/	Dec. 15, 1929	7.40	701
	Mar. 10, 1926	8.82	3,300				

a Period May to September 1924.
b Period October 1929 to March 1930.

8-1595. Colorado River at Smithville, Tex. (270)

Location.--Lat 30°01', long 97°10', on right bank 360 ft downstream from bridge on State Highway 71 in Smithville, Bastrop County, 850 ft downstream from Gazley Creek, and 4 miles downstream from Alum Creek.

Drainage area.--39,880 sq mi, approximately, of which 27,980 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 9, 1931; recording thereafter. At site 1,210 ft downstream at datum 1.0 ft higher prior to July 24, 1930. Datum of gage is 270.14 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 210,000 cfs and by slope-area measurement at 305,000 cfs.

Bankfull stage.--25 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1860, that of July 8, 1869. Stages of Dec. 4, 1913, and June 16, 1935, are highest since 1869.

Remarks.--Regulation same as that for Colorado River at Austin (see station 8-1580). Records from July 1, 1920, to July 23, 1930, from U.S. Weather Bureau and are maximum observed readings. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 8, 1869	(a)	-	1930	May 12, 1930	15.1	-
1914	Dec. 4, 1913	b47.4	-	1931	Oct. 9, 1930	21.40	67,500
					Oct. 19, 1930	21.40	67,500
1921	Sept.11, 1921	26.0	-	1932	Sept. 4, 1932	21.08	66,400
1922	May 3, 1922	28.2	-	1933	May 28, 1933	15.47	31,200
1923	May 1, 2,1923	16.4	-	1934	Apr. 9, 1934	17.13	39,200
1924	Nov. 4, 1923	15.2	-	1935	June 16, 1935	42.5	305,000
1925	May 14, 1925	12.0	-				
				1936	Sept 29, 1936	31.2	148,000
1926	Apr. 22, 1926	23.0	-	1937	Oct. 3, 1936	24.72	95,000
1927	Feb. 11, 1927	12.0	-	1938	July 27, 1938	36.02	209,000
1928	Oct. 5,6,1927	14.0	-	1939	July 16, 1939	10.84	17,200
1929	May 30, 1929	29.4	-	1940	July 1, 1940	21.24	70,400

a Several feet higher than flood of Dec. 4, 1913; from information by local residents.
b Present site and datum.

Peak stages and discharges of Colorado River at Smithville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 8, 1941	24.27	93,700	1952	June 7, 1952	6.79	3,510
1942	Sept. 9, 1942	12.43	21,100	1953	Apr. 29, 1953	16.52	30,000
1943	Oct. 19, 1942	9.03	11,900	1954	Dec. 3, 1953	16.00	28,200
1944	Feb. 26, 1944	9.50	12,900	1955	May 19, 1955	8.32	7,500
1945	Dec. 5, 1944	14.12	27,200				
				1956	May 3, 1956	6.35	5,490
1946	Apr. 24, 1946	12.70	22,000	1957	Apr. 28, 1957	24.20	66,900
1947	Nov. 4, 1946	18.03	40,000	1958	Feb. 23, 1958	25.40	67,700
1948	Aug. 13, 1948	6.34	3,620	1959	Apr. 12, 1959	12.46	18,600
1949	Apr. 25, 1949	15.88	31,900	1960	Oct. 9, 1959	18.65	37,600
1950	June 3, 1950	12.66	19,500				
				1961	Oct. 30, 1960	30.37	94,500
1951	June 4, 1951	14.35	21,100				

8-1600. Dry Creek at Buescher Lake near Smithville, Tex. (271)

Location.--Lat 30°02'35", long 97°09'20", on left bank, 225 ft upstream from dam in Bastrop-Buescher State Park, 1.9 miles upstream from mouth, and 2.2 miles north of Smithville, Bastrop County.

Drainage area.--1.48 sq mi.

Gage.--Recording. Datum of gage is 327.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Inflow into lake only, and is computed on basis of change in reservoir contents plus flow over spillway. Generally, peak inflow is computed as the average inflow for a period of less than 30 minutes, unadjusted for rainfall on reservoir surface during time of peak inflow.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 30, 1940	-	1,870	1948	May 25, 1948	-	86
				1949	Apr. 22, 1949	-	595
1941	June 7, 1941	-	903	1950	June 2, 1950	-	465
1942	Oct. 30, 1941	-	670				
1943	Nov. 4, 1942	-	35	1957	Apr. 28, 1957	-	889
				1958	Feb. 22, 1958	-	206
1945	Mar. 30, 1945	-	1,200	1959	Apr. 11, 1959	-	252
				1960	Apr. 29, 1960	-	1,200
1946	June 1, 1946	-	1,570				
1947	Aug. 26, 1947	-	667	1961	Sept.12, 1961	-	505

8-1605. Colorado River at La Grange, Tex. (272)

Location.--Lat 29°53'45", long 96°52'15", at bridge on U.S. Highway 77 in La Grange, Fayette County, and 1.2 miles downstream from Buckner Creek.

Drainage area.--40,420 sq mi, approximately, of which 28,520 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 211.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 200,000 cfs.

Remarks.--Regulation same as that for Colorado River at Austin (station 8-1580). Only annual peaks are shown.

Peak stages and discharges of Colorado River at La Grange, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 9, 1869	56.7	-	1945	Jan. 19, 1945	12.78	27,800
1914	Dec. 5, 1913	56.4	-	1946	June 1, 1946	16.04	34,700
				1947	Nov. 5, 1946	15.70	36,100
1935	June 17, 1935	50.84	255,000	1948	May 27, 1948	4.50	4,130
				1949	Apr. 26, 1949	20.20	54,400
1938	July 27, 1938	42.95	200,000	1950	June 3, 1950	14.80	26,100
1939	July 17, 1939	10.27	15,900				
1940	June 30, 1940	40.18	182,000	1951	June 5, 1951	13.02	19,000
				1952	May 28, 1952	9.07	10,100
1941	June 8, 1941	25.6	104,000	1953	Apr. 29, 1953	18.31	46,800
1942	July 5, 1942	18.7	59,200	1954	Dec. 3, 1953	14.0	24,600
1943	Oct. 20, 1942	8.20	11,300	1955	May 18, 1955	10.00	12,400
1944	Aug. 31, 1944	8.36	12,200				

8-1610. Colorado River at Columbus, Tex. (273)
(Published as "near Eagle Lake" 1931 to 1938)

Location.--Lat 29°42'20", long 96°32'05", near right bank at downstream side of pier of bridge on U.S. Highway 90 at eastern edge of Columbus, Colorado County, 340 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.6 miles downstream from Cummins Creek, and at mile 135.

Drainage area.--41,070 sq mi, approximately, of which 29,170 sq mi contributes directly to surface runoff; 41,170 sq mi, approximately, at site 23 miles downstream.

Gage.--Nonrecording prior to May 1, 1919, and from May 17 to Nov. 14, 1939; recording for all other periods. At present site at datum 3.0 ft lower prior to May 1, 1919. At site 300 ft downstream at datum 3.0 ft lower May 1, 1919, to Sept. 30, 1930. At site 23 miles downstream at different datum Oct. 1, 1930, to May 31, 1939. Datum of gage is 155.52 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Since 1958, discharge has been computed using rate of change in stage as a factor, so that, for some floods, the peak discharge occurs before the peak gage height.

Bankfull stage.--24 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1852, that of July 1869, and Dec. 6, 1913; from information by local residents.

Remarks.--Flow largely regulated since May 1937 by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 1869	a44.6	-	1916	May 23, 1916	24.7	36,800
				1917	May 7, 1917	12.14	4,570
1900	-	a39.6	-	1918	Apr. 18, 1918	22.7	30,100
				1919	Nov. 14, 1918	33.9	55,100
1903	Mar. 1, 1903	b35.15	-	1920	Oct. 14, 1919	34.6	83,900
1904	May 5, 1904	b28.50	-				
1905	May 2, 1905	b33	-	1921	Sept.13, 1921	35.1	67,400
				1922	May 5, 1922	38.3	117,000
1906	Aug. 15, 1906	b33.5	-	1923	May 2, 1923	26.0	44,600
1907	May 31, 1907	b35.00	-	1924	Nov. 4, 1923	27.05	42,000
1908	Apr. 27, 1908	b35.80	-	1925	May 14, 1925	19.64	21,100
1909	June 5, 1909	b20.90	-				
1910	May 23, 1910	b20.90	-	1926	Apr. 22, 1926	36.4	73,100
				1927	Apr. 14, 1927	27.15	42,600
1911	Sept. 9, 1911	b22.20	-	1928	Oct. 5, 1927	21.40	27,700
1912	Feb. 24, 1912	c18.6	-	1929	June 1, 1929	38.00	110,000
1913	May 11, 1913	c27.3		1930	Nov. 9, 1929	29.75	44,400
1914	Dec. 6, 1913	44.6	-				
1915	Apr. 28, 1915	c36.2	-	1931	Oct. 21, 1930	20.48	57,500

a From information by local residents. b Maximum daily mean gage height; computed discharge has been found to be unreliable and should not be used. c Maximum observed gage height, from U.S. Weather Bureau.

Peak stages and discharges of Colorado River at Columbus, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan. 5, 1932	18.50	50,200	1947	Nov. 5, 1946	15.92	31,300
1933	May 29, 1933	13.00	28,200	1948	May 26, 1948	9.94	10,200
1934	Apr. 10, 1934	17.10	37,100	1949	Apr. 27, 1949	19.75	45,200
1935	June 19, 1935	29.45	d177,000	1950	June 3, 1950	15.81	25,000
1936	Sept.26, 1936	23.02	102,000	1951	June 5, 1951	12.25	17,300
1937	Oct. 2, 1936	24.40	123,000	1952	May 27, 1952	11.53	15,000
1938	July 29, 1938	28.1	d165,000	1953	Apr. 30, 1953	17.13	33,700
1939	July 17, 1939	11.9	15,000	1954	Dec. 4, 1953	12.25	15,700
1940	July 1, 1940	36.2	152,000	1955	May 19, 1955	12.00	12,300
1941	Nov. 24, 1940	35.40	136,000	1956	Feb. 9, 1956	7.32	5,440
1942	Apr. 8, 1942	21.28	59,400	1957	Apr. 29, 1957	27.15	61,600
1943	Oct. 20, 1942	9.89	11,100	1958	Oct. 15, 1957	e27.18	74,800
1944	May 28, 1944	12.15	17,100	1959	Apr. 12, 1959	18.60	30,700
1945	Apr. 1, 1945	17.63	36,400	1960	Apr. 30, 1960	26.90	66,200
1946	Mar. 13, 1946	19.76	47,700	1961	Sept.13, 1961	29.35	73,000

d For June 15, 1935, 190,000 cfs (gage height, 38.5 ft) and July 29, 1938, 175,000 cfs (gage height, 38.4 ft), at present site and datum; discharge computed on basis of records for station near Eagle Lake, gage height from U.S. Weather Bureau.
e Occurred Feb. 24, 1958.

8-1620. Colorado River at Wharton, Tex. (274)

Location.--Lat 29°18'30", long 96°06'15", near center of span at downstream side of bridge on U.S. Highway 59, in Wharton, Wharton County, 1,000 ft downstream from Texas and New Orleans Railroad Co. bridge and 12 miles upstream from Jones Creek.

Drainage area.--41,380 sq mi, approximately, of which 29,480 sq mi contributes directly to surface runoff.

Gage.--Nonrecording, except recording Mar. 19, 1919, to July 17, 1921, and Dec. 13, 1921, to Sept. 30, 1925. At site 700 ft upstream at different datum prior to Oct. 1, 1925. Datum of gage is 65.42 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--26 ft (U.S. Weather Bureau).

Historical data.--Flood of July 12, 1869, reached about the same stage as flood in December 1913, from information by local residents.

Remarks.--Regulated by controlled lakes and reservoirs above Austin since May 1937. Gage-height record collected in cooperation with U.S. Weather Bureau. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 8, 1913	a38.9	-	1944	Mar. 17, 1944	14.96	19,700
				1945	Apr. 2, 1945	19.80	36,400
1919	June 18, 1919	32.45	b37,600				
1920	Oct. 15, 1919	33.9	39,600	1946	Mar. 14, 1946	19.50	35,600
				1947	Nov. 6, 1946	16.98	27,300
1921	Sept.14, 1921	31.55	35,900	1948	May 27, 1948	8.40	7,800
1922	May 6, 1922	40.7	-	1949	Apr. 27, 1949	20.90	37,900
1923	May 3, 1923	29.5	29,300	1950	June 4, 1950	17.55	28,600
1924	Nov. 5, 1923	27.45	32,800				
1925	May 15, 1925	22.35	22,100	1951	June 6, 1951	11.15	13,200
				1952	May 29, 1952	12.95	17,400
1929	June 3, 1929	37.7	-	1953	May 1, 1953	17.90	29,900
				1954	Dec. 5, 1953	11.20	13,300
1935	June 20, 1935	38.2	159,000	1955	May 20, 1955	10.40	10,100
1938	July 30, 1938	37.4	145,000	1956	Oct. 7, 1955	5.70	4,610
1939	July 18, 1939	11.48	12,600	1957	Apr. 30, 1957	28.90	54,200
1940	July 3, 1940	35.99	100,000	1958	Oct. 17, 1957	30.00	58,500
				1959	Apr. 13, 1959	c20.60	33,300
1941	Nov. 26, 1940	35.30	92,000	1960	June 27, 1960	27.50	53,000
1942	Apr. 9, 1942	22.35	38,900				
1943	Oct. 21, 1942	9.30	8,330	1961	Sept.15, 1961	30.90	59,600

a At present site and datum. b Maximum for period May 19 to Sept. 30; probably maximum for the year. c Occurred at different time than peak discharge.

8-1625. Colorado River near Bay City, Tex. (275)

Location.--Lat 28°58'26", long 96°00'44", on right bank 6,300 ft downstream from bridge on State Highway 35, 7,100 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.8 miles west of Bay City, Matagorda County, and at mile 32.6.

Drainage area.--41,650 sq mi, approximately, of which 29,750 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is at mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--50 ft.

Historical data.--Flood of July 1869 probably reached about the same stage as that of Dec. 10, 1913, from information at Columbus, Texas (about 100 miles upstream).

Remarks.--Some regulation by storage in Buchanan Reservoir since May 1937, Lake Travis since September 1940, and other smaller reservoirs, having a combined capacity of 3,979,000 acre-ft. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 10, 1913	a56.1	-	1949	Apr. 28, 1949	34.00	36,000
				1950	June 4, 1950	30.51	24,800
1922	May 8, 1922	a55.4	-				
				1951	June 7, 1951	25.75	12,000
1929	June 1929	a55.0	-	1952	May 29, 1952	29.07	20,100
				1953	May 1, 1953	30.00	23,300
1935	June 22, 1935	a54.6	-	1954	Dec. 5, 1953	24.83	10,000
				1955	May 21, 1955	25.74	11,900
1937	Oct. 5, 1936	a52.2	-				
1938	Aug. 2, 1938	a53.4	-	1956	Oct. 10, 1955	20.95	4,460
				1957	May 1, 1957	41.83	53,000
1940	July 4, 1940	46.6	b83,300	1958	Oct. 17, 1957	42.77	59,200
1941	Nov. 27, 1940	a47.6	-	1959	Apr. 13, 1959	34.48	34,200
				1960	June 26, 1960	e46.40	84,100
1946	Jan. 20, 1946	c26.2	-				
1947	Mar. 14, 1947	c31.92	-	1961	Sept.15, 1961	44.09	66,400
1948	May 28, 1948	22.73	d6,390				

a From information by Texas and New Orleans Railroad Co; gage heights measured 0.9 mile upstream and adjusted to present site and datum.
b Discharge measured by Corps of Engineers 6,300 ft upstream; elevation adjusted to present site and datum.
c From U.S. Weather Bureau.
d Maximum Apr. 20 to Sept. 30; probably maximum for year.
e Occurred on following day.

8-1635. Lavaca River at Hallettsville, Tex. (276)

Location.--Lat 29°26', long 96°57', at downstream side of bridge on U.S. Highway 77 in Hallettsville, Lavaca County, and 0.4 mile upstream from Texas and New Orleans Railroad Co. bridge.

Drainage area.--101 sq mi.

Gage.--Recording. Datum of gage is 186.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended on basis of slope-area measurement at 93,100 cfs.

Bankfull stage.--29 ft.

Historical data.--Flood of June 30, 1940, reached highest stage since at least 1840, and the flood of July 16, 1936, was second highest in the period beginning about 1870, from information by local resident.

Remarks.--Extensive channel improvements were made in 1959. Base for partial-duration series, 2,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 16, 1936	32.8	28,300	1949	Apr. 20, 1949	16.90	2,750
					Apr. 22, 1949	20.28	4,920
1940	June 30, 1940	40.60	93,100		Apr. 25, 1949	21.54	5,860
	July 3, 1940	19.00	2,320				
				1950	Oct. 22, 1949	16.68	2,640
1941	Oct. 29, 1940	20.76	3,220		May 27, 1950	19.17	4,130
	Nov. 5, 1940	21.72	3,980		June 2, 1950	18.80	3,900
	Nov. 24, 1940	29.36	17,000				
	Dec. 11, 1940	23.70	6,160	1951	June 12, 1951	19.85	4,600
	Dec. 15, 1940	21.94	4,180				
	Dec. 20, 1940	19.75	2,650	1952	Apr. 12, 1952	19.30	4,220
	Jan. 14, 1941	20.60	3,080		May 27, 1952	26.94	11,400
	Mar. 6, 1941	21.75	4,080				
	Mar. 18, 1941	19.22	2,400	1953	May 14, 1953	15.15	1,480
	Apr. 7, 1941	19.40	2,480				
	Apr. 22, 1941	22.20	4,480	1954	Apr. 8, 1954	19.10	3,260
	Apr. 26, 1941	19.73	2,600				
	May 3, 1941	23.33	5,680	1955	Feb. 4, 1955	28.84	10,200
	May 5, 1941	21.35	3,680		May 18, 1955	27.18	10,800
	May 11, 1941	22.65	4,880		Aug. 20, 1955	22.23	5,150
	May 22, 1941	24.55	7,400				
	June 11, 1941	19.75	2,650	1956	Feb. 8, 1956	14.02	1,310
1942	Oct. 31, 1941	19.60	4,420	1957	Mar. 31, 1957	22.62	4,880
	Apr. 8, 1942	28.43	14,500		Apr. 21, 1957	25.58	8,500
	Apr. 24, 1942	19.90	4,630		Apr. 27, 1957	25.20	7,900
	July 6, 1942	24.70	8,860		Apr. 29, 1957	26.15	9,460
					May 27, 1957	21.00	3,720
1943	May 25, 1943	16.22	2,500		Sept.25, 1957	22.82	5,060
1944	Jan. 29, 1944	16.24	2,500	1958	Oct. 15, 1957	30.55	20,600
	Mar. 15, 1944	26.61	11,000		Oct. 22, 1957	19.10	3,440
	May 28, 1944	17.82	3,330		Nov. 22, 1957	20.17	4,140
	Aug. 30, 1944	21.50	5,860		Feb. 22, 1958	22.86	6,210
1945	Jan. 18, 1945	22.36	6,590	1959	Apr. 10, 1959	23.40	6,660
	Mar. 30, 1945	21.45	5,780		June 4, 1959	18.37	4,120
	Apr. 1, 1945	16.85	2,800				
				1960	Oct. 31, 1959	18.88	4,370
1946	Feb. 18, 1946	20.95	5,700		June 25, 1960	15.49	3,760
	June 1, 1946	16.90	2,800				
	June 8, 1946	20.60	5,080	1961	Oct. 16, 1960	24.2	13,300
	Aug. 29, 1946	19.90	4,630		Oct. 18, 1960	28.4	29,500
					Oct. 29, 1960	19.5	5,400
1947	Nov. 4, 1946	20.20	4,850		Nov. 22, 1960	15.0	2,310
	Mar. 18, 1947	21.00	5,460		Feb. 16, 1961	12.78	2,380
	Apr. 13, 1947	18.78	3,900		June 18, 1961	27.6	25,500
	May 24, 1947	18.90	3,960		Sept.12, 1961	27.94	27,000
1948	May 27, 1948	18.45	3,650				

8-1640. Lavaca River near Edna, Tex. (277)

Location.--Lat 28°57'35", long 96°41'10", at downstream side near center of upstream bridge of two bridges on U.S. Highway 59, 660 ft upstream from Texas and New Orleans Railroad Co. bridge and 2.8 miles southwest of Edna, Jackson County.

Drainage area.--887 sq mi.

Gage.--Nonrecording. Datum of gage is 13.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 72,000 cfs.

Bankfull stage.--32 ft.

Historical data.--Flood of May 25, 1936, reached the highest stage since at least 1880, from information by local residents.

Remarks.--Base for partial-duration series, 4,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	32	-	1949	Apr. 24, 1949	20.33	5,650
					Apr. 27, 1949	21.33	6,830
1936	May 25, 1936	33.8	83,400				
				1950	Oct. 26, 1949	18.4	4,400
1939	July 13, 1939	23.90	13,600		Dec. 19, 1949	21.41	7,000
1940	Feb. 18, 1940	17.00	4,250	1951	June 15, 1951	16.49	3,460
	July 1, 1940	32.51	73,000				
				1952	May 29, 1952	26.54	23,000
1941	Nov. 1, 1940	18.8	5,050				
	Nov. 6, 1940	22.0	8,920	1953	Nov. 30, 1952	20.05	5,400
	Nov. 26, 1940	29.7	51,200		May 19, 1953	22.70	8,560
	Dec. 14, 1940	20.7	6,720		Aug. 31, 1953	20.58	5,940
	Dec. 17, 1940	22.0	8,920				
	Dec. 21, 1940	21.7	8,320	1954	Apr. 10, 1954	13.06	2,070
	Jan. 16, 1941	21.2	7,440				
	Mar. 8, 1941	18.4	4,810	1955	Feb. 7, 1955	22.20	7,860
	Mar. 19, 1941	23.85	13,400		May 21, 1955	23.30	9,490
	Apr. 25, 1941	21.6	8,140				
	Apr. 28, 1941	22.4	9,760	1956	July 12, 1956	7.40	690
	May 4, 1941	24.9	17,300				
	May 13, 1941	21.0	7,120	1957	Apr. 2, 1957	19.94	4,640
	May 24, 1941	23.0	11,200		Apr. 23, 1957	20.35	4,910
	June 13, 1941	23.2	11,700		Apr. 29, 1957	23.55	9,440
	June 28, 1941	25.6	20,800				
				1958	Oct. 17, 1957	26.66	24,500
1942	Apr. 10, 1942	23.60	12,800		Oct. 24, 1957	19.00	5,000
	July 8, 1942	23.77	12,300		Nov. 25, 1957	23.00	9,000
					Jan. 25, 1958	21.19	6,680
1943	Mar. 26, 1943	15.90	3,200		Feb. 24, 1958	24.57	13,200
					May 5, 1958	21.38	6,860
1944	Dec. 11, 1943	17.91	4,130		Sept.23, 1958	19.81	5,560
	Jan. 30, 1944	21.1	6,540				
	Mar. 17, 1944	22.5	9,100	1959	Feb. 3, 1959	17.70	4,250
	Mar. 19, 1944	22.70	9,640		Feb. 12, 1959	18.30	4,580
	May 29, 1944	21.9	7,820		Feb. 16, 1959	22.90	8,840
					Apr. 13, 1959	23.80	10,400
1945	Jan. 20, 1945	20.87	6,280				
	Apr. 2, 1945	18.6	4,500	1960	Nov. 2, 1959	21.40	6,860
	Apr. 20, 1945	20.5	5,840		June 27, 1960	23.47	9,860
					Aug. 15, 1960	20.12	5,780
1946	Feb. 19, 1946	21.7	7,470		Aug. 30, 1960	18.50	4,700
	June 10, 1946	19.1	4,990				
	Aug. 31, 1946	24.78	17,200	1961	Oct. 20, 1960	27.50	25,100
	Sept.16, 1946	21.4	6,980		Oct. 27, 1960	27.30	23,900
	Sept.28, 1946	19.8	5,260		Oct. 31, 1960	20.62	6,180
					Nov. 24, 1960	21.70	7,160
1947	Oct. 12, 1946	19.3	4,920		Jan. 1, 1961	20.80	6,340
	Oct. 18, 1946	25.34	19,600		Jan. 8, 1961	19.70	5,490
	Nov. 11, 1946	18.1	4,230		Feb. 7, 1961	20.60	6,180
	Nov. 17, 1946	19.6	5,120		Feb. 18, 1961	22.40	6,860
	May 26, 1947	19.0	4,740		June 20, 1961	25.53	17,100
					July 12, 1961	19.97	5,700
1948	May 27, 1948	24.69	15,200		Sept.14, 1961	27.14	21,000

8-1645. Navidad River near Ganado, Tex. (278)

Location.--Lat 29°02', long 96°33', at downstream side near center of upstream bridge on U.S. Highway 59, 170 ft upstream from Texas and New Orleans Railroad Co. bridge, a quarter of a mile downstream from Sandy Creek, and 2½ miles southwest of Ganado, Jackson County.

Drainage area.--1,116 sq mi.

Gage.--Nonrecording. Datum of gage is 13.62 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs and extended above on basis of logarithmic plotting.

Bankfull stage.--30 ft.

Historical data.--Maximum stage since at least 1876 occurred May 27, 1936, from information by local residents and Texas and New Orleans Railroad Co.

Remarks.--Base for partial-duration series, 5,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	May 27, 1936	39.8	a94,000	1950	Oct. 26, 1949	28.31	14,200
					Dec. 19, 1949	25.5	7,550
1939	July 13, 1939	27.2	b9,440		June 4, 1950	25.4	7,470
1940	July 2, 1940	36.54	64,500	1951	June 14, 1951	24.18	6,570
1941	Nov. 1, 1940	25.2	7,460	1952	Apr. 14, 1952	26.0	7,600
	Nov. 7, 1940	26.4	8,960		May 30, 1952	29.5	17,000
	Nov. 26, 1940	36.50	64,500				
	Dec. 15, 1940	27.8	13,300	1953	Dec. 1, 1952	23.7	5,820
	Dec. 22, 1940	23.7	6,400		May 20, 1953	26.3	7,960
	Jan. 15, 1941	26.4	8,960		Sept. 1, 1953	29.00	15,000
	Mar. 20, 1941	27.4	11,800				
	Apr. 25, 1941	29.1	18,600	1954	May 14, 1954	11.71	1,330
	May 5, 1941	28.6	16,500				
	May 31, 1941	24.9	7,230	1955	Feb. 8, 1955	25.62	7,210
	June 13, 1941	24.4	6,880				
	June 29, 1941	28.5	16,100	1956	Feb. 9, 1956	10.20	984
	July 14, 1941	26.5	9,140				
				1957	Mar. 19, 1957	25.0	6,700
1942	Nov. 1, 1941	25.2	7,460		Apr. 2, 1957	23.7	5,820
	Apr. 11, 1942	27.73	12,900		Apr. 30, 1957	30.08	18,100
	July 8, 1942	28.1	11,400		June 2, 1957	25.5	6,860
1943	Mar. 26, 1943	24.00	6,510	1958	Oct. 17, 1957	30.90	24,800
					Nov. 25, 1957	27.4	9,720
1944	Nov. 3, 1943	24.0	6,510		Jan. 25, 1958	24.6	6,420
	Dec. 28, 1943	22.8	5,600		Feb. 24, 1958	27.45	9,720
	Jan. 31, 1944	25.3	7,390		May 5, 1958	25.3	6,940
	Mar. 17, 1944	28.56	15,600				
	May 24, 1944	22.8	5,600	1959	Feb. 16, 1959	28.6	13,400
	May 30, 1944	26.2	8,200		Apr. 13, 1959	29.00	15,000
					June 27, 1959	26.57	8,380
1945	Dec. 7, 1944	25.6	7,640				
	Jan. 20, 1945	23.5	6,090	1960	Oct. 6, 1959	24.05	6,000
	Apr. 3, 1945	27.97	12,800		June 27, 1960	33.46	34,000
	Apr. 23, 1945	23.8	6,300		Aug. 16, 1960	25.80	7,400
	Aug. 30, 1945	22.9	5,670				
				1961	Oct. 20, 1960	28.31	13,400
1946	Feb. 20, 1946	27.1	9,500		Oct. 27, 1960	25.90	7,960
	June 2, 1946	23.1	5,810		Oct. 31, 1960	24.30	6,280
	June 24, 1946	27.20	9,740		Nov. 23, 1960	24.80	6,700
	Sept. 1, 1946	26.8	8,960		Jan. 1, 1961	24.90	6,780
					Jan. 8, 1961	24.20	6,140
1947	Oct. 17, 1946	25.01	6,790		Feb. 7, 1961	25.70	7,720
	Jan. 20, 1947	23.4	5,880		Feb. 18, 1961	28.30	13,400
					Feb. 23, 1961	25.65	7,600
1948	May 27, 1948	27.10	9,500		June 22, 1961	28.95	15,000
					July 14, 1961	24.42	6,350
1949	Feb. 28, 1949	23.2	5,880		Sept.15, 1961	32.95	28,200
	Apr. 25, 1949	27.77	10,300				

a Annual peak only.
b Maximum during period May to September.

8-1655. Guadalupe River at Hunt, Tex. (279)

Location.--Lat 30°03', long 99°19', at bridge on State Highway 39, half a mile downstream from confluence of North and South Forks and 0.6 mile east of Hunt, Kerr County.

Drainage area.--276 sq mi.

Gage.--Recording. Datum of gage is 1,722.7 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined above 4.10 ft (622 cfs).

Historical data.--It was the opinion of a long-time resident that the stage reached during the 1935 flood would have exceeded that of the 1932 flood had not the 1932 flood cleaned the channel and thereby increased its capacity. The same resident estimated that the 1919 flood (probably in October 1919) was 3 ft higher than the 1900 flood, or at about a 31-foot stage.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	a28	-	1944	May 25, 1944	b10.56	-
				1945	Jan. 18, 1945	3.00	355
1932	July 2, 1932	a36.6	-				
				1946	Oct. 10, 1945	b8.00	-
1935	June 14, 1935	a28	-	1947	Nov. 3, 1946	14.50	-
				1948	July 5, 1948	2.08	179
1942	May 7, 1942	9.00	-	1949	Feb. 25, 1949	15.4	-
1943	Oct. 17, 1942	4.43	-				

a From information by local resident.
b Driftmark in well; may have been higher.

8-1660. Johnson Creek near Ingram, Tex. (280)

Location.--Lat 30°06'00", long 99°17'00", on right bank, 1.3 miles upstream from Henderson Branch, 3.4 miles northwest of Ingram, Kerr County, 3.8 miles upstream from mouth, and 9.2 miles northwest of Kerrville.

Drainage area.--115 sq mi.

Gage.--Recording. Datum of gage is 1,721.30 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs. Oct. 10, 1953, to Oct. 3, 1959, affected by dam below gage and extended above 1,800 cfs to 4,800 cfs by weir formula study. For other periods, extended above 1,800 cfs on basis of slope-area measurements at 9,100 and 16,000 cfs and conveyance study to 95,900 cfs.

Bankfull stage.--25 ft.

Historical data.--Maximum stage since at least 1852 occurred July 2, 1932, from information by local residents. Flood of June 14, 1935, reached a stage of about 31 or 32 ft, from information by local residents.

Remarks.--Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	July 2, 1932	35	a138,000	1945	Jan. 18, 1945	4.56	1,240
					Mar. 29, 1945	1.85	52
1942	Oct. 4, 1941	4.70	1,380				
	May 7, 1942	3.73	644	1946	Oct. 5, 1945	1.86	49
1943	Oct. 18, 1942	4.05	864	1947	Oct. 8, 1946	3.13	368
	June 5, 1943	3.35	504		Nov. 3, 1946	9.67	9,180
					Jan. 18, 1947	6.34	3,260
1944	May 25, 1944	3.21	448		Apr. 25, 1947	3.97	810
	Aug. 30, 1944	2.13	102		June 23, 1947	11.76	16,200
	Sept. 6, 1944	1.85	52				

a Result of slope-area measurement 6 or 7 miles upstream from gage.

Peak stages and discharges of Johnson Creek near Ingram, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 25, 1948	2.62	179	1955	Mar. 20, 1955	6.20	105
	Mar. 26, 1948	2.12	66		May 6, 1955	7.12	749
	Apr. 13, 1948	2.84	254		May 16, 1955	6.18	85
	Apr. 23, 1948	2.16	77		May 19, 1955	6.95	580
	Apr. 25, 1948	2.05	62		July 14, 1955	6.46	208
	May 11, 1948	3.52	540		July 17, 1955	6.13	70
	June 24, 1948	2.06	63				
	July 5, 1948	2.07	63	1956	Apr. 29, 1956	6.19	92
	July 10, 1948	2.60	173				
	Aug. 1, 1948	3.11	359	1957	Oct. 15, 1956	7.10	814
	Sept.13, 1948	2.25	92		Apr. 24, 1957	6.07	72
					Apr. 27, 1957	6.21	134
1949	Feb. 23, 1949	2.55	96		May 27, 1957	6.57	330
	Feb. 25, 1949	5.94	2,000		June 1, 1957	6.78	498
	Apr. 24, 1949	6.63	2,910		Sept.12, 1957	7.41	1,120
	Sept.16, 1949	2.90	168				
				1958	Oct. 15, 1957	8.14	2,030
1950	Oct. 24, 1949,	2.10	30		Feb. 22, 1958	7.56	1,290
	June 1, 1950				May 3, 1958	7.03	648
					June 17, 1958	9.59	4,800
1951	May 7, 1951	2.96	185		June 22, 1958	6.96	847
	June 3, 1951	6.13	2,220		July 7, 1958	6.22	214
					Aug. 23, 1958	6.57	498
1952	June 5, 1952	8.65	6,420		Sept.16, 1958	7.00	892
	Sept.10, 1952	5.08	1,120		Sept.19, 1958	6.86	749
	Sept.18, 1952	2.90	170		Sept.27, 1958	8.06	2,170
1953	Apr. 1, 1953	2.26	51	1959	June 25, 1959	8.43	2,760
1954	Apr. 30, 1954	b4.48	-	1960	Oct. 4, 1959	24.25	c95,900
1955	Oct. 27, 1954	6.15	88				

b Backwater from dam.
c Annual peak only.

8-1670. Guadalupe River at Comfort, Tex. (281)
(Published as "near Comfort" 1918-32)

Location.--Lat 29°58', long 98°54', on left bank at downstream side of pier of bridge on U.S. Highway 87, a quarter of a mile downstream from Cypress Creek and half a mile east of Comfort, Kendall County.

Drainage area.--836 sq mi.

Gage.--Nonrecording prior to Nov. 28, 1939; recording thereafter. At sites 5 and 4 miles, respectively, upstream at different datums Dec. 16, 1917, to Aug. 10, 1924, and Aug. 11, 1924, to Sept. 30, 1932. Records equivalent except during periods of intense local storms. Datum of gage is 1,372.03 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs and by slope-area measurement at 182,000 cfs.

Bankfull stage.--33 ft.

Historical data.--Floods of July 16, 1900, and July 1, 1932, reached the same stage at ice plant 1 mile upstream and were the highest since at least 1848, from information by local residents.

Remarks.--Base for partial-duration series, 2,600 cfs. Only annual peaks are shown prior to 1925.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	July 16, 1900	a38.4	182,000	1923	Sept.18, 1923	17.2	-
1915	Sept.16, 1915	a34.9	114,000	1924	June 22, 1924	11.13	-
1918	Apr. 5, 1918	17.5	-	1925	May 28, 1925	10.1	4,920
1919	Aug. 21, 1919	b36.2	134,000	1926	Oct. 16, 1925	11.8	8,120
1920	Oct. 16, 1919	-	-		Apr. 23, 1926	10.30	5,100
					May 30, 1926	10.30	5,100
1921	June 12, 1921	25	-		July 23, 1926	10.70	5,460
1922	Aug. 26, 1922	6.9	2,220				

a Present site and datum; from relation of 1900 and 1932 floodmarks at ice plant 1 mile upstream.
b Present site and datum.

Peak stages and discharges of Guadalupe River at Comfort, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 28, 1927	10.9	5,630	1946	May 6, 1946	14.04	6,400
	Mar. 7, 1927	9.40	4,330				
	June 6, 1927	7.70	2,940	1947	Oct. 9, 1946	15.84	9,390
					Nov. 4, 1946	17.91	13,700
1928	Mar. 10, 1928	6.93	2,320		Nov. 16, 1946	10.55	2,980
					Jan. 19, 1947	10.10	2,730
1929	May 12, 1929	7.30	2,620		June 24, 1947	18.20	14,400
	May 28, 1929	16.95	34,200				
				1948	July 12, 1948	7.04	1,390
1930	May 18, 1930	15.0	20,100				
				1949	Feb. 26, 1949	17.23	12,100
1931	Oct. 6, 1930	20.30	70,900		Apr. 25, 1949	10.20	2,830
	Apr. 30, 1931	13.00	11,400		Sept.16, 1949	10.60	2,980
1932	Apr. 28, 1932	14.90	19,600	1950	Apr. 2, 1950	9.89	2,630
	July 1, 1932	c27.65	182,000				
	Sept.23, 1932	13.8	10,800	1951	May 15, 1951	14.98	7,970
1935	June 14, 1935	d36.9	148,000	1952	May 27, 1952	11.38	3,300
					June 6, 1952	11.20	3,140
1936	September 1936	d34.4	107,000		Sept.10, 1952	25.44	38,600
1940	Oct. 10, 1939	14.79	7,520	1953	Dec. 19, 1952	12.51	4,430
	Oct. 25, 1939	12.24	3,950		Sept. 2, 1953	12.33	4,210
	Apr. 6, 1940	14.73	7,350				
	June 24, 1940	12.76	4,500	1954	Apr. 30, 1954	14.90	7,830
1941	Oct. 31, 1940	12.8	4,500	1955	May 13, 1955	10.91	3,000
	Nov. 21, 1940	13.1	4,880		July 17, 1955	15.58	9,030
	Dec. 11, 1940	14.7	7,350				
	Feb. 1, 1941	12.69	4,390	1956	Aug. 20, 1956	10.03	2,450
	Mar. 18, 1941	10.06	2,710				
	Apr. 27, 1941	19.14	15,400	1957	Mar. 20, 1957	14.82	7,850
	May 2, 1941	14.59	7,180		Apr. 24, 1957	24.59	35,200
	Sept. 9, 1941	13.00	4,750		Apr. 26, 1957	16.53	12,500
					May 9, 1957	12.00	4,690
1942	Oct. 4, 1941	12.22	3,950		May 27, 1957	11.70	4,310
	Apr. 19, 1942	14.03	6,190		May 31, 1957	12.87	5,880
	Apr. 25, 1942	14.5	7,010				
	May 3, 1942	10.18	2,760	1958	Oct. 15, 1957	21.68	24,200
	May 7, 1942	12.74	4,390		Feb. 22, 1958	12.69	4,810
	May 19, 1942	14.27	6,670		Mar. 7, 1958	12.86	5,070
					June 17, 1958	16.69	11,100
1943	Oct. 15, 1942	12.10	3,870		Sept.19, 1958	17.77	13,500
	Oct. 18, 1942	9.96	2,660				
	June 10, 1943	10.57	2,970	1959	June 26, 1959	21.19	22,500
1944	May 1, 1944	16.30	10,300	1960	Oct. 4, 1959	33.15	93,200
	May 26, 1944	29.4	59,400		Aug. 11, 1960	10.40	3,300
	Aug. 30, 1944	13.69	5,950		Aug. 16, 1960	20.94	21,500
1945	Oct. 4, 1944	15.74	9,210	1961	Oct. 16, 1960	18.54	15,000
	Jan. 18, 1945	13.14	5,120		Oct. 18, 1960	17.55	13,000
	Mar. 15, 1945	10.46	2,930		Oct. 29, 1960	15.15	8,340
	Mar. 30, 1945	15.65	9,030		Feb. 16, 1961	13.75	6,240
	Sept.29, 1945	18.50	15,000		June 18, 1961	12.00	4,000
1946	Dec. 2, 1945	13.30	5,380				

c 38.4 ft, present site and datum.
d Annual peak only.

