UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Water-Supply Paper 628

SURFACE WATER SUPPLY *of the* UNITED STATES

1926

PART VIII
WESTERN GULF OF MEXICO BASINS

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Prepared in cooperation with the States of
TEXAS and COLORADO

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SURFACE WATER SUPPLY OF WESTERN GULF OF MEXICO BASINS, 1926

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of streams in the United States during the year ending September 30, 1926.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L., p. 394):

Provided, That this officer [the Director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States, and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895–1927

1895	$12, 500. 00	1911–1917	$150, 000. 00
1896	24, 500. 00	1918	175, 000. 00
1897–1899	50, 000. 00	1919	148, 244. 10
1900	70, 000. 00	1920	175, 000. 00
1901–1902	100, 000. 00	1921–1923	180, 000. 00
1903–1906	200, 000. 00	1924–25	170, 000. 00
1907	150, 000. 00	1926	165, 000. 00
1908–1910	100, 000. 00	1927	151, 000. 00

In this work many private and State organizations have cooperated, either by furnishing records or by assisting in their collection. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

Measurements of stream flow have been made at about 5,250 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1926, 1,730 gaging stations were being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were

made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

The volume of water flowing in a stream—the "run-off" or "discharge"—is expressed in various terms, each of which has become associated with work of a certain class. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, miner's inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, run-off in inches, and acre-feet. They may be defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off in inches" is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in depth in inches.

An "acre-foot," equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

The following terms not in common use are here defined:

"Stage-discharge relation," an abbreviation for the term "relation of gage height to discharge."

"Control," a term used to designate the section or sections of the stream below the gage which determine the stage-discharge relation at the gage. It should be noted that the control may not be the same section or sections at all stages.

The "point of zero flow" for a given gaging station is that point on the gage—the gage height—at which water ceases to flow over the control.

EXPLANATION OF DATA

The data presented in this report cover the year ending September 30, 1926. At the beginning of January in most parts of the United

States much of the precipitation in the preceding three months is stored in the form of snow or ice, in ponds, lakes, and swamps, or as ground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore, the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from

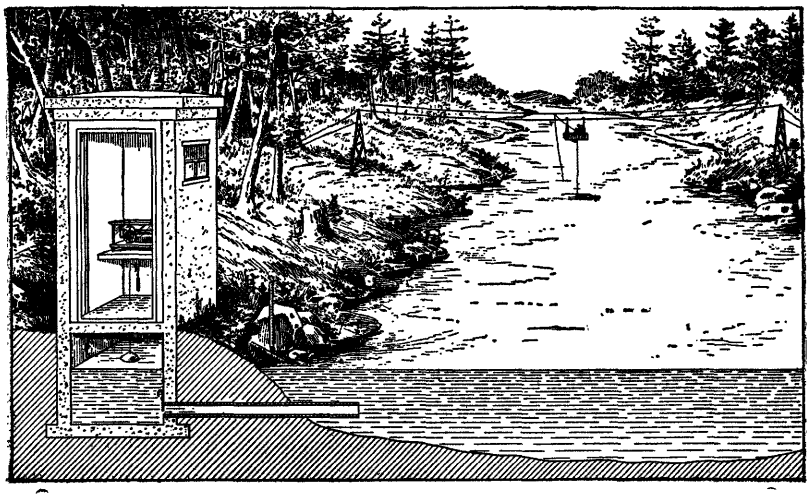

FIGURE 1.—Typical gaging station

direct reading on a staff gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in Figure 1.

From the discharge measurements rating tables are prepared that give the discharge for any stage. The application of the daily gage heights to these rating tables gives the daily discharge from which the monthly and yearly mean discharge are computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station, a table giving results of discharge measurements, a table showing the daily discharge, and a table of monthly and yearly discharge and run-off.

If the base data are insufficient to determine the daily discharge, tables giving daily gage heights and results of discharge measurements are published.

The description of the station gives, in addition to statements regarding location and equipment, information in regard to any condition that may affect the permanence of the stage-discharge relation, covering such subjects as the occurrence of ice, the use of the stream for log driving, shifting of channel, and the cause and effect of backwater. It gives also information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded stages, and the accuracy of the records.

The table of daily discharge gives the discharge in second-feet corresponding to the mean of the gage heights read each day. At stations on streams subject to sudden or rapid diurnal fluctuation the discharge obtained from the rating table and the mean daily gage heights may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge for parts of the day or by use of the discharge integrator, an instrument operating on the principle of the planimeter and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the mean flow for the day when the mean gage height was highest. As the gage height is the mean for the day, it does not indicate correctly the stage when the water surface was at crest height, and the corresponding discharge was consequently larger than that given in the column. Likewise, in the column headed "Minimum," the quantity given is the mean flow for the day when the mean gage height was lowest. The column headed "Mean" gives the average flow in cubic feet for each second during the month. On this average flow computations recorded in the remaining columns which are defined on page 2 are based.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends, primarily, (1) on the permanence of the stage-discharge relation and (2) on the accuracy of observations of stage, measurements of flow, and interpretation of records.

A paragraph in the description of the station gives information regarding the (1) permanence of the stage-discharge relation, (2) precision with which the discharge rating curve is defined, (3) refinement of gage readings, (4) frequency of gage readings, and (5) methods of applying daily gage heights to the rating table to obtain the daily discharge.

For the rating curves "well defined" indicates, in general, that the rating is probably accurate within 5 per cent; "fairly well defined," within 10 per cent; "poorly defined," within 15 to 25 per cent. These notes are very general and are based on the plotting of the individual measurements with reference to the mean rating curve.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors, caused by including large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable, and are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches. All figures representing "second-feet per square mile" and "run-off in inches" previously published by the Geological Survey should be used with caution because of possible unknown but inherent sources of error.

Many gaging stations on streams in the irrigated sections of the United States are located above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied. To give an idea of the amount of prior appropriations, a paragraph on diversions is presented in each station description. The figures given can not be considered exact, but represent the best information available.

The table of monthly discharge gives only a general idea of the flow at the station and should not be used for other than preliminary estimates. The tables of daily discharge allow more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on records previously published.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water powers, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, professional papers, annual reports, and monographs.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

PART I. North Atlantic slope basins (St. John River to York River).
II. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi).
III. Ohio River Basin.
IV. St. Lawrence River Basin.
V. Upper Mississippi River and Hudson Bay Basins.
VI. Missouri River Basin.
VII. Lower Mississippi River Basin.
VIII. Western Gulf of Mexico basins.
IX. Colorado River Basin.
X. Great Basin.
XI. Pacific slope basins in California.
XII. North Pacific slope basins, in three volumes:
A, Pacific slope basins in Washington and upper Columbia River Basin.
B, Snake River Basin.
C, Lower Columbia River Basin and Pacific slope basins in Oregon.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will, on application, furnish lists giving prices.

2. Sets of the reports may be consulted in the libraries of the principal cities of the United States.

3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Augusta, Me., State House.
Boston, Mass., 2500 Customhouse.
Hartford, Conn., 64 State Capitol.
Albany, N. Y., 904 Home Savings Bank Building.
Trenton, N. J., 423 Statehouse Annex.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 608 City Hall.
Chattanooga, Tenn., 630 Power Building.
Tuscaloosa, Ala., Post Office Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Chicago, Ill., 1510 Consumers Building.
Madison, Wis., 337 N State Capitol.
Thief River Falls, Minn., 618 Knight Avenue north.
Topeka, Kans., 23 Federal Building.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Capitol.
Tucson, Ariz., 104 Agricultural Building, University of Arizona.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 313 Federal Building.

Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, Federal Building.
Helena, Mont., 45–46 Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 600 Federal Building.
Honolulu, Hawaii, Territorial Office Building.

A list of the Geological Survey's publications may be obtained by applying to the Director of the United States Geological Survey, Washington, D. C.

Stream-flow records have been obtained at about 5,250 points in the United States, and the data obtained have been published in the reports tabulated below:

Stream-flow data in reports of the United States Geological Survey

[A=Annual Report; B=Bulletin; W=Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2	Descriptive information only	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to Sept., 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893 and 1894.
16th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895 and 1896.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)	1898.
W 35 to 39	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
W 47 to 52	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4	Monthly discharge	1900.
W 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
W 75	Monthly discharge	1901.
W 82 to 85	Complete data	1902.
W 97 to 100	do	1903.
W 124 to 135	do	1904.
W 165 to 178	do	1905.
W 201 to 214	do	1906.
W 241 to 252	do	1907–8.
W 261 to 272	do	1909.
W 281 to 292	do	1910.
W 301 to 312	do	1911.
W 321 to 332	do	1912.
W 351 to 362	do	1913.
W 381 to 394	do	1914.
W 401 to 414	do	1915.
W 431 to 444	do	1916.
W 451 to 464	do	1917.
W 471 to 484	do	1918.
W 501 to 514	do	1919–20.
W 521 to 534	do	1921.
W 541 to 554	do	1922.
W 561 to 574	do	1923.
W 581 to 594	do	1924.
W 601 to 614	do	1925.
W 621 to 634	do	1926.

NOTE.—No data regarding stream flow are given in the Fifteenth and Seventeenth Annual Reports.

The records at most of the stations discussed in these reports extend over a series of years, and miscellaneous measurements at many points other than regular gaging stations have been made each year. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1926. The data for any particular station will be found in the reports covering the years during which the station was maintained. For example, data for Machias River at Whitneyville, Me., 1903 to 1921, are published in Water-Supply Papers 97, 124, 165, 201, 241, 261, 281, 301, 321, 351, 381, 401, 431, 451, 471, 501, and 521, which contain records for the New England streams from 1903 to 1921. Results of miscellaneous measurements are published by drainage basins.

Numbers of water-supply papers containing results of stream measurements, 1899–1926

[For basins included see p. 6]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
												A	B	C
1899 [a]	35	[b] 35, 36	36	36	36	[c] 36, 37	37	37	[d] 37, 38	38, [e] 39	38, [f] 39	38	38	38
1900 [g]	47, [h] 48	48	48, [i] 49	49	49	49, [j] 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	[k] 65, 66, 75	66, 75	[k] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[b] 82, 83	83	[i] 82, 83	[k] 83, 85	84	[k] 83, 84	84	85	85	85	85	85	85
1903	97	[b] 97, 98	98	97	[k] 98, 99, [m] 100	99	[k] 98, 99	99	100	100	100	100	100	100
1904	[n] 124, [o] 125, [p] 126	[p] 126, 127	128	129	[k] 128, 130	130, [q] 131	[k] 128, 131	132	133	133, [r] 134	134	135	135	135
1905	[n] 165, [o] 166, [p] 167	[p] 167, 168	169	170	171	172	[k] 169, 173	174	175, [s] 177	176, [r] 177	177	178	178	[t] 177, 178
1906	[n] 201, [o] 202, [p] 203	[p] 203, 204	205	206	207	208	[k] 205, 209	210	211	212, [r] 213	213	214	214	214
1907–8	241	242	243	244	245	246	247	248	249	250, [r] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [r] 271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332–A	332–B	332–C
1913	351	352	353	354	355	356	357	358	359	360	361	362–A	362–B	362–C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919–20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in Twenty-first Annual Report, Part IV.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Grand River above junction with Gunnison.
[e] Mohave River only.
[f] Kings and Kern Rivers and south Pacific slope basins.
[g] Rating tables and index to Water-Supply Papers 47–52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52, Tables of monthly discharge for 1900 in Twenty-second Annual Report, Part IV.
[h] Wissahickon and Schuylkill Rivers to James River.
[i] Scioto River.
[j] Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.
[k] Tributaries of Mississippi from east.
[l] Lake Ontario and tributaries to St. Lawrence River proper.
[m] Hudson Bay only.
[n] New England rivers only.
[o] Hudson River to Delaware River, inclusive.
[p] Susquehanna River to Yadkin River, inclusive.
[q] Platte and Kansas Rivers.
[r] Great Basin in California, except Truckee and Carson River Basins.
[s] Below junction with Gila.
[t] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work of measuring streams in Texas during the year ended September 30, 1926, was carried on in cooperation with the State through the board of water engineers, consisting of John A. Norris (chairman), C. S. Clark, and A. H. Dunlap, to whom special acknowledgments are due for the efficient and cordial manner in which they represented the State in the cooperative investigations.

The following have aided in the collection of records by furnishing funds or otherwise assisting: United States Weather Bureau, American and Mexican sections of the International Boundary Commission, Texas Reclamation Department, State tubercular sanitarium, Corpus Christi, Dallas, Fort Worth, San Antonio, Brownwood, Longview, H. J. L. Stark, Walker-Caldwell Water Co., Guadalupe Water Power Co., Medina Valley Irrigation Co., Planters & Merchants' Mills, Brady Chamber of Commerce, Mineral Wells Chamber of Commerce, Breckenridge Chamber of Commerce, Jefferson Chamber of Commerce Beaumont Electra Chamber of Commerce, Missouri-Kansas-Texas Railroad, Texas & Pacific Railway, Tarrant County Water Improvement District No. 1, St. Louis Southwestern Railway, Texas & New Orleans Railroad, International-Great Northern Railroad, Galveston, Harrisburg & San Antonio Railway, Gulf, Colorado & Santa Fe Railway, Leslie Harrison, and E. N. Cory.

Acknowledgment is made in the description of the gaging stations for records furnished by cooperating parties.

DIVISION OF WORK

Data for stations in Texas were collected and prepared for publication under the direction of C. E. Ellsworth, district engineer, who was assisted by Clarence E. McCashin, J. W. Bones, W. E. Armstrong, Trigg Twichell, R. G. West, H. C. Pritchett, J. L. Saunders, S. D. Breeding, Tate Dalrymple, W. C. Dodd, A. C. Cook, N. C. Magnuson, Morris Reedy, G. D. Hunter, Kate Casparis, R. G. Fisher, E. S. Altgelt, and J. E. Stewart.

Data for Goose Creek near Wagonwheel Gap, Colo., were collected and prepared for publication under the direction of Robert Follansbee, district engineer, assisted by P. V. Hodges and Miss Nellie L. Esterly.

The records were reviewed and manuscript assembled by F. C. Christopherson and P. R. Speer.

GAGING-STATION RECORDS

SABINE RIVER BASIN

SABINE RIVER NEAR GOLDEN, TEX.

LOCATION.—At highway bridge on main road between Golden and Grand Saline, 50 feet below mouth of Blair Creek, 3 miles above mouth of Grand Saline Creek, and 5½ miles southwest of Golden, Wood County.

DRAINAGE AREA.—1,200 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—June 26, 1924, to May 2, 1926, when station was discontinued.

GAGE.—Vertical staff gage attached to piling on downstream side of bridge; read by Ernest Buyher.

DISCHARGE MEASUREMENTS.—Made from upstream side of bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of silt and débris. One channel for low and medium stages and three for high stages. Banks covered with brush and subject to overflow. Control poorly defined; shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 21.3 feet at 10 a. m. April 24 (discharge not determined); no flow October 13.

1924–1926: Maximum stage recorded, that of April 24, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Data insufficient for determination of discharge. Gage read to hundredths once daily.

The following discharge measurement was made:

November 16, 1925: Gage height, 2.90 feet; discharge, 39.2 second-feet.

Daily gage height, in feet, of Sabine River near Golden, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	0.40	3.20	1.26	1.3	3.6	1.8	16.5	6.5
2	.38	3.30	1.26	1.4	3.3	1.8	15.6	5.8
3	.36	4.00	1.26	2.2	3.1	1.8	14.2	-------
4	.30	5.80	1.26	2.1	2.9	1.8	8.0	-------
5	.30	9.10	1.26	2.6	2.8	1.8	6.0	-------
6	.28	11.05	1.28	2.5	2.7	5.4	4.9	-------
7	.29	12.55	1.28	3.3	2.6	11.3	4.7	-------
8	.30	14.32	1.28	3.1	2.6	11.5	3.5	-------
9	.32	15.50	1.24	3.0	2.5	9.0	3.2	-------
10	.32	16.90	1.24	2.6	2.4	11.6	3.8	-------
11	.28	17.40	1.24	2.4	2.4	15.2	3.8	-------
12	.26	17.00	1.26	2.3	2.3	17.0	3.8	-------
13	-------	15.00	1.26	2.0	2.3	16.3	5.5	-------
14	.30	10.95	1.28	2.0	2.1	13.6	6.2	-------
15	.40	6.00	1.34	2.0	2.1	10.2	5.1	-------
16	4.36	2.94	1.30	1.7	2.0	6.3	3.8	-------
17	7.60	2.65	1.40	5.7	2.1	4.2	3.4	-------
18	10.30	2.20	1.50	11.9	2.5	3.6	3.0	-------
19	10.85	2.00	1.50	14.8	2.5	3.5	2.8	-------
20	11.10	1.90	1.60	15.7	2.5	3.2	2.4	-------
21	7.10	1.75	1.60	18.35	2.3	7.2	3.3	-------
22	4.10	1.65	1.50	19.0	2.3	12.5	12.8	-------
23	2.60	1.48	1.50	18.6	2.3	14.4	16.3	-------
24	2.10	1.45	1.40	18.1	2.2	13.8	21.3	-------
25	2.00	1.42	1.40	18.1	2.1	14.8	20.0	-------
26	1.80	1.40	1.40	17.8	2.1	18.1	19.5	-------
27	1.55	1.36	1.40	16.2	2.1	18.0	18.7	-------
28	1.40	1.32	1.30	13.6	1.9	16.4	16.4	-------
29	1.40	1.30	1.30	7.1	-------	14.4	10.3	-------
30	3.40	1.28	1.30	6.8	-------	12.8	7.4	-------
31	3.10	-------	1.30	3.8	-------	15.9	-------	-------

SABINE RIVER NEAR LONGVIEW, TEX.

LOCATION.—At city pumping plant just below the International-Great Northern Railroad bridge, 1 mile above Longview-Henderson highway bridge, and 3 miles southwest of Longview, Gregg County.

DRAINAGE AREA.—3,010 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—January 1,1904, to December 31, 1906; October 21, 1923, to September 30, 1926.

GAGE.—Combined inclined and vertical staff gage in three sections on left bank; read by J. B. Parkhill.

DISCHARGE MEASUREMENTS.—Made from highway bridge 1 mile below gage or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of soapstone, sand, and drift; practically permanent. Right bank high; left bank subject to overflow at extremely high stages. Control is soapstone shallows and drift logs 200 feet below gage; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 24.37 feet at 6 p. m. May 4 (discharge, 8,410 second-feet); minimum stage, 1.47 feet at 6 p. m. October 8 and 7 a. m. October 9 (discharge, 32 second-feet).

1904–1906, 1924–1926: Maximum stage recorded, 35.05 feet May 19, 1905 (discharge, 19,500 second-feet); minimum stage, 1.10 feet August 30, 1925 (discharge, 14 second-feet).

DIVERSIONS.—None of consequence.

REGULATION.—Slight effect at extremely low stages by pump just above gage.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined for all stages. Gage read to hundredths once or twice daily. Daily discharge determined by applying mean daily gage height to rating table, except from August 6 to September 30, when shifting-control method was used. Records fair.

The following discharge measurements were made:

November 17, 1925: Gage height, 15.90 feet; discharge, 3,510 second-feet.

July 23, 1926: Gage height, 19.67 feet; discharge, 5,430 second-feet.

Daily discharge, in second-feet, of Sabine River near Longview, Tex., for the year ending September 30, 1926

May	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	317	227	227	6,370	378	6,190	6,490	458	2,290	5,300	272
2	39	378	227	242	6,490	362	6,310	7,200	426	2,470	4,970	242
3	35	474	212	317	6,250	332	6,370	7,900	426	2,710	4,570	198
4	35	725	227	458	5,460	332	6,370	8,320	410	2,920	4,060	185
5	35	2,840	227	508	3,660	332	6,370	8,320	426	3,100	3,100	166
6	34	3,290	227	525	1,780	560	6,310	7,810	730	3,130	1,520	146
7	33	3,450	227	508	810	1,310	6,310	7,070	1,220	3,020	614	133
8	33	3,410	227	474	596	1,640	6,250	6,250	1,470	1,990	394	133
9	33	3,130	212	442	560	1,720	6,010	5,790	1,720	850	362	133
10	33	2,850	212	442	508	2,260	5,460	5,680	1,990	770	347	140
11	33	2,640	198	410	474	3,290	4,100	6,250	2,080	560	347	272
12	33	2,600	198	378	458	3,930	2,640	6,620	2,080	992	317	508
13	35	2,600	198	362	442	4,100	1,640	6,740	1,640	1,380	287	650
14	41	2,780	378	347	410	4,150	1,310	6,740	950	1,550	272	670
15	48	2,990	1,010	317	410	4,240	1,190	6,740	442	2,140	272	525
16	95	3,250	1,100	302	394	4,380	1,080	6,680	317	2,410	272	332
17	227	3,490	930	347	378	4,620	1,010	6,550	287	2,640	242	227
18	442	3,570	710	632	410	4,870	930	6,370	272	2,920	227	172
19	650	3,490	542	710	614	5,080	830	6,250	474	3,250	212	146
20	850	2,710	410	775	670	5,080	690	6,130	458	3,700	185	126
21	1,010	1,360	347	2,480	614	4,920	632	5,790	442	4,150	185	114
22	1,080	578	317	4,620	596	5,460	1,290	5,130	426	4,720	172	95
23	1,190	378	302	4,970	560	4,870	2,200	4,470	458	5,350	166	95
24	1,190	317	287	4,770	525	3,920	2,600	3,920	491	5,840	159	84
25	890	287	272	4,620	508	3,330	2,740	3,610	525	6,190	146	79
26	650	272	272	4,620	508	4,020	2,850	3,410	884	6,490	347	74
27	302	257	272	4,820	458	4,240	3,170	3,210	1,910	6,620	394	69
28	227	242	257	5,240	426	4,280	3,880	2,680	2,470	6,620	302	69
29	198	242	242	5,520	-------	4,330	4,770	1,670	2,380	6,370	242	64
30	198	227	227	5,840	-------	4,770	5,620	850	2,260	6,010	198	64
31	242	-------	227	6,190	-------	5,790	-------	542	-------	5,620	257	-------

Monthly discharge of Sabine River near Longview, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,190	33	322	19,800
November	3,570	227	1,840	109,000
December	1,100	198	352	21,700
January	6,190	227	2,010	124,000
February	6,490	378	1,480	82,000
March	5,790	332	3,320	204,000
April	6,370	632	3,570	212,000
May	8,320	542	5,520	340,000
June	2,470	272	1,020	60,500
July	6,620	560	3,510	216,000
August	5,300	146	982	60,400
September	670	64	206	12,300
The year	8,320	33	2,020	1,460,000

SABINE RIVER AT LOGANSPORT, LA.

LOCATION.—At highway bridge between Logansport, De Soto Parish, La., and Haslam, Tex., 200 feet above Houston East & West Texas Railway bridge and 3 miles above mouth of Grand Cane Bayou.

DRAINAGE AREA.—4,860 square miles (measured on base maps of Texas and Louisiana).

RECORDS AVAILABLE.—July 1, 1903, to December 31, 1906; October 1, 1923, to September 30, 1926. Records of stage have been obtained by the United States Weather Bureau since July 1, 1903.

GAGE.—United States Weather Bureau chain gage attached to upstream handrail of highway bridge.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of sand and mud; practically permanent. Banks fairly clean, permanent, and not subject to overflow. Control is soft rock ledge 25 miles below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 29.6 feet at 7 a. m. April 25 (discharge, 23,000 second-feet, determined from extension of rating curve); minimum stage, −0.9 foot at 7 a. m. October 15 (discharge, 27.0 second-feet).

1903–1906, 1924–1926: Maximum stage recorded, 35.8 feet May 26, 1905 (discharge not determined); minimum stage not determined but was probably less than 27 second-feet during first part of September, 1925.

ICE.—None.

DIVERSIONS.—None of consequence.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent except when affected by backwater from tributaries entering below gage, or by wind. Rating curve fairly well defined from 45 to 16,000 second-feet and extended to cover range of stage for the year. Gage read to tenths once daily. Daily discharge determined by applying daily gage height to rating table, but not sufficiently accurate for publication. Monthly records fair.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

The following discharge measurements were made:

November 18, 1925: Gage height, 17.69 feet; discharge, 4,670 second-feet.

July 27, 1926: Gage height, 14.83 feet; discharge, 4,760 second-feet.

Monthly discharge of Sabine River at Logansport, La., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,090	33	386	23,700
November	12,800	636	5,180	308,000
December	1,410	488	734	45,100
January	7,400	488	3,190	196,000
February	5,420	743	2,170	120,000
March	20,200	721	7,360	453,000
April	23,000	3,280	10,500	627,000
May	10,700	3,020	7,540	464,000
June	2,920	540	1,680	100,000
July	4,800	1,970	2,930	180,000
August	4,800	303	1,630	100,000
September	290	87	174	10,400
The year	23,000	33	3,630	2,630,000

SABINE RIVER NEAR BON WIER, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge 1,000 feet below ferry crossing on highway between Newton, Tex., and Merryville, La., a quarter of a mile below Quicksand Creek, and 1¼ miles east of Bon Wier, Newton County.

DRAINAGE AREA.—8,390 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—October 6, 1923, to September 30, 1926. The United States Weather Bureau has obtained records of stage since December 8, 1913.

GAGE.—United States Weather Bureau chain gage, attached to upstream side of railroad bridge.

DISCHARGE MEASUREMENTS.—Made from upstream side of railroad bridge.

CHANNEL AND CONTROL.—Bed of stream composed of sand; shifts. Banks heavily wooded and subject to wide overflow. Control is sand bar 1,000 feet below gage; shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 20.3 feet at 7 a. m. November 9 (discharge, 41,400 second-feet, determined from extension of rating curve); minimum stage, 1.0 foot at 7 a. m. October 12 and 13 (discharge, 320 second-feet).

1924–1926: Maximum stage recorded, 20.3 feet December 25 and 26, 1923, and November 9, 1925 (discharge, 41,400 second-feet, determined from extension of rating curve); minimum stage, 0.5 foot September 11, 22, and 24, 1925 (discharge, 185 second-feet).

ICE.—None.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined from 250 to 28,000 second-feet and extended above. Gage read to tenths once daily. Daily discharge determined by applying daily gage height to rating table, but not sufficiently accurate for publication. Monthly records fair.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

No discharge measurements made at station during year.

Monthly discharge of Sabine River near Bon Wier, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	8,780	320	2,800	172,000
November	41,400	4,310	16,400	973,000
December	9,420	1,640	4,020	247,000
January	19,400	1,760	11,500	710,000
February	10,900	2,900	6,130	340,000
March	20,400	2,260	14,200	871,000
April	30,300	11,700	20,200	1,200,000
May	18,900	7,900	13,300	819,000
June	9,940	1,880	3,690	219,000
July	4,740	1,640	3,350	206,000
August	5,870	1,320	3,220	198,000
September	1,320	530	788	46,900
The year	41,400	320	8,300	6,000,000

SABINE RIVER NEAR RULIFF, TEX.

LOCATION.—At Kansas City Southern Railway bridge 1½ miles east of Ruliff, Newton County, and 5 miles below the mouth of Cypress Creek.

DRAINAGE AREA.—9,450 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—October 1, 1924, to September 30, 1926. Records of stage have been kept by Kansas City Southern Railway since August 17, 1907.

GAGE.—Staff gage attached to webbing and adjacent to upstream iron pier on left bank; read by J. M. Edwards, Lymon Doyle, and H. G. Smith.

DISCHARGE MEASUREMENTS.—Made from upstream side of railroad bridge or from boat near gage.

CHANNEL AND CONTROL.—Bed composed of sand and mud; subject to shift. Banks covered with trees and brush; fairly permanent; subject to overflow. Control for low stages formed by shifting sand bars; control for high stages indefinite.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.9 feet at 8 a. m. November 12 (discharge, 50,000 second-feet, determined from extension of rating curve and may be subject to considerable error); minimum stage, 2.10 feet at 5 p. m. October 13 (discharge, 652 second-feet).

1925–1926: Maximum stage recorded, that of November 12, 1925; minimum stage, 1.10 feet September 11, 1925 (discharge, 372 second-feet).

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 15,000 second-feet and poorly defined between 15,000 and 39,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Sabine River near Ruliff, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 19	10.15	8,850	May 1	11.75	14,000
Jan. 20	10.71	9,950	Aug. 27	4.61	1,580

Daily discharge, in second-feet, of Sabine River near Ruliff, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,050	7,900	8,800	3,150	12,600	3,450	23,500	14,000	10,200	3,050	5,000	1,840
2	1,050	7,680	7,050	3,900	12,600	3,350	27,400	14,000	9,580	2,870	5,300	1,840
3	1,050	8,120	5,600	6,080	11,400	3,350	29,700	14,000	9,580	2,550	5,450	1,840
4	1,160	7,900	4,850	8,350	11,400	3,150	27,400	15,700	9,300	2,250	5,760	1,840
5	1,400	7,900	4,020	11,100	11,800	3,150	27,400	15,700	9,050	2,550	5,910	1,840
6	1,270	11,400	3,650	13,000	11,800	2,870	23,500	23,500	8,120	3,050	6,260	1,610
7	1,090	14,500	3,550	15,700	11,800	4,560	23,500	25,200	7,250	3,450	6,260	1,450
8	945	19,200	3,450	17,100	11,400	5,300	23,500	23,500	6,080	4,420	6,460	1,400
9	777	47,700	3,450	18,200	10,800	8,120	23,500	19,200	5,450	4,420	6,460	1,310
10	745	47,700	3,350	17,100	9,300	9,850	27,400	15,700	5,150	4,420	6,460	1,200
11	745	47,700	3,250	15,700	9,580	12,600	27,400	15,700	4,560	4,700	6,260	980
12	683	50,000	3,050	12,600	9,580	14,500	27,400	15,100	3,650	4,700	6,080	1,240
13	683	45,400	2,870	12,200	9,300	16,400	29,700	14,000	3,450	4,700	5,450	1,200
14	745	41,000	2,700	14,500	9,050	18,200	29,700	13,500	3,150	4,700	5,150	1,120
15	777	36,400	2,550	8,580	8,580	19,200	29,700	11,800	3,050	4,700	4,280	1,120
16	4,280	34,200	4,070	6,260	7,680	19,200	25,200	14,000	2,960	4,150	3,900	1,090
17	4,280	29,700	7,680	6,460	6,460	18,200	19,200	14,000	2,870	3,900	3,650	1,090
18	5,910	27,400	9,580	6,460	5,600	19,200	23,500	14,000	3,050	2,960	2,320	1,050
19	7,050	25,200	11,400	7,680	5,000	19,200	20,500	14,000	3,250	2,480	2,100	1,050
20	7,250	23,500	11,800	10,200	4,700	20,500	17,100	14,000	3,450	2,250	1,970	1,020
21	7,050	21,800	11,100	12,600	4,700	21,800	17,100	14,000	3,250	2,100	1,900	980
22	5,600	21,800	9,850	16,400	4,700	19,200	20,500	14,000	3,250	2,960	1,720	945
23	4,280	19,200	8,800	18,200	4,420	18,200	29,700	14,000	2,960	3,150	1,560	1,050
24	3,250	18,200	7,680	18,200	4,280	17,100	29,700	14,000	2,870	3,250	1,400	1,240
25	3,050	17,100	6,460	19,200	4,150	17,100	29,700	13,500	2,700	3,550	1,310	1,560
26	2,960	16,400	5,760	17,100	4,020	17,100	23,500	13,000	2,480	4,420	1,270	1,610
27	3,250	15,700	5,300	16,400	3,900	17,100	19,200	12,600	2,320	4,700	1,670	1,480
28	5,000	14,500	4,280	15,700	3,650	17,100	16,400	12,200	2,960	4,850	1,840	1,340
29	6,650	13,000	3,900	14,500	-------	18,200	15,700	11,800	3,050	4,700	2,250	1,210
30	7,900	10,800	3,550	13,500	-------	19,200	15,700	11,100	3,150	4,700	2,700	1,080
31	7,900	-------	3,250	12,600	-------	21,800	-------	10,400	-------	4,700	2,400	------

NOTE.—Discharge interpolated Sept. 27–30.

Monthly discharge of Sabine River near Ruliff, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7,900	683	3,220	198,000
November	50,000	7,600	23,600	1,410,000
December	11,800	2,550	5,700	350,000
January	19,200	3,150	12,500	771,000
February	12,600	3,650	8,010	445,000
March	21,800	2,870	13,800	849,000
April	29,700	15,700	24,100	1,430,000
May	25,200	10,400	14,900	915,000
June	10,200	2,320	4,740	282,000
July	4,850	2,100	3,720	229,000
August	6,460	1,270	3,890	239,000
September	1,840	945	1,320	78,600
The year	50,000	683	9,940	7,200,000

LAKE FORK OF SABINE RIVER NEAR QUITMAN, TEX.

LOCATION.—At bridge on highway between Mineola and Quitman, 1 mile below mouth of Dry Creek and 2 miles south of Quitman, Wood County.

DRAINAGE AREA.—586 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—June 27, 1924, to April 30, 1926, when station was discontinued.

GAGE.—Staff gage on left bank; read by Carl Clark.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel composed of mud and débris; fairly permanent. Left bank high; right bank subject to overflow for 1,200 feet from the low-water channel at a stage of about 14 feet. Control consists of mud and sand bar 1,000 feet below gage; subject to shift.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 17.6 feet at 5 p. m. April 23 (discharge not determined); no flow October 4–14.

1924–1926: Maximum stage, that of April 23, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 1,000 second-feet and extended to 1,820 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records poor.

The following discharge measurement was made:

November 17, 1925: Gage height, 1.82 feet; discharge, 20.1 second-feet.

Daily discharge, in second-feet, of Lake Fork of Sabine River near Quitman, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	0.1	35	6.0	6.0	59	20	-------
2	.1	50	6.0	11	53	19	-------
3	.1	66	6.0	34	50	18	1,660
4	.0	126	5.7	41	47	18	663
5	.0	254	5.7	53	41	19	200
6	.0	455	5.7	82	38	99	122
7	.0	915	5.7	59	36	268	150
8	.0	1,260	5.4	44	35	580	130
9	.0	--------	5.3	34	32	417	114
10	.0	--------	5.1	29	30	807	106
11	.0	1,780	5.0	26	29	1,510	170
12	.0	1,060	4.4	24	29	--------	175
13	.0	354	4.9	18	26	--------	90
14	.0	89	7.5	17	26	1,510	102
15	6.6	32	9.4	14	24	637	78
16	166	20	8.6	14	23	211	66
17	270	18	8.1	82	24	106	53
18	306	15	11	282	44	82	50
19	353	12	19	944	47	70	47
20	299	9.9	17	--------	56	66	40
21	125	9.0	17	--------	70	126	72
22	39	8.4	16	1,820	53	584	728
23	11	7.5	13	1,660	41	863	-------
24	7.3	7.0	10	--------	34	1,220	-------
25	5.4	7.0	9.0	--------	30	1,580	-------
26	4.3	7.0	7.7	1,270	28	1,130	1,510
27	3.4	7.0	7.1	478	24	667	965
28	2.8	6.8	6.5	183	22	498	400
29	10	6.7	6.3	98	--------	334	122
30	38	6.3	6.0	82	--------	939	62
31	44	--------	5.7	66	--------	1,740	-------

NOTE.—Discharge not determined for several days because stage was beyond limits of rating curve. Mean gage heights for these days are given in parentheses: Nov. 9 (15.2), Nov. 10 (15.3), Jan. 20 (14.87), Jan. 21 (14.41), Jan. 24 (15.58), Jan. 25 (14.6), Mar. 12 (14.64), Mar. 13 (14.92), Apr. 1 (14.7), Apr. 2 (14.95) Apr. 23 (16.15), Apr. 24 (16.55), and Apr. 25 (14.6).

Monthly discharge of Lake Fork of Sabine River near Quitman, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	353	0.0	54.6	3,350
December	19	4.4	8.25	507
February	70	22	37.5	2,080

NECHES RIVER BASIN

NECHES RIVER NEAR REESE, TEX.

LOCATION.—At Texas & New Orleans Railroad bridge half a mile above Dead Creek, 1½ miles below Killough Creek, and 2 miles west of Reese, Cherokee County.

DRAINAGE AREA.—851 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—April 10, 1924, to September 30, 1926.

GAGE.—Staff gage in two sections attached to downstream end of center pier of railroad bridge and to old piling 63 feet below center line of railroad bridge; read by John Bowden. The gage is inverted, so that gage heights represent distance from base of rail to water surface.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of mud; fairly permanent. Banks covered with trees and brush and subject to overflow at a stage of −10.0 feet. Control half a mile below gage; probably permanent except when affected by lodged drift.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, −14.07 feet at 8.10 a. m. May 24 (discharge, 4,000 second-feet, determined from extension of rating curve; minimum stage, −26.40 feet October 5–10 (discharge, 5.0 second-feet).

1924–1926: Maximum stage, −12.5 feet at 3.45 p. m. May 30, 1924 (discharge not determined); no flow July 25–30 and September 10–11, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 1,600 second-feet and extended above. Gage read to hundredths irregularly; mean daily gage heights determined from graph drawn from gage readings in conjunction with rainfall data. Daily discharge determined by applying mean daily gage height to rating table or by estimating; not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of Neches River near Reese, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 15	−22.80	156	July 29	−17.46	1,500	July 30	−17.98	1,320
Jan. 16	−22.88	141	Do	−17.50	1,450	July 31	−18.48	1,230
July 22	−21.98	294	July 30	−17.74	1,360	Aug. 2	−20.52	671

Monthly discharge of Neches River near Reese, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	128	5.0	41.7	2,560
November	1,560	22	590	35,100
December	193	36	98.3	6,040
January	1,710	109	549	33,700
February	1,020	272	361	20,000
March	3,000	272	1,470	90,500
April	2,910	487	1,190	70,500
May	4,000	353	1,980	122,000
June	2,120	118	596	35,500
July	1,520	123	483	29,700
August	1,080		211	13,000
September			13.0	774
The year	4,000	5.0	635	459,000

NOTE.—Discharge estimated Aug. 17 to Sept. 30.

NECHES RIVER NEAR ROCKLAND, TEX.

LOCATION.—At ferry on highway between Rockland and Zavala, half a mile above Texas & New Orleans Railroad bridge, 1 mile north of Rockland, Tyler County, and 2 miles below the mouth of Billams Creek.

DRAINAGE AREA.—3,540 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926. The United States Weather Bureau has obtained records of stage since July 1, 1903.

GAGE.—United States Weather Bureau staff gage on left bank.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of rock; permanent. Banks of earth; subject to overflow at high stages. Control consists of rock shoals 2,000 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 22.7 feet at 7 a. m. April 26 and 27 (discharge, 15,100 second-feet); minimum stage, 0.1 foot at 7 a. m. October 1 (discharge, 119 second-feet).

1924–1926: Maximum stage recorded, that of April 26 and 27, 1926; minimum stage, −1.2 feet August 23 and 24, 1925 (discharge, 7.0 second-feet).

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined. Gage read to tenths once daily. Mean daily gage height for days of considerable fluctuation in stage determined from graph based on once daily gage readings. Daily discharge ascertained by applying daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

COOPERATION.—Records of stage furnished by the United States Weather Bureau.

The following discharge measurements were made:

January 18, 1926: Gage height, 9.14 feet; discharge, 3,900 second-feet.

April 28, 1926: Gage height, 22.35 feet; discharge, 14,000 second feet.

July 28, 1926: Gage height, 4.93 feet; discharge, 1,810 second-feet.

Daily discharge, in second-feet, of Neches River near Rockland, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	2,020	2,350	868	1,780	680	13,200	11,600	3,380	1,820	1,580	615
2	151	1,580	2,080	4,440	1,720	680	12,800	10,700	3,260	1,720	1,580	555
3	169	2,430	1,980	7,120	1,820	680	12,500	9,500	3,140	1,620	1,260	435
4	169	10,100	1,920	7,260	1,880	680	12,000	8,800	3,440	1,620	1,260	315
5	188	12,300	1,920	7,470	1,920	1,030	11,600	6,490	3,200	1,530	1,030	315
6	188	12,500	1,820	7,540	1,920	2,350	10,950	6,020	3,200	1,720	960	169
7	230	12,300	1,530	7,400	1,980	4,160	10,600	5,240	3,200	1,820	960	169
8	230	12,100	1,350	6,840	2,020	4,100	10,200	4,720	3,140	2,080	960	169
9	230	12,000	1,100	6,220	2,080	4,040	9,500	4,280	3,080	2,240	960	151
10	230	12,300	890	5,380	2,080	5,380	9,500	3,860	2,960	2,350	960	135
11	256	12,000	785	4,460	2,080	7,400	9,570	3,800	3,200	2,350	960	135
12	256	12,400	715	3,500	2,020	7,330	9,220	3,800	3,080	1,820	995	135
13	285	12,600	680	2,570	2,020	7,540	8,800	3,680	3,020	1,820	1,030	135
14	435	12,200	680	1,720	1,980	7,400	8,380	3,320	2,680	1,580	1,100	135
15	525	12,000	820	1,300	1,920	7,120	7,330	3,080	2,460	1,400	1,030	135
16	555	11,400	1,260	1,380	1,820	6,700	6,350	3,020	2,240	1,350	645	135
17	1,080	10,300	1,530	2,900	1,820	6,630	5,380	2,960	2,180	1,720	645	135
18	2,460	9,640	1,480	4,160	1,920	6,700	4,720	2,960	2,130	1,180	555	151
19	1,820	8,590	1,350	4,400	1,920	7,540	4,100	3,020	2,080	1,100	435	151
20	1,530	7,890	1,220	4,340	1,680	7,540	4,340	3,140	2,080	960	375	230
21	1,440	7,050	1,140	4,100	1,350	7,260	3,980	3,140	2,130	925	345	256
22	1,440	6,220	1,030	3,980	1,180	7,260	4,400	3,080	2,240	960	345	285
23	1,220	5,380	960	3,800	995	7,190	6,700	3,020	2,460	1,350	256	256
24	1,390	4,600	960	3,800	890	7,050	11,000	3,080	1,920	1,620	256	375
25	4,220	3,920	855	3,620	855	6,700	13,800	3,200	1,820	2,240	345	375
26	3,920	3,320	715	3,380	820	6,700	15,100	3,320	1,260	2,020	555	285
27	3,560	3,020	680	3,200	785	6,700	15,100	3,560	2,350	1,720	820	151
28	3,260	2,900	680	2,790	715	7,400	14,700	3,680	2,570	1,780	1,260	135
29	2,740	2,620	680	2,350	-------	10,300	13,800	3,620	2,350	1,720	890	135
30	2,460	2,350	680	2,080	-------	12,300	12,800	3,620	1,920	1,260	435	135
31	2,400	-------	715	1,820	-------	13,800	-------	3,500	-------	1,260	495	------

NOTE.—Daily discharge estimated Oct. 18, 25, Nov. 4, Jan. 17, Mar. 5 and 6.

Monthly discharge of Neches River near Rockland, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,220	119	1,260	77,700
November	12,600	1,580	8,000	476,000
December	2,350	680	1,180	72,500
January	7,540	868	4,070	250,000
February	2,080	715	1,640	91,200
March	13,800	680	6,070	374,000
April	15,100	3,980	9,750	580,000
May	11,600	2,960	4,540	279,000
June	3,440	1,260	2,610	155,000
July	2,350	925	1,630	100,000
August	1,580	256	8,160	50,100
September	615	135	230	13,700
The year	15,100	119	3,480	2,520,000

NECHES RIVER AT EVADALE, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge 500 feet west of Evadale railroad station, Jasper County, and 600 feet below mouth of Mill Creek.

DRAINAGE AREA.—7,910 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—July 1, 1904, to December 31, 1906; October 1, 1923, to September 30, 1926.

GAGE.—Vertical staff gage on left bank above bridge; read by F. B. Kirkpatrick. Zero of gage is 7.2 feet above mean sea level.

DISCHARGE MEASUREMENTS.—Made from upstream side of railroad bridge, from a boat, or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of mud and sand; shifts. Left bank high; right bank subject to overflow above a stage of 5 feet. Low-water control is a sand bar 1½ miles below gage; shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 17.66 feet at 6 p. m. April 10 and 7 p. m. April 11 (discharge, 30,800 second-feet); minimum stage, 0.40 foot at 7.30 a. m. October 13 (discharge, 252 second-feet).

1904–1906, 1924–1926: Maximum stage recorded, 19.0 feet from 7 a. m. June 1 to 7 a. m. June 7, 1924 (discharge, 40,700 second-feet); minimum stage, −0.35 foot September 10, 1925 (discharge, 148 second-feet).

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table. Records fair.

The following discharge measurements were made:

April 29, 1926: Gage height, 15.38 feet; discharge, 13,800 second-feet.

August 21, 1926: Gage height, 4.02 feet; discharge, 1,080 second-feet.

September 29, 1926: Gage height, 2.66 feet; discharge, 784 second-feet.

Daily discharge, in second-feet, of Neches River at Evadale, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	348	7,740	10,400	2,910	7,270	2,720	16,500	18,800	6,450	5,600	3,610	1,670
2	296	7,740	9,420	3,470	6,980	2,600	18,000	22,500	6,580	5,240	3,260	1,400
3	296	7,420	8,550	5,120	6,840	2,500	20,200	25,500	6,840	4,680	3,050	1,300
4	402	6,840	7,740	7,580	6,840	2,400	22,500	27,000	6,840	4,380	2,910	1,260
5	508	7,580	6,840	9,800	6,840	2,450	24,000	27,800	6,580	4,180	2,780	1,230
6	485	9,800	6,200	12,100	6,710	2,780	26,200	27,800	6,320	4,280	2,450	1,160
7	422	11,300	5,120	13,800	6,450	3,910	28,500	26,200	6,080	4,180	2,200	1,030
8	348	13,800	5,360	15,200	6,320	6,080	29,200	24,000	5,840	4,000	2,000	936
9	312	16,500	5,010	16,500	6,320	7,900	29,200	21,800	5,480	3,910	1,870	848
10	296	20,200	4,090	17,200	6,320	10,400	30,000	19,500	5,360	3,910	1,790	764
11	266	24,800	4,090	17,200	6,320	11,800	30,000	16,500	5,240	4,090	1,710	736
12	266	28,500	3,610	15,800	6,320	12,400	30,000	14,200	5,120	4,090	1,630	681
13	252	30,000	3,190	14,200	6,320	13,000	28,500	12,400	5,120	4,000	1,630	708
14	296	30,000	2,910	12,100	6,320	13,800	27,800	10,800	5,120	3,830	1,670	708
15	708	29,200	4,090	10,200	6,080	14,600	27,000	9,800	5,010	3,470	1,670	655
16	2,410	28,500	5,120	8,380	5,720	15,800	24,800	8,550	4,680	3,190	1,790	603
17	3,470	27,800	6,080	7,420	5,240	16,500	23,200	7,740	4,380	3,050	1,790	577
18	4,380	27,800	6,320	7,270	4,790	18,000	21,800	7,120	4,090	2,910	1,670	554
19	5,360	27,800	6,450	8,720	4,680	19,500	19,500	6,580	3,830	2,910	1,440	531
20	5,480	27,000	6,320	10,800	4,790	18,000	18,000	6,450	3,610	2,840	1,330	508
21	4,900	26,200	5,840	12,700	4,680	18,000	15,800	6,320	3,400	2,720	1,130	485
22	4,000	25,500	5,120	13,400	4,480	17,200	18,800	6,200	3,260	2,550	1,030	485
23	3,330	24,000	4,680	13,000	4,180	16,500	18,800	6,200	3,260	2,400	936	508
24	3,050	22,500	4,180	12,700	3,830	15,200	15,200	6,080	3,610	2,250	906	554
25	3,120	20,200	3,910	12,100	3,540	14,600	13,400	5,960	4,280	2,350	876	603
26	3,330	18,800	3,610	11,000	3,260	14,600	12,700	5,840	4,580	3,050	876	629
27	4,680	16,500	3,330	10,400	3,050	13,800	12,700	5,960	4,790	3,830	936	708
28	6,580	14,200	3,050	9,610	2,910	13,400	13,000	6,080	4,790	4,280	1,260	792
29	7,740	12,700	2,910	8,890	-------	14,200	14,200	6,200	5,240	4,380	1,710	736
30	8,380	11,500	2,780	8,380	-------	15,200	15,800	6,320	5,600	4,090	2,050	681
31	8,060	-------	2,780	7,900	-------	15,800	-------	6,450	-------	3,830	1,960	------

Monthly discharge of Neches River at Evadale, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	8,380	252	2,700	166,000
November	30,000	6,840	19,400	1,160,000
December	10,400	2,780	5,130	316,000
January	17,200	2,910	10,800	666,000
February	7,270	2,910	5,480	304,000
March	19,500	2,400	11,800	725,000
April	30,000	12,700	21,500	1,280,000
May	27,800	5,840	13,200	811,000
June	6,840	3,260	5,050	300,000
July	5,600	2,250	3,690	227,000
August	3,610	876	1,800	111,000
September	1,670	485	801	47,700
The year	30,000	252	8,440	6,110,000

MUD CREEK AT PONTA, TEX.

LOCATION.—At Texas & New Orleans Railroad bridge three-quarters of a mile west of Ponta, Cherokee County, and 1 mile below mouth of Sandy Creek.

DRAINAGE AREA.—481 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—April 15, 1924, to September 30, 1926.

GAGE.—Staff gage on downstream side of Texas & New Orleans Railroad bridge; read by J. M. Langley. The gage is inverted, so that gage heights represent distance from base of rail to water surface.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of stream composed of mud and sand; fairly permanent. One channel at all stages. Banks covered with brush and trees; not subject to overflow. Control poorly defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, −14.10 feet at 5.15 p. m. March 22 (discharge, from extension of rating curve, 2,620 second-feet; minimum stage, −25.0 feet October 5–9 (discharge, 0.4 second-foot).

1924–1926: Maximum stage recorded −12.72 feet at 5.32 a. m. May 30, 1924 (discharge, 4,000 second-feet, determined from extension of rating curve); no flow during several periods in 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 1,800 second-feet; extended above. Gage read to hundredths once daily; gage readings very irregular. Mean daily gage height determined from graph drawn from gage readings. Daily discharge determined by applying mean daily gage height to rating table. Records poor.

The following discharge measurements were made:

January 16, 1926: Gage height, −21.61 feet; discharge, 129 second-feet.

July 23, 1926: Gage height, −22.04 feet; discharge, 92 second-feet.

July 29, 1926: Gage height, −22.02 feet; discharge, 90 second-feet.

Daily discharge, in second-feet, of Mud Creek at Ponta, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 0.6	a 9.8	115	a 79	640	185	1,240	476	115	a 70	a 18	4.2
2	a .5	7.8	106	a 84	a 555	a 197	a1,160	a 374	143	58	a 14	a 4.4
3	.5	a 40	97	a 124	458	a 197	1,160	374	143	a 52	a 12	a 4.2
4	a .5	209	97	a 197	406	a 209	a1,080	374	a 259	a 49	a 9.8	a 3.8
5	.4	515	106	246	374	a 209	975	374	390	a 47	a 8.5	a 3.4
6	a .4	910	a 124	272	313	209	a 910	a 406	a 342	a 46	8.0	a 3.1
7	a .4	1,080	a 133	285	a 285	a 233	790	a 476	a 272	46	6.0	2.8
8	.4	1,040	a 143	a 299	285	a 299	a 690	a 555	233	a 48	a 5.2	a 2.5
9	a .4	1,120	143	a 299	259	458	555	a 665	133	a 51	4.7	2.3
10	.5	1,160	a 143	a285	233	820	515	740	79	a 58	4.4	a 2.3
11	a .6	a1,080	133	259	221	1,080	a 515	1,010	58	a 66	a 4.3	a 2.1
12	a .8	975	124	209	a 209	1,320	495	1,040	a 50	75	a 4.4	a 2.1
13	a 1.9	a 740	a 143	a 173	197	1,120	a 476	1,040	a 40	88	a 4.4	a 2.1
14	3.8	a 640	a 163	a 143	a 185	a1,080	476	1,080	34	a 110	4.5	a 2.1
15	a 14	a 555	185	133	a 173	a1,040	476	1,120	23	a 133	a 4.5	a 2.1
16	209	515	a 197	124	a 163	a 975	495	a1,010	a 20	124	a 4.5	2.1
17	272	a 458	a 197	a 173	163	940	476	a 910	a 19	102	4.5	a 2.1
18	a313	a 422	209	246	173	a 850	a 422	820	a 20	a 62	4.4	2.1
19	a209	a 422	209	285	173	740	374	740	24	a 24	4.4	a 2.1
20	a62	a 390	a 221	a 476	a 163	665	327	a 665	a 32	19	a 4.1	2.1
21	13	342	a 221	a 740	a 163	a 850	299	a 595	40	a 18	a 3.7	2.0
22	a 8.0	a 374	233	1,240	a 163	2,370	880	555	197	a 31	a 3.2	1.8
23	a 6.7	a 342	185	1,610	a 153	2,210	a 940	a 575	406	88	a 2.8	a 1.7
24	6.0	299	163	2,140	163	a1,780	1,080	a 617	313	a 143	a 2.5	a 1.7
25	a 9.8	a 285	a 143	1,780	a 163	1,780	a1,040	640	233	a 153	2.3	a 1.6
26	a 8.5	a 259	a 124	1,360	153	a1,410	975	640	313	163	a 2.1	a 1.6
27	7.0	233	a 106	1,120	a 163	1,160	940	476	a 259	153	a 2.0	a 1.4
28	6.0	a 209	97	1,010	a 173	a1,040	a 850	a 374	a 185	124	1.9	1.4
29	7.5	a 173	88	910	-------	940	790	a 285	133	92	a 1.7	a 1.4
30	8.7	124	88	a 790	-------	1,120	a 595	a 233	88	a 47	a 1.7	1.4
31	9.8	-------	84	a 690	-------	1,240	-------	a 163	-------	24	a 2.1	------

a Gage not read; discharge estimated from gage-height graph drawn through recorded gage readings.

Monthly discharge of Mud Creek at Ponta, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	313	0.4	38.1	2,340
November	1,160	7.8	498	29,600
December	233	84	146	8,970
January	2,140	79	574	35,300
February	640	153	247	13,700
March	2,370	185	927	57,000
April	1,240	299	733	43,600
May	1,120	163	626	38,500
June	406	19	153	9,120
July	163	18	76.3	4,690
August	18	1.7	5.18	319
September	4.4	1.4	2.26	139
The year	2,370	.4	336	243,000

ANGELINA RIVER NEAR LUFKIN, TEX.

LOCATION.—At Lufkin-Nacogdoches highway bridge, 1 mile above Houston East & West Texas Railway bridge, 1.2 miles above mouth of Lamana Bayou, and 8 miles north of Lufkin, Angelina County.

DRAINAGE AREA.—1,580 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—October 29, 1923, to September 30, 1926.

GAGE.—Chain gage attached to upstream side of highway bridge; read by Willie Lind and D. Ramos. Prior to January 17 gage was at Houston East & West Texas Railway bridge 1 mile downstream.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Bed composed of sand and mud; shifts. Left bank high; right bank subject to overflow. Control for low stages is mud and gravel, 75 feet below gage; fairly permanent. Control for high stages poorly defined; affected by timber and drift.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.99 feet from 9 a. m. November 19 to 8.30 a. m. November 21 (discharge, 30,200 second-feet, determined from extension of rating curve and may be subject to considerable error); minimum stage, 2.60 feet at 5 p. m. October 10 (discharge, 17 second-feet).

1924–1926: Maximum stage, that of November 19–21, 1925; minimum discharge, 14 second-feet August 27, 28, 31, and September 1–3, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curves fairly well defined below 6,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table; not sufficiently accurate for publication. Monthly records fair.

The following discharge measurements were made:

January 17, 1926: Gage height, 8.70 feet; discharge, 1,090 second-feet.

April 27, 1926: Gage height, 12.48 feet; discharge, 6,200 second-feet.

July 27, 1926: Gage height 7.84 feet; discharge, 455 second-feet.

Monthly discharge of Angelina River near Lufkin, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,300	17	304	18,700
November	30,200	93	10,800	645,000
December	850	475	621	38,200
January	3,250	455	1,340	82,500
February	4,370	540	1,370	75,900
March	19,100	480	5,850	360,000
April	13,800	1,210	5,210	310,000
May	4,560	680	1,820	112,000
June	1,160	191	451	26,900
July	730	247	388	23,900
August	287	37	98.8	6,070
September	48	23	32.2	1,920
The year	30,200	17	2,350	1,700,000

VILLAGE CREEK NEAR KOUNTZE, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge 4 miles east of Kountze, Hardin County, and 8 miles below mouth of Beech Creek.

DRAINAGE AREA.—838 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—May 14, 1924, to September 30, 1926.

GAGE.—Chain gage attached to upstream side of railroad bridge; read by Charles Barnes. The gage is inverted, so that gage heights represent distance from base of rail to water surface.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand; shifts. Banks low and subject to overflow. Low-water control is an accumulation of trees and logs partly buried in the sand 200 feet below the gage; subject to shift and accumulation of more drift. High-stage control is bed and banks of stream.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, —12.88 feet at 2.25 p. m. November 7 (discharge, from extension of rating curve, 12,800 second-feet); minimum stage, —28.86 feet at 2.26 p. m. October 13 (discharge, 62 second-feet).

1924–1926: Maximum stage, —11.19 feet June 2, 1924 (discharge not determined); minimum discharge, 38 second-feet August 21, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 9,000 second-feet and extended above. Gage read to hundredths once daily except Sundays. Daily discharge determined by applying daily gage height to rating table; not sufficiently accurate for publication. Monthly records fair.

The following discharge measurements were made:

April 25, 1926: Gage height, —16.97 feet; discharge, 3,560 second-feet.

August 21, 1926: Gage height, —27.89 feet; discharge, 140 second-feet.

September 29, 1926: Gage height, —26.89 feet; discharge, 306 second-feet.

Monthly discharge of Village Creek near Kountze, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,460	62	800	49,200
November	12,800	496	3,150	187,000
December	1,830	256	766	47,100
January	11,700	772	3,440	211,000
February	1,860	477	893	49,600
March	4,010	388	1,700	105,000
April	4,010	2,000	2,840	169,000
May	2,000	296	824	50,700
June	1,200	210	312	18,600
July	516	124	265	16,300
August	----------	----------	168	10,300
September	----------	----------	340	20,200
The year	12,800	----------	1,290	934,000

NOTE.—Daily discharge was estimated, owing to missing gage heights, for Oct. 4, 11, 18, 25, Nov. 15, 22, 29, Dec. 6–13, 24–29, Jan. 3, 10, 31, Feb. 7, 14, 21, 28, Mar. 7, 14, 21, 28, Apr. 11, May 9, 16, 23, 30, June 6, 13, 19, 20, 27, July 4, 18, 25. Mean monthly discharge for August and September was estimated, owing to missing gage heights.

TRINITY RIVER BASIN

WEST FORK OF TRINITY RIVER AT BRIDGEPORT, TEX.

LOCATION.—At Rock Island pumping plant, a quarter of a mile below Balsora-Bridgeport highway bridge, half a mile southwest of railroad station at Bridgeport, Wise County, and 1¼ miles below mouth of Gentry Creek.

DRAINAGE AREA.—1,010 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1914, to September 30, 1926. Records of stage have been obtained by United States Weather Bureau since August 12, 1908, at highway bridge a quarter of a mile upstream from present station.