8-1675. Guadalupe River near Spring Branch, Tex. (282)

Location.--Lat 29°51'40", long 98°23'00", on right bank at downstream side of bridge on county road, 82 ft downstream from bridge on Ranch Road 311, 2 miles southeast of Spring Branch, Comal County, and 7.2 miles downstream from Curry Creek.

Drainage area.--1,282 sq mi.

Gage.--Recording. Datum of gage is 948.13 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 70,000 cfs and extended by logarithmic plotting.

Bankfull stage.--48 ft.

Historical data.--Flood in July 1869 was the greatest since at least 1859, from information by local resident. From the nature of the substantiating evidence, the gage height of 53 ft may be too low.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 1869	53	-	1939	July 14, 1939	8.27	3,870
1900	July 1900	49	-	1940	Oct. 10, 1939	12.38	7,670
1919	August 1919	34	-		Apr. 7, 1940	10.10	5,520
1923	Sept.19, 1923	19.75	18,200	1941	Nov. 23, 1940	8.60	4,140
					Dec. 15, 1940	12.68	7,990
1924	Nov. 2, 1923	8.91	4,410		Feb. 1, 1941	17.98	15,300
	May 26, 1924	9.50	4,950		Mar. 18, 1941	8.77	4,320
					Apr. 28, 1941	16.64	13,200
1925	May 29, 1925	6.5	2,380		May 3, 1941	12.16	7,470
					May 6, 1941	10.70	6,030
1926	Oct. 16, 1925	10.0	5,400		June 27, 1941	9.66	5,130
	Apr. 21, 1926	20.72	19,800	1942	Apr. 8, 1942	11.16	6,480
	July 24, 1926	8.50	4,500		Apr. 26, 1942	10.50	5,850
					May 8, 1942	9.08	4,590
1927	June 5, 1927	11.80	7,070		May 19, 1942	8.84	4,320
					Sept. 8, 1942	16.80	13,500
1928	Mar. 9, 1928	11.32	6,570				
				1943	June 5, 1943	7.71	3,330
1929	May 29, 1929	19.82	18,600				
	July 6, 1929	17.3	13,800	1944	May 1, 1944	12.24	7,470
					May 27, 1944	25.60	28,000
1930	May 6, 1930	12.66	7,990		Aug. 30, 1944	12.39	7,670
	June 12, 1930	15.80	11,800				
				1945	Oct. 4, 1944	9.92	5,310
1931	Oct. 7, 1930	24.57	24,000		Jan. 18, 1945	10.34	5,670
	Oct. 13, 1930	9.18	4,750		Mar. 31, 1945	10.31	5,670
	May 1, 1931	15.24	11,800		Sept.30, 1945	14.43	10,100
	May 7, 1931	8.88	4,210				
				1946	Dec. 3, 1945	10.21	5,580
1932	Apr. 29, 1932	10.21	5,400		May 7, 1946	9.37	4,860
	July 3, 1932	42.10	121,000		May 16, 1946	11.75	7,070
	Sept.24, 1932	17.69	14,500		Sept.27, 1946	10.74	6,030
1933	May 26, 1933	8.78	4,120	1947	Oct. 10, 1946	10.50	5,760
					Nov. 3, 1946	10.47	5,850
1934	Apr. 18, 1934	7.96	3,400		June 25, 1947	14.37	10,100
1935	May 19, 1935	18.20	15,200	1948	June 24, 1948	12.47	7,770
	June 1, 1935	12.48	7,900				
	June 6, 1935	8.91	4,210	1949	Feb. 26, 1949	13.16	8,540
	June 15, 1935	41.3	114,000		Apr. 24, 1949	12.57	7,880
	July 24, 1935	9.00	4,300		May 10, 1949	8.90	4,410
	Sept.10, 1935	15.87	12,200				
	Sept.26, 1935	13.90	9,620	1950	May 16, 1950	9.21	4,680
1936	May 24, 1936	10.46	5,880	1951	May 16, 1951	8.81	4,330
	June 30, 1936	28.86	34,800				
	July 17, 1936	8.50	4,050	1952	May 27, 1952	14.89	10,700
	Sept.16, 1936	27.14	30,900		Sept.11, 1952	35.83	66,900
	Sept.28, 1936	33.45	48,600				
				1953	Sept. 4, 1953	8.80	4,320
1937	June 1, 1937	10.88	6,240				
				1954	May 1, 1954	7.86	5,430
1938	Apr. 27, 1938	11.22	6,520				

Peak stages and discharges of Guadalupe River near Spring Branch, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	July 18, 1955	9.93	5,310	1958	May 2, 1958	33.60	55,200
					June 17, 1958	11.47	6,770
1956	Aug. 20, 1956	4.23	810		June 22, 1958	8.73	4,230
					Sept.20, 1958	13.27	8,660
1957	Mar. 20, 1957	12.05	7,270				
	Apr. 22, 1957	14.64	10,300	1959	June 27, 1959	18.40	15,300
	Apr. 24, 1957	24.55	25,600				
	Apr. 27, 1957	12.22	7,490	1960	Oct. 5, 1959	29.61	42,500
	May 15, 1957	9.25	4,720		Aug. 16, 1960	18.04	15,700
	May 28, 1957	8.52	4,070		Aug. 19, 1960	10.69	6,390
	June 2, 1957	11.22	6,500				
	Sept.22, 1957	13.74	9,140	1961	Oct. 17, 1960	15.53	12,200
					Oct. 19, 1960	14.25	10,500
1958	Oct. 16, 1957	20.66	18,600		Oct. 29, 1960	17.22	14,500
	Oct. 22, 1957	12.56	7,880		Feb. 16, 1961	14.10	10,300
	Feb. 23, 1958	10.15	5,580		June 18, 1961	10.57	6,360
	Mar. 7, 1958	8.76	4,320				

8-1685. Guadalupe River above Comal River at New Braunfels, Tex. (283)

Location.--Lat 29°42'55", long 98°06'40", on right bank at New Braunfels, Comal County, 1.1 miles upstream from Comal River and at mile 281.

Drainage area.--1,516 sq mi.

Gage.--Recording. Datum of gage is 586.65 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Occasional backwater from Comal River. When both streams are in flood, there may be some interchange of water between the two streams.

Historical data.--Maximum stage since at least 1845, that of July 8, 1869, and December 1913; from information by local resident.

Remarks.--Base for partial-duration series, 3,100 cfs. Only annual peaks are shown prior to 1947.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 8, 1869	38	-	1948	June 25, 1948	7.14	6,910
1914	December 1913	38	-	1949	Feb. 27, 1949	8.60	9,080
					Apr. 25, 1949	6.17	5,600
1928	Mar. 10, 1928	7.05	6,090				
1929	May 30, 1929	15.10	19,700	1950	Oct. 8, 1949	4.69	3,430
1930	June 13, 1930	9.00	9,760		May 17, 1950	4.57	3,210
1931	Oct. 8, 1930	16.40	22,200	1951	May 17, 1951	4.10	2,560
1932	July 3, 1932	32.48	95,200				
1933	May 27, 1933	4.72	3,000	1952	May 28, 1952	10.05	11,100
1934	Apr. 18, 1934	4.4	2,960		Sept.11, 1952	30.70	72,900
1935	June 15, 1935	32.95	101,000				
				1953	Sept. 4, 1953	5.39	4,090
1936	Sept.28, 1936	24.85	52,800				
1937	June 2, 1937	a6.76	5,600	1954	Oct. 26, 1953	10.36	11,600
1938	Apr. 28, 1938	6.18	5,600		Dec. 2, 1953	6.76	6,120
1939	July 15, 1939	4.43	3,070				
1940	Oct. 11, 1939	7.24	7,060	1955	July 19, 1955	3.95	2,060
1941	Apr. 29, 1941	12.20	14,500	1956	Aug. 31, 1956	2.48	394
1942	Sept. 8, 1942	11.85	13,800				
1943	Oct. 15, 1942	5.92	5,170	1957	Mar. 21, 1957	6.89	6,260
1944	May 27, 1944	17.90	26,500		Apr. 23, 1957	9.87	10,800
1945	Sept.30, 1945	9.26	10,100		Apr. 25, 1957	18.13	26,900
					Apr. 28, 1957	8.50	8,610
1946	Sept. 1, 1946	7.29	7,200		May 16, 1957	4.87	3,350
					May 27, 1957	8.60	5,800
1947	Oct. 10, 1946	6.28	5,750		May 31, 1957	8.16	8,100
	Nov. 3, 1946	8.29	8,500		June 2, 1957	7.40	6,990
	Nov. 5, 1946	8.11	8,360		Sept.23, 1957	9.03	9,400
	June 25, 1947	9.43	10,200				
	Aug. 26, 1947	8.84	9,380	1958	Oct. 16, 1957	15.26	20,200

a Occurred 2 days later because of backwater.

Peak stages and discharges of Guadalupe River above Comal River at New Braunfels, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 22, 1957	8.65	9,000	1960	June 25, 1960	6.33	5,660
	Feb. 24, 1958	6.86	6,530		Aug. 17, 1960	12.69	15,300
	Mar. 8, 1958	5.00	3,780		Aug. 20, 1960	6.51	5,950
	May 3, 1958	24.44	47,900				
	June 18, 1958	7.00	6,680	1961	Oct. 17, 1960	10.70	12,100
	June 23, 1958	4.80	3,480		Oct. 19, 1960	9.53	10,300
	Sept.20, 1958	9.47	10,600		Oct. 29, 1960	15.88	21,500
					Feb. 6, 1961	4.55	3,120
1959	June 27, 1959	13.31	16,100		Feb. 17, 1961	9.73	10,600
					June 19, 1961	6.47	5,950
1960	Oct. 5, 1959	22.33	35,700				

8-1690. Comal River at New Braunfels, Tex. (284)

Location.--Lat 29°42'05", long 98°07'10", on right bank 200 ft upstream from San Antonio Street viaduct in New Braunfels, Comal County, and 1.1 miles upstream from mouth.

Drainage area.--117 sq mi. Normal flow of river comes from springs; drainage area not applicable.

Gage.--Nonrecording prior to Jan. 7, 1928; recording thereafter. Floodmarks taken at site half a mile downstream prior to 1914. Datum of gage is 582.80 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,380 cfs and by slope-area measurements at 6,700 and 35,000 cfs.

Remarks.--Stage-discharge relation affected at times by backwater from Guadalupe River. Base for partial-duration series, 1,100 cfs. Only annual peaks are shown prior to 1945.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 8, 1869	a36.91	-	1946	June 1, 1946	11.49	4,600
					June 20, 1946	14.87	6,700
1871	Oct. 17, 1870	a37.65	-		Sept.15, 1946	6.54	1,790
1872	June 8, 1872	a35.59	-		Sept.25, 1946	9.62	3,480
1914	Dec. 5, 1913	a35.4	-	1947	Nov. 3, 1946	11.43	4,540
					May 9, 1947	6.16	1,640
1927	July 4, 1927	a29.57	-		May 11, 1947	7.79	2,460
1928	Feb. 21, 1928	12.1	4,960		May 24, 1947	5.08	1,150
1929	May 30, 1929	a12.13	-				
1930	June 16, 1930	13.58	5,860	1948	June 25, 1948	a5.40	-
1931	July 18, 1931	a16.23	-	1949	Apr. 28, 1949	7.43	2,250
1932	July 3, 1932	29.51	-				
1933	May 25, 1933	4.78	1,020	1950	Oct. 22, 1949	5.21	1,170
1934	Mar. 1, 1934	5.07	1,170		Oct. 24, 1949	7.80	2,460
1935	June 15, 1935	a30.71	-				
				1951	June 3, 1951	4.28	811
1936	Sept.28, 1936	a20.6	-				
1937	June 4, 1937	12.85	5,270	1952	Sept.11, 1952	36.14	35,000
1938	Apr. 27, 1938	10.85	4,190				
1939	July 15, 1939	3.28	428	1953	Apr. 28, 1953	9.48	3,420
1940	Apr. 6, 1940	7.03	2,190				
				1954	Dec. 2, 1953	b8.13	1,990
1941	Apr. 27, 1941	a10.50	-				
1942	Sept. 8, 1942	a13.14	-	1955	June 6, 1955	3.63	590
1943	Oct. 4, 1942	9.85	3,590				
1944	May 27, 1944	-	-	1956	Aug. 31, 1956	5.56	1,200
1945	Jan. 18, 1945	6.14	1,720	1957	Apr. 24, 1957	10.15	3,800
	Feb. 4, 1945	4.89	1,120		Apr. 27, 1957	10.00	3,710
	Feb. 12, 1945	7.75	2,580		May 27, 1957	17.45	8,610
	Mar. 30, 1945	10.07	4,140		June 1, 1957	11.57	4,640
	Apr. 1, 1945	7.22	2,290		Sept.23, 1957	6.12	1,540
					Sept.25, 1957	5.78	1,360
1946	May 17, 1946	11.50	4,600				

a Probably some backwater; discharge not determined.
b Occurred Oct. 26, 1953, because of backwater.

Peak stages and discharges of Comal River at New Braunfels, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 22, 1957	6.07	1,500	1960	Apr. 29, 1960	5.54	1,200
	Feb. 21, 1958	5.88	1,420		June 24, 1960	7.78	2,460
	Sept.20, 1958	c19.58	2,520				
				1961	Oct. 18, 1960	(f)	3,420
1959	Apr. 11, 1959	d9.76	1,200		Oct. 29, 1960	f17.92	4,660
					July 3, 1961	5.55	1,200
1960	Oct. 4, 1959	e17.27	1,540		July 10, 1961	6.87	1,980

c Occurred May 3, 1958, because of backwater.
d Occurred June 27, 1959, because of backwater.
e Occurred 4½ hours later than peak discharge because of backwater.
f Backwater from Guadalupe River.

8-1695. Guadalupe River at New Braunfels, Tex. (285)

Location.--Lat 29°42', long 98°06', at San Antonio-Austin highway bridge, 700 ft downstream from the International-Great Northern Railway bridge, 1 mile northeast of the center of New Braunfels, Comal County, and 1 mile downstream from Comal River.

Drainage area.--1,624 sq mi.

Gage.--Nonrecording prior to Sept. 28, 1917; recording thereafter. Datum of gage is 572.36 ft above mean sea level; adjustment unknown.

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and extended to 56,600 cfs by logarithmic plotting.

Remarks.--Base for partial-duration series, 3,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Sept.17, 1915	27.2	a51,300	1921	June 13, 1921	19.08	26,200
					Sept.10, 1921	28.60	56,600
1916	Apr. 2, 1916	14.3	17,200				
	Apr. 16, 1916	10.6	10,900	1922	Apr. 27, 1922	7.95	6,190
	May 22, 1916	20.8	28,500		May 3, 1922	8.16	6,660
1917	Sept. 7, 1917	4.60	2,370	1923	Apr. 12, 1923	5.65	3,420
					Sept.20, 1923	15.1	17,500
1918	Apr. 7, 1918	8.72	7,600				
				1924	Nov. 3, 1923	6.71	4,300
1919	Nov. 8, 1918	7.27	5,500		Dec. 14, 1923	6.35	4,540
	Nov. 10, 1918	7.08	5,250		Apr. 26, 1924	5.55	4,060
	Dec. 24, 1918	9.60	8,480		May 9, 1924	6.25	4,910
	Jan. 22, 1919	10.28	9,420		May 26, 1924	8.10	7,280
	Mar. 26, 1919	6.90	5,000		June 2, 1924	6.10	4,660
	June 26, 1919	10.57	9,840		June 23, 1924	5.07	3,390
	July 8, 1919	7.90	6,270				
	July 22, 1919	12.78	13,100	1925	May 30, 1925	2.40	1,340
	Aug. 23, 1919	25.7	46,300				
	Sept.17, 1919	23.9	40,500	1926	Oct. 17, 1925	6.72	5,670
	Sept.23, 1919	22.8	37,000		Apr. 21, 1926	22.65	35,300
					Apr. 24, 1926	5.75	4,070
1920	Oct. 7, 1919	7.50	5,750		May 1, 1926	6.38	4,780
	Oct. 16, 1919	-	(b)		May 5, 1926	9.28	8,470
	Oct. 23, 1919	7.67	6,010		July 25, 1926	5.75	4,180
	Nov. 2, 1919	7.13	5,250				
	May 15, 1920	12.26	12,400	1927	Mar. 9, 1927	5.01	3,380
	Aug. 8, 1920	-	(c)		June 6, 1927	5.40	3,610
1921	Mar. 13, 1921	7.83	6,010	1928	Oct. 1, 1927	3.98	d2,420
	Apr. 9, 1921	10.43	9,560				

a Annual peak only.
b Crest of unknown magnitude; believed to have exceeded 10,000 cfs.
c Crest of unknown magnitude; believed to have exceeded 5,000 cfs.
d Maximum for period Oct. 1 to Dec. 30, 1927; probably exceeded in February 1928.

8-1710. Blanco River at Wimberley, Tex. (286)

Location.--Lat 29°59', long 98°04', on left bank 800 ft downstream from Cypress Creek, 1,200 ft upstream from bridge on State Highway 12, and a quarter of a mile south of Wimberley, Hays County.

Drainage area.--364 sq mi.

Gage.--Nonrecording prior to June 1928; recording thereafter. Datum of gage is 802.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs and by slope-area measurements at 95,000 and 113,000 cfs.

Bankfull stage.--25 ft.

Historical data.--Maximum stage since at least 1869 occurred May 28, 1929, from information by local residents.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 1869	23	-	1940	Apr. 6, 1940	3.60	2,370
1925	Apr. 28, 1925	.55	48	1941	Nov. 23, 1940	6.45	5,760
					Dec. 11, 1940	6.16	5,480
1926	Oct. 15, 1925	4.7	3,460		Dec. 15, 1940	8.75	9,440
	Nov. 6, 1925	4.0	2,600		Feb. 1, 1941	9.67	11,100
	Apr. 21, 1926	19.3	37,700		Mar. 6, 1941	3.97	2,540
	May 5, 1926	4.4	3,080		Mar. 18, 1941	5.07	3,980
					Apr. 27, 1941	7.26	7,050
1929	Apr. 9, 1929	6.12	5,340		May 3, 1941	7.36	7,200
	May 24, 1929	5.47	4,520		May 6, 1941	4.20	2,840
	May 28, 1929	31.1	113,000		May 11, 1941	5.37	4,390
	July 6, 1929	8.09	8,260		June 7, 1941	16.27	27,800
					June 10, 1941	3.45	1,980
1930	May 6, 1930	9.26	10,400		June 16, 1941	6.14	5,340
	May 10, 1930	7.93	7,950		June 26, 1941	4.51	3,200
1931	Oct. 13, 1930	4.35	3,020	1942	Oct. 4, 1941	6.02	5,200
	Feb. 22, 1931	3.84	2,420		Apr. 8, 1942	9.30	10,370
	Mar. 27, 1931	4.81	3,590		Apr. 25, 1942	6.50	5,900
	Apr. 30, 1931	7.25	6,900		Aug. 22, 1942	7.00	6,600
	July 18, 1931	10.65	13,100		Sept. 8, 1942	10.66	13,100
1932	Mar. 5, 1932	3.22	1,690	1943	Oct. 4, 1942	3.44	1,960
					Nov. 21, 1942	3.91	2,480
1933	Aug. 29, 1933	1.86	573		July 12, 1943	4.32	2,980
1934	Mar. 1, 1934	4.66	3,330	1944	Feb. 25, 1944	6.10	5,340
	Mar. 24, 1934	3.90	2,480		May 26, 1944	10.02	10,900
	Apr. 6, 1934	4.91	3,720				
	Apr. 19, 1934	8.50	8,920	1945	Dec. 4, 1944	6.14	5,340
					Jan. 18, 1945	5.62	4,660
1935	Nov. 15, 1934	4.07	2,660		Feb. 12, 1945	3.77	2,360
	May 10, 1935	6.94	6,500		Mar. 3, 1945	4.88	3,720
	May 18, 1935	9.22	10,200		Mar. 15, 1945	5.74	4,800
	June 5, 1935	3.70	2,250		Apr. 1, 1945	3.33	1,860
	June 15, 1935	11.40	14,700				
	Sept.25, 1935	6.03	5,200	1946	Dec. 2, 1945	6.07	5,340
					Feb. 18, 1946	4.55	3,260
1936	May 23, 1936	5.73	4,800		Mar. 12, 1946	8.18	8,420
	May 26, 1936	8.05	8,100		Sept. 1, 1946	4.16	2,780
	July 1, 1936	16.87	29,600				
	July 4, 1936	3.90	2,480	1947	Nov. 3, 1946	11.80	15,600
	July 16, 1936	3.91	2,540		Nov. 9, 1946	5.00	3,850
	July 24, 1936	4.90	3,720		Nov. 16, 1946	5.92	5,060
	Sept.15, 1936	9.37	10,600		Dec. 11, 1946	5.94	5,060
	Sept.17, 1936	3.84	2,420				
	Sept.27, 1936	12.70	17,600	1948	May 11, 1948	4.20	2,850
					June 28, 1948	3.32	1,800
1937	July 11, 1937	3.39	1,910				
				1949	Feb. 25, 1949	3.90	2,480
1938	Oct. 17, 1937	9.31	10,370		Apr. 25, 1949	14.20	21,700
	Jan. 23, 1938	7.04	6,600		May 10, 1949	4.18	2,840
	Apr. 17, 1938	4.54	3,260				
	Apr. 27, 1938	10.65	12,900	1950	Feb. 12, 1950	1.86	561
	May 16, 1938	5.22	4,120				
				1951	June 13, 1951	3.38	1,890
1939	Apr. 27, 1939	4.60	3,300				
	July 12, 1939	-	a5,000	1952	Apr. 23, 1952	3.60	2,110

a Peak discharge estimated; not previously published.

Peak stages and discharges of Blanco River at Wimberley, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 26, 1952	5.56	4,660	1958	Oct. 15, 1957	6.27	5,620
	Sept.11, 1952	30.1	95,000		Oct. 22, 1957	4.96	3,820
					Feb. 22, 1958	5.42	4,390
1953	Aug. 31, 1953	6.81	6,320		May 2, 1958	30.3	96,400
	Sept. 2, 1953	4.72	3,460		June 17, 1958	10.16	12,100
					June 22, 1958	7.51	7,350
1954	Oct. 25, 1953	2.90	1,400		Sept. 7, 1958	5.37	4,390
1955	May 17, 1955	5.70	4,800	1959	Feb. 14, 1959	3.46	2,010
					Apr. 8, 1959	3.99	2,600
1956	May 2, 1956	2.84	1,360		June 26, 1959	3.83	2,440
1957	Oct. 17, 1956	3.58	2,140	1960	Oct. 4, 1959	19.9	40,100
	Feb. 13, 1957	3.45	1,980		Feb. 3, 1960	3.68	2,270
	Mar. 21, 1957	13.00	18,400				
	Mar. 28, 1957	5.48	4,520	1961	Oct. 16, 1960	8.83	9,440
	Apr. 22, 1957	11.35	14,600		Oct. 18, 1960	8.80	9,440
	Apr. 24, 1957	24.73	62,600		Oct. 29, 1960	15.70	26,000
	Apr. 27, 1957	9.91	11,500		Dec. 8, 1960	3.38	1,910
	May 18, 1957	3.28	1,810		Feb. 5, 1961	5.08	3,980
	May 27, 1957	-	b2,200		Feb. 16, 1961	18.15	33,800
	May 31, 1957	-	b5,200		June 18, 1961	11.56	15,100
	Sept.22, 1957	10.48	12,700				

b Discharge estimated on basis of records for station near Kyle.

8-1720. San Marcos River at Luling, Tex. (287)

Location.--Lat 29°39'55", long 97°39'05", on left bank 390 ft downstream from bridge on State Highway 80, 1 mile south of Luling, Caldwell County, and 8 miles upstream from Plum Creek.

Drainage area.--833 sq mi.

Gage.--Recording. Datum of gage is 322.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--24 ft.

Historical data.--Maximum stage since at least 1859 occurred in 1869 or 1870, from information by State Highway Department. Flood of May 29, 1929, is the second highest known since 1859.

Remarks.--Base for partial-duration series, 2,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869 or 1870	-	40.4	-	1942	Sept. 9, 1942	32.34	23,600
				1943	Oct. 5, 1942	21.61	4,530
1929	May 29, 1929	37.1	-		Oct. 16, 1942	18.56	3,210
					Oct. 18, 1942	22.83	5,190
1940	June 30, 1940	32.81	28,800				
				1944	Mar. 16, 1944	25.66	6,160
1941	Oct. 31, 1940	18.70	3,320		Mar. 23, 1944	23.55	4,930
	Nov. 22, 1940	30.00	15,300		May 26, 1944	25.80	6,280
	Nov. 24, 1940	21.96	4,600		May 28, 1944	26.52	7,120
	Dec. 13, 1940	23.38	5,480				
	Dec. 15, 1940	28.34	11,200	1945	Dec. 5, 1944	26.92	7,620
	Jan. 14, 1941	18.77	3,340		Jan. 18, 1945	27.72	8,880
	Feb. 2, 1941	24.56	6,330		Feb. 12, 1945	24.71	6,210
	Mar. 19, 1941	19.68	3,610		Mar. 18, 1945	25.57	6,110
	Apr. 23, 1941	26.86	8,560		Mar. 30, 1945	27.97	9,480
	Apr. 28, 1941	29.12	13,000				
	May 3, 1941	28.14	10,700	1946	Mar. 13, 1946	25.61	6,160
	June 8, 1941	28.15	10,900		Aug. 30, 1946	23.63	5,030
	June 17, 1941	18.72	3,320		Sept. 1, 1946	21.65	4,060
	July 15, 1941	17.18	2,920		Sept.27, 1946	20.41	3,550
1942	Apr. 9, 1942	21.76	4,920	1947	Nov. 4, 1946	28.46	10,600
	July 5, 1942	32.93	29,500		Dec. 12, 1946	23.04	4,720

Peak stages and discharges of San Marcos River at Luling, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 17, 1947	20.68	3,670	1956	May 15, 1956	18.08	2,670
	Apr. 13, 1947	25.79	6,280				
	Aug. 26, 1947	27.18	7,180	1957	Mar. 22, 1957	24.03	5,070
					Apr. 23, 1957	21.17	3,610
1948	May 12, 1948	10.0	1,170		Apr. 25, 1957	32.70	29,400
					Apr. 27, 1957	31.36	20,200
1949	Feb. 26, 1949	26.97	7,700		May 28, 1957	30.20	15,400
	Apr. 20, 1949	21.45	3,970		June 2, 1957	28.18	9,880
	Apr. 22, 1949	24.74	5,680		Sept.23, 1957	27.31	8,160
	Apr. 25, 1949	29.43	12,500		Sept.25, 1957	24.15	5,000
	Apr. 28, 1949	26.92	7,590				
				1958	Oct. 16, 1957	21.64	3,760
1950	Oct. 9, 1949	27.22	7,920		Oct. 23, 1957	26.48	7,120
	Oct. 22, 1949	30.70	17,200		Nov. 24, 1957	20.82	3,490
	Oct. 25, 1949	26.25	6,910		Jan. 13, 1958	20.64	3,420
	Apr. 17, 1950	19.95	3,280		Feb. 23, 1958	30.45	16,100
	Apr. 24, 1950	20.02	3,310		May 3, 1958	33.87	41,400
	June 2, 1950	29.05	11,400		June 18, 1958	19.97	3,230
					Sept.21, 1958	26.46	7,120
1951	June 4, 1951	28.58	10,200				
				1959	Apr. 9, 1959	22.43	4,080
1952	May 27, 1952	23.41	4,540		Apr. 12, 1959	26.82	7,490
	June 6, 1952	19.30	3,020				
	Sept.12, 1952	34.95	57,000	1960	Oct. 5, 1959	32.18	25,500
					Apr. 29, 1960	32.19	25,500
1953	Nov. 29, 1952	22.66	4,190		June 25, 1960	33.56	37,900
	Apr. 29, 1953	32.42	27,000				
				1961	Oct. 19, 1960	25.80	6,310
1954	Oct. 27, 1953	23.47	4,590		Oct. 26, 1960	20.46	3,390
	Dec. 2, 1953	24.07	4,940		Oct. 29, 1960	33.30	34,800
	May 12, 1954	24.69	5,350		Feb. 6, 1961	23.02	4,340
					Feb. 17, 1961	29.62	13,500
1955	May 19, 1955	21.73	4,020		June 19, 1961	30.90	16,800

8-1725. Plum Creek near Lockhart, Tex. (288)

Location.--Lat 29°49', long 97°35', at bridge on county road, 700 ft downstream from Dry Creek and 7 miles southeast of Lockhart, Caldwell County.

Drainage area.--184 sq mi.

Gage.--Nonrecording. Datum of gage is 371.39 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 1,450 cfs and by slope-area measurement at 26,000 cfs.

Historical data.--Flood of Dec. 3, 1913, is the highest since at least 1900, from information by local residents. The second highest flood occurred the latter part of July 1900; another big flood occurred about Oct. 1, 1913; stages unknown.

Remarks.--Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Dec. 3, 1913	26.8	-	1928	Feb. 22, 1928	20.1	11,200
					Mar. 10, 1928	19.18	7,650
1925	Apr. 29, 1925	a14.30	1,260		June 15, 1926	16.00	1,900
1926	Oct. 14, 1925	19.70	9,500	1929	Apr. 8, 1929	19.20	7,650
	Oct. 16, 1925	19.00	6,970		Apr. 13, 1929	17.40	3,070
	Nov. 6, 1925	16.88	2,560		May 17, 1929	15.40	1,620
	Mar. 10, 1926	19.30	8,000		May 24, 1929	15.42	1,620
	Mar. 25, 1926	13.95	1,200		May 26, 1929	17.60	3,650
	Apr. 21, 1926	22.6	26,000		May 28, 1929	22.50	25,200
	May 6, 1926	16.90	2,560				
				1930	Feb. 4, 1930	b11.00	722
1927	Feb. 9, 1927	18.00	4,020				
	June 14, 1927	17.14	2,750				

a Maximum during period January to September 1925; probably maximum for year.
b Maximum during period October 1929 to March 1930; probably exceeded by flood in June 1930.

8-1730. Plum Creek near Luling, Tex. (289)

Location.--Lat 29°42', long 97°37', near left bank on downstream side of pier of bridge on county road, 1 mile downstream from West Fork Plum Creek, 2 miles upstream from Texas and New Orleans Railroad Co. bridge, and 3 miles northeast of Luling, Caldwell County.

Drainage area.--356 sq mi.

Gage.--Recording. Datum of gage is 326.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 37,500 cfs (subject to changes owing to channel shifting below 1,000 cfs).

Bankfull stage.--13 ft.

Historical data.--Flood of July 1, 1936, is the greatest since at least 1868. Flood in December 1913 reached about the same stage as that of July 1, 1936, from information by local residents.

Remarks.--Base for partial-duration series, 2,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	May 18, 1930	14.80	3,000	1942	July 5, 1942	21.48	37,000
	June 16, 1930	16.68	4,270		Sept. 9, 1942	17.48	7,500
1931	Jan. 11, 1931	15.85	3,580	1943	Oct. 19, 1942	14.57	2,310
	Jan. 18, 1931	15.68	3,540				
	Feb. 16, 1931	15.23	2,590	1944	Feb. 26, 1944	15.24	2,690
	Mar. 16, 1931	15.62	3,500		Mar. 16, 1944	15.11	2,620
	May 1, 1931	15.30	3,190		May 27, 1944	16.07	3,700
					May 29, 1944	15.12	2,620
1932	Jan. 5, 1932	16.83	3,980		June 7, 1944	16.00	3,600
	Jan. 12, 1932	14.14	2,930				
	Feb. 19, 1932	14.26	3,000	1945	Nov. 19, 1944	15.10	2,620
	Mar. 3, 1932	14.10	2,930		Dec. 6, 1944	16.83	5,750
	Apr. 29, 1932	15.73	3,540		Jan. 19, 1945	17.06	6,350
					Apr. 1, 1945	16.84	5,150
1933	July 31, 1933	16.33	3,370				
				1946	Mar. 13, 1946	19.47	19,600
1934	Mar. 2, 1934	14.68	2,880		May 1, 1946	14.85	2,430
	Apr. 7, 1934	14.19	2,810		May 17, 1946	16.10	3,800
					Aug. 30, 1946	17.21	6,900
1935	Jan. 20, 1935	15.5	3,070		Sept. 1, 1946	15.15	2,690
	May 5, 1935	16.80	4,060				
	May 20, 1935	16.62	3,900	1947	Nov. 4, 1946	18.45	12,900
	June 14, 1935	16.6	3,900		Dec. 12, 1946	15.72	3,170
	Sept. 8, 1935	16.26	3,660		Feb. 18, 1947	15.72	3,170
					Apr. 13, 1947	15.75	3,240
1936	May 24, 1936	16.45	4,130		Aug. 26, 1947	19.50	20,000
	May 27, 1936	15.64	2,890				
	July 1, 1936	25.7	78,500	1948	May 27, 1948	11.88	1,380
	July 4, 1936	15.53	2,810				
	July 17, 1936	15.32	2,670	1949	Feb. 25, 1949	16.71	5,300
					Apr. 20, 1949	15.30	2,770
1937	Mar. 5, 1937	16.51	4,230		Apr. 22, 1949	15.41	2,850
	June 4, 1937	16.77	4,820		Apr. 26, 1949	17.33	7,500
					Apr. 29, 1949	15.43	2,850
1938	Jan. 23, 1938	18.10	10,200				
	Apr. 18, 1938	18.00	12,000	1950	Oct. 22, 1949	18.83	15,200
	Apr. 25, 1938	17.85	8,100		Apr. 24, 1950	15.67	3,130
	May 17, 1938	15.12	2,610		June 3, 1950	19.38	19,000
1939	July 12, 1939	7.63	707	1951	June 4, 1951	18.89	15,500
					June 13, 1951	14.70	2,370
1940	June 30, 1940	18.12	11,000				
				1952	June 6, 1952	15.46	2,950
1941	Nov. 23, 1940	16.90	6,850				
	Nov. 25, 1940	14.53	2,510	1953	Nov. 30, 1952	16.56	4,880
	Dec. 12, 1940	16.30	4,690		Apr. 29, 1953	20.95	32,500
	Dec. 16, 1940	17.71	9,000				
	Jan. 14, 1941	16.20	4,480	1954	Oct. 27, 1953	15.12	2,620
	Mar. 19, 1941	15.29	3,020		Dec. 3, 1953	15.37	2,850
	Apr. 24, 1941	18.07	10,800				
	Apr. 27, 1941	16.75	5,780	1955	May 19, 1955	11.78	1,360
	May 3, 1941	16.59	5,280				
	June 8, 1941	16.96	5,520	1956	Apr. 24, 1956	15.10	2,620
	June 11, 1941	15.35	2,900				
	July 16, 1941	15.16	2,700	1957	Apr. 27, 1957	18.80	15,000

Peak stage and discharges of Plum Creek near Luling, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Sept.25, 1957	17.61	8,500	1960	Oct. 6, 1959	15.92	3,450
					Apr. 29, 1960	20.88	31,600
1958	Oct. 16, 1957	15.97	3,520		June 26, 1960	17.56	8,750
	Oct. 23, 1957	17.19	6,900				
	Jan. 24, 1958	15.08	2,620	1961	Oct. 19, 1960	17.72	9,400
	Feb. 22, 1958	19.45	19,600		Oct. 29, 1960	20.62	28,900
	May 4, 1958	16.35	4,380		Jan. 8, 1961	15.35	2,850
	Sept.21, 1958	16.27	4,120		Feb. 6, 1961	16.18	4,050
					June 18, 1961	20.89	31,600
1959	Feb. 15, 1959	15.74	3,240				
	Apr. 12, 1959	16.45	4,620				

8-1735. San Marcos River at Ottine, Tex. (290)

Location.--Lat 29°36', long 97°35', at highway bridge a quarter of a mile southwest of Ottine, Gonzales County, and 4 miles downstream from Plum Creek.

Drainage area.--1,249 sq mi.

Gage.--Nonrecording prior to Mar. 27, 1925; recording thereafter. At site 400 ft upstream at same datum Oct. 12, 1915, to Mar. 14, 1920. Datum of gage is 285.2 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and by slope-area measurement at 125,000 cfs.

Bankfull stage.--28.7 ft.

Historical data.--Flood in December 1913 was the highest since 1870, from information by local residents. Very large floods also occurred in 1869 and 1870 according to information by State Highway Department.

Remarks.--Base for partial-duration series, 4,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	December 1913	44.0	-	1922	May 3, 1922	35.5	26,100
1916	Apr. 2, 1916	23.1	5,840	1923	Feb. 22, 1923	33.3	18,800
	May 22, 1916	22.2	5,300		Mar. 28, 1923	27.6	9,960
					Apr. 13, 1923	26.0	8,340
1917	May 7, 1917	26.5	8,460				
				1924	Oct. 15, 1923	21.9	5,340
1918	Mar. 29, 1918	27.3	9,240		Dec. 2, 1923	22.0	5,390
	Apr. 3, 1918	22.0	5,190		Dec. 4, 1923	21.35	5,060
	Apr. 6, 1918	29.5	11,800		Dec. 13, 1923	29.55	12,400
	Apr. 30, 1918	23.5	6,100		Feb. 18, 1924	30.0	12,900
	May 6, 1918	27.9	9,880		Feb. 26, 1924	24.0	6,700
					June 23, 1924	22.4	5,630
1919	Jan. 23, 1919	25.2	7,340				
	Apr. 3, 1919	22.0	5,190	1925	Apr. 29, 1925	9.5	1,480
	May 8, 1919	20.0	4,210				
	May 12, 1919	21.8	5,080	1926	Oct. 14, 1925	30.4	13,500
	Mar. 24, 1919	21.1	4,720		Apr. 21, 1926	40.6	125,000
	June 18, 1919	33	17,200				
	June 27, 1919	30.3	12,900	1927	Apr. 14, 1927	19.82	4,280
	July 23, 1919	34.6	21,300				
	Aug. 22, 1919	20.2	4,290	1928	Feb. 22, 1928	32.14	16,000
	Sept.16, 1919	24.1	6,510		June 16, 1928	24.32	6,920
	Sept.18, 1919	22.4	5,420				
	Sept.23, 1919	25.0	7,180	1929	Mar. 13, 1929	22.58	5,760
					Apr. 9, 1929	29.36	12,100
1920	Jan. 13, 1920	28.7	10,800		Apr. 14, 1929	24.02	6,700
	Jan. 24, 1920	27.9	9,880		May 18, 1929	21.42	5,060
	May 16, 1920	37.5	45,600		May 24, 1929	31.82	15,500
	Aug. 22, 1920	19.7	4,240		May 27, 1929	23.04	6,020
					May 29, 1929	43.32	202,000
1921	Mar. 14, 1921	32.5	16,800				
	Apr. 8, 1921	35.5	26,100	1930	May 18, 1930	23.40	6,280
	Sept.11, 1921	35.0	23,800		June 17, 1930	25.65	7,980
1922	Mar. 29, 1922	36.5	32,800	1931	Jan. 12, 1931	24.62	7,150
	Apr. 4, 1922	37	37,000		Jan. 18, 1931	23.54	6,420
	Apr. 28, 1922	30.5	13,600		Feb. 16, 1931	20.22	4,460

Peak stages and discharges of San Marcos River at Ottine, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Mar. 16, 1931	21.95	5,630	1937	June 5, 1937	32.26	13,700
	May 1, 1931	22.55	5,950				
				1938	Apr. 18, 1938	27.8	8,660
1932	Jan. 6, 1932	25.82	8,160		Apr. 26, 1938	33.5	16,800
	Feb. 20, 1932	20.80	4,750		Apr. 28, 1938	23.58	5,700
	Mar. 3, 1932	21.60	5,170				
				1939	July 13, 1939	13.87	2,350
1933	July 31, 1933	22.72	5,820				
				1940	July 30, 1940	34.38	20,000
1934	Mar. 3, 1934	18.80	3,640				
				1941	Nov. 5, 1940	19.87	4,260
1935	May 6, 1935	28.20	9,870		Nov. 23, 1940	29.19	10,800
	May 19, 1935	29.32	11,200		Nov. 25, 1940	21.82	5,070
	June 14, 1935	29.47	11,400		Dec. 13, 1940	27.78	9,280
	June 17, 1935	31.26	14,000		Dec. 16, 1940	33.16	16,900
	Sept. 8, 1935	25.12	7,160		Feb. 2, 1941	23.71	6,080
					Mar. 19, 1941	23.28	5,860
1936	May 25, 1936	25.80	7,060		Apr. 24, 1941	31.59	13,800
	May 28, 1936	29.16	9,980		Apr. 28, 1941	33.42	17,400
	May 30, 1936	21.41	4,680		May 3, 1941	31.02	13,000
	July 1, 1936	42.05	165,000		June 8, 1941	27.75	9,280
	July 17, 1936	27.64	8,490				
	Sept.16, 1936	20.17	4,220	1942	July 6, 1942	38.72	72,200
	Sept.29, 1936	21.86	4,900		Sept. 9, 1942	34.82	21,800
1937	Mar. 6, 1937	27.48	8,400	1943	Oct. 19, 1942	a22.65	5,210
	June 1, 1937	25.18	6,650				

a Maximum for Oct. 1, 1942, to Feb. 20, 1943; probably maximum for year.

8-1740. Guadalupe River at Gonzales, Tex. (291)

Location.--Lat 29°29'40", long 97°27'15", at downstream side of concrete dam of Central Power and Light Co. hydrostation in Gonzales, Gonzales County, 1.3 miles upstream from bridge on U.S. Highway 183 and 3.3 miles downstream from San Marcos River.

Drainage area.--3,453 sq mi.

Gage.--Nonrecording. Datum of gage is 244.04 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943. Auxiliary gage maintained by Geological Survey at site 1.3 miles downstream at different datum July 1915 to September 1920.

Bankfull stage.--20 ft (U.S. Weather Bureau).

Remarks --Records furnished by U.S. Weather Bureau. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Apr. 8, 1900	36.3	-	1926	Apr. 22, 1926	36.4	-
1905	Apr. 26, 1905	25.5	-	1927	Apr 14, 1927	23.9	-
				1928	Feb. 23, 1928	17.6	-
1906	Feb. 14, 1906	14.0	-	1929	May 29, 1929	38.32	-
1907	May 31, 1907	29.1	-	1930	June 18, 1930	20.5	-
1908	Nov. 22, 1907	31.0	-				
1909	July 26, 1909	12.5	-	1931	May 2, 1931	18.7	-
1910	Apr. 12, 1910	11.2	-	1932	July 5, 1932	30.4	-
				1933	July 31, 1933	15.4	-
1911	Mar. 20, 1911	7.2	-	1934	Mar. 3, 1934	11.7	-
1912	Feb. 25, 1912	23.2	-	1935	June 17, 1935	32.8	-
1913	Sept.12, 1913	8.0	-				
1914	Dec. 4, 1913	38.1	-	1936	July 1, 1936	38.2	-
1915	Apr. 25, 1915	30.0	-	1937	June 6, 1937	28.2	-
				1938	Apr. 26, 1938	30.5	-
1916	May 25, 1916	22.3	-	1939	July 12, 1939	6.0	-
1917	May 8, 1917	13.8	-	1940	July 1, 1940	30.0	-
1918	Apr. 30, 1918	18.0	-				
1919	July 24, 1919	28.8	-	1941	Apr. 29, 1941	31.3	-
1920	Oct. 18, 1919	34.1	-	1942	July 7, 1942	35.1	-
				1943	Oct. 6, 1942	16.1	-
1921	Sept.11, 1921	31.4	-	1944	May 29, 1944	26.9	-
1922	Apr. 5, 1922	33.3	-	1945	Jan. 20, 1945	26.3	-
1923	Feb. 23, 1923	25.2	-				
1924	Dec. 15, 1923	23.6	-	1946	Mar. 14, 1946	25.9	-
1925	Apr. 30, 1925	3.3	-	1947	Aug. 28, 1947	24.6	-

Peak stages and discharges of Guadalupe River at Gonzales, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 26, 1948	13.5	-	1955	May 20, 1955	10.5	-
1949	Apr. 27, 1949	29.3	-				
1950	Oct. 23, 1949	29.1	-	1956	Apr. 16, 1956	6.0	-
				1957	Apr. 28, 1957	33.6	-
1951	June 5, 1951	24.2	-	1958	Feb. 23, 1958	33.4	-
1952	Sept.12, 1952	34.3	-	1959	Apr. 13, 1959	19.8	-
1953	Apr. 30, 1953	31.1	-	1960	June 26, 1960	33.0	-
1954	Oct. 27, 1953	13.2	-				

8-1750. Sandies Creek near Westhoff, Tex. (292)

Location.--Lat 29°12'54", long 97°26'57", on left bank 100 ft downstream from bridge on county highway, 1.9 miles upstream from Birds Creek, 2.0 miles northeast of Westhoff, Dewitt County, and 13 miles northwest of Cuero.

Drainage area.--560 sq mi.

Gage.--Recording Mar. 10, 1930, to Nov. 9, 1934, and since Feb. 3, 1960; nonrecording for other periods. At site 150 ft upstream at datum 0.86 ft lower Mar. 10, 1930, to Nov. 9, 1934. Datum of gage is 178.27 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs and by slope-area measurement at 93,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Highest stage since at least 1864, that of July 2, 1936.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	October 1913	26.0	17,700	1936	July 2, 1936	33.1	93,000
1931	Feb. 3, 1931	9.77	454	1960	June 28, 1960	21.40	4,320
1932	Apr. 30, 1932	21.79	5,780				
1933	Aug. 1, 1933	21.50	5,320	1961	June 19, 1961	26.64	20,700
1934	Mar. 3, 1934	20.10	3,640				

8-1760. Guadalupe River below Cuero, Tex. (293)
(Published as "near Cuero" prior to Aug. 6, 1916)

Location.--Lat 29°03', long 97°18', three-quarters of a mile upstream from Heards Bridge on Arnickeville road and 2½ miles southeast of Cuero, DeWitt County.

Drainage area.--4,923 sq mi; 4,870 sq mi at site used prior to December 1906.

Gage.--Nonrecording prior to August 1916; recording thereafter. Datum of gage is 125.45 ft above mean sea level, datum of 1929. At site 4 miles upstream at different datum prior to December 1906, and from January to July 1916.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs.

Remarks.--Base for partial-duration series, 7,500 cfs. Only annual peaks are shown prior to September 1916.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	Mar. 1, 1903	a43.00	b71,300	1924	Feb. 29, 1924	13.77	10,400
1904	May 7, 1904	20.78	b8,890		May 17, 1924	11.39	8,410
1905	Apr. 29, 1905	24.90	b10,600		June 3, 1924	16.15	14,100
1906	Feb. 15, 1906	17.0	b4,650	1925	May 1, 1925	2.93	1,600
1914	Oct. 4, 1913	37.57	-	1926	Oct. 13, 1925	13.6	10,200
	Dec. 6, 1913	34.57	-		Oct. 18, 1925	15.44	11,600
					Apr. 24, 1926	31.5	64,400
1916	May 27, 1916	19.00	-		May 8, 1926	10.50	7,580
1917	May 9, 1917	9.58	6,930	1927	Oct. 31, 1926	12.62	9,260
					Apr. 16, 1927	23.75	24,200
1918	Mar. 29, 1918	11.47	8,340				
	Mar. 31, 1918	13.68	10,200	1928	Feb. 25, 1928	11.36	8,240
	Apr. 8, 1918	13.08	9,680				
	May 2, 1918	11.80	8,590	1929	Mar. 23, 1929	16.76	12,800
	May 6, 1918	10.58	7,590		Apr. 12, 1929	17.97	13,900
	May 8, 1918	10.90	7,830		May 20, 1929	11.67	8,500
					May 30, 1929	35.2	101,000
1919	Oct. 29, 1918	14.22	10,600		July 6, 1929	17.27	13,300
	Jan. 25, 1919	14.50	10,900				
	Apr. 5, 1919	12.90	9,520	1930	June 19, 1930	11.67	8,500
	May 8, 1919	11.82	8,580				
	May 10, 1919	11.50	8,320	1931	Jan. 20, 1931	11.67	8,070
	May 14, 1919	11.58	8,410		May 4, 1931	11.50	8,240
	May 27, 1919	16.46	12,600				
	June 13, 1919	11.57	8,410	1932	Jan. 8, 1932	17.70	13,600
	June 20, 1919	19.3	15,000		Feb. 22, 1932	12.48	9,090
	July 1, 1919	17.2	13,200		May 1, 1932	14.85	11,100
	July 24, 1919	30.0	55,000		July 8, 1932	21.07	17,500
1920	Oct. 20, 1919	32.2	c72,000	1933	Aug. 2, 1933	12.67	9,340
1921	Mar. 17, 1921	11.35	8,240	1934	Mar. 4, 1934	14.37	10,800
	Apr. 12, 1921	15.57	11,800				
	Sept.15, 1921	16.36	12,500	1935	Dec. 30, 1934	15.40	11,600
					Feb. 13, 1935	11.69	8,500
1922	Apr. 2, 1922	17.97	13,900		May 5, 1935	21.74	18,700
	Apr. 7, 1922	26.5	36,000		May 22, 1935	25.20	29,900
	Apr. 30, 1922	15.36	11,600		June 1, 1935	17.86	13,800
	May 7, 1922	22.46	20,400		June 4, 1935	12.00	8,750
					June 19, 1935	30.07	55,500
1923	Feb. 25, 1923	12.63	9,260		Sept.10, 1935	13.67	10,200
	Mar. 30, 1923	13.45	9,980		Sept.28, 1935	23.94	24,600
	Apr. 15, 1923	12.10	8,840				
				1936	July 2, 1936	c39.8	-
1924	Dec. 4, 1923	16.97	13,100				
	Dec. 16, 1923	16.73	12,900	1952	Sept.15, 1952	28.32	c44,700
	Dec. 22, 1923	16.95	15,200				
	Feb. 22, 1924	14.55	11,100	1958	Feb. 25, 1958	31.6	c65,000

a Maximum during period January to September 1903; probably maximum for the year.
b Daily mean discharge.
c Probably maximum for the year.

Peak stages and discharges of Coleto Creek near Schroeder, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Oct. 16, 1946	d29.1	-	1958	Nov. 23, 1957	7.89	2,550
					Jan. 5, 1958	9.69	4,540
1953	Nov. 29, 1952	6.72	3,900		Jan. 13, 1958	8.35	3,050
	May 19, 1953	9.62	10,500		Feb. 22, 1958	18.85	27,900
	Aug. 30, 1953	11.62	17,200		May 3, 1958	15.10	15,400
					Sept.22, 1958	9.59	4,420
1954	May 25, 1954	4.06	905				
				1959	Oct. 29, 1958	9.36	4,180
1955	Feb. 6, 1955	7.16	2,040		Feb. 14, 1959	10.23	5,200
					Apr. 8, 1959	11.44	7,120
1956	May 15, 1956	5.60	869		Apr. 11, 1959	11.10	6,580
1957	Nov. 3, 1956	11.78	7,900	1960	June 25, 1960	8.59	3,260
	Mar. 31, 1957	8.13	2,570		Aug. 29, 1960	8.07	2,750
	Apr. 21, 1957	9.17	3,760				
	Apr. 28, 1957	21.00	39,000	1961	Oct. 19, 1960	18.20	25,500
	May 18, 1957	15.00	15,500		Oct. 25, 1960	16.60	19,900
	June 1, 1957	14.45	13,800		Nov. 22, 1960	11.20	6,820
					Dec. 31, 1960	8.75	3,410
1958	Oct. 15, 1957	10.78	6,100		Feb. 5, 1961	8.80	3,410
	Nov. 11, 1957	13.92	12,300		June 19, 1961	12.08	8,400

d Annual peak only; 22.9 ft former site.

8-1775. Coleto Creek near Victoria, Tex. (296)

Location.--Lat 28°43', long 97°08', at bridge on U.S. Highway 59, 100 ft upstream from Texas and New Orleans Railroad Co. bridge, 1.1 miles downstream from Perdido Creek, and 9.4 miles southwest of Victoria, Victoria County.

Drainage area.--514 sq mi.

Gage.--Recording. Datum of gage is 49.18 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 38,900 cfs and by slope-area measurement at 89,000 cfs.

Bankfull stage.--32 ft.

Historical data.--Maximum stage since at least 1875 occurred Oct. 16, 1946. The next highest occurred July 1, 1936, from information obtained from railroad company.

Remarks.--Base for partial-duration series, 2,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan. 4, 1932	27	a63,000	1944	Mar. 19, 1944	13.08	12,200
					May 2, 1944	7.74	3,380
1936	July 1, 1936	27.2	a64,000		May 26, 1944	7.98	3,700
					Aug. 31, 1944	10.49	7,300
1939	July 12, 1939	11.40	b8,820				
				1945	Apr. 20, 1945	7.09	2,700
1940	June 30, 1940	22.05	39,200				
	Aug. 19, 1940	8.58	4,180	1946	May 23, 1946	12.02	10,000
					May 26, 1946	6.84	2,530
1941	Oct. 31, 1940	10.58	7,460		June 1, 1946	11.63	9,200
	Nov. 5, 1940	8.10	3,810		Aug. 30, 1946	7.99	3,700
	Nov. 25, 1940	24.25	48,200				
	Dec. 20, 1940	9.23	5,330	1947	Oct. 11, 1946	10.65	7,620
	Mar. 18, 1941	7.88	3,590		Oct. 16, 1946	31.64	89,000
	Apr. 28, 1941	11.80	9,600		May 24, 1947	16.20	19,900
	May 3, 1941	17.59	23,600				
	May 5, 1941	8.32	4,050	1948	May 24, 1948	8.78	4,260
	May 22, 1941	8.74	4,590				
	June 4, 1941	9.4	5,630	1949	Apr. 26, 1949	6.89	2,700
	July 12, 1941	11.15	8,460		July 16, 1949	6.88	2,700
1942	July 6, 1942	20.75	34,300	1950	Oct. 26, 1949	6.43	2,290
1943	May 31, 1943	6.76	2,530	1951	May 7, 1951	6.80	2,620

a Annual peak only.
b Maximum June 28 to Sept. 30, 1939; probably maximum for year.

Peak stages and discharges of Coleto Creek near Victoria, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Sept.13, 1951	11.60	9,440	1953	Nov. 29, 1952	8.27	5,020
	Sept.26, 1951	6.98	2,770		May 19, 1953	11.49	10,100
					Aug. 30, 1953	13.73	14,400
1952	May 28, 1952	15.18	17,300		Sept. 4, 1953	6.80	3,280
	Sept.12, 1952	13.71	13,800				
				1954	May 25, 1954	3.33	731
1953	Nov. 23, 1952	6.54	2,980				

SAN ANTONIO RIVER BASIN

8-1780. San Antonio River at San Antonio, Tex. (297)

Location.--Lat 29°24'35", long 98°29'40", on right bank at downstream side of South Alamo Street Bridge, in San Antonio, Bexar County, 2.1 miles upstream from San Pedro Creek.

Drainage area.--42 sq mi, approximately.

Gage.--Nonrecording at site 1.9 miles upstream Feb. 28, 1916, to Apr. 7, 1920; recording thereafter. Datum of gage is 612.26 ft above mean sea level, datum of 1929. Datum of gages prior to Apr. 8, 1920, unknown.

Stage-discharge relation.--Defined by current-meter measurements below 2,200 cfs and by slope-area measurement at 15,300 cfs.

Historical data.--Maximum stage since 1819, that of Sept. 10, 1921; flood of July 5, 1819, equaled or exceeded that of Sept. 10, 1921. Highest recorded stage prior to 1921 occurred Oct. 23, 1914, at Commerce Street Bridge, relation to present gage not known.

Remarks.--Only annual peaks are shown. Since 1926, floodflow regulated by Olmos flood-control reservoir (capacity, 15,500 acre-ft), 8½ miles upstream.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Oct. 23, 1914	14.0	4,800	1943	Oct. 4, 1942	8.16	2,350
				1944	Sept. 6, 1944	5.54	1,260
1916	Sept.25, 1914	9.4	2,650	1945	Dec. 4, 1944	7.21	1,820
1917	Mar.24,25,May 20, 1917	1.8	147				
				1946	Sept.27, 1946	15.32	5,740
1918	May 5, 1918	-	-	1947	Nov. 10, 1946	5.85	984
1919	Sept.15, 1919	7.7	2,380	1948	Aug. 26, 1948	10.60	2,840
1920	Oct. 16, 1919	7.8	2,430	1949	June 25, 1949	7.85	1,640
				1950	Oct. 22, 1949	7.11	1,390
1921	Sept.10, 1921	20.14	15,300				
				1951	June 3, 1951	8.22	1,800
1923	July 21, 1923	3.5	390	1952	Sept.18, 1952	5.47	365
1924	May 26, 1924	4.5	648	1953	Sept. 4, 1953	7.55	1,610
1925	May 10, 1925	4.5	641	1954	June 26, 1954	5.05	758
				1955	Feb. 4, 1955	5.23	810
1926	Apr. 20, 1926	8.3	1,840				
1927	June 14, 1927	5.18	845	1956	May 15, 1956	6.63	1,230
1928	June 2, 1928	4.93	755	1957	May 27, 1957	9.23	1,850
1929	May 24, 1929	4.32	588	1958	June 22, 1958	7.34	1,210
				1959	May 16, 1959	5.83	772
1940	June 29, 1940	4.45	1,040	1960	Aug. 15, 1960	10.12	2,360
1941	Apr. 28, 1941	5.76	1,470	1961	July 22, 1961	12.20	3,410
1942	Sept. 4, 1942	5.90	1,680				

8-1785. San Pedro Creek at San Antonio, Tex. (298)

Location.--Lat 29°25', long 98°30', at Missouri, Kansas and Texas Railway culvert, 200 ft below Arsenal Street in San Antonio, Bexar County, three-quarters of a mile upstream from Apache and Alazan Creek, and 2½ miles upstream from San Antonio River.

Drainage area.--2.64 sq mi.

Gage.--Nonrecording prior to Mar. 14, 1921; recording thereafter. Datum of gage unknown. At Commerce Street Bridge, half a mile upstream at different datum July 19, 1916, to Mar. 13, 1921.

Stage-discharge relation.--Defined by current-meter measurements below 200 cfs and extended above on basis of Kutler's formula.

Bankfull stage.--7 ft.

Historical data.--Flood of Sept. 9, 1921, at San Antonio greatly exceeded all floods of which there is any information except the flood of July 5, 1819, which probably equaled if not exceeded it.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	October 1913	10.2	-	1922	May 2, 1922	5.25	788
				1923	Aug. 28, 1923	3.55	404
1916	Sept.25, 1916	6.25	a700	1924	Apr. 25, 1924	6.38	1,070
1917	Oct. 16, 1916	3.5	145	1925	May 10, 1925	4.8	680
1918	Apr. 5, 1918	4.80	380				
1919	Sept.15, 1919	4.45	335	1926	Apr. 20, 1926	6.40	1,070
1920	Oct. 16, 1919	3.40	170	1927	June 15, 1927	5.00	728
				1928	Mar. 9, 1928	6.79	1,170
1921	Sept. 9, 1921	8.60	b2,020	1929	May 23, 1929	5.00	728

a Maximum July 20 to Sept. 30, 1916; probably maximum for year.
b Gage height affected by backwater from Alazan Creek; discharge determined by C. K. McDonald of Office of Engineers, eighth corps area.

8-1790. Medina River near Pipe Creek, Tex. (299)

Location.--Lat 29°40', long 98°59', on left bank 600 ft upstream from Bandera Falls, 0.8 mile upstream from Red Bluff Creek, and 4 miles southwest of town of Pipe Creek, Bandera County.

Drainage area.--457 sq mi.

Gage.--Recording. At site 2 miles upstream at different datum December 1922 to June 1935. Datum of gage is 1,067.37 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 31,500 cfs and by slope-area measurement at 64,000 cfs.

Bankfull stage.--10 ft.

Historical data.--Maximum stage since at least 1880, that of 1919, from information by local resident.

Remarks.--Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	-	42	-	1926	Apr. 21, 1926	19.8	23,200
					July 24, 1926	8.40	4,640
1923	Apr. 25, 1923	15.36	14,700				
	Sept. 6, 1923	8.2	4,400	1927	Feb. 28, 1927	8.50	4,670
	Sept.18, 1923	9.3	5,430		Mar. 7, 1927	8.56	4,760
1924	May 26, 1924	8.1	4,080	1928	June 2, 1928	4.50	1,530
1925	May 28, 1925	12.42	10,000	1929	May 13, 1929	18.25	19,800
					May 28, 1929	14.90	13,800
1926	Oct. 15, 1925	11.50	8,700		July 3, 1929	10.73	7,580

Peak stages and discharges of Medina River near Pipe Creek, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	May 12, 1930	9.13	5,250	1955	May 19, 1955	10.28	4,340
1931	Oct. 6, 1930	17.2	17,900	1956	Aug. 20, 1956	10.28	4,340
	Oct. 12, 1930	7.4	3,680				
	Apr. 30, 1931	16.3	16,200	1957	Mar. 20, 1957	14.67	10,300
	July 16, 1931	15.0	14,000		Apr. 19, 1957	11.20	5,400
					Apr. 22, 1957	14.45	9,920
1932	Apr. 28, 1932	10.96	8,000		Apr. 24, 1957	23.00	26,000
	July 1, 1932	a33.8	64,000		Apr. 27, 1957	13.75	8,840
	Sept.23, 1932	15.29	14,500		May 28, 1957	(e)	-
					June 1, 1957	21.70	23,400
1933	-	-	(b)		Sept.22, 1957	16.29	13,100
1934	Apr. 19, 1934	4.75	1,520	1958	Oct. 15, 1957	16.22	13,000
					Feb. 22, 1958	9.60	3,500
1935c/	May 10, 1935	10.0	6,600		Mar. 7, 1958	11.21	5,340
	May 18, 1935	d14	12,400		May 2, 1958	10.24	4,140
	May 31, 1935	25.4	37,200		June 17, 1958	27.3	37,100
	June 12, 1935	8	4,200		June 22, 1958	10.63	4,260
	June 14, 1935	22	28,300		Sept.17, 1958	12.36	6,330
	July 24, 1935	26.5	40,400		Sept.20, 1958	11.85	5,610
1953	Aug. 31, 1953	12.33	6,800	1959	June 26, 1959	13.64	7,940
	Sept. 3, 1953	10.56	4,690				
				1960	Oct. 4, 1959	14.35	9,100
1954	Oct. 4, 1953	15.54	11,700		Aug. 15, 1960	15.63	11,000
	May 24, 1954	11.18	5,400				
				1961	Feb. 16, 1961	9.96	3,620
1955	May 7, 1955	9.68	3,700		June 17, 1961	15.97	11,600

a 35.2 ft, present site and datum. b Record insufficient to publish peaks; probably no peak above base. c For period Oct. 1, 1934 to July 25, 1935. d Estimated.
e Peak was above base but less than 21.70 ft stage of June 1.

8-1815. Medina River near San Antonio, Tex. (300)

Location.--Lat 29°15'15", long 98°28'20", near left bank on downstream side of pier of bridge on U.S. Highway 281, 1.6 miles upstream from Palo Blanco Creek, 2.8 miles downstream from Leon Creek, 6.8 miles upstream from mouth, and 7 miles south of San Antonio (city limits), Bexar County.

Drainage area.--1,225 sq mi (609 sq mi above dam forming Medina Lake).

Gage.--Recording. Datum of gage is 439.0 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements throughout and subject to shift.

Historical data.--Highest stage known occurred sometime prior to 1912; stage, 55 ft. A large flood occurred in July 1869 and was the highest known since at least 1852. It is probable that this was the 55-foot stage flood.

Remarks.--Floodflow slightly regulated by Medina Dam (capacity, 254,000 acre-ft) and Medina Diversion Reservoir (capacity, 4,500 acre-ft). During periods of high flow, the city of San Antonio discharges sewage effluent from Mitchell Lake into the river above the gage. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 1936	32.2	-	1951	May 16, 1951	14.92	2,150
				1952	Sept.12, 1952	9.11	801
1940	June 30, 1940	15.97	2,540	1953	Sept. 4, 1953	20.79	4,960
				1954	Apr. 8, 1954	9.53	865
1941	Feb. 2, 1941	22.93	6,880	1955	Feb. 6, 1955	11.35	1,200
1942	Sept. 5, 1942	30.92	17,500				
1943	Oct. 18, 1942	27.20	12,100	1956	Sept. 1, 1956	16.37	1,750
1944	Aug. 28, 1944	13.33	2,000	1957	Apr. 29, 1957	22.83	5,180
1945	Feb. 12, 1945	16.96	3,540	1958	May 3, 1958	27.79	9,220
				1959	Oct. 30, 1958	19.56	3,350
1946	Aug. 29, 1946	a41.57	31,800	1960	Oct. 4, 1959	19.33	3,200
1947	Oct. 9, 1946	12.57	1,470				
1948	Aug. 27, 1948	14.58	2,050	1961	July 23, 1961	17.92	3,050
1949	June 26, 1949	30.79	17,400				
1950	Oct. 25, 1949	21.67	5,660				

a Occurred on Sept. 27, 1946; backwater from San Antonio River.

8-1825. Calaveras Creek near Elmendorf, Tex. (301)

Location.--Lat 29°15'30", long 98°17'30", near center of span on downstream side of bridge on U.S. Highway 181, 2.5 miles east of Elmendorf, Bexar County, 5 miles upstream from mouth, and 10 miles southeast from city limits of San Antonio.

Drainage area.--77.2 sq mi.

Gage.--Recording. Datum of gage is 406.45 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements. Subject to seasonal shifts due to heavy vegetal growth.

Historical data.--Flood of Sept. 29, 1946, was the highest since at least 1860.

Remarks.--During the period 1954-58, nine floodwater-retarding structures were built in the basin above this station. These structures have a total floodwater-retarding capacity of 13,250 acre-ft below the flood spillway crests, and partly control the flow from 37.1 sq mi above the station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept.29, 1946	35	-	1958	Feb. 21, 1958	14.74	2,010
1955	May 16, 1955	11.73	568	1959	May 24, 1959	14.98	1,400
1956	Oct. 11, 1955	12.07	607	1960	Oct. 4, 1959	14.22	1,370
1957	Sept.25, 1957	21.83	5,310	1961	Oct. 29, 1960	13.69	1,140

8-1830. San Antonio River at Calaveras, Tex. (302)

Location.--Lat 29°13', long 98°15', a quarter of a mile south of Calaveras, Wilson County, and 1 mile below mouth of Calaveras Creek.

Drainage area.--1,786 sq mi.

Gage.--Nonrecording. Datum of gage is 361.23 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended to 18,500 cfs by the use of AVd method.

Historical data.--Local information obtained in March 1918 indicates that the highest flood known was 40 to 45 ft.

Remarks.--Flow partly regulated by Medina Lake (capacity, 254,000 acre-ft). Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	Apr. 6, 1918	16.34	a2,690	1921	Apr. 8, 1921	13.4	2,080
	Apr. 30, 1918	23.96	a5,700		Sept.11, 1921	42.0	18,500
	May 6, 1918	32.84	a11,200	1922	Mar. 29, 1922	22.38	4,650
1919	Oct. 27, 1918	13.5	1,940		Apr. 4, 1922	25.88	6,460
	Dec. 24, 1918	13.55	1,960		Apr. 28, 1922	23.36	5,200
	Jan. 23, 1919	28.1	8,040		May 3, 1922	27.4	7,440
	Apr. 29, 1919	19.0	3,540	1923	Sept. 7, 1923	16.55	2,340
	June 27, 1919	22.1	4,780	1924	Dec. 12, 1923	14.63	2,320
	July 22, 1919	19.5	3,720		Feb. 18, 1924	18.78	3,570
	Sept.18, 1919	35.0	12,700		Apr. 27, 1924	12.98	1,860
	Sept.24, 1919	38.0	15,100		May 27, 1924	15.46	2,480
1920	Oct. 7, 1919	32.2	10,800		June 2, 1924	20.71	4,260
	Oct. 11, 1919	24.80	6,180		June 23, 1924	24.6	6,080
	Oct. 17, 1919	32.23	10,800		Sept.13, 1924	16.23	2,740
	Nov. 2, 1919	16.7	2,830	1925	Dec. 3, 1924	11.97	b1,600
	May 14, 1920	13.3	1,940				
1921	Mar. 2, 1921	19.32	3,870				

a Peak above base during period March to September 1918; maximum for year probably occurred May 6, 1918.
b Maximum during period October 1924 to August 1925; probably maximum for the year.

8-1835. San Antonio River near Falls City, Tex. (303)

Location.--Lat 28°57'05", long 98°03'55", on left bank 23 ft downstream from bridge on Farm to Market Road 791, 0.9 mile upstream from Scared Dog Creek, and 3.6 miles southwest of Falls City, Karnes County.

Drainage area.--2,071 sq mi.

Gage.--Recording. Datum of gage is 285.49 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--23 ft.

Historical data.--Maximum stage since at least 1875, that of Sept. 29, 1946.

Remarks.--Flow slightly regulated by Medina Lake and Olmos flood-control reservoir (combined capacity, 269,500 acre-ft). Storage began in Medina Reservoir in 1913 and Olmos Dam was completed in 1926. For statement regarding regulation by Soil Conservation Service floodwater-detention reservoirs, see Calavaras Creek near Elmendorf. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	October 1913	28.46	28,900	1944	May 28, 1944	6.92	5,170
				1945	Jan. 20, 1945	5.48	3,820
1926	Apr. 23, 1926	10.53	9,260				
1927	June 16, 1927	3.98	2,220	1946	Sept.29, 1946	33.80	47,400
1928	Oct. 1, 1927	7.16	5,550	1947	Nov. 12, 1946	4.43	b2,670
1929	May 29, 1929	11.15	10,100	1948	Aug. 26, 1948	13.88	10,900
1930	May 16, 1930	2.97	1,290	1949	June 28, 1949	18.05	14,800
				1950	Oct. 27, 1949	5.67	4,020
1931	July 20, 1931	4.44	2,540				
1932	Feb. 20, 1932	3.50	1,660	1951	June 5, 1951	4.53	2,640
1933	July 30, 1933	7.64	5,990	1952	July 18, 1952	4.00	2,100
1934	Apr. 7, 1934	5.35	3,400	1953	May 18, 1953	6.96	5,040
1935	June 15, 1935	a22.3	14,300	1954	May 25, 1954	3.82	1,950
				1955	Feb. 7, 1955	3.68	1,660
1936	July 3, 1936	19.44	16,200				
1937	June 2, 1937	16.65	14,600	1956	Sept. 2, 1956	5.38	3,590
1938	Apr. 26, 1938	6.04	4,320	1957	Apr. 27, 1957	10.53	6,920
1939	July 14, 1939	3.04	1,280	1958	Feb. 23, 1958	11.13	7,320
1940	Apr. 7, 1940	5.39	3,700	1959	Nov. 1, 1958	4.75	2,820
				1960	Oct. 7, 1959	5.09	3,060
1941	Nov. 6, 1940	8.70	6,620				
1942	July 6, 1942	22.13	18,500	1961	Oct. 27, 1960	8.10	5,220
1943	Oct. 20, 1942	10.37	7,880				

a Occurred on June 13, 1935.
b Maximum peak discharge; maximum discharge during year, 11,900 cfs at 12:01 a.m. Oct. 1, stage falling.

8-1840. Cibolo Creek near Bulverde, Tex. (304)

Location.--Lat 29°43'35", long 98°25'40", on left bank at William Classen ranchhouse, 1.8 miles downstream from bridge on U.S. Highway 281, 2 miles southeast of Bulverde, Comal County, and 4.7 miles upstream from Dripping Springs Creek.

Drainage area.--198 sq mi.

Gage.--Recording. Altitude of gage is 1,013 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 4,400 cfs and extended above on basis of slope-area measurements and logarithmic plotting.

Historical data.--Maximum stage since at least 1868 occurred about 1889 (stage unknown); the second and third highest stages occurred in 1913, and 1937 or 1938, respectively (stages unknown); the fourth highest stage, 25 ft, occurred in 1943; from information by local residents.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges of Cibolo Creek near Falls City, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Feb. 22, 1958	24.47	12,800	1961	Oct. 26, 1960	23.20	10,800
	May 4, 1958	23.28	11,000		Oct. 30, 1960	19.56	6,510
					June 19, 1961	23.18	11,700
1959	Apr. 12, 1959	15.98	4,000		July 11, 1961	18.70	6,240
1960	Oct. 5, 1959	18.47	5,820				

8-1870. Escondido Creek subwatershed No. 1 near Kenedy, Tex. (307)

Location.--Lat 28°47', long 97°54', near center of dam on unnamed fork of Panther Creek, 500 ft upstream from State Highway 72 and 3 miles southwest of Kenedy, Karnes County.

Drainage area.--3.39 sq mi.

Gage.--Recording. Datum of gage is 350.00 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 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. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	July 12, 1955	-	988	1958	Nov. 22, 1957	-	139
	Aug. 11, 1955	-	2,100		Jan. 12, 1958	-	348
	Aug. 14, 1955	-	105		Feb. 22, 1958	-	288
					May 3, 1958	-	1,700
1956	June 19, 1956	-	486				
				1959	Sept.29, 1959	-	181
1957	Mar. 11, 1957	-	148				
	Mar. 31, 1957	-	205	1960	Oct. 4, 1959	-	653
	Apr. 14, 1957	-	250		Jan. 14, 1960	-	166
	Apr. 20, 1957	-	1,300		July 17, 1960	-	a817
	Apr. 27, 1957	-	404		Aug. 28, 1960	-	121
	May 13, 1957	-	a560		Aug. 29, 1960	-	114
	May 27, 1957	-	a1,810		Aug. 30, 1960	-	139
	June 1, 1957	-	418				
	Sept.22, 1957	-	359	1961	Oct. 25, 1960	-	b4,990
	Sept.23, 1957	-	268				

a Not adjusted for rainfall on water surface.
b Annual peak only.

8-1875. Escondido Creek at Kenedy, Tex. (308)

Location.--Lat 28°49', long 97°52', near center of span on downstream side of bridge on U.S. Highway 181 in northwest edge of Kenedy, Karnes County, 3½ miles upstream from Dry Escondido Creek, and 8⅔ miles upstream from mouth.

Drainage area.--82.2 sq mi, of which 36.5 sq mi is above flood-detention structures.

Gage.--Recording. Datum of gage is 246.40 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,400 cfs and extended above.

Historical data.--Maximum stage since at least 1887, that of Aug. 29, 1946, from information by local residents.

Remarks.--Flow from 36.5 sq mi above station is partly controlled by 10 floodwater-detention reservoirs, completed between Sept. 21, 1954, and Feb. 17, 1957, with a total combined capacity of 13,300 acre-ft below flood spillway crests. Only annual peaks are shown.

Peak stages and discharges of Escondido Creek at Kenedy, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Aug. 29, 1946	24.2	12,300	1958	May 3, 1958	19.78	3,330
				1959	June 6, 1959	18.31	2,060
1955	Aug. 31, 1955	19.82	3,370	1960	Oct. 4, 1959	17.26	1,680
1956	Sept. 2, 1956	16.77	1,250	1961	Oct. 25, 1960	23.55	10,700
1957	Sept.23, 1957	18.45	2,160				

8-1880. Dry Escondido Creek near Kenedy, Tex. (309)

Location.--Lat 28°52', long 97°50', at bridge on State Farm Road 792, 3.5 miles north of Kenedy, Karnes County, 4.0 miles upstream from Escondido Creek, and 4.0 miles southeast of Karnes City.

Drainage area.--9.43 sq mi.

Gage.--Recording. Datum of gage is 276.55 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of May 18, 1953, was the highest since at least 1906, from information by local resident.

Remarks.--Flow from 8.43 sq mi above station is partly controlled since Jan. 31, 1958, by one flood-detention structure. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 18, 1953	16	-	1957	Apr. 21, 1957	10.53	706
				1958	Sept.22, 1958	7.10	155
1955	May 12, 1955	7.55	290	1959	Oct. 30, 1958	5.49	13
1956	Sept. 3, 1956	7.22	215				

8-1885. San Antonio River at Goliad, Tex. (310)

Location.--Lat 28°39', long 97°22', on right bank at upstream side of pier of bridge on U.S. Highway 183, 1.3 miles southeast of courthouse in Goliad, Goliad County, and 10 miles upstream from Manahuilla Creek.

Drainage area.--3,918 sq mi.

Gage.--Nonrecording prior to Mar. 31, 1929; recording thereafter. At site 0.9 mile upstream prior to Mar. 31, 1929. Datum of gage is 91.08 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--35 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since 1869, that of July 9, 1942. Maximum stage since at least 1800, that of July 1869.

Remarks.--Regulation above station (see Remarks for San Antonio River near Falls City and Escondido Creek at Kenedy). Flow from 82.0 sq mi above station partly controlled by 20 floodwater-detention reservoirs, completed between Sept. 9, 1954, and June 17, 1958, with a total combined capacity of 28,060 acre-ft below flood spillway crests. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	July 1869	(a)	-	1926	Apr. 25, 1926	31.0	11,900
				1927	Apr. 16, 1927	22.5	5,410
1914	October 1913	44.9	33,800	1928	May 16, 1928	19.0	3,880
1925	July 13, 1925	11.9	1,830	1929	Jan. 11, 1929	31.79	13,100

a Several feet higher than flood of July 9, 1942.

8-1905. West Nueces River near Brackettville, Tex. (313)

Location.--Lat 29°28'55", long 100°14'20", at Wilson Ranch, 9 miles downstream from Loss Creek, 11 miles upstream from Liveoak Creek, and 15.8 miles northeast of Brackettville, Kinney County.

Drainage area.--700 sq mi.

Gage.--Nonrecording prior to Mar. 14, 1940; recording thereafter. Datum of gage is 1,326.79 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,500 cfs and by slope-area measurements at 10,000, 51,000, and 150,000 cfs.

Bankfull stage.--12 ft.

Historical data.--Maximum stage since at least 1879, that of June 14, 1935. From floodmarks at site 0.6 mile upstream, gage-height relation of floods in 1935 and 1955 at this point was used to adjust 1935 flood to present site and datum. Discharge for flood of June 14, 1935, 580,000 cfs, by slope-area measurement at site 33 miles upstream from gage, and 536,000 cfs by slope-area measurement at site 24 miles downstream from gage.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	-	34	-	1947	Oct. 8, 1946	10.10	6,720
				1948	June 25, 1948	20.95	51,000
1935	June 14, 1935	40	550,000	1949	Feb. 25, 1949	18.60	37,000
				1950	Oct. 27, 1949	2.95	a.8
1940	Oct. 27, 1939	11.56	10,100				
				1955	Sept.24, 1955	27.1	150,000
1941	May 6, 1941	3.21	7.6				
1942	Sept.11, 1942	2.96	6.8	1957	May 16, 1957	17.40	31,000
1943	Oct. 18, 1942	6.55	1,540	1958	June 17, 1958	25.15	104,000
1944	June 9, 1944	2.83	1.0	1959	June 25, 1959	9.52	5,540
1945	Jan. 22, 1945	2.84	1.1	1960	Oct. 4, 1959	5.60	845
1946	Sept.29, 1946	2.90	2.5	1961	July 24, 1961	20.08	45,600

a Maximum peak discharge; maximum discharge 1.0 cfs at 12:01 a.m. on Oct. 1, 1949, stage falling.