GAGE.—Vertical staff gage on left bank, three-eighths mile above Rock Island Dam; read by F. G. Howard.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of clay, gravel, and sand. Banks slightly wooded; subject to overflow at a stage of 25 feet. Control is a 4-foot concrete dam three-eighths mile below station; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 21.57 feet during night of March 21–22 (discharge, 7,480 second-feet); no flow December 7 to January 16.

1908–1926: Maximum stage recorded, 28.9 feet June 8, 1915 (discharge not determined); no flow during several periods.

DIVERSIONS.—City of Bridgeport diverts a small amount for municipal uses. Practically no other diversion above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 1,500 second-feet, poorly defined from 1,500 to 3,500 second-feet, well defined from 3,500 to 5,500 second-feet, and extended above. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

The following discharge measurements were made:

December 9, 1925: Gage height, 5.73 feet; discharge estimated, 0.05 second-foot.

April 25, 1926: Gage height, 6.88 feet; discharge, 144 second-feet.

August 8, 1926: Gage height, 6.22 feet; discharge determined by float measurement, 4.2 second-feet.

Daily discharge, in second-feet, of West Fork of Trinity River at Bridgeport, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	1.7	1.1	0.0	39	0.5	91	16	330	16	124	1,320
2	10	1.6	1.1	.0	25	.5	65	13	486	9.0	244	954
3	7.1	1.6	.9	.0	16	.4	34	11	276	5.8	100	148
4	4.8	1.1	.6	.0	11	.6	22	10	120	4.5	41	50
5	34	.7	.1	.0	9.7	.9	18	9.7	105	3.4	21	55
6	16	.7	.1	.0	5.8	1.1	17	9.7	113	3.4	11	463
7	9.7	348	.0	.0	8.4	1.2	68	281	139	12	8.4	236
8	7.1	147	.0	.0	9.7	.9	16	92	176	125	5.8	32
9	4.5	136	.0	.0	9.7	.6	11	1,160	96	37	5.2	77
10	13	224	.0	.0	7.8	.8	1,350	218	37	384	3.7	32
11	10	167	.0	.0	7.1	1.0	985	224	23	1,110	2.9	50
12	4.5	68	.0	.0	5.8	1.0	1,280	120	22	496	2.3	31
13	4.0	30	.0	.0	4.5	1.0	1,340	50	13	761	1.7	350
14	3.4	18	.0	.0	4.0	.7	625	25	10	134	1.3	67
15	149	11	.0	.0	3.2	.5	110	21	8.4	37	1.0	86
16	805	7.1	.0	.0	2.9	.3	61	16	5.8	22	.6	105
17	128	7.1	.0	591	2.9	.4	41	11	11	12	7.0	27
18	164	5.2	.0	536	2.3	.7	30	9.7	1,630	7.8	68	12
19	93	8.4	.0	625	1.8	.8	23	14	1,620	5.8	74	9.7
20	45	7.1	.0	165	1.7	1.2	17	988	1,160	4.0	333	7.1
21	32	5.2	.0	1,370	1.6	3,760	897	1,100	655	3.2	294	5.8
22	16	4.5	.0	268	1.4	4,060	984	869	156	221	115	4.5
23	8.4	2.1	.0	98	1.2	333	371	128	59	196	89	2.9
24	7.1	2.1	.0	81	1.1	88	224	61	36	90	294	2.1
25	4.5	2.3	.0	50	1.1	139	136	34	22	329	538	1.7
26	3.4	2.1	.0	28	1.0	224	86	18	48	539	605	1.0
27	2.6	1.8	.0	23	.6	136	54	11	218	1,700	117	.8
28	2.6	1.6	.0	27	.5	72	36	8.4	158	1,580	63	.9
29	1.7	1.4	.0	45	-------	43	23	5.8	77	2,230	2,560	1.0
30	1.8	1.2	.0	105	-------	45	18	4.5	30	1,990	2,510	1.1
31	1.7	-------	.0	77	-------	59	-------	310	---------	846	1,950	-------

Monthly discharge of West Fork of Trinity River at Bridgeport, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	805	1.7	52.0	3,200
November	348	.7	40.5	2,410
December	1.1	.0	.13	7.7
January	1,370	.0	132	8,110
February	39	.5	6.67	371
March	4,060	.3	289	17,800
April	1,350	11	301	17,900
May	1,160	4.5	189	11,600
June	1,630	5.8	261	15,600
July	2,230	3.2	417	25,600
August	2,560	.6	329	20,200
September	1,320	.8	138	8,200
The year	4,060	.0	181	131,000

WEST FORK OF TRINITY RIVER AT LAKE WORTH DAM, ABOVE FORT WORTH, TEX.

LOCATION.—Just above Lake Worth Dam, 4 miles above confluence with Clear Fork, and 4½ miles northwest of courthouse in Fort Worth, Tarrant County.

DRAINAGE AREA.—1,870 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926. Partial records of stage have been obtained by city of Fort Worth since June 1, 1917.

GAGE.—Gurley 8-day water-stage recorder in concrete valve tower just above dam and 300 feet to the right of spillway.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge 2 miles below gage.

CHANNEL AND CONTROL.—Control formed by concrete dam.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.52 feet at 6 p. m. September 6 (discharge, 4,560 second-feet); no flow during several periods.

1924–1926: Maximum stage recorded, 2.25 feet November 18, 1923 (discharge, from extension of rating curve, 8,390 second-feet); no flow during several periods.

DIVERSIONS.—Diversions for municipal use only. Amount not known.

REGULATION.—Storage above dam causes considerable regulation.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined. Operation of water-stage recorder satisfactory. Daily discharge determined by applying mean daily gage heights to rating table. Records fair.

The following discharge measurements were made:

December 8, 1925: Gage height, −0.40 foot; no flow.

April 17, 1926: Gage height, 0.46 foot; discharge, 677 second-feet.

August 9, 1926: Gage height, 0.01 foot; discharge, 23.3 second-feet.

Daily discharge, in second-feet, of West Fork of Trinity River at Lake Worth Dam, above Fort Worth, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				46		86	110	122	133	1,900	1,520
2				70		110	102	214	102	1,800	1,900
3				70		110	102	570	86	1,050	2,290
4				78		102	86	999	70	551	2,480
5				30		110	78	889	46	318	2,170
6		43		30		102	122	513	22	190	2,890
7		4.0		27		122	144	302	38	122	3,700
8		.8		25		102	102	214	202	86	1,760
9		126		22		156	190	179	256	54	972
10		302		12		287	456	179	272	25	456
11		272		3.2		437	916	156	418	22	287
12		256		4.0		1,030	1,520	102	494	14	202
13		202		4.0		1,590	1,490	70	972	4.0	156
14		156		4.0		1,900	806	38	999	2.4	102
15		144		3.2		1,870	399	27	782		156
16		94				1,650	214	12	513		168
17		102				664	144	6.6	287		144
18	74	102		14		364	144	6.6	190	132	144
19	225	78				190	318	14	256	2,090	133
20	190	17	65			110	256	110	86	2,440	102
21	144	12	513		37	367	190	617	62	2,360	78
22	102	6.6	944		2,080	688	418	1,260	70	1,760	70
23	78	2.4	1,080		2,680	806	759	1,330	94	972	38
24	54	.8	1,260		3,280	1,490	861	688	144	570	25
25	22		735		3,910	1,690	594	302	240	302	20
26	17		399		2,480	1,110	318	214	214	334	4.0
27	4.0		225		916	551	202	225	318	475	2.4
28	6.6		156		617	318	144	179	570	570	.8
29	.8		110		418	190	102	179	1,050	494	
30			86		364	122	86	168	1,520	475	
31			102		122		133		1,800	889	

NOTE.—No flow on days for which no discharge is given.

Monthly discharge of West Fork of Trinity River at Lake Worth Dam, above Fort Worth, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	225	0	29.6	1,820
November	302	0	64.0	3,810
January	1,260	0	183	11,300
February	78	0	15.8	877
March	3,910	0	545	33,500
April	1,900	86	614	36,500
May	1,520	78	371	22,800
June	1,330	6.6	330	19,600
July	1,800	22	397	24,400
August	2,440	0	645	39,700
September	3,700	0	732	43,600
The year	3,910	0	329	238,000

WEST FORK OF TRINITY RIVER AT FORT WORTH, TEX.

LOCATION.—At old intake pump house of Fort Worth Power & Light Co.'s plant in Fort Worth, Tarrant County, one-fourth mile below mouth of Clear Fork of Trinity River and 150 feet above Paddock Viaduct.

DRAINAGE AREA.—2,430 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 11, 1920, to September 30, 1926. Records of stage have been obtained by United States Weather Bureau at Paddock Viaduct since March 1, 1910.

GAGE.—Gurley graph water-stage recorder in old pump house of Fort Worth Power & Light Co.; inspected by employee of city of Fort Worth.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 1,000 feet above or from North Twelfth Street Bridge, 2 miles below gage.

CHANNEL AND CONTROL.—Bed composed of rock, gravel, and clay. Right bank not subject to overflow; left bank has a protection leevee but is subject to overflow at high stages. Control is a concrete dam just below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum and minimum stages during the year not recorded. 1910–1926: Maximum stage recorded, 23.95 feet at 12.20 p. m. April 25, 1922 (discharge, 85,000 second-feet); no flow for several periods.

DIVERSIONS.—The city of Fort Worth diverts for municipal use about 15 second-feet from Lake Worth storage reservoir.

REGULATION.—Flow is partly regulated by the storage at Lake Worth, which has a capacity of about 30,000 acre-feet.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder not satisfactory. Daily discharge determined by applying mean daily gage height to rating table. Records of daily discharge not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of West Fork of Trinity River at Fort Worth, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 8	1.04	8.7	June 23	3.44	1,570
Apr. 16	3.34	1,410	Aug. 9	1.20	38.2

Monthly discharge of West Fork of Trinity River at Fort Worth, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	791	3.0	83.2	5,110
November	345		79.0	4,700
December			12.7	780
January			241	14,800
February		2.0	35.5	1,970
March			[a]609	37,400
April			[a]795	47,300
May			[a]480	29,500
June			[a]365	21,700
July			[a]435	26,700
August		3.7	735	45,200
September		14	848	50,500
The year			395	286,000

[a] Mean monthly discharge estimated.

WEST FORK OF TRINITY RIVER AT GRAND PRAIRIE, TEX.

LOCATION.—At highway bridge on Grand Prairie-Sowers-Irving road, 1 mile northeast of Grand Prairie, 1½ miles above Bear Creek, and 4½ miles above Mountain Creek.

DRAINAGE AREA.—2,890 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—March 27, 1925, to September 30, 1926.

GAGE.—Chain gage attached to downstream handrail of bridge; read by Jack Key.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of silt; fairly permanent. Right bank high and not subject to overflow; left bank subject to overflow for three-fourths mile at high stages. Low-water control consists of shale shoals 1,000 feet below gage. When Bear Creek is at high stage it may cause backwater at this station.

EXTREMES OF DISCHARGE.—Maximum stage during year, 25.0 feet at 11 a. m. April 22, 8,980 second-feet; minimum discharge, 9.5 second-feet from 6.30 p. m. September 24 to 7 a. m. September 25.

1925–1926: Maximum stage, 25.0 feet at 3.30 p. m. May 8, 1925, and 11 a. m. April 22, 1926, 8,980 second-feet; minimum discharge, 3.2 second-feet at 6 p. m. June 6, 1925.

DIVERSIONS.—Numerous small diversions above gage. The largest is that by the city of Fort Worth, which diverts about 15 second-feet.

REGULATION.—Flow regulated by storage at Lake Worth, which has a capacity of about 30,000 acre-feet.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 5,000 second-feet and fairly well defined above. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of West Fork of Trinity River at Grand Prairie, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	2.34	19.0	Apr. 19	5.10	422	July 16	6.72	701
Dec. 18	2.65	27.0	June 29	4.32	282	Aug. 20	13.80	2,240

Daily discharge, in second-feet, of West Fork of Trinity River at Grand Prairie, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	35	26	37	201	52	263	263	412	201	1,430	791
2	18	31	26	47	143	43	164	201	295	171	1,520	1,240
3	18	33	36	50	108	45	171	178	216	136	1,460	1,500
4	18	33	36	39	115	37	171	171	534	102	943	1,710
5	18	39	68	32	108	38	157	150	867	82	534	1,910
6	19	49	102	30	122	71	150	143	829	61	327	2,010
7	15	202	56	30	94	41	143	186	534	48	143	4,080
8	14	606	27	32	81	44	171	186	311	78	115	5,330
9	32	554	25	31	80	51	157	171	216	292	97	2,360
10	40	219	24	30	88	55	1,010	406	164	446	72	1,070
11	54	630	22	30	79	55	1,000	534	171	378	55	606
12	35	660	25	27	59	53	696	943	157	552	43	429
13	25	588	24	31	62	52	981	1,340	143	588	32	263
14	32	552	25	32	53	49	1,340	1,370	99	886	22	216
15	33	570	25	30	59	41	1,520	867	81	943	31	150
16	1,080	505	26	30	58	44	1,590	498	61	715	24	136
17	1,560	166	25	1,210	67	44	1,240	295	43	480	22	186
18	302	81	25	605	50	47	734	231	39	279	136	157
19	129	63	26	233	44	47	446	1,180	255	178	615	136
20	306	51	26	136	129	48	327	2,770	218	129	2,060	122

Daily discharge, in second-feet, of West Fork of Trinity River at Grand Prairie, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	311	49	24	201	82	247	1,270	636	235	89	2,010	99
22	263	44	24	897	72	734	4,850	279	1,320	86	1,860	84
23	201	41	23	1,360	42	981	2,180	395	1,260	278	1,500	66
24	143	39	24	1,320	52	1,340	1,260	696	1,260	534	1,060	34
25	129	40	27	1,140	53		2,430	791	867	247	772	12
26	115	35	25	772	66	2,800	1,810	570	678	263	463	20
27	66	32	22	480	61		1,050	344	905	231	395	28
28	52	26	21	279	47		772	201	446	279	516	39
29	39	27	21	231	------	660	498	171	263	516	1,460	37
30	46	29	21	186	------	498	344	150	201	943	753	40
31	43	------	24	157	------	516	------	158	------	1,260	534	------

NOTE.—Gage heights in feet for days when stage was beyond limits of rating curve as follows: Apr. 22, 20.7; Sept. 7, 19.4; Sept. 8, 22.6. Gage-height record believed in error Mar. 25–28; discharge estimated. Discharge interpolated or partly estimated Oct. 18 and 28.

Monthly discharge of West Fork of Trinity River at Grand Prairie, Tex., for the years ending September 30, 1925 and 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
March 27–31	35	23	28.0	278
April	1,350	----------	119	7,060
May	8,340	20	1,630	100,000
June	88	4.8	17.0	1,010
July	214	9.0	31.7	1,950
August	25	5.4	12.1	743
September	104	4.5	20.6	1,230
The period	----------	----------	----------	112,000
1925–26				
October	1,560	14	167	10,300
November	660	26	201	12,000
December	102	21	30.0	1,850
January	1,360	27	314	19,300
February	201	42	81.2	4,510
March	----------	37	553	34,000
April	4,850	143	963	57,300
May	2,770	143	531	32,700
June	1,320	39	436	25,900
July	1,260	48	370	22,800
August	2,060	22	678	41,700
September	5,330	12	829	49,300
The year	5,330	12	430	312,000

NOTE.—Monthly discharge for the year ending September 30, 1925, contains the record for May, which is not published in Water-Supply Paper 608. Daily discharge for the high-water period in May, not contained in that paper, is as follows: May 7, 3,880 second-feet; May 8, 8,340 second-feet; May 9, 7,530 second-feet; May 10, 6,190 second-feet; May 11, 6,350 second-feet; and May 12, 3,740 second-feet.

TRINITY RIVER AT DALLAS, TEX.

LOCATION.—At Commerce Street viaduct in Dallas, Dallas County, 800 feet below Texas & Pacific Railway bridge and 5 miles below confluence of Elm and West Forks of Trinity River.

DRAINAGE AREA.—6,000 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1898, to December 31, 1899 (discharge not determined); July 1, 1903, to December 31, 1906; and October 1, 1920, to September 30, 1926. Gage-height record obtained by United States Weather Bureau since 1903.

GAGE.—Chain gage attached to downstream handrail of Commerce Street viaduct; read by employees of Dallas city engineer's office or by United States Weather Bureau observer.

DISCHARGE MEASUREMENTS.—Made by wading at upstream side of Commerce Street viaduct or from "Miller's Ferry" bridge, about 6 miles below gage.

CHANNEL AND CONTROL.—Channel practically straight for 1,000 feet above and 600 feet below station. Right bank composed of clay and gravel, wooded, and subject to overflow; left bank not subject to overflow except at extremely high stages. Bed composed of clay and gravel, fairly permanent. Low-water control is clay and gravel shoal about 300 feet below gage; high-water control not known. A lock and dam 13 miles below gage will back water at station to a stage of 11.65 feet when wickets are closed. This, however, rarely occurs.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 31.55 feet at 7.30 a. m. April 23 (discharge, 11,500 second-feet); minimum stage, 4.31 feet at 4.50 p. m. December 1 (discharge, 14.0 second-feet).

1898–1899, 1903–1906, 1921–1926: Maximum stage recorded, 42.35 feet at 5.15 a. m. April 27, 1922 (discharge, 75,100 second-feet); minimum stage, 4.27 feet at 4 p. m. September 11, 1924 (discharge, 6.8 second-feet).

Maximum flood, from United States Weather Bureau records, 52.6 feet at 6 p. m. May 26, 1908 (discharge not determined); during drought of 1917–18 discharge was practically zero. Low stages not comparable, owing to shifting control.

DIVERSIONS.—Only known diversions are for municipal uses.

REGULATION.—Low-water flow is partly regulated by municipal dams on West Fork, 40 miles above, and on Elm Fork, 6 miles above gage.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined for all stages. Gage read to hundredths twice daily from October 1 to July 31; after that date, to tenths once daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

COOPERATION.—Record of stage furnished by United States Weather Bureau August 1 to September 30.

Discharge measurements of Trinity River at Dallas, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 12	8.76	480	Dec. 10	4.71	30.9	Jan. 19	12.30	1,140
Nov. 14	7.83	335	Jan. 18	20.27	3,520	May 4	10.17	758

Daily discharge, in second-feet, of Trinity River at Dallas, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	32	16	31	485	34	657	1,160	2,870	431	8,900	1,420
2	21	29	15	58	332	34	449	949	6,570	317	5,200	2,230
3	22	30	23	30	123	32	332	677	6,960	233	2,140	1,780
4	20	30	20	44	78	37	347	717	7,630	162	1,750	1,900
5	20	30	21	44	103	40	233	1,240	8,150	123	949	2,080
6	20	82	64	40	99	44	162	1,330	4,890	92	617	3,080
7	21	332	52	33	92	42	142	1,220	1,250	78	413	8,300
8	70	927	37	33	71	42	142	1,140	597	983	302	8,600
9	120	1,420	27	34	64	42	272	3,260	449	3,100	220	6,160
10	31	777	29	32	58	40	2,160	5,000	317	1,750	172	2,400
11	27	395	28	29	58	37	6,040	3,820	287	2,170	132	1,160
12	47	467	23	32	47	37	4,000	3,940	259	2,320	92	637
13	32	362	22	29	47	42	2,980	3,180	233	1,720	92	467
14	29	317	26	30	44	40	2,490	3,020	162	4,210	71	347
15	104	233	26	33	37	37	2,110	2,600	142	6,740	47	287
16	822	207	26	96	44	37	1,990	1,960	96	7,700	64	272
17	6,070	152	29	1,680	42	34	1,900	1,690	78	5,300	58	220
18	6,350	88	28	4,260	42	37	1,330	1,390	74	981	590	246
19	4,850	64	21	1,360	40	40	817	1,540	152	467	3,520	172
20	1,140	52	21	777	42	47	577	6,250	2,850	302	5,400	172
21	395	42	23	1,360	82	388	2,530	7,760	1,880	220	6,090	152
22	287	37	23	3,520	50	4,660	9,080	5,200	2,850	413	3,540	132
23	233	31	23	4,710	40	6,570	11,100	3,060	2,240	3,040	2,460	115
24	172	28	23	2,820	34	5,860	7,020	949	1,630	6,240	1,930	92
25	142	30	23	1,960	34	5,450	5,300	949	1,360	6,900	2,230	85
26	107	37	24	1,720	37	5,300	5,150	905	1,190	6,680	2,320	71
27	92	26	26	1,450	37	4,400	3,780	557	2,260	6,300	797	58
28	55	26	34	949	44	2,380	2,600	332	2,660	6,900	777	58
29	42	26	25	777	------	1,190	2,290	246	1,270	8,150	1,120	58
30	47	22	26	503	------	905	1,810	272	597	8,900	2,050	52
31	40	------	25	503	------	777	------	1,080	------	10,000	2,260	------

Monthly discharge of Trinity River at Dallas, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	6,350	20	692	42,600
November	1,420	22	211	12,600
December	64	15	26.7	1,640
January	4,710	29	935	57,500
February	485	34	82.4	4,570
March	6,570	32	1,250	76,700
April	11,100	142	2,660	158,000
May	7,760	246	2,170	134,000
June	8,150	74	2,070	123,000
July	10,000	78	3,320	204,000
August	8,900	47	1,820	112,000
September	8,600	52	1,430	84,900
The year	11,100	15	1,400	1,010,000

TRINITY RIVER NEAR OAKWOOD, TEX.

LOCATION.—At International-Great Northern Railroad bridge 4 miles northeast of Oakwood, Anderson County, and 5 miles below the mouth of Keechi Creek.

DRAINAGE AREA.—12,800 square miles (measured on United States Army progressive military maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926. Records of stage have been obtained by United States Weather Bureau since September 1, 1904.

GAGE.—Chain gage attached to upstream side of railroad bridge.

DISCHARGE MEASUREMENTS.—Made from bridge at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand, mud, and gravel. Channel straight for 400 feet above and half a mile below gage. Right bank of earth and not subject to overflow; left bank of earth, wooded, and overflowed at a stage of 32 feet. Control is three-fourths mile below gage; shifts. Channel above and below bridge is affected by log jams.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 38.5 feet May 2 (discharge, 20,500 second-feet); minimum discharge, 62 second-feet October 10–12 and September 27–30.

1924–1926: Maximum stage recorded, 43.3 feet December 25–26, 1923 (discharge, from extension of rating curve, 50,800 second-feet); minimum stage not determined but discharge probably less than 28 second-feet in August, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 40 to 48,000 second-feet. Gage read to tenths once daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable change in stage, by applying to rating table mean daily gage height obtained from graph based on one daily reading, or, on days of large fluctuation in stage, by averaging discharge for intervals of a day. Shifting-control method used October 1–12, 26, 29–31, November 17 to January 17, August 12–21, and September 20–30.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

The following discharge measurements were made:

January 15, 1926: Gage height, 4.90 feet; discharge, 184 second-feet.

July 22, 1926: Gage height, 29.95 feet, discharge, 11,400 second-feet.

Daily discharge, in second-feet, of Trinity River near Oakwood, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	211	534	165	128	2,340	310	17,800	18,100	1,340	5,960	11,600	1,340
2	265	1,140	165	146	1,890	280	18,200	20,500	1,240	4,830	9,960	1,830
3	198	1,500	146	211	1,600	280	18,600	19,300	1,740	3,740	9,360	2,240
4	146	1,240	146	186	1,440	265	18,200	17,800	3,740	2,530	9,230	2,300
5	105	5,990	128	326	1,290	393	16,200	14,800	7,520	1,860	9,420	1,950
6	92	5,910	128	752	1,110	501	8,550	9,420	8,440	1,340	9,750	1,860
7	80	8,740	128	708	938	1,800	3,700	5,580	9,040	938	10,000	2,080
8	70	10,400	128	503	774	4,150	1,980	4,050	9,680	752	8,620	4,990
9	70	11,600	128	393	665	6,350	1,600	3,590	10,000	665	4,310	6,350
10	62	12,700	165	326	602	7,920	1,720	3,440	10,200	1,590	1,720	7,750
11	62	13,200	146	265	582	9,490	2,010	6,790	10,400	4,670	1,160	9,160
12	62	13,200	128	237	562	10,600	2,780	10,300	9,560	6,570	914	10,200
13	67	11,700	128	211	522	12,300	5,530	12,400	4,990	8,500	730	11,000
14	106	6,270	128	186	484	14,000	7,920	13,800	1,720	9,960	602	11,600
15	133	2,470	128	165	447	15,500	9,420	14,800	1,040	11,000	708	11,200
16	674	1,360	128	175	429	15,900	10,100	15,000	843	11,500	447	6,440
17	1,730	1,040	165	342	411	10,900	9,160	12,900	752	11,800	359	2,200
18	3,790	890	165	932	393	5,280	7,180	9,360	1,780	11,800	310	1,160
19	4,990	820	165	6,100	393	2,170	5,580	7,180	6,240	11,400	280	1,140
20	6,400	708	211	8,860	376	1,360	4,570	6,850	5,670	11,000	251	1,080
21	7,010	562	211	12,500	376	3,180	5,130	8,440	2,200	10,800	224	820
22	6,460	522	186	14,600	376	8,500	9,300	9,680	1,580	11,100	828	602
23	5,200	447	165	15,700	376	7,750	9,820	10,800	1,920	11,900	3,200	310
24	2,630	359	146	16,400	359	9,040	11,200	12,100	2,920	13,200	5,040	146
25	1,550	295	146	16,300	326	10,400	13,000	12,600	3,100	15,000	5,800	98
26	914	265	128	15,700	326	11,600	14,600	12,200	3,790	16,300	8,920	70
27	1,390	224	128	14,800	326	12,500	15,900	11,300	4,000	16,900	4,150	62
28	1,420	211	128	12,200	326	13,200	17,000	9,300	4,780	16,900	3,050	62
29	914	211	128	7,980	-------	14,200	17,700	5,530	6,240	16,500	2,830	62
30	542	198	128	4,670	-------	16,000	18,000	2,530	6,680	15,500	2,340	62
31	411	-------	128	3,100	-------	17,400	---------	1,660	---------	13,800	1,690	-------

Monthly discharge of Trinity River near Oakwood, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7,010	62	1,540	94,700
November	13,200	198	3,820	228,000
December	211	128	146	9,010
January	16,400	128	5,000	308,000
February	2,340	326	716	39,700
March	17,400	265	7,860	483,000
April	18,600	1,600	10,100	600,000
May	20,500	1,660	10,400	639,000
June	10,400	752	4,770	284,000
July	16,900	665	9,040	556,000
August	11,600	224	4,120	253,000
September	11,600	62	3,340	199,000
The year	20,500	62	5,100	3,690,000

TRINITY RIVER AT RIVERSIDE, TEX.

LOCATION.—At International-Great Northern Railroad bridge at Riverside, Walker County, 2 miles below mouth of Harmon Creek.

DRAINAGE AREA.—15,500 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—January 1, 1903, to December 31, 1906; October 1, 1923, to September 30, 1926. Records of stage by United States Weather Bureau since July 1, 1903.

GAGE.—Chain gage attached to downstream side of railroad bridge near center of draw-span.

DISCHARGE MEASUREMENTS.—Made by wading below gage or from highway bridge or railroad bridge.

CHANNEL AND CONTROL.—Channel straight for 400 feet above and 1,000 feet below gage. Bed composed of sand clay; fairly permanent. Right bank not subject to overflow; left bank subject to overflow at extremely high stages. Control for low stage is rock and gravel riffle 500 feet below gage; for high stages, probably lock and dam 10 miles below gage. Locks not used.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 38.1 feet April 23 (discharge, 63,300 second-feet, determined from extension of rating curve and may be subject to considerable error); minimum discharge, 115 second-feet October 12.

1903–1906, 1924–1926: Maximum stage recorded, that of April 23, 1926; minimum stage, 0.2 foot August 20–26 and September 8–13, 1925 (discharge, 70 second-feet).

DIVERSIONS.—None of importance.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 100 to 45,000 second-feet and extended above to cover range of stage for year. Gage read to nearest tenth once daily. Daily discharge determined by applying daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Daily discharge not sufficiently accurate for publication. Monthly records fair.

COOPERATION.—Gage-height records furnished by United States Weather Bureau.

The following discharge measurements were made:

January 14: Gage height, 2.94 feet; discharge, 703 second-feet.

August 3: Gage height, 17.29 feet; discharge, 14,700 second-feet.

Monthly discharge of Trinity River at Riverside, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16,400	115	4,020	247,000
November	54,100	875	13,600	810,000
December	830	540	675	41,500
January	18,100	540	7,260	446,000
February	8,100	925	1,970	109,000
March	36,200	875	14,100	866,000
April	63,300	6,350	21,600	1,290,000
May	32,000	6,440	15,000	922,000
June	13,300	1,300	6,480	385,000
July	16,700	1,080	9,080	558,000
August	16,500	540	5,580	343,000
September	11,500	275	3,900	232,000
The year	63,300	115	8,630	6,250,000

TRINITY RIVER AT ROMAYOR, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge one-fourth mile west of railroad station at Romayor, Liberty County, 2½ miles below mouth of Big Creek.

DRAINAGE AREA.—17,200 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—May 4, 1924, to September 30, 1926. Records of stage by United States Engineer Corps from July 28, 1915, to February 14, 1918.

GAGE.—Chain gage on downstream side of railroad bridge; read by Ed Wyatt. Gage readings are from base of rail to water surface.

DISCHARGE MEASUREMENTS.—Made from upstream side of railroad bridge.

CHANNEL AND CONTROL.—Bed of stream composed of sand; shifts. Channel straight for 500 feet above and 200 feet below gage. Left bank wooded and not subject to overflow; right bank wooded and subject to overflow for a distance of 3 miles. Control is indefinite; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, −20.90 feet at 4.20 p. m. April 26 to 7.15 a. m. April 27 (discharge, 46,900 second-feet); minimum stage, −53.10 feet at 6.20 p. m. October 1 (discharge, 190 second-feet).

1924–1926: Maximum stage recorded, that of April 26–27, 1926; minimum stage, −53.46 feet August 21–22, 1925 (discharge, 132 second-feet).

DIVERSIONS.—None of importance.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined from 100 to 47,000 second-feet. Gage read to half-tenths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Trinity River at Romayor, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 13	−48.77	1,620	Aug. 4	−36.46	13,300
Apr. 26	−20.98	46,600	Sept. 28	−50.55	959

Daily discharge, in second-feet, of Trinity River at Romayor, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	200	9,140	1,390	2,180	12,800	1,000	26,300	26,300	8,270	5,450	15,100	3,580
2	230	6,260	1,340	5,480	10,500	965	27,500	21,600	5,900	5,630	15,300	3,160
3	250	4,190	1,340	22,700	7,110	965	29,400	20,200	4,350	5,810	15,500	2,810
4	250	3,230	1,250	26,500	4,830	930	27,500	22,200	4,030	6,350	13,600	2,120
5	250	8,200	1,200	16,900	4,430	965	25,000	25,400	3,510	5,810	11,500	1,900
6	250	31,300	1,160	10,500	3,090	1,640	22,200	28,600	2,420	5,000	10,100	1,900
7	270	39,400	1,120	9,300	2,670	5,090	21,000	32,800	3,950	4,430	9,660	2,000
8	250	44,000	1,080	7,830	2,420	7,720	19,500	30,900	6,910	4,110	9,060	2,360
9	250	45,600	1,000	6,620	2,300	6,710	17,800	27,700	8,380	3,510	9,300	2,420
10	240	43,700	930	5,900	2,120	8,160	15,700	20,600	9,300	2,240	9,540	2,540
11	220	41,800	930	4,110	2,000	19,600	17,100	13,100	9,660	2,060	8,600	2,810
12	210	40,900	860	2,300	1,950	21,800	12,900	8,600	10,700	1,840	6,530	3,720
13	270	36,700	825	1,640	1,690	20,200	9,780	7,720	10,300	1,690	4,270	6,170
14	515	30,100	1,000	1,540	1,590	18,800	8,160	9,660	10,300	2,420	2,880	7,410
15	1,400	23,800	1,390	1,490	1,490	17,000	7,010	10,700	9,660	5,270	2,120	8,490
16	6,600	16,800	1,540	1,440	1,300	14,700	6,710	11,800	7,720	6,810	1,640	9,540
17	14,600	12,700	1,950	4,750	1,300	14,600	8,050	13,600	5,180	8,940	1,390	9,780
18	17,100	11,100	2,300	11,000	1,300	17,000	10,500	14,100	3,160	9,420	1,300	9,900
19	14,200	15,800	2,360	11,200	1,300	20,000	10,700	14,600	2,180	10,300	1,250	9,540
20	10,400	14,800	2,180	9,300	1,250	18,400	10,400	14,500	1,790	10,600	1,200	6,260
21	7,940	8,710	1,900	9,660	1,200	16,400	9,660	12,900	1,740	11,300	1,080	4,750
22	6,810	7,610	1,590	11,600	1,160	14,100	17,800	11,000	4,430	11,700	1,040	2,000
25	5,180	6,170	1,490	14,100	1,160	16,500	35,000	9,300	10,500	12,700	965	1,540
24	5,720	4,910	1,440	15,700	1,120	23,800	43,400	9,180	13,600	13,000	965	1,250
25	7,400	3,020	1,300	17,100	1,120	36,100	45,000	10,000	8,270	12,800	895	1,300
26	16,600	2,240	1,160	17,400	1,080	37,600	46,600	10,900	6,170	12,300	1,160	1,300
27	14,900	1,840	1,160	17,200	1,080	33,600	46,600	11,600	6,170	11,900	2,880	1,200
28	10,400	1,840	1,040	16,500	1,040	29,600	44,400	12,100	6,170	11,800	5,090	895
29	11,500	1,740	1,040	15,900	-------	25,400	39,700	12,400	6,350	13,400	5,090	720
30	14,200	1,440	1,300	15,500	-------	22,600	33,000	12,300	6,170	14,100	4,670	600
31	15,500	-------	1,790	14,800	-------	23,800	-------	10,900	-------	14,800	4,270	------

Monthly discharge of Trinity River at Romayor, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	17,100	200	5,940	365,000
November	45,600	1,440	17,300	1,030,000
December	2,360	825	1,370	84,000
January	26,500	1,440	10,600	651,000
February	12,800	1,040	2,730	152,000
March	37,600	930	16,000	983,000
April	46,600	6,710	23,100	1,380,000
May	32,800	7,720	16,000	986,000
June	13,600	1,740	6,570	391,000
July	14,800	1,690	7,980	491,000
August	15,500	895	5,740	353,000
September	9,900	660	3,800	226,000
The year	46,600	200	9,790	7,090,000

CLEAR FORK OF TRINITY RIVER AT FORT WORTH, TEX.

LOCATION.—At Texas & Pacific Railway bridge 100 feet above highway bridge on Fort Worth-Granbury road, 200 feet below upper Texas & Pacific Dam, 3 miles above confluence with West Fork of Trinity River, and 3 miles southwest of Tarrant County courthouse in Fort Worth.

DRAINAGE AREA.—522 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—March 8, 1924, to September 30, 1926.

GAGE.—Stevens continuous recorder attached to downstream side of left pier of railroad bridge.

DISCHARGE MEASUREMENTS.—Made from highway bridge or railroad bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 300 feet above and below highway bridge. Bed composed mostly of rock. Banks covered with small amount of brush and subject to overflow at extremely high stages. Control for all but extremely high stages is concrete dam 750 feet below gage; permanent. Railroad embankments below will probably be control for high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 8.90 feet at 9 a. m. May 19 (discharge, 6,870 second-feet); no flow for several periods.

1924–1926: Maximum discharge, 7,400 second-feet at 7 a. m. May 7, 1925; no flow for several periods.

DIVERSIONS.—Practically all of low flow is diverted 800 feet below gage by Texas & Pacific Railway; amount not known.

REGULATION.—Low flow regulated by dam just above gage.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 900 second-feet and extended through one measurement made at stage of 8.33 feet. Operation of water-stage recorder satisfactory. Daily discharge determined by applying mean daily gage height to rating table or by averaging discharge for intervals of a day. Daily discharge records not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of Clear Fork of Trinity River at Forth Worth, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 5		0.0	Oct. 17	3.49	312	Apr. 17	2.72	16.2
Oct. 6	1.67	.0	Oct. 19	2.62	5.1	June 22	2.83	46.8
Oct. 15	.25	.0	Dec. 8	.68	.0	Aug. 19	4.02	655
Oct. 16	4.06	720	Jan. 8	2.65	[a] 2.0			

[a] Estimated.

Monthly discharge of Clear Fork of Trinity River at Fort Worth, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	936	0.0	42.6	2,620
November	164	.0	8.68	516
December	2.0	.0	.20	12.3
January	587	.7	49.9	3,070
February	13	.0	5.42	301
March	986	.0	48.7	3,000
April	1,610	13	173	10,300
May	2,030	4.4	100	6,160
June	214	3.5	28.4	1,690
July	154	.0	32.3	1,990
August	1,480	.0	75.0	4,610
September	2,330	1.9	104	6,200
The year	2,330	.0	55.9	40,500

NOTE.—Discharge estimated or partly estimated Aug. 5–19.

VILLAGE CREEK NEAR HANDLEY, TEX.

LOCATION.—At Fort Worth-Webb road crossing, 3½ miles south of Handley, Tarrant County, and 8 miles above confluence of Village Creek with West Fork of Trinity River.

DRAINAGE AREA.—130 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—June 7, 1925, to September 30, 1926.

GAGE.—Inclined and vertical staff gage on left bank, 70 feet above bridge, read by Samuel Hand.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 300 feet above and 200 feet below gage. Bed of heavy gravel; permanent. Right bank is ledge rock; not subject to overflow. Left bank of earth; heavily wooded and subject to overflow at a stage of 16.8 feet. At stage of 14 feet water flows through a slough on left bank 800 feet from bridge. Control is limestone riffle 10 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during period of record from graph drawn on basis of two daily gage readings, 11.5 feet at 4 a. m. May 19 (discharge, 4,180 second-feet, determined from poorly defined curve); no flow for several periods.

DIVERSIONS.—None.

REGULATIONS.—None

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 400 second-feet and poorly defined from 400 to 5,000 second-feet by one measurement made by slope method. Gage read to half-tenths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, for days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair except those for high water, which are poor.

Discharge measurements of Village Creek near Handley, Tex., during the years ending September 30, 1925 and 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
May 8	12.57	* 4,820	Oct. 16	2.95	108	Apr. 19	1.93	2.32
Sept. 5		0	Oct. 17	2.22	11.5			
Oct. 16	3.99	407	Oct. 19	1.90	.72			

* Slope measurement, with n=0.040 in Kutter's formula.

Daily discharge, in second-feet, of Village Creek near Handley, Tex., for the period June 7, 1925, to September 30, 1926

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0.2		0.2		0.8	0.5	2.9	2.9	21	2.9	0.7	45
2		.2				.8	.4	2.9	2.9	13	2.9	.6	25
3		.2				.8	.4	2.9	2.9	8.0	2.9	.6	6.7
4		.2				.8	.4	2.9	2.9	5.9	2.9	.5	1.8
5		.1				.8	.7	2.9	2.9	5.3	2.9	.4	.4
6						.8	2.9	2.9	2.9	4.4	2.9	.4	15
7			34		0.8	.8	2.9	2.9	2.9	2.9	.6	.2	15
8			11		.7	.8	2.9	2.9	2.9	2.9	.8	.2	2.9
9			6.7		.4	.8	2.9	2.9	.8	2.9	.6	.1	2.9
10			5.3		.2	8	2.9	855	.8	2.9	.5		.8
11			2.9		.2	.8	2.9	189	.8	2.9	.5		.5
12	29		2.5		.2	.8	2.9	123	.8	2.9	.5		.4
13	4.4		1.2		.5	.8	2.9	123	.8	2.9	2.9		.4
14	.7		.8		.8	.8	2.9	31	.8	2.9	2.9		.4
15	.4		.6		.8	.8	2.9	31	.8	1.8	1.8		.4
16		297	.4		298	.8	2.9	31	.6	.6	1.8		.2
17		15	.3		233	.6	2.9	13	.5	.4	1.2		.2
18		3.5		1.2	135	.6	2.9	2.9	.5	.4	.8	53	.1
19		1.2		.7	123	.6	2.9	139	1,970	78	.8	25	
20		.6		.4	99	.6	2.9	134	120	2.9	.8	6.7	

Daily discharge, in second feet, of Village Creek near Handley, Tex., for the period June 7, 1925, to September 30, 1926—Continued

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21		0.5		0.2	57	0.6	857	925	10	341	0.6	0.3	
22		.3			16	.6	240	685	2.9	231	.6		
23		.2			5.3	.6	2.1	450	2.9	15	194		
24		.2			2.9	.5		222	2.9	2.9	17	2.6	
25		.2			2.9	.5	2.2	80	2.9	2.9	2.9	2.9	
26	1.8	.1	1.8		2.9	.5	2.9	2.9	2.9	585	2.9	1.8	
27	.1		.7		2.0	.5	2.9	2.9	2.9	31	2.9	.6	
28	.2		.4		1.8	.5	2.9	2.9	2.9	13	2.5	.5	
29	.3		.4		1.2		2.9	2.9	2.9	8.0	1.8	20	60
30			.3		.8		2.9	2.9	2.9	2.9	1.2	74	6.8
31					.8		2.9		83		.8	67	

NOTE.—No flow June 7 to Aug. 31, 1925, except Aug. 23 (0.2 second-foot). No flow on days for which discharge is not shown.

Monthly discharge of Village Creek near Handley, Tex., for the period June 7, 1925, to September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
June 7-30	0.0	0.0	0.0	0.0
July	.0	.0	.0	.0
August	.2	.0	.01	.4
September	29	.0	1.23	73.2
The period				73.6
1925-26				
October	297	.0	10.3	634
November	34	.0	2.31	137
December	1.2	.0	.09	5.4
January	298	.0	31.8	1,960
February	.8	.5	.70	38.7
March	857	.0	37.6	2,310
April	925	2.9	136	8,080
May	1,970	.5	72.2	4,440
June	585	.4	46.6	2,770
July	194	.5	8.42	518
August	74	.0	8.33	512
September	60	.0	6.16	367
The year	1,970	.0	30.1	21,800

MOUNTAIN CREEK NEAR GRAND PRAIRIE, TEX.

LOCATION.—At Grand Prairie-Duncanville highway bridge, 3½ miles southeast of Grand Prairie, Dallas County, and 5½ miles above confluence with West Fork of Trinity River.

DRAINAGE AREA.—267 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—March 5, 1925, to September 30, 1926.

GAGE.—Stevens continuous recorder at upstream side of bridge on left bank; attended by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from upstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 100 feet above and below gage. Bed of silt. Banks of earth; covered with timber; probably shift; subject to overflow at high stages. One channel at low and intermediate stages and several at high stages. Levee 20 feet high 400 feet to right of bridge. Low-water control is mud bar three-fourths mile below gage; shifts. High-water control is stretch of creek and timber on banks.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 18.00 feet at 3 a. m. April 22 (discharge, 3,110 second-feet); no flow for several periods during year.

1925–1926: Maximum discharge, 3,300 second-feet, at 6 p. m. May 9, 1925; no flow during several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 200 second-feet and poorly defined above. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by shifting-control method for low and intermediate stages and by applying mean daily gage height to rating table for high stages or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of Mountain Creek near Grand Prairie, Tex., during the year ending September 30, 1927

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	3.70	No flow.	Jan. 6	3.53	0.00	June 29	4.00	7.6
Oct. 19	4.42	[a] 6.9	Feb. 6	3.90	1.93	July 27	3.42	[a] .20
Dec. 1	3.68	.01	Apr. 19	4.30	5.7	Aug. 20	3.50	[a] .80

[a] Estimated.

Daily discharge, in second-feet, of Mountain Creek near Grand Prairie, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1	0.5			5.2	0.8	3.7	12	365	1.4		
2	.4			4.0	.8	2.3	11	160	1.0		
3	.2			3.2	.8	1.4	11	11	.8		
4	.1			2.9	.8	1.0	9.4	8.6	.7		
5				2.3	.8	.9	7.8		.7		
6		1.5		2.0	.9	.9	7.3		.6		0.1
7		667		1.7	1.3	.9	7.1		.6		.1
8		1,390		1.4	3.6	.9	6.8		268		.2
9		46		1.4	4.4	.8	6.6		118		
10		16	0.2	1.3	3.7	1,120	6.5		9.4		
11		9.6	.3	1.2	2.9	728	6.3	4.3			
12		4.6	.3	1.2	4.8	51	6.0				
13		2.8	.3	1.0	5.8	28	5.8				
14		.9	.2	1.0	3.7	20	3.3				
15		.7	.2	1.0	2.1	16	3.0				
16	138	.5	16	.9	1.5	12	2.4		4.7		
17	393	.3	1,830	.9	1.2	9.8	1.6				
18	26	.2	433	.9	1.2	7.1	1.4			0.8	
19	8.6	.1	34	.9	1.0	6.0	36			6.5	
20	2.2	.1	19	.9	1.0	3.6	1,100			1.0	
21	.9	.1	179	.9	25	1,080	42				
22	.7	.1	560	.9	96	2,500	14				
23	.5		32	.9	21	231	8.5	90			
24	.4		15	.9	8.2	46	5.7		270		
25	.2		11	.9	5.5	30	4.0				
26	.1		11	.9	32	23	2.7				
27	.1		11	.9	14	20	2.0		.2		
28			9.8	.9	6.5	16	1.8				
29			7.3		3.7	15	1.6	7.6			
30			5.5		3.4	13	1.4	2.9			
31			6.0		3.8		141				

NOTE.—No flow on days for which discharge is not given. Discharge partly estimated July 10 and 27. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Mountain Creek near Grand Prairie, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	393	0.0	18.4	1,130
November	1,390	.0	71.3	4,250
January	1,830	.0	103	6,310
February	5.2	.9	1.52	84.3
March	96	.8	8.46	520
April	2,500	.8	200	11,900
May	1,100	1.4	47.6	2,930
June	----------	----------	50.5	3,010
July	----------	.0	58.2	3,580
August	6.5	.0	.27	16.5
September	.2	.0	.01	.8
The year	2,500	.0	46.5	33,700

ELM FORK OF TRINITY RIVER NEAR DENTON, TEX.

LOCATION.—At Texas & Pacific Railway bridge 1 mile below mouth of Clear Creek and 6 miles northeast of Denton, Denton County.

DRAINAGE AREA.—1,100 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 20, 1923, to September 30, 1926.

GAGE.—Chain gage attached to upstream side of bridge; read by Hughlon King.

DISCHARGE MEASUREMENTS.—Made from highway bridge a quarter of a mile below gage, from railroad bridge, or by wading.

CHANNEL AND CONTROL.—Channel straight for 50 feet above and 400 feet below gage. Bed of earth; permanent. Right bank not subject to overflow; left bank is overflowed for a quarter of a mile at a stage of 29 feet. Control for low stages is gravel riffle 600 feet below gage; permanent; high-stage control indefinite.

EXTREMES OF DISCHARGE.—Maximum stage during the year, from graph drawn from gage readings, 27.5 feet at 6.10 a. m. June 1 (discharge, about 7,620 second-feet; minimum stage, 0.60 foot October 3, December 24 and 28 (discharge, 0.60 second-foot).

1924–1926: Maximum stage recorded, 29.05 feet at 9.05 a. m. March 20, 1924 (discharge, 8,330 second-feet); no flow for several periods.

DIVERSIONS.—Railroad diverts 100,000 gallons a day just above gage. No others of importance.

REGULATION. None.

ACCURACY.—Stage-discharge relation changed April 21. Rating curve used from October 1 to April 21 well defined below 1,500 second-feet and poorly defined above; curve used from April 22 to September 30 fairly well defined from 10 to 3,000 second-feet and extended above parallel with other curve. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of Elm Fork of Trinity River near Denton, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	0.65	1.18	Apr. 24	16.73	2,980	July 8	11.82	1,510
Dec. 11	.68	2.05	July 7	1.11	14.5			

Daily discharge, in second-feet, of Elm Fork of Trinity River near Denton, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	1.5	2.1	1.2	61	3.7	118	107	6,970	32	154	138
2	.7	1.5	1.7	1.7	34	3.1	97	100	2,490	28	130	107
3	1.0	1.8	1.5	2.3	26	3.0	72	919	478	23	107	87
4	8.5	1.7	1.3	3.4	22	3.1	51	1,390	535	20	93	75
5	3.4	1.6	1.1	3.0	20	3.2	44	216	208	18	81	69
6	1.9	3.3	1.1	3.6	18	3.4	38	174	114	16	75	81
7	1.3	51	1.1	3.7	15	3.4	121	3,730	100	66	69	63
8	16	308	1.1	3.4	13	4.3	121	4,790	87	1,200	60	53
9	434	236	1.1	2.8	12	5.7	56	1,580	75	223	56	53
10	111	48	1.1	2.4	11	6.9	2,390	1,390	66	180	53	48
11	26	24	1.2	1.9	8.5	5.7	1,930	1,640	58	134	48	46
12	22	15	1.1	1.7	8.2	5.4	504	705	53	122	46	40
13	5.7	9.0	1.1	1.7	8.5	5.4	220	247	48	4,170	40	43
14	2.6	6.7	1.9	1.7	6.3	6.7	163	181	43	3,210	38	66
15	499	4.9	2.9	1.6	5.7	4.9	125	138	40	548	36	53
16	1,440	3.7	4.0	6.0	5.7	4.6	104	114	38	113	34	40
17	1,130	2.5	2.8	749	5.5	4.0	90	100	34	63	737	34
18	583	2.2	1.7	639	4.9	4.2	84	179	197	48	4,110	30
19	64	1.8	1.3	260	4.3	4.0	285	4,060	1,380	38	2,050	27
20	28	1.6	1.1	120	3.8	4.3	126	1,850	166	32	333	25
21	19	1.6	1.0	2,030	3.6	865	138	261	93	38	160	23
22	14	1.8	.9	1,640	3.2	910	4,100	146	69	4,610	114	22
23	9.5	1.7	.8	718	3.0	543	1,910	114	56	3,900	157	19
24	6.3	1.7	.6	119	3.2	176	1,920	87	46	1,380	1,550	16
25	4.6	1.7	1.0	61	2.6	97	848	75	48	2,210	508	14
26	3.4	1.9	1.0	51	3.4	66	257	63	74	6,090	154	12
27	2.6	1.7	.8	48	4.2	56	190	58	914	7,310	114	12
28	2.1	1.6	.6	48	4.4	54	146	53	357	4,530	87	13
29	1.9	1.6	.7	125	-------	51	130	48	65	769	236	13
30	1.8	1.9	.8	90	-------	66	114	46	38	255	1,040	25
31	1.7	-------	.8	69	-------	163	-------	2,680	-------	190	199	------

NOTE.—Owing to backwater from Garza Dam discharge partly estimated July 28, 29.

Monthly discharge of Elm Fork of Trinity River near Denton, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,440	0.7	143	8,820
November	308	1.5	24.8	1,470
December	4.0	.6	1.33	81.9
January	2,030	1.2	220	13,500
February	61	2.6	11.5	637
March	910	3.0	101	6,220
April	4,100	38	550	32,700
May	4,790	46	879	54,000
June	6,970	34	498	29,600
July	7,310	16	1,340	82,400
August	4,110	34	409	25,100
September	138	12	44.9	2,670
The year	7,310	.6		257,000

ELM FORK OF TRINITY RIVER NEAR CARROLLTON, TEX.

LOCATION.—At Carrollton Dam, 40 feet below highway bridge on Dallas-Denton road, 1 mile below mouth of Denton Creek, and 1½ miles west of Carrollton, Dallas County.

DRAINAGE AREA.—2,540 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 1, 1923, to September 30, 1926.

GAGE.—Vertical staff attached to left wing wall of dam and to second pile bent from left concrete pier of bridge; read by J. L. Coleman.

DISCHARGE MEASUREMENTS.—Made from bridge, by wading, from boat, or from St. Louis Southwestern Railway Bridge 1 mile below.

CHANNEL AND CONTROL.—Channel straight for 150 feet above and below gage. Bed and banks are of loam and clean up to a stage of 5 feet, Left bank is subject to overflow at a stage of 8 feet. Control is a concrete dam up to a stage of about 8 feet; permanent. Valves pass water through dam at extremely low stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 6.74 feet at 7 p. m. July 29 (discharge, 8,660 second-feet); no flow for several periods.

1924–1926: Maximum stage recorded, 12.75 feet during morning of December 14, 1923 (discharge not determined); no flow for several periods.

DIVERSIONS.—None.

REGULATION.—Low flow completely regulated and flow at high stages partly regulated by Garza Dam, 20 miles above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 19,000 second-feet. Gage read to hundredths twice daily. Daily discharges determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. There was small leakage through valve in the dam when closed throughout the year; amount not known but believed to be negligible. The valve was open October 8–31 and probably from December 23 to January 2. Discharge represents flow over dam only. Records fair.

Discharge measurements of Elm Fork of Trinity River near Carrollton, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	−0.30	0.00	July 7	0.38	38.1	July 26	4.96	4,410
Dec. 9	.08	.00	July 8	3.84	3,070			
Apr. 22	4.57	4,740	July 24	5.70	6,150			

Daily discharge, in second-feet, of Elm Fork of Trinity River near Carrollton, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	8 8	0. 0	238	2. 4	324	774	5, 390	186	1, 820	539
2	14	12	7. 4	23	70	1. 8	268	605	6, 850	113	308	388
3	12	12	6. 0	41	23	1. 2	236	572	7, 350	81	231	313
4	4. 8	12	5. 4	30	20	1. 2	236	884	6, 410	65	195	142
5	3. 2	12	3. 0	30	20	1. 2	236	1, 160	3, 430	46	161	120
6	. 0	12	1. 8	25	17	11	94	1, 070	498	43	145	2, 920
7	. 0	279	. 0	13	17	14	46	958	259	43	124	1, 720
8	. 0	418	. 0	6. 2	17	6. 0	81	1, 940	199	2, 020	113	222
9	. 0	704	. 0	. 0	17	6. 0	77	4, 080	157	1, 760	95	127
10	. 0	391	. 0	. 0	16	8. 8	1, 120	3, 760	135	506	77	95
11	. 0	250	. 0	. 0	14	12	2, 020	3, 180	109	1, 790	77	77
12	25	149	. 0	. 0	14	12	2, 250	2, 250	95	901	77	77
13	36	99	. 0	. 0	14	12	1, 690	1, 580	84	1, 420	46	77
14	41	81	. 0	. 0	14	12	661	1, 250	77	5, 790	46	77
15	187	55	. 0	. 0	14	12	388	1, 160	68	7, 100	46	109
16	3, 170	46	. 0	3. 8	13	12	273	1, 160	55	4, 290	46	81
17	5, 190	41	. 0	1, 410	12	8. 8	287	1, 070	49	433	52	77
18	4, 080	33	. 0	671	13	8. 8	259	1, 070	49	190	1, 360	77
19	1, 590	25	. 0	539	12	8. 8	241	2, 480	1, 240	142	4, 230	71
20	260	20	. 0	476	10	8. 8	227	5, 190	2, 000	106	4, 330	55
21	120	20	. 0	803	7. 4	734	1, 180	4, 420	1, 580	95	1, 420	46
22	84	20	. 0	1, 820	3. 6	4, 210	3, 610	3, 280	1, 020	1, 030	538	46
23	62	19	. 0	1, 070	3. 6	2, 540	2, 630	1, 230	282	5, 090	264	46
24	49	13	. 0	739	2. 4	2, 500	2, 250	264	153	6, 190	856	43
25	46	12	. 0	671	2. 4	2, 500	2, 130	161	124	5, 390	1, 800	41
26	38	12	. 0	572	2. 4	1, 180	1, 910	135	547	4, 080	578	33
27	33	10	. 0	572	2. 4	884	1, 800	117	1, 010	6, 930	388	30
28	28	8. 8	. 0	539	2. 4	476	1, 690	91	1, 540	8, 380	293	30
29	19	8. 8	. 0	506	-------	340	1, 250	71	487	8, 660	511	30
30	17	8. 8	. 0	506	-------	335	884	71	293	7, 850	920	30
31	16	-------	. 0	383	-------	335	-------	782	-------	5, 900	1, 170	------

Monthly discharge of Elm Fork of Trinity River near Carrollton, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	5, 190	0. 0	488	30, 000
November	704	8. 8	93. 2	5, 540
December	8. 8	. 0	1. 05	64. 3
January	1, 820	. 0	369	22, 700
February	238	2. 4	21. 8	1, 210
March	4, 210	1. 2	522	32, 100
April	3, 610	46	1, 010	60, 200
May	5, 190	71	1, 510	92, 900
June	7, 350	49	1, 380	82, 400
July	8, 660	43	2, 790	172, 000
August	4, 330	46	720	44, 300
September	2, 920	30	255	15, 200
The year	8, 660	. 0	771	559, 000

ELM FORK OF TRINITY RIVER NEAR DALLAS, TEX.

LOCATION.—At city of Dallas pumping plant and dam (known as Record Crossing plant), 2,800 feet above Rock Island Lines railroad bridge, 1.2 miles above confluence with West Fork, and 5 miles northwest of Dallas, Dallas County.

DRAINAGE AREA.—2,660 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 17, 1920, to September 30, 1926.

GAGE.—Vertical staff attached to pump house; read by W. J. Selby.

DISCHARGE MEASUREMENTS.—Made from Record Crossing highway bridge, 200 feet below gage, from railroad bridge half a mile below, or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel; shifting. Control is concrete dam; permanent. Banks wooded and subject to overflow.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.15 feet at 8 a. m. July 31 (discharge, about 9,670 second-feet); no flow during several periods.

1920–1926: Maximum stage recorded, 20.20 feet at 10 a. m. April 27, 1922 (discharge not determined owing to backwater from Trinity River); no flow during several periods.

DIVERSIONS.—No diversions except for municipal use; the largest is at the Record Crossing plant. The sum of all the diversions is believed to be but a small percentage of the total run-off during years of ordinary flow.

REGULATION.—Flow partly regulated by city of Dallas reservoir at Carrollton and Garza Dam above Carrollton.

ACCURACY.—Stage-discharge relation permanent except during periods of backwater. Rating curve well defined below 1,100 second-feet and poorly defined above. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records for low stages good; for intermediate and high stages poor.

The following discharge measurement was made:

April 22: Gage height, 13.10 feet; discharge, 4,540 second-feet (stage-discharge relation affected by backwater from West Fork of Trinity River).