8-1920. Nueces River below Uvalde, Tex. (314)
(Published as "near Uvalde" prior to 1939)

Location.--Lat 29°07'25", long 99°53'40", on right bank at McDaniel Ranch, 5.7 miles upstream from bridge on U.S. Highway 83, 8.8 miles southwest of Uvalde, Uvalde County, and 18.2 miles downstream from West Nueces River.

Drainage area.--1,947 sq mi.

Gage.--Nonrecording prior to Nov. 22, 1927, and June 14, 1935, to Apr. 4, 1939; recording for other periods. At site 4.5 miles upstream at datum 58.11 ft higher prior to Apr. 5, 1939. Datum of gage is 796.12 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 34,000 cfs and extended above on basis of slope-area measurements at 189,000 and 616,000 cfs. (Slope-area measurement at 616,000 cfs was at upper station.)

Historical data.--Maximum stage since at least 1836, that of June 14, 1935. Large floods also occurred in 1901 and 1913, stages unknown.

Remarks.--Records combined with those for Nueces River near Uvalde. Only annual peaks are shown.

Peak stages and discharges of Nueces River below Uvalde, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	Oct. 2, 1927	7.1	10,000	1946	Sept.27, 1946	6.18	3,010
1929	May 29, 1929	8.34	14,500	1947	Oct. 9, 1946	6.85	4,490
1930	June 15, 1930	15.73	68,200	1948	June 25, 1948	11.44	23,600
				1949	Feb. 26, 1949	16.06	63,000
1931	Oct. 6, 1930	11.11	27,000	1950	Oct. 22, 1949	4.17	384
1932	Sept. 1, 1932	23.25	207,000				
1933	Aug. 30, 1933	1.49	a246	1951	May 24, 1951	3.11	46
1934	July 26, 1934	.87	45	1952	May 28, 1952	7.05	5,020
1935	June 14, 1935	b36.9	616,000	1953	Sept. 1, 1953	7.52	6,160
				1954	June 29, 1954	10.60	18,400
1936	Sept.16, 1936	16.2	74,800	1955	Sept.24, 1955	24.61	169,000
1937	Oct. 27, 1936	1.74	a330				
1938	Dec. 29, 1937	9.29	18,200	1956	Oct. 6, 1955	3.92	d48
1939	July 13, 1939	20.4	85,000	1957	May 18, 1957	6.76	3,090
1940	Oct. 10, 1939	6.71	4,990	1958	June 17, 1958	21.80	146,000
				1959	Sept.24, 1959	10.00	17,300
1941	May 4, 1941	3.42	212	1960	Oct. 4, 1959	12.98	37,500
1942	Oct. 24, 1941	9.05	11,200				
1943	Oct. 18, 1942	5.86	2,380	1961	July 25, 1961	11.80	28,600
1944	Aug. 30, 1944	6.33	3,370				
1945	Mar. 17, 1945	2.98	70				

a Maximum peak discharge; maximum discharge, 643 cfs at 12:01 a.m. Oct. 1, 1932 (stage, 2.15 ft and falling). b 40.4 ft, present site and datum. c Maximum peak discharge; maximum discharge, 765 cfs at 12:01 a.m. Oct. 1, 1936 (stage, 2.35 ft and falling). d Maximum peak discharge; maximum discharge, 186 cfs at 12:01 a.m. Oct. 1, 1955 (stage, 4.35 ft and falling).

8-1925. Nueces River near Cinonia, Tex. (315)

Location.--Lat 28°47', long 99°50', at bridge on Farm Road 1025, 2 miles east of Cinonia, and 8 miles northeast of Crystal City, Zavalla County.

Drainage area.--2,150 sq mi.

Gage.--Nonrecording. Datum of gage unknown.

Stage-discharge relation.--Defined by current-meter measurements below 700 cfs and extended to 4,200 cfs on basis of area-velocity studies.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	July 1913	53	-	1920	Oct. 9, 1919	12.8	b1,090
					Oct. 17, 1919	26.3	4,190
1915	Sept.19, 1915	a20.00	1,960		Oct. 29, 1919	14.6	1,350
1916	May 23, 1916	15.70	1,170	1921	Mar. 1, 1921	6.3	339
	Aug. 19, 1916	18.20	1,600				
				1922	Apr. 28, 1922	18.55	2,180
1917	May 20, 1917	4.30	90		May 1, 1922	15.75	1,600
					June 13, 1922	23.94	3,530
1918	May 4, 1918	12.0	b920				
				1923	Sept.19, 1923	48.2	-
1919	Oct. 22, 1918	17.80	2,000				
	Jan. 22, 1919	22.30	3,090	1924	Oct. 31, 1923	20.7	2,690
	May 25, 1919	13.70	1,230		Nov. 4, 1923	20.4	2,620
	Aug. 24, 1919	21.80	2,960				
	Sept.16, 1919	25.50	3,960	1925	May 31, 1925	50	-
	Sept.23, 1919	49.1	-				

a Maximum during period July 6 to Sept. 30, 1915; maximum for year not known.
b Daily mean discharge.

8-1930. Nueces River near Asherton, Tex. (316)

Location.--Lat 28°29'55", long 99°40'55", on right bank 28 ft downstream from bridge on Farm to Market Road 190 between Asherton and Brundage, 1.2 miles downstream from El Moro Creek, and 5.5 miles northeast of Asherton, Dimmit County.

Drainage area.--4,082 sq mi.

Gage.--Nonrecording prior to Feb. 2, 1940; recording thereafter. Datum of gage is 470.92 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Maximum stage since at least 1900, that of June 17, 1935, from information by local residents. Flood of June 30, 1913, reached about the same stage.

Remarks.--Considerable losses of floodflows into various permeable formations occur downstream from the Balcones fault zone. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	-	28	-	1949	Feb. 28, 1949	29.98	19,600
				1950	Aug. 30, 1950	18.04	2,750
1932	July 1932	28	-				
				1951	May 28, 1951	18.46	2,870
1935	June 17, 1935	33	-	1952	May 28, 1952	17.11	2,510
				1953	Sept. 6, 1953	26.70	6,500
1940	Apr. 7, 1940	24.65	5,200	1954	July 2, 1954	25.27	5,430
				1955	Sept.27, 1955	29.64	15,100
1941	Feb. 4, 1941	19.07	3,140				
1942	Sept. 5, 1942	24.07	5,000	1956	July 4, 1956	14.86	1,840
1943	June 6, 1943	20.17	3,530	1957	June 2, 1957	27.82	7,750
1944	Sept. 2, 1944	30.40	24,000	1958	June 20, 1958	30.23	21,800
1945	Sept.30, 1945	28.32	9,340	1959	June 29, 1959	23.51	4,460
				1960	Oct. 6, 1959	30.88	28,500
1946	Oct. 10, 1945	28.92	10,600				
1947	June 28, 1947	18.94	2,910	1961	July 27, 1961	26.68	6,260
1948	June 26, 1948	25.86	5,830				

8-1940. Nueces River at Cotulla, Tex. (317)

Location.--Lat 28°26', long 99°16', near left bank on downstream side of bridge on U.S. Highway 81 at Cotulla, La Salle County, and a third of a mile upstream from Missouri Pacific Railroad Co. bridge.

Drainage area.--5,260 sq mi.

Gage.--Recording Nov. 20, 1934, to July 14, 1938; nonrecording for other periods. At present site at datum 7.28 ft higher Oct. 31, 1923, to Aug. 4, 1924. At site 5,000 ft downstream at datum 8.42 ft higher Aug. 4, 1924, to Nov. 19, 1934. Gage-height records by U.S. Weather Bureau prior to Oct. 31, 1923, at railroad bridge 1,460 ft downstream and at same datum as present gage. Datum of gage is 368.08 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs and by slope-area measurement at 82,600 cfs.

Bankfull stage.--15 ft (U.S. Weather Bureau).

Historical data.--Maximum stage since at least 1879, that of June 18, 1935.

Remarks.--Considerable losses of floodflows into various permeable formations occur downstream from the Balcones fault zone which crosses basin just north of Uvalde. Gage-height record furnished by U.S. Weather Bureau prior to Oct. 31, 1923, and since July 15, 1938. Only annual peaks are shown.

Peak stages and discharges of Nueces River at Cotulla, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	June 19, 1899	a29.7	-	1942	Sept. 8, 1942	17.40	10,200
				1943	June 9, 1943	13.69	3,940
1923	Sept. 7, 1923	16.0	-	1944	Aug. 30, 1944	26.80	40,900
1924	Sept.26, 1924	3.10	2,920	1945	Apr. 4, 1945	15.65	6,480
1925	June 3, 1925	14.89	35,200				
				1946	Oct. 11, 1945	20.70	17,900
1926	Apr. 28, 1926	6.5	9,820	1947	June 27, 1947	16.67	8,600
1927	Oct. 22, 1926	2.25	1,440	1948	June 27, 1948	14.15	4,470
1928	Oct. 11, 1927	7.15	11,400	1949	Mar. 3, 1949	20.45	17,200
1929	May 29, 1929	12.20	22,100	1950	June 7, 1950	12.75	2,680
1930	June 22, 1930	5.20	6,940				
				1951	May 30, 1951	12.60	2,720
1931	Oct. 12, 1930	3.08	2,920	1952	May 31, 1952	12.14	2,130
1932	Sept. 7, 1932	b16.05	40,500	1953	Sept. 8, 1953	15.25	5,820
1933	Oct. 1, 1932	4.10	4,520	1954	June 2, 1954	14.42	4,610
1934	Sept.18, 1934	2.66	2,140	1955	Sept.30, 1955	18.25	10,900
1935	June 18, 1935	32.4	82,600				
				1956	July 5, 1956	15.30	c5,660
1936	Sept.16, 1936	19.50	14,500	1957	Apr. 22, 1957	18.30	10,700
1937	Oct. 1, 1936	13.73	4,120	1958	June 24, 1958	19.70	13,700
1938	July 31, 1938	17.23	9,960	1959	July 2, 1959	13.92	3,890
1939	May 16, 1939	16.80	9,240	1960	Oct. 9, 1959	24.03	23,300
1940	June 23, 1940	14.90	5,400				
				1961	July 31, 1961	14.87	4,990
1941	May 2, 1941	13.98	4,220				

a Present site and datum.
b 26.8 ft, present site and datum.
c Maximum peak discharge; maximum discharge, 10,900 cfs at 12:01 a.m. Oct. 1, 1955 (stage, 18.25 ft and falling).

8-1945. Nueces River near Tilden, Tex. (318)

Location.--Lat 28°18', long 98°34', on right bank at downstream side of pier of bridge on State Highway 173, 2 miles upstream from Cow Creek and 10.5 miles south of Tilden, McMullen County.

Drainage area.--8,192 sq mi.

Gage.--Recording. Datum of gage 183.5 ft above mean sea level, datum of 1929 (levels by Topographic Division).

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs.

Bankfull stage.--16 ft.

Historical data.--Maximum stage since at least 1902, that of Oct. 11, 1946.

Remarks.--Considerable losses of floodflows into various permeable formations occur downstream from the Balcones fault zone which crosses basin just north of Uvalde. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	23.7	38,000	1952	June 2, 1952	17.27	3,720
				1953	Sept. 8, 1953	19.52	9,650
1942	July 1942	22	22,600	1954	June 29, 1954	21.29	18,400
1943	June 10, 1943	17.65	4,060	1955	June 3, 1955	14.71	1,710
1944	Sept. 3, 1944	22.98	29,900				
1945	Apr. 27, 1945	17.25	3,550	1956	Oct. 8, 1955	17.23	3,570
				1957	Apr. 30, 1957	22.64	27,600
1946	Oct. 16, 1945	21.06	17,200	1958	Feb. 24, 1958	24.80	50,600
1947	Oct. 11, 1946	26.46	70,000	1959	Oct. 3, 1956	19.22	7,930
1948	July 8, 1948	16.07	2,430	1960	Oct. 13, 1959	21.79	21,000
1949	Mar. 7, 1949	20.78	14,700				
1950	June 7, 1950	19.21	6,780	1961	Dec. 29, 1960	15.30	1,830
1951	June 6, 1951	19.10	7,690				

8-1950. Frio River at Concan, Tex. (319)

Location.--Lat 29°29'18", long 99°42'16", on left bank 0.7 mile southeast of Concan Post Office, Uvalde County, and 15 miles upstream from Dry Frio River.

Drainage area.--405 sq mi.

Gage.--Nonrecording prior to Oct. 4, 1930; recording thereafter. At site 86 ft upstream at datum 5.08 ft lower prior to July 29, 1924. At site 130 ft upstream July 29, 1924, to May 18, 1939. Datum of gage is 1,203.71 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,400 cfs and extended on basis of slope-area measurements at 29,400 and 162,000 cfs.

Bankfull stage.--13 ft.

Historical data.--Maximum stage since at least 1869, that of July 1, 1932, from information by local residents. Second highest stage since 1923, that of Sept. 16, 1936. Flood in 1913 reached about same stage as that of Sept. 18, 1923.

Remarks.--Base for partial-duration series, 750 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Sept.18, 1923	a28.8	b100,000	1938	Dec. 29, 1937	2.72	668
1924	Nov. 2, 1923	a4.72	1,200	1939	July 13, 1939	12.90	21,300
1925	May 10, 1925	3.95	1,500	1940	May 9, 1940	2.99	796
	May 28, 1925	4.30	1,800		June 29, 1940	3.15	935
1926	Oct. 15, 1925	4.30	1,800		July 3, 1940	3.57	1,360
	July 22, 1926	7.00	5,860	1941	Apr. 27, 1941	7.04	6,720
	July 23, 1926	14.5	24,000		May 2, 1941	3.59	1,380
1927	July 15, 1927	3.30	800		Aug. 8, 1941	5.05	3,210
1929	May 29, 1929	4.50	2,000	1942	Oct. 24, 1941	6.32	5,260
	July 3, 1929	4.50	2,000		Aug. 30, 1942	3.75	1,540
1931	Oct. 6, 1930	22.3	52,600	1943	Oct. 15, 1942	3.45	1,200
	Mar. 15, 1931	4.21	1,280	1944	May 25, 1944	3.68	1,460
	Apr. 30, 1931	8.95	6,450		June 6, 1944	4.20	2,080
	May 2, 1931	5.55	2,410		Aug. 30, 1944	3.97	1,800
	July 19, 1931	14.65	24,200	1945	Jan. 16, 1945	3.77	1,560
1932	Oct. 23, 1931	8.11	7,080		Apr. 29, 1945	3.15	690
	July 1, 1932	34.4	162,000	1946	Sept.27, 1946	e3.5	1,250
	Sept. 1, 1932	20.38	43,700	1947	Oct. 8, 1946	10.46	15,000
	Sept. 6, 1932	4.60	2,930		June 24, 1947	4.56	2,400
	Sept.21, 1932	2.94	811	1948	June 11, 1948	2.33	195
	Sept.23, 1932	4.06	2,160	1949	Feb. 23, 1949	8.46	10,200
1933	May 25, 1933	2.29	c388		Feb. 25, 1949	16.40	29,300
1934	Apr. 4, 1934	4.75	3,100		Apr. 20, 1949	2.83	810
	May 2, 1934	3.36	1,350		Apr. 24, 1949	3.33	1,310
1935	May 4, 1935	3.71	1,730	1950	May 16, 1950	2.30	370
	May 18, 1935	14.65	24,200	1951	May 15, 1951	10.47	13,900
	May 23, 1935	9.50	11,800		Sept.25, 1951	7.52	7,680
	May 28, 1935	15.35	26,400	1952	May 27, 1952	3.27	906
	May 31, 1935	13.90	22,300	1953	Sept. 1, 1953	4.02	105
	June 5, 1935	3.70	1,730	1954	May 25, 1954	11.29	15,800
	June 14, 1935	29.4	106,000		June 27, 1954	5.73	1,430
	July 24, 1935	17.36	32,600	1955	May 10, 1955	6.10	1,890
	July 27, 1935	3.34	1,320		May 19, 1955	6.66	2,760
	Sept. 3, 1935	3.84	1,910		July 17, 1955	6.60	2,670
	Sept. 8, 1935	10.60	14,200				
1936	Apr. 27, 1936	2.76	780				
	Sept.16, 1936	30.65	119,000				
	Sept.27, 1936	23.0	56,300				
1937	June 4, 1937	2.65	d622				

a Present datum. b Annual peak only. c Maximum peak discharge; maximum discharge, 584 cfs at 12:01 a.m. on Oct. 1, 1932, stage falling. d Maximum peak discharge, 778 cfs at 12:01 a.m. on Oct. 1, 1936, stage falling. e Estimated from weather records.

Peak stages and discharges of Frio River at Concan, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Sept.24, 1955	6.39	2,340	1958	Aug. 11, 1958	6.04	1,890
					Sept.17, 1958	5.24	920
1956	July 3, 1956	4.34	231		Sept.19, 1958	16.12	28,400
					Sept.21, 1958	7.05	3,600
1957	Mar. 17, 1957	5.94	1,690				
	Apr. 24, 1957	10.45	13,400	1959	June 26, 1959	12.20	18,000
	Apr. 27, 1957	7.33	4,140		Sept.23, 1959	5.62	1,270
	Apr. 29, 1957	6.74	2,970				
	May 27, 1957	6.40	2,390	1960	Oct. 4, 1959	7.46	4,340
	June 1, 1957	6.68	2,860		Aug. 11, 1960	5.20	875
	Sept.22, 1957	5.18	812		Aug. 16, 1960	6.23	2,120
1958	Mar. 7, 1958	5.74	1,420	1961	June 18, 1961	7.30	4,000
	June 17, 1958	12.51	18,800		Aug. 20, 1961	5.18	850
	June 22, 1958	7.00	3,400				

8-1960. Dry Frio River near Reagan Wells, Tex. (320)

Location.--Lat 29°30', long 99°47', on right bank 1,000 ft upstream from Aldine School, 2 miles upstream from Rock Creek, and 4 miles southeast of Reagan Wells, Uvalde County.

Drainage area.--117 sq mi.

Gage.--Recording. Datum of gage is 1,335.2 ft above mean sea level, adjustment unknown (levels by Ground Water Branch).

Stage-discharge relation.--Defined by current-meter measurements below 720 cfs and by slope-area measurements at 11,400 and 64,700 cfs.

Historical data.--Floods of 1880 and June 14, 1935, are the highest since at least 1875, from information by local resident.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1880	-	33	-	1956	Oct. 2, 1955	2.67	34
				1957	June 1, 1957	12.0	8,000
1935	June 14, 1935	26	a64,700	1958	Sept.19, 1958	13.72	10,700
				1959	Sept.23, 1959	6.20	2,020
1953	Sept. 1, 1953	2.81	211	1960	Oct. 4, 1959	13.3	10,000
1954	May 25, 1954	14.12	11,400				
1955	Sept.24, 1955	18.68	23,200	1961	June 18, 1961	15.0	13,200

a From slope-area measurement at site 2.6 miles upstream.

8-1975. Frio River below Dry Frio River near Uvalde, Tex. (321)

Location.--Lat 29°14'55", long 99°40'24", on right bank 1 mile upstream from crossing of old Uvalde-Sabinal road, 4.3 miles downstream from Dry Frio River, 5 miles downstream from bridge on U.S. Highway 90, and 7.4 miles northeast of Uvalde, Uvalde County.

Drainage area.--661 sq mi.

Gage.--Nonrecording prior to Sept. 18, 1953; recording thereafter. Sum of records published as Frio River at Knippa and Dry Frio River at Knippa prior to Sept. 18, 1953, is equivalent to record for this station. Datum of gage is 882.47 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs and by slope-area measurements at 53,000 cfs.

Bankfull stage.--19 ft.

Historical data.--Maximum stage since at least 1887 occurred in 1894, from information by local residents. A flood which occurred prior to 1887 was several feet higher than the 1894 flood.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Frio River below Dry Frio River near Uvalde, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	-	35	-	1956	Aug. 20, 1956	2.65	4.0
				1957	May 27, 1957	11.60	10,300
1932	July 1, 1932	30	-	1958	June 17, 1958	19.7	53,000
				1959	June 26, 1959	13.75	21,200
1952	-	-	0	1960	Oct. 4, 1959	10.60	9,940
1953	-	-	0				
1954	May 25, 1954	15.18	24,400	1961	June 18, 1961	8.66	5,060
1955	Sept.24, 1955	11.03	8,680				

8-1980. Sabinal River near Sabinal, Tex. (322)

Location.--Lat 29°30', long 99°29', on right bank 470 ft upstream from low-water crossing on old Sabinal-Utopia road, 3.5 miles downstream from Onion Creek, and 12 miles north of Sabinal, Uvalde County.

Drainage area.--206 sq mi.

Gage.--Recording. Datum of gage is 1,131.20 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and by slope-area measurements at 8,490, 10,600, and 55,200 cfs.

Historical data.--Flood of July 2, 1932, is the highest since at least 1892 according to information from local residents.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	July 2, 1932	a29	-	1954	May 24, 1954	14.18	15,800
					June 26, 1954	3.22	854
1943	Oct. 15, 1942	4.95	2,370				
	Oct. 18, 1942	8.72	7,180	1955	May 19, 1955	2.89	644
	Apr. 8, 1943	2.87	602				
	July 13, 1943	2.72	516	1956	July 2, 1956	5.00	2,420
1944	Mar. 17, 1944	4.75	2,170	1957	Mar. 17, 1957	6.34	3,950
	July 6, 1944	3.55	1,070		Mar. 21, 1957	3.10	775
	Aug. 30, 1944	8.26	6,820		Apr. 24, 1957	10.20	9,300
					Apr. 26, 1957	5.13	2,590
1945	Jan. 18, 1945	7.40	5,650		Apr. 27, 1957	6.75	4,600
	Mar. 29, 1945	5.40	2,880		May 27, 1957	4.28	1,730
	Sept.28, 1945	3.25	855		June 1, 1957	7.05	4,860
					Sept.22, 1957	10.55	9,900
1946	Apr. 25, 1946	5.25	2,720				
	Sept.15, 1946	3.77	1,230	1958	Oct. 15, 1957	3.30	910
	Sept.27, 1946	6.47	4,260		Mar. 7, 1958	8.20	6,340
					Mar. 15, 1958	2.79	536
1947	Oct. 8, 1946	7.40	5,650		June 17, 1958	24.6	55,200
	May 24, 1947	4.76	2,170		June 22, 1958	4.74	2,370
	June 24, 1947	9.60	8,490		Sept.16, 1958	3.14	814
					Sept.20, 1958	8.05	6,200
1948	Sept. 4, 1948	2.26	282				
				1959	Oct. 22, 1958	2.36	522
1949	Oct. 17, 1948	3.17	794		Oct. 27, 1958	2.87	906
	Feb. 25, 1949	7.20	5,320		Oct. 30, 1958	2.46	595
	Apr. 20, 1949	3.25	850		June 25, 1959	11.90	11,900
	Apr. 24, 1949	4.60	2,020				
	Apr. 28, 1949	3.10	745	1960	Oct. 4, 1959	5.20	3,140
	June 7, 1949	2.69	500		July 17, 1960	-	-
					July 20, 1960	-	-
1950	Oct. 22, 1949	3.47	1,010		Aug. 11, 1960	2.63	722
					Aug. 16, 1960	4.73	2,650
1951	May 15, 1951	11.09	10,600		Sept.24, 1960	2.70	760
1952	May 25, 1952	4.96	2,370	1961	Oct. 18, 1960	4.34	1,660
	May 27, 1952	2.91	626		Oct. 29, 1960	3.19	790
					Feb. 16, 1961	2.85	536
1953	Sept. 4, 1953	2.08	202		June 18, 1961	4.95	2,920
1954	Oct. 25, 1953	6.50	4,210				

a Annual peak only.

8-1985. Sabinal River at Sabinal, Tex. (323)

Location.--Lat 29°19', long 99°29', near center of span at downstream side of bridge on U.S. Highway 90, 1,000 ft downstream from Southern Pacific Lines railroad bridge, 0.8 mile west of Sabinal, Uvalde County, and 6.5 miles upstream from Ranchero Creek.

Drainage area.--247 sq mi.

Gage.--Nonrecording prior to July 29, 1958; recording thereafter. Datum of gage is 882.17 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Historical data.--Maximum stage since at least 1890, that of Aug. 24, 1919, from information by local residents. Local residents report that a flood occurred in 1858 that may have been the highest since at least 1850, stage unknown.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	Aug. 24, 1919	40	-	1957	Apr. 27, 1957	10.59	2,580
					May 27, 1957	13.10	5,120
1932	July 2, 1932	a31	60,000		June 1, 1957	11.0	2,920
					Sept.22, 1957	15.3	8,050
1953	Sept. 4, 1953	8.94	1,700				
				1958	Mar. 7, 1958	12.3	4,190
1954	Oct. 26, 1953	7.57	912		June 17, 1958	33.3	73,300
	May 24, 1954	19.56	15,900		June 22, 1958	10.00	2,570
					Sept.17, 1958	7.51	810
1955	Oct. 6, 1954	4.83	51		Sept.20, 1958	13.37	5,580
1956	July 3, 1956	8.40	1,100	1959	June 26, 1959	19.17	15,900
1957	Mar. 17, 1957	8.86	1,340	1960	Oct. 4, 1959	9.30	1,780
	Apr. 22, 1957	9.00	1,430				
	Apr. 24, 1957	15.47	8,350	1961	June 18, 1961	8.17	1,120

a From information by Southern Pacific Lines.

8-2000. Hondo Creek near Tarpley, Tex. (324)

Location.--Lat 29°34', long 99°15', on left bank 460 ft downstream from Ranch Road 462 low-water crossing, 6.2 miles southeast of Tarpley, Bandera County, and 16.7 miles northwest of Hondo.

Drainage area.--86.2 sq mi.

Gage.--Recording. Datum of gage is 1,169.1 ft above mean sea level, adjustment unknown (Magnolia Oil Co. bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 360 cfs and by slope-area measurements at 3,340, 18,600, and 69,800 cfs.

Historical data.--Maximum stage since at least 1907, that of June 17, 1958; second highest, that in July 1932.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	July 1932	26.0	58,500	1957	Sept.22, 1957	17.8	25,300
				1958	June 17, 1958	28.2	69,800
1953	Sept. 4, 1953	7.77	3,340	1959	Apr. 7, 1959	9.20	5,200
1954	May 24, 1954	15.46	18,600	1960	Oct. 4, 1959	10.10	6,640
1955	Mar. 20, 1955	6.02	1,570				
				1961	June 18, 1961	-	8,500
1956	Sept. 6, 1956	4.20	510				

8-2005. Hondo Creek near Hondo, Tex. (325)

Location.--Lat 29°27', long 99°11', on left bank 43 ft upstream from Schlentz's crossing, 7.8 miles northwest of Hondo, Medina County, and 13.5 miles upstream from Verde Creek.

Drainage area.--132 sq mi.

Gage.--Recording. Datum of gage is 986.4 ft above mean sea level (Western Geophysical bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 450 cfs and by slope-area measurements at 12,500 and 71,700 cfs.

Historical data.--Maximum stage since at least 1910, that in September 1919. Second highest stage since 1910, that of June 17, 1958.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	September 1919	25.8	-	1957	Sept.22, 1957	13.5	20,500
				1958	June 17, 1958	23.4	71,700
1953	Sept. 4, 1953	10.34	12,500	1959	Apr. 8, 1959	4.38	2,250
1954	May 24, 1954	10.90	13,700	1960	Oct. 4, 1959	8.50	8,550
1955	Mar. 20, 1955	3.24	1,260				
				1961	June 18, 1961	9.10	9,760
1956	July 3, 1956	2.21	516				

8-2020. Seco Creek near Utopia, Tex. (326)

Location.--Lat 29°33', long 99°24', on right bank half a mile downstream from county road crossing, 7.6 miles upstream from Bartz Spring Creek, and 9 miles southeast of Utopia, Uvalde County.

Drainage area.--53.2 sq mi.

Gage.--Recording. Datum of gage is 1,245.8 ft above mean sea level, adjustment unknown (Magnolia Oil Co. bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 290 cfs and by slope-area measurements at 1,910, 9,040, and 52,600 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 1935	19	40,000	1957	Sept.22, 1957	11.63	12,100
				1958	June 17, 1958	21.4	b52,600
1953	Sept. 2, 1953	5.88	a1,930	1959	Apr. 7, 1959	4.27	657
1954	May 24, 1954	10.3	b9,040	1960	Aug. 15, 1960	4.87	1,040
1955	May 19, 1955	4.23	633				
				1961	June 18, 1961	5.73	1,780
1956	July 3, 1956	3.74	393				

a Result of slope-area measurement at gage.
b Result of slope-area measurement three-quarters of a mile upstream.

8-2025. Seco Creek near D'Hanis, Tex. (327)

Location.--Lat 29°29', long 99°23', on right bank a quarter of a mile downstream from concrete dam and road crossing at Woodward Ranch headquarters, 2.8 miles upstream from Bartz Spring Creek, and 12.8 miles northwest of D'Hanis, Medina County.

Drainage area.--87.4 sq mi.

Gage.--Recording. Datum of gage is 1,142.8 ft above mean sea level (levels by Ground Water Branch).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs and by slope-area measurements at 2,090, 8,110, and 72,000 cfs (adjusted to present site).

Historical data.--Maximum stage since at least 1866, that in May 1935. Flood of Aug. 31, 1894, second highest prior to June 17, 1958, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1894	Aug. 31, 1894	16	33,000	1956	July 3, 1956	3.09	680
				1957	Sept.22, 1957	11.18	12,400
1935	May 1935	26.2	-	1958	June 17, 1958	20.8	72,000
				1959	Oct. 22, 1958	4.21	918
1953	Sept. 2, 1953	5.03	2,090	1960	Oct. 4, 1959	4.27	966
1954	May 24, 1954	9.30	8,110				
1955	Mar. 20, 1955	4.62	1,730	1961	June 18, 1961	6.46	3,370

8-2055. Frio River near Derby, Tex. (328)

Location.--Lat 28°44'10", long 99°08'45", near center of span at downstream side of pier of bridge on U.S. Highway 81, 150 ft upstream from Missouri Pacific Railroad Co. bridge, 750 ft downstream from Leona River, and 2.4 miles south of Derby, Frio County.

Drainage area.--3,493 sq mi.

Gage.--Nonrecording prior to Apr. 22, 1931; recording thereafter. At site 150 ft downstream prior to Mar. 7, 1940. Datum of gage is 449.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and by slope-area measurement at 230,000 cfs.

Bankfull stage.--8 ft.

Historical data.--Maximum stage since at least 1860, that of July 4, 1932. A flood in 1860 deposited a large cypress log which was floated away by the flood of July 4, 1932. Another large rise occurred in 1912 which was not as high as the rises of 1860 or 1932.

Remarks.--Only annual peaks are shown. Considerable losses of floodflows into various permeable formations occur downstream from the Balcones fault zone.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 3, 1916	13.0	15,000	1927	June 6, 1927	3.29	874
1917	Oct. 18, 1916	6.5	2,360	1928	June 4, 1928	5.2	1,480
1918	May 7, 1918	10.1	7,800	1929	May 26, 1929	9.80	7,200
1919	Sept.18, 1919	18.5	34,400	1930	June 17, 1930	6.90	5,400
1920	Oct. 19, 1919	10.3	8,200				
				1931	May 4, 1931	9.28	6,200
1921	June 14, 1921	6.7	2,540	1932	July 4, 1932	29.45	230,000
1922	May 2, 1922	11.4	10,600	1933	Oct. 1, 1932	3.23	1,000
1923	Sept.20, 1923	9.0	5,600	1934	Apr. 6, 1934	2.77	755
1924	June 25, 1924	9.4	6,400	1935	June 2, 1935	23.68	68,300
1925	May 12, 1925	3.34	874				
				1936	Sept.29, 1936	11.52	13,700
1926	Apr. 23, 1926	14.12	18,300	1937	Oct. 1, 1936	7.72	3,540

Peak stages and discharges of Frio River near Derby, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Dec. 31, 1937	3.8	1,290	1951	May 17, 1951	16.04	26,900
1939	July 15, 1939	11.53	13,700	1952	Sept.13, 1952	2.12	436
1940	Oct. 13, 1939	6.23	2,370	1953	Sept. 5, 1953	12.68	15,000
				1954	May 27, 1954	9.64	5,980
1941	Feb. 3, 1941	13.82	20,000	1955	May 21, 1955	4.95	1,550
1942	Sept. 9, 1942	9.06	5,080				
1943	June 7, 1943	9.00	4,900	1956	July 4, 1956	7.92	2,440
1944	Aug. 30, 1944	6.40	2,270	1957	May 29, 1957	11.34	10,400
1945	Sept.30, 1945	9.75	6,460	1958	June 20, 1958	14.84	22,200
				1959	June 28, 1959	9.39	5,560
1946	Sept.29, 1946	9.50	5,800	1960	Oct. 6, 1959	12.17	13,400
1947	June 22, 1947	8.20	3,820				
1948	June 28, 1948	10.83	9,200	1961	June 20, 1961	13.62	17,900
1949	Feb. 27, 1949	10.02	6,900				
1950	Oct. 26, 1949	8.65	4,110				

8-2070. Frio River at Calliham, Tex. (329)

Location.--Lat 28°29'30", long 98°20'45", on right bank at upstream side of county bridge, 0.5 mile upstream from bridge on State Farm to Market Road 99, 1 mile north of Calliham, McMullen County, and 10.4 miles downstream from San Miguel Creek.

Drainage area.--5,491 sq mi.

Gage.--Nonrecording prior to Apr. 30, 1926; recording thereafter. At datum 0.53 ft higher prior to Mar. 9, 1925. Datum of gage is 153.47 ft above mean sea level, datum of 1329.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and extended to 70,000 cfs.

Bankfull stage.--22 ft.

Historical data.--Maximum stage since at least 1870, that of July 6, 1932, from information by local residents.

Remarks.--Considerable losses of floodflows into various permeable formations occur above this station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	-	23.9	6,800	1945	June 19, 1945	19.21	5,070
1925	Mar. 22, 1925	16.10	4,140	1946	Sept. 1, 1946	29.06	15,700
1926	Apr. 28, 1926	a23.40	7,320	1947	Oct. 17, 1946	29.57	17,000
				1948	July 2, 1948	19.18	4,760
1929	May 29, 1929	33	27,000	1949	Apr. 26, 1949	28.10	13,200
				1950	May 13, 1950	14.40	2,770
1932	July 6, 1932	39.2	70,000				
1933	Oct. 4, 1932	12.74	2,340	1951	Sept.14, 1951	26.24	8,070
1934	Apr. 7, 1934	16.85	3,860	1952	Feb. 22, 1952	12.86	2,180
1935	June 6, 1935	33.42	28,600	1953	Sept. 5, 1953	29.14	14,800
				1954	June 27, 1954	16.05	3,100
1936	July 1, 1936	31.73	22,400	1955	May 14, 1955	11.73	2,040
1937	Oct. 4, 1936	21.53	5,390				
1938	Dec. 29, 1937	26.88	12,900	1956	Aug. 28, 1956	25.55	6,660
1939	July 19, 1939	18.38	5,000	1957	June 3, 1957	27.00	8,700
1940	July 1, 1940	24.22	9,490	1958	Feb. 23, 1958	29.95	16,000
				1959	June 28, 1959	21.99	5,100
1941	Sept.18, 1941	31.44	21,900	1960	Oct. 11, 1959	24.72	6,790
1942	July 7, 1942	32.00	23,700				
1943	July 15, 1943	20.65	5,670	1961	June 25, 1961	27.67	10,200
1944	May 30, 1944	26.70	10,400				

a Maximum during period October 1925 to April 1926; probably maximum for year.

8-2080. Atascosa River at Whitsett, Tex. (330)

Location.--Lat 28°37'20", long 98°17'05", on right bank 1,400 ft upstream from bridge on Farm Road 99, 0.9 mile west of Whitsett, Live Oak County, and 4 miles downstream from LaParita Creek.

Drainage area.--1,171 sq mi.

Gage.--Nonrecording prior to May 20, 1932; recording thereafter. At site 1,566 ft downstream at datum 1.38 ft higher Sept. 23, 1924, to May 8, 1926. Datum of gage is 159.04 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Ratings used prior to 1952 are defined by current-meter measurements below 12,000 cfs, by slope-area measurement at 38,300 cfs, and extended to 50,000 cfs. Ratings used since 1952 are defined by current-meter measurements.

Historical data.--Highest stage since at least 1881, that of September 1919.

Remarks.--Considerable loss of floodflow into various permeable formations occur upstream from station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	September 1919	41	50,000	1946	Aug. 30, 1946	33.34	23,300
				1947	Oct. 17, 1946	27.65	10,800
1925	July 12, 1925	17.30	2,780	1948	Aug. 27, 1948	18.93	2,650
				1949	July 27, 1949	30.92	18,200
1933	Oct. 4, 1932	15.65	1,600	1950	July 15, 1950	21.69	3,070
1934	Feb. 1, 1934	19.63	2,760				
1935	June 14, 1935	38.0	38,300	1951	Sept.14, 1951	25.49	6,060
				1952	Sept.10, 1952	22.96	4,000
1936	July 1 or 2, 1936	28.0	11,400	1953	Sept. 5, 1953	25.81	6,550
1937	June 3, 1937	11.36	990	1954	Apr. 9, 1954	13.90	1,050
1938	Dec. 30, 1937	22.77	4,760	1955	Feb. 7, 1955	16.62	1,570
1939	June 1, 1939	17.08	2,280				
1940	June 30, 1940	23.60	5,100	1956	Sept. 3, 1956	22.10	2,960
				1957	May 29, 1957	27.73	8,410
1941	Sept.18, 1941	34.0	25,300	1958	Feb. 23, 1958	32.52	17,500
1942	July 7, 1942	38.3	39,300	1959	Oct. 31, 1958	24.08	3,830
1943	Sept. 7, 1943	15.77	1,530	1960	June 27, 1960	23.12	3,210
1944	May 29, 1944	23.93	5,900				
1945	Apr. 22, 1945	19.71	2,980	1961	June 18, 1961	28.30	9,280

8-2100. Nueces River near Three Rivers, Tex. (331)

Location.--Lat 28°26'10", long 98°11'10", on left bank 100 ft downstream from San Antonio, Uvalde & Gulf (Missouri Pacific) Railroad bridge, half a mile downstream from Frio River, and 2 miles south of Three Rivers, Live Oak County.

Drainage area.--15,600 sq mi.

Gage.--Nonrecording prior to Apr. 5, 1932; recording thereafter. At site 100 ft upstream prior to Apr. 5, 1932. Datum of gage is 101.13 ft above mean sea level, datum of 1929, Houston supplementary adjustment of 1943.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs.

Bankfull stage.--23 ft.

Historical data.--Maximum stage since 1875, that of Sept. 18, 1919. A flood in 1875 is rumored to have been of about the same magnitude as flood in 1919.