Daily discharge, in second-feet, of Elm Fork of Trinity River near Dallas, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		2.0		290		254	780	2,680	222	7,060	670
2		.3		120		222	670	4,670	120	997	510
3		.1		29		222	570	5,520	76	268	268
4		.0		10		200	670	6,500	45	180	152
5		.0		12		168	1,250	6,530	34	102	120
6		1.0		8.3		39	1,170	1,440	23	61	1,720
7		29		6.1		29	1,090	290	12	42	
8		349		6.1		29	1,530	192		25	1,000
9		550		4.4		61	3,220	160	1,750	10	
10		446		3.2		1,210	3,310	140	670	10	113
11		192		2.0		2,290	2,630	120	1,810	9.4	102
12		152		1.4		2,050	2,460	102	1,490	7.2	79
13		99		.3		1,810	1,650	85	818	3.8	50
14		82		.8		970	1,330	73	3,310	2.0	25
15		42		.3		406	1,250	61	5,100	2.0	85
16	1,040	34		.1		330	1,170	34	6,320	1.4	79
17	4,500	25	648	.1		290	1,170	25	2,430	2.0	42
18	4,420	14	975	.3		245	1,170	21	422	614	14
19	2,290	10	602	.1		245	1,170	384	160	2,800	10
20	485	6.1	510			200	4,460	1,970	70	4,160	5.0
21	156	4.4	450		69	1,510	5,440	1,570	61	2,820	4.4
22	88	2.0	1,950		3,360	3,100	3,400	1,730	378	742	3.2
23	70		1,370		3,990		2,520	464	2,800	340	2.0
24	52		855		2,630	2,380	441	152	4,670	615	1.4
25	32		705			1,810	192	124	5,350	1,650	.8
26	29		602		1,660	1,970	140	414	4,840	950	.3
27	21		570			1,730	102	650	4,500	406	.3
28	17		510		635	1,730	88	1,650	5,690	340	2.0
29	10		480		315	1,650	64	810	7,350	705	3.2
30	10		450		315	1,170	52	330	8,880	464	2.0
31	4.4		422		290		179		9,530	1,570	

NOTE.—No flow on days for which discharge is not shown. Braced figures show estimated mean discharge for periods when stage-discharge relation was affected by backwater from West Fork of Trinity River.

Monthly discharge of Elm Fork of Trinity River near Dallas, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,500	0.0	427	26,200
November	550	.0	68.0	4,050
January	1,950	.0	358	22,000
February	290	.0	17.7	981
March	3,990	.0	535	32,900
April		29	1,050	62,300
May	5,440	52	1,460	89,900
June	6,530	21	1,300	77,100
July	9,530	12	2,600	160,000
August	7,060	1.4	870	53,500
September		.3	235	14,000
The year	9,530	.0	750	543,000

DENTON CREEK NEAR ROANOKE, TEX.

LOCATION.—At highway bridge on Fort Worth-Denton highway, 3 miles north of Roanoke, Denton County, 13 miles south of Denton, and 15 miles above confluence of Denton Creek with Elm Fork of Trinity River.

DRAINAGE AREA.—704 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 12, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream truss of bridge; read by G. W. Patterson.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of rock and gravel; fairly permanent. Channel straight for 150 feet above and below gage. One channel at all stages. Right bank is subject to overflow at extremely high stages. Left bank is wooded for 50 feet and is covered with tall grass and weeds beyond this; is overflowed at a stage of 24 feet. Low-water control is a rock and gravel bar, 75 feet below gage; shifts. High-stage control indefinite.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 18.1 feet at 3 p. m. March 21 (discharge, 11,100 second-feet; determined from extension of rating curve and may be subject to error); no flow several periods.

1923–1926: Maximum stage recorded, 20.65[1] feet at 8.30 p. m. December 12, 1923 (discharge, 14,300 second-feet; determined from extension of rating curve and may be subject to considerable error); no flow for several periods.

The highest known flood occurred in April, 1922, when a stage of about 26.00 feet was reached; discharge not determined.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 3,440 second-feet and extended above on basis of area and velocity curves. Gage read twice daily to hundredths. Daily discharge ascertained by applying mean daily gage heights to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records poor.

The following discharge measurements were made:

December 9, 1925: Gage height, 0.62 foot; discharge estimated 0.02 second-foot.

April 24, 1926: Gage height, 5.38 feet; discharge, 853 second-feet.

[1] Maximum stage supersedes that published in Water-Supply Paper 588.

Daily discharge, in second-feet, of Denton Creek near Roanoke, Tex., for the high-water periods in years ending September 30, 1924 and 1925

Date	Discharge	Date	Discharge	Date	Discharge
1924		1924		1924	
Nov. 15	2,500	Mar. 17	2,900	Apr. 27	943
Nov. 16	2,280	Mar. 18	1,050	May 26	1,270
Dec. 12	5,910	Mar. 19	3,180		
Dec. 13	6,890	Mar. 20	3,760	1925	
Dec. 14	3,440	Mar. 21	1,340	May 7	2,380
Dec. 15	1,900	Apr. 23	1,420	May 9	4,530
Mar. 15	1,030	Apr. 26	1,130		

NOTE.—Records for the above periods not previously published because of lack of definitions of rating curve for high stages.

Daily discharge, in second-feet, of Denton Creek near Roanoke, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.0	0.0	0.0	0.0	4.5	0.8	17	26	466	56	41	294
2	.0	.0	.0	.6	3.6	1.1	14	22	1,220	25	22	105
3	.0	.0	.0	.6	2.4	1.6	11	18	1,050	13	14	36
4	.0	.0	.0	.6	1.8	1.6	9.4	15	288	8.3	9.0	16
5	.0	.0	.0	.6	1.9	1.6	8.0	12	105	5.6	6.4	9.8
6	.0	1.2	.0	.0	1.8	1.3	7.0	14	51	4.0	5.3	476
7	.0	62	.0	.0	1.8	1.1	58	132	28	15	4.0	55
8	.0	9.6	.0	.0	1.4	1.3	21	832	17	732	3.3	5.3
9	.0	9.0	.0	.0	1.4	2.4	11	2,160	12	102	1.0	2.6
10	.0	3.8	.0	.0	1.1	2.9	289	929	8.7	21	.4	1.9
11	.0	2.4	.0	.0	1.4	2.9	429	634	7.0	16	.4	1.3
12	.0	2.1	.0	.0	1.4	2.9	682	188	5.3	12	.7	.8
13	.0	1.8	.0	.0	1.1	2.9	268	97	4.0	199	.6	.8
14	.0	1.3	.0	.0	.8	2.9	118	57	2.6	86	.4	35
15	.6	.8	.0	.0	1.1	2.6	64	41	2.2	82	.2	7.2
16	928	.7	.0	.6	1.1	2.2	38	33	1.3	108	.1	1.1
17	126	.7	.0	153	1.1	1.9	26	25	.7	57	.1	.7
18	62	.6	.0	48	1.1	1.8	20	20	280	28	151	.6
19	14	.6	.0	10	1.1	2.1	16	15	832	12	517	.4
20	2.1	.6	.0	6.2	1.1	1.9	11	14	1,230	5.0	656	.4
21	1.0	.0	.0	909	1.1	4,040	460	19	1,220	2.3	406	.3
22	.6	.0	.0	358	.8	995	593	12	200	6.4	120	.2
23	.6	.0	.0	55	1.1	305	906	9.8	76	443	66	.1
24	.0	.0	.0	77	1.1	170	751	8.0	35	119	22	.1
25	.0	.0	.0	38	1.4	92	844	6.4	82	17	15	.0
26	.0	.6	.0	20	1.1	62	222	5.3	135	52	164	.0
27	.0	.0	.0	15	1.0	39	108	4.5	207	992	111	.0
28	.0	.0	.0	10	0.8	26	69	4.0	73	1,040	69	.0
29	.0	.0	.0	7.6	-------	20	49	3.3	179	1,280	.29	.0
30	.0	.0	.0	6.2	-------	20	33	104	130	330	183	.0
31	.0	-------	.0	5.0	-------	18	-------	14	---------	101	292	------

Monthly discharge of Denton Creek near Roanoke, Tex., for the years ending September 30, 1924–1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923–24				
October 12–31	730	0.0	196	7,790
November	2,500	4.5	212	12,600
December	6,890	24	713	43,900
January	82	33	54.5	3,350
February	82	25	40.0	2,300
March	3,760	17	604	37,200
April	1,420	38	218	13,000
May	1,270	21	119	7,330
June	203	.1	22.5	1,340
July	82	.0	3.93	242
August	76	.0	3.13	192
September	.7	.0	.03	2.0
The year				129,000
1924–25				
October	.0	.0	.00	.0
November	16	.0	1.95	116
December	.3	.1	.19	11.9
January	4.2	.2	.76	46.6
February	3.8	1.3	2.04	113
March	2.2	1.4	1.92	118
April	1,060	.1	118	7,050
May	4,530	.6	287	17,700
June	23	.0	1.67	99.6
July	24	.0	1.28	78.9
August	64	.0	2.33	143
September	.0	.0	.00	.0
The year	4,530	.0	35.2	25,500
1925–26				
October	928	.0	36.6	2,250
November	62	.0	3.26	194
December	0	.0	.00	.0
January	909	.0	55.5	3,410
February	4.5	.8	1.48	82.1
March	4,040	.8	188	11,600
April	906	7.0	205	12,200
May	2,160	3.3	177	10,900
June	1,230	.7	265	15,800
July	1,280	2.3	19.3	11,800
August	656	.1	93.9	5,770
September	476	.0	35.0	2,080
The year	4,040	.0	105	76,100

EAST FORK OF TRINITY RIVER NEAR ROCKWALL, TEX.

LOCATION.—At bridge on State highway No. 1, between Dallas and Rockwall, 3 miles southwest of Rockwall, Rockwall County, and 7 miles below mouth of Pilot Creek.

DRAINAGE AREA.—831 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military map).

RECORDS AVAILABLE.—November 9, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream side of bridge; read by J. T. Collum.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel curving at, above, and below bridge. Bed of earth and fairly permanent. Right bank of earth, covered with weeds and grass, and not subject to overflow; left bank of earth, covered with weeds and grass, and at a gage height of about 12 feet is subject to overflow for 1,000 feet to levee. One channel at all stages. Control indefinite but fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage, from graph drawn from gage readings during year, 18.98 feet at 3 to 4 p. m. July 14 (discharge, 23,000 second-feet); no flow during several periods.

1924–1926.—Maximum stage, that of July 14, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined for all stages. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

The following discharge measurements were made:

November 16, 1925: Gage height, 0.65 foot; discharge, 1.79 second-feet.

April 23, 1926: Gage height, 13.93 feet; discharge, 4,010 second-feet.

July 14, 1926: Gage height, 18.94 feet; discharge, 22,700 second-feet.

Daily discharge, in second-feet, of East Fork of Trinity River near Rockwall, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.0	0.5	0.2	0.0	21	7.0	45	99	6,250	58	270	32
2	.0	.5	.2	.0	21	5.6	48	90	10,800	43	216	29
3	.0	.5	.2	.3	20	4.4	34	162	6,960	36	180	28
4	.0	.5	.2	.2	19	3.6	26	706	3,030	28	144	25
5	.0	.5	.2	.2	16	3.7	25	1,120	596	24	126	24
6	.0	6.8	.2	.1	14	4.4	23	396	306	24	108	80
7	.0	36	.1	.1	13	3.8	22	324	198	25	90	674
8	.0	40	.1	.1	10	4.2	23	629	135	1,200	77	387
9	.0	126	.1	.0	9.0	7.1	26	1,370	108	6,300	67	61
10	.0	61	.1	.0	11	8.9	112	2,000	81	9,180	61	37
11	.0	21	.1	.0	10	11	820	2,400	67	5,440	55	31
12	.0	11	.1	.0	9.7	9.2	1,590	2,560	64	4,920	48	28
13	.0	5.2	.1	.0	8.8	9.5	1,270	2,560	52	6,960	43	26
14	.0	2.8	.1	.0	7.6	16	351	988	48	16,600	39	24
15	.0	1.8	.1	.0	7.4	12	190	261	41	14,900	36	22
16	19	1.4	.1	.1	7.4	10	144	216	32	6,210	32	21
17	158	1.0	.0	273	7.4	8.0	117	171	32	1,330	32	20
18	324	1.0	.0	342	7.1	6.4	90	144	29	288	218	18
19	66	.8	.0	456	5.9	5.3	81	1,460	28	216	953	16
20	19	.6	.0	180	5.4	4.9	70	1,780	28	171	1,510	14
21	8.0	.5	.0	181	10	605	1,060	2,560	44	144	585	13
22	4.2	.4	.0	506	11	2,000	4,220	1,250	436	144	126	12
23	2.4	.4	.0	607	7.4	1,680	3,800	207	930	466	81	11
24	1.7	.4	.0	270	6.8	738	3,620	135	546	1,370	117	10
25	1.2	.4	.0	50	5.9	189	1,710	99	112	2,730	144	9.5
26	.9	.4	.0	37	4.9	90	378	73	688	4,000	86	8.3
27	.7	.4	.0	34	4.7	52	189	64	855	4,000	52	8.3
28	.6	.3	.0	31	5.3	43	153	58	930	5,170	43	8.3
29	.5	.3	.0	29	-------	32	126	52	960	5,720	41	9.0
30	.5	.3	.0	29	-------	41	112	45	234	1,700	41	11
31	.5	-------	.0	24	-------	58	-------	601	-------	378	37	------

Monthly discharge of East Fork of Trinity River near Rockwall, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	324	0.0	19.6	1,200
November	126	.3	10.8	640
December	.2	.0	.07	4.4
January	607	.0	98.4	6,050
February	21	4.7	10.2	569
March	2,000	3.6	183	11,300
April	4,220	22	682	40,600
May	2,560	45	793	48,800
June	10,800	28	1,150	68,700
July	16,600	24	3,220	198,000
August	1,510	32	183	11,200
September	674	8.3	56.6	3,370
The year	16,600	.0	539	390,000

SAN JACINTO RIVER BASIN

SAN JACINTO RIVER NEAR CONROE, TEX.

LOCATION.—At International-Great Northern Railroad bridge 150 feet below highway bridge, 3 miles below mouth of Lake Creek, and 4 miles south of Conroe, Montgomery County.

DRAINAGE AREA.—832 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—May 7, 1924, to September 30, 1926.

GAGE.—Staff gage attached to piling at eleventh bent from left abutment on downstream side of railroad bridge; read by G. W. Crafton. Zero of gage is base of rail.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand. One channel for low and medium stages and three for high stages. Channel straight for 150 feet above and 300 feet below gage. Banks covered with brush and trees and subject to overflow. Control formed by riprap near bridge and by sand of bed of stream; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, −1.00 foot at 5 p. m. April 22 (discharge not determined); minimum stage, −23.50 feet October 1, 8–10 (discharge, 16 second-feet).

1924–1926: Maximum stage recorded, that of April 22, 1926; minimum stage, −23.70 feet August 17, 19, 21, and 22, 1925 (discharge, 11 second-feet).

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed October 19. Rating curves fairly well defined below 24,000 second-feet but do not cover range of stage for the year. Gage read to tenths once daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on once-daily gage readings, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of San Jacinto River near Conroe, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	−7.34	21,100	Nov. 10	−10.10	5,270	May 2	−20.75	247
Nov. 7	−7.31	23,300	Nov. 11	−11.39	2,880	Aug. 3	−22.44	114
Nov. 9	−9.14	14,000	Jan. 12	−20.32	299	Sept. 28	−23.52	36.3

Daily discharge, in second-feet, of San Jacinto River near Conroe, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	6,670	220	328	385	146	11,700	146		170	114	162
2	18	8,000	211	2,380	373	146	8,100	229		162	114	146
3	20	3,390	202	7,160	350	138	2,570	307		90	106	114
4	20	2,830	194	11,100	297	146	2,330	549		69	106	83
5	20	7,020	194	10,500	247	162	2,050	1,930		69	102	76
6	20	21,400	190	4,400	238	287	1,700	10,500	106	66	98	72
7	18	22,800	186	2,410	229	317	556	6,410		146	98	69
8	16	18,200	186	1,840	229	361	280	3,690		83	83	69
9	16	11,100	178	533	211	850	825	3,200		80	76	69
10	16	5,570	178	453	211	1,910	1,630	2,620		76	69	55
11	24	2,920	178	373	194	2,230	1,700	1,780		72	69	37
12	32	2,380	178	297	194	4,600	1,660	540	69	69	69	36
13	105	1,840	182	267	178	8,700	1,630	397	76	69	69	31
14	361	1,320	186	267	178	4,400	1,600	328	76	69	69	29
15	1,110	1,080	202	247	178	1,910	950	229	71	69	66	27
16	3,160	925	339	229	178	616	448	229	72	69	66	27
17	6,300	753	361	356	194	339	307	186	72	69	62	27
18	7,500	598	373	1,630	287	448	287	194	72	69	62	27
19	8,700	533	350	2,760	277	598	229	211	72	69	62	27
20	4,230	565	339	4,080	220	524	229	211	72	69	58	27
21	1,900	565	328	1,700	194	3,770	344	211	76	69	58	27
22	732	500	307	1,170	186	5,010	-------	211	80	69	58	27
23	307	435	297	825	178	2,580	-------	178	80	69	55	27
24	247	397	277	789	162	1,770	9,460	162	170	218	55	27
25	287	350	238	753	162	1,520	3,300	146	229	361	55	27
26	397	328	202	598	162	1,380	2,520	146	229	317	55	27
27	1,050	287	234	565	154	2,130	956	146	247	220	55	34
28	2,390	247	267	502	146	2,050	267	138	257	114	55	35
29	2,370	238	247	409	-------	2,020	220	138	247	98	178	35
30	2,290	229	229	361	-------	2,110	146	138	238	83	211	35
31	1,880	-------	211	373	-------	17,100	-------	146	-------	72	186	------

NOTE.—Discharge interpolated on the following days: Oct. 4, 11, Nov. 22, 29, Dec. 6, 13, 20, 27, Jan. 10, 24, and 31. Mean daily gage height for days when stage was beyond limits of rating curve as follows: Apr. 22, −3.75 feet; Apr. 23, −4.47 feet. Braced figure shows estimated mean discharge for period indicated.

Monthly discharge of San Jacinto River near Conroe, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	8,700	16	1,470	90,400
November	22,800	229	4,120	245,000
December	373	178	241	14,800
January	11,100	229	1,920	118,000
February	385	146	221	12,300
March	17,100	138	2,270	139,000
April	-------	146	-------	-------
May	10,500	138	1,150	70,700
June	257	-------	122	7,280
July	361	66	109	6,730
August	211	55	85.1	5,230
September	162	27	50.4	3,000

BRAZOS RIVER BASIN

DOUBLE MOUNTAIN FORK OF BRAZOS RIVER NEAR ASPERMONT, TEX.

LOCATION.—At bridge on Aspermont-Hamlin highway in southeast corner of sec. 134, Texas & Pacific Railway Co.'s block U, 8 miles below mouth of Mountain Creek and 11 miles south of Aspermont, Stonewall County.

DRAINAGE AREA.—7,980 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—December 3, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream side of bridge; read by I. E. Smith.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 500 feet above and half a mile below gage. Bed of sand; shifts. Banks of clay, shifting, and not subject to overflow. Control indefinite; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15 feet at 10 p. m. August 22 (discharge, about 33,200 second-feet); probable no flow some time in January and April.

1924–1926: Maximum stage recorded, that of August 22, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None

ACCURACY.—Stage-discharge relation not permanent. Rating curve poorly defined for all stages. Gage read to hundredths twice daily, but at extremely low stages water was not under gage. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of monthly discharge. Daily discharge not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of Double Mountain Fork of Brazos River near Aspermont, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 19	2.00	142	Apr. 2	0.83	0.5	Sept. 17	1.60	33.4
Nov. 20	.92	1.89	June 17	1.04	11.0			
Feb. 9	.60	[a].3	Aug. 6	1.37	19.9			

[a] Estimated.

Monthly discharge of Double Mountain Fork of Brazos River near Aspermont, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	862	7.8	96.0	5,910
November	433	1.3	33.2	1,980
December	1.5	----------	.74	45.2
January	----------	----------	.49	30.0
February	----------	----------	.45	25.2
March	354	----------	14.9	916
April	2,700	.1	247	14,700
May	1,590	.6	135	8,320
June	3,320	2.0	247	14,700
July	3,040	.9	284	17,400
August	10,200	----------	907	55,800
September	2,700	17	432	25,700
The year	10,200	----------	201	146,000

NOTE.—Discharge estimated Dec. 14–31, Jan. 1–27, Feb. 2–9, 14–28, Mar. 1–20, and Aug. 12–16.

BRAZOS RIVER AT SEYMOUR, TEX.

LOCATION.—At bridge on Wichita Valley Highway three-fourths mile above Wichita Valley Railway Co.'s bridge, 1 mile southwest of courthouse in Seymour, Baylor County, and 1¼ miles above mouth of Seymour Creek.

DRAINAGE AREA.—14,500 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 30, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream side of bridge; read by B. F. Bowman, jr.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for quarter of a mile above and below gage. Bed of sand; shifts. Banks of sand and covered with brush; shift; not subject to overflow. Control is sand bed of stream; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during the year, 13.77 feet at 6 p. m. August 29 (discharge, 43,400 second-feet; determined by slope method and may be subject to error); no flow for several periods.

1924–1926: Maximum stage, that of September 29, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed August 23. Rating curves fairly well defined for all stages. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of Brazos River at Seymour, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	2.28	227	Aug. 5	2.60	296	Sept. 2	3.29	1,790
Nov. 21	1.29	18.0	Aug. 29	13.77	[a] 43,400	Do	2.99	1,510
Feb. 10	1.01	.28	Aug. 31	4.44	5,300	Sept. 3	2.60	1,140
Mar. 31	1.96	60	Sept. 1	4.05	3,830	Sept. 16	2.10	357
June 16	3.15	866	Do	3.62	2,960			

[a] Determined by slope method, using Kutter's formula.

Daily discharge, in second-feet, of Brazos River at Seymour, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	518	6.0	23	4.4	2.4	-------		34	38	7.2	281	3,790
2	383	3.2	14	3.4	2.0	-------		23	26	1.2	588	1,570
3	239	2.2	7.6	2.8	.8	-------		13	18	---------	634	971
4	154	.6	3.6	3.4	.8	-------		6.8	938	---------	480	455
5	101	-------	1.4	2.4	1.8	-------	30	24	2,050	---------	314	3,070
6	78	-------	15	3.2	1.0	-------		68	1,180	---------	213	2,430
7	59	-------	8.8	4.4	.4	-------		120	540	---------	126	1,840
8	30	2.6	6.0	6.0	1.2	-------		193	300	---------	94	1,290
9	8.0	275	4.0	11	.6	-------		61	314	98	64	860
10	5.2	262	3.2	6.8	.2	-------	476	104	249	36	38	534

Daily discharge, in second-feet, of Brazos River at Seymour, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	974	207	2.2	6.8			936	112	104	0.0	21	300
12	742	158	6.0	5.6			470	74	27	65	9.6	140
13	576	104	3.8	4.4			213	55		454	3.6	
14	1,062	70	2.6	5.2			144	42		355	2.2	
15	998	171	2.6	3.8			101	42		307	4.0	450
16	820	126	3.8	3.6			70	29	613	244	23	
17	576	118	3.6	18			35	16	110	158	1,020	185
18	414	76	3.8	18			14	14	556	96	966	125
19	300	50	2.8	14			5.6	3,500	9,610	32	536	96
20	228	35	3.2	10			3.4	3,800	3,960	3.0	369	67
21	184	21	3.8	6.0		1,290	5,730	966	1,530		327	52
22	171	29	3.8	3.0		1,200	6,260	657	153		274	41
23	112	44	3.4	1.8		438	6,070	565	59		17,100	41
24	94	64	2.8	1.1		162	2,810	462	42		6,890	35
25	74	57	3.4	93		99	909	334	30		2,070	38
26	55	23	2.2	78		68	307	250	19	5,210	1,540	55
27	39	14	1.8	39		39	189	167	10	6,870	1,070	50
28	30	25	2.2	23		20	107	72	6.0	2,440	815	77
29	22	22	2.2	11		26	68	3,830	3.0	498	18,200	327
30	15	30	3.0	5.6		78	49	1,430	1.0	362	20,500	1,190
31	9.6		6.0	3.2		63		53		244	6,810	

NOTE.—No flow on days for which no discharge is shown. Braced figures show estimated mean daily discharge for periods indicated.

Monthly discharge of Brazos River at Seymour, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,062	5.2	293	18,000
November	275	.0	66.5	3,960
December	23	1.4	5.02	309
January	93	1.1	13.0	797
February	2.4	.0	.40	22.2
March	1,290	.0	112	6,910
April	6,260	3.4	841	50,100
May	3,830	6.8	552	34,000
June	9,610	.0	750	44,600
July	6,870	.0	564	34,700
August	20,500	2.2	2,630	161,000
September	3,790	35	714	42,500
The year	20,500	.0	549	397,000

BRAZOS RIVER NEAR MINERAL WELLS, TEX.

LOCATION.—At highway bridge on Mineral Wells-Palo Pinto highway 4 miles west of Mineral Wells, Palo Pinto County, and 4 miles below mouth of Turkey Creek.

DRAINAGE AREA.—23,100 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—January 31, 1924, to September 30, 1926.

GAGE.—Chain gage attached to downstream handrail of bridge; read by Joe C. Savage.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for half a mile above and below gage. Banks fairly clean and not subject to overflow. Control is sand and gravel riffle, 1,000 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during the year, 15.23 feet at 3 a. m. August 31 (discharge, 40,900 second-feet); minimum stage, 2.70 feet March 16 (discharge, 5.5 second-feet).

1924–1926: Maximum stage recorded, 15.40 feet at 7 a. m. September 13, 1925 (discharge, 46,900 second-feet); no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined for all stages. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Brazos River near Mineral Wells, Tex., during the year ending September 30, 1927

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 26	4.50	499	June 22	9.77	12,600	Sept. 4	6.64	2,680
Dec. 12	3.18	26.5	July 17	4.86	679	Sept. 15	6.12	1,950
Jan. 14	3.08	20.9	Aug. 3	5.46	1,410	Sept. 29	3.90	136
Apr. 15	5.60	1,650	Aug. 25	10.42	17,300			

Daily discharge, in second-feet, of Brazos River near Mineral Wells, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,280	190	38	18	42	7.6	452	834	379	554	2,190	13,800
2	1,800	182	38	18	38	6.9	502	649	1,970	438	2,190	5,780
3	1,260	173	37	18	35	6.9	424	480	1,190	338	1,450	4,050
4	986	165	35	22	31	6.9	250	405	649	261	1,880	2,620
5	786	151	30	21	29	8.3	177	373	2,000	231	1,320	1,800
6	649	154	29	21	27	9.0	186	360	3,600	182	986	1,210
7	569	360	28	20	26	9.4	202	360	3,200	147	834	6,220
8	480	326	28	20	25	9.0	134	649	1,840	230	649	4,300
9	509	635	26	20	25	8.6	94	487	1,260	784	532	3,000
10	649	1,040	26	19	24	8.3	822	466	786	1,660	405	2,410
11	1,210	590	26	19	23	8.0	4,410	1,230	539	1,780	321	1,510
12	1,580	386	26	18	22	7.6	5,000	884	354	986	261	1,210
13	1,260	304	26	18	21	7.2	3,600	649	299	1,150	198	1,150
14	1,660	272	26	18	21	6.9	2,450	473	245	1,450	134	986
15	1,730	245	25	18	20	6.2	1,660	373	207	1,090	116	1,890
16	2,100	182	24	18	19	5.5	1,090	310	761	694	90	1,380
17	3,400	151	24	24	18	7.6	786	282	1,130	649	66	934
18	1,730	130	24	81	18	9.8	554	245	1,780	532	69	1,040
19	1,150	102	23	136	16	9.0	398	380	9,870	392	2,990	694
20	1,210	92	23	71	15	8.6	321	886	20,600	304	5,890	539
21	1,580	85	22	814	14	916	498	5,710	24,000	277	2,590	398
22	1,320	78	22	298	13	816	2,470	3,740	12,400	198	1,510	326
23	1,210	69	22	202	12	119	8,850	2,280	11,200	221	1,040	266
24	934	66	21	121	11	1,210	8,500	1,730	7,600	569	946	216
25	649	61	21	88	11	1,320	5,020	1,210	2,880	1,490	16,100	169
26	480	53	20	113	9.8	1,510	3,200	884	2,100	3,210	5,480	141
27	366	47	20	81	9.0	1,380	2,100	649	1,880	9,200	3,000	154
28	304	44	20	66	8.3	1,150	1,660	524	1,260	8,500	2,100	137
29	288	42	19	58	------	649	1,320	418	884	8,050	13,100	134
30	261	41	19	52	------	509	1,040	299	694	4,050	16,700	130
31	231	------	18	47	------	539	------	609	------	2,800	30,200	------

Monthly discharge of Brazos River near Mineral Wells, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,400	231	1,120	68,700
November	1,040	41	214	12,700
December	38	18	25.4	1,560
January	814	18	82.5	5,070
February	42	8.3	20.8	1,160
March	1,510	5.5	331	20,400
April	8,850	94	1,940	115,000
May	5,710	245	930	57,200
June	24,000	207	3,920	233,000
July	9,200	147	1,690	104,000
August	30,200	66	3,720	229,000
September	13,800	130	1,950	116,000
The year	30,200	5.5	1,330	964,000

BRAZOS RIVER NEAR GLEN ROSE, TEX.

LOCATION.—A quarter of a mile above highway bridge on Glen Rose-Cleburne road crossing, 1¼ miles above confluence with Squaw and Paluxy Creeks, and 4 miles northeast of Glen Rose, Somervell County.

DRAINAGE AREA.—24,800 square miles, a large part of which is probably non-contributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926.

GAGE.—Combination vertical and inclined staff on right bank; read by J. B. Christenson.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 1 mile above and below gage. Bed composed of rock, sand, and gravel; fairly permanent. Right bank of sand and clay and not subject to overflow; left bank of sand, wooded, and subject to overflow at a stage of 17 feet. Control for low water is rock and gravel shoal 600 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.20 feet during night of June 21 (discharge, about 38,300 second-feet); minimum stage, 0.19 foot at 5.55 p. m. March 16 (discharge, 9.8 second-feet).

1924–1926: Maximum stage, 15.10 feet at 11 a. m. May 8, 1925 (discharge, about 45,700 second-feet). No flow September 7–9, 1924.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 30,000 second-feet and extended above. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records poor.

Discharge measurements of Brazos River near Glen Rose, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	1.48	905	Apr. 30	2.10	2,120	Aug. 26	5.67	9,740
Dec. 14	.45	69	July 18	1.88	1,220			
Jan. 13	.38	38.1	Aug. 26	7.20	16,000			

Daily discharge, in second-feet, of Brazos River near Glen Rose, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,690	371	103	45	128	13	875	2,030	610	1,260	4,620	27,200
2	2,340	326	96	48	110	12	630	1,500	530	930	1,700	13,400
3	1,760	299	96	53	96	10	610	1,150	720	760	2,510	7,560
4	1,500	292	92	58	92	13	520	985	1,040	580	2,030	6,060
5	1,260	265	89	60	85	15	492	820	3,150	425	1,700	5,170
6	1,150	353	82	60	79	24	510	780	5,170	353	1,440	4,620
7	930	630	76	55	74	22	380	800	3,590	291	1,260	5,170
8	750	1,150	74	50	68	18	290	680	6,660	362	1,100	6,660
9	580	1,380	71	48	63	15	344	560	4,620	820	730	5,460
10	510	2,030	71	43	58	15	425	550	5,170	1,960	444	4,090
11	482	592	71	41	48	15	760	780	2,990	1,720	434	3,110
12	580	540	71	37	43	15	1,440	780	1,630	3,630	380	2,890
13	630	1,040	68	37	43	15	6,060	1,100	985	2,510	317	2,030
14	1,040	670	68	37	39	13	3,590	1,440	690	2,180	248	1,700
15	2,180	482	65	37	35	10	3,590	1,200	540	1,500	201	1,700
16	12,100	398	65	94	31	10	2,690	875	389	1,890	186	1,630
17	7,760	362	65	172	31	10	1,890	760	335	1,890	166	1,500
18	4,620	317	63	201	31	13	1,320	600	462	1,200	194	1,440
19	3,340	265	63	256	28	13	875	2,640	2,910	740	1,150	1,380
20	2,180	224	58	240	28	14	670	6,780	13,500	600	3,930	1,380
21	1,500	194	58	602	24	141	810	2,250	28,000	570	7,860	1,260
22	1,320	172	55	2,960	24	154	680	5,650	23,500	680	4,820	985
23	1,500	160	55	1,320	18	1,000	4,160	6,060	13,300	1,260	3,590	730
24	1,630	148	55	1,040	16	1,630	15,300	4,890	12,900	1,260	5,460	580
25	1,380	137	53	690	16	930	12,000	3,110	9,700	560	8,940	472
26	1,260	128	50	398	15	520	8,160	2,030	4,620	317	14,360	416
27	985	118	50	299	14	1,150	5,460	1,630	3,110	1,110	5,170	380
28	660	110	50	240	13	1,440	4,090	1,500	2,690	12,300	3,110	362
29	530	107	50	179	-------	1,700	3,340	1,260	2,690	9,070	2,510	326
30	482	103	50	154	-------	1,760	2,690	930	2,030	9,380	15,000	290
31	434	-------	48	142	-------	1,440	-------	985	-------	6,960	25,000	-------

Monthly discharge of Brazos River near Glen Rose, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	12,100	434	1,940	119,000
November	2,030	103	445	26,500
December	103	48	67.1	4,130
January	2,960	37	313	19,200
February	128	13	48.2	2,680
March	1,760	10	392	24,100
April	15,300	290	2,820	168,000
May	6,780	550	1,840	113,000
June	28,000	335	5,270	314,000
July	12,300	291	2,230	137,000
August	25,000	166	3,890	239,000
September	27,200	290	3,670	218,000
The year	28,000	10	1,910	1,380,000

BRAZOS RIVER AT WACO, TEX.

LOCATION.—At bridge of Texas Electric Co. (formerly called Southern Traction Co.), 100 feet above suspension bridge in Waco, McLennan County, and 2½ miles below mouth of Bosque River.

DRAINAGE AREA.—28,500 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1914, to September 30, 1926, and September 14, 1898, to December 31, 1911. Records of stage have been obtained by United States Weather Bureau since August 9, 1900.

GAGE.—Stevens continuous recorder attached to downstream side of bridge.

DISCHARGE MEASUREMENTS.—Made from first 1-span highway bridge above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel; shifts. Banks are clay, and subject to overflow at extremely high stages. Channel straight above and below for several thousand feet. Control not known.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 19.30 feet at 2.30 p. m. June 22 (discharge, 44,400 second-feet); minimum discharge, 84.0 second-feet at 1 p. m. December 28.

1898–1926: Maximum stage recorded, 39.7 feet December 3, 1913 (discharge not determined); no flow August 20–21, 1918, and probably several days in August, 1923.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that numerous small diversions are made above the station for mining, irrigation, and municipal uses, but total probably does not appreciably affect flow, except during low stages.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements of Brazos River at Waco, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	8.54	1,480	July 10	8.74	1,670	Sept. 1	18.08	34,000
Nov. 24	6.96	385	Aug. 31	12.80	12,700	Sept. 2	15.92	23,000
Jan. 12	6.25	124	Do	12.60	11,100			
June 18	7.30	680	Sept. 1	17.12	32,400			

Daily discharge, in second-feet, of Brazos River at Waco, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,330	634	246	125	885	122	2,670	3,160	3,110	2,240	5,900	31,800
2	3,820	550	238	174	822	115	2,340	2,900	2,090	1,740	3,510	24,000
3	2,960	504	226	202	745	113	1,840	3,190	1,300	1,420	2,670	8,900
4	2,450	460	206	189	654	145	1,520	2,290	1,380	1,180	2,500	6,150
5	2,140	443	189	171	586	250	1,470	1,940	2,140	990	2,090	5,200
6	1,840	4,910	180	160	538	574	1,340	5,420	2,780	843	1,990	4,420
7	1,470	4,520	174	152	492	1,490	2,090	2,970	2,500	731	1,740	5,400
8	1,220	5,950	168	145	460	498	1,900	2,450	2,450	7,530	1,560	7,150
9	1,020	2,670	165	140	416	351	1,220	1,940	5,310	6,540	1,600	7,400
10	885	2,140	165	138	380	6,940	28,000	5,690	4,150	1,700	1,300	6,400
11	794	2,240	160	125	356	4,150	15,200	4,800	3,020	9,100	1,100	4,420
12	703	1,560	158	122	338	1,600	3,790	2,300	2,560	3,330	955	3,370
13	745	1,180	165	120	310	1,260	4,300	1,600	2,140	2,250	808	3,300
14	1,500	920	171	113	292	1,020	6,400	1,560	1,700	5,400	661	2,840
15	885	1,260	155	111	258	990	4,700	1,340	1,340	2,670	752	2,240
16	9,820	1,100	145	1,340	238	885	4,600	1,740	1,220	2,040	622	1,940
17	15,200	885	140	10,900	234	801	3,980	1,700	822	1,520	562	1,740
18	5,100	738	140	6,150	230	773	3,440	1,600	703	1,650	504	1,650
19	3,740	634	138	1,890	198	731	2,780	1,520	738	1,700	448	1,940
20	3,300	562	135	1,340	192	682	2,290	2,640	3,330	1,340	390	2,240
21	2,560	520	130	1,990	189	2,270	9,380	7,700	19,500	1,020	375	1,740
22	2,140	465	122	4,160	186	3,510	26,100	3,580	39,000	4,340	3,350	1,560
23	1,740	421	122	3,040	168	1,840	5,830	5,440	20,500	4,420	2,900	1,520
24	1,890	380	122	2,780	158	1,140	18,500	6,150	12,400	6,650	2,340	1,300
25	3,440	351	120	2,340	150	4,740	17,800	4,060	12,800	5,490	2,240	1,140
26	2,090	324	120	2,040	138	4,280	10,900	3,230	9,550	1,940	8,360	1,100
27	1,560	297	118	1,890	128	2,450	7,150	2,620	5,900	1,560	9,320	955
28	1,340	274	101	1,890	125	1,790	5,650	2,240	4,240	1,260	4,330	885
29	1,100	258	107	1,560	-------	1,890	4,330	1,890	3,230	10,400	3,230	731
30	920	250	101	1,260	-------	5,530	3,660	1,560	2,670	9,200	3,570	598
31	780	-------	105	1,060	-------	3,220	-------	1,380	-------	8,900	12,000	-------

Monthly discharge of Brazos River at Waco, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	15,200	703	2,690	166,000
November	5,950	250	1,250	74,200
December	246	101	153	9,390
January	10,900	111	1,540	94,800
February	885	125	352	19,600
March	6,940	113	1,810	111,000
April	28,000	1,220	6,840	407,000
May	6,150	1,340	2,990	184,000
June	39,000	703	5,820	346,000
July	10,400	731	3,580	220,000
August	12,000	375	2,700	166,000
September	31,800	598	4,800	286,000
The year	39,000	101	2,890	2,080,000

BRAZOS RIVER NEAR BRYAN, TEX.

LOCATION.—At Pitts Bridge, on State highway between Bryan and Caldwell, 1¾ miles below mouth of Little Brazos River, 5½ miles below Southern Pacific Co.'s railroad bridge, 7½ miles above old station at Jones Bridge, and 9 miles southwest of Bryan, Brazos County.

DRAINAGE AREA.—38,400 square miles, part of which is probably noncontributing (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—September 11, 1925, to September 30, 1926.

GAGE.—Chain gage attached to upstream handrail of bridge; read by James J. Siegert.

DISCHARGE MEASUREMENTS.—Made from highway or railroad bridge.

CHANNEL AND CONTROL.—Bed of sand and clay; shifts. Channel curved above, at, and below gage. Banks of sand and clay; shift; subject to overflow at extremely high stages. Low-stage control is rock shoal 2 miles below gage; permanent. High-stage control not known.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 21.04 feet at 6 p. m. November 7 (discharge, about 35,600 second-feet); of minimum stage, 4.30 feet December 27 to January 1 (discharge, 560 second-feet). A higher and lower stage probably occurred during period of missing record in 1926.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation probably not permanent, but data insufficient to justify shifting-control methods. Rating curve well defined from 500 to 28,000 second-feet and extended above 28,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Brazos River near Bryan, Tex., during the period September 11, 1925, to September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1926	*Feet*	*Sec.-ft.*
Sept. 11	4.54	688	Sept. 16	14.60	17,400	July 20	7.09	2,920
Sept. 13	14.25	17,500	Sept. 17	11.18	10,400	Sept. 3	15.08	19,100
Sept. 14	11.33	9,100	Oct. 23	8.23	3,790	Sept. 4	12.01	10,900
Sept. 15	18.14	27,600	Nov. 25	5.46	1,260	Sept. 27	5.58	1,350
Sept. 16	16.17	21,300						

Daily discharge, in second-feet, of Brazos River near Bryan, Tex., for the period September 11, 1925, to September 30, 1926

Day	Sept.	Oct.	Nov.	Dec.	Jan.	June	July	Aug.	Sept.
1		5,480	2,100	940	560		4,710	8,000	12,100
2		4,140	1,850	880	770		4,280	6,800	20,700
3		4,280	1,680	880	1,010		3,880	5,480	21,000
4		3,490	1,600	770	1,850		3,620	4,420	11,500
5		3,030	8,380	770			2,920	4,010	7,100
6		2,590	21,100	770		5,650	2,590	3,620	5,480
7		2,300	33,700	770		5,480	2,020	3,140	5,010
8		2,100	32,000	770		5,480	4,280	3,030	4,860
9		1,850	31,200	742		4,860	10,700	2,700	8,150
10		1,600	23,200	742		4,860	7,600	2,390	9,980
11	688	1,520	12,200	715		4,420	7,400	2,390	6,800
12	742	1,680	6,600	715		4,280	7,200	2,100	4,860
13	15,500	3,980	3,960	715		4,280	6,600	1,940	3,880
14	10,900	11,400	3,490	715		4,280	5,650	1,760	3,490
15	24,500	13,300	3,250	715		3,880	5,480	1,680	3,250
16	21,100	15,300	3,250	715		3,620	5,480	1,440	2,920
17	10,700	19,900	2,920	715		2,810	4,710	1,370	2,390
18	13,600	24,200	2,490	715		2,700	3,750	1,220	2,200
19	10,700	17,300	2,390	715		2,490	3,030	1,150	2,100
20	7,600	10,700	2,300	688		2,300	2,700	1,080	1,940
21	5,600	5,830	2,300	660		2,300	3,620	1,010	2,020
22	4,170	4,420	2,300	660		15,700	4,140	1,220	2,810
23	3,350	4,010	1,420	635		27,000	5,830	1,940	2,020
24	2,820	3,370	1,300	610		25,300	9,540	3,140	1,850
25	2,620	3,620	1,220	610		18,100	12,100	3,750	1,760
26	2,260	6,140	1,220	585		14,800	11,900	3,030	1,600
27	2,180	5,060	1,080	560		12,400	7,000	8,620	1,370
28	9,100	4,280	1,080	560		7,800	4,560	9,840	1,220
29	11,200	3,370	1,220	560		6,600	5,320	5,510	1,150
30	7,400	2,920	1,370	560		5,480	7,800	4,140	1,010
31		2,300		560			9,760	5,030	

NOTE.—No record from Jan. 5 to June 5, 1926.

Monthly discharge of Brazos River near Bryan, Tex., for the period September 11, 1925, to September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
September 11-30	24,500	688	8,330	331,000
October	24,200	1,520	6,310	388,000
November	33,700	1,080	7,140	425,000
December	940	560	701	43,100
1926				
January 1-4			1,050	8,310
June 5-30	27,000	2,300	7,870	390,000
July	12,100	2,020	5,810	357,000
August	9,840	1,010	3,450	212,000
September	21,000	1,010	5,220	310,000

BRAZOS RIVER AT ROSENBERG, TEX.

LOCATION.—At Rosenberg-Richmond highway bridge, at Rosenberg, Fort Bend County, 3 miles above mouth of Jones Creek.

DRAINAGE AREA.—44,000 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—October 1, 1922, to September 30, 1926. Records of stage have been obtained by United States Weather Bureau since July 1, 1914.

GAGE.—Chain gage attached to downstream handrail of bridge; read by G. W. Nelson.

DISCHARGE MEASUREMENTS.—Made from highway bridge.

CHANNEL AND CONTROL.—Bed of sand; shifts. Channel straight for 400 feet above and 700 feet below gage. Right bank of sand and clay. Left bank above bridge is wooded and below bridge is clean, subject to overflow at extremely high stages. Control is bed of stream; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 37.1 feet at 2 p. m. April 26 (discharge, about 86,900 second-feet; minimum stage, 2.50 feet at 7 a. m. December 29 (discharge, 1,160 second-feet).

1923–1926: Maximum stage recorded, that of April 26, 1926; minimum stage, 0.30 foot August 19–22, 1925 (discharge, 306 second-feet).

Recent levels to flood marks show that a stage of 55.5 feet,[2] present gage datum was reached at 11 p. m. December 9, 1913.

DIVERSIONS.—None of importance.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 325 to 40,000 second-feet and extended above by means of area-velocity curves; extension may be subject to considerable error. Gage read to tenths once daily. Daily discharge determined by applying daily gage height to rating table or, on days of considerable fluctuation in stage by using gage-height graph based on daily gage readings. Shifting control method used May 17 to September 30. Records poor.

COOPERATION.—Gage-height record furnished by United States Weather Bureau.

Discharge measurements of Brazos River at Rosenberg, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	17.16	25,300	Apr. 13	21.84	[a]40,000
Dec. 21	3.26	1,600	Aug. 5	8.23	7,820

[a] Surface velocity observed for part of measurement and coefficient of 0.91 used to reduce to mean velocity.

Daily discharge, in second-feet, of Brazos River at Rosenberg, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,820	18,000	2,470	1,610	8,970	1,440	35,300	42,800	5,990	9,310	5,210	5,600
2	8,320	15,100	2,090	5,300	8,320	1,380	37,000	36,700	5,470	7,390	9,720	5,080
3	6,800	12,100	2,020	13,800	7,240	1,380	33,400	38,700	4,840	6,800	10,700	9,340
4	5,730	9,990	1,820	18,500	6,800	1,440	25,900	35,000	4,240	6,250	9,310	19,400
5	4,240	12,900	1,820	13,800	6,380	1,880	18,900	33,900	5,080	5,340	7,840	18,500
6	4,480	22,500	1,750	7,690	5,340	2,380	15,500	34,500	6,940	4,720	7,540	12,700
7	3,890	32,800	1,680	6,120	5,080	2,740	13,000	34,500	5,990	4,000	6,800	8,970
8	3,240	45,200	1,620	5,470	4,000	2,380	11,600	31,700	6,660	3,670	5,600	7,090
9	2,740	50,600	1,560	5,080	3,340	2,090	11,200	31,100	8,160	3,450	5,210	5,860
10	2,560	50,000	1,500	3,780	3,340	7,640	11,000	33,900	7,090	3,030	4,600	5,600
11	2,300	46,700	1,500	2,840	3,130	18,300	12,900	35,900	5,600	3,340	4,240	5,730
12	2,470	40,100	1,440	2,470	2,560	23,200	20,600	32,200	5,470	7,310	3,780	6,250
13	2,560	30,800	1,380	2,160	2,380	31,100	34,500	27,500	5,470	7,310	3,450	7,090
14	7,790	24,400	1,440	1,950	2,020	29,600	30,800	24,900	6,520	5,340	3,340	5,860
15	21,500	18,300	1,440	1,820	2,230	23,900	24,900	18,500	6,120	5,600	3,130	6,120
16	40,700	15,900	1,500	1,750	2,160	16,100	21,300	13,800	5,600	6,800	2,840	5,080
17	58,400	13,600	1,620	2,580	2,020	12,500	19,200	12,100	5,340	5,600	2,640	4,000
18	55,000	12,300	1,680	5,550	2,020	10,500	15,900	10,300	4,840	5,990	2,560	3,450
19	46,700	13,000	1,680	10,200	1,880	11,600	14,600	8,800	4,360	5,730	2,160	3,340
20	42,500	13,800	1,680	21,500	1,750	10,900	14,800	7,840	4,240	4,600	2,230	3,030
21	34,200	12,300	1,620	22,500	1,820	9,820	21,000	8,000	3,890	4,120	2,090	2,840
22	23,900	10,900	1,560	14,600	1,750	12,900	35,000	6,800	3,340	4,000	2,090	2,470
23	16,100	9,820	1,380	12,500	1,680	19,400	64,800	7,090	3,240	3,560	2,020	2,380
24	11,600	8,160	1,330	12,300	1,620	25,100	74,400	6,520	4,120	3,780	1,880	2,230
25	8,970	6,520	1,330	14,200	1,620	26,700	81,200	8,000	21,900	3,890	1,820	2,230
26	8,160	5,860	1,280	12,700	1,560	26,700	86,200	7,090	21,500	6,790	1,820	2,380
27	10,500	4,360	1,280	11,200	1,500	27,000	83,900	7,840	18,300	12,900	1,750	2,560
28	14,000	4,360	1,220	10,200	1,500	28,800	82,200	8,320	17,000	13,200	3,340	2,300
29	12,900	2,930	1,160	9,480	-------	29,000	82,200	7,390	14,800	9,990	3,340	2,090
30	12,100	2,640	1,220	8,970	-------	29,800	68,900	6,660	11,000	7,240	6,120	1,950
31	15,300	-------	1,220	8,970	-------	33,600	-------	5,860	-------	6,250	7,840	-------

[2] Previously reported stage of 56.4 feet in error.

Monthly discharge of Brazos River at Rosenberg, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	58,400	2,300	16,100	991,000
November	50,600	2,640	18,900	1,120,000
December	2,470	1,160	1,560	95,800
January	22,500	1,610	8,760	539,000
February	8,970	1,500	3,360	186,000
March	33,600	1,380	15,500	955,000
April	86,200	11,000	36,700	2,190,000
May	42,800	5,860	20,100	1,240,000
June	21,900	3,240	7,770	462,000
July	13,200	3,030	6,040	372,000
August	10,700	1,750	4,420	272,000
September	19,400	1,950	5,720	340,000
The year	86,200	1,160	12,100	8,760,000

CLEAR FORK OF BRAZOS RIVER AT NUGENT, TEX.

LOCATION.—At highway bridge at Nugent, Jones County, 2 miles below mouth of Elm Creek.

DRAINAGE AREA.—2,220 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—February 10, 1924, to September 30, 1926.

GAGE.—Vertical staff on left bank, 350 feet below highway bridge; read by C. F. Howard.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 1,000 feet above and 400 feet below gage. Bed of rock; permanent. Banks covered with light brush, subject to overflow at extremely high stages. Control is rock shoal, 1,000 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.50 feet at 12.35 p. m. June 19 (discharge, 9,620 second-feet); minimum stage, 1.28 feet August 17 (discharge, 3.4 second-feet).

1924–1926: Maximum stage, that of June 19, 1926; minimum discharge, 0.20 second-foot July 27–28, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 2,000 second-feet and fairly well defined from 2,000 to 10,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily readings. Records fair.

Discharge measurements of Clear Fork of Brazos River at Nugent, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 4	1.72	20.6	June 14	2.10	84	Aug. 4	1.54	11.4
Nov. 20	1.65	15.4	June 19	15.42	[a] 9,790	Sept. 17	1.50	10.8
Feb. 9	1.51	8.1	Do	14.50	[a] 8,360			
Mar. 29	1.74	24.3	June 20	10.22	4,420			

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.

Daily discharge, in second-feet, of Clear Fork of Brazos River at Nugent, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	25	15	11	9.6	7.1	64	17	8.4	19	174	7.1
2	51	25	15	12	9.6	7.4	28	17	11	18	47	9.6
3	54	25	14	14	9.6	7.7	18	580	308	16	18	11
4	36	23	12	12	9.6	8.8	15	54	819	16	11	19
5	32	21	12	12	9.6	9.6	14	54	754	14	9.6	566
6	29	122	13	11	8.8	10	12	451	80	13	6.8	1,070
7	25	150	12	11	8.8	9.6	10	420	26	12	5.3	192
8	23	78	12	12	8.8	8.8	11	102	15	440	12	59
9	24	33	12	11	8.4	8.0	414	39	9.6	1,140	11	34
10	330	26	12	11	8.8	8.0	1,810	30	8.8	1,490	10	24
11	299	21	12	11	8.4	8.0	820	26	6.8	228	10	34
12	395	18	12	12	8.0	8.8	107	21	5.9	72	10	54
13	90	18	12	11	8.0	7.7	61	19	5.0	44	7.4	99
14	51	17	12	10	8.0	7.4	58	20	91	29	4.0	30
15	99	15	12	10	7.4	7.4	42	19	484	23	3.8	76
16	474	16	12	10	7.4	7.4	33	18	85	19	4.2	18
17	579	19	12	11	7.4	10	30	16	19	18	3.4	11
18	618	19	12	12	7.4	10	23	14	1,170	16	30	8.8
19	576	20	11	11	7.4	11	12	254	8,010	14	12	8.0
20	88	16	11	10	7.4	9.6	11	42	4,770	12	7.4	7.7
21	64	18	11	11	7.4	120	412	15	1,320	11	5.6	7.7
22	53	18	11	12	7.4	349	1,080	10	742	11	3.8	7.4
23	48	17	12	12	7.4	33	860	9.6	78	11	4.2	7.1
24	39	17	12	12	7.4	14	296	8.8	56	46	4.2	7.1
25	33	17	12	11	7.4	250	59	8.8	46	338	15	6.2
26	33	17	12	12	7.4	202	34	8.4	42	49	7.7	5.3
27	29	15	12	11	7.4	56	25	8.4	33	35	9.2	5.9
28	25	15	11	11	7.4	26	21	8.8	28	113	9.0	7.1
29	26	15	10	10	-------	26	18	8.8	24	42	7.4	8.4
30	25	15	11	10	-------	42	18	8.8	20	108	7.7	11
31	25	-------	11	9.6	-------	147	-------	8.8	---------	379	14	-------

Monthly discharge of Clear Fork of Brazos River at Nugent, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	618	23	140	8,590
November	150	15	29.0	1,730
December	15	10	12.0	738
January	14	9.6	11.2	687
February	9.6	7.4	8.13	451
March	349	7.4	46.4	2,850
April	1,810	10	214	12,700
May	580	8.4	74.7	4,600
June	8,010	5.0	636	37,800
July	1,490	11	155	9,510
August	174	3.4	15.6	959
September	1,070	5.3	80.4	4,780
The year	8,010	3.4	118	85,400

CLEAR FORK OF BRAZOS RIVER AT FORT GRIFFIN, TEX.

LOCATION.—At highway bridge on Fort Griffin-Throckmorton road, 600 feet below mouth of Collins Creek and half a mile east of Fort Griffin, Shackelford County.

DRAINAGE AREA.—3,970 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—December 9, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream side of bridge; read by H. C. Herron.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 200 feet above and 400 feet below gage. Bed of gravel; permanent. Banks of clay, underlain by a stratum of rock; sparsely wooded; fairly permanent. Left bank subject to overflow at a stage of 15 feet, and right bank at a stage of 33 feet. At extremely high stages bridge can be reached only by boat. Low-water control is gravel shoal, 300 feet below gage; fairly permanent. High-water control is probably channel and banks some distance below station.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 27.0 feet at 2 a. m. June 21 (discharge, about 12,500 second-feet); minimum stage, 2.26 feet March 20 (discharge, 0.70 second-foot).

1924–1926: Maximum stage, that of June 21, 1926; no flow at 6 p. m. April 8, 1925.

DIVERSIONS.—Small diversions for municipal use; amount not known.

REGULATION.—Possibly slight regulatory effect at low stages by power plant at Stamford.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 6,700 second-feet and extended above. Gage read to hundredths once daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day using gage-height graph based on daily gage readings. Records for low and intermediate stages fair; for high stages, poor.

Discharge measurements of Clear Fork of Brazos River at Fort Griffin, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	2.72	37.5	June 15	2.32	8.7	June 23	5.13	833
Nov. 23	2.38	12.1	June 21	25.46	[b]10,400	June 24	4.02	326
Feb. 11	2.72	[a]10.7	June 23	6.17	1,440	Aug. 4	3.00	79
Mar. 30	3.02	88	Do	5.51	1,080	Sept. 16	2.90	61

[a] Partly estimated.

[b] Measurement made principally by timing drift and without adequate information to determine coefficient; stage rapidly falling..

Daily discharge, in second-feet, of Clear Fork of Brazos River at Fort Griffin, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	23	12	5.6	5.4	11	165	39	11	53	396	58
2	105	19	13	5.2	5.8	11	236	30	13	20	416	36
3	74	25	11	4.8	6.0	12	136	25	12	14	181	24
4	57	22	11	5.2	5.2	14	71	939	317	12	97	22
5	44	22	11	6.9	4.6	14	61	241	1,050	20	63	17
6	44	158	11	9.8	6.0	15	56	227	1,200	22	42	34
7	40	49	12	8.1	8.1	13	47	255	288	50	30	1,310
8	40	37	12	6.9	9.4	8.7	30	556	106	74	25	974
9	209	109	14	5.4	10	8.4	42	406	55	48	24	510
10	482	120	14	4.4	8.7	6.0	849	148	48	1,110	23	170
11	556	162	12	3.2	11	4.0	2,420	81	32	1,580	16	120
12	697	82	12	2.6	9.8	2.8	1,860	61	18	570	12	77
13	396	46	9.8	2.6	9.8	2.0	416	42	16	188	12	74
14	376	24	9.0	4.0	9.0	2.0	187	25	13	103	12	74
15	358	14	8.7	4.6	9.4	2.0	133	26	165	91	13	66
16	609	13	8.1	5.0	9.8	1.8	95	25	1,440	77	13	64
17	797	11	7.2	5.8	9.8	1.8	70	22	1,680	69	16	49
18	897	17	10	5.2	11	1.4	58	23	4,910	30	31	42
19	814	11	8.7	4.8	11	1.0	57	544	8,240	31	281	35
20	950	13	8.1	5.8	13	.7	51	1,150	11,800	28	257	30

Daily discharge, in second-feet, of Clear Fork of Brazos River at Fort Griffin, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	381	12	8.4	6.9	12	12	102	638	11,400	24	231	30
22	131	11	7.2	7.8	14	71	1,470	400	3,970	22	63	25
23	91	11	6.9	7.8	16	791	1,980	141	1,170	23	49	18
24	76	9.8	7.5	6.0	18	314	1,380	77	323	165	33	11
25	70	15	7.2	7.8	14	180	518	44	200	78	31	7.8
26	52	14	6.6	6.6	12	145	252	25	140	40	27	8.4
27	42	13	8.1	6.0	13	561	133	18	95	30	20	11
28	36	16	8.1	5.8	11	230	76	18	74	18	31	12
29	36	19	6.6	6.9	-------	120	64	12	49	63	725	12
30	33	16	6.6	6.0	-------	84	51	7.8	53	257	290	12
31	28	-------	5.4	5.2	-------	70	-------	6.0	--------	306	148	-------

Monthly discharge of Clear Fork of Brazos River at Fort Griffin, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	950	28	279	17,200
November	162	9.8	37.1	2,210
December	14	5.4	9.46	582
January	9.8	2.6	5.76	354
February	18	4.6	10.1	561
March	791	.7	87.4	5,380
April	2,420	30	436	25,900
May	1,150	6.0	202	12,400
June	11,800	11	1,630	97,000
July	1,580	12	168	10,300
August	725	12	116	7,160
September	1,310	7.8	131	7,800
The year	11,800	.7	258	187,000

CLEAR FORK OF BRAZOS RIVER AT CRYSTAL FALLS, TEX.

LOCATION.—At Walker-Caldwell Water Co.'s pumping plant, one-fourth mile north of Crystal Falls, Stephens County, and 1 mile above mouth of Hubbard Creek.

DRAINAGE AREA.—4,320 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 12, 1921, to September 30, 1926.

GAGE.—Vertical staff on right bank opposite pumping plant; read by pump man.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 500 feet below gage.

CHANNEL AND CONTROL.—Channel straight for 800 feet above and 400 feet below gage. Bed of rock. Right bank of clay, fairly clean, and high; left bank of clay, wooded, and subject to overflow at extremely high stages. Control is concrete dam 800 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 12.70 feet at 5 p. m. June 19 (discharge not determined); no flow March 16–20.

1922–1926: Maximum stage, 18.25 feet at 10.30 p. m. April 30, 1922 (discharge, not determined); no flow during several periods.

DIVERSIONS.—Large part of ordinary flow diverted for municipal use and mining.

REGULATION.—Low-water flow partly regulated by dam above gage.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined below 6,200 second-feet and extended to 12,000 second-feet but does not cover the range of stage for the year. Gage read to hundredths once daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Clear Fork of Brazos River at Crystal Falls, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	1.24	78	Mar. 30	1.33	121	Sept. 16	1.24	62
Nov. 23	1.10	9.5	June 15	1.10	22.0			
Feb. 11	1.01	[a] 3.0	Aug. 8	1.14	26.3			

[a] Estimated.

Daily discharge, in second-feet, of Clear Fork of Brazos River at Crystal Falls, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	199	36	14	16	5.2	2.3	62	52	8.0	71	264	142
2	155	29	29	16	3.6	2.7	254	52	5.2	62	504	52
3	104	22	16	16	3.6	3.0	184	36	5.2	52	356	29
4	62	29	8.0	12	3.6	3.3	116	611	689	44	184	16
5	71	16	6.0	12	2.0	3.6	71	491	1,180	36	98	12
6	62	36	10	8.0	2.0	3.6	44	336	1,380	36	62	992
7	62	550	8.0	8.0	5.2	3.6	36	246	684	458	29	1,310
8	52	104	8.0	8.0	5.2	5.2	22	850	296	474	29	1,240
9	327	36	12	5.2	4.4	5.2	22	666	129	128	16	510
10	481	169	22	5.2	4.4	5.2	932	316	62	46	8.0	230
11	527	104	22	5.2	2.8	3.6	2,200	116	44	1,150	8.0	123
12	670	62	16	3.6	3.6	3.6	2,600	82	29	1,390	8.0	87
13	550	44	16	5.2	3.6	16	1,050	62	16	508	5.2	76
14	550	36	16	5.2	2.0	2.0	358	36	129	169	4.4	149
15	1,850	29	12	3.6	3.6	.8	155	36	16	116	10	76
16	914	16	8.0	3.6	3.6	.0	104	29	10	82	3.6	66
17	852	16	8.0	62	3.6	.0	71	36	2,870	52	2.0	57
18	915	16	8.0	8.0	3.6	.0	62	40	9,100	36	3.6	32
19	915	14	8.0	3.6	2.0	.0	62	1,390	------	32	414	26
20	1,040	19	8.0	3.6	3.6	.0	52	1,240	9,700	29	135	16
21	1,040	16	5.2	12	3.6	54	155	1,040	------	22	104	22
22	230	12	5.2	8.0	3.6	57	362	754	------	36	104	14
23	129	16	5.2	8.0	3.6	22	1,520	338	2,910	22	62	10
24	93	12	8.0	8.0	3.6	594	2,020	116	670	29	36	6.0
25	71	12	12	8.0	3.6	762	846	62	281	199	29	6.0
26	71	16	12	8.0	2.0	272	504	36	184	104	29	3.6
27	71	16	8.0	8.0	2.0	385	238	22	129	82	29	2.0
28	40	16	8.0	5.2	2.0	385	142	16	116	71	29	2.0
29	40	16	8.0	5.2	------	199	82	12	93	102	617	1.6
30	36	14	12	5.2	------	123	71	12	82	264	427	1.6
31	44	------	12	5.2	------	71	------	8.0	------	230	264	------

NOTE.—Mean daily gage height, in feet, on days when stage was beyond limits of rating curve as follows: June 19, 10.06; June 21, 6.70; June 22, 8.43. No gage-height record Mar. 1–4; discharge interpolated.

Monthly discharge of Clear Fork of Brazos River at Crystal Falls, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,850	36	394	24,200
November	550	12	51.0	3,030
December	29	5.2	11.3	695
January	62	3.6	9.38	577
February	5.2	2.0	3.40	189
March	762	.0	96.4	5,930
April	2,600	22	480	28,600
May	1,390	8.0	295	18,100
June		5.2		
July	1,390	22	198	12,200
August	617	2.0	125	7,680
September	1,310	1.6	177	10,500

NORTH BOSQUE RIVER NEAR CLIFTON, TEX.

LOCATION.—One-fourth mile above Gulf, Colorado & Santa Fe Railway bridge, 1⅜ miles northwest of Clifton, Bosque County, and 2 miles below confluence with Meridian Creek.

DRAINAGE AREA.—974 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 4, 1923, to September 30, 1926.

GAGE.—Staff gage attached to trees on right bank; read by Belinda Swenson.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 1 mile below and one-fifth mile above station. Bed and banks composed of sand and earth; permanent. Banks slightly wooded and subject to overflow at a stage of 17 feet. Two channels above gage height 17 feet and three above 20 feet. Concrete dam 10 feet high, one-third mile below gage, is control to stage of 15 feet. Above this stage control is probably river channel; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn on basis of gage readings, 7.08 feet at 5.30 a. m. April 10 (discharge, 8,090 second-feet); minimum stage, 0.58 foot at 5.54 p. m. October 12 (discharge, 0.60 second-foot).

1924–1926: Maximum stage, 9.65 feet at 7 a. m. April 26, 1924 (discharge, 12,100 second-feet); no flow June 25 and July 13–30, 1925.

DIVERSIONS.—Railroad pumps about 100,000 gallons a day above dam and below gage.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 2,000 second-feet and poorly defined between 2,000 and 16,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records for low stages, fair; for high stages, poor.

The following discharge measurements were made:

January 12: Gage height, 1.01 feet; discharge, 2.85 second-feet.

July 9: Gage height, 1.64 feet; discharge, 2.40 second-feet.

Daily discharge, in second-feet, of North Bosque River near Clifton, Tex., for high-water periods in the years ending September 30, 1924 and 1925

Date	Discharge	Date	Discharge	Date	Discharge
1924		1924		1925	
Dec. 13	3,290	Mar. 20	2,380	May 10	3,000
Mar. 13	3,610	Apr. 26	5,980		
Mar. 17	2,230				

NOTE.—Records for the above periods during 1924 not previously published because of lack of definitions of rating curve for high stage. Record for 1925 supersedes previous record.

Daily discharge, in second-feet, of North Bosque River near Clifton, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	6.0	4.0	6.0	14	2.7	28	71	304	22	14	3.9
2	6.0	3.4	4.0	8.0	13	2.6	24	64	102	16	12	3.6
3	4.0	3.4	3.9	8.0	12	2.7	24	71	52	14	10	3.3
4	3.6	3.2	2.6	8.0	10	7.4	21	57	224	11	9.0	3.2
5	3.4	3.7	3.3	7.4	10	17	19	52	1,460	10	8.0	2.6
6	3.4	251	3.4	6.8	8.0	28	19	577	251	9.0	8.0	2.7
7	3.2	1,560	3.7	6.0	8.0	17	76	380	86	8.0	6.0	641
8	2.9	684	3.7	4.0	8.0	12	31	300	52	84	6.0	68
9	2.9	128	3.4	4.0	8.0	11	346	955	34	286	5.0	28
10	2.3	54	1.8	4.3	8.0	33	5,260	2,230	26	292	5.0	17
11	.9	31	1.2	4.6	7.0	24	619	300	22	128	4.0	12
12	.6	24	1.2	5.0	6.0	17	238	168	17	98	4.0	22
13	.7	19	1.4	5.5	6.0	14	168	128	16	39	4.0	24
14	.8	13	1.0	6.0	6.0	12	128	111	14	117	4.0	14
15	74	10	.9	5.0	6.0	12	137	102	12	93	3.7	10
16	3,630	8.0	1.0	26	6.0	10	106	82	10	41	2.9	8.0
17	864	7.0	.7	162	5.0	11	86	71	9.0	26	2.2	6.0
18	118	6.0	.6	64	4.0	12	71	57	8.0	19	1.6	4.0
19	47	8.0	.8	31	5.0	10	57	176	316	14	1.5	4.0
20	26	9.0	1.3	22	6.0	30	47	395	261	12	1.2	3.7
21	17	8.0	2.2	238	4.0	1,430	1,430	142	82	18	1.1	3.4
22	14	6.0	3.2	106	3.4	141	1,230	79	71	775	1.0	4.0
23	11	5.0	3.7	60	3.4	49	312	64	79	232	1.0	5.0
24	17	6.0	3.7	54	3.2	31	1,290	49	52	312	.9	4.0
25	31	5.0	3.6	47	3.4	116	460	41	31	183	38	3.7
26	18	3.7	2.6	47	3.3	137	189	36	482	118	17	3.7
27	10	3.2	2.7	41	3.7	61	128	34	408	86	11	3.9
28	8.0	3.2	3.4	31	3.2	39	97	29	132	57	10	3.3
29	6.0	3.0	3.6	28	-------	31	79	24	57	39	7.0	3.0
30	10	3.4	3.3	24	-------	36	71	24	31	24	6.0	2.7
31	8.0	---------	4.0	19	-------	29	-------	330	---------	17	4.0	------

Monthly discharge of North Bosque River near Clifton, Tex., for the years ending September 30, 1924–1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923–24				
November 4–30	272	1.4	40.6	2,180
December	3,290	44	310	19,100
January	750	71	121	7,470
February	386	49	117	6,710
March	3,610	137	677	41,700
April	5,980	106	397	23,600
May	1,410	47	153	9,410
June	102	13	32.6	1,940
July	16	4.0	9.26	569
August	4.0	1.6	2.92	179
September	14	1.2	4.57	272
The period				113,000
1924–25				
October	4.0	1.4	2.80	172
November	173	2.9	18.7	1,110
December	12	3.9	6.19	381
January	10	3.9	6.64	408
February	21	3.6	6.33	352
March	5.0	2.4	3.61	222
April	3.3	.2	1.26	75
May	3,000	.6	180	11,100
June	133	.0	13.0	776
July	460	.0	15.5	952
August	643	.4	62.8	3,860
September	467	.1	37.2	2,210
The year	3,000	.0	29.8	21,600
1925–26				
October	3,630	.6	160	9,820
November	1,560	3.0	95.9	5,710
December	4.0	.6	2.58	158
January	238	4.0	35.1	2,160
February	14	3.2	6.56	364
March	1,430	2.6	76.9	4,730
April	5,260	19	426	25,400
May	2,230	24	232	14,300
June	1,460	8.0	157	9,320
July	775	8.0	103	6,350
August	38	.9	6.75	415
September	641	2.6	30.6	1,820
The year	5,260	.6	111	80,500

SOUTH BOSQUE RIVER NEAR SPEEGLEVILLE, TEX.

LOCATION.—At highway bridge half a mile below mouth of Hog Creek and 2 miles south of Speegleville, McLennan County.

DRAINAGE AREA.—388 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—March 24, 1924, to September 30, 1926.

GAGE.—Chain gage attached to upstream side of bridge; read by W. W. Comer.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 300 feet above and 750 feet below gage. Bed of sand and gravel; shifts. Right bank subject to overflow. Left bank lightly timbered and not subject to overflow. Control is gravel riffle 500 feet below gage; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 26.0 feet at 9 p. m. April 21 (discharge, about 38,400 second-feet); no flow October 3–12.

1924–1926: Maximum stage, that of April 21, 1926; no flow during several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 3,100 second-feet and extended above on the basis of one slope measurement made at a stage of 29.37 feet. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of South Bosque River near Speegleville, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 27	4.23	12.6	Jan. 12	4.27	18.3	Aug. 23	4.38	4.9
Nov. 24	4.52	42.9	July 10	4.77	62			

Daily discharge, in second-feet, of South Bosque River near Speegleville, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	7.0	34	20	187	44	390	576	470	64	10	6.1
2	.1	6.4	33	48	181	43	358	426	85	63	11	5.5
3	0	6.4	33	48	162	44	284	826	71	58	9.9	5.5
4	0	6.4	31	35	152	67	258	426	105	58	11	4.3
5	0	5.8	26	30	136	105	232	410	85	55	12	5.5
6	0	1,500	28	25	133	202	214	2,100	63	55	12	9.6
7	0	1,190	30	23	121	164	241	810	56	52	10	8.8
8	0	394	30	23	112	112	184	576	50	944	11	6.7
9	0	204	28	20	110	94	178	454	46	134	9.6	6.7
10	0	154	29	20	99	4,090	4,770	405	44	172	9.2	6.1
11	0	149	28	20	94	939	640	332	40	629	11	6.4
12	0	121	26	19	94	544	544	303	39	61	8.5	5.2
13	179	96	30	18	90	416	426	266	36	79	7.3	4.6
14	221	85	33	18	83	416	416	249	34	292	7.9	5.2
15	14	71	29	18	74	353	454	225	30	55	7.3	5.2
16	2,600	66	25	489	71	294	327	211	28	41	7.3	5.2
17	76	63	25	760	79	284	284	184	26	34	6.7	5.2
18	18	63	24	238	74	266	245	171	28	34	6.4	4.6
19	11	61	23	184	61	266	214	204	44	32	6.1	4.6
20	8.2	55	23	168	63	232	211	171	35	30	5.5	4.9
21	6.7	49	21	348	61	1,510	9,780	149	34	30	6.1	4.6
22	5.8	46	20	278	59	348	2,260	133	395	965	4.9	3.7
23	4.9	44	20	208	57	241	1,030	128	251	416	5.5	2.5
24	4.6	43	20	232	56	214	1,680	114	46	203	5.5	1.9
25	223	43	20	218	60	1,890	810	105	101	63	5.5	2.3
26	32	43	20	218	55	513	706	101	265	34	4.9	2.8
27	14	41	20	294	46	364	608	92	110	22	6.1	2.5
28	8.5	36	16	384	52	343	513	85	81	25	6.7	5.8
29	7.0	35	17	384	------	379	454	79	69	22	5.5	5.5
30	8.5	35	18	289	------	1,510	454	76	68	20	5.2	4.6
31	7.9	------	18	241	------	513	------	71	------	15	6.4	------

NOTE.—Discharge partly estimated or interpolated Feb. 21–23, June 5, 21, July 29, 31, Sept. 15 and 16.

Monthly discharge of South Bosque River near Speegleville, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,600	0.0	111	6,840
November	1,500	5.8	157	9,360
December	34	16	25.1	1,540
January	760	18	172	10,500
February	187	46	93.6	5,200
March	4,090	43	542	33,300
April	9,780	178	972	57,800
May	2,100	71	337	20,700
June	470	26	94.5	5,620
July	965	15	153	9,440
August	12	4.9	7.81	480
September	9.6	1.9	5.07	302
The year	9,780.	.0	223	161,000

LEON RIVER NEAR HAMILTON, TEX.

LOCATION.—At St. Louis Southwestern Railway bridge 300 feet above Hamilton-Hico highway bridge, 3 miles below mouth of Bear Creek, and 6 miles north of Hamilton, Hamilton County.

DRAINAGE AREA.—1,900 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—January 7, 1925, to September 30, 1926.

GAGE.—Chain gage attached to upstream guard rail of railroad bridge; read by J. T. Dehart.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for one-fourth mile above and below gage. Bed composed of sandy clay and loam with some débris lodged in it; fairly permanent. Banks of main channel covered with heavy growth of brush and light timber; subject to overflow at stage of 20 feet. Control is gravel and cobblestone riffle 1 mile below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 17.0 feet at 10 a. m. April 12 (discharge not determined); no flow October 3–15.

1925–1926: Maximum stage, that of April 12, 1926; no flow July 19 to August 2 and September 4–12, 1925.

DIVERSIONS.—None of importance.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Curve well defined below 1,640 second-feet but does not cover range of stage for the year. Gage read to hundredths once daily. Daily discharge determined by shifting control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

The following discharge measurements were made:

January 13, 1926: Gage height, 2.66 feet; discharge, 6.8 second-feet.

July 9, 1926: Gage height, 2.68 feet; discharge, 15.1 second-feet.

Daily discharge, in second-feet, of Leon River near Hamilton, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.7	3.3	11	19	3.6	7.8	136	39	35	86	5.0
2	.1	1.1	4.0	11	16	3.9	7.8	341	174	32	41	4.5
3	.0	1.4	3.8	11	13	4.3	41	549	264	25	29	4.5
4	.0	1.4	4.0	9.2	7.8	7.0	28	772	854	21	28	4.5
5	.0	1.4	4.0	10	6.2	7.0	23	1,340	678	18	24	4.5
6	.0	6.5	4.0	12	5.8	7.8	23	1,360	549	17	17	856
7	.0	574	4.5	12	5.2	7.8	7.8	697	524	17	10	280
8	.0	678	4.5	11	5.2	8.8	91	332	600	15	10	40
9	.0	847	4.5	10	5.2	8.8	92	221	375	15	10	68
10	.0	772	4.0	10	4.3	7.8	------	170	195	12	10	88
11	.0	295	5.0	8.3	3.9	6.2	------	398	111	69	10	79
12	.0	147	6.2	6.0	3.9	5.2	------	348	92	464	10	79
13	.0	71	7.8	7.0	3.6	4.8	------	158	92	244	9.2	24
14	.0	67	7.8	7.0	3.6	4.3	1,810	106	63	182	8.3	24
15	.0	44	7.8	6.2	3.6	4.3	722	79	92	221	8.3	11
16	1,210	36	7.8	7.8	3.6	4.3	369	63	136	195	6.5	7.0
17	1,080	7.8	12	14	3.6	4.3	249	57	126	147	5.5	6.2
18	961	5.2	12	140	3.6	4.3	208	53	182	82	5.5	5.2
19	678	4.3	12	195	3.4	4.8	208	118	208	45	5.5	4.8
20	296	2.9	12	104	3.4	4.8	296	136	469	33	5.5	2.9
21	154	2.4	12	59	3.4	5.2	659	410	706	29	5.0	2.9
22	88	2.9	12	92	3.6	6.2	1,260	652	923	151	5.0	2.7
23	50	2.9	12	111	3.6	6.2	1,000	626	524	972	5.0	2.4
24	14	2.8	12	158	3.6	7.0	1,760	338	176	1,220	17.	2.4
25	5.5	3.5	13	147	3.4	8.8	1,480	195	136	1,160	8.3	2.4
26	3.9	3.5	13	136	3.4	43	1,050	136	930	988	6.0	1.9
27	2.5	3.5	12	75	3.4	16	569	84	344	600	35	1.9
28	2.5	3.3	12	63	3.4	7.8	296	67	147	350	55	1.9
29	.8	3.0	11	45	------	7.0	182	60	61	221	13	1.1
30	.5	3.3	11	45	------	7.0	158	55	44	296	9.2	1.1
31	.2	------	11	41	------	7.0	------	44	------	237	5.5	------

NOTE.—Gage height in feet on days when discharge was beyond limits of rating curve as follows: Apr. 10 10.40; Apr. 11, 14.90; Apr. 12, 16.65; Apr. 13, 14.50.

Monthly discharge of Leon River near Hamilton, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,210	0.0	147	9,020
November	847	.7	120	7,130
December	13	3.3	8.45	520
January	195	6.0	50.8	3,120
February	19	3.4	5.42	301
March	43	3.6	7.59	467
May	1,360	44	326	20,000
June	930	39	327	19,500
July	1,220	12	262	16,100
August	86	5.0	16.2	998
September	856	1.1	54.0	3,210

LEON RIVER NEAR BELTON, TEX.

LOCATION.—100 feet below bridge of Southwestern Traction Co., one-fourth mile above Temple-Belton highway bridge, 2 miles east of Belton, Bell County, and 2 miles above mouth of Nolan Creek.

DRAINAGE AREA.—3,550 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1926.

GAGE.—Vertical staff on left bank attached to pump intake masonry; read by W. I. Massey.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of silt and mud and overlying decomposed rock. Banks of earth, fringed with trees at low water's edge and subject to overflow at extremely high stages. Low-water control is concrete and masonry dam one-fourth mile below gage; permanent. High-water control is section of channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 12.50 feet at 3 a. m. April 22 (discharge, 20,100 second-feet); minimum stage, 2.39 feet from 8 a. m. October 10 to 8 a. m. October 12 (discharge, 4.6 second-feet).

1924–1926: Maximum stage, that of April 22, 1926; no flow for several periods in 1925.

DIVERSIONS.—Several small pumping plants above; amount diverted not known.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 4,500 second-feet, poorly defined from 4,500 to 16,000 second-feet, and extended above. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Leon River near Belton, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 26	3.72	841	Apr. 12	6.31	3,790	Apr. 15	6.30	4,280
Nov. 6	10.83	15,600	Do	6.33	4,270	Do	6.40	4,320
Apr. 10	9.90	14,000	Do	6.32	4,310	Apr. 16	6.44	4,290
Do	9.76	11,400	Apr. 13	6.20	4,140	Apr. 18	4.69	1,860
Apr. 11	6.05	3,900	Do	6.21	4,140	July 13	2.94	218

Daily discharge, in second-feet, of Leon River near Belton, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	35	53	29	299	44	845	1,160	366	343	343	20
2	29	29	47	29	222	44	675	1,070	235	264	278	17
3	26	29	44	106	189	44	631	1,120	256	215	235	17
4	20	29	41	112	176	59	544	1,020	235	189	182	17
5	14	177	35	106	163	92	402	890	412	152	140	17
6	11	12,900	35	87	157	157	666	4,340	605	112	106	16
7	8.6	4,130	35	78	157	292	570	3,650	845	97	87	16
8	6.8	2,030	35	64	152	285	527	2,700	845	87	78	14
9	5.0	1,070	35	53	152	271	485	2,290	631	208	68	14
10	4.6	494	35	47	152	6,420	9,980	1,560	755	570	59	415
11	4.6	692	35	41	146	2,610	3,840	1,260	755	890	50	140
12	5.0	800	35	29	140	1,490	4,230	980	552	396	35	73
13	24	710	35	26	140	800	4,030	800	358	196	32	47
14	494	420	35	23	134	605	4,030	890	278	752	29	35
15	129	264	41	23	117	527	4,230	935	215	800	28	68
16	4,830	196	41	519	92	477	4,430	710	176	666	28	68
17	1,360	152	41	1,660	68	436	4,030	587	152	373	26	56
18	1,360	140	41	605	59	436	1,790	535	117	278	26	38
19	692	129	41	420	59	420	1,020	535	117	299	24	28
20	1,260	106	41	249	56	381	890	535	189	228	23	26
21	800	97	41	321	56	710	5,440	510	242	163	22	23
22	605	87	41	820	53	605	11,900	485	1,940	1,370	18	20
23	336	78	41	845	53	436	6,970	460	2,560	2,130	17	17
24	176	68	41	420	50	366	8,410	570	1,160	3,180	17	16
25	552	64	41	336	50	2,040	5,770	800	935	1,120	17	14
26	666	59	41	552	47	1,390	2,700	890	980	1,260	16	13
27	518	59	38	845	44	1,070	3,000	675	890	1,210	16	13
28	182	59	35	469	44	710	3,000	477	552	1,160	14	13
29	68	59	32	428	------	640	2,160	405	890	1,120	14	12
30	53	56	32	389	------	2,230	1,460	343	605	890	14	12
31	47	------	29	351	------	1,260	------	292	------	452	23	------

Monthly discharge of Leon River near Belton, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,830	4.6	467	28,700
November	12,900	29	841	50,000
December	53	29	38.5	2,370
January	1,660	23	325	20,000
February	299	44	115	6,400
March	6,420	44	882	54,200
April	11,900	402	3,290	196,000
May	4,340	292	1,080	66,400
June	2,560	117	628	37,400
July	3,180	87	683	42,000
August	343	14	66.6	4,100
September	415	12	43.2	2,570
The year	12,900	4.6	704	510,000

LITTLE RIVER NEAR LITTLE RIVER, TEX.

LOCATION.—At Missouri-Kansas-Texas Railroad bridge 150 feet west of Bartlett-Temple highway, 2 miles south of Little River, Bell County, and 4½ miles below confluence of Leon and Lampasas Rivers.

DRAINAGE AREA.—5,250 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 5, 1923, to September 30, 1926.

GAGE.—Chain gage attached to downstream guardrail of middle span of bridge; read by A. J. Lanham.

DISCHARGE MEASUREMENTS.—Made from railroad bridge, from highway bridge, or by wading.

CHANNEL AND CONTROL.—Bed composed of mud and silt, overlying decomposed rock; shifts. Banks covered with brush and light timber; subject to overflow. Channel straight for 250 feet above and 150 feet below gage. Control is small brushy island 150 feet below gage; shifts. This island is submerged at high stages, when control is probably section of channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 41.3 feet at 8 a. m. April 22 (discharge, 24,100 second-feet); minimum stage, 3.60 feet October 8 (discharge, 22 second-feet).

1924–1926: Maximum stage recorded, that of April 22, 1926; minimum stage, 3.26 feet at 2.50 p. m. August 12, 1925 (discharge, 8.9 second-feet).

DIVERSIONS.—Several small diversions above station; amount not known.

REGULATION.—Dam of Temple waterworks on Leon River may regulate flow at extremely low stages.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 18,000 second-feet and extended above. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records poor.

Discharge measurements of Little River near Little River, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	32.60	8,480	Apr. 12	25.40	6,150	Apr. 18	14.84	3,330
Do	30.00	6,510	Apr. 13	21.97	5,120	Apr. 19	11.85	2,090
Oct. 28	6.11	474	Apr. 14	21.18	4,870	Do	11.41	1,870
Nov. 7	38.61	[a] 17,600	Apr. 15	21.38	5,270	Apr. 20	10.65	1,700
Do	37.50	15,100	Apr. 16	22.15	5,450	July 13	5.90	466
Nov. 23	4.65	179	Apr. 18	16.21	3,520			
Apr. 11	35.52	12,200	Do	15.42	3,370			

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.

Daily discharge, in second-feet, of Little River near Little River, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	136	128	73	596	160	2,110	2,380	571	521	646	121
2	67	114	128	83	571	160	1,690	2,500	646	406	452	128
3	60	121	128	169	475	160	1,370	3,100	546	340	452	136
4	54	102	128	215	429	152	1,200	2,530	521	297	362	144
5	39	96	108	225	406	160	1,090	2,140	1,340	255	297	136
6	29	11,000	102	160	362	187	1,090	4,210	1,360	235	255	128
7	26	18,200	96	144	340	362	1,060	6,250	836	225	225	144
8	22	6,740	96	144	340	546	1,060	4,660	1,120	225	196	96
9	24	2,060	96	136	340	671	1,230	3,910	920	206	187	99
10	36	976	96	114	297	4,700	10,200	4,450	836	1,040	178	724
11	30	920	96	102	297	9,480	16,100	2,920	780	2,320	169	340
12	25	836	96	90	276	3,790	6,300	2,230	864	821	160	225
13	44	696	96	102	255	1,690	5,140	1,750	646	406	152	160
14	54	646	102	102	266	1,260	4,870	1,660	498	521	144	136
15	297	596	102	102	266	1,090	4,900	1,750	452	746	144	121
16	3,450	475	96	116	255	920	5,080	1,480	571	976	144	114
17	8,150	452	102	4,440	245	920	4,870	1,280	362	596	128	102
18	2,790	429	96	1,570	235	976	3,400	1,140	340	429	121	128
19	948	362	90	1,090	235	976	1,960	1,170	318	362	121	121
20	1,090	266	90	696	225	1,030	1,690	1,140	297	384	108	114
21	1,420	245	88	498	215	976	7,520	1,120	452	318	102	108
22	864	225	85	780	206	920	21,700	1,030	1,380	2,280	102	90
23	475	206	85	1,280	206	864	9,660	948	3,790	8,610	96	78
24	452	187	83	1,280	196	808	8,980	892	2,680	4,830	96	73
25	1,050	178	83	1,120	187	2,120	7,810	1,140	1,200	2,560	96	71
26	1,690	169	80	752	178	3,820	5,410	1,230	1,140	1,720	96	68
27	948	152	78	1,140	169	2,230	4,450	1,170	976	1,510	96	65
28	498	144	73	948	169	1,780	4,360	892	808	1,370	102	63
29	406	136	68	696	------	1,570	3,730	780	752	1,260	108	59
30	266	136	66	546	------	2,410	3,040	671	976	1,120	114	57
31	178	------	71	596	------	3,490	------	596	------	752	114	------

Monthly discharge of Little River near Little River, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	8,150	22	824	50,700
November	18,200	96	1,570	93,200
December	128	66	94.6	5,820
January	4,440	73	629	38,700
February	596	169	294	16,300
March	9,480	152	1,630	99,900
April	21,700	1,060	5,100	304,000
May	6,250	596	2,040	125,000
June	3,790	297	933	55,500
July	8,610	206	1,210	74,700
August	646	96	186	11,400
September	724	57	138	8,230
The year	21,700	22	1,220	883,000

LITTLE RIVER AT CAMERON, TEX.

LOCATION.—At new highway bridge at Cameron-Rockdale highway crossing, one-fourth mile below old McCowan Bridge, three-fourths mile above Gulf, Colorado & Santa Fe Railway bridge, 2 miles southeast of Cameron, and 8 miles below mouth of San Gabriel River.

DRAINAGE AREA.—7,030 square miles (measured on topographic maps, base maps of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—November 1, 1916, to September 30, 1926.

GAGE.—Chain gage attached to upstream handrail of bridge; read by Tracy Hobson. Prior to April 9 gage was one-fourth mile upstream and at a different datum.

DISCHARGE MEASUREMENTS.—Made from highway bridge, from railroad bridge, or by wading.

CHANNEL AND CONTROL.—Channel straight for 400 feet above and 200 feet below gage. Bed of sand, gravel, and clay; fairly permanent. Right bank partly wooded and not subject to overflow; left bank of clay, sand, and loam, slightly wooded, and subject to overflow above gage height 30 feet. During extremely high stages on Brazos River backwater may reach gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 36.98 feet at 12.35 p. m. April 22 (discharge, 71,300 second-feet); minimum stage, 3.30 feet from 8.10 a. m. to 5 p. m. October 8 and at 6.10 p. m. October 10 (discharge, 77 second-feet).

1917–1926: Maximum stage recorded, 49.5 feet at 2.30 p. m. September 10, 1921 (discharge, 647,000 second-feet, determined by slope method); minimum discharge, 2.6 second-feet at 7 a. m. September 3, 5, and 7, 1918.

DIVERSIONS.—Numerous small diversions are made for irrigation and municipal uses, but such diversions have little effect on flow at station, except during extremely low stages. Records of the Board of Water Engineers for State of Texas show that about 2,500 acres has been declared irrigated above station. No diversions of importance below station. During time of low flow water pumped by Cameron Power & Light Co. will affect flow at this station.

REGULATION.—Slight effect by pumping for city of Cameron.

ACCURACY.—Stage-discharge relation not permanent. Two rating curves used, which are well defined for all stages. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Little River at Cameron, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 18	25.71	10,900	Apr. 22	36.85	[d] 67,900	Apr. 27	25.82	9,590
Oct. 24	6.14	898	Apr. 23	35.31	[b] 41,200	Apr. 29	18.21	5,930
Nov. 7	32.33	[a] 19,800	Apr. 24	34.60	[b] 28,700	Do	18.10	5,830
Nov. 8	32.62	[b] 18,800	Apr. 25	34.05	[b] 20,600	Apr. 30	17.48	5,400
Nov. 24	4.77	414	Apr. 26	32.80	[b] 15,000	July 13	8.23	1,400
Apr. 9	[c] 9.25	1,950	Apr. 27	27.30	[b] 9,750	July 14	7.36	1,160

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities and measurement partly estimated.
[b] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.
[c] Gage at new location and to different datum. New datum 1.56 lower than previous datum at McCowan Bridge. New gage reads 9.25 feet when the old gage reads 8.72 feet.
[d] Measurement by float method.

Daily discharge, in second-feet, of Little River at Cameron, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	251	444	332	241	1,300	450	7,040	4,960	1,310	1,270	1,200	196
2	304	304	332	332	1,180	419	3,920	6,330	2,270	886	920	238
3	202	264	318	1,680	1,030	419	2,750	7,930	1,690	694	694	238
4	170	304	318	1,060	953	450	2,320	7,980	1,370	610	580	227
5	138	4,340	304	515	878	450	2,070	5,050	3,560	526	526	216
6	112	11,400	297	419	841	515	1,980	4,350	3,030	475	451	206
7	90	16,100	290	389	804	586	2,110	7,310	1,730	475	403	206
8	77	18,400	290	346	767	656	2,440	15,900	1,560	427	369	216
9	84	16,600	277	332	767	730	2,020	15,900	1,640	427	335	216
10	93	8,200	277	311	730	3,730	3,460	8,060	1,520	403	335	206
11	172	2,530	277	290	693	12,700	8,670	5,010	1,640	379	291	196
12	251	1,540	277	290	656	13,100	10,800	5,100	1,480	2,110	291	664
13	2,660	1,460	277	277	656	8,560	12,700	4,350	1,310	2,150	291	379
14	10,100	1,420	277	277	638	4,170	8,510	3,210	1,070	1,310	280	291
15	10,200	1,170	277	264	620	2,320	6,630	2,950	886	1,070	280	248
16	5,720	915	277	290	584	1,900	6,190	2,900	784	754	280	216
17	9,430	767	277	6,970	584	1,860	6,190	2,690	886	1,350	258	216
18	10,400	656	277	17,200	584	1,980	6,140	2,400	754	580	248	227
19	6,660	620	277	8,330	549	2,150	6,520	2,400	664	580	238	227
20	2,190	549	270	2,230	549	2,190	3,830	2,990	649	607	227	216
21	1,380	515	264	1,980	532	6,760	6,850	2,440	634	920	227	206
22	1,420	467	264	2,750	515	6,190	54,400	2,230	634	2,020	212	185
23	1,030	419	251	1,980	482	3,100	47,000	1,980	1,820	4,540	196	164
24	878	419	251	1,860	482	2,440	31,700	1,810	4,210	7,710	216	154
25	953	389	244	1,860	482	2,320	22,300	1,770	4,040	7,400	216	146
26	1,260	389	238	1,700	482	3,420	15,200	1,900	2,060	4,300	196	143
27	2,070	389	232	1,700	482	5,770	10,300	2,020	1,560	2,270	196	140
28	1,420	374	226	1,620	466	3,960	7,450	1,940	1,430	1,900	206	140
29	841	360	226	1,820	-------	2,620	6,040	1,690	1,270	1,770	216	140
30	549	346	214	1,500	-------	5,420	5,430	1,480	992	1,600	227	140
31	584	-------	214	1,400	-------	9,040	-------	1,310	-------	1,480	216	------

NOTE.—Discharge interpolated or partly estimated Oct. 4, 11, 25, Nov. 1, 15, 22, 29, Dec. 6, 13, 20, 25, 27, Jan. 10, 31, Feb. 7, 14, 21, 28, Mar. 7, Apr. 28, June 20, July 4, 11–23, Aug. 1, 8, 15, 22, 29, Sept. 5, 26.

Monthly discharge of Little River at Cameron, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	10,400	77	2,310	142,000
November	18,400	264	3,070	183,000
December	332	214	272	16,700
January	17,200	214	2,010	123,000
February	1,300	466	689	38,300
March	13,100	419	3,560	219,000
April	54,400	1,980	10,400	621,000
May	15,900	1,310	4,460	274,000
June	4,210	634	1,620	96,100
July	7,710	379	1,710	105,000
August	1,200	196	349	21,500
September	664	140	220	13,100
The year	54,400	77	2,560	1,850,000

LAMPASAS RIVER AT YOUNGSPORT, TEX.

LOCATION.—Half a mile northeast of Youngsport, Bell County, and 2½ miles below mouth of Rocky Creek.

DRAINAGE AREA.—1,240 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—February 5, 1924, to September 30, 1926.

GAGE.—Combined vertical and inclined staff on left bank 500 feet above steel highway bridge; read by Joel Ray or L. J. Henderson.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for half a mile above and below station. Bed of rock; permanent. Right bank of rock, overlain by clay, covered with light timber and not subject to overflow. Left bank covered with light timber and subject to overflow at extremely high stages. Control for low and medium stages is rock shoal 50 feet below gage; permanent. High-stage control is indefinite.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 22.0 feet at 9 a. m. November 6 (discharge not determined); minimum stage, 2.68 feet October 9–10 (discharge, 4.8 second-feet).

1924–1926: Maximum stage recorded, that of November 6, 1926; no flow July 17 to August 18, 1925.

DIVERSIONS.—Small amount diverted for municipal uses.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 2,000 second-feet and poorly defined from 2,000 to 6,200 second-feet but does not cover range of stage for the year. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

The following discharge measurements were made:

October 26: Gage height, 3.50 feet; discharge, 236 second-feet.

November 6: Gage height, 8.37 feet; discharge, 6,100 second-feet.

July 12: Gage height, 3.10 feet; discharge, 73 second-feet.

Daily discharge, in second-feet, of Lampasas River at Youngsport, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	24	59	49	163	70	560	617	185	85	70	6.2
2	13	21	59	54	145	70	532	1,690	154	78	57	6.2
3	9.2	21	59	88	137	70	476	838	130	67	52	6.2
4	8.0	17	54	88	137	70	444	1,030	1,110	65	47	5.6
5	6.2	19	54	88	134	122	427	739	737	62	42	9.2
6	6.2	------	54	81	126	137	417	1,860	277	59	40	49
7	5.6	1,730	49	75	122	154	503	1,030	171	54	38	45
8	5.0	800	49	65	122	199	476	739	141	52	36	38
9	4.8	268	49	59	115	163	444	678	208	534	34	31
10	4.8	180	45	54	115	------	------	1,740	199	134	29	22
11	5.0	208	45	54	115	582	1,540	1,120	185	122	22	17
12	5.0	158	45	54	111	532	916	737	163	81	19	17
13	26	130	49	54	107	449	770	560	163	57	16	17
14	1,050	118	49	54	104	417	770	449	376	54	13	17
15	859	101	49	49	101	406	877	503	336	282	10	16
16	------	88	49	62	101	373	800	427	232	118	9.8	14
17	497	81	49	454	101	320	708	390	163	94	9.2	14
18	163	75	49	213	97	310	617	363	199	65	8.6	14
19	81	70	49	158	94	310	532	363	154	57	8.6	14
20	47	65	49	145	88	268	663	476	130	52	8.0	14
21	38	65	49	163	85	310	------	352	122	40	7.4	14
22	29	65	49	300	78	299	2,690	299	2,120	------	7.4	14
23	22	59	49	208	75	258	1,460	268	807	2,240	7.4	14
24	21	59	49	208	75	258	1,460	247	292	1,390	7.4	13
25	1,020	54	49	208	75	1,860	1,360	232	154	247	7.4	11
26	301	54	49	189	70	838	1,110	208	154	232	7.4	11
27	94	54	49	189	70	532	877	199	130	154	6.2	11
28	45	54	49	189	70	444	739	171	115	115	6.2	10
29	36	49	49	189	------	476	648	154	101	81	27	9.8
30	29	49	49	189	------	1,180	648	141	91	59	25	9.8
31	27	------	49	171	------	739	------	208	------	101	6.8	------

NOTE.—Gage height in feet for days when discharge was beyond limits of rating curve: Oct. 16, 8.92; Nov. 6, 12.79; March 10, 6.66; Apr. 10, 11.22; Apr. 21, 8.28; July 22, 8.14.

Monthly discharge of Lampasas River at Youngsport, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October		4.8		
November		17		
December	59	45	50.1	3,080
January	454	49	136	8,330
February	163	70	105	5,820
March		70		
April		417		
May	1,860	141	607	37,300
June	2,120	91	317	18,800
July		40		
August	70	6.2	22.1	1,360
September	49	5.6	16.3	972

SAN GABRIEL RIVER AT CIRCLEVILLE, TEX.

LOCATION.—At bridge on Meridian Highway between Taylor and Granger, half a mile southeast of Circleville, Williamson County, half a mile above Missouri-Kansas-Texas Railroad bridge, and 7 miles above mouth of Williamson Creek.

DRAINAGE AREA.—602 square miles (measured on topographic maps and base-map of Texas).

RECORDS AVAILABLE.—February 1, 1924, to September 30, 1926.

GAGE.—Chain gage attached to upstream rail of bridge; read by Van P. Slagle.

DISCHARGE MEASUREMENTS.—Made from highway bridge, from railroad bridge, or by wading.

CHANNEL AND CONTROL.—Bed of mud and gravel; shifting. One channel at all stages. Channel curved above and below gage. Banks covered with brush and light timber; subject to overflow at extremely high stages, at which the highway bridge is completely surrounded by water. Control formed by gravel riffle 100 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 28.70 feet at 3.45 p. m. April 21 (discharge not determined); minimum discharge, 4.0 second-feet October 7 and 8.

1924–1926: Maximum stage recorded, that of April 21, 1926; no flow September 5, 6, 8, and 11, 1924.

DIVERSIONS.—Several small diversions above gage for municipal use; amount not known.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 1,100 second-feet and poorly defined from 1,100 to 5,500 second-feet but does not cover the range of stage for the year. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records poor.

Discharge measurements of San Gabriel River at Circleville, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	14.41	5,370	Oct. 28	2.66	45.4	Mar. 30	8.84	2,210
Do	12.30	3,530	Nov. 23	2.90	[a] 77	July 14	3.20	137

[a] Gage height probably too low, owing to action of wind on chain gage.

Daily discharge, in second-feet, of San Gabriel River at Circleville, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	37	61	89	265	143	420	1,530	240	98	170	44
2	38	32	59	108	252	138	365	1,950	228	94	100	37
3	17	34	58	121	240	138	340	810	228	91	72	34
4	9.4	34	52	94	240	163	328	630	340	89	65	34
5	6.0	88	49	74	228	170	315	480	216	89	55	34
6	5.0	------	47	61	228	204	302	785	204	89	51	37
7	4.0	1,110	47	50	228	163	302	------	193	85	49	52
8	4.0	425	47	50	216	156	278	1,870	182	79	49	41
9	82	252	46	47	216	152	278	855	182	76	49	34
10	27	228	47	47	193	------	1,090	690	182	191	47	32
11	12	193	49	45	204	570	500	570	165	723	46	29
12	460	165	48	41	204	390	340	540	170	161	43	27
13	------	145	47	45	204	328	302	510	158	204	39	25
14	792	123	47	44	193	290	302	480	154	134	38	25
15	1,270	106	49	44	182	290	340	450	149	91	39	21
16	------	98	47	------	182	290	302	420	140	78	39	22
17	540	94	47	------	182	302	278	390	140	70	38	22
18	114	94	47	480	182	328	265	390	145	69	37	22
19	69	94	45	340	170	302	252	660	132	65	37	22
20	51	85	45	315	170	302	396	420	129	65	34	20
21	41	79	45	420	170	315	------	390	129	65	37	19
22	35	74	44	365	165	290	2,430	340	754	890	44	17
23	32	76	44	315	165	265	1,200	328	512	582	37	17
24	39	72	46	315	156	240	1,910	315	193	284	34	17
25	311	74	44	340	152	1,420	855	302	149	132	32	17
26	159	74	43	390	147	590	660	290	123	98	29	17
27	69	69	40	365	145	340	600	278	114	83	45	17
28	49	69	40	328	143	328	540	265	112	79	41	20
29	49	64	38	315	------	328	510	252	104	70	39	22
30	49	61	38	302	------	1,570	510	252	98	61	38	22
31	37	------	40	290	------	570	------	252	------	78	39	------

NOTE.—Mean daily gage height, in feet, on days when stage during some part of the day was above 15 feet and discharge not determined: Oct. 13, 8.93; Oct. 16, 12.10; Nov. 6, 12.65; Jan. 16, 8.58; Jan. 17, 8.70 Mar. 10, 9.36; Apr. 21, 16.47; May 7, 17.44. Discharge interpolated Dec. 12, 25, Feb. 12, and July 2.

Monthly discharge of San Gabriel River at Circleville, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	------	4	------	------
November	------	32	------	------
December	61	38	46.6	2,870
January	------	41	------	------
February	265	143	194	10,800
March	------	138	------	------
April	------	252	------	------
May	------	252	------	------
June	754	98	199	11,800
July	890	61	163	10,000
August	170	29	48.8	3,000
September	52	17	26.6	1,580

BRUSHY CREEK AT COUPLAND, TEX.

LOCATION.—At Missouri-Kansas-Texas Railroad bridge half a mile north of Coupland, Williamson County, 8 miles south of Taylor, and 32 miles above confluence with San Gabriel River.

DRAINAGE AREA.—198 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—May 27, 1924, to September 30, 1926.

GAGE.—Chain gage attached to downstream guardrail of bridge; read by Charles Rector.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of clay and silt; brush and willows scattered throughout; shifting. Channel curved above and below station. Banks slope gently, are covered with light timber and brush, and are subject to overflow at extremely high stages. Overflow section is cultivated land. Control is indefinite and will be affected by growth of brush and timber.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 23.2 feet at 6 p. m. October 13 (discharge not determined); minimum stage, 1.80 feet October 10–11 (discharge, 0.60 second-feet).

1924–1926; Maximum stage recorded, that of October 13, 1925, no flow June 29 to September 11, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 1,200 second-feet and extended above on the basis of area-velocity curves; extension may be subject to considerable error. Gage read to tenths but not regularly. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of Brushy Creek at Coupland, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 28	3.42	8.5	Apr. 8	6.24	73
Jan. 11	4.00	14.5	July 14	5.92	53

Daily discharge, in second-feet, of Brushy Creek at Coupland, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0.9	7.6	21	10	70	23	105	124	20	
2	1.2	7.6	17	9.5	70	23	94	124	26	
3	1.0	8.5	17	8.5	62	23	86	134	25	
4	.9	17	16	9.0	46		84	124	30	
5	.8	56	16	9.5	14		83	134	26	
6	.8	876	16	6.0	10		82	119	26	
7	.8	1,240	16	6.7	22		86	173	58	27
8	.8	391	16	7.1	23		74	124	56	
9	.7	129	16	7.6	25		70	124	54	
10	.6	119	16	12	28			70	50	
11	.6	114	15	14	28			54	50	
12	14	109	15	13	25			46	50	
13	1,540	94	15	14	25			40	46	
14	494	50	15	14	19		78	34	44	
15	447	34	15	14	19	86	74	34	43	27
16	1,230	31	14	68	19	78	70	88	40	26
17	304	31	13	928	15	134	58	86	37	19
18	43	31	13	236	14	144	46	62	34	20
19	24	28	13	114	13	94	34	66	34	19
20	17	28	14	138	12	97	54	62	34	21
21	13	22	14	379	15	101		66	34	23
22	9.5	22	14	86	18	104		86	78	83
23	14	22	13	86	22	99		66	86	104
24	130	21	14	94	25	94		62	86	35
25	25	21	12	109	23			54	86	21
26	14	22	12	134	18		188	46	73	19
27	8.0	22	12	114	20		166	54	31	20
28	8.0	22	12	114	21		145	62	28	21
29	7.6	24	10	86			124	54	27	21
30	11	24	11	86		129	119	28	27	22
31	9.0		12	74		127		26		21

NOTE.—No record on days for which discharge is not given. Discharge interpolated Feb. 18, 19, 21–23, 27–28, Mar. 2, 20–21, 31, Apr. 1, 4–5, 17–18, 27–28. Braced figure shows estimated mean discharge for period included.

Monthly discharge of Brushy Creek at Coupland, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,540	0.6	141	8,670
November	1,240	7.6	121	7,190
December	21	10	14.4	883
January	928	6.0	96.8	5,950
February	70	10.0	25.8	1,430
May	134	26	78.3	4,810
June	86	20	44.6	2,660
July			29.0	1,790

YEGUA CREEK NEAR SOMERVILLE, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge a quarter of a mile above Somerville-Brenham highway bridge, 2 miles south of Somerville, Burleson County, and 5 miles above mouth of Davidson Creek.

DRAINAGE AREA.—990 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—May 24, 1924, to September 30, 1926.

GAGE.—Chain gage attached to upstream side of bridge; read by B. H. Herring or August Dietrich. Zero of gage is base of rail; all gage readings are minus.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Bed of sand and silt; shifts. Channel curved. Banks of sand and silt, covered with light timber and brush, with considerable swamp land above and below gage. One channel above bridge and several below at all stages. Control is indefinite and formed by natural channel below gage; brush and light timber scattered throughout channel; subject to change.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, −18.02 feet at 2 p. m. April 22 (discharge, 29,500 second-feet); minimum stage, −33.05 feet at 8 a. m. October 1 (discharge, 0.10 second-foot).

1924–1926: Maximum stage recorded, that of April 22, 1926; no flow during several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 1,000 second-feet, well defined from 1,000 to 18,000 second-feet, and extended above. Gage read to hundredths but not regularly. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Yegua Creek near Somerville, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	−21.25	16,700	Oct. 17	−22.41	12,000	Oct. 19	−24.99	5,240
Oct. 15	−22.29	12,400	Oct. 18	−24.35	6,550	Oct. 22	−28.17	972
Oct. 16	−21.28	16,100	Do	−24.59	6,060	Apr. 11	−27.42	1,750

Daily discharge, in second-feet, of Yegua Creek near Somerville, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	2,180	18	12	122	10	3,210	595	17	9.2	3.3	1.0
2	12	834	18	83	98	10	2,410	808	16	5.8	3.3	.9
3	40	395	8.4	1,290	60	9.2	1,690	765	16	4.9	2.6	2.6
4	29	395	8.4	1,440	39	10	1,690	850	16	4.1	1.9	2.2
5	17	1,170	14	786	32	14	892	935	38	1.3	1.9	1.6
6	4.1	3,480	12	435	29	21	850	1,940	69	3.0	2.2	3.6
7	2.6	4,490	12	315	27	24	1,100	1,690	40	3.0	1.9	3.2
8	2.3	4,310	11	252	24	25	808	1,810	23	2.2	2.6	2.6
9	2.0	2,650	11	152	22	25	1,800	2,800	14	2.7	2.4	2.1
10	2.3	1,930	11	54	19	1,050	1,930	3,490	12	2.7	2.4	1.6
11	2.0	1,590	11	39	18	2,650	1,590	3,220	16	3.4	2.6	1.2
12	2.3	1,290	11	27	18	2,930	1,930	1,600	12	2.2	2.2	1.0
13	586	786	11	23	18	2,180	1,590	975	15	2.7	2.2	.9
14	11,500	405	12	21	17	904	1,490	455	21	5.8	2.2	.9
15	13,600	215	12	18	16	1,440	1,190	252	20	4.5	2.8	.7
16	16,300	128	15	17	16	1,060	638	170	14	3.7	6.4	.7
17	12,600	56	16	478	16	680	395	115	11	2.7	9.4	.5
18	6,450	59	18	722	16	808	315	115	9.4	2.7	4.8	.5
19	5,050	2,190	18	510	16	1,060	240	120	7.4	2.4	2.6	.7
20	3,220	2,080	18	395	16	978	335	199	7.3	2.4	1.7	.6
21	1,930	1,180	16	686	14	1,100	415	265	7.2	2.2	1.5	.6
22	1,100	420	14	1,105	13	4,670	21,900	265	13	2.7	1.5	.6
23	578	190	14	1,290	13	6,050	19,100	265	17	3.2	1.3	.5
24	257	115	12	892	12	4,670	8,790	240	78	99	1.1	.2
25	2,720	52	12	595	12	3,810	4,310	130	32	74	1.3	.4
26	3,070	38	11	722	12	4,310	2,210	45	16	18	1.3	.4
27	2,060	23	12	535	11	3,210	1,490	11	14	7.5	1.5	.4
28	759	25	11	395	11	1,880	1,190	27	39	5.7	1.3	.2
29	348	21	10	375	-------	1,160	967	24	32	4.4	1.2	.4
30	6,280	19	8.4	252	-------	3,410	475	23	22	4.0	1.0	.3
31	8,180	-------	8.4	202	-------	4,490	--------	20	-------	3.3	1.2	------

NOTE.—Discharge interpolated Nov. 26.

Monthly discharge of Yegua Creek near Somerville, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16,300	0.2	3,140	193,000
November	4,490	19	1,090	64,900
December	18	8.4	12.7	783
January	1,440	12	455	28,000
February	122	11	26.3	1,460
March	6,050	9.2	1,760	108,000
April	21,900	240	2,900	172,000
May	3,490	11	781	48,000
June	78	7.2	22.1	1,320
July	99	1.3	9.53	586
August	9.4	1.0	2.44	150
September	3.6	.2	1.10	65.7
The year	21,900	.2	855	618,000

NAVASOTA RIVER NEAR EASTERLY, TEX.

LOCATION.—At International-Great Northern Railroad bridge 3 miles below mouth of Steel Creek and 6 miles northeast of Easterly, Robertson County.

DRAINAGE AREA.—949 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—March 20, 1924, to September 30, 1926.

GAGE.—Vertical staff attached to downstream end of second timber bent from right bank; read by Mack McCullough. Zero of gage is base of rail; all gage readings are minus.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand and silt; shifting; scattered trees and brush along edges of well-defined channel. Channel curved above and below gage. Banks of sand and earth; heavily wooded; subject to overflow at about gage height −9 feet. Control indefinite, formed by natural channel of stream below gage, which has brush and débris lodged therein.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, −9.1 feet at 3 p. m. November 7 and 10 a. m. April 23 (discharge, 10,200 second-feet); minimum stage, −25.0 feet September 15–30 (discharge, 2.0 second-feet).

1924–1926: Maximum stage, that of November 7, 1925, and April 23, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 7,000 second-feet and extended to cover range of stage for year. Gage read to tenths once daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Navasota River near Easterly, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 23	−22.99	68	Mar. 23	−10.78	5,240	Mar. 25	−12.05	2,810
Nov. 24	−23.72	31.8	Do	−11.04	4,600	July 21	−24.18	15.3
Mar. 22	−10.15	6,860	Mar. 24	−11.50	3,760			

Daily discharge, in second-feet, of Navasota River near Easterly, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	126	26	29	178	29	1,620	842	82	265	87	5.0
2	9.0	120	26	32	150	29	1,450	1,660	82	247	72	5.0
3	9.0	114	26	32	126	29	1,260	1,660	82	247	62	5.0
4	15	155	26	32	92	36	915	1,620	82	185	48	5.0
5	20	3,110	26	120	72	44	657	1,260	90	171	40	5.0
6	23	5,650	26	362	72	52	435	915	1,250	120	32	5.0
7	26	9,240	26	292	62	62	305	657	2,130	108	29	5.0
8	26	7,340	26	145	52	62	215	484	1,840	67	26	5.0
9	26	4,750	26	114	52	117	139	484	1,600	36	23	5.0
10	23	2,380	20	67	48	532	375	615	527	26	20	5.0
11	23	1,170	17	48	48	1,020	675	915	247	26	17	5.0
12	23	1,000	13	40	48	1,300	1,390	975	157	20	15	5.0
13	29	825	15	44	44	1,100	1,660	750	132	20	13	3.0
14	447	636	17	62	44	975	1,660	467	108	20	11	3.0
15	679	519	20	72	40	915	1,570	405	62	20	11	2.0
16	1,440	451	23	102	40	855	1,090	351	48	20	9.0	2.0
17	1,750	322	23	126	40	775	440	305	40	20	9.0	2.0
18	2,220	252	23	212	36	606	207	265	32	20	9.0	2.0
19	2,560	168	23	222	36	413	124	247	29	20	7.0	2.0
20	1,950	111	23	374	36	1,110	97	206	494	20	7.0	2.0
21	664	62	23	1,830	32	3,240	97	185	1,740	15	7.0	2.0
22	152	48	23	2,400	32	7,340	470	171	1,930	} 15	7.0	2.0
23	77	48	23	2,250	32	4,970	7,440	138	1,880		7.0	2.0
24	67	48	23	1,800	29	3,550	6,730	120	1,700	15	7.0	2.0
25	62	44	23	1,230	29	2,650	6,730	108	1,330	112	5.0	2.0
26	67	40	23	832	29	1,520	4,440	108	1,040	463	5.0	2.0
27	157	36	23	523	29	1,300	1,640	97	800	1,790	5.0	2.0
28	230	32	23	318	29	848	1,190	97	488	2,000	5.0	2.0
29	199	29	23	214	------	1,120	486	87	305	664	5.0	2.0
30	185	26	23	192	------	1,410	131	87	265	175	5.0	2.0
31	164	------	26	185	------	1,840	------	82	------	97	5.0	------

NOTE.—Braced figure shows estimated mean discharge for period indicated.

Monthly discharge of Navasota River near Easterly, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,560	9.0	430	26,400
November	9,240	26	1,300	77,100
December	26	13	22.8	1,400
January	2,400	29	461	28,400
February	178	29	55.6	3,090
March	7,340	29	1,290	79,000
April	6,730	97	1,520	90,500
May	1,660	82	528	32,500
June	2,130	29	686	40,800
July	2,000	15	227	14,000
August	87	5.0	19.7	1,210
September	5.0	2.0	3.27	194
The year	9,240	2.0	545	395,000

COLORADO RIVER BASIN

COLORADO RIVER NEAR ROBERT LEE, TEX.

LOCATION.—6 miles southwest of Bronte, 6 miles southeast of Robert Lee, Coke County, and 7 miles above former station near Bronte.

DRAINAGE AREA.—15,900 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 23, 1923, to September 30, 1926.

GAGE.—Vertical and inclined staff gage on right bank; read by Mrs. J. R. Smith.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 20 feet below gage.

CHANNEL AND CONTROL.—Channel straight for a quarter of a mile above and below gage. Bed of ledge rock, overlain in places by gravel and silt; fairly permanent. Banks covered with brush and light timber. Right bank subject to overflow at about gage height 15 feet. Left bank subject to overflow at high stages. Control is rock and gravel shoal a quarter of a mile below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, determined from graph drawn from gage readings, 20.20 feet at 10 a. m. September 6 (discharge, 32,500 second-feet; determined from extension of rating curve and may be subject to error); minimum discharge, 0.50 second-foot February 27 to March 4.

1924–1926: Maximum stage, that of September 6, 1926; no flow for several periods.

DIVERSIONS.—Records of Board of Water Engineers for the State of Texas show that 1,700 acres has been declared irrigated above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 3,000 second-feet, fairly well defined between 3,000 and 15,000 second-feet, and extended above. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair below and poor above 15,000 second-feet.

Discharge measurements of Colorado River near Robert Lee, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 16	1.08	[a]5	Aug. 9	1.34	19	Aug. 25	5.84	2,970
Feb. 14	1.00	[a]2	Aug. 23	10.06	[b]10,800	Sept. 21	1.64	51
Mar. 27	1.66	63	Aug. 24	11.78	[b]13,800			
May 7	2.63	363	Do	12.44	[b]14,800			

[a] Estimated.
[b] Surface velocity measured for part of measurement and coefficient used to reduce to mean velocity.