Remarks.--Considerable losses of floodflows into various permeable formations occur downstream from the Balcones fault zone. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges of Nueces River near Three Rivers, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915 a/	Aug. 28, 1915	-	2,400	1935	June 7, 1935	39.66	26,500
					June 15, 1935	44.67	66,700
1916	Aug. 25, 1916	30.0	9,550		June 23, 1935	43.68	56,000
	Aug. 28, 1916	26.7	6,050		Aug. 1, 1935	32.08	10,400
					Aug. 7, 1935	27.0	7,300
1917	Nov. 10, 1916	13.05	2,960		Sept. 7, 1935	33.0	11,300
					Sept.10, 1935	25.73	6,700
1918	May 1, 1918	22.2	6,110		Sept.26, 1935	35.77	15,500
	Sept.21, 1918	29.2	9,110				
				1936	May 29, 1936	28.60	8,060
1919	Oct. 24, 1918	28.6	9,000		July 3, 1936	40.1	28,300
	Nov. 4, 1918	23.0	6,400		Sept.29, 1936	30.7	9,340
	Dec. 20, 1918	33.0	11,900				
	Dec. 25, 1918	23.0	6,400	1937	Oct. 5, 1936	29.97	8,860
	Jan. 24, 1919	24.2	6,880				
	May 27, 1919	37.7	20,500	1938	Dec. 30, 1937	35.09	14,300
	Apr. 4, 1919	27.0	8,050		Apr. 26, 1938	29.08	9,150
	June 27, 1919	25.3	7,200				
	July 26, 1919	24.0	6,800	1939	Sept.13, 1939	24.60	6,420
	Sept. 1, 1919	26.5	7,600				
	Sept.18, 1919	46.0	85,000	1940	June 16, 1940	26.7	7,850
	Sept.23, 1919	24.5	7,000		July 3, 1940	37.74	19,600
					Aug. 20, 1940	26.59	7,800
1920	Oct. 1, 1919	32.2	11,000				
	Oct. 8, 1919	32.2	11,000	1941	Feb. 8, 1941	24.36	6,690
	Oct. 19, 1919	36.1	16,200		Apr. 30, 1941	39.44	25,500
	July 6, 1920	28.5	8,500		May 5, 1941	40.12	28,300
					May 23, 1941	23.23	6,260
1921	Mar. 23, 1921	23.9	6,760		June 11, 1941	24.24	6,610
	Apr. 7, 1921	26.2	7,600		July 14, 1941	31.0	9,900
	Sept.10, 1921	29.2	9,800		Sept.19, 1941	41.22	34.400
1922	Apr. 6, 1922	35.2	14,300	1942	July 9, 1942	44.64	55,000
	May 5, 1922	35.4	15,000		Sept. 1, 1942	27.45	6,540
					Sept. 7, 1942	24.93	5,960
1923	Feb. 24, 1923	41.9	39,300		Sept.14, 1942	39.13	22,000
	Mar. 29, 1923	32.8	11,900				
	Apr. 1, 1923	36.0	16,000	1943	June 12, 1943	21.38	5,090
	Aug. 30, 1923	24.50	7,000				
	Sept.19, 1923	26.10	7,600	1944	May 30, 1944	33.33	11,500
					June 3, 1944	34.05	12,300
1924	Dec. 3, 1923	29.4	10,200		Sept. 6, 1944	38.48	20,500
1925	June 10, 1925	36.75	17,600	1945	Apr. 2, 1945	24.49	6,330
					June 19, 1945	25.40	6,670
1926	Apr. 29, 1926	22.7	6,285				
	May 19, 1926	24.45	6,980	1946	Oct. 11, 1945	33.3	11,500
					Oct. 18, 1945	34.25	12,500
1927	June 16, 1927	32.7	11,600		Sept. 1, 1946	38.34	24,600
					Sept.19, 1946	23.97	5,950
1928	Oct. 2, 1927	22.25	6,110		Sept.30, 1946	31.53	9,340
	May 14, 1928	23.9	6,760				
	May 20, 1928	23.0	6,400	1947	Oct. 13, 1946	42.57	40,700
					May 27, 1947	31.6	9,880
1929	Mar. 22, 1929	32.1	11,100				
	May 31, 1929	41.7	37,900	1948	July 3, 1948	22.7	5,950
1930	Oct. 2, 1929	22.7	6,285	1949	Mar. 10, 1949	31.91	10,100
	Apr. 30, 1930	27.7	8,365		Apr. 27, 1949	38.97	22,000
	May 16, 1930	28.5	8,750		July 28, 1949	31.10	9,480
	June 14, 1930	30.8	10,100				
				1950	June 9, 1950	22.74	5,650
1931	May 11, 1931	22.0	6,040				
	July 27, 1931	21.9	6,000	1951	May 23, 1951	22.37	6,030
					May 26, 1951	24.13	6,710
1932	July 8, 1932	43.72	56,000		June 5, 1951	33.75	12,700
	July 15, 1932	35.8	15,600		Sept.15, 1951	37.20	18,800
	Sept. 9, 1932	26.2	6,990				
	Sept.13, 1932	39.75	26,800	1952	May 29, 1952	22.51	5,570
1933	Oct. 5, 1932	23.18	5,980	1953	May 20, 1953	30.05	8,800
					Sept. 6, 1953	37.46	18,100
1934	Jan. 17, 1934	22.35	5,730				
				1954	July 2, 1954	34.36	12,800
1935	Nov. 21, 1934	23.37	6,040				
	May 7, 1935	28.92	8,210	1955	May 14, 1955	14.31	2,890
	May 12, 1935	24.28	6,330				
	May 27, 1935	27.44	7,300	1956	Aug. 29, 1956	24.87	6,700
	June 3, 1935	37.20	17,200				

a Period July 1 to Sept. 30, 1915.

Peak stages and discharges of Nueces River near Three Rivers, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Apr. 26, 1957	31.18	9,060	1959	Oct. 4, 1958	32.04	9,810
	May 3, 1957	39.20	22,200		Nov. 2, 1958	27.45	6,800
	May 10, 1957	34.56	12,500		Nov. 7, 1958	28.50	7,350
	May 14, 1957	33.86	11,800				
	June 3, 1957	38.39	20,200	1960	Oct. 13, 1959	27.98	7,100
	Sept.26, 1957	35.34	13,800		Oct. 16, 1959	36.83	16,500
1958	Jan. 8, 1958	34.32	12,400	1961	Oct. 26, 1960	29.04	7,610
	Jan. 14, 1958	33.34	11,200		Nov. 23, 1960	26.86	6,560
	Jan. 26, 1958	29.81	8,050		Feb. 6, 1961	25.57	6,040
	Feb. 25, 1958	42.99	56,500		June 21, 1961	29.73	8,030
	Sept.29, 1958	26.08	6,200		June 27, 1961	27.95	7,100

8-2110. Nueces River near Mathis, Tex. (332)

Location.--Lat 28°02'17", long 97°51'36", on left bank 6 ft downstream from pier of bridge on State Highway 359, 200 ft downstream from Texas and New Orleans Railroad Co. bridge, 0.6 mile downstream from Wesley E. Seale Dam, and 4 miles southwest of Mathis, San Patricio County.

Drainage area.--16,660 sq mi.

Gage.--Recording. Datum of gage is 27.53 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--28 ft.

Historical data.--Flood of Sept. 20, 1919, was the highest since at least 1888, from information by Texas and New Orleans Railroad Co.

Remarks.--Flow largely regulated by Lake Corpus Christi, 0.8 mile upstream, July 24, 1934, to Apr. 26, 1958. The original capacity in 1934 of 54,000 acre-ft had decreased to 39,400 acre-ft by March 1948. Mathis Dam was submerged by Wesley E. Seale Dam, which was completed Apr. 26, 1958. Flow regulated by Lake Corpus Christi, 0.6 mile upstream, since Apr. 26, 1958. Capacity at spillway crest is 185,900 acre-ft.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	Sept.20, 1919	40	59,000	1946	July 5, 1948	16.29	3,830
				1949	Apr. 30, 1949	29.67	23,000
1931	Nov. 23, 1930	34.1	37,000	1950	June 11, 1950	19.83	5,290
1932	July 12, 1932	34.3	38,000				
				1951	Sept.18, 1951	27.72	15,600
1935	June 18, 1935	36.0	44,000	1952	May 30, 1952	17.45	4,600
				1953	Sept. 9, 1953	28.49	17,200
1940	July 6, 1940	28.53	18,400	1954	July 5, 1954	25.36	11,000
				1955	May 23, 1955	9.25	1,540
1941	May 3, 1941	32.04	29,600				
1942	July 12, 1942	37.38	49,400	1956	Sept. 5, 1956	16.65	3,820
1943	June 13, 1943	19.57	5,070	1957	May 5, 1957	29.05	19,500
1944	Sept. 9, 1944	28.40	19,000	1958	Mar. 1, 1958	32.06	31,400
1945	Apr. 3, 1945	19.20	5,010	1959	Oct. 7, 1958	24.42	8,800
				1960	Oct. 20, 1959	27.35	11,200
1946	Sept. 4, 1946	29.05	20,800				
1947	Oct. 16, 1946	32.92	33,700	1961	Oct. 19, 1960	26.76	10,400

8-3640. Rio Grande at El Paso, Tex. (333)
(Published as "near El Paso" from 1927-28)

Location.--Lat 31°49', long 106°33', 1.7 miles upstream from the American Dam, 5 miles northwest of El Paso, El Paso County, and at mile 1,249.9.

Drainage area.--29,267 sq mi (contributing area), all in the United States.

Gage.--Nonrecording prior to May 1897; nonrecording or recording May 1897 to June 1931; recording thereafter. At site 4 miles downstream at datum 10.56 ft lower May 1889 to June 1893. At site 2 miles downstream at different datum January 1895 to April 1897. At site 1 mile downstream at datum 10.78 ft lower May 1897 to September 1918. At site 1 mile downstream at datum 1.79 ft lower September 1918 to Aug. 3, 1938. Datum of present gage is 3,722.30 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Peak discharge of June 12, 1905, is the highest since at least 1828. Peak discharge of Sept. 3, 1925, was the highest since Elephant Butte Dam was closed in 1915.

Remarks.--Records furnished by International Boundary and Water Commission prior to 1927, and subsequent to June 30, 1931. Records furnished by U.S. Bureau of Reclamation from 1927 to July 31, 1928. Flow regulated since 1915 by Elephant Butte Dam (capacity, 2,206,800 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	May or June 1884	-	16,000	1924	Aug. 16, 1924	3.52	b2,900
				1925	Sept. 3, 1925	-	13,550
1889	May 10,11, 1889	7.60	ab4,700	1926	July 12, 1926	-	5,600
1890	May 30, 1890	8.40	b7,200	1927	July 26, 1927	4.94	5,350
				1928	Aug. 13, 1928	4.40	4,060
1891	May 17, 1891	11.6	b16,600	1929	Aug. 11, 1929	6.18	6,870
1892	May 8, 1892	9.4	10,000	1930	Aug. 8, 1930	4.14	3,310
1893	May 25, 1893	8.2	bc6,630				
				1931	Aug. 3, 1931	5.20	4,710
1895	July 15, 1895	bd12.0	-	1932	Aug. 31, 1932	3.76	2,630
				1933	Aug. 5, 1933	5.78	5,010
1896	July 25, 1896	b9.6	-	1934	Aug. 26, 1934	4.54	3,610
1897	May 27, 1897	15.3	18,200	1935	Aug. 31, 1935	7.56	7,120
1898	July 20, 1898	-	10,200				
1899	July 23, 1899	9.05	b1,900	1936	Aug. 30, 1936	5.25	3,910
1900	June 6, 1900	10.45	b3,550	1937	June 28, 1937	5.96	4,740
				1938	Sept. 2, 1938	7.27	5,350
1901	May 30, 1901	11.0	b3,980	1939	Sept.16, 1939	6.69	3,710
1902	Aug. 29, 1902	9.95	b2,140	1940	June 23, 1940	6.45	3,250
1903	June 21, 1903	14.05	b18,070				
1904	Sept. 6, 1904	6.1	b655	1941	Sept.30, 1941	7.60	5,000
1905	June 12, 1905	15.0	24,000	1942	May 20, 1942	8.67	7,000
				1943	June 30, 1943	7.17	4,020
1906	May 27, 1906	12.5	b8,700	1944	Aug. 19, 1944	7.70	4,800
1907	June 24, Sept. 3, 1907	-	11,000	1945	July 30, 1945	6.74	2,150
1908	Apr. 22, 1908	10.6	b3,420	1946	Apr. 1, 1946	6.09	1,680
1909	May 13, 1909	12.5	b6,850	1947	Oct. 5, 1946	6.70	3,470
1910	May 8, 1910	13.0	b7,720	1948	Apr. 12, 1948	6.62	3,110
				1949	Sept.16, 1949	6.72	3,940
1911	July 25, 1911	14.0	10,600	1950	July 14, 1950	9.40	7,740
1912	June 3, 1912	15.15	16,500				
1913	June 15, 1913	11.6	b3,900	1951	Mar. 26, 1951	6.10	2,840
1914	July 27, 1914	-	b5,570	1952	Aug. 25, 1952	7.00	4,390
1915	June 10, 1915	-	5,500	1953	July 13, 1953	7.30	4,650
				1954	Aug. 21, 1954	6.24	3,690
1917	Oct. 15, 1916	-	6,000	1955	July 20, 1955	7.22	4,800
1918	Aug. 12, 1918	-	b1,900				
1919	May 11, 1919	-	b2,090	1956	Mar. 27, 1956	4.87	752
1920	Aug. 15, 1920	-	b3,170	1957	Aug. 31, 1957	6.81	5,780
				1958	Sept.14, 1958	10.90	11,600
1921	Aug. 19, 1921	-	b3,110	1959	Aug. 24, 1959	7.46	4,410
1922	Aug. 22, 1922	-	b2,400	1960	July 31, 1960	5.99	1,510
1923	Aug. 27, 1923	5.84	4,500				

a Maximum during period May 10 to Sept. 30, 1889; probably maximum for year.
b Maximum daily mean.
c Maximum during period October 1892 to June 30, 1893; probably maximum for year.
d Maximum during period Jan. 25 to Sept. 30, 1895; probably maximum for year.

8-3650. Rio Grande below American Dam, Tex. (334)

Location.--Lat 31°47', long 106°32', 3,200 ft downstream from the American Dam, 1.5 miles upstream from the International Dam, west of El Paso, El Paso County, Tex., and at mile 1,247.6.

Drainage area.--29,271 sq mi (contributing area), all in the United States.

Gage.--Recording June 2, 1938, to Apr. 30, 1939, and after Mar. 1, 1941; nonrecording May 1, 1939, to Mar. 1, 1941. At site 3,200 ft upstream at datum 10.00 ft higher June 2, 1938, to Apr. 30, 1939. At present site at datum 3.98 ft higher May 1, 1939, to Mar. 1, 1941. Datum of gage is 3,712.30 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Maximum discharge since at least 1828, 24,000 cfs June 12, 1905. Maximum discharge since Elephant Butte Dam was closed, 13,550 cfs Sept. 3, 1925.

Remarks.--Records furnished by International Boundary and Water Commission. Flow largely regulated by Elephant Butte Dam since January 1915. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Sept.16, 1939	5.50	2,670	1950	July 14, 1950	10.70	6,240
1940	June 23, 1940	4.85	1,610				
				1951	Mar. 26, 1951	7.26	1,190
1941	Sept.30, 1941	9.81	5,090	1952	Aug. 25, 1952	8.31	3,100
1942	May 18, 1942	9.77	6,770	1953	July 13, 1953	7.95	3,440
1943	June 30, 1943	7.93	3,250	1954	Aug. 21, 1954	7.85	3,210
1944	Sept.25, 1944	8.17	3,640	1955	July 20, 1955	10.16	4,800
1945	July 30, 1945	6.60	945				
				1956	Mar. 28, 1956	7.60	832
1946	Oct. 10, 1945	6.52	798	1957	Aug. 31, 1957	10.95	4,610
1947	Aug. 13, 1947	7.94	3,150	1958	Sept.14, 1958	14.50	11,300
1948	June 20, 1948	7.22	1,900	1959	Aug. 24, 1959	10.50	3,980
1949	Sept.16, 1949	7.50	2,920	1960	Mar. 8, 1960	6.17	4,570

8-3660. Rio Grande at Juarez, Chihuahua, Mexico (335)

Location.--Lat 31°45', long 106°26', 2.9 miles downstream from El Paso, Tex., and Juarez, Chihuahua, Mexico, 4.9 miles downstream from the Mexican Dam, 7.0 miles downstream from the American Dam, and at mile 1,241.2.

Drainage area.--29,350 sq mi (contributing area), of which 38 sq mi is in Mexico and 29,312 sq mi is in the United States.

Gage.--Recording. Datum of gage is 3,683.98 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At datum 3.28 ft higher prior to Jan. 1, 1943.

Remarks.--Records furnished by International Boundary and Water Commission. Flow largely regulated by Elephant Butte Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Sept. 2, 1938	9.74	a5,010	1947	Aug. 18, 1947	6.79	3,140
1939	Sept.16, 1939	8.07	3,270	1948	June 20, 1948	6.66	2,910
1940	June 23, 1940	7.25	2,710	1949	Sept.16, 1949	6.79	3,110
				1950	July 14, 1950	10.83	6,140
1941	Aug. 13, 1941	8.66	5,190				
1942	May 18, 1942	8.04	6,600	1951	Mar. 26, 1951	6.04	2,490
1943	June 30, 1943	7.38	3,850	1952	Aug. 25, 1952	7.25	2,680
1944	Sept.26, 1944	7.22	4,170	1953	Mar. 16, 1953	5.15	1,550
1945	Apr. 9, 1945	4.69	1,570	1954	Aug. 23, 1954	7.94	6,290
				1955	July 21, 1955	9.88	7,630
1946	Oct. 10, 1945	5.51	2,240				

a Maximum for period Apr. 1 to Sept.30, 1938; probably maximum for year.

8-3665. Rio Grande at Island Station near El Paso, Tex. (336)

Location.--Lat 31°32', long 106°15', in the rectified channel near Clint, El Paso County, Tex., and San Augustin, Chihuahua, Mexico, 27.1 miles downstream from the American Dam, and at mile 1,221.1.

Drainage area.--29,951 sq mi (contributing area), of which 493 sq mi is in Mexico and 29,458 sq mi is in the United States.

Gage.--Recording. Datum of gage is 3,608.99 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Sept.16, 1939	14.62	2,970	1950	July 14, 1950	14.76	4,770
1940	June 23, 1940	13.68	1,640				
				1951	Mar. 26, 1951	11.80	1,300
1941	Sept.30, 1941	15.60	4,360	1952	Aug. 26, 1952	14.25	670
1942	May 19, 1942	16.06	6,490	1953	July 13, 1953	13.69	2,380
1943	June 30, 1943	12.34	3,140	1954	Aug. 23, 1954	12.22	1,990
1944	Sept.26, 1944	12.32	3,540	1955	July 21, 1955	13.67	3,660
1945	Apr. 1, 1945	11.65	1,790				
				1956	Jan. 29, 1956	9.10	26
1946	Oct. 10, 1945	11.77	1,940	1957	Aug. 31, 1957	13.50	2,900
1947	Aug. 17, 1947	12.50	2,440	1958	Sept.14, 1958	15.80	7,050
1948	June 20, 1948	12.07	1,660	1959	Oct. 14, 1958	12.55	2,450
1949	Sept.16, 1949	12.82	2,460	1960	July 14, 1960	12.35	1,170

8-3670. Rio Grande at Tornillo Bridge near Fabens, Tex. (337)

Location.--Lat 31°26', long 106°08', at bridge 2 miles west of Tornillo, El Paso County, Tex., 3.7 miles north of Guadalupe, Chihuahua, Mexico, 4.5 miles southeast of Fabens, El Paso County, and at mile 1,211.2.

Gage.--Recording. Datum of gage is 3,578.63 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At datum 10 ft higher prior to Feb. 12, 1926.

Remarks.--Records furnished by International Boundary and Water Commission prior to Oct. 1, 1927, and subsequent to June 30, 1931, and by U.S. Bureau of Reclamation Oct. 1, 1927, to July 30, 1928. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Sept. 1, 1924	3.97	1,700	1931	Aug. 6, 1931	14.35	2,650
1925	Sept. 5, 1925	-	a6,500	1932	Sept.30, 1932	12.63	1,350
				1933	Aug. 8, 1933	13.36	1,680
1926	July 15, 1926	14.19	2,280	1934	Feb. 7, 1934	12.17	828
1927	July 31, 1927	13.91	2,030	1935	Sept. 1, 1935	16.30	5,130
1928	Aug. 15, 1928	12.92	1,710				
1929	Aug. 14, 1929	14.72	3,440	1936	Aug. 31, 1936	14.53	1,880
1930	Aug. 12, 1930	12.63	1,640	1937	May 31, 1937	14.72	2,410

a Maximum daily.

8-3695. Rio Grande at County Line Station near El Paso, Tex. (338)

Location.--Lat 31°23', long 106°00', on the rectified channel 0.8 mile downstream from El Paso-Hudspeth County line, 47.3 miles downstream from the American Dam at El Paso, and at mile 1,200.9.

Drainage area.--30,610 sq mi (contributing area), of which 667 sq mi is in Mexico and 29,943 sq mi is in the United States.

Gage.--Recording. Datum of gage is 3,547.9 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Sept. 3, 1938	6.39	a4,050	1950	July 14, 1950	6.83	3,530
1939	Sept.16, 1939	6.08	2,980				
1940	June 24, 1940	4.66	1,550	1951	Oct. 7, 1950	3.82	392
				1952	June 4, 1952	2.63	11
1941	Sept.30, 1941	6.40	3,450	1953	July 13, 1953	5.65	577
1942	May 19, 1942	8.66	8,340	1954	Aug. 24, 1954	4.70	357
1943	Oct. 2, 1942	6.06	3,010	1955	July 21, 1955	4.82	640
1944	Sept.27, 1944	5.80	3,150				
1945	Apr. 1, 1945	4.57	1,590	1956	-	-	0
				1957	Sept. 1, 1957	5.51	1,300
1946	Oct. 10, 1945	5.06	1,940	1958	Sept.15, 1958	7.29	5,180
1947	Aug. 18, 1947	5.53	4,340	1959	Oct. 15, 1958	4.48	1,450
1948	July 25, 1948	4.05	728	1960	July 10, 1960	5.08	1,480
1949	Sept.16, 1949	5.28	2,370				

a Maximum for period Jan. 1 to Sept. 30, 1938; probably maximum for year.

8-3705. Rio Grande at Fort Quitman, Tex. (339)

Location.--Lat 31°05', long 105°33', on the rectified channel of the Rio Grande, 1.5 miles downstream from Fort Quitman, 11.5 miles south of Finlay, Hudspeth County, Tex., and at mile 1,167.1.

Drainage area.--32,035 sq mi (contributing area), of which 30,606 sq mi is in the United States and 1,429 sq mi is in Mexico.

Gage.--Nonrecording prior to Jan. 15, 1926; recording thereafter. At site 1,142 ft upstream at datum 3.49 ft higher prior to Apr. 22, 1936. At several sites at different datum Apr. 22, 1936, to Jan. 6, 1938. Datum of gage is 3,450.57 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Peak discharge for June 20, 1905, is maximum known since at least 1828.

Remarks.--Records furnished by the International Boundary and Water Commission prior to Oct. 1, 1926, and subsequent to June 30, 1931, and by the State of Colorado Engineering Department Oct. 1, 1926, to Sept. 15, 1928. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 20, 1905	-	17,000	1935	Aug. 31, 1935	6.48	2,140
1923a/	Aug. 26, 1923	6.7	2,600	1936	Aug. 20, 1936	4.76	1,840
1924	July 10, 1924	5.83	b2,200	1937	Sept.11, 1937	7.10	3,040
1925	Sept.11, 1925	7.02	b2,600	1938	Sept. 8, 1938	6.12	3,180
				1939	July 30, 1939	6.88	3,390
1926	Sept.26, 1926	6.46	b2,450	1940	Aug. 26, 1940	8.85	6,620
1927	Sept.21, 1927	4.68	b1,440				
1928	Aug. 15, 1928	4.97	b1,730	1941	June 5, 1941	10.68	9,780
1929	Aug. 20, 1929	6.38	2,460	1942	Apr. 22, 1942	9.69	6,540
1930	Aug. 14, 1930	4.64	1,360	1943	July 1, 1943	5.60	2,840
				1944	July 24, 1944	6.90	3,750
1931	Apr. 17, 1931	6.05	2,330	1945	Apr. 2, 1945	3.93	1,860
1932	Sept.30, 1932	5.87	1,820				
1933	Oct. 5, 1932	5.34	1,530	1946	Oct. 6, 1945	8.42	7,570
1934	Oct. 13, 1933	6.19	1,850	1947	Oct. 5, 1946	10.00	10,600

a Period Jan. 1 to Sept. 30.
b Maximum daily mean.

Peak stages and discharges of Rio Grande at Fort Quitman, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Aug. 29, 1948	7.26	5,290	1955	Aug. 20, 1955	7.64	2,400
1949	Sept.19, 1949	7.32	4,170				
1950	Sept.24, 1950	8.03	5,490	1956	Aug. 2, 1956	8.74	4,380
				1957	Aug. 30, 1957	7.24	2,300
1951	Aug. 30, 1951	10.76	10,400	1958	Sept.11, 1958	10.55	4,750
1952	July 15, 1952	6.16	2,780	1959	May 23, 1959	9.61	3,560
1953	July 13, 1953	10.40	9,660	1960	July 9, 1960	9.90	2,460
1954	Aug. 6, 1954	7.15	3,250				

8-3710. Rio Grande at La Nutria, Tex. (340)

Location.--Lat 30°14', long 104°43', at La Nutria, 9.5 miles upstream from Candelaria, Tex., and San Antonio, Chihuahua, Mexico, 64 miles upstream from Presidio, Tex., and at mile 1,040.3.

Drainage area.--33,672 sq mi (contributing area), of which 31,647 sq mi is in the United States and 2,025 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 2,871.42 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935a/	Aug. 31, 1935	13.20	7,480	1939	Aug. 16, 1939	7.22	2,300
				1940	Oct. 23, 1939	8.88	4,140
1936	Sept.25, 1936	11.06	6,190				
1937	Aug. 21, 1937	9.45	3,060	1941	Sept.25, 1941	10.82	6,880
1938	Sept.14, 1938	10.00	5,670				

a For period January to September.

8-3715. Rio Grande above Presidio, Tex. (upper Presidio station) (341)

Location.--Lat 29°37', long 104°29', 7.8 miles upstream from the Rio Conchos, 10 miles northwest of Presidio, Presidio County, Tex., and Ojinaga, Chihuahua, Mexico, and at mile 962.5.

Drainage area.--34,988 sq mi (contributing area), of which 32,227 sq mi is in the United States and 2,761 sq mi is in Mexico.

Gage.--Nonrecording prior to Aug. 31, 1923; recording thereafter. Datum of gage is 2,576.66 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At site 1 mile downstream at different datum May 1900 to Sept. 8, 1905, and July 1909 to March 1914. At site 7 miles upstream at different datum Sept. 8, 1905, to July 1909. At site 50 ft downstream at datum 3.00 ft higher Aug. 1, 1923, to June 14, 1948.

Remarks.--Records furnished by International Boundary and Water Commission. Flow largely regulated by upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	June 13, 1900	6.5	a2,380	1910	May 15, 1910	-	7,100
1901	Sept. 5, 1901	5.8	b1,780	1911	July 10, 1911	-	8,000
1902	July 23, 1902	7.4	b2,740	1912	June 13, 1912	14.85	b13,000
1903	July 8,9, 1903	8.0	b6,600	1913	May 10, 1913	8.7	b1,380
1904	Sept. 6, 1904	7.25	b2,140				
1905	June 14, 1905	9.12	14,000	1925	Aug. 12, 1925	9.71	3,800
1906	June 3, 1906	-	7,800	1927	Oct. 4, 1926	b10.39	b3,400
1907	Sept. 8, 1907	7.7	b6,830	1928	Aug. 18, 1928	-	6,400
1908	Apr. 26,Aug.5, 1908	5.7	b2,510	1929	Sept.10, 1929	-	5,500
				1930	Aug. 11, 1930	b9.72	b2,450
1909	Sept.15, 1909	11.15	b6,060				

a Maximum during period April to September 1900; probably maximum for year.
b Daily mean.

Peak stages and discharges of Rio Grande above Presidio, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Sept.24, 1931	10.56	4,850	1946	Oct. 6, 1945	6.90	2,550
1932	Oct. 1, 1931	8.86	2,400	1947	Oct. 8, 1946	8.40	3,290
1933	Oct. 2, 1932	13.20	3,200	1948	Sept. 9, 1948	7.68	1,710
1934	Aug. 27, 1934	4.59	1,770	1949	Sept.20, 1949	8.64	1,920
1935	July 3, 1935	4.81	1,970	1950	July 31, 1950	10.08	1,580
1936	Sept.28, 1936	7.33	2,730	1951	Oct. 1, 1950	10.93	1,720
1937	July 12, 1937	5.04	2,020	1952	June 28, 1952	9.00	1,020
1938	July 25, 1938	7.36	2,520	1953	July 14, 1953	7.70	731
1939	Aug. 16, 1939	5.14	1,640	1954	Aug. 29, 1954	12.60	1,220
1940	Sept. 3, 1940	6.08	2,040	1955	Sept.25, 1955	12.63	1,010
1941	May 24, 1941	9.70	c3,440	1956	Oct. 4, 1955	12.36	960
1942	May 26, 1942	10.57	5,160	1957	June 18, 1957	11.30	632
1943	July 2, 1943	5.57	d1,960	1958	Sept.27, 1958	13.99	1,320
1944	July 24, 1944	5.85	2,130	1959	Oct. 20, 1958	-	e532
1945	July 4, 1945	8.74	3,600	1960	Aug. 13, 1960	12.21	568

c Maximum peak discharge; maximum discharge during year, 3,970 cfs Sept. 30, 1941, stage rising.
d Maximum peak discharge; maximum discharge during year, 2,420 cfs Oct. 1, 1942, stage falling.
e Maximum daily; maximum peak discharge occurred on this day. Maximum discharge during year, 954 cfs Oct. 1, 1958, stage falling.

8-3725. Rio Conchos at Cuchillo Parado, Chihuahua, Mexico (342)

Location.--Lat 29°26', long 104°53', 3.1 miles north of Cuchillo Parado, Chihuahua, Mexico, 28.6 miles west of Ojinaga, Chihuahua, and 49.1 river miles above mouth.

Drainage area.--28,147 sq mi, all in Mexico.

Gage.--Recording. Datum of gage is 2,914.23 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Flow is regulated by irrigation diversions and upstream reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 8, 1945	10.96	a14,870	1951	Oct. 2, 1950	9.22	8,580
				1952	July 12, 1952	17.19	39,200
1946	Oct. 9, 1945	15.85	34,360	1953	June 9, 1953	7.22	4,310
1947	Sept. 9, 1947	9.97	11,720	1954	Aug. 22, 1954	13.78	22,760
1948	Sept. 9, 1948	7.97	4,450	1955	July 20, 1955	11.29	b10,240
1949	Aug. 11, 1949	11.29	14,060				
1950	July 17, 1950	11.68	15,860				

a Maximum for period January to September 1945; probably maximum for year.
b Maximum for period October 1954 to August 1955; probably exceeded by flood of Sept. 24, 1955.

8-3730. Rio Conchos near Ojinaga, Chihuahua, Mexico (343)

Location.--Lat 29°34', long 104°25', 1.9 miles west of Ojinaga, Chihuahua, Mexico, 3.7 miles west of Presidio, Tex., and 1.5 miles upstream from mouth.

Drainage area.--29,267 sq mi, all in Mexico.

Gage.--Recording. Datum of gage is 2,568.04 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Very large floods are reported to have occurred in 1829 and in 1868.

Remarks.--Records furnished by the International Boundary and Water Commission. Flow regulated by upstream reservoirs and diversions. Total capacity of reservoirs, 2,797,000 acre-ft. Only annual peaks are shown.

Peak stages and discharges of Rio Conchos near Ojinaga, Chihuahua, Mexico

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Sept.11, 1904	-	a162,000	1957	June 18, 1957	15.55	13,350
				1958	Sept.28, 1958	17.98	54,740
1954	Aug. 25, 1954	16.40	b13,670	1959	Oct. 2, 1958	17.75	50,500
1955	Sept.24, 1955	14.04	11,510	1960	Aug. 12, 1960	16.27	11,340
1956	Oct. 4, 1955	15.03	11,650				

a Maximum since at least 1896, probably maximum for year. b Maximum for period April to September 1954;

8-3735. Rio Grande above Presidio, Tex. (lower Presidio station) (344)

Location.--Lat 29°34', long 104°25', 1.7 miles upstream from International Bridge between Presidio, Presidio County, Tex., and Ojinaga, Chihuahua, Mexico, 2.0 miles downstream from the Rio Conchos, 11.4 miles upstream from Alamito Creek, and at mile 952.7.

Drainage area.--64,285 sq mi (contributing area), of which 32,248 sq mi is in the United States and 32,037 sq mi is in Mexico.

Gage.--Nonrecording prior to June 18, 1924; recording thereafter. At site 5½ miles downstream at unknown datum prior to June 14, 1932. Datum of gage is 2,556.42 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Flow regulated by reservoirs in the United States and Mexico. Only annual peaks are shown. Except for 1904 and 1925, figures shown prior to 1928 are daily means.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Aug. 6, 1900	12.6	14,920	1932	Sept.12, 1932	16.50	82,550
				1933	Oct. 2, 1932	18.21	106,450
1901	Sept.18, 1901	10.0	5,410	1934	Oct. 7, 1933	5.90	6,230
1902	Sept. 7, 1902	17.95	45,000	1935	Sept. 5, 1935	8.93	14,800
1903	July 9, 1903	9.8	7,200				
1904	Sept.11, 1904	26.35	162,000	1936	Sept.26, 1936	12.66	26,700
1905	Oct. 16, 1904	12.75	18,900	1937	Sept.24, 1937	8.90	14,900
				1938	Sept.22, 1938	16.69	68,100
1906	Aug. 28, 1906	16.5	37,400	1939	Aug. 8, 1939	7.92	14,500
1907	Sept. 8, 1907	12.4	13,500	1940	May 8, 1940	10.22	25,200
1908	Aug. 11, 1908	17.6	34,000				
1909	July 10, 1909	12.8	14,820	1941	May 25, 1941	13.50	31,600
1910	June 29, 1910	11.35	6,910	1942	Sept. 8, 1942	17.57	59,400
				1943	Oct. 1, 1942	9.45	14,100
1911	June 15, 1911	16.45	30,190	1944	Sept.14, 1944	16.66	43,900
1912	Sept.15, 1912	17.0	22,400	1945	July 9, 1945	8.84	14,800
1913	Sept. 9, 1913	13.5	9,830				
				1946	Oct. 10, 1945	13.15	23,900
1923	Sept.15, 1923	24.93	38,420	1947	Oct. 4, 1946	8.95	12,700
1924	Jan. 1, 1924	17.59	6,600	1948	July 31, 1948	6.98	7,860
1925	Sept. 7, 1925	21.65	18,250	1949	Aug. 11, 1949	9.21	11,100
				1950	Sept.22, 1950	-	11,000
1926	Aug. 27, 1926	20.34	13,400				
				1951	Oct. 1, 1950	8.67	8,310
1928	August 1928	-	14,400	1952	July 14, 1952	15.57	22,500
1929	July 30, 1929	17.09	4,450	1953	June 10, 1953	6.38	4,100
1930	Aug. 11, 1930	19.88	13,000	1954	Aug. 25, 1954	14.59	14,200
1931	Sept.24, 1931	18.24	9,500				

a Except for water years 1904 and 1925, figures shown prior to 1928 are daily means.

8-3740. Alamito Creek near Presidio, Tex. (345)

Location.--Lat 29°31', long 104°18', 1,800 ft upstream from mouth and 6 miles downstream from Presidio, Presidio County, Tex., and Ojinaga, Chihuahua, Mexico.

Drainage area.--1,504 sq mi, all in the United States.

Gage.--Recording. Datum of gage is 2,541.61 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Only annual peaks are shown.

RIO GRANDE BASIN

Peak stages and discharges of Alamito Creek near Presidio, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Aug. 27, 1933	4.45	4,490	1947	Aug. 15, 1947	6.30	8,320
1934	Aug. 25, 1934	4.04	8,200	1948	July 31, 1948	6.17	7,910
1935	Sept. 4, 1935	4.90	7,250	1949	July 25, 1949	5.27	2,940
				1950	July 31, 1950	5.95	7,250
1936	May 28, 1936	5.11	7,120				
1937	July 20, 1937	5.33	9,670	1951	Sept.10, 1951	6.89	9,600
1938	Oct. 13, 1937	5.25	8,000	1952	July 8, 1952	6.99	13,900
1939	June 21, 1939	5.10	4,600	1953	July 26, 1953	5.55	6,290
1940	Aug. 12, 1940	4.57	2,700	1954	June 5, 1954	7.18	15,200
				1955	Sept.24, 1955	7.33	16,400
1941	June 28, 1941	6.68	9,550				
1942	Oct. 24, 1941	5.64	6,450	1956	Oct. 4, 1955	6.30	7,000
1943	May 28, 1943	5.84	6,950	1957	Sept.22, 1957	7.05	14,300
1944	Sept. 4, 1944	5.72	4,400	1958	June 17, 1958	6.72	10,500
1945	July 3, 1945	5.98	7,400	1959	June 3, 1959	7.96	9,100
				1960	Aug. 11, 1960	6.57	4,100
1946	Sept.19, 1946	5.46	4,300				

8-3742. Rio Grande below Presidio, Tex. (lower Presidio station) (346)

Location.--Lat 29°31', long 104°17', 0.4 mile downstream from Alamito Creek, 10.1 miles downstream from the International Highway bridge between Presidio, Presidio County, Tex., and Ojinaga, Chihuahua, Mexico, and at mile 940.9.

Drainage area.--66,203 sq mi (contributing area), of which 34,098 sq mi is in the United States and 32,105 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 2,527.99 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Flow regulated by reservoirs in the United States and Mexico. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Sept.24, 1955	13.75	a12,800	1958	Sept.28, 1958	21.26	53,900
				1959	Oct. 1, 1958	20.37	54,300
1956	Oct. 4, 1955	11.74	9,390	1960	Aug. 24, 1960	10.17	9,160
1957	June 18, 1957	10.50	7,090				

a Maximum for period January to September 1955; probably maximum for year.

8-3745. Terlingua Creek near Terlingua, Tex. (347)

Location.--Lat 29°12', long 103°36', 2.7 miles upstream from mouth and 12 miles south of Terlingua, Brewster County, Tex.

Drainage area.--1,070 sq mi, all in the United States.

Gage.--Recording. At site 0.3 mile downstream at datum 4.65 ft lower prior to June 11, 1954. At present site at datum 2.88 ft higher June 11, 1954, to June 7, 1956. Datum of gage is 2,200.64 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 28, 1932	15.3	a24,080	1939	June 21, 1939	13.40	20,400
1933	Sept. 3, 1933	10.2	8,430	1940	May 8, 1940	9.95	7,390
1934	Oct. 10, 1933	14.8	22,090				
1935	May 24, 1935	17.59	34,900	1941	Oct. 12, 1940	10.70	9,200
				1942	Oct. 1, 1941	10.51	8,990
1936	May 27, 1936	15.40	29,500	1943	Sept. 3, 1943	5.66	1,900
1937	June 1, 1937	16.20	29,100	1944	Aug. 26, 1944	7.65	4,000
1938	July 19, 1938	12.60	17,900	1945	July 3, 1945	6.62	2,560

a Maximum for period January to September 1932; probably maximum for year.

Peak stages and discharges of Terlingua Creek near Terlingua, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept.16, 1946	10.00	7,800	1954	Apr. 14, 1954	7.82	7,260
1947	June 30, 1947	5.72	1,880	1955	May 4, 1955	11.22	18,000
1948	July 24, 1948	5.56	3,550				
1949	June 11, 1949	7.01	5,800	1956	July 30, 1956	7.05	4,150
1950	July 17, 1950	9.85	11,700	1957	Sept.21, 1957	10.9	13,000
				1958	Sept.25, 1958	10.15	21,400
1951	June 3, 1951	8.02	7,660	1959	July 20, 1959	10.70	16,000
1952	July 8, 1952	8.14	7,890	1960	Aug. 29, 1960	10.80	23,600
1953	July 14, 1953	8.30	8,200				

8-3750. Rio Grande at Johnson Ranch, Tex. (348)

Location.--Lat 29°02', long 103°24', 2 miles upstream from Johnson Ranch, 14 miles downstream from Castolon, Brewster County, Tex., and Santa Elena Ranch, Chihuahua, Mexico, and at mile 855.3.