Daily discharge, in second-feet, of Colorado River near Robert Lee, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	31	8.4	2.8	6.0	0.5	65	68	778	31	273	904
2	107	30	7.8	6.0	5.6	.5	119	56	353	25	150	868
3	97	29	7.2	5.6	5.2	.5	85	53	332	20	85	227
4	78	29	7.2	5.6	4.4	.5	65	48	512	19	73	7,520
5	66	27	6.0	5.6	4.4	.8	39	1,710	218	17	68	16,000
6	60	27	6.0	5.6	4.0	.8	33	1,410	91	15	59	24,200
7	53	30	6.0	6.0	4.0	1.1	24	512	54	8.4	45	3,200
8	45	26	6.0	6.0	3.6	1.1	19	512	83	7.1	31	1,300
9	45	24	5.6	6.0	2.8	1.0	18	250	103	754	23	483
10	48	23	5.6	6.6	2.8	1.0	24	133	59	224	16	292
11	161	23	5.6	6.6	2.4	1.0	56	97	48	65	11	202
12	374	20	5.6	6.0	2.0	1.0	31	70	38	54	8.4	142
13	332	19	5.2	6.0	2.0	.8	29	56	31	39	6.0	105
14	205	18	5.2	5.6	2.0	.8	26	45	24	128	4.4	177
15	123	17	5.2	5.6	2.0	.7	21	40	15	130	3.2	705
16	1,020	14	5.2	6.0	2.0	.7	18	33	13	184	1.8	313
17	2,340	12	4.8	8.4	1.7	5.2	12	28	33	135	8.9	155
18	1,390	12	4.8	7.2	1.7	3.6	9.0	27	2,080	72	3.2	107
19	441	12	4.8	6.0	1.7	3.6	7.2	24	12,600	46	4.0	80
20	251	11	4.4	7.2	1.4	6.0	11	20	4,330	30	1.7	66
21	161	11	4.4	9.0	1.1	2,690	11,100	18	1,040	22	1.2	60
22	112	11	4.0	8.4	1.1	192	7,390	17	512	24	.6	53
23	99	10	4.0	6.0	1.0	123	2,670	29	292	20	7,880	48
24	80	9.6	4.0	7.2	1.0	68	940	26	150	56	14,300	40
25	66	9.6	4.0	6.6	.8	185	563	55	116	398	3,010	40
26	58	9.6	4.0	7.2	.6	89	254	85	83	88	1,040	40
27	49	7.2	3.6	7.2	.5	59	215	48	70	555	480	40
28	41	9.0	2.8	7.2	.5	46	427	29	56	563	292	33
29	38	9.0	2.4	7.2	-------	40	107	22	52	706	179	31
30	36	8.4	2.0	7.2	-------	85	82	3,410	36	512	128	27
31	38	-------	2.8	6.6	-------	38	----------	2,950	-------	353	361	-------

NOTE.—Discharge interpolated Aug. 21 and Sept. 25–26.

Monthly discharge of Colorado River near Robert Lee, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,340	36	263	16,200
November	31	7.2	17.6	1,050
December	8.4	2.0	4.99	307
January	9.0	2.8	6.46	397
February	6.0	.5	2.44	135
March	2,690	.5	118	7,230
April	11,100	7.2	815	48,500
May	3,410	17	383	23,600
June	12,600	13	807	48,000
July	754	7.1	171	10,500
August	14,300	.6	921	56,600
September	24,200	27	1,920	114,000
The year	24,200	.5	451	327,000

COLORADO RIVER AT BALLINGER, TEX.

LOCATION.—Half a mile below Hutchins Avenue highway bridge, two-thirds mile below Gulf, Colorado & Santa Fe Railway bridge at Ballinger, Runnels County, and half a mile above mouth of Elm Creek.

DRAINAGE AREA.—16,800 square miles, a large part of which is probably non-contributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—December 11, 1915, to September 30, 1926. Records of stage have been obtained at Hutchins Avenue gage by United States Weather Bureau since July 1, 1903.

GAGE.—Staff gage on right bank; read by Lennis Brown.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Banks of clay and gravel; wooded, and subject to overflow at extremely high stages. Bed of hard clay, sand, gravel, and rock; shifting. Control is rock shoal one-third mile below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 23.9 feet at 8.35 a. m. September 7 (discharge, 26,500 second-feet); minimum stage, 1.08 feet at 6.30 p. m. August 21 (discharge, 1.0 second-foot).

1916–1926: Maximum stage recorded, 26.0 feet during night of April 26, 1922 (discharge, about 28,000 second-feet), no flow during several periods.

DIVERSIONS.—During low stages a large part of flow is diverted a few miles above station for irrigation. Records of the Board of Water Engineers for the State of Texas show that about 6,900 acres has been declared irrigated above the station.

REGULATION.—None of importance.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 5,000 second-feet and fairly well defined from 5,000 to 26,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records for low and medium stages fair; for high stages poor.

Discharge measurements of Colorado River at Ballinger, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
Dec. 19	1.30	9.8	Aug. 25	7.24	[a] 4,520	Sept. 6	18.00	[b] 11,900
Feb. 12	1.25	6.7	Do	6.18	[a] 3,500	Sept. 7	23.12	24,300
Mar. 26	2.02	164	Aug. 26	4.42	1,660	Do	18.78	14,400
May 8	2.53	376	Sept. 4	9.96	6,740	Sept. 8	4.85	1,940
Aug. 11	1.32	11.7	Sept. 5	15.48	13,300	Sept. 22	1.74	80

[a] Poor measurement. [b] Backwater existed from creek below station.

Daily discharge, in second-feet, of Colorado River at Ballinger, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	253	44	15	12	12	4.5	91	104	1,480	47	338	748
2	179	40	16	12	10	5.0	59	80	453	44	202	748
3	140	40	16	12	10	6.5	137	75	446	37	194	361
4	118	37	16	10	10	7.0	99	60	2,770	40	110	7,510
5	102	37	14	13	8.0	7.0	66	815	785	22	68	12,300
6	80	47	14	13	8.0	7.0	55	1,950	247	22	47	14,800
7	86	62	11	12	8.0	6.5	42	851	124	24	60	18,600
8	66	55	12	14	6.5	7.0	33	499	86	119	38	2,040
9	102	35	14	13	6.5	7.0	32	460	55	601	33	960
10	80	30	12	12	6.0	6.0	115	257	96	520	27	520

Daily discharge, in second-feet, of Colorado River at Ballinger, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	62	37	12	12	6.0	5.0	105	164	70	221	16	308
12	59	24	12	12	6.0	4.5	54	118	55	113	15	261
13	438	24	11	12	6.0	4.0	51	91	42	64	7.0	153
14	361	21	12	12	5.5	5.0	38	75	37	42	3.5	221
15	240	21	13	12	5.0	5.0	35	60	32	37	6.5	338
16	194	21	10	16	5.0	6.5	32	51	24	130	7.0	410
17	2,740	21	10	16	5.0	12.0	27	47	115	75	3.5	299
18	1,400	21	10	14	5.0	10.0	21	44	640	130	1.6	202
19	613	18	10	15	3.5	8.0	18	37	9,190	70	2.4	143
20	361	18	10	13	4.0	24	20	35	7,550	55	1.4	116
21	232	20	8.0	14	3.5	13,500	13,900	30	1,840	44	1.2	99
22	194	16	8.0	12	3.5	3,990	10,800	26	888	236	2.4	75
23	143	16	7.5	16	3.0	274	4,250	26	465	96	261	70
24	116	15	8.0	16	3.0	124	1,380	24	274	42	10,600	62
25	96	16	7.5	15	3.0	236	782	27	228	211	7,630	59
26	80	15	7.5	14	3.0	167	451	82	150	274	1,560	51
27	66	16	6.0	14	3.5	160	213	96	143	312	678	51
28	59	16	2.4	14	3.5	96	836	55	118	644	410	51
29	55	15	5.0	15	-------	89	362	40	62	465	232	49
30	47	16	6.5	13	-------	1,700	146	49	57	613	140	46
31	44	-------	10	12	-------	311	-------	4,120	-------	613	213	-------

NOTE.—Discharge Sept. 6 corrected for backwater.

Monthly discharge of Colorado River at Ballinger, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,740	44	284	17,500
November	62	15	27.1	1,610
December	16	2.4	10.5	647
January	16	10	13.3	817
February	12	3.0	5.79	321
March	13,500	4.0	671	41,200
April	13,900	18	1,140	67,900
May	4,120	24	337	20,700
June	9,190	24	954	56,800
July	644	22	192	11,800
August	10,600	1.2	739	45,400
September	18,600	46	2,060	122,000
The year	18,600	1.2	535	387,000

COLORADO RIVER NEAR MILBURN, TEX.

LOCATION.—At bridge on Brady-Brownwood highway 1½ miles northwest of Milburn, McCullough County, and 1½ miles above mouth of Deep Creek.

DRAINAGE AREA.—24,600 square miles, a large part of which is probably non-contributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 20, 1923, to September 30, 1926.

GAGE.—Staff gage 0 to 10.1 feet, 50 feet upstream from bridge, and chain gage attached to upstream side of bridge for gage heights above 10.1 feet; read by J. W. McBride.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for half a mile above and a quarter of a mile below station. Bed composed of gravel and silt; shifts. Both banks of clay, sparsely covered with trees, and subject to overflow at extremely high stages. Control is rock shoal a quarter of a mile below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 36.1 feet at 10 a. m. April 23 (discharge, 35,100 second-feet); minimum stage, 3.94 feet at 8.40 a. m. March 15 (discharge, 16 second-feet).

1924–1926: Maximum stage, that of April 23, 1926; minimum stage, 3.08 feet at 7.30 a. m. August 10, 1924 (discharge, 0.60 second-foot).

DIVERSIONS.—About 18,000 acres has been declared irrigated above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 35 to 2,000 second-feet, fairly well defined from 2,000 to 24,000 second-feet, and extended above to cover range of stage for the year. Gage read to hundredths but not regularly. Mean daily gage height obtained by averaging twice-daily readings or from graph based on gage readings. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Colorado River near Milburn, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 24	4.53	81	May 9	6.41	798	Sept. 23	4.88	152
Mar. 25	6.58	1,000	Aug. 15	4.22	26.5			

Daily discharge, in second-feet, of Colorado River near Milburn, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	87	79	79	103	25	1,820	523	3,800	156	456	236
2	286	68	76	83	98	24	720	361	2,230	115	1,150	236
3	269	72	83	83	96	26	404	286	1,380	79	576	720
4	201	52	83	87	87	28	322	252	1,370	55	236	1,910
5	145	52	79	89	81	28	269	258	6,420	45	172	7,780
6	120	52	76	96	78	26	236	4,790	1,820	55	134	14,300
7	137	134	78	96	78	28	216	5,900	860	55	115	17,100
8	137	269	76	96	73	26	201	1,740	486	42	98	20,300
9	150	204	76	92	68	25	198	1,000	304	40	76	3,380
10	342	148	74	85	68	24	624	1,730	252	131	60	1,380
11	322	161	76	83	66	21	1,570	615	198	361	44	1,220
12	169	134	76	81	64	19	790	404	181	304	40	1,560
13	730	110	76	83	63	17	404	322	178	219	36	486
14	1,430	85	76	85	58	16	286	304	252	150	31	322
15	525	60	74	83	52	16	252	286	269	132	27	269
16	4,960	45	76	87	52	16	207	251	139	96	25	216
17	947	92	76	103	52	24	183	216	813	74	23	322
18	1,320	96	76	150	47	22	156	204	4,140	57	22	456
19	1,680	92	79	127	46	21	150	192	2,650	63	22	304
20	1,080	92	78	110	45	22	134	180	9,150	92	515	236
21	615	87	79	3,190	40	27	592	169	8,000	81	382	216
22	430	83	72	733	38	13,900	20,300	158	1,940	2,230	236	172
23	304	83	72	219	40	11,200	29,800	167	1,080	2,230	210	158
24	269	81	74	156	38	2,030	7,580	156	685	1,220	252	132
25	236	83	72	137	34	1,080	2,430	158	404	486	8,830	105
26	189	96	70	120	33	1,800	1,380	158	286	269	6,940	98
27	134	85	68	120	29	1,830	895	161	252	219	1,740	87
28	134	85	68	134	28	755	650	167	219	322	930	76
29	167	85	68	132	-------	404	548	172	198	720	580	81
30	122	83	66	120	-------	1,360	685	158	177	755	430	76
31	110	-------	70	110	-------	5,160	-------	873	-------	615	361	-------

NOTE.—Discharge interpolated Nov. 14, Dec. 25, 26, Feb. 8, May 1, 16, 18–20, June 29–30, Aug. 13–14, and Sept. 27. Discharge partly estimated July 6, 17, Aug. 15, Sept. 15, 18–20.

Monthly discharge of Colorado River near Milburn, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	4,960	110	579	35,600
November	269	45	98.5	5,860
December	83	66	74.9	4,610
January	3,190	79	227	14,000
February	103	28	59.1	3,280
March	13,900	16	1,290	79,300
April	29,800	134	2,470	147,000
May	5,900	156	733	45,000
June	9,150	139	1,670	99,400
July	2,230	40	370	22,700
August	8,830	22	798	49,100
September	20,300	76	2,460	147,000
The year	29,800	16	901	653,000

COLORADO RIVER NEAR TOW, TEX.

LOCATION.—At highway bridge 1¼ miles northeast of Tow, Llano County, 2 miles below mouth of Fall Creek, and 6 miles northwest of Bluffton.

DRAINAGE AREA.—31,100 square miles, a large part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 26, 1923, to September 30, 1926.

GAGE.—Au continuous water-stage recorder attached to downstream side of bridge pier; attended by W. A. Farris.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 2 miles above and half a mile below gage. Bed of rock, partly overlain by gravel and silt; fairly permanent. Banks covered with brush and light timber; permanent; subject to overflow at extremely high stages. Control is rock ledge and boulder shoal one-eighth mile below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 16.62 feet from 5 to 7 a. m. April 25 (discharge, 26,500 second-feet); minimum stage, 5.52 feet from 1 to 8 a. m. August 22 (discharge, 81.0 second-feet).

1924–1926: Maximum stage, 16.74 feet at 4 a. m. May 12, 1925 (discharge, 27,000 second-feet); minimum stage, 5.00 feet at 5 p. m. January 10, 1925 (discharge, 24.0 second-feet).

DIVERSIONS.—Numerous small diversions above station; amount not known.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined for all stages. Operation of water-stage recorder not satisfactory. Daily discharge determined by applying to rating table mean daily gage heights obtained from recorder graph by inspection or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Except for estimated periods, records good.

Discharge measurements of Colorado River near Tow, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 2	6.10	295	Aug. 17	5.66	115
Mar. 24	13.91	16,700	Sept. 7	12.25	11,700

Daily discharge, in second-feet, of Colorado River near Tow, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	327	293	266	450		3,940	1,140	333	444	884	
2	849	293	293	288	430		3,220	1,280	588	374	746	
3	665	277	310	288	399		1,780	1,040	3,310	374	822	
4	552	271	310	293	380	252	1,220	2,720	2,780	322	831	2,260
5	504	661	293	304	374		940	1,180	2,040	271	589	
6	483	6,410	282	293	356		796	1,220	8,000	250	476	
7	476	3,490	271	288	344	304	754	4,290	4,440	220	393	9,800
8	476	4,050	266	304	339	266	704	8,040	2,040	196	327	13,900
9	456	2,570	266	299	322	390	926	3,230	1,350	167	288	17,800
10	463	1,250	255	299	310	1,750	11,900	6,170	968	220	239	13,400
11	310	940	255	293	288	680	7,100	14,000	729	1,110	196	2,590
12	704	754	261	293	288	490	4,960	2,540	665	524	163	1,450
13	996	618	250	277	277	362	2,780	1,240	665	673	148	1,010
14	4,960	538	250	277	271	293	1,720	968	721	762	136	788
15	6,220	483	244	271	266	282	1,420	822	704	552	126	626
16	8,450	444	244	293	266	293	1,200	721	1,800	430	113	504
17	14,500	430	244	1,020	261	282	1,010	649	949	393	108	424
18	6,220	399	250	921	266	293	857	603	567	310	101	368
19	2,040	393	255	665	250	304	738	574	2,340	255	98	380
20	2,640	362	261	463		322	665	524	1,750	205	94	582
21	1,840	356	255	470	239	316	814	490	6,530	201	86	497
22	1,240	344	250	3,400		293	1,590	463	10,800	816	113	424
23	940	339	250	3,440		5,180	12,100	450	4,290	3,550	504	356
24	762	322	255	1,450		15,100	23,500	424	2,100	8,710	405	310
25	1,870	316	255	903	220	5,280	24,300	399	1,500	3,470	368	277
26	1,720	322	255	680		2,300	6,130	393	1,090	1,840	3,950	239
27	762	299	239	582		1,480	2,430	374	875	1,070		205
28	517	293	239	531	201	2,650	1,840	344	704	779		220
29	405	288	239	510	-------	1,780	1,470	339	618	634	2,260	187
30	368	293	244	497	-------	1,380	1,190	374	497	696		171
31	339	-------	250	483	-------	1,100	-------	362	-------	1,040		-------

NOTE.—Discharge partly estimated Feb. 21, 28, Mar. 7–23, 27, July 23–25, and Sept. 7. Braced figures show estimated discharge for periods included.

Monthly discharge of Colorado River near Tow, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	14,500	310	2,060	127,000
November	6,410	271	938	55,800
December	310	239	261	16,000
January	3,440	266	666	40,900
February	450	201	291	16,200
March	15,100	-------	1,440	88,600
April	24,300	665	4,130	246,000
May	14,000	339	1,850	114,000
June	10,800	333	2,190	130,000
July	8,710	167	995	61,200
August	-------	86	761	46,800
September	17,800	171	2,670	159,000
The year	24,300	86	1,520	1,100,000

COLORADO RIVER AT MARBLE FALLS, TEX.

LOCATION.—At steel highway bridge a quarter of a mile south of Marble Falls, Burnet County, and 10 miles below mouth of Sandy Creek.

DRAINAGE AREA.—36,100 square miles, a part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 1, 1916, to August 31, 1926, when station was discontinued on account of power plant diverting water around gage. Miscellaneous discharge measurements were made in 1902. Records of stage have been obtained by United States Weather Bureau since January 1, 1908.

GAGE.—Chain gage on upstream side of bridge; read by N. C. Galloway.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of solid rock; banks of rock, gravel, and clay; wooded and not subject to overflow. Rapids just below gage serve as fairly permanent control, except at times when sand and gravel collect.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 11.90 feet at 7.20 a. m. November 6 (discharge not determined); minimum stage, 1.03 feet at 5.45 p. m. August 19 (discharge, 121 second-feet; subject to error owing to inaccuracy of reading gage because of wind on tape).

1916–1926: Maximum stage recorded, 22.3 feet at about 1 p. m. May 1, 1922 (discharge not determined); no flow August 7, 8, 11–25, 1918, caused by storing water above gage.

A stage of 23.9 feet was reached during flood of April 7, 1900, as reported by United States Weather Bureau (discharge not determined).

DIVERSIONS.—Several large projects have been proposed in the drainage basin above station, but none have been developed. Numerous small diversions for irrigation and municipal uses are made above station; total amount diverted not known. Record of the Board of Water Engineers for the State of Texas shows that approximately 36,000 acres has been declared irrigated by diversions above station. Little water is diverted between Marble Falls and Austin.

REGULATION.—None of importance, except possibly during extremely low stages.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 6,000 second-feet and poorly defined above, owing to inability to read gage accurately because of surge, and inaccuracies in measurements on account of high velocities and submerged drift. Gage read to hundredths twice daily, although the influence of wind on long gage chain and surge of water at high stages probably introduce some error. Daily discharge above 6,000 second-feet not sufficiently accurate for publication. Daily discharge determined by applying mean daily gage height to rating table. Records for low stages, fair; for intermediate stages, poor.

The following discharge measurements were made:

December 1, 1925: Gage height, 2.21 feet; discharge, 654 second-feet.

March 23, 1926: Gage height, 2.66 feet; discharge, 1,030 second-feet.

Daily discharge, in second-feet, of Colorado River at Marble Falls, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	2,000	825	665	535	958	445	2,360	2,000	665	825	1,370
2	1,550	782	665	702	910	445	-------	2,180	632	740	1,200
3	1,200	740	665	782	868	470	3,780	2,000	1,430	665	1,050
4	1,000	740	632	740	825	502	2,810	2,270	5,300	600	1,100
5	868	1,000	600	665	782	600	2,720	3,120	3,560	568	1,100
6	702	-------	568	665	740	665	2,360	1,850	5,300	502	868
7	665	-------	568	600	702	782	1,920	-------	-------	445	665
8	600	-------	568	568	702	782	2,180	-------	3,560	395	600
9	535	-------	568	568	702	782	1,920	-------	2,360	370	470
10	502	4,000	568	568	702	4,260	-------	4,130	1,700	325	445
11	445	2,540	568	535	632	5,040	-------	-------	1,370	316	420
12	445	1,920	568	535	600	2,360	-------	-------	1,050	1,260	395
13	1,260	1,850	600	535	600	1,490	-------	2,720	910	782	343
14	3,560	1,550	632	502	600	1,200	3,560	2,000	825	868	273
15	-------	1,310	600	502	600	1,200	3,340	1,780	1,000	1,000	233
16	-------	1,150	535	568	568	1,050	3,120	1,430	958	868	221
17	-------	1,000	535	1,260	568	1,200	2,360	1,310	1,920	825	194
18	-------	1,000	568	2,900	535	1,550	2,000	1,260	1,150	665	209
19	5,300	958	568	1,780	502	1,490	1,700	2,270	740	535	150
20	3,560	868	568	1,370	502	1,260	1,620	2,000	3,670	420	170
21	3,340	868	535	1,200	470	1,200	2,270	1,370	2,360	370	168
22	2,540	825	535	1,550	470	1,100	5,300	1,050	-------	420	155
23	1,920	782	502	5,040	502	1,050	-------	1,000	-------	2,540	160
24	1,620	782	502	3,340	470	-------	-------	868	5,040	-------	188
25	3,230	740	502	2,270	470	-------	-------	825	3,340	-------	535
26	4,000	740	502	1,850	470	-------	-------	825	2,000	3,780	470
27	2,180	740	502	1,550	470	4,000	4,650	740	2,180	2,180	-------
28	1,260	702	470	1,310	470	3,780	3,340	740	1,310	1,430	-------
29	1,050	702	470	1,200	-------	4,260	2,720	665	1,100	1,150	2,900
30	1,000	665	470	1,100	-------	3,560	2,270	632	1,000	910	1,920
31	910	-------	470	1,050	-------	3,560	-------	665	-------	1,000	1,430

NOTE.—Approximate mean daily gage height in feet for days when discharge was beyond limits of rating curve, as follows: Oct. 15, 6.58; Oct. 16, 9.30; Oct. 17, 9.70; Oct. 18, 7.50; Nov. 6, 10.50; Nov. 7, 7.90; Nov. 8, 6.80; Nov. 9, 5.46; Mar. 24, 7.74; Mar. 25, 8.68; Mar. 26, 5.76; Apr. 2, 5.42; Apr. 10, 7.02; Apr. 11, 7.12; Apr. 12, 5.75; Apr. 13, 5.13; Apr. 23, 5.46; Apr. 24, 10.12; Apr. 25, 11.16; Apr. 26, 7.75; May 7, 5.55; May 8, 6.66; May 9, 5.78; May 11, 8.26; May 12, 5.90; June 7, 6.06; June 22, 7.58; June 23, 6.36; July 24, 5.52; July 25, 6.61; Aug. 27, 6.20; Aug. 28, 5.61.

Monthly discharge of Colorado River at Marble Falls, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
December	665	470	557	34,300
January	5,040	502	1,240	76,000
February	958	470	621	34,500

COLORADO RIVER AT AUSTIN, TEX.

LOCATION.—At Congress Avenue concrete viaduct in Austin, Travis County, half a mile below mouth of Shoal Creek, above mouth of Waller Creek, and 3½ miles below Austin Dam.

DRAINAGE AREA.—38,200 square miles, part of which is probably noncontributing (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—February 15, 1898, to September 30, 1926.

GAGE.—Au 60-day recorder on downstream side of pier; inspected by engineers of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made by wading or from Montopolis highway bridge, 4 miles below gage.

CHANNEL AND CONTROL.—Channel straight for 1,000 feet above and 500 feet below gage. Banks of clay and gravel; right bank subject to overflow; left bank not subject to overflow. Bed of rock, gravel, and sand; shifts. Control is gravel shoal 500 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 9.58 feet at 11 p. m. April 21 (discharge, 33,300 second-feet); minimum stage, 0.18 foot at 7 a. m. August 26 (discharge, 140 second-feet).

1898–1926: Maximum stage recorded, 33.5 feet a few minutes after failure of dam, which occurred at 11.30 a. m. April 7, 1900 (discharge, 236,000 second-feet; determined from extension of rating curve and may be subject to considerable error). At time of failure depth of water over crest of dam was 11.07 feet, with a computed discharge of 151,000 second-feet. According to information obtained from people living near Congress Avenue bridge, the water rose 6.1 feet as a result of the failure. Therefore, the gage height corresponding to a discharge of 151,000 second-feet was 27.4 feet. According to a statement by Mr. W. P. Johnson, who was in charge of the power plant at the dam, the flood appeared to be practically at its crest when the dam failed. Minimum discharge, 13 second-feet[3] at 6 p. m. August 18, 1918.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that about 36,000 acres has been declared irrigated by diversions above station. Most of area irrigated is in upper basin of main stream and adjacent to large tributaries. Little water is diverted between Austin and Columbus.

REGULATION.—Flow entirely regulated at times by operation at Austin Dam, about 3½ miles upstream. Sluice gates, crest gates, and power plant at dam were not in operation during the years ending September 30, 1919–1926. Capacity of reservoir about 24,000 acre-feet.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records good.

Discharge measurements of Colorado River at Austin, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 3	1.13	906	Apr. 16	2.31	3,690	Aug. 13	0.75	453
Nov. 30	1.04	881	May 14	2.78	4,980	Sept. 17	1.22	977
Dec. 18	.90	585	June 17	1.18	1,080	Sept. 18	1.16	850
Jan. 26	2.24	2,990	Aug. 13	.73	437			

[3] Figures published in Water-Supply Paper 588 and papers prior to 528 in error.

Daily discharge, in second-feet, of Colorado River at Austin, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,240	1,100	855	530	1,220	570	4,080	3,730	810	1,200	1,010	1,600
2	2,600	977	825	613	1,180	550	3,550	4,310	738	1,060	994	1,170
3	1,990	915	840	624	1,040	510	6,090	3,430	580	930	1,170	930
4	1,540	945	870	690	1,010	550	4,520	3,320	657	855	1,130	786
5	1,180	1,150	702	774	945	560	3,370	3,310	1,100	762	977	679
6	930	3,230	714	726	960	646	3,200	5,390	1,900	690	960	580
7	825	28,400	702	702	870	602	2,800	5,920	4,630	635	960	520
8	726	14,400	702	690	840	657	2,580	10,300	8,540	560	810	2,030
9	635	12,800	668	613	810	738	2,680	12,000	5,390	560	679	11,600
10	520	8,020	646	580	726	1,420	2,520	9,600	3,120	560	580	17,200
11	472	5,740	646	580	690	4,150	11,100	6,090	2,450	591	510	18,600
12	612	3,860	635	580	738	6,260	12,000	14,000	1,650	900	472	8,980
13	3,010	3,040	613	550	679	6,090	8,540	10,300	1,400	900	404	3,730
14	1,730	2,600	657	520	679	2,100	6,960	4,740	1,010	945	374	2,240
15	3,640	2,240	613	520	657	1,650	4,690	3,150	798	1,010	353	1,610
16	12,700	1,900	602	635	613	1,480	3,620	2,680	870	960	307	1,260
17	29,800	1,650	591	2,460	624	1,460	3,400	2,400	1,100	1,080	271	1,030
18	26,200	1,500	570	2,010	726	1,440	3,200	2,140	1,330	994	250	840
19	15,300	1,350	550	2,600	490	1,600	2,750	2,140	1,770	885	240	679
20	7,140	1,270	580	2,350	472	1,820	3,070	2,300	1,390	774	235	591
21	4,240	1,240	580	2,100	500	1,690	15,900	3,070	1,600	657	220	550
22	3,920	1,200	550	1,670	624	1,540	19,800	2,600	2,700	950	215	472
23	3,120	1,060	510	1,580	510	1,400	10,000	2,400	10,500	4,470	211	480
24	2,550	1,030	520	3,780	560	1,350	11,000	1,920	10,200	5,560	220	530
25	2,120	1,010	560	4,180	520	15,400	27,600	1,400	6,090	5,740	187	560
26	2,350	977	520	2,900	550	13,200	29,400	1,330	3,990	8,190	161	454
27	3,090	930	570	2,280	500	7,490	16,100	1,180	2,880	5,220	235	395
28	3,010	885	480	1,880	500	4,690	9,060	994	2,190	3,020	2,760	353
29	2,120	885	490	1,690	-------	4,310	6,090	945	1,750	2,050	7,490	332
30	1,560	885	510	1,500	-------	5,390	4,340	885	1,420	1,480	3,960	307
31	1,260	-------	490	1,390	-------	4,690	-------	840	-------	1,150	2,380	-------

NOTE.—Discharge partly estimated Apr. 10, 27-29, and May 21.

Monthly discharge of Colorado River at Austin, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	29,800	472	4,680	288,000
November	28,400	885	3,570	213,000
December	870	480	625	38,400
January	4,180	520	1,430	87,900
February	1,220	472	723	40,100
March	15,400	510	3,100	190,000
April	29,400	2,520	8,130	484,000
May	14,000	840	4,160	255,000
June	10,500	580	2,820	168,000
July	8,190	560	1,790	110,000
August	7,490	161	991	60,900
September	18,600	307	2,700	161,000
The year	29,800	161	2,900	2,100,000

EVAPORATION NEAR AUSTIN, TEX.

LOCATION.—At reservoir on Hill ranch, 1,000 feet from ranch house and 5 miles southeast of Austin, Travis County; 475 feet above mean sea level.

RECORDS AVAILABLE.—April 1, 1916, to September 30, 1926.

EQUIPMENT.—Two evaporation pans, one floating on surface of reservoir which is about 30 feet wide by 250 feet long and is supplied by spring, and the other on land about 30 feet from reservoir. Auxiliary equipment consists of hook gage, rain gage, anemometer, maximum and mimimum thermometers, and psychrometer.

ACCURACY.—Moss and weed growth in reservoir may at times affect results. Records from land pan more accurate than that from floating pan. Observations made daily at 8 a. m. Observer's work good.

COOPERATION.—Computations made by United States Weather Bureau.

Evaporation near Austin, Tex., for the year ending September 30, 1926

Month	Temperature (°F.)					Mean relative humidity (per cent)	Wind		Rainfall (inches)	Evaporation (inches)	
	Air			Water			Average velocity (miles per hour)	Prevailing direction		Floating pan	Land pan
	Mean maximum	Mean minimum	Mean	Floating pan (mean)	Land pan (mean)						
October	74.3	57.1	65.7	67.2	62.8	92.4	1.9	N.	11.90	[a]3.544	[a]4.478
November	68.5	43.8	56.2	55.0	52.6	93.4	2.0	NE.	3.92	[a]2.233	[a]2.996
December	57.5a	34.8a	46.2a	46.6c	42.1c	89.4c	3.4	SW.	.80	2.159	2.577
January	54.9	33.3	44.1	44.9d	42.6e	92.0d	2.9	SW.	4.19	[a]1.697	[a]2.219
February	72.0	40.8	56.4	53.2	48.0	88.9	3.1	SW.	.10	3.270	4.354
March	63.6	45.0	54.3	56.3	51.8	93.7	3.0	NE.	7.05	[a]3.400	[a]3.954
April	73.6	50.5	62.0	62.1	59.7	90.8	3.3	N.	5.66	[a]3.877	[a]4.748
May	82.9	60.5	71.7	69.7	69.4	91.0	.7	E.	4.00	[a]3.151	[a]5.771
June	91.6	68.7	80.2	76.7	76.1	86.0	.7	E.	2.14	4.062	7.336
July	92.2	70.6	81.4	78.7	77.7	86.3	.9	S.	3.89	[a]4.127	7.405
August	94.0	71.0	82.5	--------	--------	--------	.9	S.	2.13	5.050	7.445
September	93.0	69.3	81.2	--------	--------	--------	1.1	S.	1.29	4.755	6.395
The year	76.5	53.8	65.2	--------	--------	--------	2.0	S.	47.07	41.325	59.678

[a] Estimated.

NOTE.—Letters following figures indicate the number of days missing; a, 1 day; b, 2 days; etc.

COLORADO RIVER AT COLUMBUS, TEX.

LOCATION.—At county highway bridge 400 feet below Galveston, Harrisburg & San Antonio Railway bridge, in eastern edge of Columbus, Colorado County, 2 miles below mouth of Cummins Creek.

DRAINAGE AREA.—40,800 square miles, a large part of which is probably noncontributing (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—May 22, 1916, to September 30, 1926; January 1, 1903, to December 31, 1911. Records of stage have been obtained by United States Weather Bureau since January 1, 1903.

GAGE.—Gurley graph water-stage recorder, inspected by E. J. Frnka.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel straight above and below station for 400 feet. Right bank of earth and not subject to overflow; left bank subject to overflow above gage height 34 feet. Bed of sand; shifts. A sand and gravel section, 350 feet below gage, may serve as low-water control. During medium and high stages stage-discharge relation may be controlled by bend in river below bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year, from recorder graph, 36.4 feet at 11 p. m. April 22 (discharge, 73,100 second-feet); minimum discharge, 555 second-feet at 11 a. m. August 29.

1903–1911, 1916–1926: Maximum stage, from water-stage recorder, 38.3 feet May 5, 1922 (discharge, 79,500 second-feet); minimum discharge, 10 second-feet September 9 and 10, 1910.

DIVERSIONS.—Considerable water is diverted for irrigation in the drainage basin above Austin, but between Austin and Columbus little water is diverted. Station is above the irrigated rice belt, which comprises several thousand acres. Records of the Board of Water Engineers for the State of Texas show that about 36,000 acres has been declared irrigated above Austin.

REGULATION.—Flow during low stages partly controlled by storage at Lake Austin.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by shifting-control method or, on days of considerable fluctuation, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Colorado River at Columbus, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 21	16.01	11,700	Apr. 12	11.63	5,180
Dec. 21	7.21	1,030	Aug. 5	8.01	1,580

Daily discharge, in second-feet, of Colorado River at Columbus, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,620	4,430	1,340	1,120	2,230	644	8,040	9,200	1,745	2,600	2,700	5,080
2	7,820	2,900	1,310	6,800	2,100	639	5,800	9,670	2,200	2,280	2,230	3,670
3	4,940	2,280	1,280	7,360	1,860	612	5,360	10,200	6,860	2,050	2,140	2,900
4	3,670	1,930	1,250	3,910	1,710	698	4,800	8,570	3,130	1,860	1,780	2,230
5	2,800	1,820	1,220	3,110	1,630	1,020	4,800	8,750	1,900	1,710	1,600	1,860
6	2,180	5,940	1,180	1,930	1,520	1,060	5,950	10,600	1,630	1,560	1,630	1,560
7	1,820	15,000	1,150	1,480	1,440	1,040	5,220	12,200	2,140	1,410	1,630	1,370
8	1,520	14,300	1,120	1,300	1,340	862	5,500	20,900	3,380	1,230	1,520	1,230
9	1,260	19,000	1,090	1,230	1,300	830	5,360	15,000	3,910	1,120	1,440	1,120
10	1,090	13,700	1,060	1,160	1,230	8,040	5,360	12,100	6,390	1,020	1,410	960
11	1,020	10,800	1,020	1,020	1,230	12,300	6,400	13,300	5,960	992	1,300	5,570
12	928	8,210	992	960	1,160	7,070	5,360	11,200	4,030	895	1,200	14,100
13	2,030	6,250	960	960	1,060	3,790	8,260	10,000	3,220	1,830	1,060	13,300
14	52,500	5,080	928	895	1,020	5,360	9,670	13,100	2,600	2,010	960	8,750
15	54,400	4,030	960	830	960	4,800	7,700	10,600	2,230	1,970	928	5,800
16	36,700	3,440	960	1,550	960	3,550	6,860	7,020	1,970	1,600	862	4,150
17	31,900	3,110	992	5,880	928	3,220	5,650	5,220	1,820	1,340	830	3,220
18	28,300	2,800	992	3,110	895	6,450	4,800	4,410	1,630	1,300	812	2,700
19	24,900	4,510	992	2,800	895	5,800	4,030	4,030	1,740	1,200	794	2,320
20	20,400	4,490	1,200	2,900	830	5,140	5,800	3,790	1,740	1,300	770	2,050
21	12,700	2,700	1,020	3,000	830	5,650	38,100	3,670	1,710	1,370	747	1,780
22	7,870	2,180	895	4,670	830	4,670	69,100	3,440	2,140	1,600	724	1,600
23	5,500	1,930	862	4,150	818	4,410	68,100	3,550	1,860	2,200	702	1,410
24	4,540	1,780	862	3,220	782	4,410	43,200	3,790	1,970	2,570	680	1,230
25	4,150	1,670	830	2,900	740	3,910	47,200	3,220	6,850	2,870	658	1,090
26	4,280	1,600	806	3,440	716	4,910	21,100	2,700	9,110	5,080	636	992
27	3,440	1,480	770	4,800	662	10,100	31,600	2,360	6,550	4,940	614	960
28	2,800	1,440	770	3,440	656	10,600	26,600	2,230	4,940	6,700	592	992
29	2,700	1,410	776	3,670	-------	7,530	16,100	2,050	3,790	6,100	570	1,020
30	7,880	1,380	776	2,900	-------	14,200	11,400	1,930	3,110	4,410	617	928
31	8,850	-------	800	2,500	-------	12,900	-------	1,820	-------	3,440	2,490	-------

NOTE.—Discharge obtained by use of United States Weather Bureau records: Oct. 1, 2, 6–20, Nov. 6, Jan. 11–18, Feb. 8–24, Apr. 17–24. Discharge partly estimated Nov. 23–27, Jan. 19, Feb. 24–25, Mar. 26–27, July 25, Aug. 29, Sept. 12–14. Discharge interpolated Nov. 28 to Dec. 11 and Aug. 21–28.

Monthly discharge of Colorado River at Columbus, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	54,400	928	11,400	701,000
November	19,000	1,380	5,050	301,000
December	1,340	770	1,010	61,800
January	7,360	830	2,870	177,000
February	2,230	656	1,150	64,100
March	14,200	612	5,040	310,000
April	69,100	4,030	16,400	978,000
May	20,900	1,820	7,440	457,000
June	9,110	1,630	3,410	203,000
July	6,700	895	2,340	144,000
August	2,700	570	1,180	72,600
September	14,100	928	3,200	190,000
The year	69,100	570	5,050	3,660,000

CONCHO RIVER NEAR SAN ANGELO, TEX.

LOCATION.—Half a mile below confluence of North Concho and South Concho Rivers and 1¾ miles southeast of San Angelo, Tom Green County.

DRAINAGE AREA.—4,490 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—September 17, 1915, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank, 1,500 feet below on old ford; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 1,500 feet above gage.

CHANNEL AND CONTROL.—Bed of solid rock and gravel. Channel straight for 1,000 feet above and below station. Right bank wooded, rocky, and not subject to overflow. Left bank of clay and gravel, covered with scattering trees and subject to overflow at high stages. Rapids just below gage serve as control for medium and low stages; affected by moss. High-stage control not known.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 27.68 feet at 10.45 a. m. April 21 (discharge, about 48,800 second-feet); minimum discharge, 2.0 second-feet August 16.

1915–1926: Maximum stage, 36.8 feet April 26, 1922 (discharge, about 139,000 second-feet,); no flow November 29, 1922.

DIVERSIONS.—Flow at low stages materially affected by diversions above station. About 1 mile above mouth of South Concho River there is a storage dam. Records of Board of Water Engineers for the State of Texas show that about 11,000 acres has been declared irrigated by water diverted above station and about 3,500 acres by diversions below station.

REGULATION.—Storage at dam 1 mile above mouth of South Concho River has slight effect on flow at station. No regulation of importance on North Concho River.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 1,000 second-feet, fairly well defined from 1,000 to 22,000 second-feet, and poorly defined from 22,000 to 46,000 second-feet. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records good for all but estimated periods.

Discharge measurements of Concho River near San Angelo, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 20	1.57	61	May 19	1.72	91	Sept. 20	1.12	24.1
Feb. 13	1.54	[a] 51	July 2	.70	7.2			
May 28	1.90	140	Aug. 6	1.35	42.0			

[a] Measurement does not include flow of irrigation ditch which returns to river above gage and below measuring section.

Daily discharge, in second-feet, of Concho River near San Angelo, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	60	67	64	71	22	192	152	125	11	41	38
2	54	63	69	71	71	18	143	140		7.7	53	28
3	53	64	66	71	67	16	122	131		6.0	38	25
4	53	63	58	67	66	21	117	209	615	6.3	32	257
5	52	62	58	66	66	21	105	1,550	289	7.0	25	174
6	50	71	59	64	66	25	93	1,160	154	3.8	26	80
7	47	76	58	66	66	24	80	340	103	2.8	14	
8	46	69	58	69	63	27	94	211	87	2.7	12	
9	52	67	59	67	58	26	118	166	76	2.8	8.0	
10	212	66	62	64	59	24	348	143	71	2.8	4.4	50
11	143	69	59	63	62	20	192	125	63	2.8	2.9	
12	80	67	59	64	59	25	140	120	53	2.8	2.4	
13	71	66	60	64	58	24	111	114	48	2.9	2.2	77
14	69	62	62	64	57	22	108	108	45	2.9	2.2	124
15	92	59	62	62	53	20	120	103	38	2.9	2.1	62
16	217	59	60	71	54	22	114	103	26	2.9	2.0	43
17	96	60	60	78	54	35	108	103	20	2.9	2.1	32
18	78	59	62	59	48	34	108	96	23	2.9	99	29
19	64	59	63	69	48	32	103	85	140	2.8	827	27
20	63	62	58	67	46	37	289	80	60	3.2		24
21	63	64	59	71	40	7,390	21,800	81	45	3.2		22
22	63	64	58	67	40	3,800	3,330	76	50	2.3		18
23	63	63	59	76	38	982	556	174	42	2.2		16
24	63	63	59	85	40	331	326	112	37	131		13
25	63	62	59	81	32	1,150	300	69	32	106	85	11
26	59	62	60	78	28	436	274	63	28	81		
27	58	63	58	78	25	214	247		31	32		
28	57	64	55	78	25	154	220		25	20		11
29	55	63	58	78		143	193	125	18	18		
30	57	62	60	76		1,230	166		15	31		
31	58		62	71		335				57	22	

NOTE.—Discharge interpolated Apr. 5–6, 25–29, and July 25. Discharge partly estimated Apr. 4, 7, 30, May 26, June 4, July 26, and Sept. 25. Braced figures show estimated mean discharge for periods included.

Monthly discharge of Concho River near San Angelo, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	217	46	74.5	4,580
November	76	59	63.8	3,790
December	69	55	60.2	3,700
January	85	59	70.0	4,300
February	71	25	52.1	2,900
March	7,390	16	537	33,000
April	21,800	80	1,010	59,900
May	1,550		208	12,800
June		15	87.0	5,170
July	131	2.2	18.2	1,120
August		2.0	69.4	4,270
September	257		48.5	2,890
The year	21,800	2.0	191	138,000

CONCHO RIVER NEAR PAINT ROCK, TEX.

LOCATION.—At Gulf, Colorado & Santa Fe Railway bridge a quarter of a mile below mouth of Kickapoo Creek, 1½ miles above highway bridge, and 2 miles northwest of Paint Rock, Concho County.

DRAINAGE AREA.—5,530 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—September 20, 1915, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder attached to downstream end of middle bridge pier; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made by wading from railroad bridge at gage or from highway bridge below gage.

CHANNEL AND CONTROL.—Bed is solid rock; permanent. Channel straight for 500 feet above and below gage. Right bank is solid rock and not subject to overflow; left bank subject to overflow during high water. Control during low and medium stages is solid rock shoal 400 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage, from water-stage recorder, 18.67 feet at 3 a. m. April 22 (discharge, about 38,200 second-feet); no flow August 14–18.

1915–1926: Maximum stage recorded, 27.5 feet at 11 a. m. April 27, 1922 (discharge not determined); no flow during several periods of every year except 1920 and 1921.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that about 11,000 acres has been declared irrigated by diversions from Concho River, practically all of which is above the station. Flow during low stages is materially affected by diversions.

REGULATION.—Ten storage dams of small capacity are located between this station and San Angelo. An abandoned dam 12 feet high, known as Fourmile Dam, is 4 miles below San Angelo, and a small dam 8 feet high has been constructed for storage on the Sims ranch, just above the station. None of the dams appreciably affect the flow except during extremely low stages.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 6,000 second-feet, poorly defined from 6,000 to 20,000 second-feet, and extended above; extension may be subject to considerable error. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records good below and poor above 6,000 second-feet.

Discharge measurements of Concho River near Paint Rock, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 21	1.61	e1	Apr. 28	2.09	197	Sept. 16	1.72	83
Feb. 13	1.60	55	May 25	1.88	121			
Mar. 26	3.10	647	Aug. 4	1.28	15.8			

Daily discharge, in second-feet, of Concho River near Paint Rock, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	59	61	63	69	32	322	172	63	7.4	5.4	13
2	59	61	65	65	67	30	211	163	147	6.0	11	15
3	58	63	69	72	67	28	163	148	111	5.4	19	20
4	56	69	67	72	67	25	137	143	1,040	5.0	16	22
5	55	72	63	74	63	22	118	782	637	4.7	15	142
6	55	74	58	70	61	22	107	2,550	252	4.4	10	182
7	55	94	59	67	61	22	99	674	146	4.4	5.7	411
8	53	82	63	67	61	22	92	306	104	4.1	3.4	492
9	108	76	59	72	65	23	92	208	85	4.1	1.8	185
10	53	72	59	74	58	22	350	172	70	3.8	.7	109
11	156	72	61	72	56	17	281	151	63	3.8	2.2	72
12	151	74	63	70	55	15	172	137	56	3.4	.2	56
13	102	72	63	70	55	15	134	126	51	3.4	.1	45
14	85	72	63	70	50	12	115	123	43	3.4	.0	38
15	76	67	63	70	50	9.7	112	118	39	3.4	.0	109
16	134	63	63	70	47	13	115	118	33	3.1	.0	82
17	182	63	63	72	48	15	112	115	312	3.1	.0	59
18	120	63	59	85	48	18	107	115	102	2.8	.0	44
19	92	65	59	78	47	28	104	112	34	2.8	1,200	34
20	76	61	63	72	45	28	99	102	74	2.5	349	28
21	69	61	61	69	47	5,010	11,500	87	63	2.8	105	25
22	67	63	58	69	45	7,400	17,100	87	38	2.5	50	22
23	70	61	58	70	43	1,310	1,290	126	29	2.5	32	20
24	70	63	59	74	41	508	520	143	24	2.3	24	17
25	65	63	61	80	40	866	342	131	20	2.5	16	15
26	65	63	59	82	40	900	260	82	15	227	12	13
27	61	61	63	78	38	316	215	72	14	102	11	13
28	59	61	59	76	34	201	193	69	12	43	11	15
29	58	61	58	74	-------	176	172	65	11	22	11	15
30	55	59	58	78	-------	1,760	166	61	8.8	13	9.7	16
31	56	-------	61	78	-------	790	--------	59	---------	8.3	12	------

NOTE.—Discharge partly estimated June 17–18 and July 17 to Aug. 4.

Monthly discharge of Concho River near Paint Rock, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	182	53	80.1	4,920
November	94	59	67.0	3,990
December	69	58	61.2	3,760
January	85	63	72.7	4,470
February	69	34	52.4	2,910
March	7,400	9.7	634	39,000
April	17,100	92	1,160	69,000
May	2,550	59	242	14,900
June	1,040	8.8	123	7,330
July	227	2.3	16.4	1,010
August	1,200	0	62.4	3,830
September	492	13	77.6	4,620
The year	17,100	0	221	160,000

NORTH CONCHO RIVER NEAR CARLSBAD, TEX.

LOCATION.—Just above State Sanitarium dam, 1½ miles below mouth of Live Oak Creek, and 2 miles above Carlsbad, Tom Green County.

DRAINAGE AREA.—1,530 square miles (measured on base map of Texas).

RECORDS AVAILABLE.—March 27, 1924, to September 30, 1926.

GAGE.—Stevens continuous recorder attached to left side of dam; attended by United States Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet above gage or by wading below dam.

CHANNEL AND CONTROL.—Bed of rock, overlain in places by gravel and silt; with large pecan trees along edge of stream. Channel straight for 600 feet above and 400 feet below gage. Banks covered with brush and trees and subject to overflow at extremely high stages. At about gage height 12.5 feet and discharge 25,000 second-feet water runs over crest of banks on both sides of stream into draws, which do not drain back into river but form lakes. Control is concrete dam just below gage; permanent. A notch which is part of a fish ladder in the crest of dam is closed during very dry periods. Point of zero flow, with notch open, 1.67 feet; with notch closed, 2.21 feet.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 14.1 feet at 4.10 a. m. March 21 (discharge, about 33,500 second-feet); minimum stage, 1.79 feet from 8 p. m. September 3 to 7 a. m. September 4 (discharge, 0.10 second-foot).

1924–1926: Maximum stage recorded, 14.45 feet at 1.10 p. m. May 30, 1925 (discharge, about 35,600 second-feet); no flow for several periods.

DIVERSIONS.—Several pumps in drainage basin above station are reported to have a combined capacity of 40 second-feet; amount of water actually diverted not known, but flow materially affected at low stages.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 3,000 second-feet and extended above on the basis of one slope measurement at a stage of 14.45 feet; extension may be subject to considerable error. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by applying mean daily gage heights to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records for low stages fair; for high stages, poor.

Discharge measurements of North Concho River near Carlsbad, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 15	2.28	8.5	May 6	2.53	45.4	Aug. 23	1.92	[a] 0.30
Mar. 27	2.46	33.2	Aug. 5	2.22	3.27	Sept. 18	2.20	2.85

[a] Estimated.

Daily discharge, in second-feet, of North Concho River near Carlsbad, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	9.3	12	11	13	15	41	22	23	2.3	31	0.2
2	4.2	11	15	10	12	15	33	21	19	2.3	18	.2
3	3.4	11	13	9.7	12	16	29	19	18	2.0	10	.1
4	3.4	11	11	9.0	11	17	28	19	198	1.6	5.9	592
5	2.5	11	10	8.4	11	17	26	66	87	1.6	4.2	54
6	2.5	16	10	7.6	10	17	25	61	29	1.2	2.5	799
7	2.5	21	10	6.8	10	17	25	23	18	.6	1.8	161
8	2.5	19	9.6	8.4	11	17	25	22	15	.6	.7	18
9	2.5	22	9.3	12	10	17	26	21	12	.5	.4	9.3
10	2.5	21	8.4	13	10	17	123	21	11	.4	.3	6.8
11	3.4	23	8.4	15	9.3	17	34	19	11	.5	.3	5.9
12	4.2	26	8.4	16	10	17	23	19	10	.5	.2	5.0
13	5.9	26	9.3	17	9.3	17	23	21	10	.5	.2	13
14	6.8	23	9.3	17	9.3	17	23	19	8.4	.5	.2	7.6
15	7.6	21	9.3	17	9.3	17	23	19	7.6	.5	.2	4.2
16	7.6	22	10	21	10	17	23	19	7.6	.4	.2	3.4
17	6.8	22	11	21	10	21	23	19	6.8	.4	.2	2.5
18	6.8	22	11	19	9.3	21	23	19	5.9	.4	11	2.5
19	6.8	25	11	19	10	18	23	19	6.8	.4	2.5	2.3
20	5.9	25	12	19	11	19	855	19	6.8	.3	1.1	2.3
21	5.9	26	12	21	11	6,230	570	18	8.4	.3	.3	2.0
22	6.8	23	12	19	11	1,190	66	17	8.4	4.9	.2	2.0
23	8.4	17	13	18	12	282	36	17	6.8	12	11	1.6
24	10	15	15	18	12	90	23	17	6.8	12	13	.5
25	10	13	15	17	13	116	19	17	5.0	10	1.4	.4
26	10	12	15	17	13	45	19	16	4.2	16	.4	.4
27	8.4	9.3	15	16	13	33	17	15	4.2	9.3	.2	.7
28	8.4	10	15	16	15	31	19	13	3.4	5.0	.2	1.6
29	8.4	10	13	16	-------	334	33	13	3.4	3.4	.3	2.0
30	9.3	11	13	15	-------	759	25	13	2.5	12	.3	1.6
31	9.3	-------	15	15	-------	76	-------	15	-------	41	.3	-------

NOTE.—Discharge interpolated or partly estimated Oct. 9–16, Dec. 8, 25–26, Jan. 2–6, 23–29.

Monthly discharge of North Concho River near Carlsbad, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	10	2.5	6.03	371
November	26	9.3	17.8	1,060
December	15	8.4	11.6	716
January	21	6.8	15.0	922
February	15	9.3	11.0	610
March	6,230	15	307	18,900
April	855	17	76.0	4,520
May	66	13	21.2	1,310
June	198	2.5	18.8	1,120
July	41	.3	4.63	284
August	31	.2	3.82	235
September	799	.1	56.7	3,380
The year	6,230	.1	46.2	33,400

NORTH CONCHO RIVER AT SAN ANGELO, TEX.

LOCATION.—At county concrete viaduct in San Angelo, Tom Green County, 1 mile above confluence with South Concho River.

DRAINAGE AREA.—1,800 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—October 27, 1915, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder attached to left side of web of third pier of viaduct from left bank; inspected by Geological Survey engineers. Temporary staff gage used for low stages throughout year.

DISCHARGE MEASUREMENTS.—Made from second highway bridge upstream from gage or by wading.

CHANNEL AND CONTROL.—Bed of solid rock which is to some extent covered in high-water channel with grass and moss; permanent. Channel straight for 800 feet above and 400 feet below gage. Banks of rock and clay; subject to overflow during high floods. Control is concrete dam, about 4½ feet high, 20 feet below gage and at downstream side of viaduct, permanent. Portion of this dam removed temporarily throughout the year, erratically changing stage-discharge relation. Backwater probably occurs at this station when the Concho reaches a stage of 25 feet.

EXTREMES OF DISCHARGE.—Maximum stage, from water-stage recorder, 12.8 feet March 21 (discharge not determined); probably no flow for several periods.

1916–1926: Maximum stage, from water-stage recorder, 19.3 feet at 7.30 p. m. April 26, 1922 (discharge not determined; backwater from Concho River probably existed); no flow for several periods.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that about 600 acres has been declared irrigated by diversions from North Concho River above station.

REGULATION.—None of importance.

ACCURACY.—Stage-discharge relation not permanent. Two new rating curves, one applicable October 1 to April 21 and the other April 22 to September 30, were used for low-water periods in obtaining flow through gap in the dam, and the old standard curve was used in obtaining flow over crest of dam that was the former control. Low-water curves poorly defined below 150 second-feet, and standard curve fairly well defined below 1,100 second-feet and poorly defined from 1,100 to 14,000 second-feet. Operation of water-stage recorder not satisfactory, because of varying opening in the dam that forms the control, and much of the time discharge estimated or determined from poor gage readings. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, or by estimation. At stage when water flows over crest of dam, discharge is sum of the flow through gap in the dam and the flow over dam obtained from the standard curve formerly used. Daily and monthly discharge not sufficiently accurate for publication.

Estimated run-off for year, 50,300 acre-feet.

Discharge measurements of North Concho River at San Angelo, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 21	[a] 3.13	4.50	May 3	[a] 3.90	28.4	Aug. 11	[a] 2.38	[b] 0.50
Feb. 13	[a] 3.17	6.56	July 2	[a] 4.60	2.39	Aug. 23	[a] 2.32	[b] .05
Mar. 28	[a] 5.32	44.8	July 6	[a] 4.54	[b] .25	Sept. 4	[a] 2.37	[b] .30
Apr. 7	[a] 4.82	24.4	Aug. 6	[a] 3.68	21.4	Sept. 20	[a] 2.50	1.46

[a] Gage heights are from auxiliary gage which is being used while hole is in the dam. Datum of auxiliary gage is 5.93 feet below permanent gage.
[b] Estimated.

PECAN BAYOU AT BROWNWOOD, TEX.

LOCATION.—At pumping plant of city of Brownwood, 800 feet above lower dam, three-eighths mile above Brownwood-Comanche highway bridge, and 1 mile north of Brownwood, Brown County.

DRAINAGE AREA.—1,610 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—May 24, 1917, to June 30, 1918; October 17, 1923, to September 30, 1926.

GAGE.—Combined inclined and vertical staff gage attached to trees on right bank at rear and upstream end of city pumping plant; read by C. N. Davis and L. O. Davis, employees of the city of Brownwood.

DISCHARGE MEASUREMENTS.—Made from highway bridge three-eighths mile below gage, from cable at gage, or by wading.

CHANNEL AND CONTROL.—Bed of mud and clay. Channel straight above and below station. Banks wooded and subject to overflow during extremely high stages. At a stage of about 12 feet there is flow through sloughs to the right and left which leave the bayou above the gage and return below the gage. City dam, 800 feet below gage, is control for stages when flow is confined within banks; dam has opening of 140 feet. When banks are submerged water spreads over wide area and control not known.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.00 feet at 8 a. m. April 22 (discharge, 10,300 second-feet); no flow during several periods.

1917–1918, 1923–1926: Maximum stage recorded, 9.90 feet at 1 p. m. May 14, 1924 (discharge, from extension of rating curve, 12,100 second-feet); no flow for several periods.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that 590 acres has been declared irrigated above station. City of Brownwood pumps water just below station. Two small pumps below control, but amount of water diverted not known.

REGULATION.—Flow at station regulated during periods of normal flow by storage reservoir and pumping plants above. City of Brownwood has a dam 2 miles above station to impound water for municipal use. Water is released from this reservoir when supply is short in pond at gage from which the city supply is pumped. Backwater from lower dam extends to upper dam. No regulation of importance from irrigation above station.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 4,000 second-feet and poorly defined from 4,000 to 12,000 second-feet. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

The following discharge measurements were made:

May 9: Gage height, 1.05 feet; discharge, 21.8 second-feet.

August 14: Gage height, 0.60 foot; no flow.

September 23: Gage height, 0.78 foot; no flow.

Daily discharge, in second-feet, of Pecan Bayou at Brownwood, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					234	17	137	1.6	28	
2					103	17	252	1.0	49	
3					56	46	123	.6	56	
4					40	17	1,380	.2	28	
5					28	47	1,530	.2	11	
6		32			19	621	185		5.4	1,590
7		1,680			11	135	94		2.1	4,960
8		154			8.0	46	52	889	.8	540
9		135			319	32	28	761	.1	212
10		90			4,260	107	15	257		99
11		69			1,290	22	8.0	103		65
12		56			321	15	4.6	52		37
13	234	49			154	9.0	35	28		15
14	470	37			112	7.0	1,860	112		8.0
15	130	22			90	5.4	202	40		5.4
16	3,800	9.0			60	3.9	40	19		3.2
17	486	6.2			46	3.9	19	9.0		1.6
18	159	3.2			34	1.6	11	5.4		.8
19	103	2.6			56	3.9	2,250	1.6		.2
20	34	1.2			52	9.0	665	.2		
21	19	.3	1,610		2,610	5.4	180			
22	11		154	112	6,630	3.2	103	387	.4	
23	9.0		56	267	1,020	1.2	78	441		
24	8.0		28	86	301	1.0	40	196		
25	6.2		37	34	149	.6	17	94		
26	1.2		40	88	94		7.0	242		
27	.1		28	226	52		3.9	135		
28			15	99	40		3.9	78		
29			8.0	37	28		3.9	52		
30			2.1	176	22		2.6	22		
31			.6	360				46		

NOTE.—No flow on days for which no discharge is shown.

Monthly discharge of Pecan Bayou at Brownwood, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,800	0.0	177	10,900
November	1,680	.0	78.2	4,650
January	1,610	.0	63.8	3,920
March	360	.0	47.9	2,950
April	6,630	8.0	608	36,200
May	621	.0	38.0	2,330
June	2,250	2.6	311	18,500
July	889	.0	128	7,880
August	56	.0	5.83	359
September	4,960	.0	251	14,900
The year	6,630	.0	142	103,000

SAN SABA RIVER AT MENARD, TEX.

LOCATION.—1,000 feet above steel highway bridge in Menard, Menard County, and half a mile below mouth of Las Moras Creek.

DRAINAGE AREA.—1,150 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—September 14, 1915, to September 30, 1926.

GAGE.—Combined inclined and vertical staff on right bank; read by Mrs. O. D Parker.

DISHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Channel straight 450 feet above and 250 feet below gage. Bed of rock and gravel; fairly clean and permanent. Banks of rock and clay; wooded; right bank not subject to overflow; left bank subject to overflow at high stages. Control is rock and gravel shoal 100 feet below gage; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.00 feet at 9 a. m. June 2 (discharge, 863 second-feet); minimum stage, 0.66 foot at 5 p. m. August 11 (discharge, 2.6 second-feet).

1915–1926: Maximum stage recorded, 13.6 feet at 2.30 a. m. September 16, 1915 (discharge, about 8,610 second-feet); no flow July 12–14 and 19–31, August 1–4 and 26–31, 1918.

DIVERSIONS.—Considerable land is irrigated with water diverted above station. Noyes Canal, on right bank of river, which serves a considerable area, diverts a short distance above station. Records of the Board of Water Engineers for the State of Texas show that about 4,300 acres has been declared irrigated above station and about 7,700 acres below station.

REGULATION.—Flow controlled at low stages during irrigation season by diversions to Noyes Canal.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 3 to 85 second-feet and extended above through one slope measurement made at a stage of 11.18 feet; extension may be subject to considerable error. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records good.

Discharge measurements of San Saba River at Menard, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	1.15	18.0	Apr. 8	1.60	53	May 25	1.10	15.0
Nov. 19	1.58	51	Apr. 27	1.58	48.2	Aug. 19	.91	3.5

Daily discharge, in second-feet, of San Saba River at Menard, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	46	53	30	57	40	54	47	6.5	9.0	11	7.6
2	37	46	53	30	57	32	53	30	481	9.0	10	7.6
3	29	49	41	31	56	26	54	24	162	8.4	9.0	8.4
4	21	48	27	31	55	27	55	24	145	7.9	3.1	8.2
5	35	48	27	32	55	26	56	30	22	7.9	10	8.2
6	32	62	27	33	57	24	57	31	68	7.6	8.2	9.0
7	23	75	28	34	57	24	55	26	57	7.6	7.3	9.5
8	18	58	28	35	56	25	53	25	31	7.3	6.5	9.0
9	18	56	27	35	56	26	53	23	14	7.3	5.4	9.0
10	27	51	27	37	55	27	53	21	14	6.8	3.5	8.4
11	21	50	27	55	55	27	53	20	13	6.5	2.8	8.4
12	21	50	27	55	54	26	53	20	11	6.0	19	8.4
13	30	50	28	55	53	26	53	20	9.5	95	5.4	8.4
14	23	49	28	56	53	26	53	20	9.0	85	4.0	7.9
15	40	48	27	56	53	25	61	20	9.0	9.0	3.8	7.9
16	141	48	27	60	52	27	55	20	8.4	8.2	3.5	7.3
17	63	50	27	66	52	34	51	18	8.4	6.5	3.2	6.5
18	49	51	30	68	51	32	51	15	167	5.4	3.2	7.3
19	47	51	28	69	51	31	50	14	359	4.2	3.1	7.6
20	44	50	28	68	51	29	50	14	129	6.2	3.1	6.8

Daily discharge, in second-feet, of San Saba River at Menard, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	44	50	28	142	51	30	62	14	19	5.8	3.0	6.0
22	46	50	29	130	51	30	61	12	23	209	3.0	5.2
23	46	50	29	71	53	30	55	12	27	192	3.0	4.8
24	45	50	29	61	52	30	50	16	20	45	3.0	4.1
25	45	49	29	61	51	29	49	12	16	31	3.1	3.8
26	46	49	28	64	51	29	49	9.0	16	30	3.3	3.6
27	46	50	28	67	50	29	48	8.4	15	26	3.3	7.6
28	46	51	27	62	50	29	47	7.9	14	18	9.5	37
29	47	52	29	59	-------	29	51	8.4	13	15	10	34
30	47	53	35	59	-------	30	47	8.2	12	12	9.0	33
31	46	-------	30	58	-------	57	-------	6.8	-------	13	8.7	------

Monthly discharge of San Saba River at Menard, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	141	18	40.3	2,480
November	75	46	51.3	3,050
December	53	27	30.2	1,860
January	142	30	57.1	3,510
February	57	50	53.4	2,970
March	57	24	29.4	1,810
April	62	47	53.1	3,160
May	47	6.8	18.6	1,140
June	481	6.5	63.3	3,770
July	209	4.2	29.3	1,800
August	19	2.8	5.94	365
September	37	3.6	10.0	596
The year	481	2.8	36.6	26,500

SAN SABA RIVER NEAR SAN SABA, TEX.

LOCATION.—200 feet above Beveridge highway bridge, 2 miles northwest of San Saba, San Saba County, and 3 miles below mouth of Richland Creek.

DRAINAGE AREA.—3,040 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—December 30, 1904, to December 31, 1906; September 11, 1915, to September 30, 1926. Miscellaneous discharge measurements prior to 1904.

GAGE.—Vertical and inclined staff on right bank; read by G. M. Pool.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge.

CHANNEL AND CONTROL.—Channel straight for 100 feet above and below station. Bed of rock and gravel; shifts. Left bank of gravel and clay, wooded, and not subject to overflow. Right bank of clay and gravel, wooded, and subject to overflow during high water. A shoal at a ford about 75 feet below gage serves as control during medium and low stages; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 23.8 feet at 6 p. m. October 16 (discharge, 8,640 second-feet); minimum stage, 1.30 feet at 7.30 p. m. July 9 (discharge, 26 second-feet).

1904–1906, 1915–1926: Maximum stage recorded, about 37.0 feet April 26 or 27, 1922, determined from flood marks on gage (discharge not determined); no flow August 9 and 10, 1918.

DIVERSIONS.—Considerable water is diverted from stream and tributaries above station. There are also diversions below station, but none in the vicinity of station. Flood water from Brady Creek at Brady is stored for municipal uses; capacity of reservoir not known, but probably small. Records of Board of Water Engineers for the State of Texas show that about 9,300 acres has been declared irrigated by diversions above station and about 2,700 acres by diversions below station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined between 15 and 2,000 second-feet and fairly well defined between 2,000 and 8,760 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of San Saba River near San Saba, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	7.16	1,360	May 24	1.96	130	Aug. 16	1.42	40.2
Nov. 25	2.00	128	May 10	2.18	152			

Daily discharge, in second-feet, of San Saba River near San Saba, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	118	120	101	178	134	198	146	55	70	70	44
2	76	117	120	136	168	134	188	188	57	68	60	44
3	76	120	120	138	168	130	168	148	320	60	73	42
4	73	124	118	126	168	148	158	132	424	55	61	40
5	67	120	117	120	158	158	158	314	314	55	53	41
6	72	336	117	124	168	158	148	446	220	52	50	41
7	67	1,130	117	120	158	168	148	402	168	44	48	67
8	67	583	109	115	168	158	148	220	148	32	42	73
9	67	314	109	111	168	138	423	188	117	31	40	64
10	314	230	109	101	168	142	572	148	100	35	42	60
11	358	209	109	107	168	209	230	142	87	40	42	62
12	168	198	105	109	168	144	230	120	87	33	40	66
13	652	178	105	109	168	134	158	122	80	45	36	58
14	3,490	158	105	105	168	134	168	117	103	44	41	53
15	1,100	148	101	109	158	130	209	107	209	41	37	49
16	5,320	140	101	111	158	130	230	111	132	38	40	46
17	2,620	132	101	168	158	146	178	101	76	40	36	46
18	629	138	103	158	158	168	168	107	178	38	36	48
19	358	136	113	148	148	178	158	96	288	50	36	46
20	251	132	109	132	148	158	146	94	92	43	36	46
21	198	134	105	148	146	148	148	90	127	51	35	46
22	178	130	105	188	146	136	198	90	251	135	37	46
23	158	130	105	272	146	140	293	87	146	591	41	46
24	262	128	105	240	146	132	251	83	158	675	45	46
25	251	128	101	220	142	148	262	80	172	491	50	46
26	198	128	101	209	138	251	168	64	206	251	46	46
27	148	124	101	209	134	178	148	70	117	148	60	46
28	136	124	101	209	130	148	138	67	85	113	60	46
29	124	124	98	198	-------	148	132	64	82	92	58	46
30	124	120	105	188	-------	188	132	62	72	72	53	46
31	120	-------	101	188	-------	230	-------	61	-------	72	46	-------

Monthly discharge of San Saba River near San Saba, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	5,320	67	574	35,300
November	1,130	117	201	12,000
December	120	98	108	6,620
January	272	101	152	9,360
February	178	130	157	8,720
March	251	130	156	9,610
April	572	132	202	12,000
May	446	61	138	8,460
June	424	55	156	9,260
July	675	31	116	7,150
August	73	35	46.8	2,880
September	73	40	49.9	2,970
The year	5,320	31	172	124,000

NOYES CANAL AT MENARD, TEX.

LOCATION.—4 miles below head gates and dam near gaging station on San Saba River and 1,000 feet above steel highway bridge in Menard, Menard County.

RECORDS AVAILABLE.—March 13, 1924, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by Mrs. O. D. Parker.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Bed and banks of earth. Channel straight above and below station. Control bed and banks of canal.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.80 feet at 6 p. m. December 3 (discharge, 38 second-feet); no flow for several periods. 1924–1926: Maximum stage, 2.24 feet at 8 a. m. April 15, 1925 (discharge, 50 second-feet); no flow for several periods.

DIVERSIONS.—Small diversions above; amount not known.

REGULATION.—Flow regulated by head gates.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table, or by shifting-control method, or, on days of considerable and rapid fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Canal diverts from right bank 4 miles above Menard, and water is used for irrigation near Menard.

Discharge measurements of Noyes Canal at Menard, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 2	0.69	11.0	Oct. 3	1.36	27.6	Oct. 3	0.44	5.4
Do	.97	18.9	Do	1.29	25.2	Do	.39	4.3
Do	1.09	21.7	Do	1.18	21.5	Do	.32	2.82
Do	1.25	24.7	Do	1.05	19.9	Do	.24	1.64
Do	1.31	26.5	Do	.96	18.9	Do	.18	.86
Do	1.38	27.6	Do	.87	15.6	May 25	1.28	22.8
Do	1.44	27.0	Do	.68	10.4	Aug. 19	1.48	25.0
Oct. 3	1.42	27.7	Do	.50	6.4			

Daily discharge, in second-feet, of Noyes Canal at Menard, Tex., for the year ending September 30, 1926

Day	Oct.	Dec.	Jan.	Mar.	May	June	July	Aug.	Sept.
1	16		28	27		28	24	24	28
2	9.1		26	28	7.8	28	24	26	28
3	15	30	28	28	23	22	24	24	27
4	24	33	28	28	23		27	24	27
5		33	28	28	24		24	26	26
6	2.2	30	27	27	23		24	24	26
7	26	28	26	27	26		23	24	26
8	27	28	26	26	23		23	24	24
9	26	28	26	27	23	26	24	23	24
10	26	28	8.7	27	24	27	24	23	26
11	26	29		27	24	27	24	23	26
12	26	28		28	26	26	24	26	26
13	28	28		27	26	24	26	24	24
14	26	29		26	24	24	24	24	24
15	24	27		27	26	26	24	24	26
16		27		26	26	24	24	24	24
17		28		28	24	26	23	24	26
18		29		27	23	27	23	24	24
19		29		27	24	28	24	24	24
20		28		28	23	26	24	24	24
21		27		27	23	24	23	26	26
22		27		28	23	26	27	23	26
23		28		27	23	27	24	24	26
24		29		27	24	24	24	24	24
25		26		28	24	24		24	26
26		27		27	24	24		26	26
27		28		27	24	24	22	26	8.0
28		26		27	23	24	24	27	
29		28		28	28	24	26	27	
30		26		26	28	24	26	27	
31		27			28		27	27	

NOTE.—No flow on days for which discharge is not given.

Monthly discharge of Noyes Canal at Menard, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October (14 days)	28	2.2	21.5	598
December (29 days)	33	26	28.2	1,620
January (10 days)	28	8.7	25.2	499
March (30 days)	28	26	27.2	1,620
May (30 days)	28	7.8	23.7	1,410
June (25 days)	28	22	25.4	1,260
July (29 days)	27	22	24.3	1,400
August (31 days)	27	23	24.6	1,520
September (27 days)	28	8.0	24.9	1,330
The year				11,300

NORTH LLANO RIVER NEAR JUNCTION, TEX.

LOCATION.—500 feet above remains of old Wilson Dam, 1 mile below mouth of Bear Creek, 2½ miles above North Llano highway bridge, and 3 miles northwest of Junction, Kimble County.

DRAINAGE AREA.—914 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—September 14, 1915, to September 30, 1926.

GAGE.—Au continuous water-stage recorder on left bank; attended by Gilford Evans.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 2½ miles below station.

CHANNEL AND CONTROL.—Bed is solid rock. Channel is straight series of pools and rapids above and below station for 400 feet. One channel at all stages. Left bank not subject to overflow. Right bank wooded and subject to overflow during high stages. Current sluggish at gage during low and medium stages. Solid-rock ledge of about 2-foot vertical fall at site of old dam is control for medium and low stages; permanent, except for slight effect from accumulation of moss during low stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.80 feet at 3.40 a. m. October 16 (discharge, 9,030 second-feet); minimum stage, 0.92 foot at 6–12 p. m. September 30 (discharge, 0.70 second-foot).

1915–1926: Maximum stage recorded, 23 feet about midnight April 24, 1923 (discharge, 43,100 second-feet; determined from extension of rating curve and may be subject to considerable error); no flow during several periods.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that about 1,200 acres has been declared irrigated by diversions above station. During low stages such diversions materially reduce flow at station.

REGULATION.—No indication that flow at station is regulated.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 1,400 second-feet and poorly defined from 1,400 to 34,000 second-feet. Operation of water-stage recorder satisfactory, except for short breaks in the record. Daily discharge determined by applying mean daily gage heights to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records good, except for estimated periods.

Discharge measurements of North Llano River near Junction, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	1.25	13.0	Apr. 8	1.35	27.8	July 27	1.14	5.85
Nov. 18	1.38	30.1	Apr. 27	1.32	19.7	Aug. 19	1.00	1.25
Feb. 21	1.34	20.4	May 24	1.31	19.0	Sept. 10	.98	[a] 1.00

[a] Estimated.

Daily discharge, in second-feet, of North Llano River near Junction, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	34	32	34	32	23	31	22	17		4.5	1.2
2	14	34	32	34	32	23	31	22	23		3.7	1.2
3	14	34	31	36	32	23	29	25	23		3.5	1.3
4	14	33	29	36	32	25	29	378	22		3.2	1.3
5	14	32	29	36	32	29	29	106	16		2.7	1.3
6	14	48	29	34	32	34	27	76	14	10	1.4	1.3
7	14	55	29	34	31	34	27	60	13		.9	1.3
8	14	46	31	34	31	32	27	53			1.3	1.3
9	14	41	29	34	31	29	27	48	10		1.7	1.3
10	14	41	29	32	31	34	25	46			1.7	1.2

Daily discharge, in second-feet, of North Llano River near Junction, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	14	38	29	32	29	34	23	41			1.4	1.2
12	14	38	29	32	29	32	23	38			1.2	1.3
13	208	34	31	32	27	29	23	36			1.2	1.3
14	86	34	31	31	27	29	25	34			1.2	1.3
15	43	32	31	31	27	29	27	32			1.2	1.4
16	1,910	32	32	31	25	31	25	31			1.4	1.3
17	155	32	34	34	25	46	25	29			1.7	1.3
18	98	32	34	34	25	43	25	29			1.7	1.3
19	73	32	36	32	27	41	25	27		10	1.3	1.2
20	63	32	31	31	27	38	25	25	10		1.2	1.2
21	60	32	31	32	25	38	29	23			1.2	1.2
22	53	34	31	31	25	36	29	23			1.1	1.1
23	48	34	32	32	23	34	29	23			1.1	1.0
24	50	32	32	32	23	32	27	20			1.2	1.0
25	48	32	32	32	23	43	25	18			1.1	1.0
26	43	32	32	32	23	41	23	18			1.1	.9
27	41	34	34	32	23	36	23	17		6.1	1.2	.9
28	36	32	34	32	23	36	23	16		5.6	1.2	.9
29	34	32	34	32	------	34	23	16		5.0	1.1	.8
30	34	32	34	32	------	34	23	16		6.6	1.2	.9
31	34	------	34	32	------	32	------	17	------	5.6	1.2	------

NOTE.—Discharge interpolated or partly estimated Nov. 4–5 and July 27. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of North Llano River near Junction, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,910	14	106	6,520
November	55	32	35.3	2,100
December	36	29	31.5	1,940
January	36	31	32.7	2,010
February	32	23	27.6	1,530
March	46	23	33.4	2,050
April	31	23	26.1	1,550
May	378	16	44.0	2,710
June	------	------	11.9	710
July	------	------	9.32	573
August	4.5	.9	1.64	101
September	1.4	.8	1.17	69.8
The year	1,910	.8	30.2	21,900

LLANO RIVER NEAR JUNCTION, TEX.

LOCATION.—100 feet north of Kerrville-Junction road, 3 miles below confluence of North Llano and South Llano Rivers, and 3½ miles east of Junction, Kimble County.

DRAINAGE AREA.—1,760 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—September 13, 1915, to September 30, 1926.

GAGE.—Au continuous water-stage recorder on right bank; attended by Gilford Evans.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 400 feet above gage.

CHANNEL AND CONTROL.—Bed is solid rock; permanent channel straight for 700 feet above and 350 feet below gage. Left bank slightly wooded and subject to overflow. Right bank not subject to overflow. One channel except above a stage of 11.3 feet when a small part of the flow may follow a slough that leaves the river a short distance above gage and reenters below gage. Control for low and medium stages is rock ledge 75 feet below gage, forming a fall of about 3 feet.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 5.97 feet at 4 a. m. October 16 (discharge, 5,600 second-feet); minimum stage, 1.49 feet September 22–25, 27, 29 (discharge, 50 second-feet).

1915–1926: Maximum stage recorded, 26.3 feet at 3 a. m. September 16, 1915 (discharge, about 98,800 second-feet); minimum stage, 1.32 feet August 23–28, 1918 (discharge, 13 second-feet).

DIVERSIONS.—Records of the board of water engineers for the State of Texas show that about 2,500 acres has been declared irrigated by diversions above station and about 1,300 acres below station. Diversions materially reduce flow at station during low stages.

REGULATION.—Slight regulation by water-power plant on South Llano River at Junction.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 24 to 1,700 second-feet and extended above through two slope measurements; extension may be subject to considerable error. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day except as noted in footnote to table of daily discharge. Records for low stages good; for intermediate and high stages, poor.

Discharge measurements of Llano River near Junction, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 7	1.61	86	Apr. 9	1.79	166	July 27	1.57	72
Nov. 18	1.82	169	Apr. 27	1.70	112	Aug. 18	1.52	60
Feb. 21	1.66	98	May 24	1.69	113	Sept. 10	1.52	57

Daily discharge, in second-feet, of Llano River near Junction, Tex., for the year ending September 30, 1926

Day	Oct.	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
1	105	138	151	125	102	103	156	112	105	91	77	58
2	105	134	151	125	98	102	156	112	105	91	74	60
3	102	129	142	120	98	98	156	116	116	87	72	58
4	94	125	151	120	98	102	198	684	125	87	72	58
5	94	125	151	116	98	102	203	494	116	84	69	60
6	91	134	151	109	98	116	179	421	109	77	69	60
7	87	262	147	109	98	116	174	330	105	74	66	60
8	84	255	142	105	98	112	165	255	102	69	66	60
9	87	224	142	105	98	105	160	213	102	69	66	60
10	91	213	142	102	98	138	160	194	98	69	63	58
11	87	203	142	102	102	134	156	184	98	69	60	58
12	87	184	142	98	102	116	151	170	98	69	60	58
13	216	179	142	94	102	112	151	170	98	69	60	58
14	181	170	138	91	102	109	151	160	94	69	60	58
15	120	174	134	91	98	98	160	156	87	69	60	58
16	1,320	170	129	91	98	98	150	151	84	69	60	58
17	365	170	125	91	98	112	140	142	80	69	60	55
18	255	170	125	91	102	116	129	142	80	66	60	52
19	203	160	125	91	102	109	125	134	80	66	60	52
20	184	151	125	94	98	105	125	129	80	66	60	52
21	160	151	125	94	98	105	129	125	80	66	60	52
22	142	147	125	98	102	109	129	120	165	69	58	50
23	125	147	125	102	98	105	125	120	151	98	58	50
24	116	147	125	102	98	102	120	116	120	84	60	50
25	170	147	129	105	98	173	116	112	112	80	60	50
26	151	151	129	105	98	640	116	109	109	77	60	52
27	147	151	125	102	98	301	112	109	109	72	60	50
28	142	203	125	102	98	218	112	109	102	69	60	52
29	142	151	120	105	-------	184	112	105	98	69	60	50
30	142	151	125	105	-------	170	112	109	94	72	60	52
31	138	-------	120	105	-------	165	-------	109	-------	74	60	-------

NOTE.—Discharge interpolated or partly estimated Oct. 18–25 and Apr. 15–18.

Monthly discharge of Llano River near Junction, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,320	84	178	11,000
November	262	125	167	9,950
December	151	120	135	8,270
January	125	91	103	6,340
February	102	98	99.2	5,510
March	640	98	144	8,870
April	203	112	144	8,580
May	684	105	184	11,300
June	165	80	103	6,150
July	98	66	74.5	4,580
August	77	58	62.9	3,870
September	60	50	55.3	3,290
The year	1,320	50	121	87,700

LLANO RIVER NEAR CASTELL, TEX.

LOCATION.—4 miles above mouth of Hickory Creek and 6 miles east of Castell, Llano County

DRAINAGE AREA.—3,510 square miles (measured on topographic maps and base map of Texas.

RECORDS AVAILABLE.—November 17, 1923, to September 30, 1926.

GAGE.—Vertical and inclined staff gage on right bank; read by V. A. Grenwelge.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed of sand; shifts. Channel straight for several hundred feet above and below gage. Banks of earth, sand, and gravel; sparsely timbered; permanent; not subject to overflow. One channel at all stages. Control is rock ledge which angles across river 200 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 11.9 feet at 2 p. m. November 6 (discharge, 21,400 second-feet); minimum stage, 0.90 foot September 25–27 (discharge, 41 second-feet).

1923–1926: Maximum stage recorded, 16.8 feet at 4 a. m. May 30, 1925 (discharge, 59,500 second-feet); minimum stage, that of September 25–27, 1926.

DIVERSIONS.—Several small diversions in drainage basin above; amount not known.

REGULATION.—Slight regulation at extremely low stages by pumps above station.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 17,500 second-feet and poorly defined from 17,500 to 60,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage height graph based on daily gage readings. Shifting-control method used August 6 to September 30. Records fair.

Discharge measurements of Llano River near Castell, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	1.67	103	Apr. 9	2.57	401	Sept. 8	1.21	67.4
Oct. 18	3.66	1,370	Apr. 10	4.38	2,640			
Dec. 3	2.10	201	Aug. 17	1.19	53.6			

Daily discharge, in second-feet, of Llano River near Castell, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	205	211	178	217	150	400	303	142	120	82	69
2	130	205	205	226	211	150	375	290	148	112	83	63
3	130	202	205	235	196	165	382	235	3,190	107	82	63
4	120	199	199	217	187	193	827	226	852	102	76	59
5	114	328	199	199	187	199	565	244	760	100	73	57
6	104	10,800	187	193	184	220	565	582	451	96	72	55
7	101	6,920	181	187	181	720	640	1,640	252	96	65	66
8	101	1,940	181	184	178	217	498	1,740	190	90	59	68
9	101	1,050	181	181	181	442	391	571	165	84	55	59
10	106	680	181	170	181	1,670	2,350	350	150	76	54	55
11	101	565	178	165	178	680	645	288	144	73	54	65
12	102	530	175	165	175	364	430	270	142	72	55	55
13	178	430	181	165	175	270	375	270	136	79	54	52
14	1,150	400	181	160	175	235	400	252	130	114	53	54
15	1,130	328	181	160	175	235	657	235	120	86	52	51
16	11,300	288	175	234	172	270	495	229	114	89	50	52
17	5,710	288	172	628	170	558	400	217	108	84	53	52
18	880	270	175	317	162	605	375	217	100	83	52	52
19	836	270	181	252	155	422	350	252	107	79	51	51
20	530	252	175	235	152	328	350	235	104	74	50	53
21	400	252	172	235	152	350	663	208	104	74	52	54
22	375	235	170	252	155	328	722	184	1,510	373	52	53
23	305	235	168	235	155	288	530	175	1,990	202	49	51
24	328	229	165	319	155	406	400	170	1,630	175	50	44
25	400	226	165	550	152	2,930	328	160	270	152	48	41
26	350	223	168	548	150	990	305	155	187	116	49	41
27	288	217	168	405	150	990	270	150	165	100	57	41
28	252	217	168	299	150	680	252	150	158	90	61	42
29	202	211	168	252	-------	565	252	146	150	84	69	46
30	211	211	168	235	-------	640	235	144	134	83	69	51
31	211	-------	165	223	-------	530	-------	142	-------	80	72	-------

Monthly discharge of Llano River near Castell, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	11,300	101	851	52,400
November	10,800	199	947	56,300
December	211	165	179	11,000
January	628	160	258	15,900
February	217	150	172	9,540
March	2,930	150	527	32,400
April	2,350	235	514	30,600
May	1,740	142	336	20,700
June	3,190	100	460	27,400
July	373	72	108	6,650
August	83	48	59.8	3,680
September	69	41	53.8	3,200
The year	11,300	41	373	270,000

PEDERNALES RIVER AT STONEWALL, TEX.

LOCATION.—At Stonewall, Gillespie County, 2 miles below mouth of South Grape Creek.

DRAINAGE AREA.—647 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—July 22, 1924, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by William Klier, jr.

DISCHARGE MEASUREMENTS.—Made from cable 300 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and silt; channel straight for 300 feet above and 700 feet below gage. Left bank is covered with brush and trees; right bank is sparsely wooded. Banks not subject to overflow. Control is rock ledge at road crossing, 600 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 7.48 feet at 3 a. m. October 16 (discharge, 8,950 second-feet; determined from extension of rating curve and may be subject to error); minimum stage, 0.39 foot September 22–25 (discharge, 3.9 second-feet).

1924–1926: Maximum stage, 8.20 feet at 2.30 a. m. May 9, 1925 (discharge, 10,700 second-feet); minimum stage, 0.33 foot July 30, 31, 1925 (discharge, 1.8 second-feet).

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 1,400 second-feet and fairly well defined from 1,400 to 7,000 second-feet. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records good.

Discharge measurements of Pedernales River at Stonewall, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	5.33	[a] 4,530	Feb. 22	0.54	12.9	July 28	0.54	11.6
Oct. 16	6.45	6,950	Apr. 10	2.20	824	Sept. 8	.42	3.23
Dec. 10	.56	10.2	Apr. 26	.86	62	Sept. 9	.41	[b] 2.5

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.
[b] Estimated.

Daily discharge, in second-feet, of Pedernales River at Stonewall, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	15	16	17	16	11	41	46	14	6.8	36	4.7
2	17	14	16	20	16	11	37	42	13	6.8	11	4.7
3	9.2	14	16	23	16	11	37	163	14	6.8	10	4.7
4	6.8	14	14	23	15	13	41	233	86	6.8	10	4.7
5	7.5	406	13	20	14	14	46	199	76	6.8	7.5	4.7
6	6.8	1,110	13	18	14	15	39	78	29	7.2	6.8	6.1
7	6.1	915	13	16	14	15	34	128	20	6.4	6.1	5.4
8	5.8	169	13	15	14	14	30	401	16	6.1	6.1	4.7
9	5.8	76	13	14	13	14	30	60	14	5.4	5.8	4.4
10	5.4	51	13	14	13	792	332	44	13	5.8	5.8	4.0
11	5.4	41	13	14	13	222	148	34	13	15	5.4	4.0
12	9.2	34	13	13	13	67	62	37	11	9.2	5.4	4.0
13	101	30	13	13	13	46	46	41	11	13	5.4	4.0
14	142	26	14	13	13	37	48	36	10	25	5.4	4.0
15	2,510	23	15	13	13	34	62	34	9.2	12	5.4	4.0
16	5,760	20	14	14	13	34	53	30	9.2	7.5	5.4	4.0
17	421	20	14	26	13	46	41	34	7.5	6.4	4.7	4.0
18	102	19	14	16	12	51	37	27	7.5	6.1	4.7	4.0
19	57	19	14	14	11	39	34	214	200	5.4	4.7	4.0
20	41	19	14	14	11	34	41	41	59	5.4	4.7	4.0
21	27	18	14	20	12	32	594	26	9.2	5.8	4.4	4.0
22	26	18	14	20	11	44	354	25	326	2,200	4.0	4.0
23	23	18	13	25	11	34	154	23	95	1,020	4.4	4.0
24	57	17	13	24	11	27	88	20	26	107	4.7	4.0
25	57	17	13	23	11	560	66	19	15	26	4.0	4.0
26	26	17	13	20	11	140	57	18	13	17	4.0	4.0
27	19	16	13	20	10	66	53	17	14	13	5.4	4.4
28	17	16	13	19	11	53	48	16	14	10	6.1	4.4
29	16	17	12	18	-------	48	48	16	8.4	8.4	5.4	4.4
30	17	17	13	18	-------	78	48	14	7.5	7.5	5.8	4.0
31	15	-------	13	17	-------	51	-------	14	-------	8.2	5.4	-------

Monthly discharge of Pedernales River at Stonewall, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	5,760	5.4	307	18,900
November	1,110	14	107	6,360
December	16	12	13.6	837
January	26	13	17.9	1,100
February	16	10	12.8	710
March	792	11	85.6	5,260
April	591	30	91.6	5,450
May	401	14	68.7	4,220
June	326	7.5	38.7	2,300
July	2,200	5.4	116	7,130
August	36	4.0	6.77	416
September	6.1	4.0	4.31	256
The year	5,760	4.0	73.1	52,900

PEDERNALES RIVER NEAR SPICEWOOD, TEX.

LOCATION.—1½ miles above Austin-Marble Falls road crossing, 2½ miles below mouth of Fall Creek, and 8 miles southeast of Spicewood, Burnet County.

DRAINAGE AREA.—1,290 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—November 7, 1923, to September 30, 1926.

GAGE.—Vertical staff on right bank; read by J. W. Bowles.

DISCHARGE MEASUREMENTS.—Made from cable 250 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed composed of cobblestones and coarse gravel, overlain in places by silt; fairly permanent. Channel straight one-fourth mile above and 400 feet below gage. One channel at all stages. Banks wooded, permanent, and not subject to overflow. Control below gage height of 2 feet is gravel and rock riffle 325 feet below gage. Control for high water composed of boulders and coarse gravel 400 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 16.4 feet at 1.45 p. m. April 21 (discharge, 28,000 second-feet); minimum stage, 1.38 feet September 25 (discharge, 2.80 second-feet).

1924–1926: Maximum stage, that of April 21, 1926; no flow June 24 to August 3 and August 28–30, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Two rating curves, one from October 1–13 and the other from October 14 to September 30, used during year. Both curves are well defined below 1,500 second-feet and extended above by measurements from slope determinations. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Pedernales River near Spicewood, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	4.99	1,440	Mar. 23	2.50	134	Sept. 22	1.42	3.3
Nov. 7	5.01	1,530	June 17	1.91	37.2			

Daily discharge, in second-feet, of Pedernales River near Spicewood, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	60	42	33	98	37	264	470	91	29	104	6.0
2	49	60	42	47	92	37	201	366	87	26	116	9.1
3	39	53	40	60	89	37	177	343	82	26	86	11
4	20	47	37	65	86	39	170	390	80	23	65	10
5	17	346	37	64	79	47	168	556	77	20	50	10
6	17	5,750	34	59	77	60	163	584	193	18	38	20
7	15	1,800	34	56	74	62	163	1,210	141	18	29	21
8	13	1,050	34	50	72	59	154	644	107	17	25	11
9	12	416	32	47	70	56	141	613	84	15	22	7.8
10	10	230	32	44	66	553	166	366	71	246	18	8.2
11	9.4	166	32	39	64	1,040	161	282	65	393	17	8.2
12	8.1	136	32	35	62	423	326	264	64	62	15	7.8
13	50	114	32	34	62	230	201	264	60	52	14	6.8
14	654	98	32	33	62	185	189	230	52	117	12	5.5
15	1,140	84	32	32	59	134	168	247	46	81	11	5.0
16	11,300	74	32	581	56	120	177	230	43	76	11	4.5
17	3,960	66	33	656	56	141	163	216	38	47	9.6	4.5
18	499	62	35	201	54	185	150	201	33	37	8.6	4.5
19	230	62	35	128	52	230	132	301	31	30	7.8	4.0
20	161	58	34	110	48	216	1,470	676	82	25	7.3	4.0
21	116	53	34	124	47	150	15,100	304	91	1,680	6.4	3.5
22	94	53	33	150	44	136	3,840	201	88	7,000	6.4	3.5
23	77	48	32	139	44	132	1,320	172	184	6,900	5.2	3.0
24	79	47	32	124	44	124	1,400	152	264	907	5.0	2.9
25	68	46	32	124	44	444	940	139	177	390	4.2	2.8
26	70	44	32	136	43	908	670	130	87	170	4.0	3.0
27	103	44	30	130	42	379	556	122	62	110	5.5	3.0
28	76	44	30	128	39	230	470	114	47	82	6.4	3.0
29	62	42	30	116	------	189	442	107	37	65	6.0	3.2
30	53	42	28	108	------	446	416	99	33	58	6.4	4.0
31	48	------	28	103	------	322	------	94	------	64	6.0	------

Monthly discharge of Pedernales River near Spicewood, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	11,300	8.1	615	37,800
November	5,750	42	373	22,200
December	42	28	33.4	2,050
January	656	32	121	7,450
February	98	39	61.6	3,420
March	1,040	37	237	14,600
April	15,100	132	969	57,600
May	1,210	94	325	20,000
June	264	31	86.6	5,150
July	7,000	15	606	37,300
August	116	4.0	23.5	1,440
September	21	2.8	6.69	398
The year	15,100	2.8	289	209,000

BARTON SPRINGS AT AUSTIN, TEX.

LOCATION.—Barton Springs issue from channel of Barton Creek 1,600 feet above Austin-Bee Cave highway bridge, half a mile above confluence of Barton Creek with Colorado River, and half a mile southwest of Austin, Travis County.

RECORDS AVAILABLE.—October 1, 1918, to September 30, 1926. Daily record of flow of Barton Creek, which closely approximates flow of Barton Springs, as the ordinary flow of creek is from springs, has been published from April 25, 1917, to September 30, 1918. Miscellaneous discharge measurements of Barton Creek made from 1894 to 1906 and during 1916 and 1917.

DISCHARGE MEASUREMENTS.—Made by wading Barton Creek above and below the springs in order to determine the flow of springs as indicated in table below.

Discharge measurements, in second-feet, of Barton Creek and determination of discharge of Barton Springs at Austin, Tex., during the year ending September 30, 1926

Date	Barton Creek below springs	Barton Creek above springs	Barton Springs	Date	Barton Creek below springs	Barton Creek above springs	Barton Springs
Oct. 28	31.5	0.0	31.5	May 13	245	153	92
Nov. 30	59.8	.0	59.8	June 17	81.9	3.0	78.9
Dec. 18	36.6	.0	36.6	Sept. 17	41.9	.0	41.9
Jan. 26	85.1	37.3	47.8				

LITTLE WALNUT CREEK NEAR AUSTIN, TEX.

LOCATION.—At Austin-Manor highway bridge, 1½ miles above confluence with Walnut Creek and 4½ miles northeast of Austin, Travis County.

DRAINAGE AREA.—12 square miles (measured on topographic maps).

RECORDS AVAILABLE.—April 25, 1924, to March 25, 1926, when station was discontinued.

GAGE.—Gurley 8-day or Stevens continuous water-stage recorder attached to downstream side of first concrete pier from right bank; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of clay; shifts. Channel curved above and straight for 150 feet below gage. Banks of gravel and clay; high and steep; shift. Control of clay; 150 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during period, from water-stage recorder, 9.00 feet at 1.50 a. m. October 13 (discharge not determined); no flow October 1–11.

1924–1926: Maximum stage, that of October 13, 1925; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation changed October 16. Rating curves poorly defined and do not cover range of stage for period. Operation of water-stage recorder not satisfactory. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Discharge not applied above gage height 4.1 feet October 13–15 or above gage height 2.7 feet October 16 to March 25. Records poor.

Discharge measurements of Little Walnut Creek near Austin, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	0.57	[a] 38.7	Oct. 13	0.91	91	Feb. 5	0.03	2.55
Do.	.43	29.0	Nov. 5	2.53	896	Mar. 10	.48	34.2
Do.	2.25	[a] 470	Do.	1.93	504			
Do.	4.09	[a] 2,140	Do.	1.55	310			

[a] Surface velocities observed and coefficient used to reduce to mean velocities.

Daily discharge, in second-feet, of Little Walnut Creek near Austin, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	0.0	1.4	2.0	6.4	3.6	2.8	16	------	2.0	2.8	8.6	2.4	9.0
2	.0	1.4	2.0	5.2	3.6	2.8	17	7.0	2.0	2.4	4.0	2.8	9.0
3	.0	1.6	2.0	3.2	3.2	2.8	18	4.9	2.0	2.8	2.4	2.4	9.0
4	.0	40	1.8	2.4	2.8	3.6	19	2.8	2.0	3.2	2.0	2.4	9.0
5	.0	194	2.0	2.4	3.2	4.0	20	2.0	1.8	2.4	2.0	2.8	9.0
6	.0	30	2.8	2.4	2.8	3.6	21	1.6	1.8	2.0	5.2	2.8	9.0
7	.0	13	4.0	2.4	2.8	2.4	22	1.6	1.8	2.0	2.8	2.8	9.0
8	.0	5.2	4.4	2.8	2.4	2.0	23	1.6	1.8	2.4	3.6	2.8	9.0
9	.0	4.4	3.6	2.8	2.4	4.0	24	8.4	1.8	2.4	4.8	2.4	9.0
10	.0	4.0	3.6	2.8	2.4	------	25	3.6	1.8	2.4	5.2	2.8	14
11	.0	3.6	3.6	2.8	2.4	8.5	26	2.8	1.8	2.4	5.2	2.8	------
12	16	3.2	3.2	2.8	2.4	7.0	27	2.0	1.8	2.0	4.4	2.8	------
13	------	2.8	3.2	2.8	2.4	10	28	2.0	1.8	2.0	4.0	2.8	------
14	6.0	2.4	2.8	2.8	2.4	14	29	1.6	1.8	2.4	4.4	------	------
15	142	2.0	2.8	2.8	2.4	9.0	30	2.4	2.0	2.4	4.4	------	------
							31	1.6	------	2.0	4.4	------	------

NOTE.—Mean daily gage height, in feet, for days when stage was beyond limits of rating curve for portions of day as follows: Oct. 13, 2.29; Oct. 16, 0.57; Mar. 10, 0.53.

Monthly discharge of Little Walnut Creek near Austin, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
November	194	1.4	11.2	668
December	4.4	1.8	2.64	162
January	8.6	2.0	3.68	227
February	3.6	2.4	2.71	151

ONION CREEK NEAR DEL VALLE, TEX.

LOCATION.—At Del Valle-Creedmoor highway crossing, 2 miles below mouth of Williamson Creek and 2½ miles southwest of Del Valle, Travis County.

DRAINAGE AREA.—337 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—May 15, 1924, to September 30, 1926.

GAGE.—Vertical staff attached to rock 250 feet above low-water concrete bridge; read by C. T. Sundberg.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 2 miles downstream.

CHANNEL AND CONTROL.—Bed of solid rock with some gravel. Channel straight for 500 feet above and 200 feet below gage. One channel at all stages. Right bank of rock and clay; fairly clean to a stage of 8 feet and covered with grass, light brush, and small trees above; permanent; subject to overflow at extremely high stages. Left bank is ledge rock; clean up to a stage of 8 feet and covered with fairly heavy growth of brush and small trees above; permanent; not subject to overflow. Control is formed by rock and gravel rapids and low-water concrete bridge 250 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from levels to flood mark, 16.05 feet at 9 p. m. April 21 (discharge, 24,300 second-feet); no flow October 4–12.

1924–1926: Maximum stage, that of April 21, 1926; no flow during several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 220 second-feet and fairly well defined from 220 to 70,800 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Daily records not suffiiciently accurate for publication. Monthly records fair.

Discharge measurements of Onion Creek near Del Valle, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	11.90	[a] 15,300	Apr. 21	13.15	14,600	Apr. 22	7.87	2,990
Oct. 14	5.98	272	Do	14.45	16,800	July 30	3.74	10.1
Nov. 6	6.75	988	Do	16.05	[b] 24,200	Aug. 26	3.33	1.84

[a] Very poor measurement, owing to measuring conditions.
[b] Discharge obtained from slope determination and Kutter's formula.

Monthly discharge of Onion Creek near Del Valle, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,730	0.0	282	17,300
November	1,660	10	124	7,350
December	15	12	13.3	817
January	91	12	39.0	2,400
February	62	22	35.7	1,980
March	1,570	20	168	10,300
April	11,800	85	847	50,400
May	1,470	80	351	21,600
June	135	13	39.3	2,340
July	1,010	6.0	73.0	4,490
August	44	1.7	4.93	303
September	2.9	1.7	2.06	123
The year	11,800	.0	165	119,000

GUADALUPE RIVER BASIN

GUADALUPE RIVER NEAR COMFORT, TEX.

LOCATION.—At low-water bridge and dam on State highway No. 27, 3½ miles below mouth of Verde Creek and 2.6 miles west of Comfort, Kendall County.

DRAINAGE AREA.—916 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—December 17, 1917, to September 30, 1926. Records prior to August 10, 1924, at a point 1 mile upstream.

GAGE.—Vertical staff on left bank; read by Gus Haufler.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 400 feet above gage.

CHANNEL AND CONTROL.—Channel straight for 1,000 feet above and 400 feet below gage. Bed of gravel and silt; permanent. Two channels at extremely high stages. Right bank of earth, covered with trees, and not subject to overflow at cable. Left bank of earth, covered with trees, and subject to overflow at high stages. At extremely high stages water flows through second channel to left of gage and station can not be reached. Control below stage of 3 feet is concrete low-water bridge and dam with opening in the center; permanent if opening is kept clear. For high stages, control is gravel bar and earth banks; subject to shift.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.7 feet at 7.30 p. m. July 23 (discharge, 5,460 second-feet); minimum stage, 2.24 feet at 7.12 a. m. September 28 (discharge, 26.0 second-feet).

1917–1926: Maximum stage, about 41 feet August 21, 1919, determined from flood marks near gage (discharge not determined); minimum stage, 0.80 foot August 2, 1918 (discharge, 0.40 second-foot).

DIVERSIONS.—A few pumping plants along stream about 8 miles above station. Records of the board of water engineers for the State of Texas show that about 400 acres has been declared irrigated by diversions above station.

REGULATION.—Dams are located at Kerrville and Center Point, but effect of regulation is slight except during low stages.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined from 18 to 120 second-feet, fairly well defined from 120 to 3,200 second-feet, and extended above; extension may be subject to considerable error. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for shorter intervals, using gage-height graph based on daily gage readings. Records fair.

Discharge measurements of Guadalupe River near Comfort, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 9	2.36	42.1	Oct. 16	6.02	1,680	Mar. 4	2.49	58
Oct. 16	7.66	2,890	Dec. 9	2.52	61	July 11	2.36	40.9

Daily discharge, in second-feet, of Guadalupe River near Comfort, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	58	84	69	62	50	96	112	307	44	96	55
2	63	58	74	90	58	50	90	105	114	43	84	47
3	65	60	62	90	62	50	92	105	105	144	84	45
4	39	58	58	84	62	55	84	340	129	122	67	43
5	39	76	60	71	58	62	84	251	108	45	69	42
6	40	1,140	65	62	55	60	80	218	80	50	62	43
7	34	570	69	58	57	62	78	162	74	36	57	44
8	47	265	71	58	52	58	55	142	69	44	55	44
9	37	165	62	58	54	69	72	124	65	36	52	44
10	37	160	65	58	55	170	65	114	62	36	52	40
11	34	126	69	57	55	202	142	110	62	47	52	37
12	50	117	65	58	55	132	96	248	60	32	55	37
13	96	105	62	55	58	105	86	132	58	149	51	37
14	55	96	54	55	58	94	88	110	58	67	51	36
15	1,030	88	65	57	55	86	101	103	57	55	47	37
16	3,340	96	62	65	54	88	94	94	55	58	48	37
17	352	96	58	65	60	105	84	105	55	48	44	47
18	182	96	60	76	52	101	80	96	58	42	47	43
19	129	96	62	67	52	84	76	92	105	40	42	39
20	84	92	65	62	51	84	787	88	82	37	39	39
21	92	86	62	72	69	90	821	82	69	51	40	37
22	50	86	62	74	58	105	238	80	119	157	39	34
23	42	84	58	69	55	86	1,100	76	72	1,570	39	33
24	69	86	57	76	52	83	176	76	65	1,720	44	32
25	65	84	58	80	52	472	144	72	62	678	42	32
26	69	86	58	78	50	134	139	72	62	465	43	32
27	67	84	55	72	44	96	129	69	72	190	48	33
28	62	84	57	69	50	105	119	65	76	114	55	30
29	55	84	58	69	-------	96	124	65	67	92	57	32
30	57	84	57	72	-------	101	119	1,510	60	92	96	34
31	58	-------	58	72	-------	110	-------	144	-------	105	55	-------

Monthly discharge of Guadalupe River near Comfort, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,340	34	209	12,900
November	1,140	58	149	8,860
December	84	54	62.3	3,830
January	90	55	68.3	4,200
February	69	44	55.5	3,080
March	472	50	105	6,440
April	1,100	55	185	11,000
May	1,510	65	167	10,200
June	307	55	82.9	4,930
July	1,720	32	207	12,700
August	96	39	55.2	3,400
September	55	30	38.8	2,310
The year	3,340	30	116	83,800

GUADALUPE RIVER NEAR SPRING BRANCH, TEX.

LOCATION.—At New Braunfels-Blanco City highway bridge, known as Esser Bridge, 4 miles southeast of Spring Branch, Comal County, and 6 miles below mouth of Curry Creek.

DRAINAGE AREA.—1,430 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—June 28, 1922, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder attached to downstream side of pier on right bank; attended by E. L. Jonas.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Channel straight for 200 feet above and 700 feet below gage. Bed of solid rock and gravel; permanent. Right bank of clay, wooded, and not subject to overflow. Left bank of clay and gravel, covered with grass and brush, and subject to overflow at a stage of about 46 feet. Low-water control is rock and gravel riffle 350 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 20.70 feet at 8.30 a. m. April 21 (discharge, 19,800 second-feet); minimum stage, 2.00 feet at 6 a. m. October 12 (discharge, 26.0 second-feet).

1923–1926: Maximum stage, that of April 21, 1926; minimum stage not definitely known but about 1.74 feet during period of missing record August 17, 1923 (discharge, 4.7 second-feet).

DIVERSIONS.—See Guadalupe River near Comfort.

REGULATION.—See Guadalupe River near Comfort.

ACCURACY.—Stage-discharge relation not permanent. Two curves used during year; one from October 1 to April 23, is well defined below 1,000 second-feet and poorly defined from 1,000 to 18,000 second-feet; the other from April 24 to September 30, is poorly defined below 45 second-feet, well defined from 45 to 150 second-feet, and poorly defined from 150 to 18,000 second-feet. Both curves extended above this limit. Operation of water-stage recorder satisfactory, except as noted. Daily discharge determined by applying mean daily gage height to rating table, or by shifting-control method, or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Guadalupe River near Spring Branch, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 7	2.07	35.8	Mar. 4	2.28	70	Aug. 28	2.05	64
Oct. 18	3.47	478	June 10	2.40	144			
Dec. 10	2.30	79	July 11	2.12	81			

Daily discharge, in second-feet, of Guadalupe River near Spring Branch, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	66	89	82	91	70	198	380	307	96	182	101
2	41	64	89	93	91	66	170	327	235	96	167	77
3	47	61	89	98	87	66	153	310	213	96	148	73
4	46	59	89	107	82	70	142	498	372	96	137	63
5	48	99	82	104	80	74	137	761	317	96	122	69
6	40	618	80	93	82	74	134	871	238	96	108	69
7	34	968	78	85	76	74	134	1,300	194	83	101	61
8	33	700	80	82	76	74	132	507	173	73	94	59
9	34	376	80	78	72	74	126	406	159	71	90	57
10	33	273	82	78	76	100	132	364	151	136	83	55
11	31	218	82	78	72	140	124	338	142	135	81	53
12	31	186	85	78	72	240	156	307	140	69	79	51
13	119	164	85	78	72	186	151	357	135	65	81	50
14	78	150	85	74	72	150	146	357	127	92	83	46
15	397	134	85	74	74	129	141	310	127	112	77	44
16	3,900	126	87	85	70	121	136	290	122	140	73	46
17	2,330	116	85	85	68	156	131	270	114	96	69	51
18	482	109	82	80	64	176	126	447	105	81	65	53
19	265	109	80	80	66	170	121	421	108	75	61	51
20	182	109	80	91	64	156	1,840	463	112	69	57	50
21	137	107	82	95	64	139	11,000	284	142	61	57	41
22	109	104	82	91	64	134	2,310	248	119	243	53	44
23	100	100	80	95	66	139	1,620	238	167	443	51	46
24	89	98	76	102	68	134	933	225	162	1,860	51	42
25	68	95	78	98	70	132	610	213	127	1,130	50	42
26	72	95	78	98	74	348	479	203	110	432	53	32
27	72	95	78	100	72	236	414	191	112	287	61	41
28	70	93	78	98	72	186	380	182	117	225	65	42
29	66	93	76	95	------	164	361	176	98	188	67	41
30	104	91	78	93	------	252	361	170	114	165	69	42
31	80	------	76	93	------	314	------	802	------	156	157	------

NOTE.—Discharge partly estimated or interpolated Oct. 16–18, Mar. 4–7, Apr. 13–17, May 29, June 2, 3, and July 2–5.

Monthly discharge of Guadalupe River near Spring Branch, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,900	31	296	18,200
November	968	59	189	11,300
December	89	76	81.8	5,030
January	107	74	89.1	5,480
February	91	64	73.5	4,080
March	348	66	147	9,010
April	11,000	121	767	45,600
May	1,300	170	394	24,200
June	372	98	162	9,640
July	1,860	61	228	14,000
August	182	50	86.8	5,340
September	101	32	53.1	3,160
The year	11,000	31	214	155,000

GUADALUPE RIVER AT NEW BRAUNFELS, TEX.

LOCATION.—At highway bridge on San Antonio-Austin post road 700 feet below International-Great Northern Railroad bridge, 1 mile below mouth of Comal River, and 1 mile northeast of center of New Braunfels, Comal County.

DRAINAGE AREA.—1,770 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—March 13, 1898, to December 30, 1899; January 27, 1915, to September 30, 1926.

GAGE.—Stevens water-stage recorder attached to downstream side of middle pier of highway bridge; inspected by Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of solid rock with pockets of coarse gravel. Banks of gravel, clay, and rock; slightly wooded, and not subject to overflow. Control is rock and gravel shoal 600 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 22.65 feet at 7.30 p. m. April 21 (discharge, 35,300 second-feet); minimum discharge, probably no flow for few minutes October 6–10 and 12.

1898–1899, 1915–1926: Maximum stage recorded, 28.6 feet at 3 a. m. September 10, 1921 (discharge, 56,600 second-feet; no flow for short period on each of several days in August and September, 1922, October 10, 1923, and October 6–10 and 12, 1925, owing to regulation at dam 300 feet above gage.

DIVERSIONS.—Some water diverted for irrigation above station in Kerr and Comal Counties, and for waterworks and other municipal uses in Kerr, Kendall, and Comal Counties; amount not known.

REGULATION.—Flow at this point entirely regulated at times by operation of power plants on Comal River and by plant 300 feet above gage.

ACCURACY.—Stage-discharge relation changed April 21. Rating curve used from October 1 to April 20 well defined, and curve used from April 21 to September 30 fairly well defined for all stages. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Guadalupe River at New Braunfels, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	0.72	409	Mar. 3	1.02	443	June 4	2.02	718
Oct. 17	6.50	5,650	Apr. 17	1.24	525	June 10	1.80	639
Oct. 18	2.44	1,300	Apr. 21	22.10	[a] 32,000	July 12	1.90	679
Dec. 2	.86	440	Do	19.89	[a] 26,900	Aug. 27	1.20	476
Jan. 21	1.08	446	June 4	2.10	749			

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocity.

Daily discharge, in second-feet, of Guadalupe River at New Braunfels, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	364	463	425	406	482	444	733	1,620	1,210	539	721	507
2	366	425	425	406	482	444	646	1,200	845	526	674	565
3	349	406	444	406	482	444	604	1,080	795	511	651	511
4	368	425	425	425	482	425	562	1,130	745	511	630	480
5	379	444	425	406	482	406	562	2,820	770	507	608	480
6	357	843	425	425	482	425	562	3,750	745	511	586	473
7	365	1,340	425	425	482	425	562	2,370	697	526	586	473
8	366	1,480	425	425	502	406	522	1,860	697	511	565	466
9	353	988	406	406	502	406	522	1,580	674	495	561	455
10	331	733	406	406	502	693	639	1,360	630	488	548	437
11	349	646	406	425	482	604	502	1,330		548	531	441
12	350	604	406	425	482	522	502	1,260		651	522	441
13	682	562	387	425	482	604	502	1,230		539	522	430
14	808	522	406	425	482	562	522	1,140		514	522	426
15	522	502	406	425	482	502	502	1,140		503	522	423
16	1,570	482	406	425	463	502	502	1,080		526	531	430
17	3,980	463	406	502	463	688	502	1,020		548	514	423
18	1,560	444	406	482	463	646	522	988	608	526	511	426
19	880	444	387	444	463	688	589	988		503	507	419
20	688	444	387	425	444	646	1,140	988		488	499	434
21	562	444	406	425	444	604	21,800	988		477	492	412
22	522	444	387	444	444	604	10,600	872		805	492	409
23	482	425	406	444	444	562	2,710	820		1,150	488	402
24	444	425	387	444	444	562	2,790	795		872	488	409
25	444	425	406	444	444	562	1,660	770		2,630	477	388
26	444	425	406	463	444	562	1,360	770	586	1,230	473	392
27	425	425	406	463	444	660	1,200	745	586	928	477	392
28	425	425	425	482	444	646	1,110	745	756	795	484	385
29	425	425	406	482	-------	604	1,080	721	565	721	492	385
30	425		406	463	-------	710	1,250	697	535	674	488	385
31	444	-------	406	482	-------	733	--------	731	-------	651	484	------

NOTE.—Discharge partly estimated or interpolated Dec. 2, Apr. 15–17, and June 10, 26. Braced figures show estimated mean discharge for period indicated.

Monthly discharge of Guadalupe River at New Braunfels, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,980	331	646	39,700
November	1,480	406	565	33,600
December	444	387	409	25,200
January	502	406	438	26,900
February	502	444	469	26,100
March	733	406	558	34,300
April	21,800	502	1,910	114,000
May	3,750	697	1,240	76,500
June	1,210	535	665	39,600
July	2,630	477	690	42,500
August	721	473	537	33,000
September	565	385	437	26,000
The year	21,800	331	714	517,000

GUADALUPE RIVER BELOW CUERO, TEX.

LOCATION.—Three-fourths mile upstream from Heards Bridge, on Arneckville Road and 2½ miles southeast of Cuero, Dewitt County.

DRAINAGE AREA.—5,070 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—August 6, 1916, to September 30, 1926 (fragmentary from May 29, 1919, to August 10, 1920). From December 26, 1902, to December 31, 1906, and August 19, 1915, to August 6, 1916, a station was maintained at Schleicher Bridge, 4 miles above this point. Discharge at two sites practically the same.

GAGE.—Stevens water-stage recorder on left bank; inspected by E. B. Dietze.

DISCHARGE MEASUREMENTS.—Made from cable 40 feet upstream from gage, from Schleicher highway bridge, from San Antonio & Aransas Pass Railroad bridge 6 miles upstream, or by wading near gage.

CHANNEL AND CONTROL.—Channel straight above and below station for 1,000 feet. Bed composed of gravel and small rock; shifts slightly. Left bank composed of sand and dirt, covered with brush and open timber; subject to overflow above a gage height of 20 feet, the water submerging an area for 1 mile. Right bank composed of sand and dirt, covered with brush and trees on sloping side and cultivated on top; subject to overflow at extremely high stages. Control during low and medium stages is rock and gravel rapids 250 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 31.5 feet at 3 a. m. April 24 (discharge, 64,400 second-feet); minimum discharge not determined.

1916–1926: Maximum stage about October 20, 1919, when recorder was not in operation, about 32.2 feet as determined from flood marks on gage house (discharge not determined); minimum stage, from water-stage recorder, about 0.58 foot from 9 to 10 a. m. November 1, 1917 (discharge, 80 second-feet; determined from extension of rating curve; possibly slightly in error).

A stage of 37.6 feet was reached November 4, 1913.

DIVERSIONS.—Numerous small diversions above station for irrigation and municipal uses, but flow is probably not materially affected thereby, except possibly during extremely low stages.