Drainage area.--70,715 sq mi (contributing area), of which 36,261 sq mi is in the United States and 34,454 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 2,045.30 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Flow regulated by reservoirs in the United States and in Mexico. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Oct. 3, 1932	24.6	a97,000	1948	Aug. 1, 1948	6.23	8,780
				1949	June 11, 1949	12.56	28,900
1936b/	Sept.27, 1936	14.15	32,400	1950	Sept.24, 1950	13.25	28,200
1937	June 2, 1937	12.55	26,000				
1938	Sept.23, 1938	19.75	58,800	1951	Oct. 2, 1950	10.35	17,900
1939	June 21, 1939	8.15	11,800	1952	July 8, 1952	15.32	35,900
1940	May 9, 1940	10.01	18,300	1953	July 14, 1953	6.87	8,120
				1954	June 14, 1954	11.90	19,300
1941	Sept.23, 1941	13.78	32,200	1955	Sept.25, 1955	12.45	21,000
1942	Sept.10, 1942	19.65	57,700				
1943	Oct. 1, 1942	9.49	16,100	1956	Oct. 5, 1955	8.64	10,300
1944	Sept.15, 1944	15.50	38,600	1957	May 30, 1957	12.35	20,900
1945	July 4, 1945	9.65	18,000	1958	Sept.27, 1958	24.70	61,900
				1959	Oct. 4, 1958	22.93	52,500
1946	Sept.16, 1946	10.39	25,000	1960	Aug. 30, 1960	10.86	12,500
1947	Sept.10, 1947	10.30	20,700				

a Estimated.
b Maximum for period Apr. 1 to Sept. 30.

8-3755. Rio Grande at Boquillas, Tex. (349)

Location.--Lat 29°11', long 102°56', a quarter of a mile south of Boquillas, Brewster County, 4 miles downstream from Tornillo Creek, and at mile 800.5.

Drainage area.--75,954 sq mi (contributing area) of which 36,732 sq mi is in the United States and 39,222 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 1,802.73 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Flow regulated by reservoirs in the United States and Mexico. Only annual peaks are shown.

Peak stages and discharges of Rio Grande at Boquillas, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	September 1904	32.4	158,000	1931	Oct. 5, 1930	9.60	19,000
				1932	Sept.13, 1932	-	87,000
1928	Aug. 27, 1928	8.38	a16,200	1933	Oct. 4, 1932	24.50	95,030
1929	Sept.11, 1929	11.90	27,600	1934	Oct. 14, 1933	7.60	13,550
1930	Aug. 15, 1930	6.39	10,400	1935	June 12, 1935	8.80	19,200

a Maximum during period June to September 1928; probably maximum for year.

8-3775. Rio Grande at Langtry, Tex. (350)
(Published as "near Langtry" 1900-15)

Location.--Lat 29°48', long 101°34', at Langtry, Val Verde County, 24.1 miles upstream from Pecos River, and at mile 634.1.

Drainage area.--84,795 sq mi (contributing area), of which 42,855 sq mi is in the United States and 41,940 sq mi is in Mexico.

Gage.--Nonrecording prior to June 2, 1928; recording thereafter. At site 900 ft downstream at approximately the same datum prior to May 10, 1928. Datum of gage is 1,091.69 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission prior to January 1924 and subsequent to June 30, 1931. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Apr. 6, 1900	-	77,000	1933	Oct. 5, 1932	29.27	77,610
				1934	Oct. 14, 1933	8.70	14,630
1901	Sept. 8, 1901	8.45	a14,700	1935	Sept. 4, 1935	46.70	149,000
1902	Sept. 9, 1902	-	39,000				
1903	June 12, 1903	8.95	a18,000	1936	Sept.24, 1936	16.98	32,600
1904	Sept.13, 1904	-	138,000	1937	June 4, 1937	14.03	25,900
1905	June 30, 1905	-	33,000	1938	Sept.26, 1938	24.78	57,300
				1939	Aug. 9, 1939	9.32	15,700
1906	Aug. 11, 1906	-	57,200	1940	May 22, 1940	13.68	25,800
1907	Sept.20, 1907	7.75	a16,060				
1908	Aug. 14, 1908	-	33,000	1941	May 2, 1941	14.48	35,200
1909	July 12, 1909	7.55	a16,510	1942	Sept.12, 1942	24.93	58,900
1910	Sept. 6, 1910	4.1	a7,550	1943	Oct. 1, 1942	11.25	20,600
				1944	Sept.17, 1944	17.35	33,300
1911	May 16, 1911	-	43,000	1945	July 11, 1945	15.90	31,600
1912	Sept.19, 1912	-	28,500				
1913	Sept.10, 1913	5.8	a11,810	1946	Oct. 7, 1945	16.04	31,900
				1947	May 11, 1947	12.40	22,300
1919	Sept.16, 1919	46.9	152,000	1948	July 3, 1948	6.46	9,740
				1949	June 26, 1949	12.76	23,200
1922	June 18, 1922	56.9	b204,000	1950	July 13, 1950	14.00	27,500
1924	June 2, 1924	-	a5,000	1951	May 24, 1951	10.44	18,000
1925	May 29, 1925	18.0	38,500	1952	July 16, 1952	12.70	18,600
				1953	Sept. 3, 1953	6.14	8,060
1926	Aug. 25, 1926	10.72	24,500	1954	June 27, 1954	49.87	169,000
1927	July 2, 1927	11.34	25,600	1955	Sept.25, 1955	18.68	39,100
1928	Aug. 9, 1928	19.4	46,400				
1929	Sept.12, 1929	11.15	22,000	1956	Oct. 7, 1955	7.58	9,710
1930	Aug. 16, 1930	6.15	9,700	1957	Oct. 18, 1956	18.45	34,400
				1958	Sept.29, 1958	30.47	56,900
1931	Oct. 7, 1930	7.98	14,400	1959	Oct. 6, 1958	28.85	54,100
1932	Sept.29, 1932	25.67	64,070	1960	Aug. 27, 1960	14.98	24,100

a Daily mean discharge.
b Estimated by rating curve extension.

8-4065. Pecos River near Malaga, N. Mex. (351)

Location.--Lat 32°12'30", long 104°01'20", in NE¼ sec.19, T.24 S., R.29 E., on right bank 3 miles southeast of Malaga and 4 miles downstream from Black River.

Drainage area.--19,190 sq mi (contributing area).

Gage.--Recording. At datum 3.0 ft higher prior to Mar. 25, 1949. Datum of gage is 2,895.64 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 23,000 cfs and extended above by logarithmic plotting. Relation subject to moderate shifting.

Bankfull stage.--30 ft.

Historical data.--Flood of September 1941 is believed to be the greatest since October 1904 when a flood of about the same magnitude occurred.

Remarks.--Records for 1920-36 furnished by U.S. Bureau of Reclamation. Some peak discharges are affected by regulation at McMillan and Avalon Dams. Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	September 1919	26.4	40,400	1932	June 27, 1932	7.40	3,000
					Sept.26, 1932	9.85	5,910
1921	June 3, 1921	8.05	3,440		Sept.30, 1932	16.0	17,800
	June 8, 1921	12.85	22,000				
	June 14, 1921	7.93	3,270	1933	Oct. 4, 1932	10.1	a6,270
	June 18, 1921	9.97	7,940		Sept.14, 1933	7.40	3,000
	July 11, 1921	8.07	3,480				
	July 14, 1921	6.74	1,920	1934	Apr. 30, 1934	6.20	2,010
	July 31, 1921	7.1	2,250				
	Aug. 8, 1921	7.15	2,300	1935	June 13, 1935	12.70	9,020
	Aug. 19, 1921	8.41	4,040		June 14, 1935	11.12	6,940
					July 2, 1935	6.12	1,900
1922	Apr. 25, 1922	7.0	1,790		Sept. 4, 1935	11.57	7,510
					Sept. 5, 1935	11.6	7,550
1923	Aug. 28, 1923	8.83	4,640				
	Sept.16, 1923	7.79	2,960	1936	Sept.19, 1936	6.00	1,870
1924	Oct. 10, 1923	11.45	14,000	1937	May 29, 1937	15.0	13,000
	Oct. 14, 1923	10.75	10,500		June 1, 1937	25.7	38,200
	Oct. 28, 1923	7.24	2,240		June 15, 1937	9.90	5,850
					June 17, 1937	7.76	3,680
1925	Aug. 6, 1925	7.48	2,550		Aug. 23, 1937	9.5	5,400
	Aug. 10, 1925	12.3	16,500		Sept.15, 1937	5.70	2,160
	Sept.11, 1925	7.75	2,880				
	Sept.13, 1925	6.90	1,960	1938	June 28, 1938	12.24	8,880
					Sept. 2, 1938	6.84	2,940
1926	May 4, 1926	7.4	2,700				
	May 27, 1926	9.25	5,400	1939	Aug. 21, 1939	2.74	618
	May 30, 1926	9.65	6,300				
	June 3, 1926	6.93	2,100	1940	May 22, 1940	7.2	3,210
	June 5, 1926	7.15	2,350				
	June 10, 1926	7.00	2,100	1941	Oct. 13, 1940	8.63	4,500
	July 11, 1926	9.30	5,500		May 2, 1941	21.1	26,100
	July 12, 1926	7.25	2,500		May 6, 1941	13.17	10,400
	July 13, 1926	6.79	2,000		May 9, 1941	6.42	2,750
	July 16, 1926	6.60	4,170		May 11, 1941	7.13	3,310
	July 30, 1926	9.30	5,500		May 15, 1941	7.63	3,750
	Sept.10, 1926	8.66	4,500		May 22, 1941	32.1	62,600
					July 17, 1941	8.83	5,510
1927	Oct. 4, 1926	5.70	1,150		July 25, 1941	4.60	1,830
					Aug. 19, 1941	4.92	2,040
1928	July 24, 1928	6.94	2,450		Aug. 22, 1941	5.82	2,700
	Aug. 10, 1928	11.70	10,000		Sept.19, 1941	4.75	1,960
	Aug. 13, 1928	7.16	2,700		Sept.21, 1941	31.0	63,700
	Aug. 23, 1928	7.48	3,100		Sept.22, 1941	22.7	36,700
					Sept.26, 1941	21.68	33,900
1929	Oct. 19, 1928	8.33	4,000				
	Oct. 30, 1928	7.08	2,400	1942	Oct. 3, 1941	16.83	b21,200
	Nov. 3, 1928	7.55	3,100				
				1943	Nov. 3, 1942	7.60	5,380
1930	Oct. 13, 1929	7.23	2,700		Nov. 7, 1942	7.63	5,440
1932	May 28, 1932	11.6	8,630	1944	Jan. 4, 1944	1.53	595
	June 4, 1932	7.0	2,610		Sept.18, 1944	1.47	595

a Maximum peak discharge; maximum discharge during the year, 17,700 cfs at 12:01 a.m. Oct. 1, 1932, stage falling.
b Annual peak only.

Peak stages and discharges of Pecos River near Malaga, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 22, 1945	6.45	4,270	1955	Oct. 6, 1954	20.31	43,100
					Oct. 12, 1954	18.64	15,300
1946	Aug. 28, 1946	3.84	1,930		Oct. 29, 1954	9.14	3,030
					Sept.24, 1955	16.32	11,400
1947	Oct. 5, 1946	1.49	615				
				1956	Oct. 2, 1955	14.47	8,650
1948	May 26, 1948	5.08	2,780		Oct. 7, 1955	10.70	4,340
	June 2, 1948	16.10	18,900				
				1957	May 30, 1957	8.25	2,180
1949	June 6, 1949	10.21	4,740		Aug. 18, 1957	12.57	5,800
	June 12, 1949	7.09	1,960				
	Sept.16, 1949	10.68	5,180	1958	May 19, 1958	7.98	2,040
	Sept.22, 1949	8.50	2,960		Aug. 23, 1958	10.98	4,210
					Aug. 25, 1958	8.32	2,240
1950	July 25, 1950	13.75	7,960		Sept.23, 1958	8.79	2,550
	Sept. 6, 1950	7.48	2,030		Sept.28, 1958	7.69	1,890
1951	Oct. 3, 1950	11.39	5,150	1959	May 8, 1959	11.63	4,810
1952	July 15, 1952	3.25	210	1960	July 6, 1960	9.97	3,290
					July 7, 1960	11.66	4,650
1953	May 31, 1953	4.06	378		July 13, 1960	15.76	8,970
1954	Oct. 23, 1953	9.30	2,990	1961	Oct. 18, 1960	5.54	866
	Apr. 25, 1954	11.46	4,900				

8-4075. Pecos River at Red Bluff, N. Mex. (352)

Location.--Lat 32°04'30", long 104°02'20", in sec.1, T.26 S., R.28 E., on right bank at Red Bluff, 0.2 mile downstream from Red Bluff Creek and 5.5 miles upstream from Delaware River.

Drainage area.--19,540 sq mi, approximately (contributing area).

Gage.--Recording. Datum of gage is 2,850.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 30,000 cfs and extended above on basis of slope-area measurement at 52,600 cfs; relation subject to moderate shifting.

Historical data.--Flood of October 1904 reached a stage of 28.0 ft, from information by Panhandle and Santa Fe Railway Co.

Remarks.--Some peak discharges are appreciably affected by regulation at McMillan and Avalon Dams. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	June 28, 1938	10.12	6,460	1951	Oct. 4, 1950	8.37	3,800
1939	Aug. 15, 1939	5.60	1,090	1952	July 12, 1952	4.26	366
1940	May 22, 1940	7.56	2,820	1953	June 1, 1953	4.53	476
				1954	Aug. 23, 1954	9.16	4,660
1941	May 24, 1941	28.3	52,600	1955	Oct. 8, 1954	23.28	26,600
1942	Oct. 4, 1941	17.75	19,800				
1943	Nov. 8, 1942	9.02	4,830	1956	Oct. 4, 1955	10.87	6,480
1944	Jan. 4, 1944	4.70	535	1957	Aug. 19, 1957	8.12	3,090
1945	Aug. 22, 1945	7.51	3,070	1958	Aug. 22, 1958	9.22	4,400
				1959	May 8, 1959	7.68	2,650
1946	Sept.18, 1946	7.48	2,950	1960	July 14, 1960	11.20	6,100
1947	Oct. 5, 1946	6.31	1,700				
1948	June 2, 1948	14.31	13,100	1961	Oct. 17, 1960	5.41	820
1949	Sept.16, 1949	8.82	4,570				
1950	July 25, 1950	9.76	5,700				

8-4085. Delaware River near Red Bluff, N. Mex. (353)

Location.--Lat 32°01', long 104°03', in sec.23, T.26 S., R.28 E., on downstream side of pier at bridge on U.S. Highway 285, 3.6 miles upstream from mouth, 4 miles south of Red Bluff, and 14 miles south of Malaga.

Drainage area.--689 sq mi.

Gage.--Recording and concrete control. Datum of gage is 2,900.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements below 1,500 cfs and extended above on basis of four slope-area measurements. Relation subject to very minor shifting.

Historical data.--The flood of Oct. 2, 1955, is greatest since at least 1911.

Remarks.--Only annual peaks are shown for 1938-47. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	June 27, 1938	18.0	34,600	1953	July 21, 1953	5.56	2,600
1939	June 20, 1939	9.70	10,600				
1940	Sept. 1, 1940	3.32	457	1954	Oct. 3, 1953	6.30	3,980
					Apr. 11, 1954	14.72	21,700
1941	May 23, 1941	16.25	28,700		Aug. 10, 1954	5.25	2,550
1942	Oct. 24, 1941	6.15	3,710		Aug. 22, 1954	7.95	6,190
1943	July 1, 1943	3.85	915		Aug. 25, 1954	6.00	3,540
1944	Aug. 17, 1944	5.96	3,450				
1945	July 6, 1945	4.90	2,080	1955	Oct. 2, 1954	5.18	2,220
					Oct. 7, 1954	10.10	8,480
1946	Sept.29, 1946	5.92	3,320		July 29, 1955	5.19	2,220
1947	Oct. 4, 1946	5.75	3,120				
1948	May 31, 1948	9.02	8,040	1956	Oct. 2, 1955	27.0	81,400
					Oct. 4, 1955	4.82	1,790
1949	May 26, 1949	-	5,850				
	June 6, 1949	-	1,960	1957	July 25, 1957	5.02	2,000
	Sept. 9, 1949	8.06	6,460		Aug. 18, 1957	14.56	19,600
	Sept.15, 1949	-	2,380		Aug. 31, 1957	6.76	3,980
	Sept.19, 1949	-	2,930				
				1958	May 12, 1958	6.75	3,980
1950	July 24, 1950	-	3,550		June 23, 1958	6.95	4,200
	Sept. 6, 1950	7.34	5,310		July 6, 1958	5.23	2,280
					Aug. 22, 1958	9.30	7,200
1951	Oct. 1, 1950	9.05	8,140		Sept.27, 1958	4.89	1,900
	July 2, 1951	4.91	2,080				
				1959	May 16, 1959	4.79	1,790
1952	July 8, 1952	8.17	5,620				
	July 11, 1952	12.84	14,100	1960	July 15, 1960	4.28	1,350
	July 15, 1952	7.13	4,360				
	July 17, 1952	4.89	1,880	1961	Oct. 17, 1960	4.97	2,160

8-4095. Pecos River near Angeles, Tex. (354)

Location.--Lat 32°02', long 104°00', in T.26 S., R.29 E., on right bank half a mile downstream from Delaware River, 2 miles north of New Mexico-Texas State line, 8½ miles northwest of Angeles, and 17.9 miles upstream from Red Bluff Dam (completed in 1936).

Drainage area.--20,540 sq mi (contributing area).

Gage.--Recording. At datum 1.00 ft higher prior to June 8, 1934. Datum of gage is 2,830.8 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Since 1936, fairly well defined by current-meter measurements below 30,000 cfs; 1914-24, poorly defined; 1925-36, fairly well defined by current-meter measurements below 10,000 cfs; extended above on basis of velocity-area studies, comparison with stations upstream and downstream, and logarithmic plotting. Relation subject to considerable shifting.

Historical data.--Flood of Oct. 5, 1904, is maximum known. Flood of Oct. 2, 1955, from Delaware River may have exceeded 50,000 cfs at this station.

Remarks.--Some peak discharges are appreciably affected by regulation at McMillan and Avalon Dams. Only annual peaks are shown.

Peak stages and discharges of Pecos River near Angeles, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Oct. 5, 1904	-	65,000	1928	Aug. 10, 1928	10.44	16,600
				1929	May 17, 1929	4.95	5,610
1914	Sept. 2, 1914	6.7	a10,800	1930	May 17, 1930	2.77	2,370
1915	Apr. 17, 1915	15.45	36,000				
				1931	Apr. 29, 1931	6.14	7,570
1916	Aug. 8, 1916	21.5	60,000	1932	Sept.24, 1932	6.50	6,260
1917	Oct. 14, 1916	3.65	3,860	1933	Oct. 1, 1932	12.73	15,900
1918	June 6, 1918	1.60	1,030	1934	May 22, 1934	4.80	3,880
1919	Sept.20, 1919	10.1	22,400	1935	June 13, 1935	18.30	23,500
1920	Oct. 13, 1919	4.47	5,490				
				1936	Sept.20, 1936	7.78	6,680
1921	June 8, 1921	-	18,000	1937	June 1, 1937	22.30	38,900
1922	Apr. 25, 1922	5.62	9,200	1938	June 27, 1938	17.58	23,000
1923	Sept.16, 1923	6.84	12,400	1939	June 20, 1939	7.38	5,800
1924	Oct. 14, 1923	7.27	12,600	1940	May 22, 1940	4.75	2,700
1925	Aug. 10, 1925	8.53	12,700				
				1941	May 21, 1941	25.00	48,000
1926	May 29, 1926	9.04	14,000	1942	Oct. 4, 1942	16.9	19,000
1927	Oct. 5, 1926	1.69	1,210				

a Maximum for period May 27 to Sept. 30, 1914; probably maximum for water year.

8-4115. Salt (Screwbean) Draw near Orla, Tex. (355)

Location.--Lat 31°52'40", long 103°56'50", at bridge on U.S. Highway 285, 157 ft upstream from Panhandle and Santa Fe Railway Co. bridge, 4.1 miles northwest of Orla, Reeves County, and 5 miles upstream from mouth.

Drainage area.--464 sq mi.

Gage.--Recording. At datum 3.00 ft higher prior to Oct. 1, 1955. Datum of gage is 2,801.19 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements and slope-area measurement at 40,600 cfs.

Historical data.--Flood of Oct. 2, 1955, is the greatest since at least 1910, from information by local resident.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939 a/	Aug. 17, 1939	9.30	692	1953	Aug. 5, 1953	5.32	188
1940	May 22, 1940	11.65	1,820	1954	Oct. 23, 1953	12.08	2,320
	June 29, 1940	10.98	1,450		Apr. 12, 1954	9.52	1,840
	Aug. 18, 1940	13.32	3,220		Apr. 14, 1954	5.75	644
1941 b/	Oct. 12, 1940	10.95	1,240	1955	Sept.23, 1955	5.30	575
1944	Aug. 18, 1944	13.88	3,780	1956	Oct. 2, 1955	29.1	40,600
1945	July 3, 1945	13.70	3,600		May 29, 1956	12.05	2,730
1946	Sept.19, 1946	13.15	3,050	1957	June 1, 1957	7.18	612
					July 2, 1957	16.10	6,740
1947	Oct. 4, 1946	9.26	586		July 24, 1957	10.46	1,950
1948	June 25, 1948	9.93	840	1958	Oct. 12, 1957	7.15	-
					July 6, 1958	12.80	-
1949	Sept.10, 1949	13.84	3,540		Aug. 24, 1958	9.05	-
					Sept.27, 1958	7.60	-
1950	July 19, 1950	12.31	2,320	1959	June 29, 1959	5.82	-
1951	Oct. 3, 1950	9.31	688	1960 c/	Jan. 14, 1960	3.15	-
1952	Apr. 17, 1952	13.93	4,070				

a Period Aug. 16 to Sept. 30, 1939.
b Period Oct. 1, 1939, to Dec. 31, 1940.
c Period Oct. 1, 1959, to Feb. 1, 1960.

8-4125. Pecos River near Orla, Tex. (356)

Location.--Lat 31°49', long 103°48', on left bank 600 ft upstream from Pasotex pipeline crossing, 6 miles southeast of Orla, Reeves County, 11 miles downstream from Salt (Screwbean) Draw, and 14 miles downstream from Red Bluff Dam.

Drainage area.--21,300 sq mi, approximately (contributing area).

Gage.--Recording. Datum of gage is 2,718.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Remarks.--Flow regulated by Red Bluff Reservoir and reservoirs above Carlsbad, N. Mex. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	June 28, 1938	5.06	2,280	1951	May 3, 1951	2.87	755
1939	June 21, 1939	5.55	2,690	1952	Apr. 17, 1952	4.70	2,000
1940	June 29, 1940	2.92	770	1953	June 9, 1953	2.29	460
				1954	Oct. 23, 1953	4.42	1,830
1941	Sept.29, 1941	20.74	23,700	1955	June 30, 1955	3.84	804
1942	Oct. 5, 1941	19.23	15,700				
1943	Nov. 11, 1942	4.75	2,060	1956	Oct. 2, 1955	13.30	8,050
1944	Aug. 18, 1944	5.41	2,470	1957	July 2, 1957	4.82	2,110
1945	July 4, 1945	4.88	2,130	1958	Oct. 9, 1957	7.24	3,780
				1959	June 29, 1959	3.22	1,010
1946	Sept.20, 1946	3.65	1,280	1960	July 8, 1960	8.49	2,360
1947	Apr. 19, 1947	2.56	562				
1948	June 1, 1948	3.69	1,320	1961	Oct. 17, 1960	3.50	1,030
1949	Sept.11, 1949	3.82	1,380				
1950	July 19, 1950	4.39	1,790				

8-4205. Pecos River at Pecos, Tex. (357)
(Published as "near Pecos" prior to June 30, 1907, "above Barstow (above Barstow Canal)" Feb. 1, 1916, to May 11, 1921, "above Barstow (below Barstow Canal)" Mar. 22, 1922, to July 16, 1926)

Location.--Lat 31°26', long 103°28', at bridge on U.S. Highway 80, 195 ft downstream from Texas and Pacific Railway bridge, 1.7 miles east of Pecos, Reeves County, and 11 miles upstream from Toyah Creek.

Drainage area.--22,100 sq mi (contributing area), of which 20,720 sq mi is above Red Bluff Reservoir.

Gage.--Nonrecording prior to June 30, 1907; recording thereafter. At several sites within 14 miles of present site at various datums prior to July 16, 1926. At site 284 ft upstream at datum 2.00 ft higher Aug. 15, 1939, to Oct. 12, 1946. Datum of gage is 2,552.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft.

Historical data.--Flood of August 1893 and Oct. 5, 1904, reached a stage of about 20 ft at site 195 ft upstream, present datum. In 1939, H. C. Pritchett, Geological Survey engineer, noted: "There is no relation between gage heights of past floods and those that have occurred during recent years, because the growth of tamarisk along the banks has vastly changed conditions."

Remarks.--Some regulation above station by irrigation canals and reservoirs except for Feb. 1, 1916, to May 11, 1921. Records for Pecos River above Barstow (above Barstow Canal), Tex. were combined with Pecos River at Pecos. Maximum daily discharge shown prior to Feb. 1, 1916; only annual peaks shown thereafter.

Peak stages and discharges of Pecos River at Pecos, Tex. a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1899	July 27, 1899	-	1,070	1937	June 1937	17.6	-
1900	Sept.23, 1900	-	2,350				
				1940	June 30, 1940	5.79	528
1901	Oct. 18, 1900	-	2,600				
1902	Nov. 7, 1901	-	4,270	1941	Sept.30, 1941	17.68	22,200
1903	June 22, 1903	-	2,870	1942	Oct. 27, 1941	16.78	c4,800
1904	Sept.25, 1904	-	1,260	1943	Nov. 12, 1942	11.40	1,590
				1944	Aug. 19, 1944	9.22	1,220
1906	July 18, 1906	-	2,340	1945	July 5, 1945	7.15	828
1916	Aug. 10, 1916	12.1	-	1946	Mar.23,July 24, 1946	4.87	418
1917	Oct. 15, 1916	9.7	2,820				
1918	Jan. 15, 1918	2.58	176	1947	Apr. 18, 1947	6.60	449
1919	September 1919	b12	-	1948	Sept.10, 1948	7.33	560
1920	Oct. 14, 1919	10.65	4,000	1949	Apr. 14, 1949	5.30	286
				1950	July 20, 1950	8.31	766
1923	Sept.17, 1923	7.50	2,900				
1924	Oct. 15, 1923	9.80	5,000	1951	May 18, 1951	6.81	506
1925	Aug. 13, 1925	9.53	4,720	1952	Apr. 19, 1952	8.94	888
				1953	July 15, 1953	3.12	51
1933	Oct. 4, 1932	17.5	-	1954	Oct. 24, 1953	9.81	1,060

a Maximum daily means shown prior to 1916. b From floodmarks. c Maximum peak discharge; maximum discharge during year, 21,500 cfs at 12:01 a.m. Oct. 1, 1941, stage falling.

8-4245. Madera Canyon near Toyahvale, Tex. (358)

Location.--Lat 30°52', long 103°58', in Jeff Davis County, 11 miles upstream from Aguja Canyon and 12 miles southwest of Toyahvale, Reeves County.

Drainage area.--53.8 sq mi.

Gage.--Nonrecording prior to Dec. 16, 1932; recording thereafter. Altitude of gage is 4,200 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 200 cfs and by slope-area measurement at 3,700 cfs.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 165 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept.29, 1932	8.00	a5,120	1941	May 2, 1941	2.60	226
					May 29, 1941	2.71	252
1933	Aug. 27, 1933	3.62	765		June 29, 1941	4.18	1,200
	Aug. 30, 1933	3.62	818		July 8, 1941	3.86	930
	Sept. 1, 1933	3.93	1,000		Aug. 1, 1941	2.59	220
	Sept.10, 1933	3.88	968		Aug. 28, 1941	3.99	1,010
	Sept.19, 1933	4.60	1,520		Sept. 1, 1941	5.95	2,810
					Sept.12, 1941	2.40	212
1934	June 4, 1934	3.5	660		Sept.14, 1941	2.39	209
	Aug. 25, 1934	2.50	165		Sept.18, 1941	4.41	1,520
1935	Sept. 4, 1935	2.41	148	1942	Oct. 1, 1941	3.44	789
					Oct. 25, 1941	7.70	4,760
1936	May 4, 1936	2.64	211		Aug. 20, 1942	3.01	276
	May 25, 1936	2.85	298		Aug. 22, 1942	2.73	167
	May 27, 1936	2.88	311		Aug. 25, 1942	4.44	1,400
	Aug. 19, 1936	2.59	192		Aug. 31, 1942	2.73	167
	Sept.12, 1936	2.67	223				
	Sept.17, 1936	2.54	177	1943	May 21, 1943	4.69	1,600
	Sept.21, 1936	3.00	365		June 28, 1943	2.80	188
	Sept.22, 1936	3.78	870		July 2, 1943	3.23	419
					July 18, 1943	3.58	699
1937	Aug. 21, 1937	2.75	255				
				1944	Aug. 24, 1944	4.45	1,400
1938	June 26, 1938	3.50	660		Sept. 5, 1944	4.61	1,560
	July 11, 1938	3.68	795				
	July 19, 1938	4.82	1,690	1945	July 2, 1945	5.55	2,360
	July 21, 1938	3.33	550				
	July 22, 1938	3.69	802	1946	Oct. 8, 1945	2.72	252
	July 29, 1938	4.82	1,690		Sept.20, 1946	5.80	2,610
1939	Aug. 14, 1939	2.16	102	1947	Oct. 7, 1946	4.47	1,400
					May 10, 1947	3.55	607
1940	June 24, 1940	4.22	1,200	1948	July 23, 1948	5.01	377
	Aug. 6, 1940	3.88	945				
	Aug. 12, 1940	2.90	336	1949	Aug. 18, 1949	2.42	102

a Maximum Aug. 1 to Sept. 30; probably maximum for year.

8-4320. Limpia Creek near Fort Davis, Tex. (359)

Location.--Lat 30°47', long 103°45', at State Highway 17 (formerly No. 3), 3 miles downstream from Short Canyon Creek, 14 miles south of Balmorhea, and 16 miles northeast of Fort Davis, Jeff Davis County.

Drainage area.--303 sq mi.

Gage.--Recording. Altitude of gage is 4,200 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 3,400 cfs and by slope-area measurement at 14,200 cfs.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	July 28, 1927	3.28	585	1930	Oct. 13, 1929	3.21	545
	Sept.18, 1927	3.54	685		July 22, 1930	4.00	880
					July 23, 1930	3.82	790
1928	July 25, 1928	4.57	1,150		Aug. 9, 1930	3.78	790
	Aug. 11, 1928	4.52	1,120				
	Aug. 14, 1928	4.67	1,210	1931	Oct. 5, 1930	3.81	790
	Aug. 17, 1928	3.66	725		Aug. 4, 1931	4.10	925
	Aug. 26, 1928	7.00	3,420				
				1932	Aug. 30, 1932	10.42	a14,200
1929	May 24, 1929	3.46	645				
	July 28, 1929	3.97	858				

a Annual peak only.

8-4340. Toyah Creek below Toyah Lake, near Pecos, Tex. (360)

Location.--Lat 31°21', long 103°24', at bridge on county road between Pecos and Grandfalls, at lower end of Toyah Lake, 6 miles upstream from mouth at Pecos River, and 7.4 miles southeast of Pecos, Reeves County.

Drainage area.--3,709 sq mi (contributing area).

Gage.--Recording. Altitude of gage is 2,560 ft.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	September 1932	7.7	-	1946	Oct. 10, 1945	1.62	20
1940	Aug. 7, 1940	4.17	5,850	1947	May 11, 1947	1.52	12
1941	Oct. 15, 1940	2.60	518	1948	July 31, 1948	1.57	19
1942	Oct. 27, 1941	3.25	1,660	1949	June 7, 1949	2.58	815
1943	Dec. 21, 1942	1.54	16	1950	Sept. 4, 1950	2.34	540
1944	May 30, 1944	2.42	425	1951	Oct. 6, 1950	1.51	10
1945	July 4, 1945	3.89	4,160				

8-4395. Pecos River near Grandfalls, Tex. (361)

Location.--Lat 31°19', long 102°53', at site of old abandoned road crossing 1½ miles upstream from bridge on State Highway 82, 2 miles downstream from diversion for low-line canal of Imperial Irrigation Co., 3 miles southwest of Grandfalls, Ward County, and 4½ miles upstream from diversion dam of Zimmerman irrigation project (destroyed in 1941).

Drainage area.--27,810 sq mi, approximately (contributing area).

Gage.--Recording. At site 1½ miles downstream at different datum prior to Aug. 14, 1917. Altitude of gage is 2,410 ft, from map of Pecos River Joint Investigation.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--8 ft.

Historical data.--Maximum stage known, about 13 ft in April 1915 (20 ft from floodmarks at site 1½ miles downstream at different datum).

Remarks.--Some regulation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	Oct. 18, 1916	8.10	1,640	1922	Apr. 27, 1922	3.55	1,310
1918	Apr. 6, 7, 1918	.96	71	1923	Sept.18, 1923	3.72	1,990
1919	Sept.25, 1919	9.6	13,000	1924	Oct. 18, 1923	6.10	3,040
1920	Oct. 16, 1919	5.7	2,580	1925	Aug. 16, 1925	5.50	2,920
1921	(a)	-	-				

a Peak occurred during period of missing record; known to be less than peak for 1919.

8-4415. Pecos River below Grandfalls, Tex. (362)
(Published as "near Buena Vista" prior to July 1926)

Location.--Lat 31°18', long 102°46', at bridge on Farm Road 11 between Grandfalls and Imperial, 7.1 miles southeast of Grandfalls, Ward County, and 10 miles downstream from State Highway 82.

Drainage area.--27,820 sq mi, approximately (contributing area).

Gage.--Recording. At site 12 miles downstream at different datum prior to July 1926. Datum of gage is 2,373.0 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft.

Remarks.--Some regulation. Because of overlap of record, Pecos River near Grandfalls was not combined with this station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Sept.19, 1923	4.14	992	1946	Oct. 4, 1945	4.16	272
1924	Oct. 19, 1923	7.78	2,640	1947	June 5, 1947	6.48	822
1925	Aug. 16, 1925	7.0	2,250	1948	Sept.12, 1948	2.87	50
				1949	June 6, 1949	3.16	92
1933	October 1932	a18.0	-	1950	Mar. 16, 1950	3.97	162
1940	Aug. 10, 1940	6.02	700	1951	Sept.13, 1951	4.67	253
				1952	May 28, 1952	5.07	280
1941	June 6, 1941	18.44	8,080	1953	Mar. 3, 1953	2.65	23
1942	Oct. 2, 1941	b20.98	22,000	1954	June 13, 1954	8.22	1,040
1943	Nov. 14, 1942	6.40	1,380	1955	Oct. 6, 1954	5.35	350
1944	Aug. 21, 1944	5.65	595				
1945	July 7, 1945	7.74	1,200	1956	Oct. 7, 1955	5.17	232

a From information by local resident.
b Upstream dam collapsed.

8-4465. Pecos River near Girvin, Tex. (363)

Location.--Lat 31°07', long 102°25', on right bank 2.4 miles upstream from Comanche Creek, 2.6 miles northwest of Girvin, Pecos County, and 7.8 miles upstream from bridge on U.S. Highway 67.

Drainage area.--29,560 sq mi, approximately (contributing area of supplementary gage 7.8 miles downstream).

Gage.--Recording. Supplementary gage (used as regular gage prior to July 17, 1951, now used only for flows exceeding about 650 cfs) 7.8 miles downstream at datum 2,869.65 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--14 ft.

Historical data.--Maximum stage known since at least 1932, that of Oct. 5, 1941.

Remarks.--Flow largely regulated by reservoirs above Orla, Tex. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 11, 1940	a4.15	469	1951	Sept.15, 1951	2.23	189
				1952	July 11, 1952	2.14	164
1941	June 16, 1941	a17.36	6,870	1953	Aug. 20, 1953	1.43	43
1942	Oct. 5, 1941	a20.49	20,000	1954	June 15, 1954	a6.43	784
1943	Nov. 5, 1942	a7.02	1,290	1955	Oct. 6, 1954	a10.09	2,000
1944	Aug. 22, 1944	a3.89	450				
1945	July 8, 1945	a6.12	1,080	1956	July 5, 1956	2.40	230
				1957	Apr. 26, 1957	a14.55	3,800
1946	Oct. 6, 1945	a2.47	201	1958	Sept.27, 1958	a16.18	5,090
1947	May 16, 1947	a4.29	652	1959	July 18, 1959	2.74	365
1948	May 25, 1948	a2.59	259	1960	June 7, 1960	3.20	309
1949	June 13, 1949	a3.07	198				
1950	May 26, 1950	a9.00	1,800	1961	Mar. 28, 1961	3.26	690

a Gage height at supplemental gage 7.8 miles downstream.

8-4470. Pecos River near Sheffield, Tex. (364)

Location.--Lat 30°39', long 101°45', at bridge on U.S. Highway 290, 3½ miles southeast of Sheffield, Pecos County, and 4 miles upstream from Liveoak Creek.

Drainage area.--31,660 sq mi, approximately (contributing area), of which 20,720 sq mi is above Red Bluff Reservoir near Orla, Tex.

Gage.--Nonrecording prior to Nov. 8, 1939; recording thereafter. At site three-quarters of a mile upstream at datum 2.90 ft higher prior to Apr. 30, 1925. Datum of gage is 2,026.30 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by discharge measurements.

Bankfull stage.--16 ft.

Historical data.--Maximum stage known, about 23.5 ft in September 1916, at site three-quarters of a mile upstream at datum 2.90 ft higher, from information by local residents.

Remarks.--Diversions and upstream reservoirs affect peak flow. Only annual peaks are shown.

Peak stages and discharges of Pecos River near Sheffield, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	September 1919	a21.0	-	1942	Oct. 8, 1941	16.75	b13,800
				1943	Oct. 17, 1942	8.41	3,820
1922	Mar. 25, 1922	4.95	1,820	1944	Aug. 26, 1944	5.05	1,330
1923	Sept. 7, 1923	6.35	2,360	1945	July 7, 1945	5.22	1,480
1924	Oct. 20, 1923	6.40	2,460				
				1946	May 9, 1946	2.65	384
1940	June 24, 1940	7.52	2,870	1947	May 18, 1947	7.86	3,410
				1948	Feb. 26, 1948	5.24	1,450
1941	June 20, 1941	11.00	b5,700	1949	July 26, 1949	11.40	5,560

a From State Highway Department.
b Peak caused by releases from upstream reservoir.

8-4474. Pecos River near Shumla, Tex. (365)
(Published as "near Moorhead" prior to 1915, and "near Comstock" 1915-54)

Location.--Lat 29°50', long 101°23', 4½ miles north of Shumla, Val Verde County, 13 miles upstream from Pecos High Bridge, and 18.5 miles above mouth.

Drainage area.--35,162 sq mi (contributing area), all in the United States.