REGULATION.—Flow partly regulated during low and medium stages by operation of water-power plants upstream, chiefly by a plant about 8 miles above.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 200 to 15,000 second-feet, fairly well defined from 15,000 to 36,000 second-feet, and extended above; extension may be subject to considerable error. Operation of water-stage recorder not satisfactory. Daily discharge determined by applying mean daily gage height to rating table, or by shifting-control method, or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of Guadalupe River below Cuero, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 19	14.66	10,200	May 12	4.38	2,730	Aug. 27	1.61	62
Dec. 20	1.44	593	July 7	2.36	977			

Daily discharge, in second-feet, of Guadalupe River below Cuero, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		2,350				858	6,140	3,980			1,060	728
2		1,270				825	4,060				990	708
3					760	806	1,820	5,180			1,060	695
4						786	1,490	6,620		890	955	728
5		865		1,580		754	1,380	4,380			1,100	708
6					773	740	1,240	4,940			1,020	671
7	510		820		665	786	1,200	5,900		825	890	806
8		3,020			825	890	1,750	7,260		806	792	695
9		2,800			858	825	1,680	6,700		786	818	702
10		2,050			806	3,160	5,610	4,780		786	858	702
11		1,750		747	799	3,020	6,140	3,100		773	858	659
12		1,410		702	825	5,500	6,940	2,720		1,300	890	702
13	6,220	1,490		708	825	5,560	5,500	2,580		890	799	629
14	5,900	1,200	825	702	773		2,420	2,420		890	740	605
15	5,180		786	708	825			2,280	1,380	1,410	747	641
16	6,700	970	773	695	818			2,200		890	825	647
17	10,100		858	1,200	890	3,390	1,110	2,200		825	792	721
18	11,600		780	1,750	890					747	858	611
19	10,900	1,100	728	1,520						806	740	488
20	5,970	1,640	641	1,160						890	766	683
21	2,050	1,240	728	922		2,280	5,690			825	780	521
22	1,380	990		812		1,820	11,000			689	754	671
23	1,200			754	825	1,900	34,000			825	647	563
24	1,160					1,520	61,200	1,900		1,200	641	635
25	1,060					1,340	46,800			2,200	734	617
26	1,100	820	635			1,270	28,600			2,200	653	482
27	1,600			760		2,420	15,100			1,820	714	569
28	1,130				858	1,710	5,580			2,200	659	611
29						1,300				1,560	665	635
30	825					3,340	3,980			1,270	714	647
31						4,620				1,160	702	

NOTE.—Discharge partly estimated Oct. 13–18, 28, Nov. 8, 19, 22, Jan. 23, Feb. 18, Mar. 13, 21, and May 3. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Guadalupe River below Cuero, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	11,600		2,640	162,000
November	3,020		1,240	73,500
December			746	45,900
January			1,110	68,000
February			809	44,900
March			2,310	142,000
April	61,200		9,000	535,000
May	7,260		3,160	194,000
June			1,380	82,100
July	2,200		1,090	67,300
August	1,100	641	814	50,000
September	806	482	649	38,600
The year	61,200		2,080	1,500,000

SAN MARCOS RIVER AT OTTINE, TEX.

LOCATION.—At highway bridge one-fourth mile southwest of Ottine, Gonzales County, and 4 miles below mouth of Plum Creek.

DRAINAGE AREA.—1,250 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps). (Greater part of normal flow comes from large springs in the vicinity of San Marcos.)

RECORDS AVAILABLE.—June 22, 1915, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder on right bank just below pier; attended by W. C. Meek or Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand, clay, and gravel; shifts. Banks wooded. Right bank subject to overflow at gage height 28.7 feet and left bank at 34.0 feet. Channel straight above and below station for 150 feet. Low-stage control is shoal 150 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 40.6 feet April 21, determined by levels to flood marks (discharge, 125,000 second-feet; determined by slope method and may be subject to error). Owing to regulation probably no flow about midnight June 24–25.

1915–1926: Maximum stage recorded, that of April 21, 1926; no flow at 6.30 p. m. July 29, 1923. At noon March 31, 1925, and at midnight June 24, 1926.

DIVERSIONS.—Small amounts of water are diverted above station for irrigation and municipal uses, but only a small part of total run-off is used. Little water, if any, is diverted below station.

REGULATION.—Flow regulated by operation of small cotton gin a short distance above station. Operation of several small water-power plants in upper drainage basin near San Marcos and Martindale does not materially affect flow at this station.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 3,000 second-feet, fairly well defined from 3,000 to 16,000 second-feet, and extended on basis of one slope measurement made at a stage of 40.6 feet; extension may be subject to error. Operation of water-stage recorder not satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair, except those for estimated periods, which are poor.

Discharge measurements of San Marcos River at Ottine, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 23	2.84	213	Apr. 21	40.6	[a]125,000	June 8	4.00	390
Dec. 1	2.53	168	May 10	6.34	878	July 6	3.22	250
Jan. 18	3.96	396	May 13	5.46	716	Aug. 26	2.47	173
Mar. 6	2.76	217	June 3	4.12	420	Sept. 30	2.64	174

[a] Determined by slope method.

Daily discharge, in second-feet, of San Marcos River at Ottine, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	648	234	168	135	218	175	1,300	935	498	288	248	195
2	324		155	158	195	189		1,270		264	256	195
3	143	168	164	388	211	175		935	426	248	304	188
4	124		155	599	196	190		1,120	417	241	256	185
5	114	747	162	498	196	226		1,990	501	241	234	183
6	112	1,780	148	241	196	226	350	2,050	646	248	211	175
7	128	2,110	154	189	193			2,450	471	234	218	214
8	98	795	162	172	196	226		1,220	399	234	218	192
9	98	426	162	159	192			995	372	234	204	192
10	102	312	154	146	189			875	354	241	218	178
11	96	424	158	160	186	1,140	1,000	815	337	272	218	172
12	308	426	158	139	186			775	337	256	211	148
13	619	234	158	169	188			715	381	248	211	155
14	8,780		155	160	189			695	363	234	211	165
15	5,660		167	162	185	320		675	354	234	218	166
16	3,240		159	162	190			655	337	234	234	154
17	2,460		164	163	193			635	328	234	1,990	156
18	1,660		142	269	196		285	675	312	296	204	164
19	935		164	234	188			695	312	264	196	157
20	536		151	190	181	1,340		715	312	234	196	158
21	381	162	154	211	179		32,300	735	296	226	168	151
22	264		154	218	188		12,200	635	256	441	185	144
23	211		151	196	189		3,490	575	288	850	176	152
24	196		147	211	185		2,380		300	1,600	185	133
25	689		136	280	189		1,800		272	545	179	141
26	246		152	256	185	440	1,380		264	390	182	121
27			150	264	185		1,200	498	256	337	189	129
28	207		146	264	175		1,100		358	296	192	159
29			152	234			995		272	280	196	146
30	1,330		138	218			935		304	256	196	155
31	936		146	218		1,300				248	211	

NOTE.—Discharge partly estimated Oct. 16–24, Dec. 1, Mar. 6, Apr. 21–26, May 23, and June 3. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of San Marcos River at Ottine, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	8,780	96	1,000	61,600
November	2,110		358	21,300
December	168	136	154	9,490
January	599	135	228	14,000
February	218	175	191	10,600
March			678	41,700
April	32,300		2,370	141,000
May	2,450		865	53,200
June	646	256	361	21,500
July	1,600	226	337	20,700
August	1,990	168	268	16,500
September	214	121	164	9,760
The year	32,300	96	582	421,000

BLANCO RIVER AT WIMBERLEY, TEX.

LOCATION.—800 feet below mouth of Cypress Creek, 1,200 feet above low-water concrete bridge on San Marcos-Wimberley Road, and a quarter of a mile south of Wimberley, Hays County.

DRAINAGE AREA.—378 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—August 6, 1924, to September 30, 1926, when station was discontinued.

GAGE.—Inclined and vertical staff on left bank; read by L. Harrison.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet above gage or by wading.

CHANNEL AND CONTROL.—Bed of rock and gravel; shifts. Channel straight for 500 feet above and below gage. Left bank composed of silt and gravel overlying limestone ledges, covered sparsely with trees, and not subject to overflow; permanent. Right bank of rock, sparsely wooded at low water's edge; permanent and not subject to overflow. Solid rock ledge 200 feet below gage forms control; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 19.3 feet at 1.30 p. m. April 21 (discharge, 32,500 second-feet; determined by slope method and may be subject to error); minimum stage not determined but probably less than 9.0 second-feet.

1924–1926.—Maximum stage recorded, that of April 21, 1926; minimum stage, 0.26 foot July 30 and 31, 1925 (discharge, 5.8 second-feet).

DIVERSIONS.—None of importance.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 5 to 50 second-feet, fairly well defined from 50 to 1,400 second-feet, and poorly defined from 1,400 to 34,700 second-feet. Gage read to hundredths twice daily from March 1 to June 30. Daily discharge determined by applying mean daily gage height to rating table or by shifting-control method. Records from March 1 to June 30 fair; those for rest of year poor.

Discharge measurements of Blanco River at Wimberley, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 5	0.29	7.4	Mar. 30	1.38	296	Apr. 21	19.3	[a] 32,500
Dec. 3	.40	20.8	Do	1.83	582	Apr. 23	2.68	1,200
Mar. 3	.46	25.5	Do	1.95	647	June 5	1.18	233

[a] Discharge obtained by slope determination and Kutter's formula.

Daily discharge, in second-feet, of Blanco River at Wimberley, Tex., for the year ending September 30, 1926

Day	Mar.	Apr.	May	June	Day	Mar.	Apr.	May	June
1	26	167	258	108	16	64	89	202	77
2	26	154	348	103	17	98	89	286	71
3	26	133	291	101	18	96	89	213	66
4	33	127	702	491	19	96	84	273	66
5	40	122	844	252	20	122	1,600	278	79
6	29	111	898	160	21	119	10,600	202	75
7	26	119	482	114	22	108	2,250	174	66
8	26	108	368	96	23	96	1,210	160	68
9	26	98	358	89	24	81	895	154	68
10	75	91	318	84	25	122	715	148	66
11	86	86	269	167	26	101	545	142	66
12	86	103	257	106	27	101	423	136	66
13	71	101	257	114	28	98	396	130	157
14	64	93	240	98	29	96	363	125	98
15	64	89	224	84	30	376	348	114	75
					31	224		108	

Monthly discharge of Blanco River at Wimberley, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October				
November				
December			78.0	23,400
January				
February				
March	376	26	87.2	5,360
April	10,600	84	713	42,400
May	898	108	289	17,800
June	491	66	111	6,600
July				
August			60.0	10,900
September				
The year	10,600		147	106,000

NOTE.—Mean discharge and total run-off estimated from Oct. 1 to Feb. 28 and from July 1 to Sept. 30.

PLUM CREEK NEAR LOCKHART, TEX.

LOCATION.—At steel highway bridge on Lockhart-Sea Willow-Tilmon highway, 700 feet below mouth of Dry Creek and 7 miles southeast of Lockhart, Caldwell County.

DRAINAGE AREA.—184 square miles (measured on topographic maps and base map of Texas).

RECORDS AVAILABLE.—January 13, 1925, to September 30, 1926.

GAGE.—Inclined and vertical staff gage on right bank at upstream side of bridge; read by Otto Anton.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand and clay; shifts. Channel straight for 200 feet above and 250 feet below bridge. Both banks of earth, heavily wooded, and subject to overflow. Before bank-full stage is reached at the bridge, both banks are overflowed above and bridge is surrounded by water. Low-water control formed by clay and drift shoal 10 feet below gage; subject to shift. High-stage control indefinite.

EXTREMES OF DISCHARGE.—Maximum stage during year, by levels to flood marks 22.6 feet at 11 p. m. April 21 (discharge, 26,000 second-feet); minimum discharge, 0.60 second-foot August 12–15, September 17–25 and 30.

1925–1926: Maximum stage, that of April 21, 1926; no flow July 2 to September 12, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 1,600 second-feet and extended through one slope measurement made at a stage of 22.6 feet. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Shifting-control method used April 24 to May 3 and July 11 to September 30. Daily records poor; monthly records fair.

Discharge measurements of Plum Creek near Lockhart, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	15.32	1,450	Apr. 21	22.60	[a]26,000	June 8	1.01	5.9
Do	13.72	1,130	Apr. 28	1.83	21.8	July 6	.55	[b]1.50
Oct. 23	.66	2.34	June 3	1.70	17.5	Aug. 26	.45	.78

[a] Discharge determined by slope method. [b] Discharge estimated.

Daily discharge, in second-feet, of Plum Creek near Lockhart, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	16	2.8	16	11	3.0	28	60	367		0.9	0.8
2	2.8	11	2.8	144	9.1	3.0	22	46	233		23	.8
3	2.3	11	2.8	251	8.0	2.8	20	22	19		3.1	.8
4	2.3	8.8	2.8	55	7.5	4.1	19	383	14		1.7	.8
5	2.2	450	2.8	25	7.0	7.8	19	126	41	1.5	1.0	.7
6	2.1	1,640	2.8	16	5.2	5.2	19	1,160	21		.8	.7
7	2.0	152	2.8	12	5.2	42	31	165	14		.8	.8
8	2.0	40	2.8	9.1	4.6	14	26	33	6.0		.8	.8
9	2.1	20	2.8	6.7	4.5	10	24	30	5.9		.8	.8
10	2.1	17	2.8	5.2	4.5	2,500	248	25	4.5		.7	.8
11	2.0	11	2.8	5.2	4.3	411	112	21	3.9	14	.7	.8
12	17	8.0	2.8	4.6	4.3	122	44	18	4.9	19	.6	2.4
13	261	6.7	2.8	4.2	4.3	60	18	17	4.5	2.2	.6	1.9
14	3,280	6.7	2.8	4.0	4.3	46	17	17	4.5	1.8	.6	1.0
15	85	5.0	2.8	3.9	4.2	30	18	17	4.1	10	.6	.7
16	2,400	4.2	5.2	3.8	4.0	14	18	16	3.9	3.5	.8	.7
17	316	3.8	4.5	160	3.9	221	17	16	3.6	2.7	.8	.6
18	20	3.1	4.5	44	3.9	467	17	16	3.3	17	.8	.6
19	9.6	3.1	8.0	14	3.9	120	15	22	3.1	5.3	.9	.6
20	6.7	3.1	4.9	86	3.9	57	422	19	2.8	3.3	.9	.6
21	4.5	3.1	4.8	41	3.9	108	11,500	19	2.8	2.6	.8	.6
22	3.0	3.0	4.6	30	3.8	82	7,360	18	2.7	15	.8	.6
23	2.3	2.9	4.1	13	3.5	25	145	18	13	14	.8	.6
24	2.0	3.0	3.5	8.6	3.3	12	92	17	4.9	7.9	.8	.6
25	7.3	3.0	3.1	8.4	3.3	526	44	16	3.9	4.6	.8	.6
26	4.5	3.0	3.1	53	3.3	91	30	16	3.8	3.4	.7	.8
27	2.4	3.0	3.1	59	3.2	26	26	15	3.4	2.6	.8	.8
28	2.2	2.9	3.1	28	3.0	19	21	14	2.8	2.1	.9	.7
29	2.2	2.8	3.1	19	------	20	20	14	2.3	1.5	.9	.7
30	388	2.8	3.1	17	------	1,050	20	14	2.1	1.2	.8	.6
31	56	------	3.1	14	------	80	------	14	------	.9	.8	------

NOTE.—Discharge partly estimated Apr. 27. Braced figure shows estimated mean discharge for period indicated.

Monthly discharge of Plum Creek near Lockhart, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,280	2.0	222	13,700
November	1,640	2.8	81.7	4,860
December	8.0	2.8	3.48	214
January	251	3.8	37.4	2,300
February	11	3.0	4.82	268
March	2,500	2.8	199	12,300
April	11,500	15	680	40,500
May	1,160	14	77.5	4,770
June	367	2.1	26.9	1,600
July	19	.9	4.83	297
August	23	.6	1.61	98.8
September	2.4	.6	.81	48.2
The year	11,500	.6	112	81,000

SAN ANTONIO RIVER AT SAN ANTONIO, TEX.

LOCATION.—At South Alamo Street Bridge in San Antonio, Bexar County, 4 miles below San Antonio Springs, source of normal flow of river, and 1¼ miles above mouth of San Pedro Creek.

DRAINAGE AREA.—38 square miles (measured on topographic map and United States Army progressive military maps.

RECORDS AVAILABLE.—January 26, 1915, to September 30, 1926. Miscellaneous discharge measurements were made from 1895 to 1906.

GAGE.—Gurley graph water-stage recorder on right bank at downstream side of bridge; attended by employees of city of San Antonio.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel is straight for 100 feet below and curved above gage. Bed composed of sand, gravel, and silt. Control formed by gravel bar; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, 8.30 feet at 4.30 p. m. April 20 (discharge about 1,940 second-feet); minimum stage, 1.25 feet at 3.40 a. m. November 29 (discharge, 7.7 second-feet).

1914–1926: Maximum stage determined from flood marks on gage, 20.14 feet at 3 a. m. September 10, 1921 (discharge, 15,300 second-feet, determined by slope method and Kutter's formula); minimum discharge, 5.1 second-feet at 10 a. m. July 12, 1925. City of San Antonio turned flow from well into river during summer of 1925 to keep it from going dry.

DIVERSIONS.—Quantity of water diverted above gage not known, but believed to be negligible. Considerable land is irrigated from diversions below gage.

REGULATION.—Operation of water wheels at Guenther Flour Mills, just above gage, causes sharp fluctuations in stage.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 19 to 300 second-feet and poorly defined above. Operation of water-stage recorder satisfactory, except as noted. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day except as noted in footnote to table of daily discharge. Records good.

Normal flow of San Antonio River comes from springs within city limits, but two tributaries from the north furnish considerable run-off at times of heavy precipitation. Changes in mean daily stage during periods of low flow are believed to be due to pumping from deep wells for city water supply, and use of artesian water for irrigation in areas adjacent to the river, for it is thought that the wells draw from the underground reservoir that feeds the river by springs.

Discharge measurements of San Antonio River at San Antonio, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	1.68	29.4	Jan. 21	1.70	36.6	Apr. 17	1.61	46.5
Dec. 4	1.68	29.0	Mar. 6	1.38	27.9	June 24	1.88	80

Daily discharge, in second-feet, of San Antonio River at San Antonio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	28	34	64	37	26	47	131	114	79	52	41
2		35	32	43	37	26	48		112	92	53	40
3	28	32	33	36	36	25	44	131	111	82	54	40
4	26	32	31	36	36	25	43		168	80	54	41
5	29	40	28	38	34	26	47	238	106	80	52	41
6	29	49	28	36	35	27	46		103	82	52	40
7	28	34	41	35	32	28	44		103	79	50	40
8	28	31	34	34	40	26	43		98	75	49	39
9	28	32	31	35	35	36	65		96	70	53	39
10	27	31	32	32	32	58	115	131	95	69	48	38
11	26	30	32	34	35	32	49		111	67	48	37
12		35	32	32	36	33	50		95	69	47	34
13		36	32	33	36	34	52		92	69	45	36
14		36	32	33	34	33	45		94	68	49	34
15	60	32	36	32	34	34	46	131	89	65	47	33
16	34	34	32	61	33	57	45	133	84	62	48	35
17	28	35	33	35	34	64	45	169	82	61	46	35
18	50	35	33	34	32	41	42	142	80	59	47	35
19	31	38	30	34	31	45	44		82	61	43	37
20	30	36	30	34	32	49	543	126	80	59	44	39
21	31	31	31	36	30	49	442		82	57	42	38
22	32	29	29	31	32	50	150	126	91	63	40	35
23	32	32	24	36	31	48	124	121	79	59	43	36
24	30	31	26	39	31	46	124	121	77	59	45	35
25	33	28	27	36	30	66	111	121	79	58	36	34
26	32	32	27	32	36	48	114	117	79	58	36	34
27	31	33	27	33	29	47	112	119	114	57	41	35
28	30	32	27	34	24	46	112	116	83	56	43	38
29	34	31	27	35	------	49	116	114	83	55	41	35
30	30	40	26	37	------	85	126	116	80	54	45	34
31	28	------	26	36	------	49	------	117	------	53	41	------

NOTE.—Discharge partly estimated or interpolated Oct. 3, Nov. 22, Dec. 27, Apr. 20–24, May 1, 5, 15, 22, June 4, 5, July 24–31, Sept. 4–11. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of San Antonio River at San Antonio, Tex., for the year ending September, 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	60	----------	30.2	1,850
November	49	28	33.7	2,000
December	41	24	30.4	1,870
January	64	31	36.6	2,250
February	40	24	33.4	1,850
March	85	25	42.2	2,590
April	543	42	101	6,020
May	238	114	132	8,100
June	168	77	94.7	5,640
July	92	53	66.4	4,080
August	54	36	46.3	2,840
September	41	33	36.9	2,200
The year	543	----------	57.0	41,300

SAN ANTONIO RIVER NEAR FALLS CITY, TEX.

LOCATION.—At Falls City-Campbellton highway bridge, half a mile above mouth of Scared Dog Creek and 3.4 miles southwest of Falls City, Karnes County.

DRAINAGE AREA.—2,070 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—April 14, 1925, to September 30, 1926.

GAGE.—Stevens continuous recorder just above bridge on left bank; attended by Chris Ploch.

DISCHARGE MEASUREMENTS.—Made from highway bridge by wading or from bridge just below Falls City.

CHANNEL AND CONTROL.—Channel straight for half a mile above and below gage. Bed of mud; shifts. Right bank of earth, wooded, and subject to overflow at extremely high stages. Left bank of earth, wooded, and not subject to overflow. Both banks fairly permanent. One channel below gage height 23 feet and two above. Control for low and intermediate stages is solid rock ledge half a mile below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 10.53 feet at 11.40 p. m. April 23 (discharge, 9,260 second-feet); minimum stage, 1.07 feet from 3 p. m. October 12 to 10.30 p. m. October 13 (discharge, 65.0 second-feet).

1925–1926: Maximum stage, from water-stage recorder, that of April 23, 1926; minimum stage, 1.01 feet August 2, 1925 (discharge, 48 second-feet).

DIVERSIONS.—Medina Reservoir, having a capacity of 254,000 acre-feet, is on Medina River about 50 miles above its confluence with San Antonio River.

REGULATION.—Slight regulation by Medina Dam.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined from 40 to 9,000 second-feet. Operation of water-stage recorder not satisfactory. Daily discharge determined by applying to rating table mean daily gage height obtained from recorder graph by inspection, by averaging discharge for fractional parts of a day, or as noted in footnote to table of daily discharge. Records poor.

Discharge measurements of San Antonio River near Falls City, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	1.10	74	Apr. 22	6.26	4,740	Apr. 23	10.04	8,750
Dec. 12	1.22	109	Do	6.62	4,790	June 25	1.36	231
Jan. 19	1.31	170	Apr. 23	8.78	7,370	July 8	1.28	159
Apr. 4	1.30	163	Do	9.67	8,190	Sept. 14	1.13	86

Daily discharge, in second-feet, of San Antonio River near Falls City, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	92	109	119			534	2,500		190	119	98
2	84	95		124			248	1,380		160	114	95
3	78	92		323			218				114	95
4	74	92		364	120	110	188				124	95
5	78	92		198			188			160	145	95
6	78	110		140			182				129	98
7	78	571	110	134	119	129			290		124	109
8	74			134		124				150	119	106
9	74			122		124		900		150	114	98
10	71			109		174				145	95	95
11	71	350			120	202	600			145	109	92
12	82		119			232				145	102	88
13	65		129	120		140			270	140	98	84
14	78		124			119			200	316	95	84
15	74	102	119			114				169	109	88

Daily discharge, in second-feet, of San Antonio River near Falls City, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	237					127	160	314		145	102	92
17	286					281	166			150	106	84
18	259		140		120	381	160			150	102	84
19	96			171		510	155			140	95	84
20	98					226	160		200	134	95	81
21	92		129	140	109	182	960			129	84	81
22	92	135				182	4,480			134	81	84
23	88					182	7,950	500		140	81	81
24	88		120	119		182	7,250		270	134	81	81
25	92			124	105	176			193	215	78	81
26	92					286				150	78	81
27	95		119			590	2,500			134	78	78
28	92		124	120		242			190	134	74	74
29	92	109	124			176				114	100	81
30	92	109	124			366		237		114	92	81
31	92		119			510		290		119	95	

NOTE.—Discharge partly estimated Nov. 29, Dec. 1, 12, 15, 21, 27, Jan. 8, 10, 19, 24, 25, Feb. 7, 21, Mar. 7, Apr. 2, 4, 6, 16, May 2, 16, 30, June 13, 24, 25, July 2, 8. Discharge interpolated Apr. 3. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of San Antonio River near Falls City, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	286	65	106	6,510
November		92	189	11,200
December			121	7,420
January			143	8,770
February			116	6,430
March	590		213	13,100
April	7,950		1,450	86,100
May			739	45,500
June			238	14,200
July	316	114	153	9,410
August	145	74	101	6,210
September	109	74	88.3	5,250
The year	7,950	65	304	220,000

SAN ANTONIO RIVER AT GOLIAD, TEX.

LOCATION.—At Galveston, Harrisburg & San Antonio Railway bridge in Goliad, Goliad County, 6½ miles above mouth of Manahuilla Creek.

DRAINAGE AREA.—3,910 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—June 19, 1924, to September 30, 1926.

GAGE.—Chain gage attached to upstream guardrail of bridge; read by J. T. Lacy.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand; subject to shift. Channel straight for 150 feet above and half a mile below gage. Bank covered with heavy growth of brush and light timber; right bank subject to overflow at medium stages; left bank not subject to overflow. Control is indefinite; formed by bed and banks of stream and brush along banks.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 31.0 feet at 8 p. m. April 25 (discharge, 11,900 second-feet); minimum stage, 3.72 feet September 26–30 (discharge, 85 second-feet).

1924–1926: Maximum stage recorded, that of April 25, 1926; minimum stage, 3.19 feet at 7.45 a. m. August 24, 1925 (discharge, 58 second-feet).

DIVERSIONS.—Medina Reservoir, with storage capacity of 254,000 acre-feet, is on Medina River about 50 miles above its confluence with San Antonio River. Diversion works 4 miles below dam have a capacity of 850 second-feet.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 90 to 4,000 second-feet and fairly well defined from 4,000 to 12,000 second-feet. Gage read to hundredths twice daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements of San Antonio River at Goliad, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	12.44	1,940	Apr. 25	30.69	a 11,200	Apr. 27	16.94	2,640
Do	11.47	1,690	Apr. 26	30.67	a 11,600	Do	14.88	2,160
Dec. 19	4.33	152	Do	29.89	a 9,860	July 7	5.02	248
Apr. 15	6.38	513	Apr. 27	19.37	3,350	Sept. 14	3.93	106
Apr. 24	28.86	a 9,690	Do	17.87	2,900			

a Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.

Daily discharge, in second-feet, of San Antonio River at Goliad, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	282	166	143	274	133	120	575	777	323	178	143	120
2	1,530	166	133	391	133	120	445	1,050	445	178	143	120
3	438	154	133	357	124	110	290	2,460	340	166	154	102
4	224	154	133	248	124	110	216	1,490	306	166	143	102
5	133	154	133	216	120	110	178	1,000	391	166	143	120
6	115	154	133	203	120	120	178	1,450	409	190	143	120
7	110	154	133	190	133	124	203	2,270	575	230	143	120
8	102	158	133	190	133	133	178	2,790	518	216	143	110
9	93	651	133	178	143	154	166	2,620	445	216	133	106
10	97	714	154	154	143	625	1,500	1,480	323	203	143	102
11	89	537	154	154	143	1,100	4,860	842	290	178	154	102
12	89	306	154	154	143	679	4,110	714	274	166	143	102
13	498	216	143	154	143	374	1,680	633	259	192	143	93
14	6,900	133	143	154	133	340	833	594	244	636	143	102
15	7,310	138	154	154	133	261	501	518	216	648	143	102
16	2,780	133	178	154	143	194	340	499	216	501	143	102
17	1,880	110	178	143	143	369	290	516	203	203	143	102
18	1,260	119	190	332	143	1,050	244	3,550	178	190	143	102
19	617	736	154	323	133	1,000	210	2,310	178	190	143	102
20	409	274	154	306	133	864	203	908	190	178	143	93
21	340	216	154	259	133	704	203	653	203	178	133	93
22	230	178	154	216	133	274	1,410	499	203	190	133	93
23	166	154	143	190	124	230	5,130	499	216	688	133	93
24	166	133	143	178	124	203	8,480	445	348	383	133	93
25	166	110	133	166	124	190	11,400	391	463	203	133	89
26	154	106	133	154	124	178	10,600	391	374	166	133	85
27	154	102	133	143	124	166	3,330	391	259	244	133	85
28	203	102	154	143	120	289	1,070	357	203	203	124	85
29	166	102	190	143	-------	427	931	323	190	154	124	85
30	166	133	216	133	-------	638	931	323	178	154	106	85
31	154	-------	230	143	-------	693	--------	323	-------	143	110	------

Monthly discharge at San Antonio River at Goliad, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	7,310	89	872	53,600
November	736	102	222	13,200
December	230	133	153	9,410
January	391	133	203	12,500
February	143	120	132	7,340
March	1,100	110	385	23,700
April	11,400	166	2,020	120,000
May	3,550	323	1,070	65,600
June	575	178	299	17,800
July	688	143	248	15,300
August	154	106	138	8,460
September	120	85	100	5,970
The year	11,400	85	488	353,000

SAN PEDRO CREEK AT SAN ANTONIO, TEX.

LOCATION.—At south end of Missouri-Kansas-Texas Railroad culvert 200 feet south of Arsenal Street crossing, 1 mile above mouth of Salsamora and Martinez Creeks, 2 miles below San Pedro Springs, its source, and 2½ miles above confluence with San Antonio River.

DRAINAGE AREA.—Indeterminate.

RECORDS AVAILABLE.—July 20, 1916, to September 30, 1926.

GAGE.—Gurley 7-day water-stage recorder; attended by engineers of city of San Antonio.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge in vicinity.

CHANNEL AND CONTROL.—Bed and banks of smooth concrete; permanent. Low-stage control is a 4 by 4 inch timber bolted across bed of flume. Channel straight above and below station.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.4 feet at 11 a. m. April 20 (discharge, 1,070 second-feet); minimum stage, 0.26 foot for short period August 16 (discharge, zero).

1916–1926: Maximum stage recorded, 8.6 feet at 11.30 p. m. September 9, 1921, when backwater from Alizan Creek existed (discharge not determined); minimum stage, that of August 16, 1926.

DIVERSIONS.—None.

REGULATION.—Flow partly regulated by small dam at swimming pool in San Pedro Park, a few miles above.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well-defined below 200 second-feet and extended above on basis of determinations from Kutter's formula. Operation of water-stage recorder satisfactory, except as noted. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

Entire flow of San Pedro Creek, except during times of heavy precipitation, is furnished by San Pedro Springs, and the flow at this station is believed to be that which reaches San Antonio River. Martinez and Salsamora Creeks carry no water except during heavy local rains and have been known to be dry for several years at a time.

Discharge measurements of San Pedro Creek at San Antonio, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	0.50	7.31	Mar. 6	0.48	6.76
Dec. 4	.50	6.58	Apr. 17	.51	9.18

Daily discharge, in second-feet, of San Pedro Creek at San Antonio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	6.5	6.5	19	7.5	8.0	6.5	21	11	13	10	6.5
2	6.5	7.0	6.5	11	7.5	7.5	6.5	14	9.6	15	7.0	7.5
3	6.5	7.0	6.5	8.0	7.0	7.0	6.5	15	9.6	11	8.5	6.5
4	6.5	7.0	6.5	8.0	7.0	7.5	6.5	15	20	9.6	10	8.5
5	6.0	16	6.5	7.0	7.0	7.0	6.0	44	13	9.0	11	9.0
6	6.0	12	6.5	6.0	7.0	7.5	6.0	18	13	9.0	5.6	8.5
7	6.0	8.0	10	6.0	7.0	7.0	6.0	14	11	9.0	7.0	8.5
8	6.0	7.0	7.5	6.0	7.0	7.0	6.5	14	11	9.0	8.5	8.5
9	6.0	7.0	6.0	6.0	7.0	13	20	}	8.0	9.0	6.0	10
10	6.5	6.5	6.0	6.0	7.0	15	11	}	8.5	7.5	7.0	5.2
11	6.5	6.5	6.0	6.0	7.0	7.0	9.6	} 14	21	9.6	7.5	7.0
12	7.5	6.5	6.0	5.6	7.0	7.0	9.0	}	11	9.6	10	8.5
13	7.5	6.5	6.0	5.6	7.0	7.0	8.5	}	10	8.0	7.5	7.5
14	9.0	6.5	6.0	5.6	7.0	7.0	8.5	}	9.6	9.6	8.5	8.0
15	34	6.5	9.0	5.6	7.0	7.0	9.0	14	9.6	8.5	8.5	8.5
16	8.5	6.5	6.0	18	7.0	16	8.5	16	9.6	8.0	4.0	8.5
17	6.5	6.5	6.0	7.5	7.0	16	7.0	30	10	6.5	7.0	7.0
18	6.5	6.5	6.0	6.5	7.5	9.0	9.1	16	11	8.5	7.5	7.5
19	6.5	6.5	6.0	6.5	7.5	8.5	9.0	15	11	9.0	8.5	9.0
20	6.5	6.5	6.0	6.5	7.5	8.5	163	15	12	9.0	6.5	9.0
21	6.5	6.5	6.0	8.0	8.0	8.5	35	14	11	9.6	7.5	8.5
22	6.5	6.5	6.0	6.5	8.0	8.0	16	14	14	13	9.0	8.0
23	6.5	6.5	6.0	8.5	11	8.0	13	14	11	8.5	4.0	9.0
24	6.5	6.5	6.0	9.6	8.5	7.5	14	14	11	8.5	7.5	6.5
25	7.5	7.0	6.0	7.5	8.0	12	14	14	11	10	7.5	8.5
26	6.5	7.0	6.0	7.5	7.5	9.6	13	13	7.5	9.6	8.0	9.6
27	6.5	9.0	6.0	7.5	8.0	7.5	13	14	24	8.5	7.0	7.0
28	6.5	6.5	6.5	10	8.0	7.5	13	13	13	9.0	7.5	7.5
29	7.5	6.0	6.5	7.5	-------	8.0	14	12	11	9.6	7.5	8.0
30	7.0	6.5	6.5	7.5	-------	20	17	12	12	8.0	4.4	8.0
31	6.5	-------	6.5	7.5	-------	6.5	-------	11	-------	9.6	5.2	-------

NOTE.—Discharge partly estimated Mar. 6, 11-13, 31, Apr. 1-2, May 15, and Sept. 18. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of San Pedro Creek at San Antonio, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	34	6.0	7.65	470
November	16	6.0	7.23	430
December	10	6.0	6.44	396
January	19	5.6	7.88	484
February	11	7.0	7.48	416
March	20	6.5	9.12	561
April	163	6.0	16.2	961
May	44	11	15.8	972
June	24	7.5	11.8	704
July	15	6.5	9.40	578
August	11	4.0	7.46	459
September	10	5.2	7.99	476
The year	163	4.0	9.54	6,910

MEDINA RIVER NEAR PIPE CREEK, TEX.

LOCATION.—3 miles above backwater from Medina Dam, 3½ miles above mouth of Pipe Creek, and 4 miles southwest of Pipe Creek post office, Bandera County.

DRAINAGE AREA.—412 square miles (measured on United States Army progressive military maps).

RECORDS AVAILABLE.—December 6, 1922, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder on left bank; inspected by R. E. Buck.

DISCHARGE MEASUREMENTS.—Made by wading or by timing drift.

CHANNEL AND CONTROL.—Bed consists of rock and gravel and some moss. Channel straight for 1,000 feet above and below gage. Right bank rocky, thickly wooded with small trees and brush, and not subject to overflow; left bank of sand, gravel, and rock, sparsely covered with small trees, and subject to overflow at a stage of 9 feet. Low-water control, up to a stage of about 0.80 foot, consists of concrete weir 100 feet below gage. Weir is about 1.5 feet high for a width of 95 feet, with abutments 4 feet higher than crest. Rock riffle 600 feet below gage serves as control for medium stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 19.8 feet April 21 (discharge not determined); minimum discharge, 6.8 second-feet September 26–27.

1922–1926: Maximum stage recorded, that of April 21, 1926; minimum stage, 0.56 foot August 29, 1925 (discharge, 2.7 second-feet).

DIVERSIONS.—None above. Medina Reservoir, with storage capacity of 254,000 acre-feet, is below. Diversion works have a capacity of 850 second-feet, but only a small percentage of this capacity was used in 1923–1926.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 80 second-feet, fairly well defined from 80 to 250 second-feet, poorly defined from 250 to 5,500 second-feet, and extended above to cover the maximum mean daily stage for the year; extension may be subject to considerable error. Operation of water-stage recorder not satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records for low stages fair; for high stages, poor.

Discharge measurements of Medina River near Pipe Creek, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec-feet*		*Feet*	*Sec.-feet*		*Feet*	*Sec.-feet*
Oct. 9	0.64	9.10	Dec. 7	0.78	30.7	Sept. 11	0.67	15.7
Oct. 15	9.20	[a] 5,550	Mar. 5	.74	25.5			
Oct. 16	8.40	[a] 4,820	July 10	.78	42.1			

[a] Surface floats timed and coefficient of 0.90 used to reduce to mean velocities.

Daily discharge, in second-feet, of Medina River near Pipe Creek, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	35	33	35	40	24	72	119	109	52	84	27
2	12	35	31	38	38	27	67	115	106	50	77	24
3	12	35	33	38	38	27	62	115	102	47	64	22
4	14	35	31	40	35	27	54	756	111	86	62	20
5	12	39	33	40	35	27	54	749	104	77	54	20
6	12	730	31	38	35	29	54	452	84	57	50	20
7	12	479	27	35	33	29	54	317	77	54	47	20
8	11	166	27	35	33	29	54	294	74	119	44	18
9	9.2	102	27	33	33	29	54	253	69	60	42	18
10	9.2	79	29	33	33	92	54	208	64	42	38	16
11	11	77	29	35	31	78	54	181	62	38	82	16
12	14	74	29	33	33	47	52	288	60	38	67	16
13	193	72	27	33	31	44	52	203	60	35	47	16
14	82	72	29	33	31	42	50	170	60	163	40	16
15	1,840	69	29	33	31	42	50	149	54	54	40	14
16	578	62	31	33	31	42	44	137	52	42	40	14
17	290	60	29	31	31	50	44	204	50	35	38	14
18	166	54	31	31	29	57	42	153	47	35	38	14
19	117	50	29	31	29	57	42	123	291	33	35	14
20	81	44	29	31	27	57	189	113	94	31	33	12
21	62	40	27	31	27	57	6,010	109	62	31	29	12
22	54	35	29	29	27	60	519	106	234	29	27	12
23	44	35	27	29	24	60	331	102	145	268	22	9.2
24	40	35	24	31	24	60	248	98	72	1,640	22	9.2
25	40	35	24	31	24	60	194	93	60	314	22	8.0
26	40	35	24	35	24	64	161	89	52	173	22	6.8
27	38	35	24	35	24	69	143	84	52	127	22	6.8
28	35	33	27	35	24	69	133	81	57	102	22	8.0
29	35	33	27	35	-------	67	129	77	52	84	22	8.0
30	33	31	29	38	-------	157	121	74	52	77	24	8.0
31	33	-------	31	38	-------	95	-------	104	-------	81	27	-------

NOTE.—Discharge partly estimated Oct. 13, 15–17, 29–31, Nov. 5–15, 22, Mar. 10, 11, 30, Apr. 20–21, May 4, 5, 17, June 5, 19, 22.

Monthly discharge of Medina River near Pipe Creek, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,840	9.2	127	7,820
November	730	31	90.5	5,390
December	33	24	28.6	1,760
January	40	29	34.1	2,090
February	40	24	30.5	1,700
March	157	24	54.0	3,320
April	6,010	42	306	18,200
May	756	74	197	12,100
June	291	47	85.6	5,090
July	1,640	29	131	8,080
August	84	22	41.4	2,540
September	27	6.8	14.6	871
The year	6,010	6.8	95.3	69,000

MEDINA RIVER NEAR RIOMEDINA, TEX.

LOCATION.—Just above Medina Valley Irrigation Co.'s diversion dam, a mile above Haby's crossing, 4 miles below company's main dam, and 6 miles northwest of Riomedina, Medina County.

DRAINAGE AREA.—606 square miles (measured on United States Army progressive military maps).

RECORDS AVAILABLE.—January 21, 1922, to September 30, 1926.

GAGE.—Gurley-graph water-stage recorder attached to right upstream side of diversion dam; attended by J. B. Milam.

DISCHARGE MEASUREMENTS.—Made from cable 2,000 feet below gage or by wading near Haby's crossing, 1 mile below gage.

CHANNEL AND CONTROL.—Channel of rock and gravel; permanent. Banks of rock and earth, wooded, and not subject to overflow. Control is concrete spillway of dam; permanent. Point of zero flow over dam is 0.60 foot.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.17 feet at 5 a. m. April 21 (discharge, 11,800 second-feet), no flow for several periods.

1922–1926: Maximum stage, that of April 21, 1926; no flow over dam for several periods.

ICE.—None.

DIVERSIONS.—Water is diverted to Medina Canal just above gage. About 5,000 acres irrigated in 1922. Maximum capacity of canal, 850 second-feet. See "Medina Canal near Riomedina."

REGULATION.—Flow regulated by main storage dam, 4 miles upstream, except when main reservoir is full and water flows over spillway.

ACCURACY.—Stage-discharge relation for flow over dam permanent. Rating curve well defined below 45 second-feet and extended above by means of weir formula, using low-water coefficients determined from current-meter measurements. Operation of water-stage recorder good. Daily discharge determined by applying to rating table mean daily gage height determined from recorder graph by inspection or by means of planimeter or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. A seepage curve showing relation of height of water in reservoir to seepage past the dam and based on discharge measurements made 1 mile downstream is fairly well defined for all stages. Mean monthly seepage determined by comparing mean monthly stage of reservoir with measurements made during year. Records fair.

COOPERATION.—Medina Valley Irrigation Co. furnishes daily gage readings of lake level which are used to determine the monthly seepage.

Discharge measurements of Medina River near Riomedina, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge[a]	Date	Gage height	Discharge[a]
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	−4.1	22.4	Jan. 20	−3.5	20.3
Dec. 5	−2.7	25.9	Mar. 5	−3.8	22.7

[a] No flow over dam, and discharge represents seepage inflow between dam and measuring section.

Daily discharge, in second-feet, of Medina River near Riomedina, Tex., for the year ending September 30, 1926

Date	Discharge	Date	Discharge	Date	Discharge
Apr. 21	1,270	May 3	26	May 15	26
Apr. 22	167	May 4	26	May 16	23
Apr. 23	123	May 5	131	May 17	20
Apr. 24	108	May 6	56	May 18	23
Apr. 25	77	May 7	45	May 19	17
Apr. 26	62	May 8	30	May 20	20
Apr. 27	50	May 9		May 21	20
Apr. 28	40	May 10		May 22	20
Apr. 29	56	May 11	20	May 23	15
Apr. 30	50	May 12		May 24	1.5
May 1	26	May 13			
May 2	26	May 14			

NOTE.—Discharge partly estimated May 8. No flow on days for which discharge is not shown. Braced figure shows estimated mean discharge for period indicated.

Monthly discharge and seepage past station of Medina River near Riomedina, Tex., for the year ending September 30, 1926

Month	Discharge over dam				Seepage past dam		Total run-off
	Maximum	Minimum	Mean	Total	Mean	Total	
	Second-feet	*Second-feet*	*Second-feet*	*Acre-feet*	*Second-feet*	*Acre-feet*	*Acre-feet*
October	0	0	0	0	22	1,350	1,350
November	0	0	0	0	26	1,550	1,550
December	0	0	0	0	27	1,660	1,660
January	0	0	0	0	20	1,230	1,230
February	0	0	0	0	20	1,110	1,110
March	0	0	0	0	23	1,410	1,410
April	1,270	0	66.8	3,970	25	1,490	5,460
May	131	0	21.7	1,330	26	1,600	2,930
June	0	0	0	0	25	1,490	1,490
July	0	0	0	0	25	1,540	1,540
August	0	0	0	0	25	1,540	1,540
September	0	0	0	0	25	1,490	1,490
The year	1,270	0	7.33	5,300		17,460	22,760

MEDINA CANAL NEAR RIOMEDINA, TEX.

LOCATION.—Just above upper end of flume No. 1 on Medina Valley Irrigation Co.'s main canal, one-third mile below head of canal, and 6 miles north of Riomedina, Medina County.

RECORDS AVAILABLE.—March 30, 1922, to September 30, 1926. Station maintained during irrigation seasons of 1920 and 1921 by United States Department of Agriculture in cooperation with Texas Board of Water Engineers for seepage studies.

GAGE.—Gurley graph water-stage recorder; attended by J. B. Milam.

DISCHARGE MEASUREMENTS.—Made by wading or from foot plank just above gage.

CHANNEL AND CONTROL.—Metal flume and concrete-lined canal; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.38 feet at 10.00 a. m. October 5 (discharge, 55 second-feet); no flow for several periods.

1922–1926: Maximum discharge, 128 second-feet June 26, 1923, and June 5 to 6, 1925; no flow for several periods.

DIVERSIONS.—Above all diversions from canal.

REGULATION.—Flow controlled by headgates. Canal ordinarily carries a small flow during nonirrigation season for domestic supply and stock water.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined for all stages. Operation of water-stage recorder satisfactory, except as noted in footnote to table of daily discharge. Daily discharge determined by applying to rating table mean daily gage height determined from recorder graph by inspection or by use of planimeter or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

Canal diverts from right bank of Medina River. Water used for irrigation in vicinity of Lacoste and Natalia.

Discharge measurements of Medina Canal near Riomedina, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	0.60	14.7	Jan. 20	0.69	17.1
Dec. 5	.74	20.0	Mar. 5	.30	6.52

Daily discharge, in second-feet, of Medina Canal near Riomedina, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	3.4	16	2.2	3.1	34	5.3	------		15	27	16
2	2.7	3.3	20	2.8	3.1	30	4.5	------	22	15	26	------
3	14	2.9	20	3.1	3.1	24	3.6	------		16	26	------
4	18	2.8	19	2.9	2.9	19	3.6	------		22	27	25
5	51	2.5	20	2.9	1.3	6.5	3.4	------	23	27	27	30
6	52	2.2	16	2.9	------	7.0	3.3	------	48	27	26	31
7	52	2.0	10	3.8	------	12	3.1	------	47	27	26	37
8	43	1.2	10	3.6	------	21	2.9	16	46	27	26	38
9	16	1.1	10	3.4	------	11	3.8	29	44	27	27	36
10	8.2	1.1	11	3.3	------	6.5	4.1	5.3	45	26	28	37
11	36	1.1	7.4	3.3	------	8.4	12	4.3	52	26	27	37
12	36	1.1	------	3.1	------	8.7	17	3.4	37	26	27	36
13	21	1.0	------	2.9	------	6.5	17	3.1	35	29	27	14
14	15	------	------	2.9	------	------	17	7.0	36	27	27	------
15	9.2	------	------	2.8	------	------	16	6.1	35	32	26	------
16	3.8	------	------	3.6	------	------	17	6.7	34	34	25	17
17	3.3	------	------	4.3	12	------	11	6.5	39	37	26	39
18	3.3	2.3	------	4.1	17	------	12	7.5	39	36	26	34
19	2.8	6.3	------	4.0	18	------	12	7.9	39	36	32	32
20	2.3	6.3	------	12	18	------	3.0	6.5	39	35	32	32
21	2.2	10	------	17	17	------	.6	6.1	37	42	32	32
22	2.0	7.2	6.7	17	18	------	------	6.1	23	38	33	32
23	2.0	7.0	13	17	18	------	------	15	15	4.7	33	32
24	14	6.7	18	17	18	------	------	23	15	4.7	34	32
25	17	6.3	17	17	18	5.7	------	25	16	5.2	32	33
26	9.6	6.5	6.0	17	18	17	------	25	15	12	27	32
27	20	6.7	2.0	17	18	16	------	23	15	19	27	32
28	18	6.5	2.0	17	5.8	16	------	5.6	15	21	27	32
29	20	7.9	2.0	17	------	16	------	5.6	15	26	27	31
30	9.5	8.9	2.2	16	------	6.0	------	16	15	26	28	30
31	3.8	------	2.2	3.9	------	3.1	------	22	------	26	26	------

NOTE.—Discharge determined from readings of Medina Irrigation Co.'s staff gage May 15, 27–29, June 18–19, July 8–10, 24, 30–31, Aug. 6–7, 14, 19–28, Sept. 10–11. Braced figure shows estimated mean daily discharge for period indicated. No flow on days for which discharge is not given.

Monthly discharge of Medina Canal near Riomedina, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October (30 days)	52	2.0	16.9	1,010
November (26 days)	10	1.0	4.40	227
December (21 days)	20	2.0	11.0	457
January	17	2.2	7.96	490
February (17 days)	18	1.3	12.3	415
March (20 days)	34	3.1	13.7	544
April (21 days)	17	.6	8.20	342
May (24 days)	29	3.1	11.7	559
June	52	15	30.2	1,800
July	42	4.7	24.9	1,530
August	34	25	28.0	1,720
September (26 days)	39	14	31.1	1,600
The year				10,700

CIBOLO CREEK AT SUTHERLAND SPRINGS, TEX.

LOCATION.—At highway bridge in Sutherland Springs, Wilson County, 5½ miles below mouth of Elm Creek.

DRAINAGE AREA.—665 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—June 22, 1924, to September 30, 1926.

GAGE.—Vertical staff on right bank at upstream side of bridge; read by J. S. Lane.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 500 feet above and below gage. Bed of sandy clay; shifts. Banks steep, covered with heavy growth of brush and small timber, and fairly permanent. Left bank not subject to overflow; right bank subject to overflow at a stage of about 39 feet, at which gage can not be reached from the right bank. Control is rock shoal one-fourth mile below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 28.5 feet at 7 a. m. April 21 (discharge, 23,800 second-feet; determined by slope method and subject to error); minimum stage, 2.10 feet at 5.40 p. m. October 24 (discharge, 7.1 second-feet).

1924–1926: Maximum stage, that of April 21, 1926; minimum stage, that of October 24, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 1,600 second-feet and poorly defined from 1,600 to 24,000 second-feet. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records for low and intermediate stages fair; for high stages, poor.

Discharge measurements of Cibolo Creek at Sutherland Springs, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	2.18	8.97	Apr. 16	2.20	17.6	Apr. 23	27.9	[a]19,000
Dec. 8	2.16	13.3	Apr. 21	28.5	[a]23,800	Apr. 28	2.79	87.9

[a] Discharge determined by slope method.

Daily discharge, in second-feet, of Cibolo Creek at Sutherland Springs, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	15	12	15	17	16	48	283	24	16	14	11
2	10	11	12	17	17	16	28	309	25	16	14	11
3	11	10	13	20	17	16	21	73	25	19	13	10
4	10	10	12	30	17	17	19	73	29	20	13	10
5	10	40	12	23	16	16	17	196	166	18	14	10
6	9.6	149	12	17	17	17	18	1,510	41	17	14	11
7	9.6	121	12	15	16	16	18	296	25	18	14	12
8	9.2	32	13	15	17	16	17	240	22	16	13	12
9	8.8	18	13	14	17	15	17	120	20	16	14	10
10	8.4	14	13	14	16	60	1,010	65	20	16	14	10
11	8.8	13	14	14	16	246	402	50	25	16	14	10
12	9.6	12	13	14	15	72	76	41	25	15	14	11
13	10	12	14	14	16	24	29	34	30	15	14	11
14	9.6	11	14	14	16	18	21	30	23	17	14	10
15	18	11	14	14	15	17	21	29	20	16	16	11
16	642	10	14	16	16	17	18	27	18	15	18	11
17	120	10	14	56	16	304	18	29	18	15	18	12
18	27	11	14	37	16	370	17	27	18	14	17	11
19	14	11	14	22	15	120	17	27	20	15	16	13
20	10	10	14	20	16	45	20	28	20	17	17	12

Daily discharge, in second-feet, of Cibolo Creek at Sutherland Springs, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	10	11	14	18	16	28	8,800	29	22	16	16	12
22	9.2	11	14	17	16	24	11,500	29	87	18	12	12
23	8.4	10	14	17	16	22	18,300	27	31	20	12	11
24	7.7	10	13	19	15	19	15,000	26	47	19	12	11
25	9.6	11	13	17	16	103	292	27	23	18	12	11
26	32	11	14	16	16	160	142	27	20	16	11	11
27	14	11	14	16	16	59	120	27	18	16	13	11
28	12	11	14	17	16	29	91	26	53	16	12	11
29	9.6	12	14	17	-------	22	77	26	29	15	13	11
30	54	12	13	18	-------	145	61	26	19	15	12	11
31	35	-------	13	17	-------	168	--------	25	-------	15	12	------

Monthly discharge of Cibolo Creek at Sutherland Springs, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	642	7.7	37.7	2,320
November	149	10	21.4	1,270
December	14	12	13.3	819
January	56	14	19.0	1,170
February	17	15	16.1	897
March	370	15	71.5	4,400
April	18,300	17	1,870	112,000
May	1,510	25	122	7,500
June	166	18	32.1	1,910
July	20	14	16.4	1,010
August	18	11	13.9	857
September	13	10	11.0	657
The year	18,300	7.7	186	135,000

NUECES RIVER BASIN

NUECES RIVER AT LAGUNA, TEX.

LOCATION.—1 mile northwest of Laguna, Uvalde County, 2.6 miles above Laguna-Uvalde road crossing, and 5 miles in an air line below mouth of Montell Creek.

DRAINAGE AREA.—764 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—October 25, 1923, to September 30, 1926.

GAGE.—Stevens water-stage recorder on right bank; attended by J. W. Bones or E. S. Altgelt.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Channel straight for 500 feet above and 2,400 feet below gage. Bed of rock, permanent. Right bank of rock, permanent, and not subject to overflow; left bank of rock, gravel, and earth, covered with trees and brush, and subject to overflow for 1,000 feet at extremely high stages. Control is rock and gravel shoal 800 feet below gage; fairly permanent. Prior to January 25, 1925, at extremely low stages, large part of flow probably went through gravel bar on left bank.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 14.88 feet at 2.45 p. m. July 23 (discharge, 27,000 second-feet); minimum stage, 1.87 feet from 9 p. m. July 15 to 2 a. m. July 16 (discharge, 30 second-feet).

1924–1926: Maximum stage, that of July 23, 1926; minimum discharge, 8.9 second-feet September 9–11, 1924.

By levels to distinct drift line, the flood of September 21, 1923, reached a stage of 26.5 feet, referred to datum of gage used since January 25, 1925, (discharge, 74,500 second-feet, determined by slope method). The flood of 1913 reached about the same stage. Floods in 1903 reached a slightly higher stage.

DIVERSIONS.—None.

REGULATIONS.—None.

ACCURACY.—Stage-discharge relation not permanent. Two curves used during year—one from October 1 to July 22, well defined below 1,300 second-feet, fairly well defined from 1,300 to 5,500 second-feet, and poorly defined above; the other from July 23 to September 30, well defined below 5,500 second-feet and poorly defined above. Operation of water-stage recorder satisfactory, except for short breaks in record. Daily discharge determined by applying to rating table mean daily gage height obtained from recorder graph by inspection or by planimeter or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to the table of daily discharge. Shifting-control method used April 17 to July 22. Records for low stages fair; for high stages, poor.

Discharge measurements of Nueces River at Laguna, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	2.04	55	Apr. 29	2.15	74	Aug. 10	2.49	119
Oct. 16	7.72	5,450	July 1	1.93	30.5	Aug. 25	2.34	80
Oct. 17	3.90	1,220	July 2	1.93	37.4	Sept. 3	2.27	62
Nov. 19	2.36	159	July 23	14.02	[a] 24,800	Sept. 21	2.20	44.9
Dec. 25	2.12	80	July 24	4.48	1,600			

[a] Surface velocities observed for part of measurement and coefficient used to reduce to mean velocities.

Daily discharge, in second-feet, of Nueces River at Laguna, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	123	112	78	67			72	63	36	252	66
2	72	119	112	75	67			75	63	38	233	64
3	70	119	108	75	67			78	60	39	210	62
4	67	115	112	75	67			84	67	39	197	62
5	65	112	112	72	67			81	63	38	184	64
6	63	160	108	72	67			108	60	36	171	62
7	63	234	108	75	67			271	58	36	163	56
8	60	230	98	72	67			276	56	35	151	54
9	60	243	95	70	67		67	183	54	34	147	54
10	58	238	95	37	67			152	51	32	139	52
11	58	230	95	67	67			141	51	31	143	52
12	58	212	95	65	65			137	49	31	155	49
13	63	204	95	65	65			130	48	32	147	46
14	63	191	92	65	65			123	46	32	135	49
15	320	183	92	67	65			112	45	30	124	44
16	2,050	175	92	70	63	67		105	43	31	120	44
17	1,260	167	89	67	60		75	123	43	32	113	44
18	595	164	89	67			72	101	42	34	106	52
19	398	160	86	70			67	92	42	35	102	46
20	300	156	84	70			92	89	41	35	99	44
21	252	148	84	67			92	86	41	35	95	44
22	216	145	84	67			92	81	42	35	92	44
23	191	137	84	67	67		92	78	42	9,570	89	44
24	171	133	84	67			86	75	39	2,910	92	44
25	171	130	78	67			84	72	38	932	86	42
26	171	126	78	67			81	70	38	597	82	42
27	156	126	78	67			78	67	38	450	82	40
28	145	123	81	67			75	67	41	363	79	40
29	137	119	78	67			75	65	39	313	72	40
30	130	115	75	67			75	65	39	287	72	37
31	130		72	67				63		276	69	

NOTE.—Discharge partly estimated Apr. 17. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Nueces River at Laguna, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	2,050	58	248	15,200
November	243	112	161	9,590
December	112	72	91.8	5,640
January	78	65	69.1	4,250
February	67		66.3	3,680
March			67.0	4,120
April	92		73.6	4,380
May	276	63	107	6,590
June	67	38	48.1	2,860
July	9,570	30	531	32,600
August	252	69	129	7,940
September	66	37	49.4	2,940
The year	9,570	30	138	99,800

NUECES RIVER AT COTULLA, TEX.

LOCATION.—100 feet upstream from Farmer Dam, half a mile below International-Great Northern Railroad bridge, 1.9 miles by road from post office at Cotulla, La Salle County, and 3 miles below mouth of Salt Creek.

DRAINAGE AREA.—5,260 square miles, large part of which is noncontributing at low stages owing to water entering a fault near Uvalde (measured on topographic maps, United States Army progressive military maps; and base map of Texas).

RECORDS AVAILABLE.—October 31, 1923, to September 30, 1926.

GAGE.—Vertical staff on left bank read by Kathleen Lind.

DISCHARGE MEASUREMENTS.—Made from highway bridge 1 mile upstream or from railroad bridge.

CHANNEL AND CONTROL.—Bed of sand and silt, probably permanent. Channel straight for 1 mile above and below gage. Right bank of earth, covered with rushes and subject to overflow at stage of 3.5 feet. Left bank of earth, wooded, and subject to overflow at extremely high stages. Low water control is concrete and rock dam 100 feet below gage. No vegetation on control proper, but much of the dam is only a few inches high, and just above the dam there is much aquatic growth, which may affect the stage-discharge relation. This control probably submerged at a stage of about 2 feet. At about 4-foot gage height another dam farther downstream probably serves as control, and this dam is probably submerged at a stage of 6 feet.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.5 feet at 5.00 a. m. April 23 (discharge, 9,820 second-feet); no flow for several periods.

1924–1926: Maximum stage recorded, 14.89 feet from 10 a. m. to 1 p. m., June 3, 1925 (discharge, 49,500 second-feet); no flow during several periods.

DIVERSIONS.—Much of low-water flow is diverted by pumping from storage reservoirs above; amount not known.

REGULATION.—Low-water flow regulated by storage reservoirs above.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined below 11,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except as noted in footnote to table of monthly discharge. Owing to leaks through dam (control), records for low stages are poor, and for high stages fair. Daily records not sufficiently accurate for publication.