Gage.--Nonrecording prior to May 11, 1942, and from June 17 to Oct. 7, 1954; recording from May 11, 1942, to June 17, 1954, and after Oct. 7, 1954. At site 13.0 miles downstream at datum 101.51 ft lower prior to Oct. 8, 1954. Datum of gage is 1,159.52 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Peak discharges slightly affected by upstream reservoirs. Records furnished by the International Boundary and Water Commission prior to Apr. 1, 1914, and subsequent to June 30, 1931. Records for Pecos River near Comstock, Tex., have been combined with Pecos River near Shumla, Tex. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Apr. 6, 1900	35.75	a107,000	1931	Oct. 14, 1930	12.6	20,100
				1932	Sept. 1, 1932	38.25	a116,000
1901	Sept. 8, 1901	-	b9,200	1933	Oct. 16, 1932	6.50	6,360
1902	May 18, 1902	-	c33,500	1934	June 4, 1934	7.50	8,220
1903	June 29, 1903	-	b2,140	1935	Sept. 4, 1935	29.30	84,400
1904	June 27, 1904	-	c72,000				
1905	Apr. 23, 1905	-	c47,000	1936	Sept.27, 1936	16.30	31,100
				1937	May 10, 1937	3.87	2,800
1906	Aug. 11, 1906	-	c90,000	1938	July 24, 1938	16.42	31,500
1907	Dec. 10, 1906	-	b880	1939	May 5, 1939	6.15	5,800
1908	July 7, 1908	-	c68,000	1940	June 25, 1940	6.02	5,610
1909	Aug. 1, 1909	-	b1,780				
1910	Sept. 6, 1910	-	c102,000	1941	Sept.18, 1941	12.23	18,700
				1942	Oct. 10, 1941	9.80	14,300
1911	Apr. 4, 1911	-	c27,000	1943	July 15, 1943	9.10	11,200
1912	Apr. 7, 1912	-	b1,110	1944	Sept. 6, 1944	7.99	8,960
1913	May 4, 1913	-	c63,000	1945	July 8, 1945	7.87	8,730
1914	May 23, 1914	-	b9,280				
1915	Oct. 23, 1914	19.0	67,000	1946	Oct. 7, 1945	15.27	27,700
				1947	Oct. 6, 1946	24.50	65,000
1916	Sept. 1, 1916	33.0	97,000	1948	July 4, 1948	21.52	51,300
1917	May 12, 1917	2.65	1,590	1949	July 26, 1949	33.32	98,500
1918	Aug. 15, 1918	6.90	7,140	1950	July 13, 1950	20.00	44,900
1919	Sept.16, 1919	30.00	87,000				
1920	Oct. 4, 1919	5.8	5,220	1951	May 24, 1951	7.56	8,180
				1952	May 27, 1952	4.55	3,570
1921	June 13, 1921	12.8	18,500	1953	Aug. 24, 1953	10.72	14,800
1922	June 18, 1922	27.16	77,000	1954	June 28, 1954	96.24	948,000
1923	Sept.17, 1923	2.60	1,500	1955	July 19, 1955	18.45	27,100
1924	Sept.21, 1924	9.80	12,800				
1925	May 28, 1925	23.6	61,000	1956	May 2, 1956	4.14	4,000
				1957	May 10, 1957	22.22	38,400
1926	July 23, 1926	5.20	4,380	1958	Sept.22, 1958	21.90	36,400
1927	June 13, 1927	10.60	14,600	1959	Sept.30, 1959	16.80	25,700
1928	May 13, 1928	12.47	19,800	1960	Oct. 4, 1959	24.58	47,500
1929	June 30, 1929	4.88	5,970				
1930	Oct. 14, 1929	6.53	6,320				

a Based on 1935 rating curve.
b Maximum daily discharge.
c Peak discharge from International Boundary and Water Commission Bull. 9.

8-4490. Devils River near Juno, Tex. (366)

Location.--Lat 29°58', long 101°09', on left bank 500 ft downstream from Walter Baker ranchhouse, 2 miles upstream from Phillips Creek, and 13½ miles southwest of Juno, Val Verde County.

Drainage area.--2,733 sq mi.

Gage.--Recording. Datum of gage is 1,489.7 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 71,000 cfs and extended to 370,000 cfs on basis of slope-area measurements at 240,000 and 370,000 cfs, and extended above 370,000 cfs by logarithmic plotting.

Bankfull stage.--12 ft.

Historical data.--Floods of 1882, 1896, and 1916 reached a stage of about 22 ft, from information by Mr. Walter Baker, whose family has lived in vicinity for a number of generations.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 29, 1925	15.8	a43,700	1936	Sept.17, 1936	14.88	38,300
					Sept.26, 1936	12.95	26,000
1926	Oct. 16, 1925	2.23	136				
				1937	June 7, 1937	5.92	2,580
1927	Oct. 15, 1926	5.05	1,360				
	Apr. 17, 1927	8.77	8,000	1938	Jan. 24, 1938	3.52	513
	Sept.28, 1927	13.30	27,000		July 24, 1938	18.08	65,100
1928	Oct. 2, 1927	8.46	7,250	1939	May 4, 1939	9.60	10,500
	Oct. 10, 1927	5.16	1,440		June 3, 1939	5.05	1,460
	May 13, 1928	6.33	6,750		July 15, 1939	6.30	2,770
	June 14, 1928	13.52	28,200				
	July 28, 1928	6.63	3,280	1940	May 9, 1940	6.16	2,580
	Sept.22, 1928	3.57	570				
				1941	May 2, 1941	3.87	652
1929	June 30, 1929	8.20	6,500		June 15, 1941	3.78	610
	July 26, 1929	11.12	16,000				
				1942	Oct. 15, 1941	5.32	1,680
1930	June 15, 1930	3.80	510		Aug. 30, 1942	4.75	1,220
					Sept. 9, 1942	3.78	610
1931	Oct. 6, 1930	19.22	71,000				
	Oct. 14, 1930	14.50	34,600	1943	Oct. 18, 1942	12.93	25,400
	Apr. 29, 1931	8.15	6,360		May 22, 1943	6.66	3,240
	May 2, 1931	5.82	1,850		Sept. 2, 1943	3.57	532
	May 18, 1931	6.50	2,980				
	May 29, 1931	4.77	1,140	1944	Sept. 6, 1944	11.63	18,700
1932	Oct. 22, 1931	4.94	1,290	1945	July 7, 1945	3.07	357
	July 3, 1932	5.05	1,360				
	Sept. 1, 1932	33.8	370,000	1946	Oct. 7, 1945	16.80	52,400
	Sept.30, 1932	10.8	15,200		Oct. 9, 1945	5.77	2,120
					June 20, 1946	6.02	2,400
1933	May 26, 1933	3.72	b522		June 24, 1946	13.08	26,600
					Sept.28, 1946	4.66	1,150
1934	June 4, 1934	9.05	8,570				
	Sept. 3, 1934	3.81	528	1947	Oct. 6, 1946	6.60	3,170
					Oct. 8, 1946	8.22	6,140
1935	Apr. 19, 1935	7.65	4,880		May 15, 1947	7.89	5,310
	May 15, 1935	3.88	555				
	May 18, 1935	6.53	3,100	1948	June 25, 1948	10.00	11,600
	May 23, 1935	10.67	14,800		July 4, 1948	26.8	240,000
	May 28, 1935	12.76	24,900				
	June 2, 1935	9.37	9,760	1949	Oct. 22, 1948	5.64	2,020
	June 5, 1935	14.02	32,200		Feb. 25, 1949	5.66	2,020
	June 12, 1935	12.19	21,700		Apr. 24, 1949	11.12	15,600
	June 14, 1935	11.09	16,400		Apr. 28, 1949	6.86	3,520
	June 19, 1935	5.35	1,820		May 4, 1949	12.92	24,400
	July 17, 1935	5.20	1,730		June 8, 1949	4.37	919
	July 24, 1935	5.83	2,340		July 26, 1949	15.33	47,600
	Sept. 4, 1935	16.00	46,200		Aug. 8, 1949	7.41	4,410
	Sept. 8, 1935	10.30	13,200				
				1954	June 28, 1954	35.0	c393,000
1936	July 7, 1936	12.43	22,700				

a Maximum for Apr. 6 to Sept. 30, 1925; probably maximum for year.
b Maximum peak discharge; maximum discharge during year, 1,900 cfs at 12:01 a.m. Oct.1, 1932, stage falling, from estimated graph based on field engineer's notes.
c Annual peak only.

8-4505. Devils River near mouth (367)

(Published as "at Devils River" prior to 1924, and as "near Del Rio" 1924-54)

Location.--Lat 29°28'10", long 101°03'25", 0.8 mile above mouth, 3.7 miles downstream from bridge on U.S. Highway 90, and 12 miles northwest of Del Rio, Val Verde County.

Drainage area.--4,305 sq mi (contributing area) all in the United States; at site 3.7 miles upstream, 4,185 sq mi.

Gage.--Nonrecording prior to Nov. 21, 1924; recording thereafter. At site 0.9 mile upstream at different datum prior to March 1914. At site 1.9 miles upstream at datum 24.63 ft higher Dec. 7, 1923, to Sept. 1, 1932. At site 3.7 miles upstream at datum 40.80 ft higher Sept. 1, 1932, to Aug. 1, 1954. Datum of gage is 911.00 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission prior to 1924, and subsequent to June 30, 1931. Backwater from Rio Grande sometimes reaches this station. During periods of backwater, flow is computed at site 3.7 miles upstream. Flow slightly modified since 1929 by two power reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Apr. 6, 1900	25.4	145,000	1932	Sept. 1, 1932	36.60	597,000
				1933	Nov. 5, 1932	2.82	3,160
1901	Nov. 1, 1900	4.25	a2,410	1934	June 5, 1934	3.24	3,420
1902	May 18, 1902	5.95	a5,380	1935	June 14, 1935	21.50	243,000
1903	June 13, 1903	7.3	a10,400				
1904	Apr. 22, 1904	3.4	a1,580	1936	July 6, 1936	11.05	61,400
1905	Apr. 1, 1905	6.0	a6,470	1937	May 29, 1937	-	12,500
				1938	July 23, 1938	14.30	107,000
1906	Aug. 12, 1906	-	99,000	1939	May 4, 1939	3.46	5,000
1907	Oct. 14, 1906	2.95	a960	1940	June 9, 1940	4.04	7,440
1908	May 24, 1908	4.2	a2,550				
1909	July 24, 1909	4.6	a3,590	1941	July 11, 1941	2.78	2,830
1910	May 20, 1910	-	21,500	1942	Aug. 31, 1942	4.20	8,240
				1943	Nov. 6, 1942	7.10	25,100
1911	Apr. 2, 1911	4.45	a3,370	1944	Sept. 6, 1944	7.25	26,100
1912	Sept.29, 1912	3.1	a1,140	1945	Jan. 18, 1945	2.01	1,190
1913	May 4, 1913	-	25,000				
				1946	Oct. 9, 1945	10.79	59,300
1915	Oct. 21, 1914	30.15	220,000	1947	Sept.12, 1947	4.19	8,140
				1948	June 24, 1948	33.00	476,000
1916	Sept. 2, 1916	-	94,000	1949	July 26, 1949	15.61	128,000
				1950	July 13, 1950	6.75	22,800
1919	Sept.16,22,1919	-	b140,000				
				1951	May 24, 1951	2.76	2,790
1922	June 18, 1922	-	b100,000	1952	May 27, 1952	4.70	10,800
				1953	Sept. 1, 1953	2.93	2,440
1925	May 29, 1925	24.96	147,000	1954	June 28, 1954	34.76	585,000
				1955	Sept.24, 1955	21.02	86,500
1926	Apr. 29, 1926	8.77	20,900				
1927	Sept.28, 1927	10.68	30,200	1956	Oct. 7, 1955	2.67	698
1928	Oct. 1, 1927	12.05	38,700	1957	May 13, 1957	16.98	50,700
1929	June 30, 1929	10.12	26,500	1958	June 17, 1958	19.10	82,000
1930	June 16, 1930	6.68	10,200	1959	Oct. 10, 1958	-	12,600
				1960	Oct. 5, 1959	-	9,950
1931	Oct. 6, 1930	20.9	101,000				

a Daily mean.
b Not exceeding.

8-4509. Rio Grande below Amistad damsite (368)

Location.--Lat 29°25', long 101°02', 2.9 miles downstream from Devils River, 10.5 miles upstream from International Highway Bridge between Del Rio, Tex., and Ciudad Acuna, Coahuila, Mexico, and at mile 565.

Drainage area.--126,423 sq mi (contributing area), of which 82,690 sq mi is in the United States and 43,733 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 893.79 ft above sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Flood of June 28, 1954, is the greatest rate of discharge recorded at any point on the Rio Grande.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	June 28, 1954	55.72	1,158,000	1957	May 11, 1957	21.26	85,100
1955	Sept.24, 1955	18.70	96,800	1958	Sept.28, 1958	18.10	73,900
				1959	Oct. 7, 1958	15.92	54,900
1956	Oct. 7, 1955	5.37	9,610	1960	Oct. 5, 1959	17.25	64,200

8-4520. Arroyo Las Vacas near Ciudad Acuna, Coahuila, Mexico (369)
(Published as "near Villa Acuna" prior to 1951)

Location.--Lat 29°20', long 100°57', 1.5 miles upstream from Ciudad Acuna, Coahuila, and 1.8 miles upstream from mouth, which is just upstream from the Del Rio-Ciudad Acuna International Highway Bridge.

Drainage area.--358 sq mi, all in Mexico.

Gage.--Nonrecording prior to Sept. 7, 1939; recording thereafter. At datum 1.67 ft lower prior to January 1955. Datum of gage is 885.52 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	July 23, 1938	6.56	4,170	1950	July 13, 1950	5.74	3,400
1939	Aug. 5, 1939	6.59	4,200				
1940	Apr. 5, 1940	8.14	6,250	1951	May 24, 1951	10.01	13,420
				1952	May 27, 1952	5.74	3,780
1941	Sept.18, 1941	14.01	21,010	1953	Sept. 1, 1953	6.20	4,730
1942	May 18, 1942	4.66	2,600	1954	Sept.30, 1954	18.34	25,780
1943	July 11, 1943	15.06	18,750	1955	Oct. 6, 1954	11.61	13,000
1944	May 19, 1944	6.63	3,150				
1945	Oct. 3, 1944	17.45	25,640	1956	Sept. 6, 1956	6.76	7,450
				1957	Apr. 28, 1957	9.32	11,120
1946	June 19, 1946	7.81	4,450	1958	May 13, 1958	14.44	22,180
1947	June 25, 1947	10.93	9,500	1959	May 16, 1959	4.43	3,430
1948	July 4, 1948	14.57	18,120	1960	July 20, 1960	2.79	1,590
1949	Aug. 7, 1949	10.37	14,690				

8-4525. Rio Grande near Del Rio, Tex. (370)
(Published as "near Devils River" prior to 1924)

Location.--Lat 29°20', long 100°56', at International Bridge between Del Rio, Val Verde County, Tex., and Ciudad Acuna, Coahuila, Mexico, 500 ft downstream from Arroyo Las Vacas, and at mile 564.6.

Drainage area.--126,940 sq mi (contributing area), of which 82,750 sq mi is in the United States and 44,190 sq mi is in Mexico.

Gage.--Nonrecording prior to May 16, 1928; recording thereafter. At site 11 miles upstream at different datum May 1900 to April 1915. At site 7.5 miles upstream at McKee's Switch at different datum December 1919 to March 1920. At site 900 ft upstream at datum 1.00 ft higher December 1923 to July 2, 1941. At present site at datum 1.00 ft higher July 3, 1941, to Feb. 20, 1948. Datum of gage is 864.30 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission prior to December 1923 and subsequent to June 30, 1931. Only annual peaks are shown. Figures shown for 1901-13 and 1925 are maximum daily means.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Apr. 6, 1900	36.5	-	1930	Aug. 17, 1930	5.20	11,200
1901	Sept. 9, 1901	14.4	34,280	1931	Oct. 6, 1930	18.35	77,900
1902	Sept.10, 1902	12.75	40,000	1932	Sept. 1, 1932	34.50	605,000
1903	June 15, 1903	11.5	28,180	1933	Oct. 6, 1932	17.23	86,520
1904	Sept.14, 1904	26.75	138,800	1934	Oct. 15, 1933	6.72	17,540
1905	June 29, 1905	21.1	95,000	1935	Sept. 5, 1935	24.75	224,000
1906	Aug. 12, 1906	23.85	121,000	1936	Sept.28, 1936	15.77	66,200
1907	Sept.21, 1907	7.55	17,260	1937	June 4, 1937	8.00	21,800
1908	Aug. 15, 1908	9.8	24,500	1938	July 24, 1938	20.22	118,000
1909	July 23, 1909	12.5	34,260	1939	Oct. 1, 1938	6.20	16,700
1910	Sept. 6, 1910	10.7	27,440	1940	May 23, 1940	7.40	21,200
1911	May 17, 1911	8.2	21,380	1941	Sept.18, 1941	16.90	81,600
1912	Sept.15, 1912	7.35	27,000	1942	Sept.15, 1942	15.75	65,700
1913	May 4, 1913	11.7	31,600	1943	July 11, 1943	10.00	28,900
				1944	Sept. 7, 1944	11.90	42,100
1915	Apr. 22, 1915	b13.0	b20,500	1945	Oct. 5, 1944	13.52	50,200
1919	September 1919	41.0	-	1946	June 23, 1946	20.85	112,000
				1947	Oct. 7, 1946	14.50	58,400
1922	June 19, 1922	32.8	-	1948	June 24, 1948	33.55	475,000
				1949	July 26, 1949	21.12	107,000
1924	Sept.22, 1924	5.80	c14,400	1950	July 14, 1950	15.80	58,200
1925	May 29, 1925	22.00	142,000				
				1951	May 24, 1951	7.88	18,600
1926	Aug. 26, 1926	7.70	25,100	1952	May 27, 1952	13.46	43,500
1927	Sept.28, 1927	7.90	25,900	1953	Aug. 23, 1953	6.45	13,800
1928	Aug. 10, 1928	10.12	35,600	1954	June 28, 1954	38.25	1,140,000

a Figures shown for 1901-13 and 1925 are maximum daily means.
b Maximum for period October 1914 to April 1915.
c Maximum for period Dec. 17, 1923, to Sept. 30, 1924; probably maximum for year.

8-4530. San Felipe Creek near Del Rio, Tex. (371)

Location.--Lat 29°20', long 100°53', at Silos farm road bridge, 1.75 miles south of Del Rio, Val Verde County, and 2 miles upstream from the mouth which is 1.6 miles downstream from International Bridge.

Drainage area.--46 sq mi, all in the United States.

Gage.--Recording. At site 100 ft downstream at datum 2.38 ft lower prior to Jan. 1, 1956. Datum of gage is 877.43 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Backwater reaches this station when the Rio Grande near Del Rio reaches a stage of 15 ft or about 60,000 cfs. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges of San Felipe Creek near Del Rio, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Aug. 31, 1932	12.84	3,030	1947	June 19, 1947	14.33	10,300
1933	Nov. 5, 1932	4.38	554	1948	July 4, 1948	20.40	20,600
1934	Sept. 3, 1934	14.47	11,300	1949	Feb. 25, 1949	12.77	7,200
1935	June 14, 1935	23.20	45,000	1950	Oct. 23, 1949	3.52	464
1936	Apr. 27, 1936	11.95	6,060	1951	Sept.16, 1951	11.38	5,450
1937	Jan. 6, 1937	1.56	99.1	1952	May 27, 1952	22.10	39,400
1938	July 24, 1938	11.25	5,320	1953	Sept. 1, 1953	13.00	7,600
1939	Aug. 4, 1939	13.94	9,440	1954	Sept.30, 1954	a26.89	5,900
1940	June 9, 1940	13.90	9,360	1955	May 15, 1955	8.10	b2,600
1941	July 11, 1941	12.30	8,450	1956	Sept. 6, 1956	7.60	2,830
1942	May 19, 1942	15.40	12,900	1957	May 11, 1957	15.12	13,300
1943	July 11, 1943	13.60	8,750	1958	May 13, 1958	13.00	9,760
1944	June 8, 1944	8.59	2,950	1959	May 1, 1959	8.26	3,460
1945	Oct. 3, 1944	16.10	14,000	1960	July 19, 1960	6.99	2,350
1946	Oct. 9, 1945	10.50	4,570				

a Occurred on June 28, 1954; backwater from the Rio Grande.
b Maximum peak discharge; maximum discharge during year, 5,260 cfs on Oct. 1, 1954, stage falling.

8-4550. Pinto Creek near Del Rio, Tex. (372)

Location.--Lat 29°09', long 100°43', 0.6 mile downstream from bridge on U.S. Highway 277 between Del Rio and Eagle Pass, Tex., 1.6 miles upstream from confluence with the Rio Grande, and 18 miles southeast of Del Rio, Val Verde County, Tex.

Drainage area.--249 sq mi, all in the United States.

Gage.--Recording. At site 3.9 miles upstream at datum 40.93 ft higher prior to Sept. 1, 1955. Datum of gage is 813.68 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	July 3, 1929	a9.77	-	1945	May 9, 1945	4.64	304
1930	Apr. 28, 1930	6.50	2,000	1946	June 20, 1946	9.00	4,500
1931	Oct. 4, 1930	7.00	-	1947	June 25, 1947	9.26	5,240
1932	Aug. 31, 1932	21.08	54,650	1948	June 24, 1948	32.0	186,000
1933	July 29, 1933	5.85	2,100	1949	Feb. 25, 1949	10.92	8,490
1934	Sept. 3, 1934	8.61	7,700	1950	Oct. 23, 1949	4.22	120
1935	May 18, 1935	11.40	15,200	1951	May 24, 1951	7.25	2,510
1936	June 29, 1936	7.75	5,600	1952	May 27, 1952	12.60	12,600
1937	May 29, 1937	4.15	158	1953	Sept. 1, 1953	11.70	10,400
1938	July 24, 1938	11.05	14,200	1954	June 15, 1954	b28.8	18,500
1939	Mar. 24, 1939	6.18	3,170	1955	June 4, 1955	9.60	5,830
1940	May 23, 1940	7.71	2,660	1956	Nov. 8, 1955	1.37	9.2
1941	July 14, 1941	20.30	48,600	1957	Oct. 18, 1956	c15.20	21,900
1942	May 18, 1942	9.59	4,700	1958	June 17, 1958	11.00	20,100
1943	May 22, 1943	8.21	3,380	1959	June 25, 1959	9.76	15,100
1944	June 6, 1944	8.46	3,720	1960	Mar. 25, 1960	2.39	77.1

a Maximum for period Nov. 1, 1928, to Sept. 30, 1929; probably maximum for year.
b Occurred June 28, 1954; backwater from Rio Grande.
c At former site.

8-4555. Rio San Diego at Jimenez, Coahuila, Mexico (373)

Location.--Lat 29°05', long 100°41', 4.4 miles west of Jimenez, Coahuila, Mexico, and 5.0 miles above the confluence with the Rio Grande.

Drainage area.--848 sq mi, all in Mexico.

Gage.--Recording. At datum 2.62 ft lower prior to Dec. 24, 1955. Datum of gage is 831.52 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Flood in 1905 was reported to be about same stage as flood of Sept. 18, 1941, from information by local residents.

Remarks.--Records furnished by the International Boundary and Water Commission. Peak flows affected by regulation and diversions. San Miguel and Centenario Reservoirs on tributaries upstream, built in 1934, have a total capacity of 19,900 acre-ft. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept.29, 1932	8.10	a10,590	1947	June 25, 1947	9.28	7,490
1933	Apr. 22, 1933	3.25	b1,020	1948	July 4, 1948	14.24	32,100
1934	Sept. 3, 1934	9.06	11,200	1949	Feb. 23, 1949	7.84	6,460
1935	June 14, 1935	12.11	32,100	1950	May 17, 1950	4.46	1,120
1936	June 29, 1936	10.17	18,900	1951	May 24, 1951	6.86	4,450
1937	Oct. 6, 1936	2.56	247	1952	Apr. 22, 1952	5.02	1,670
1938	July 23, 1938	8.10	19,000	1953	Sept. 1, 1953	8.50	7,950
1939	Aug. 4, 1939	6.50	8,620	1954	June 27, 1954	7.02	4,770
1940	Aug. 13, 1940	5.28	3,110	1955	June 4, 1955	5.12	1,780
1941	Sept.18, 1941	20.96	75,220	1956	Aug. 20, 1956	.39	114
1942	Oct. 24, 1941	15.81	38,140	1957	Apr. 28, 1957	9.02	18,790
1943	Nov. 8, 1942	8.83	6,640	1958	Sept.28, 1958	10.14	23,550
1944	May 21, 1944	6.23	4,050	1959	June 25, 1959	7.61	13,210
1945	Oct. 7, 1944	3.81	611	1960	Apr. 29, 1960	2.82	2,200
1946	June 23, 1946	11.81	14,440				

a Maximum daily for Sept. 29, 1932; may have been exceeded during year.
b Maximum peak discharge; maximum daily discharge, 8,120 cfs Oct. 1, 1932, stage falling.

8-4570. Rio San Rodrigo near El Moral, Coahuila, Mexico (374)

Location.--Lat 28°54', long 100°38', 10.6 miles west of El Moral, 11.2 miles upstream from mouth, and 19.3 miles northwest of Piedras Negras.

Drainage area.--669 sq mi, all in Mexico.

Gage.--Nonrecording prior to Nov. 8, 1932; recording thereafter. At site 3,300 ft upstream at datum 4.27 ft higher prior to January 1939. Datum of gage is 879.95 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by the International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept. 7, 1932	16.08	a81,200	1947	May 10, 1947	4.07	2,340
1933	Oct. 3, 1932	-	b4,240	1948	Sept.10, 1948	2.66	1,170
1934	Oct. 14, 1933	4.86	2,330	1949	Aug. 7, 1949	8.73	7,420
1935	May 15, 1935	12.47	45,200	1950	May 11, 1950	1.44	424
1936	June 29, 1936	4.33	1,660	1951	May 16, 1951	3.67	1,870
1937	May 30, 1937	2.59	367	1952	May 1, 1952	1.57	484
1938	July 23, 1938	8.10	9,610	1953	Sept. 2, 1953	11.06	10,910
1939	May 13, 1939	2.20	1,110	1954	June 27, 1954	6.50	4,660
1940	Aug. 13, 1940	8.04	12,190	1955	June 17, 1955	1.44	424
1941	Sept.18, 1941	10.30	10,770	1956	May 27, 1956	1.71	551
1942	Apr. 21, 1942	2.20	855	1957	May 27, 1957	10.47	9,994
1943	June 4, 1943	6.20	4,660	1958	Sept.28, 1958	14.99	29,660
1944	Aug. 30, 1944	8.56	5,120	1959	Oct. 17, 1958	5.31	4,060
1945	May 12, 1945	1.54	480	1960	Apr. 27, 1960	2.20	777
1946	Oct. 9, 1945	11.45	12,780				

a Maximum for period Jan. 1 to Sept. 30, 1932; probably maximum for year.
b Daily mean; peak for year occurred on this day; maximum daily, 5,650 cfs on Oct. 1, 1932; stage falling.

8-4580. Rio Grande at Eagle Pass, Tex. (375)

Location.--Lat 28°43', long 100°30', on left bank 0.5 mile upstream from International Bridge between Eagle Pass, Maverick County, Tex., and Piedras Negras, Coahuila, Mexico, and at mile 491.8.

Drainage area.--130,575 sq mi (contributing area), of which 84,245 sq mi is in the United States and 46,330 sq mi is in Mexico.

Gage.--Nonrecording prior to Apr. 12, 1928; recording thereafter. At site 0.4 mile downstream at different datum May 1, 1900, to Apr. 30, 1916. At site 2,820 ft downstream at datum 0.08 ft lower May 1, 1916, to Sept. 29, 1922, and Sept. 16, 1923, to Nov. 26, 1923. At site 1,970 ft downstream at datum 0.08 ft lower Sept. 30, 1922, to Sept. 16, 1923, and Nov. 27, 1923, to March 1927. At site 650 ft downstream at datum 1.08 ft higher Apr. 23, 1927, to Apr. 11, 1928. Datum of gage is 682.91 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Flood in June 1865 is the highest since at least 1746. Flood in June 1954 is the highest since 1865 and second highest since 1746.

Remarks.--Records furnished by International Boundary and Water Commission prior to Nov. 26, 1923, and subsequent to June 30, 1931. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1865	June 1865	a56.0	1,236,000	1929	July 1, 1929	8.22	20,100
				1930	Dec. 14, 1929	7.42	14,300
1899	June 14, 1899	33.6	250,000				
1900	Apr. 6, 1900	30.0	209,000	1931	Oct. 7, 1930	18.35	66,800
				1932	Sept. 2, 1932	49.0	569,000
1901	Sept. 9, 1901	7.15	b21,460	1933	Oct. 1, 1932	21.0	96,700
1902	Sept.11, 1902	8.9	b32,000	1934	Sept. 3, 1934	13.08	41,800
1903	June 14, 1903	14.4	73,200	1935	June 15, 1935	33.23	199,000
1904	Sept.15, 1904	24.0	158,000				
1905	June 29, 1905	34.6	262,000	1936	June 29, 1936	19.92	79,500
				1937	June 5, 1937	10.20	c24,600
1906	Aug. 13, 1906	22.00	129,000	1938	July 24, 1938	24.22	109,000
1907	Sept.21, 1907	6.1	b16,980	1939	May 14, 1939	7.81	d18,800
1908	May 24, 1908	8.9	b49,560	1940	Aug. 13, 1940	9.58	23,410
1909	July 24, 1909	8.0	b26,100				
1910	Sept. 7, 1910	13.2	71,000	1941	Sept.19, 1941	19.59	89,350
				1942	Sept.14, 1942	15.85	68,200
1911	May 17, 1911	7.45	b23,050	1943	May 25, 1943	9.68	32,240
1912	June 18, 1912	15.7	91,400	1944	Sept.18, 1944	11.22	29,660
1913	June 24, 1913	8.45	b33,000	1945	Oct. 4, 1944	12.01	31,040
1914	May 24, 1914	13.9	65,200				
1915	Oct. 22, 1914	30.0	209,000	1946	June 24, 1946	17.91	62,500
				1947	Oct. 7, 1946	12.57	36,020
1916	Sept. 3, 1916	16.3	89,400	1948	June 25, 1948	46.92	519,100
1917	Sept.28, 1917	23.6	143,000	1949	Feb. 26, 1949	20.47	82,280
1918	May 4, 1918	7.9	b20,500	1950	July 14, 1950	11.84	36,730
1919	Sept.17, 1919	38.5	285,000				
1920	Sept.10, 1920	14.4	70,200	1951	May 24, 1951	9.25	22,600
				1952	May 28, 1952	14.21	45,910
1921	June 15, 1921	11.0	b42,000	1953	Sept. 1, 1953	16.37	58,620
1922	June 19, 1922	45.6	408,000	1954	June 29, 1954	53.51	964,100
1923	Sept.18, 1923	14.0	63,000	1955	Sept.25, 1955	16.31	59,330
1924	Sept.14, 1924	8.0	b20,800				
1925	May 30, 1925	33.7	252,000	1956	Oct. 8, 1955	6.14	9,820
				1957	May 29, 1957	20.64	75,600
1926	Aug. 27, 1926	8.46	25,000	1958	June 19, 1958	21.00	86,520
1927	Oct. 15, 1926	-	b24,000	1959	Oct. 8, 1958	17.49	57,560
1928	Sept.10, 1928	14.5	50,800	1960	Oct. 6, 1959	14.50	45,200

a Present site and datum.
b Maximum daily discharge.
c Maximum peak discharge; maximum discharge for the year, 25,000 cfs on Oct. 1, 1936, stage falling.
d Maximum peak discharge; maximum discharge for the year, 19,300 cfs on Oct. 1, 1938, stage falling.

8-4585. Rio Escondido at Villa de Fuente, Coahuila, Mexico (376)

Location.--Lat 28°40', long 100°34', on the outskirts of Villa de Fuente, 3.1 miles southwest of Piedras Negras, Coahuila, and 3.7 miles above mouth.

Drainage area.--1,279 sq mi, all in Mexico.

Gage.--Nonrecording at site 4,000 ft upstream at datum 9.79 ft higher prior to Oct. 5, 1932; recording thereafter. At site 1.2 miles upstream at datum 9.00 ft higher Oct. 5, 1932, to November 1954. Datum of gage is 708.78 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Backwater reaches this station when flow of the Rio Grande at Eagle Pass reaches approximately 380,000 cfs. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Aug. 28, 1932	6.46	961	1947	May 10, 1947	8.63	2,740
1933	Aug. 20, 1933	5.31	1,020	1948	Sept. 9, 1948	14.60	10,520
1934	July 24, 1934	11.42	4,450	1949	Aug. 7, 1949	12.37	6,890
1935	May 14, 1935	17.06	17,700	1950	June 1, 1950	6.50	1,290
1936	June 29, 1936	19.13	24,000	1951	May 22, 1951	11.88	6,220
1937	May 30, 1937	8.30	2,600	1952	May 24, 1952	6.40	1,270
1938	July 24, 1938	8.79	3,280	1953	Sept. 2, 1953	14.21	9,820
1939	June 19, 1939	8.37	2,310	1954	May 23, 1954	18.44	17,870
1940	Aug. 13, 1940	14.53	9,180	1955	July 2, 1955	7.55	5,650
1941	May 2, 1941	10.40	5,370	1956	May 26, 1956	3.81	1,490
1942	Sept. 7, 1942	9.02	2,420	1957	May 27, 1957	15.81	18,220
1943	June 5, 1943	7.87	1,940	1958	Sept.16, 1958	10.30	8,120
1944	Aug. 30, 1944	8.96	2,130	1959	Oct. 1, 1958	3.51	1,060
1945	May 11, 1945	7.45	1,810	1960	Apr. 26, 1960	5.05	2,120
1946	Apr. 22, 1946	11.91	6,820				

8-4587. Rio Grande at San Antonio Crossing near Villa Guerrero, Coahuila, Mexico (377)

Location.--Lat 28°21', long 100°18', 0.5 mile downstream from Cuervo Creek, 5 miles northeast of Villa Guerrero, Coahuila, 34.8 miles downstream from Eagle Pass, Maverick County, Tex., and Piedras Negras, Coahuila, Mexico, and at mile 455.8.

Drainage area.--132,347 sq mi (contributing area), of which 84,482 sq mi is in the United States and 47,865 sq mi is in Mexico.

Gage.--Recording. At site 1,100 ft upstream at datum 0.08 ft lower October 1952 to December 1953. Datum of gage is 581.61 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 11, 1953	4.79	a3,430	1957	May 29, 1957	12.67	73,500
1954	June 29, 1954	42.70	912,000	1958	June 19, 1958	13.13	78,800
1955	Sept.26, 1955	10.43	b50,500	1959	Oct. 8, 1958	11.37	59,600
				1960	Oct. 6, 1959	-	c31,500
1956	Sept. 2, 1956	5.36	11,700				

a Maximum for periods Oct. 1, 1952, to Aug. 20, 1953, and Sept.23-30, 1953; probably exceeded by peak of Sept. 2, 1953.
b Maximum for periods May 27 to July 31, and Aug. 20 to Sept. 30, 1955; probably maximum for year.
c Daily mean discharge.

8-4590. Rio Grande at Laredo, Tex. (378)

Location.--Lat 27°30', long 99°31', 0.9 mile downstream from International Highway Bridge between Laredo, Webb County, Tex., and Nuevo Laredo, Tamaulipas, Mexico, and at mile 357.4.

Drainage area.--135,976 sq mi (contributing area), of which 85,718 sq mi is in the United States and 50,258 sq mi is in Mexico.

Gage.--Nonrecording prior to July 1924; recording thereafter. At site three-quarters of a mile upstream at different datum May 1, 1900, to July 31, 1903. At site 3 miles upstream at datum 5.43 ft higher Aug. 1, 1903, to Mar. 31, 1914, and Nov. 1, 1922, to September 1925. At site 1.5 miles upstream at datum 3.61 ft higher Aug. 26, 1930, to July 14, 1954. At site 1.4 miles upstream at datum 3.61 ft higher July 15, 1954, to Dec. 31, 1954. At site 100 ft upstream at datum 3.06 ft lower Jan. 1, 1955, to Aug. 31, 1955. Datum of gage is 347.90 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Flood in June 1865 was the highest since at least 1745.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1865	June 1865	a62.5	950,000	1929	Sept.17, 1929	10.79	c27,000
				1930	Apr. 29, 1930	-	15,650
1899	June 15, 1899	b388.9	172,000				
1900	Apr. 7, 1900	b387.2	160,000	1931	Oct. 8, 1930	-	53,300
				1932	Sept. 3, 1932	52.20	335,000
1901	Sept.10, 1901	-	-	1933	Oct. 2, 1932	22.47	79,500
1902	Sept.12, 1902	-	-	1934	June 3, 1934	13.94	47,700
1903	June 15, 1903	b372.8	73,500	1935	June 16, 1935	35.10	176,000
1904	Sept.17, 1904	b383.8	137,000				
1905	July 1, 1905	b388.1	166,000	1936	June 30, 1936	20.96	87,600
				1937	June 6, 1937	10.20	e21,000
1906	Aug. 14, 1906	b379.2	109,000	1938	July 26, 1938	27.40	106,000
1907	Sept.22, 1907	7.6	c18,390	1939	May 14, 1939	11.48	55,200
1908	Aug. 16, 1908	10.6	c33,000	1940	June 30, 1940	10.89	26,500
1909	July 24, 1909	9.2	c20,000				
1910	Sept. 8, 1910	b365.8	40,200	1941	Sept.20, 1941	20.31	68,860
				1942	Sept.15, 1942	17.45	55,440
1911	May 18, 1911	9.55	c24,260	1943	June 5, 1943	14.76	50,500
1912	June 19, 1912	b378.5	105,000	1944	Aug. 29, 1944	22.44	73,100
1913	June 25, 1913	12.3	e35,100	1945	Apr. 21, 1945	10.37	26,900
1914	May 26, 1914	b369.6	57,200				
1915	Oct. 24, 1914	b384.3	140,000	1946	Oct. 10, 1945	22.80	79,800
				1947	June 24, 1947	17.39	55,800
1916	Sept. 4, 1916	b370.3	60,600	1948	June 26, 1948	47.83	299,500
1917	Sept.29, 1917	b378.7	106,000	1949	Feb. 27, 1949	20.41	67,540
1918	May 4, 1918	-	(d)	1950	July 15, 1950	11.81	27,690
1919	Sept.18, 1919	b391.8	192,000				
1920	Sept.11, 1920	b371.4	66,400	1951	May 16, 1951	18.24	55,800
				1952	May 29, 1952	13.12	32,770
1921	June 15, 1921	-	-	1953	Sept. 3, 1953	18.60	53,680
1922	June 20, 1922	b402.4	312,000	1954	June 30, 1954	61.35	716,900
1923	Sept. 8, 1923	b375.0	85,200	1955	Sept.27, 1955	16.57	43,440
1924	Sept.22, 1924	15.25	c36,500				
1925	May 31, 1925	34.61	189,000	1956	July 3, 1956	11.15	24,540
				1957	May 30, 1957	22.05	64,630
1926	Apr. 21, 1926	b369.5	56,800	1958	June 20, 1958	20.93	f57,560
1927	Oct. 16, 1926	10.63	c25,000	1959	Oct. 1, 1958	20.93	59,080
1928	Sept.23, 1928	14.70	c51,600	1960	Oct. 7, 1959	14.27	36,730

a Site and datum of gage used 1930-54.
b Estimated mean sea level elevation from stage-discharge relationship in 1932.
c Maximum daily discharge.
d Maximum peak discharge for 1918 not determined; maximum discharge during year, 57,200 cfs on Oct. 1, 1917 (elevation, 369.6 ft), stage falling.
e Maximum peak discharge; maximum discharge during year, 34,500 cfs on Oct. 1, 1936 (gage height, 12.60 ft), stage falling.
f Maximum peak discharge; maximum discharge during year, 58,980 cfs on Sept. 30, 1958 (gage height, 20.73 ft), stage rising.

8-4597. Rio Salado at Las Tortillas, Tamaulipas, Mexico (379)

Location.--Lat 26°34', long 99°38', 2 miles downstream from Rio Sabinas, 6.2 miles southeast of Las Tortillas, Tamaulipas, and 24.8 miles above mouth.

Drainage area.--24,877 sq mi, all in Mexico.

Gage.--Recording. Datum of gage is 325.72 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. Some regulation by Don Martin Reservoir, about 150 miles upstream (capacity, 1,123,000 acre-ft) since 1930. Drainage area above reservoir, 17,296 sq mi. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 19, 1954	9.15	12,400	1958	Sept.19, 1958	19.68	22,600
1955	Sept. 3, 1955	15.94	19,710	1959	Oct. 16, 1958	23.79	27,720
				1960	June 7, Aug. 12, 1960	3.51	2,870
1956	Sept. 4, 1956	6.30	8,120				
1957	May 28, 1957	13.25	16,070				

8-4600. Rio Salado at Ciudad Guerrero, Tamaulipas, Mexico (380)

Location.--Lat 26°47', long 99°22', at a place called "El Cable," 2 miles southwest of Ciudad Guerrero, Tamaulipas, and 6.2 miles above mouth.

Drainage area.--25,112 sq mi, all in Mexico.

Gage.--Nonrecording prior to 1932; recording thereafter. Datum of gage is 265.75 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records furnished by International Boundary and Water Commission. See Remarks for station at Las Tortillas (station 8-4597) for regulation. Figures shown for 1901-24 and 1927-30 are maximum daily means. Only annual peaks are shown.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	July 16, 1900	b9.3	b15,100	1931	July 18, 1931	10.70	11,600
				1932	Sept. 6, 1932	11.55	13,400
1901	May 9, 1901	9.05	11,200	1933	Sept. 7, 1933	18.86	43,800
1902	Sept.20, 1902	7.25	6,960	1934	Apr. 7, 1934	11.29	14,300
1903	June 16, 1903	17.5	26,700	1935	July 24, 1935	14.24	22,400
1904	Sept.15, 1904	14.5	20,800				
1905	Sept.22, 1905	e9.4	10,000	1936	May 9, 1936	14.17	22,200
				1937	Aug. 17, 1937	12.57	16,500
1906	July 10, 1906	16.75	26,700	1938	Aug. 30, 1938	13.88	18,800
1907	July 4, 1907	8.6	7,480	1939	May 6, 1939	10.07	8,020
1908	Oct. 8, 1907	11.15	14,100	1940	Oct. 11, 1939	14.86	23,400
1909	July 4, 1909	19.3	30,400				
1910	Sept.16, 1910	15.8	26,900	1941	June 5, 1941	13.58	17,100
				1942	Sept. 8, 1942	13.42	16,200
1911	Sept. 1, 1911	5.95	3,650	1943	Sept. 2, 1943	8.39	6,070
1912	June 21, 1912	11.25	13,600	1944	Aug. 24, 1944	16.63	28,600
1913	Oct. 1, 1912	d8.15	7,520	1945	Apr. 21, 1945	11.29	10,100
1923	Sept.24, 1923	10.70	12,570	1946	May 30, 1946	13.29	15,300
1924	Sept.18, 1924	17.52	35,600	1947	Aug. 6, 1947	14.07	17,100
1925	Aug. 2, 1925	11.38	e19,400	1948	Sept.11, 1948	15.91	23,500
				1949	Apr. 23, 1949	17.29	26,200
1926	Oct. 1, 1925	14.04	40,600	1950	May 30, 1950	9.45	6,390
1927	June 22, 1927	12.63	27,500				
1928	Sept.10, 1928	8.56	7,230	1951	Sept.15, 1951	15.94	22,100
1929	Sept.16, 1929	9.77	3,180				
1930	May 29, 1930	12.99	18,000				

a Figures for 1901-24 and 1927-30 are maximum daily means.
b Maximum during period May 1 to Sept. 30, 1900; probably maximum for year.
c Occurred July 1905.
d Maximum during period Oct. 1, 1912, to July 14, 1913; probably maximum for year.
e Maximum peak discharge; maximum discharge, 20,100 cfs Sept. 30, 1925, stage rising.

8-4605. Rio Grande near Zapata, Tex. (381)

Location.--Lat 26°52', long 99°18', 1.4 miles downstream from the Rio Salado, 3 miles downstream from Zapata, Zapata County, 7.5 miles northeast of Ciudad Guerrero, Tamulipas, Mexico, and at mile 297.0.

Drainage area.--163,344 sq mi (contributing area), of which 86,815 sq mi is in the United States and 76,529 sq mi is in Mexico.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--Maximum flood since at least 1746 occurred in 1865 and reached a stage between 278 and 285 ft.

Remarks.--Records furnished by International Boundary and Water Commission. Permanent storage in Falcon Reservoir began Aug. 25, 1953. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept. 4, 1932	262.07	261,000	1944	Aug. 30, 1944	239.05	91,600
1933	Oct. 2, 1932	239.90	97,380	1945	Oct. 5, 1944,	226.51	26,600
1934	Oct. 15, 1933	228.68	42,750		Apr. 21, 1945	226.46	26,600
1935	June 17, 1935	251.00	161,000				
				1946	Oct. 10, 1945	235.73	72,100
1936	May 9, 1936	236.27	75,000	1947	Oct. 9, 1946	234.10	61,500
1937	June 6, 1937	225.80	a24,200	1948	June 27, 1948	257.33	209,000
1938	July 27, 1938	242.20	105,000	1949	Apr. 25, 1949	240.76	94,100
1939	May 6, 1939	228.15	33,200	1950	May 28, 1950	231.10	50,900
1940	Mar. 24, 1940	233.10	57,500				
				1951	Sept.15, 1951	234.30	61,300
1941	Sept.21, 1941	233.56	57,900	1952	May 29, 1952	228.90	34,600
1942	Sept. 8, 1942	239.24	88,700	1953	May 14, 1953	222.46	b7,750
1943	June 6, 1943	228.64	36,400				

a Maximum peak discharge; maximum discharge during year, 38,900 cfs on Oct. 1, 1936, stage falling.
b Maximum for period Oct. 1, 1952, to Aug. 23, 1953; probably exceeded during latter part of August or September.

8-4615. Rio Grande at Chapeno, Tex. (382)

Location.--Lat 26°38', long 99°09', at Chapeno, Starr County, 2.5 miles downstream from International Falcon Dam, and at mile 271.3.

Drainage area.--164,538 sq mi (contributing area), of which 87,762 sq mi is in the United States and 76,776 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 171.52 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At datum 1.74 ft higher prior to Mar. 9, 1954. Gage heights adjusted to present datum.

Remarks.--Flow controlled since Aug. 25, 1953, by releases from International Falcon Reservoir. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Aug. 27, 1953	9.72	a22,600	1956	June 2, 1956	6.66	11,100
1954	June 29, 1954	8.35	16,900	1957	May 26, 1957	7.35	13,100
1955	May 10, 1955	7.27	13,300	1958	Oct. 29, 1957	5.84	b7,740

a Maximum during period Jan. 1 to Sept. 30, 1953; probably maximum for year.
b Maximum during period Oct. 1 to Dec. 31, 1957; probably exceeded in September 1958.

8-4620. Rio Alamo at Ciudad Mier, Tamaulipas, Mexico (383)

Location.--Lat 26°27', long 99°09', at a point called "El Paso del Cantaro," 0.6 mile north of Ciudad Mier, Tamaulipas, and about 5 miles upstream from mouth.

Drainage area.--1,692 sq mi, all in Mexico.

Gage.--Nonrecording prior to August 1930; recording thereafter. Datum of gage is 188.35 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At site 515 ft upstream at datum 1.31 ft lower prior to June 10, 1952.

Historical data.--Flood of Sept. 11, 1948, is the highest since at least 1753.

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Sept.19, 1923	a8.46	a3,530	1942	May 20, 1942	10.99	9,460
1924	June 2, 1924	a6.30	a3,440	1943	Oct. 7, 1942	10.37	9,820
1925	Sept. 8, 1925	a15.88	a8,020	1944	Aug. 24, 1944	24.93	60,390
				1945	Sept.13, 1945	7.84	5,260
1926	Oct. 1, 1925	b12.53	b4,950				
1927	June 22, 1927	c16.57	c8,660	1946	Oct. 4, 1945	12.24	11,800
1928	May 13, 1928	a10.0	a4,010	1947	Oct. 9, 1946	15.35	19,920
1929	Aug. 26, 1929	7.96	a2,140	1948	Sept.11, 1948	33.56	144,800
1930	June 12, 1930	a11.48	a11,300	1949	Apr. 25, 1949	14.76	14,160
				1950	Sept.25, 1950	13.71	11,760
1931	July 17, 1931	11.15	21,190				
1932	Sept.30, 1932	19.56	20,060	1951	Sept.15, 1951	15.75	17,660
1933	Sept. 7, 1933	26.9	76,600	1952	May 25, 1952	11.91	8,930
1934	Apr. 6, 1934	14.07	12,400	1953	Aug. 27, 1953	22.36	43,080
1935	May 4, 1935	6.53	3,570	1954	Oct. 5, 1953	16.54	27,120
				1955	Sept.14, 1955	6.23	6,990
1936	Aug. 30, 1936	11.09	10,000				
1937	Aug. 17, 1937	6.43	3,460	1956	May 15, 1956	8.33	9,530
1938	Aug. 30, 1938	17.62	20,300	1957	Apr. 27, 1957	14.14	22,280
1939	Apr. 28, 1939	13.16	12,100	1958	Sept.19, 1958	13.42	20,480
1940	June 25, 1940	13.32	12,290	1959	Oct. 17, 1958	14.17	22,250
				1960	July 19, 1960	9.78	12,780
1941	Sept.10, 1941	8.79	7,060				

a Maximum daily mean.
b Maximum daily during period Oct. 1, 1925, to June 30, 1926; probably maximum daily for year.
c Maximum daily during period Jan. 1 to Sept. 30, 1927; probably maximum daily for year.

8-4625. Rio Grande at Roma, Tex. (384)

Location.--Lat 26°24', long 99°01', at International Bridge between Roma, Starr County, Tex., and Ciudad Miguel Aleman (formerly San Pedro), Tamaulipas, Mexico, 14.9 miles upstream from Rio San Juan, and at mile 254.2.

Drainage area.--166,464 sq mi (contributing area), of which 87,847 sq mi is in the United States, and 78,617 sq mi is in Mexico.

Gage.--Nonrecording prior to July 1924; recording thereafter. Datum of gage is 142.65 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At datum 4.38 ft higher May 1900 to December 1913. At datum 7.28 ft higher November 1922 to February 1929. At datum 3.28 ft higher March 1929 to December 1950.

Historical data.--Flood in June 1865 was the highest since at least 1746, and flood of Sept. 5, 1932, was the highest since 1865.

Remarks.--Records furnished by International Boundary and Water Commission prior to March 1929 and subsequent to June 1931. Since Aug. 25, 1953, flow largely regulated by Falcon Reservoir, 21 miles upstream. Only annual peaks are shown.

Peak stages and discharges of Rio Grande at Roma, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1865	June 1865	a43.0	650,000	1927	June 26, 1927	-	b41,000
				1928	May 14, 1928	-	b71,000
1874	September 1874	29.2	-	1929	Aug. 26, 1929	12.86	-
				1930	June 12, 1930	16.72	59,000
1899	June 16, 1899	-	130,000				
1900	Apr. 8, 1900	-	120,000	1931	July 16, 1931	21.58	90,400
				1932	Sept. 5, 1932	35.4	203,400
1901	Oct. 2, 1900	-	b18,600	1933	Sept. 7, 1933	23.66	100,000
1902	Sept.12, 1902	-	b30,200	1934	Oct. 16, 1933	12.46	34,900
1903	June 16, 1903	19.50	70,200	1935	June 17, 1935	27.81	141,000
1904	Sept.16, 1904	26.00	143,000				
1905	July 2, 1905	22.80	102,000	1936	May 9, 1936	18.31	68,400
				1937	June 7, 1937	8.75	d21,200
1906	Aug. 15, 1906	-	b55,000	1938	July 27, 1938	23.98	100,000
1907	July 4, 1907	-	b35,000	1939	May 6, 1939	11.68	e32,600
1908	Aug. 17, 1908	-	b27,000	1940	Mar. 25, 1940	16.86	55,100
1909	July 3, 1909	19.20	57,000				
1910	Sept.16, 1910	20.80	82,000	1941	Oct. 25, 1940	15.98	55,400
				1942	July 7, 1942	21.26	75,900
1911	May 19, 1911	-	b21,930	1943	June 6, 1943	11.22	40,600
1912	June 20, 1912	21.30	90,000	1944	Aug. 29, 1944	22.80	97,110
1913	Sept.26, 1913	-	b52,800	1945	Apr. 21, 1945	10.24	29,660
1914	Oct. 3, 1913	22.50	90,000				
1915	Oct. 24, 1914	-	140,000	1946	May 30, 1946	20.77	82,300
				1947	Oct. 9, 1946	18.47	67,500
1917	Sept.30, 1917	-	102,000	1948	Sept.11, 1948	33.04	176,900
				1949	Apr. 26, 1949	22.67	98,530
1919	Sept.25, 1919	-	155,000	1950	May 28, 1950	13.94	47,320
1920	Sept.11, 1920	-	64,000				
				1951	Sept.15, 1951	25.82	78,750
1922	June 22, 1922	c32.4	202,000	1952	May 30, 1952	14.17	31,710
1923	Sept. 9, 1923	17.10	69,500	1953	Aug. 27, 1953	23.26	56,500
1924	Sept.23, 1924	-	b49,000	1954	Oct. 22, 1953	16.57	36,370
1925	June 2, 1925	24.80	161,000				
1926	Oct. 1, 1925	19.32	97,000				

a Present site and datum. b Maximum daily mean discharge. c 35.0 ft, datum in use March 1929 to December 1950. d Maximum peak discharge; maximum discharge during year, 43,300 cfs on Oct. 1, 1936, stage falling. e Maximum peak discharge; maximum discharge during year, 38,000 cfs on Oct. 1, 1938, stage falling.

8-4630. Rio San Juan at Santa Rosalia, Tamaulipas, Mexico (385)
(Published as "near La Quemada" prior to July 15, 1902)

Location.--Lat 26°11', long 99°00', at Santa Rosalia Ranch, 3 miles west of Ochoa Railway station, 15 miles southwest of Ciudad Camargo, and at mile 27.5.

Drainage area.--12,013 sq mi, all in Mexico.

Gage.--Nonrecording prior to 1929; recording thereafter. Datum of gage is 205.15 ft above mean sea level, U.S. Coast and Geodetic Survey datum. At site 2.5 miles downstream at different datum Apr. 28, 1900, to July 14, 1902. At present site at different datums July 15, 1902, to Sept. 30, 1913. (Gage datum lowered 11.0 ft May 27, 1912.)

Remarks.--Records furnished by International Boundary and Water Commission. Only annual peaks are shown. Except for 1909 and 1923, figures shown prior to 1932 are daily means.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1901	June 29, 1901	-	19,200	1911	Apr. 27, 1911	-	10,760
1902	May 7, 1902	-	7,300	1912	June 25, 1912	-	20,490
1903	Aug. 17, 1903	-	31,430	1913	Sept.25, 1913	-	29,000
1904	Sept.16, 1904	-	45,080				
1905	July 18, 1905	-	13,380	1923	September 1923	33.79	95,810
				1924	June 2, 1924	25.33	27,600
1906	Nov. 2, 1905	-	21,980	1925	Sept. 8, 1925	19.68	41,830
1907	July 4, 1907	-	15,430				
1908	May 15, 1908	-	14,660	1926	Oct. 1, 1925	17.52	19,200
1909	Aug. 30, 1909	b49.21	353,000	1927	June 22, 1927	28.25	47,930
1910	Sept.16, 1910	-	18,040	1928	Sept.18, 1928	17.52	19,980

a Except for 1909 and 1923, figures shown prior to 1932 are daily means.
b Present site and datum.

Peak stages and discharges of Rio San Juan at Santa Rosalia, Tamaulipas, Mexico--Con. a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Sept.20, 1929	14.83	8,830	1937	July 10, 1937	13.45	7,840
1930	June 11, 1930	22.63	30,720	1938	Aug. 30, 1938	42.65	233,000
				1939	May 14, 1939	17.95	23,800
1931	Oct. 19, 1930	21.98	32,310	1940	Oct. 11, 1939	25.10	65,000
1932	Sept.29, 1932	41.01	212,000				
1933	Sept. 7, 1933	35.37	132,430	1941	Sept.10, 1941	25.36	72,750
1934	Oct. 4, 1933	23.79	57,210	1942	June 25, 1942	23.39	44,850
1935	Sept.23, 1935	19.88	29,000	1943	Oct. 7, 1942	20.73	30,370
1936	July 15, 1936	23.69	51,600				

a Figures shown prior to 1932 are daily means.

8-4647. Rio Grande at Fort Ringgold, Rio Grande City, Tex. (386)
(Published as "Rio Grande near Rio Grande City" prior to Jan. 1, 1955)

Location.--Lat 26°22', long 98°48', 1 mile downstream from Rio Grande City, Starr County, 4.9 miles downstream from the Rio San Juan, and at mile 233.9.

Drainage area.--180,396 sq mi (contributing area), of which 87,982 sq mi is in the United States and 92,414 sq mi is in Mexico. At gage site in use 1932-54, 180,941 sq mi (contributing area).

Gage.--Nonrecording prior to Jan. 1, 1932; recording thereafter. U.S. Weather Bureau gage at various sites and datums Jan. 1, 1901, to Dec. 31, 1931. At site 3.0 miles downstream at datum 100.00 ft lower Jan. 1, 1932, to Dec. 31, 1954. Datum of gage is 100.00 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Records prior to 1932 were obtained by comparison with other stations, records of gains and losses between stations on the Rio Grande, diversions from the Rio Grande, U.S. Weather Bureau records, and time of water travel between stations. Discharge measurements began in 1932. Flow regulated since August 1953 by releases from Falcon Reservoir 41 miles upstream. Prior to January 1946, when flow exceeded about 160,000 cfs at the gaging station on Rio San Juan at Santa Rosalia, water began to overflow the right bank of that stream, bypassing this station on Rio Grande near Rio Grande City, and entering the Rio Grande at a point 9 miles downstream. Subsequent to this time, water was released from Marta R. Gomez Reservoir into a canal which enters the Rio Grande downstream from this station. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1865	June 1865	-	590,000	1937	June 7, 1937	134.29	20,100
				1938	Aug. 31, 1938	153.53	147,000
1874	-	a31.5	-	1939	May 14, 1939	139.49	49,500
				1940	Oct. 12, 1939	146.43	73,100
1909	Aug. 30, 1909	b158.5	-				
				1941	Sept.11, 1941	146.00	72,100
1913	Sept.25, 1913	c24.0	-	1942	Sept. 9, 1942	145.09	72,900
1914	Oct. 4, 1913	28.0	-	1943	Oct. 7, 1942	137.70	37,000
1915	Oct. 25, 1914	25.8	129,000	1944	Aug. 31, 1944	149.82	106,000
				1945	Oct. 6, 1944	135.47	28,400
1916	Sept.14, 1916	20.8	85,600				
1917	May 13, 1917	17.8	-	1946	May 31, 1946	142.60	77,300
1918	Oct. 1, 1917	21.7	91,900	1947	Oct. 10, 1946	141.87	68,900
1919	Sept.26, 1919	26.5	136,000	1948	June 28, 1948	153.74	145,000
1920	Sept.12, 1920	17.2	61,900	1949	Apr. 26, 1949	146.71	79,500
				1950	May 28, 1950	137.16	38,000
1922	June 22, 1922	29.5	176,000				
1923	Sept.11, 1923	23.3	104,000	1951	Sept.16, 1951	146.78	65,600
1924	Sept.25, 1924	15.0	-	1952	May 30, 1952	136.21	26,500
1925	June 2, 1925	24.5	-	1953	Aug. 28, 1953	145.34	46,400
				1954	Oct. 5, 1953	139.87	29,500
1926	Oct. 1, 1925	19.0	-	1955	May 13, 1955	34.63	11,100
1932	Sept. 5, 1932	157.40	198,750	1956	June 4, 1956	34.35	10,600
1933	Sept. 8, 1933	154.90	160,500	1957	Apr. 28, 1957	39.34	23,800
1934	Oct. 5, 1933	142.80	59,780	1958	May 14, 1958	39.48	d23,800
1935	June 18, 1935	151.75	122,000	1959	Oct. 17, 1958	57.40	104,000
				1960	June 19, 1960	35.82	16,000
1936	May 10, 1936	145.40	71,200				

a At site and datum of U.S. Weather Bureau gage in use during period Dec. 1, 1913, to Nov. 10, 1926. b At site and datum of gage in use during period 1932-54. c Maximum during period Jan. 1 to Sept. 30, 1913; probably maximum for year. d Maximum peak discharge; maximum discharge during year, 25,700 cfs Sept. 30, 1958 (gage height, 42.04 ft), stage rising.

8-4680. Mission Branch south of McAllen, Tex. (387)
(Published as "North Floodway" prior to 1958)

Location.--Lat 26°10', long 98°14', at Tenth Street Bridge on State Highway 336, 3.5 miles south of McAllen, Hidalgo County.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum. At datum 79.45 ft higher prior to June 1948.

Remarks.--This floodway diverts only excess floodwater from the Rio Grande at an inlet 6 miles upstream from Anzalduas Dam. When the stage at Anzalduas Dam reaches approximately 109 ft, the Rio Grande begins to divert into Mission Branch. Only floodflow from the Rio Grande is computed at this station. Records furnished by International Boundary and Water Commission. Only annual peaks since 1926 during years when excess floodwater was diverted are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept. 7, 1932	21.37	38,710	1944	Sept. 2, 1944	16.90	4,700
1933	Oct. 2, 1932	21.10	35,710	1948	Sept.14, 1948	94.74	6,040
1935	Sept.12, 1935	16.23	6,860	1949	Apr. 28, 1949	92.16	1,400
1938	Sept. 2, 1938	20.07	26,000	1959	Oct. 19, 1958	100.46	32,000
1942	Sept.18, 1942	9.50	50				

8-4692. Rio Grande below Anzalduas Dam (388)

Location.--Lat 26°09', long 98°20', half a mile downstream from headworks of Anzalduas Canal and Anzalduas Dam, 12.2 miles upstream from the International Bridge between Hidalgo, Hidalgo County, Tex., and Reynosa, Tamaulipas, Mexico, and at mile 171.1.

Drainage area.--182,138 sq mi (contributing area), of which 88,934 sq mi is in the United States and 93,204 sq mi is in Mexico.

Gage.--Nonrecording prior to May 30, 1953; recording thereafter. Datum of gage is 82.61 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--After Aug. 25, 1953, flow largely regulated by releases from International Falcon Reservoir, 102.2 miles upstream, and by diversions into Anzalduas Canal. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 31, 1952	15.39	19,030	1957	Apr. 29, 1957	13.39	11,700
1953	Sept. 6, 1953	21.85	27,900	1958	May 15, 1958	12.99	a10,840
1954	Oct. 6, 1953	20.67	24,160	1959	Oct. 19, 1958	28.87	63,920
1955	May 15, 1955	7.94	4,380	1960	June 21, 1960	8.92	6,780
1956	May 29, 1956	8.96	5,540				

a Maximum peak discharge; maximum discharge during year, 20,410 cfs on Sept. 30, 1958, stage rising.

8-4700. Hackney Branch south of McAllen, Tex. (389)
(Published as "South Floodway" prior to 1958)

Location.--Lat 26°09', long 98°15', at bridge on State Highway 336, 4.5 miles south of McAllen, Hidalgo County, Tex.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum. At datum 79.65 ft higher prior to June 1948.

Remarks.--This floodway diverts only excess floodwater from the Rio Grande at an inlet 7 miles downstream from Anzalduas Dam. When the stage of Rio Grande at Hidalgo reaches approximately 100 ft, the Rio Grande begins to divert into Hackney Branch. Only floodflow from the Rio Grande is computed at this station. Records furnished by International Boundary and Water Commission. Only annual peaks since 1926 during years when excess floodwater was diverted are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Sept. 8, 1932	22.16	29,120	1944	Sept. 2, 1944	22.50	13,890
1933	Oct. 2, 1932	21.91	25,890	1948	Sept.14, 1948	101.57	11,700
1935	Sept.12, 1935	18.96	7,990	1949	Apr. 28, 1949	98.91	5,410
1938	Sept. 2, 1938	22.52	15,300	1959	Oct. 19, 1958	102.78	22,600
1942	Sept.18, 1942	14.82	336				

8-4715. Rio Grande at Hidalgo, Tex. (390)

Location.--Lat 26°06', long 98°16', at the International Highway Bridge between Hidalgo, Hidalgo County, Tex., and Reynosa, Tamaulipas, Mexico, and at mile 158.9.

Drainage area.--182,146 sq mi (contributing area), of which 88,937 sq mi is in the United States and 93,209 sq mi is in Mexico.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum. At datum 79.03 ft higher prior to July 28, 1941.

Remarks.--When the river at this station reaches an elevation of about 100 ft, or a flow of about 60,000 cfs, water begins to flow into Hackney Lake Inlet about 5.7 miles upstream from this station. The two above mentioned "Inlets" were formerly known as South Floodway south of McAllen, Tex., and North Floodway south of McAllen, Tex., in same order as named above. Records furnished by International Boundary and Water Commission after June 30, 1931. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	-	27.89	-	1939	Oct. 1, 1938	19.58	49,900
1910	-	24.82	-	1940	June 27, 1940	18.55	54,000
1922	June 23, 1922	26.6	-	1941	Sept.13, 1941	99.56	52,300
				1942	July 9, 1942	99.65	53,000
1928	Sept.25, 1928	20.20	a47,500	1943	Oct. 8, 1942	95.91	35,000
1929	May 27, 1929	-	b22,400	1944	Sept. 2, 1944	102.21	57,000
1930	June 15, 1930	21.50	43,200	1945	Apr. 23, 1945	92.04	22,000
1931	July 20, 1931	20.30	38,200	1946	Oct. 13, 1945	99.80	49,300
1932	Sept. 7, 1932	25.85	83,870	1947	Oct. 11, 1946	97.73	39,800
1933	Oct. 2, 1932	25.85	83,870	1948	Sept.14, 1948	101.75	57,800
1934	Oct. 5, 1933	19.85	52,820	1949	Apr. 28, 1949	100.58	52,800
1935	Sept.12, 1935	23.40	69,000	1950	May 29, 1950	92.42	25,000
1936	July 2, 1936	18.20	47,400	1951	Sept.18, 1951	98.71	40,300
1937	Oct. 1, 1936	18.15	47,400				
1938	Sept. 2, 1938	24.00	c83,200	1959	Oct. 19, 1958	102.02	37,100

a Maximum during period July 13 to Sept. 30, 1926; probably maximum for year.
b Maximum daily mean discharge.
c Maximum during period Apr. 26 to Sept. 30, 1938; probably maximum for year.

8-4733. Rio Grande at Progreso Bridge, Tex. (391)

Location.--Lat 26°03'20" , long 97°56'40", at bridge 2 miles south of Progreso, Hidalgo County, Tex., 0.8 mile downstream from Progreso pumping plant, and at mile 123.8.

Drainage area.--182,173 sq mi (contributing area), of which 88,947 sq mi is in the United States and 93,226 sq mi is in Mexico.

Gage.--Recording. Datum of gage is 52.56 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Flow regulated by releases from International Falcon Reservoir 149 miles upstream. When flow of Rio Grande at Hidalgo exceeds about 60,000 cfs, part of the upstream river flow finds outlet to the Gulf of Mexico through flood channels which branch from the river in both countries within the reach 44.4 miles upstream and 120.6 miles downstream from this station. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Apr. 11, 1954	14.50	a10,810	1957	Apr. 30, 1957	12.76	8,790
1955	May 16, 1955	8.01	3,520	1958	May 16, 1958	11.61	b6,460
				1959	Oct. 22, 1958	23.69	19,900
1956	May 28, 1956	8.66	4,030	1960	Apr. 19, 1960	8.92	4,380

a Maximum during period December 1953 to September 1954; probably exceeded during October 1953.
b Maximum peak discharge; maximum discharge during year, 10,770 ft on Sept. 30, 1958, stage rising.

8-4737. Rio Grande near San Benito, Tex. (392)

Location.--Lat 26°02'10", long 97°42'35", on left bank 5.6 miles downstream from San Benito pumping plant, 9 miles southwest of San Benito, Cameron County, and at mile 96.5.

Drainage area.--182,187 sq mi (contributing area), of which 88,954 sq mi is in the United States and 93,233 sq mi is in Mexico.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--Flow regulated by releases from International Falcon Reservoir 177 miles upstream. Excessive floodflows are partly diverted through the United States and Mexican floodway systems before reaching this station. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Apr. 11, 1954	50.15	8,040	1957	Apr. 30, 1957	46.85	5,700
1955	Oct. 7, 1954	40.78	2,140	1958	May 16, 1958	44.48	a3,010
				1959	Oct. 22, 1958	60.07	13,600
1956	May 29, 1956	38.63	1,630	1960	Apr. 20, 1960	43.87	3,470

a Maximum peak discharge; maximum discharge during year, 8,000 cfs on Sept. 30, 1958, stage rising.

8-4745. Rio Grande at Matamoras, Tamaulipas, Mexico (393)
(Published as "near Brownsville" prior to Oct. 1, 1926)

Location.--Lat 25°53', long 97°31', at railroad bridge between Matamoras, Tamaulipas, Mexico, and Brownsville, Cameron County, Tex., and at mile 56.3.

Drainage area.--182,211 sq mi (contributing area) of which 88,966 sq mi is in the United States, and 93,245 sq mi is in Mexico.

Gage.--Nonrecording prior to July 1, 1924; recording thereafter. At site 0.6 mile upstream at datum 8.27 ft higher prior to September 1925. At present site at datum 8.27 ft higher September 1925 to Oct. 2, 1930. At present site at datum 3.27 ft higher Oct. 3, 1930, to May 1, 1950. Datum of gage is 12.11 ft above mean sea level, U.S. Coast and Geodetic Survey datum.

Remarks.--During floods only a small part of the water discharges past this station through the main channel of the Rio Grande. The greater part finds outlet to Gulf of Mexico through channels and floodways in both countries. Records furnished by International Boundary and Water Commission. Only annual peaks are shown. Figures shown prior to 1931 are maximum daily means.

Peak stages and discharges a/

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	Aug. 14, 1900	-	b52,500	1931	July 22, 1931	21.10	27,600
				1932	Sept. 6, 1932	20.47	27,500
1901	Sept.13, 1901	-	c15,500	1933	Sept. 9, 1933	21.52	26,420
1902	Sept.16, 1902	-	24,000	1934	Oct. 19, 1933	21.06	22,670
1903	June 22, 1903	13.20	36,320	1935	June 10, 1935	22.21	31,400
1904	Sept.22, 1904	-	29,770				
1905	July 6, 1905	-	29,170	1936	Sept.18, 1936	22.41	29,100
				1937	Oct. 2, 1936	22.57	29,600
1906	July 16, 1906	-	30,140	1938	July 28, 1938	20.67	27,000
1907	May 30, 1907	-	30,610	1939	May 15, 1939	20.93	29,300
1908	Aug. 19, 1908	-	27,790	1940	Mar. 27, 1940	20.44	30,300
1909	Sept. 7, 1909	-	31,650				
1910	Sept.24, 1910	-	25,140	1941	June 29, 1941	21.92	28,920
				1942	Sept.16, 1942	22.51	32,300
1911	Oct. 6, 1910	-	18,000	1943	Oct. 9, 1942	19.36	23,700
1912	Nov. 5, 1911	-	25,210	1944	Aug. 28, 1944	20.60	29,950
1913	Oct. 3, 1912	-	20,000	1945	Oct. 1, 1944	17.36	21,470
1914	Oct.8,12, 1913	-	d33,000				
				1946	Oct. 13, 1945	20.70	31,570
1923	Sept.12, 1923	14.98	25,500	1947	Oct. 12, 1946	19.62	27,330
1924	Sept.28, 1924	15.81	23,800	1948	Sept.17, 1948	20.75	27,720
1925	Sept.12, 1925	16.63	26,700	1949	Apr. 30, 1949	21.62	32,950
				1950	May 31, 1950	18.27	16,100
1926	Apr. 25, 1926	13.96	29,000				
1927	June 29, 1927	16.31	28,400	1951	Sept.19, 1951	22.44	25,460
1928	May 17, 1928	15.91	25,500	1952	June 1, 1952	15.12	12,960
1929	May 28, 1929	12.50	18,000	1953	Sept. 8, 1953	21.52	15,290
1930	June 14, 1930	16.70	32,000	1954	Oct. 8, 1953	19.03	12,890

a Figures shown prior to 1931 are maximum daily means.
b Maximum daily during period May to September 1900.
c Maximum peak daily; maximum daily, 19,220 cfs Oct. 1, 1900, stage falling.
d Maximum daily during period October to December 1913.

8-4750. Rio Grande at Lower Brownsville, Tex. (394)

Location.--Lat 25°52', long 97°23', 1,000 ft downstream from El Jardin pumping plant, 6.6 miles downstream from Brownsville, Cameron County, and at mile 48.8.

Drainage area.--182,215 sq mi (contributing area), of which 88,968 sq mi is in the United States and 93,247 sq mi is in Mexico.

Gage.--Recording. Datum of gage is mean sea level, U.S. Coast and Geodetic Survey datum.

Historical data.--From records at El Jardin pumping plant, where the river gage datum is 1.11 ft above this gaging station datum, the maximum elevation reached at this station in recent years was 31.2 ft, during the floods of 1922, 1931, and 1932.

Remarks.--During floods, a portion of the upstream river flow finds outlet to the Gulf of Mexico through flood channels in both countries, which divert from the Rio Grande within 125 miles upstream from this station. Records furnished by International Boundary and Water Commission. Only annual peaks are shown.

Peak stages and discharges

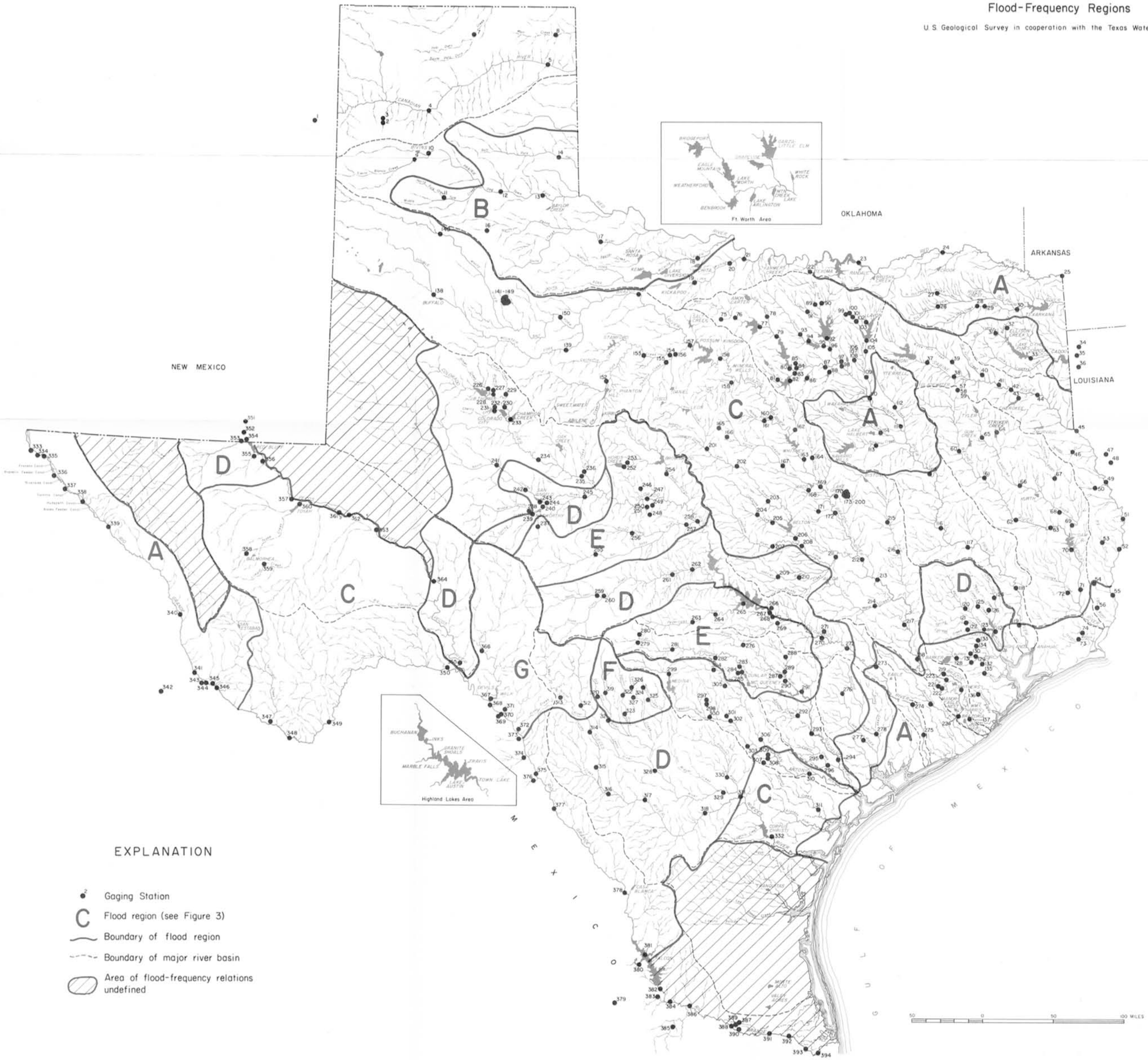
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	-	31.2	-	1946	Oct. 8, 1945	31.48	31,700
				1947	Oct. 12, 1946	30.82	25,000
1931	-	31.2	-	1948	Sept.17, 1948	31.73	26,400
1932	-	31.2	-	1949	Apr. 26, 1949	32.74	28,000
				1950	May 31, 1950	26.30	15,700
1935	June 10, 1935	32.10	31,000				
				1951	Sept.19, 1951	30.20	21,000
1936	Sept. 3, 1936	32.11	25,600	1952	June 1, 1952	22.85	9,430
1937	Oct. 2, 1936	32.27	21,200	1953	Sept. 8, 1953	29.04	15,100
1938	Sept. 2, 1938	31.63	24,000	1954	Oct. 8, 1953	26.64	12,300
1939	May 16, 1939	31.95	25,500	1955	Oct. 8, 1954	14.37	1,980
1940	June 28, 1940	31.75	28,300				
				1956	Nov. 11, 1955	10.50	606
1941	June 27, 1941	32.32	28,300	1957	May 2, 1957	18.56	3,800
1942	Sept.14, 1942	33.24	31,000	1958	May 18, 1958	17.40	b1,720
1943	Oct. 9, 1942	30.34	22,700	1959	Oct. 23, 1958	31.84	9,760
1944	Sept.15, 1944	32.08	26,200	1960	Apr. 21, 1960	17.61	2,870
1945	Oct. 8, 1944	-	a17,600				

a Maximum mean daily; maximum peak discharge occurred on this day; maximum discharge during year, 17,900 cfs on Oct. 1, 1944, stage falling.
b Maximum peak discharge; maximum discharge during year, 2,970 cfs on Sept. 30, 1958, stage rising.

Plate I

Map of Texas Showing Gaging Stations and Flood-Frequency Regions

U.S. Geological Survey in cooperation with the Texas Water Commission



EXPLANATION

- Gaging Station
- C — Flood region (see Figure 3)
- Boundary of flood region
- Boundary of major river basin
- Area of flood-frequency relations undefined

Plate 2

Map of Texas Showing Gaging Stations and Hydrologic Areas

U. S. Geological Survey in cooperation with the Texas Water Commission