Discharge measurements of Nueces River at Cotulla, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 16	0.36	[a] 0.0	July 26	−0.60	[a] 0.0
Apr. 12	1.08	37.8	Aug. 5	1.26	[b] 109

[a] Below point of zero flow. [b] Poor measurement.

Monthly discharge of Nueces River at Cotulla, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	456	0	83.8	5,150
November	32	0	14.4	833
December	0	0	.0	0
January	11	0	5.82	358
February	0	0	.0	0
March	6.0	0	1.13	69.4
April	9,380	0	1,120	66,400
May	1,620	0	353	21,700
June	3,280	0	478	28,400
July	1,700	0	194	11,900
August	730	0	70.1	4,310
September	0	0	.0	0
The year	9,380	0	192	139,000

NOTE.—Discharge represents flow over the dam only. Leakage through dam estimated as follows: Oct. 1 to Dec. 6, 1.5 second-feet; Mar. 20 to July 19, from 0 to 50 second-feet; Aug. 22 to Sept. 4, 50 second-feet. Discharge interpolated Apr. 11, 18–20, May 19–21, Aug. 5, 8–14.

NUECES RIVER NEAR THREE RIVERS, TEX.

LOCATION.—At San Antonio, Uvalde & Gulf Railroad bridge 2 miles southeast of Three Rivers, Live Oak County, and half a mile below mouth of Frio River.

DRAINAGE AREA.—15,600 square miles part of which is noncontributing at low stages, owing to water entering faults near Uvalde (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—July 1, 1915, to September 30, 1926.

GAGE.—Inclined and vertical staff on left bank or attached to piers of railroad bridge; read by Roy E. Kibbey, Adolph Orsak, or Ruby Franze.

DISCHARGE MEASUREMENTS.—Made by wading near gage, from highway bridge half a mile below gage, or from railroad bridge at gage.

CHANNEL AND CONTROL.—Bed of adobe shale and sand; does not change greatly. Channel straight above and below station. Banks wooded and not subject to overflow except at extremely high stages. Position of high-water control not known. Concrete low-water control 200 feet below gage; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 24.45 feet at 2 p. m. May 19 (discharge, 6,980 second-feet); no flow September 12–14 and 23–30.

1915–1926: Maximum stage recorded, 46.0 feet at 5 a. m. September 18, 1919 (discharge not determined, probably backwater due to Gulf storm); no flow during several periods.

DIVERSIONS.—Records of the Board of Water Engineers for the State of Texas show that about 10,000 acres has been declared irrigated by diversions above station.

REGULATION.—None of importance.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 18,000 second-feet. Gage read to tenths once daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records fair.

COOPERATION.—Record of stage furnished by United States Weather Bureau.

Discharge measurements of Nueces River near Three Rivers, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	5.46	710	Apr. 13	5.90	813	July 8	3.52	271
Dec. 18	2.00	24.5	Apr. 25	5.26	609	Sept. 12	1.18	[a].5

[a] Discharge estimated.

Daily discharge, in second-feet, of Nueces River near Three Rivers, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,380	7.0	12	14	38	9.0	478	1,510	685	1,000	910	12
2	3,520	7.0	9.0	54	31	9.0	186	1,390	315	1,150	585	9.0
3	2,560	6.8	9.0	696	31	9.0	117	1,270	315	1,270	685	7.0
4	1,810	99	7.0	718	25	7.0	95	1,210	585	1,510	850	5.0
5	1,660	118	7.0	322	20	7.0	75	1,690	685	1,810	910	3.2
6	1,690	1,060	7.0	176	20	7.0	58	3,200	410	1,510	1,030	13
7	1,630	2,800	5.0	176	20	7.0	40	5,100	248	535	1,090	21
8	1,300	3,660	5.0	195	16	9.0	127	5,270	214	315	735	20
9	331	2,290	3.0	176	16	19	91	4,710	60	231	395	8.4
10	248	517	3.0	137	12	1,360	152	4,220	48	186	195	4.4
11	141	315	3.0	117	12	2,100	950	3,730	48	137	147	1.0
12	195	231	1.0	75	12	608	490	2,860	48	106	113	.0
13	282	137	1.0	60	12	395	760	2,500	68	138	89	.0
14	248	99	.2	37	9.0	535	970	1,990	60	2,470	58	.0
15	214	91	9.0	34	9.0	535	1,120	1,600	60	3,340	44	8.9
16	497	58	25	306	9.0	610	1,360	1,000	68	2,350	37	81
17	299	38	79	307	9.0	1,600	1,030	556	60	2,110	31	12
18	204	38	31	231	9.0	1,870	430	3,410	68	2,440	126	7.7
19	176	60	24	135	7.0	1,030	347	6,600	388	1,960	147	68
20	133	48	20	83	7.0	430	248	4,550	1,940	450	106	12
21	85	38	16	40	7.0	315	204	1,930	1,690	195	60	5.0
22	37	38	12	38	7.0	195	176	1,300	760	214	41	2.0
23	25	31	9.0	38	7.0	176	195	790	910	379	24	.0
24	20	25	9.0	38	7.0	127	346	790	970	331	19	.0
25	16	20	9.0	38	7.0	75	710	790	410	248	55	.0
26	16	20	9.0	31	7.0	56	1,390	635	510	75	38	.0
27	12	20	9.0	31	7.0	43	2,650	610	850	54	38	.0
28	9.0	16	9.0	31	7.0	37	5,240	490	910	83	31	.0
29	7.0	16	9.0	31	-------	38	4,870	315	940	694	25	.0
30	7.0	12	7.0	25	-------	258	1,930	240	970	970	20	.0
31	7.0	-------	7.2	20	-------	970	-------	635	-------	850	16	------

NOTE.—Discharge partly estimated June 1–6 and 12–21.

Monthly discharge of Nueces River near Three Rivers, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	3,520	7.0	637	39,200
November	3,660	6.8	397	23,600
December	79	.2	11.8	725
January	718	14	142	8,750
February	38	7.0	13.6	754
March	2,100	7.0	434	26,700
April	5,240	40	894	53,200
May	6,600	240	2,160	133,000
June	1,940	48	510	30,300
July	3,340	54	939	57,700
August	1,090	16	279	17,200
September	81	0	10.0	596
The year	6,600	0	541	392,000

NUECES RIVER AT CALALLEN, TEX.

LOCATION.—At old pump house for city of Corpus Christi, half a mile northwest of Calallen, Nueces County, half a mile above edge of tidewater and breakwater dam, and 8 miles above Nueces Bay.

DRAINAGE AREA.—16,900 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps). A large part of this area is noncontributing at low stages, owing to water entering fault near Uvalde.

RECORDS AVAILABLE.—Records of stage only from October 1, 1918, to September 30, 1926, and records of discharge August 2, 1915, to September 30, 1918.

GAGE.—Vertical staff attached to pipe-line support of old pump house.

CHANNEL.—Bed of clay and gravel. Channel straight above and below station. Left bank wooded and bordered by levee; right bank wooded and not subject to overflow.

EXTREMES OF STAGE.—Maximum stage recorded during year, 7.40 feet at 4 p. m. May 12; minimum stage, 0.35 foot at 4 p. m. September 29.

1915–1926: During September, 1919, river reached a stage of about 12 feet, as determined from flood marks on gage. This was not only the highest stage reached during the period covered by records, but probably exceeds any that occurred for many years prior to establishment of station. No flow August 23–28, 1918.

COOPERATION.—Gage-height record furnished by city of Corpus Christi.

Daily gage height, in feet, of Nueces River at Calallen, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.15	1.38	1.35	1.85	1.50	1.10	1.72	6.20	2.80	3.68	3.02	1.20
2	4.50	1.40	1.35	1.85	1.50	.98	3.45	6.72	3.15	3.75	2.98	1.08
3	5.12	1.38	1.28	2.00	1.50	.90	3.35	6.52	2.52	3.82	2.38	1.10
4	5.95	1.32	1.18	2.00	1.52	.88	2.78	5.90	2.22	4.00	2.10	1.15
5	5.80	1.32	1.18	3.02	1.65	.85	2.35	4.50	2.10	4.12	2.75	1.12
6	4.90	1.28	1.18	3.35	1.65	.88	2.10	5.28	2.18	4.28	2.92	1.10
7	4.22	2.18	1.20	2.88	1.62	.85	2.10	4.75	2.32	4.75	2.98	1.08
8	4.10	2.72	1.28	2.50	1.60	.88	2.08	5.28	2.50	4.55	3.08	1.05
9	4.28	4.75	1.42	2.22	1.55	.75	1.90	6.05	2.55	3.50	3.12	1.00
0	3.80	5.38	1.40	2.38	1.50	.95	1.92	6.70	2.10	2.78	3.02	1.00
11	3.05	5.48	1.40	2.32	1.42	1.10	2.75	7.12	1.85	2.35	2.30	.98
12	2.58	3.20	1.40	2.15	1.40	3.18	2.30	7.38	1.70	2.10	1.90	1.00
13	2.48	2.62	1.35	1.95	1.38	4.58	4.05	7.30	1.68	1.80	1.72	.90
14	2.42	2.48	1.35	1.82	1.35	3.78	3.68	6.98	1.58	1.65	1.68	.82
15	3.15	2.30	1.42	1.72	1.35	3.00	3.30	6.30	1.50	1.90	1.62	.80

Daily gage height, in feet, of Nueces River at Calallen, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	3.98	2.15	1.40	1.65	1.35	2.62	3.58	5.48	1.52	4.30	1.52	0.78
17	3.00	1.95	1.48	1.70	1.40	2.95	3.80	4.58	1.45	4.92	1.45	.70
18	2.65	1.82	1.48	1.88	1.40	3.20	4.10	3.50	1.38	5.20	1.42	.70
19	2.85	1.72	1.60	1.92	1.35	4.52	3.85	3.15	1.45	4.70	1.40	.70
20	2.35	1.62	1.62	1.95	1.35	4.72	3.28	4.92	1.55	4.68	1.35	.65
21	2.05	1.60	1.90	1.98	1.32	3.78	2.92	6.00	1.48	4.42	1.62	.82
22	1.88	1.55	1.88	1.88	1.32	3.10	2.75	6.82	1.38	2.68	1.68	.98
23	1.75	1.55	1.80	1.85	1.28	2.82	2.58	6.70	3.95	2.10	1.50	1.02
24	1.68	1.48	1.78	1.75	1.25	2.68	2.48	3.92	3.05	1.88	1.38	.98
25	1.62	1.45	1.75	1.68	1.22	2.50	2.35	2.98	2.25	2.15	1.28	.88
26	1.98	1.40	1.75	1.60	1.18	2.35	2.62	2.62	3.02	2.15	1.20	.85
27	1.65	1.40	1.75	1.55	1.12	2.12	3.20	2.40	3.10	1.82	1.18	.72
28	1.48	1.38	1.75	1.55	1.15	1.98	4.05	2.55	3.10	1.58	1.02	.55
29	1.40	1.32	1.82	1.52	-------	1.88	4.65	2.90	3.52	1.48	1.18	.40
30	1.40	1.38	1.85	1.50	-------	1.80	5.58	3.08	3.60	1.38	1.35	.50
31	1.48	-------	1.85	1.50	-------	1.78	-------	3.18	-------	2.12	1.25	------

NOTE.—Datum of gage lowered 0.15 foot in later part of 1925; date not known.

FRIO RIVER AT CONCAN, TEX.

LOCATION.—Half a mile below Concan post office, Uvalde County, 0.8 mile below "Shut In," and 3 miles below mouth of Blanket Creek.

DRAINAGE AREA.—485 square miles (measured on United States Army progressive military maps and base map of Texas).

RECORDS AVAILABLE.—October 26, 1923, to September 30, 1926.

GAGE.—Inclined and vertical staff on right bank. Above 6.6 feet an overhanging chain gage on left bank is used; read by C. T. McNair.

DISCHARGE MEASUREMENTS.—Made from cable 123 feet upstream from gage or by wading.

CHANNEL AND CONTROL.—Bed of solid rock overlain on right side by small amount of gravel; permanent. Channel straight for a quarter of a mile above and half a mile below station. Left bank of semiconglomerate, fairly permanent, and not subject to overflow. Right bank of sand and gravel, heavily wooded, permanent, and subject to overflow at a stage of 21 feet. Control is solid rock ledge 50 feet below gage; subject to slight shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 14.50 feet at 9 p. m. July 23 (discharge, 30,400 second-feet); minimum discharge, 27 second-feet October 13.

1924–1926: Maximum stage, that of July 13, 1926; minimum discharge, 12 second-feet from July 29 to August 2, 1925.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Two rating curves used—one from October 1 to July 24 fairly well defined below 200 second-feet and poorly defined above; another for the rest of the year, which is fairly well defined from 0 to 100 second-feet and extended to cover the range for the period. Gage read to hundredths twice daily. Daily discharge determined October 1 to July 24 by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings; July 25 to September 30, by applying mean daily gage height to rating table. Records for low stages fair; for high stages poor.

Discharge measurements of Frio River at Concan, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 12	1.58	26.9	Apr. 30	1.72	49.3	Aug. 7	1.86	103
Dec. 14	1.69	48.4	July 24	3.98	1,390			

Daily discharge, in second-feet, of Frio River at Concan, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	52	50	47	44	42	57	50	40	28	171	58
2	36	57	50	47	44	42	57	50	40	28	171	58
3	36	57	50	48	44	41	57	50	40	28	144	56
4	36	54	50	48	44	41	57	48	40	28	130	55
5	36	54	50	48	44	42	57	48	40	28	120	55
6	36	62	47	47	44	42	57	48	40	28	103	55
7	36	60	45	47	44	42	57	48	40	28	103	55
8	36	57	45	57	44	42	57	48	40	28	103	55
9	33	57	45	47	44	42	57	48	40	28	103	55
10	33	57	45	47	44	44	57	48	40	28	103	53
11	33	57	45	47	44	44	57	48	38	28	103	53
12	30	55	44	47	44	44	57	48	37	28	94	51
13	27	54	44	47	44	44	57	48	36	47	87	51
14	30	54	47	47	44	44	57	48	35	64	87	51
15	446	54	48	45	44	44	57	48	33	47	74	51
16	496	54	48	45	44	42	57	47	33	40	74	51
17	70	54	48	44	44	45	57	47	32	37	71	51
18	50	54	48	44	44	48	57	47	32	36	68	51
19	59	54	48	44	44	47	57	47	40	32	63	51
20	57	54	48	44	44	45	57	47	38	32	63	50
21	55	54	48	44	42	45	59	47	35	30	63	48
22	54	54	47	44	42	45	57	47	33	1,220	63	48
23	52	52	47	44	42	44	57	45	32	8,290	63	46
24	52	52	47	44	42	44	57	45	32	2,730	63	46
25	52	52	47	45	42	48	54	45	32	610	61	44
26	57	52	47	45	42	48	54	44	32	327	58	63
27	57	52	47	45	42	48	54	42	31	299	58	63
28	57	52	48	45	42	48	52	42	30	258	58	63
29	57	50	48	45	-------	48	52	42	28	226	58	63
30	54	50	47	45	-------	57	50	42	28	235	58	63
31	54	-------	47	45	-------	57	-------	41	-------	213	58	-------

Monthly discharge of Frio River at Concan, Tex., for the year ending September 30 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	496	27	72.7	4,470
November	62	50	54.4	3,240
December	50	44	47.3	2,910
January	48	44	45.7	2,810
February	44	42	43.4	2,410
March	57	41	45.1	2,770
April	59	50	56.2	3,340
May	50	41	46.5	2,860
June	40	28	35.6	2,120
July	8,290	28	487	30,000
August	171	58	87.0	5,350
September	63	44	53.8	3,200
The year	8,290	27	90.4	65,500

FRIO RIVER NEAR FRIO TOWN, TEX.

LOCATION.—300 feet below Frio ford on old Frio Town-Sabinal road, 1½ miles below mouth of Sabinal Creek, and 7 miles northwest of Frio Town, Frio County.

DRAINAGE AREA.—1,460 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military map). A large part of this area is noncontributing at low stages owing to water entering fault near Uvalde.

RECORDS AVAILABLE.—April 9, 1924, to September 30, 1926.

GAGE.—Combined vertical staff and chain gage on left bank; read by J. L. Tiner.

DISCHARGE MEASUREMENTS.—Made from cable 340 feet below staff gage or by wading.

CHANNEL AND CONTROL.—Bed of gravel; fairly permanent. One channel at all stages. Channel straight for half a mile above and below gage. Banks permanent and not subject to overflow; right bank wooded. Low-water control is gravel riffle 150 feet below staff gage; will probably shift during floods and is overgrown by weeds and grass during dry season. High-stage control is narrow section in river 500 feet downstream from low-water control. Stage of change of control not known.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, from levels to flood marks, 30.5 feet at 6 a. m. April 20 (discharge, 30,200 second-feet; determined by slope method and subject to considerable error); no flow for several periods.

1924–1926: Maximum stage, that of April 20, 1926; no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve poorly defined for all stages. Gage read to hundredths once daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Daily discharge not sufficiently accurate for publication; monthly records poor.

The following discharge measurements were made:

April 11: Gage height, 1.40 feet; discharge, 27.2 second-feet.

April 20: Gage height, 30.50 feet; discharge, 30,200 second-feet (determined by slope method).

April 23: Gage height, 1.57 feet; discharge, 485 second-feet.

Monthly discharge of Frio River near Frio Town, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	331	0	28.6	1,760
November	0	0	0	0
December	0	0	0	0
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	19,800	0	1,140	68,100
May	0	0	0	0
June	0	0	0	0
July	4,910	0	230	14,100
August	0	0	0	0
September	0	0	0	0
The year	19,800	0	116	84,000

FRIO RIVER NEAR DERBY, TEX.

LOCATION.—At International-Great Northern Railroad bridge 900 feet below mouth of Leona River, 400 feet below highway bridge, and 4 miles south of Derby, Frio County.

DRAINAGE AREA.—3,490 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas). A large part of this area is noncontributing at low stages, owing to water disappearing into fault near Uvalde.

RECORDS AVAILABLE.—August 1, 1915, to September 30, 1926.

GAGE.—Vertical staff attached to railroad bridge pier; read by John W. Speed or J. R. Nicholson.

DISCHARGE MEASUREMENTS.—Made from railroad bridge, from highway bridge, or by wading.

CHANNEL AND CONTROL.—Bed of rock, sand, and gravel. Channel curved above and below station but straight at gage for 150 feet. Banks wooded and subject to overflow at extremely high stages. Concrete dam 50 feet below gage serves as control during low and medium stages; position of high-water control not known. Point of zero flow, gage height 0.07 foot, except when affected by moss on control.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.12 feet at 8 a. m. April 23 (discharge, 18,300 second-feet); no flow for several periods.

1915–1926: Maximum stage recorded, 18.5 feet September 18, 1919 (discharge, 34,400 second-feet; determined from extension of rating curve and may be subject to error); no flow during several periods of each year.

DIVERSIONS.—Small areas are irrigated by diversions in headwaters, but available information does not show that water is taken from stream immediately above station.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined for all stages. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records good.

Discharge measurements of Frio River near Derby, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10		No flow.	Apr. 22	11.31	10,400	Aug. 5	0.16	[a] 1.0
Dec. 16	0.17	[a] 0.05	Apr. 23	13.35	17,500			
Apr. 12	5.47	1,780	July 9	.26	[b] 6.53			

[a] Estimated.

[b] Determined by floats.

Daily discharge, in second-feet, of Frio River near Derby, Tex., for the year ending September 30, 1926

Day	Oct.	Feb.	Mar.	Apr.	May	June	July	Aug.
1			2.1	1.4	23	1.4	11	6.1
2			2.1	1.4	67	1.4	5.4	3.5
3			2.1	1.4	138	1.4	3.0	2.5
4			2.1	1.4	412	1.4	3.0	1.4
5			2.1	1.4	245	1.4	3.0	.8
6			2.1	1.4	899	1.4	2.5	.8
7			2.1	1.4	619	1.4	2.1	.8
8			2.1	1.4	255	1.4	9.2	.8
9			1.4	1.4	175	1.4	5.4	.8
10			1.4	4.1	70	1.4	4.1	.8
11			1.4	376	33	1.4	10	17
12			1.4	1,290	23	1.4	14	108
13			1.4	337	13	.8	6.1	84
14			1.4	104	9.2	.8	3.5	157
15			1.4	34	6.1	.8	2.1	48
16			1.4	14	4.1	.8	1.7	25
17			1.4	6.1	4.1	.5	1.4	7.6
18			1.4	2.5	4.1	.5	1.1	3.5
19	64		1.4	1.7	4.7	.5	.8	2.1
20	22		1.4	1.4	4.1	.5	.8	1.7
21	6.1		1.4	836	3.5	100	.5	1.4
22	2.5		1.4	7,040	3.0	671	.5	.8
23	1.1		1.4	15,400	3.0	426	.3	.4
24	.1		1.4	5,250	2.5	125	.1	.3
25	.1		2.1	966	2.1	114	2,390	.3
26			2.1	226	1.4	35	2,300	.3
27			2.1	69	1.4	20	355	
28		2.1	1.4	43	1.4	16	133	
29			1.4	26	1.4	114	48	
30			1.4	23	1.4	38	24	
31			1.4		1.4		13	

NOTE.—No flow on days for which discharge is not shown.

Monthly discharge of Frio River near Derby, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	64	0	3.09	190
February	2.1	0	.07	4.2
March	2.1	1.4	1.65	101
April	15,400	1.4	1,070	63,600
May	899	1.4	97.8	6,010
June	671	.5	56	3,330
July	2,390	.1	173	10,600
August	157	0	15.3	944
The year	15,400	0	117	84,800

FRIO RIVER AT CALLIHAM, TEX.

LOCATION.—Half a mile below mouth of San Miguel Creek, 1 mile north of Calliham, McMullen County, and 12 miles west of Three Rivers.

DRAINAGE AREA.—5,450 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas). A large part of this drainage area is noncontributing at low stages owing to water disappearing in fault near Uvalde.

RECORDS AVAILABLE.—October 1, 1924, to April 30, 1926, when station was discontinued.

GAGE.—Vertical staff attached to trees on right bank; read by J. D. Scroggins.

DISCHARGE MEASUREMENTS.—Made by wading or from cable just above gage.

CHANNEL AND CONTROL.—Channel straight for 700 feet above and 800 feet below gage. Bed of sandy clay; shifts. Right bank sodded and not subject to overflow; left bank sodded and at high stages is subject to overflow for 400 feet; both banks wooded. Control is concrete dip 100 feet below gage. There are five pipes under slab to carry the low flow. Pipes clog and affect stage-discharge relation.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 23.4 feet at 2.20 p. m. April 28 (discharge, 7,320 second-feet); no flow during several periods.

1925–1926: Maximum stage, that of April 28, 1926; no flow during several periods.

DIVERSIONS.—Some water diverted above; amount not known.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read to hundredths twice daily, but accuracy of readings doubtful. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Daily discharge not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of Frio River at Calliham, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	3.00	21.7	Apr. 26	7.78	1,370	Apr. 27	19.55	5,590
Dec. 17	2.62	4.33	Do	8.23	1,500	Do	20.27	6,040
Apr. 13	4.49	418	Do	8.78	1,680	Apr. 28	23.21	7,240
Apr. 24	4.56	371	Do	9.24	1,880	Do	23.39	[a] 6,720
Apr. 25	5.08	619	Do	9.75	1,980	Apr. 29	16.78	[a] 3,840
Do	5.55	809	Apr. 27	15.77	4,070	Do	13.99	[a] 3,080
Do	5.67	854	Do	17.15	4,810			

[a] Stage-discharge relation affected by backwater.

Monthly discharge of Frio River at Calliham, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	513	0	36.1	2,220
November	3,380	0	284	16,900
December	4.2	0	1.99	122
January	602	2.4	52.4	3,220
February	4.0	1.2	2.10	117
March	1,320	.9	269	16,600
April	6,980	13	849	50,500
The period				89,700

LEONA RIVER NEAR DIVOT, TEX.

LOCATION.—At highway bridge on Divot-Pearsall road, 2½ miles northeast of Divot, Frio County, and 12 miles above mouth of river.

DRAINAGE AREA.—565 square miles (measured on topographic maps, base map of Texas, and United States Army progressive military maps).

RECORDS AVAILABLE.—April 6, 1924, to September 30, 1926.

GAGE.—Vertical staff attached to pecan trees on left bank 6 feet below bridge; read by E. N. Cory.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of earth and sand; fairly permanent. Channel straight for 600 feet above and 65 feet below gage. Banks of earth, wooded, and fairly permanent. Right bank subject to overflow at a stage of 12 feet; left bank subject to overflow at extremely high stages. One channel below stage of 9.7 feet, two at 12.2 feet, three at 13.1 feet, and four at 13.8 feet. Low-water control is 100 feet below gage and is composed of gravel and a partly buried log; clean of vegetation; will probably shift. Collection of logs and débris may easily change stage-discharge relation. High-water control indefinite.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.9 feet at 3.30 p. m. April 23 (discharge, 4,810 second-feet); no flow for several periods.

1924–1926: Maximum stage, that of April 23, 1926; no flow for several periods.

DIVERSIONS.—Several small diversions in drainage basin above station; amount not known.

REGULATION.—Low-water flow regulated by dams above.

ACCURACY.—Stage-discharge relation not permanent. Rating curve fairly well defined below 250 second-feet and extended by means of area-velocity curves and one slope measurement made at a stage of 13.6 feet; extension may be subject to considerable error. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Daily discharge not sufficiently accurate for publication. Monthly records fair.

Discharge measurements of Leona River near Divot, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 16		0	June 21	13.60	[a] 2,350	July 10	0.78	[b] 1.2
Apr. 11	4.84	178	June 23	2.28	49.6			

[a] Determined by slope method, using Kutter's formula. [b] Estimated

Monthly discharge of Leona River near Divot, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April	3,130	0.0	187	11,100
May	543	2.0	37.9	2,330
June	1,340	.0	88.5	5,270
July	6.2	.0	1.17	71.8
August	225	.0	22.5	1,380
The year	3,130	.0	27.9	20,200

NOTE.—No flow during months for which no record is shown.

ATASCOSA RIVER AT WHITSETT, TEX.

LOCATION.—At highway bridge on Crowther road 0.9 mile west of Whitsett, Live Oak County, and 4 miles below mouth of La Parita Creek.

DRAINAGE AREA.—1,170 square miles (measured on United States Army progressive military maps and base map of Texas).

RECORDS AVAILABLE.—September 23, 1924, to May 8, 1926, when station was discontinued.

GAGE.—Chain gage attached to upstream side of highway bridge.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel straight for 300 feet above and 200 feet below gage. Bed composed of sand and some snags; shifts. Banks of sand and clay, covered with trees and brush, and subject to overflow and shift. Control is bed and banks of stream; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 10.2 feet at noon April 11 (discharge, 1,200 second-feet); no flow for several periods.

1925–1926: Maximum stage recorded, 17.3 feet at 4.50 p. m. July 12, 1925 (discharge not determined); no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve poorly defined below 110 second-feet and extended through one measurement at a stage of 7.03 feet; extension may be subject to considerable error. Gage read to hundredths but not regularly. Owing to poor gage-height record, badly shifting control, poorly defined rating curve, and infrequent measurements, data insufficient for publication of daily discharge, or monthly maximum or minimum. Monthly records poor.

The following discharge measurements were made:

October 15, 1925: Gage height, 1.22 feet; discharge, 11.6 second-feet.

December 18, 1925: Gage height, 1.22 feet; discharge, 18.0 second-feet.

April 14, 1926: Gage height, 1.43 feet; discharge, 39.8 second-feet.

Monthly discharge of Atascosa River at Whitsett, Tex., for the year ending September 30, 1926

Month	Mean discharge in second-feet	Run-off in acre-feet	Month	Mean discharge in second-feet	Run-off in acre-feet
October	49.2	3,020	March	104	6,420
November	62.5	3,720	April	72.0	4,290
December	10.2	629	May 1-8	189	3,000
January	39.5	2,430			
February	5.91	328	The period		23,800

RIO GRANDE BASIN

RIO GRANDE AT SAN MARCIAL, N. MEX.

LOCATION. In sec. 17, T. 7 N., R. 1 W., at highway bridge half a mile north of San Marcial, Socorro County. No tributary between station and Elephant Butte Reservoir, the high-water line of which comes within 3 miles of station.

DRAINAGE AREA.—23,900 square miles of contributing area (measured on base maps of Colorado and New Mexico).

RECORDS AVAILABLE.—January 1, 1922, to September 30, 1926. From January 29, 1895, to December 31, 1921, a station was maintained 1½ miles downstream.

GAGE. Water-stage recorder referred to vertical staff gage on highway bridge; inspected by Bureau of Reclamation employee. Datum lowered 1 foot December 29, 1923.

DISCHARGE MEASUREMENTS.—Made from highway bridge.

CHANNEL AND CONTROL.—Bed sandy and shifting; broken by several bridge piers. No well-defined control.

EXTREMES OF DISCHARGE.—Maximum mean daily stage during year, 4.5 feet May 29 (discharge, 10,900 second-feet); no flow the greater part of August and September.

1895–1926: Maximum mean daily discharge, 33,000 second-feet October 11, 1904; no flow for periods of varying length each year.

DIVERSIONS.—Water diverted from Rio Grande and tributaries above station for irrigation of 600,000 acres.

ACCURACY.—Stage-discharge relation not permanent; not affected by ice. Owing to shifting control, determinations of daily discharge are based almost entirely on frequent current-meter measurements.

COOPERATION.—Daily-discharge records furnished by United States Bureau of Reclamation.

Daily discharge, in second-feet, of Rio Grande at San Marcial, N. Mex., for the years ending September 30, 1922–1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1922												
1				1,410	1,020	1,200	1,400	2,220	9,060	2,640	0	0
2				1,550	985	1,200	1,150	3,290	9,340	1,020	0	0
3				1,400	980	1,240	1,010	3,570	9,400	2,700	0	0
4				1,200	976	1,160	1,300	4,230	9,480	1,100	0	0
5				1,060	972	349	1,300	4,630	8,680	2,740	0	0
6				1,050	835	565	1,250	5,610	7,820	1,170	0	0
7				1,030	891	1,370	1,380	4,440	5,500	2,560	0	0
8				1,020	953	575	1,780	4,540	4,880	0	0	0
9				913	1,100	557	1,580	4,590	4,750	927	0	0
10				809	1,250	1,260	1,340	7,730	4,780	882	0	0
11				784	538	741	1,440	10,400	4,690	1,050	0	0
12				836	526	1,930	1,320	8,940	5,100	1,060	0	0
13				780	504	1,110	1,200	5,650	5,200	951	0	0
14				828	491	2	965	5,640	5,310	814	0	0
15				816	513	50	870	4,040	5,330	957	0	0
16				815	1,350	0	1,480	2,730	5,120	1,010	0	0
17				793	457	301	1,090	2,640	4,950	1,220	0	0
18				780	457	281	1,080	2,630	4,620	976	0	0
19				773	488	103	1,140	2,750	4,460	1,100	0	0
20				763	561	58	1,230	4,310	4,250	0	0	0
21				749	1,490	17	910	4,530	4,100	143	0	0
22				850	774	166	775	4,290	4,620	0	0	0
23				851	1,230	829	640	4,430	3,700	0	0	0
24				880	455	1,030	775	5,710	2,850	0	0	0
25				880	1,250	1,480	1,400	5,990	2,820	0	0	0

Daily discharge, in second-feet, of Rio Grande at San Marcial, N. Mex., for the years ending September 30, 1922–1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1922												
26	------	------	------	800	1,150	2,530	1,850	9,030	3,000	0	0	0
27	------	------	------	980	1,210	1,750	1,650	9,030	3,030	0	0	0
28	------	------	------	1,010	1,200	1,760	2,810	9,030	2,960	0	0	0
29	------	------	------	1,050	------	1,840	2,840	9,030	3,820	0	0	0
30	------	------	------	1,070	------	1,800	2,220	9,060	3,290	0	0	0
31	------	------	------	985	------	1,460	------	8,980	------	0	0	------
1922–23												
1	0	0	0	330	560	970	740	0	7,810	1,080	0	4,910
2	0	0	0	110	560	940	740	0	6,610	1,290	0	4,840
3	0	0	0	100	560	1,090	740	0	4,280	1,250	0	6,230
4	0	0	0	120	560	1,070	740	0	5,450	1,730	0	4,890
5	0	0	0	90	560	1,030	740	693	5,360	906	0	2,060
6	0	0	0	100	520	820	136	2,410	4,700	714	0	1,62 (
7	0	0	0	150	520	820	136	2,400	4,020	610	0	1,610
8	0	0	0	130	520	820	136	6,050	3,800	592	0	1,730
9	0	0	0	130	520	820	136	6,030	3,540	483	0	1,740
10	0	0	0	130	520	820	136	6,190	2,580	794	0	1,730
11	0	0	0	450	730	900	174	6,750	5,010	670	0	1,730
12	0	0	0	450	890	900	174	8,110	4,650	1,200	0	483
13	0	0	0	450	1,070	900	174	6,170	3,930	800	654	347
14	0	0	0	450	1,000	900	174	8,740	3,510	500	1,210	383
15	0	0	0	450	880	900	174	9,450	2,760	400	1,110	408
16	0	0	0	960	590	920	174	6,860	3,000	300	2,250	460
17	0	0	0	960	590	920	174	6,620	2,760	309	2,200	488
18	0	0	677	960	590	920	500	5,670	4,000	152	2,230	538
19	0	0	621	960	590	920	500	5,250	3,740	137	2,280	330
20	0	0	0	960	590	920	1,070	3,750	3,930	114	1,320	3,140
21	0	0	647	1,160	970	930	2,540	4,160	3,590	109	1,520	4,290
22	0	0	740	1,160	970	930	2,860	4,110	3,360	118	2,470	4,060
23	0	0	792	1,160	970	930	2,380	3,940	3,120	97	3,080	1,220
24	0	0	0	1,160	970	930	2,440	6,570	4,450	67	2,550	1,590
25	0	0	707	1,160	970	930	2,400	6,960	2,250	44	3,660	1,600
26	0	0	667	1,190	760	540	2,250	4,630	2,240	40	2,510	1,880
27	0	0	0	1,130	790	540	2,500	4,050	1,990	36	2,810	1,860
28	0	0	812	910	890	540	2,620	5,890	1,730	0	1,350	1,810
29	0	0	623	1,060	------	540	2,400	7,030	1,760	0	1,320	1,680
30	0	0	0	1,060	------	540	2,580	7,340	1,680	0	1,240	1,680
31	0	------	105	1,040	------	540	------	7,810	------	0	3,760	------
1923–24												
1	1,620	909	900	1,850	950	1,180	2,020	6,340	5,820	600	500	0
2	1,620	909	1,500	1,450	1,090	1,200	1,800	5,420	5,030	550	360	0
3	1,780	1,130	1,500	1,070	1,060	970	1,600	5,400	4,200	770	100	0
4	1,800	1,130	1,470	1,020	1,060	1,100	1,280	5,570	3,680	1,260	400	0
5	1,800	1,130	1,700	970	1,220	1,180	1,600	6,300	3,120	1,190	350	0
6	1,600	1,660	1,080	940	1,160	1,200	2,020	7,980	2,700	2,420	970	0
7	1,390	1,800	1,080	940	1,270	1,270	2,800	9,050	2,590	1,450	600	0
8	1,390	3,110	1,860	940	1,460	1,350	3,940	9,640	2,380	1,280	120	0
9	2,610	1,730	1,660	1,060	1,320	1,250	4,750	9,690	2,580	1,130	100	0
10	2,520	2,600	804	1,060	1,150	1,230	6,780	9,680	2,500	1,240	70	0
11	2,520	1,770	804	920	1,230	1,120	8,100	9,980	2,570	1,390	12	0
12	2,560	3,220	996	850	1,200	950	8,400	10,800	2,430	1,480	0	0
13	2,180	1,750	3,260	750	1,210	960	7,900	11,200	2,090	1,270	0	1,000
14	1,720	1,830	1,850	700	1,550	930	7,600	11,700	1,800	820	0	270
15	1,870	3,210	1,820	710	1,700	1,080	8,400	11,500	1,450	570	10	150
16	1,870	3,110	1,780	720	1,410	1,200	8,400	11,800	1,440	1,120	50	50
17	2,000	3,100	1,660	720	1,500	1,010	9,600	12,200	1,710	820	0	0
18	1,020	1,720	223	940	1,760	1,100	10,000	12,400	1,960	760	0	0
19	1,020	1,740	247	930	1,580	1,620	9,200	12,100	2,540	540	0	0
20	1,020	1,720	271	690	1,680	1,210	7,300	12,000	2,520	280	0	0
21	1,020	1,710	250	670	1,760	1,000	6,050	12,000	2,040	160	0	0
22	1,500	1,710	437	660	1,470	1,260	5,600	12,000	2,040	120	0	0
23	1,500	1,640	402	840	1,450	1,210	6,350	12,000	1,740	80	0	0
24	1,490	1,500	499	1,020	1,350	850	8,100	12,000	1,530	80	0	0
25	1,490	1,780	390	1,020	1,400	1,440	9,200	11,700	1,380	100	0	0
26	1,430	860	461	900	1,450	1,450	10,300	10,900	1,160	100	0	0
27	1,430	860	515	900	1,350	1,460	12,200	10,400	930	450	0	0
28	1,230	950	1,070	770	1,000	1,450	12,200	10,000	760	880	0	0
29	1,230	950	1,070	730	1,120	1,880	11,500	9,200	620	820	0	0
30	992	900	1,940	730	------	1,840	10,300	8,180	510	1,060	0	
31	992	------	912	740	------	1,800	------	7,220	------	410	0	------

Daily discharge, in second-feet, of Rio Grande at San Marcial, N. Mex., for the years ending September 30, 1922–1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924–25												
1	0	0	240	100	890	570	1,530	1,180	390	0	1,610	40
2	0	0	240	50	870	560	1,230	1,380	350	0	830	970
3	0	0	240	50	850	550	1,010	1,420	310	0	420	950
4	0	0	240	50	830	530	980	1,650	250	0	140	860
5	0	0	240	50	800	510	950	1,300	190	0	20	860
6	0	0	200	100	770	480	910	1,020	130	0	120	1,060
7	0	0	200	400	740	440	1,050	1,000	70	0	420	490
8	0	0	260	900	710	400	1,240	1,100	50	0	420	280
9	0	0	250	400	690	365	1,400	1,200	30	0	370	175
10	0	0	240	100	670	410	1,350	1,280	20	0	325	160
11	0	0	240	50	650	460	1,230	1,550	0	0	250	140
12	0	0	250	50	630	500	1,230	1,380	0	0	300	125
13	0	0	350	50	610	550	1,350	1,170	0	0	1,670	125
14	0	0	350	50	590	590	1,400	1,220	0	0	540	125
15	0	0	350	50	580	620	1,410	1,180	0	0	350	2,140
16	0	20	300	50	570	650	1,790	1,100	0	0	200	830
17	0	50	300	50	560	680	1,830	980	0	0	200	240
18	0	70	280	50	540	710	2,180	820	0	0	190	240
19	0	85	280	50	525	740	2,500	700	0	0	170	270
20	0	100	320	50	515	760	3,300	580	0	0	140	320
21	0	115	320	50	570	780	3,140	460	0	0	100	570
22	0	120	320	50	625	790	2,500	400	0	0	90	660
23	0	130	260	50	680	810	2,300	350	0	0	400	270
24	0	135	200	200	735	830	2,800	300	0	0	350	270
25	0	140	200	500	790	860	2,000	310	0	0	200	260
26	0	160	180	1,000	735	820	1,830	315	0	70	200	250
27	0	180	160	940	680	760	1,450	325	0	70	210	240
28	0	195	150	850	625	700	1,270	360	0	70	220	230
29	0	210	140	780	-------	800	1,200	370	0	70	160	220
30	0	225	140	800	-------	1,100	1,100	385	0	140	100	220
31	0	-------	140	840	-------	1,530	-------	400	-------	240	40	-------
1925–26												
1	201	550	850	746	657	690	977	6,250	7,200	433	115	0
2	201	572	822	820	686	690	727	6,220	6,600	310	50	0
3	182	597	775	1,020	697	690	772	6,190	5,980	228	0	0
4	137	629	846	1,000	679	690	757	6,570	6,250	202	0	0
5	137	587	792	1,040	630	690	746	7,200	6,730	156	0	0
6	82	656	934	842	681	690	735	7,570	7,080	148	0	0
7	80	735	1,010	775	642	690	730	7,610	6,420	339	0	0
8	85	747	832	809	647	690	730	8,050	5,300	452	0	0
9	84	663	564	789	642	1,200	1,030	8,550	6,330	356	0	0
10	145	810	536	754	611	1,180	1,200	8,000	6,330	300	0	0
11	155	755	532	741	582	1,170	1,250	6,840	6,350	395	0	0
12	160	745	551	725	619	1,260	1,330	5,680	6,400	735	100	0
13	300	745	615	720	631	1,350	1,490	5,230	6,420	1,040	225	0
14	710	676	720	712	660	1,100	1,480	5,150	6,110	1,820	175	60
15	1,060	542	702	692	666	842	1,200	4,310	6,200	745	100	123
16	1,570	570	665	687	669	755	1,100	3,600	5,280	585	50	60
17	1,390	804	635	687	642	752	1,040	3,550	4,830	525	0	20
18	1,200	930	626	647	694	776	920	4,440	4,820	395	0	0
19	1,060	822	658	632	780	775	1,140	5,620	4,800	275	0	880
20	742	719	725	660	767	900	1,880	6,190	4,700	220	0	490
21	643	619	710	657	720	925	2,540	6,490	4,280	185	0	160
22	572	580	734	651	710	1,020	2,840	7,220	3,450	146	0	100
23	556	561	853	660	706	1,050	2,920	8,190	2,130	120	0	60
24	503	742	929	662	700	1,050	1,900	9,000	1,600	101	0	0
25	516	696	914	663	612	1,050	1,940	9,450	1,320	101	0	0
26	550	689	817	630	605	1,130	3,420	10,100	1,090	93	0	0
27	627	581	627	625	683	1,180	4,240	10,600	988	53	0	0
28	642	560	580	625	687	1,200	5,000	10,400	922	987	0	3
29	647	617	580	660	-------	1,210	6,060	10,900	712	885	0	0
30	585	820	597	700	-------	1,240	7,180	8,920	500	723	0	10
31	617	-------	750	752	-------	1,120	-------	7,950	-------	647	0	-------

NOTE.—No gage-height record Feb. 11–15, Feb. 17 to Mar. 29, May 6–20, 22, 23, 25, June 22, 24–26, June 28 to Sept. 30, 1922; Oct. 1 to May 4, July 28 to Sept. 30, 1923; Mar. 20–23, 25–31, 1924; discharge computed from record of gain and loss in Elephant Butte Reservoir. River frozen Jan. 1–7 and 9–25, 1925; discharge estimated. Quantities changed slightly to conform to computation rules used by Geological Survey.

Monthly discharge of Rio Grande at San Marcial, N. Mex., for the years ending September 30, 1922–1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1922				
January	1,550	749	952	58,500
February	1,490	455	897	48,800
March	2,530	0	926	56,900
April	2,840	640	1,370	81,500
May	10,490	2,220	5,600	344,000
June	9,480	2,820	5,230	311,000
July	2,740	0	807	49,600
August	0	0	0	0
September	0	0	0	0
The period	10,400	0	----------	950,000
1922–23				
October	----------	----------	0	0
November	----------	----------	0	0
December	812	0	206	12,700
January	1,190	90	665	40,900
February	1,070	520	722	40,100
March	1,090	540	845	52,000
April	2,860	136	1,090	64,900
May	9,450	0	4,960	305,000
June	7,810	1,680	3,720	221,000
July	1,730	0	469	28,800
August	3,760	0	1,270	78,100
September	6,230	330	2,040	121,000
The year	9,450	0	1,330	964,000
1923–24				
October	2,610	992	1,620	99,600
November	3,220	860	1,740	104,000
December	3,260	223	1,110	68,200
January	1,850	660	910	56,000
February	1,760	950	1,340	77,100
March	1,880	850	1,250	76,900
April	12,200	1,280	6,840	407,000
May	12,400	5,400	9,880	608,000
June	5,820	510	2,260	134,000
July	2,420	80	813	50,000
August	970	0	117	7,190
September	1,000	0	49	2,920
The year	12,400	0	2,330	1,690,000
1924–25				
October	0	0	0	0
November	225	0	64.5	3,840
December	350	140	245	15,100
January	1,000	50	283	17,400
February	890	515	680	37,800
March	1,530	365	673	41,400
April	3,300	910	1,650	98,200
May	1,650	300	877	53,900
June	390	0	59.7	3,550
July	240	0	21.3	1,310
August	1,670	20	347	21,300
September	2,140	40	453	27,000
The year	3,330	0	443	321,000
1925–26				
October	1,570	80	521	32,000
November	930	542	677	40,300
December	1,040	532	726	44,600
January	1,040	625	735	45,200
February	780	582	668	37,100
March	1,350	690	960	59,000
April	7,180	727	1,980	118,000
May	10,900	3,550	7,160	440,000
June	7,200	500	4,570	272,000
July	1,820	53	442	27,200
August	225	0	26.3	1,620
September	880	0	65.5	3,900
The year	10,900	0	1,550	1,120,000

NOTE.—Monthly discharge computed by U. S. Geological Survey from daily-discharge record furnished by the U. S. Bureau of Reclamation.

RIO GRANDE BELOW ELEPHANT BUTTE DAM, N. MEX.

LOCATION.—About sec. 25, T. 13 S., R. 4 W., 1 mile below Elephant Butte Dam, Sierra County. Nearest tributary, Mescal Canyon, enters half a mile downstream.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1916, to September 30, 1926.

GAGE.—Stevens water-stage recorder on left bank.

DISCHARGE MEASUREMENTS.—Made from cable at gage.

CHANNEL AND CONTROL.—Bed of compact gravel; probably permanent. Control is gravel bar at mouth of Mescal Canyon; shifts.

REGULATION.—Flow controlled by Elephant Butte Dam, which forms reservoir having capacity of 2,638,000 acre-feet.

EXTREMES OF DISCHARGE.—No data.

ACCURACY.—Rating curve defined by 45 current-meter measurements covering range between 0 and 2,450 second-feet made by Bureau of Reclamation during current year.

COOPERATION.—Records furnished by United States Bureau of Reclamation.

Daily discharge, in second-feet, of Rio Grande below Elephant Butte, N. Mex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	5	-------	-------	154	700	957	1,570	2,050	2,140	972	1,720
2	-------	5	-------	-------	203	700	957	1,760	2,050	1,890	1,320	1,850
3	-------	5	-------	-------	351	700	1,430	1,630	2,050	1,890	1,950	1,800
4	-------	5	-------	-------	351	700	1,800	1,110	2,050	2,060	2,250	1,800
5	-------	5	-------	-------	351	739	1,800	1,110	2,050	2,400	2,250	1,800
6	-------	5	-------	-------	363	1,040	1,800	1,110	2,050	2,400	2,250	1,800
7	-------	5	-------	-------	500	1,200	1,890	1,110	2,050	2,400	2,250	1,800
8	-------	5	-------	-------	500	1,200	2,150	1,110	2,050	2,400	2,250	1,800
9	-------	5	-------	-------	500	1,200	2,150	1,110	2,050	2,310	2,320	1,650
10	-------	5	-------	-------	500	1,200	2,150	1,110	2,050	2,250	2,400	1,550
11	-------	5	83	-------	500	1,200	2,150	1,140	2,030	2,240	2,400	1,480
12	-------	5	400	-------	500	1,200	2,060	1,300	2,000	1,420	2,400	1,400
13	282	100	400	-------	575	1,060	1,940	1,490	2,000	1,150	2,400	1,400
14	470	400	400	-------	600	1,050	2,120	1,490	2,000	1,150	2,400	1,400
15	470	400	400	-------	600	1,050	1,680	1,490	2,050	1,150	2,200	1,400
16	280	400	350	-------	600	1,000	1,900	1,550	2,100	1,150	1,950	1,400
17	280	400	206	-------	600	940	1,900	1,760	2,190	1,150	1,700	1,400
18	280	400	206	-------	600	940	1,900	1,820	2,210	1,150	1,700	1,350
19	280	400	206	-------	500	940	1,900	2,050	2,250	1,160	1,700	1,300
20	280	350	206	-------	-------	983	1,800	2,290	2,250	1,230	1,700	1,300
21	280	206	206	-------	-------	1,200	1,750	2,580	2,250	1,280	1,700	1,300
22	280	206	206	-------	-------	1,200	1,750	2,520	2,250	1,520	1,860	1,300
23	100	206	206	-------	-------	1,200	1,750	2,460	2,250	1,830	1,950	1,300
24	100	206	250	-------	-------	1,410	1,750	2,460	2,340	1,500	1,900	1,300
25	100	354	400	-------	-------	1,520	1,900	2,460	2,400	1,500	1,800	1,260
26	100	400	500	-------	-------	1,130	1,900	2,460	2,400	1,500	1,700	1,040
27	490	400	600	64	265	750	1,920	2,460	2,400	1,300	1,250	530
28	280	300	500	306	620	645	1,900	2,190	2,400	970	1,340	17
29	280	5	75	230	-------	896	1,700	2,000	2,400	970	1,650	8
30	280	5	-------	154	-------	500	1,680	1,700	2,400	970	1,650	6
31	280	-------	-------	154	-------	700	-------	1,770	-------	970	1,720	-------

NOTE.—No flow on days for which discharge is not shown. Quantities changed slightly to conform to computation rules used by U. S. Geological Survey.

Monthly discharge of Rio Grande below Elephant Butte Dam, N. Mex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	490	0	167	10,300
November	400	5	173	10,300
December	600	0	187	11,500
January	306	0	29.3	1,800
February	620	0	348	19,300
March	1,520	500	997	61,300
April	2,150	957	1,810	108,000
May	2,580	1,110	1,750	108,000
June	2,400	2,000	2,170	129,000
July	2,400	970	1,590	97,800
August	2,400	972	1,910	117,000
September	1,850	6	1,320	78,600
The year	2,580	0	1,040	753,000

RIO GRANDE NEAR EL PASO, TEX.

LOCATION.—At Courchesne's limekiln, 1 mile upstream from pumping house of Smelter Co. and 4 miles north of El Paso, El Paso County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1897, to September 30, 1926, at present location; May 10, 1889, to June 30, 1893, for station at Old Fort Bliss, 1,500 feet above Mexican Dam; January 25, 1895, to May 1, 1897, for station at pumping house of Smelter Co., 3 miles north of El Paso.

GAGE.—Continuous water-stage recorder.

DISCHARGE MEASUREMENTS.—Made from cable.

CHANNEL AND CONTROL.—Bed of sand; shifting. Banks have brush along edges and not subject to overflow. One channel at all stages. Control is sand bed of stream; shifting.

EXTREMES OF DISCHARGE.—Maximum mean daily stage during year, 4.96 feet July 12 (discharge, 4,910 second-feet); minimum mean daily stage, 0.13 foot January 31 (discharge, 136 second-feet).

1889–1893, 1895–1926: Maximum mean daily discharge, 23,680 second-feet June 12, 1905; no flow for several periods.

DIVERSION.—Considerable water is diverted in Colorado and New Mexico; amount not known.

REGULATION.—Flow regulated by storage at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent. Daily discharge based largely on frequent current-meter measurements.

COOPERATION.—Daily discharge furnished by United States Bureau of Reclamation through Mexican section of International Boundary Commission. Monthly and yearly figures changed to agree with United States Geological Survey methods of computation.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	610	321	307	359	138	146	822	1,091	1,459	1,195	756	825
2	800	347	278	346	221	137	602	1,246	1,037	1,200	687	825
3	830	376	232	316	277	157	537	1,281	1,304	1,294	492	877
4	750	346	192	297	264	230	597	1,640	1,534	1,344	397	1,185
5	750	262	207	295	233	309	650	1,591	1,472	1,677	541	1,220
6	360	240	175	257	246	400	1,162	1,264	1,509	1,300	945	1,175
7	260	229	196	241	274	397	1,117	952	1,607	1,242	1,057	1,030
8	245	204	192	215	322	452	1,085	840	1,435	1,557	1,145	1,060
9	245	172	182	205	299	451	1,270	887	1,212	1,455	1,177	1,250
10	290	165	180	200	280	624	1,620	920	990	1,475	1,047	1,400
11	430	168	179	192	287	706	1,355	742	1,092	2,077	897	1,680
12	340	166	180	183	285	751	1,435	647	1,130	4,912	1,077	1,470
13	340	165	162	174	276	705	1,390	652	1,335	2,692	1,062	1,360
14	340	176	157	174	307	862	1,312	640	1,314	1,940	1,162	1,190
15	340	185	157	168	319	934	962	745	992	1,082	1,662	1,000
16	250	175	200	164	299	854	1,252	955	906	1,020	2,326	950
17	322	168	357	163	349	709	925	932	856	945	1,330	942
18	370	210	327	154	360	727	1,149	755	1,309	915	1,212	860
19	577	270	312	152	335	751	1,359	725	1,082	930	1,035	960
20	557	369	318	154	313	619	1,202	785	1,380	817	1,237	1,062
21	496	287	258	161	309	632	1,065	867	1,592	515	935	895
22	365	315	204	162	387	677	1,005	1,027	1,415	567	952	775
23	367	341	224	159	337	661	930	1,397	1,136	622	942	710
24	360	361	170	147	274	586	920	1,130	1,114	1,202	1,195	700
25	380	323	252	145	237	749	976	945	1,142	1,830	1,250	730
26	322	282	266	167	211	879	1,030	925	1,122	1,405	1,120	990
27	335	291	273	181	173	1,635	1,036	1,551	1,287	2,162	1,031	1,625
28	291	275	293	169	163	1,440	1,250	2,395	1,510	2,390	861	1,690
29	276	247	300	162	------	1,007	1,545	1,667	1,399	1,192	912	1,275
30	291	276	374	157	------	852	1,430	2,030	1,266	1,004	805	1,040
31	281	------	389	136	------	760	------	1,790	------	881	570	------

Monthly discharge of Rio Grande near El Paso, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	830	245	412	25,300
November	376	165	257	15,300
December	389	157	242	14,900
January	359	136	199	12,200
February	387	138	278	15,400
March	1,640	137	671	41,300
April	1,620	537	1,100	65,400
May	2,400	640	1,130	69,400
June	1,610	856	1,260	75,200
July	4,910	515	1,450	88,900
August	2,330	397	1,030	63,100
September	1,690	700	1,090	65,000
The year	4,910	136	762	551,000

RIO GRANDE BELOW OLD FORT QUITMAN, NEAR FINLAY, TEX.

LOCATION.—At lower end of Valley of El Paso, 1½ miles below Old Fort Quitman and 11½ miles south of Finlay, Hudspeth County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—September 1, 1922, to September 30, 1926.

GAGE.—Vertical staff on left bank.

DISCHARGE MEASUREMENTS.—Made from cable near gage.

CHANNEL AND CONTROL.—Bed consists of sand; shifting. Banks of sand and clay; not subject to overflow; right bank with sparse vegetation. Channel straight for 500 feet above and below station. Control is sand bed of stream; shifting.

EXTREMES OF DISCHARGE.—Maximum mean daily stage during year, 6.46 feet September 28 (discharge, 2,450 second-feet); minimum mean daily discharge, 45 second-feet September 7–8.

1922–1926: Maximum mean daily discharge recorded, 2,600 second-feet August 26, 1923, and September 11, 1925; minimum mean daily discharge, 20 second-feet July 23–24, 1925.

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow regulated by storage at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent; 36 discharge measurements, ranging between 84 and 1,136 second-feet, were made from October 1 to June 30, and frequently thereafter. Discharge based on frequent discharge measurements.

COOPERATION.—Station maintained and records furnished by Mexican section of International Boundary Commission.

Daily discharge, in second-feet, of Rio Grande near Finlay, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	450	255	210	195	185	115	510	530	1,075	435	850	95
2	395	250	215	210	180	145	435	635	1,150	385	700	75
3	360	215	195	270	175	125	355	630	1,140	320	530	60
4	410	145	200	215	165	100	345	1,400	820	280	350	50
5	475	230	280	310	155	110	245	960	590	375	165	55
6	535	260	270	215	185	95	215	940	555	650	95	65
7	455	255	220	325	210	100	165	985	565	670	75	45
8	380	250	225	315	280	95	130	940	610	550	60	45
9	360	245	245	320	230	75	190	740	630	500	90	110
10	325	220	250	295	160	75	335	620	590	470	85	155
11	300	195	240	285	180	80	295	495	495	475	80	215
12	285	205	215	265	160	75	395	490	345	810	90	340
13	260	210	220	250	145	65	570	440	300	835	170	450
14	285	210	215	235	140	60	640	355	310	855	150	580
15	315	200	210	225	120	95	665	295	285	1,050	175	665
16	295	200	205	230	135	165	690	220	340	1,375	1,100	620
17	290	195	220	220	125	250	585	195	345	1,600	480	660
18	285	235	190	220	95	315	550	160	255	1,850	530	495
19	255	255	170	215	90	280	545	135	220	2,175	590	445
20	245	195	185	205	75	245	390	170	225	1,475	510	420
21	275	155	195	195	70	240	465	115	220	955	455	425
22	360	160	210	190	95	235	465	95	290	955	400	430
23	360	195	225	185	115	185	440	90	345	610	350	405
24	350	215	210	180	190	185	370	120	385	480	305	380
25	345	225	170	180	195	190	295	115	360	435	250	340
26	325	260	150	175	200	155	265	230	270	430	225	295
27	315	275	160	190	175	165	220	420	210	500	215	340
28	310	265	155	175	130	235	245	450	245	615	275	2,450
29	310	260	155	165	-------	340	230	640	265	630	235	1,350
30	280	235	180	160	-------	560	255	1,000	320	710	205	1,275
31	285	-------	170	170	-------	540	-------	1,050	-------	880	160	-------

Monthly discharge of Rio Grande near Finlay, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	535	245	338	20,800
November	275	145	222	13,200
December	280	150	205	12,600
January	325	160	225	13,900
February	280	70	156	8,650
March	560	60	184	11,300
April	690	130	383	22,800
May	1,400	90	505	31,100
June	1,150	210	458	27,300
July	2,180	280	785	48,300
August	1,100	60	321	19,700
September	2,450	45	444	26,400
The year	2,450	45	354	256,000

RIO GRANDE ABOVE PRESIDIO, TEX.

LOCATION.—1 mile above Haciendita, 8 miles above mouth of Rio Conchos, and 10 miles northwest of Presidio, Presidio County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 22, 1900, to March 31, 1914; September 1, 1919, to March 31, 1920; and August 1, 1923, to September 30, 1926.

GAGE.—Stevens 8-day water-stage recorder.

DISCHARGE MEASUREMENTS.—Made from cable near gage.

CHANNEL AND CONTROL.—Bed of sand. Channel straight for 1,000 feet above and below station. Banks medium in height and steep. Control is stretch of channel of stream; shifts. At extremely high stages backwater from Rio Conchos reaches this station.

EXTREMES OF DISCHARGE.—Maximum mean daily discharge for year, 3,000 second-feet August 23; minimum, 95 second-feet September 15.

1900–1914, 1919–20; 1923–1926: Maximum mean daily discharge, 18,100 second-feet September 15–16, 1919; no flow for several periods.

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow largely regulated by storage at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent. 39 discharge measurements, ranging between 218 and 1,395 second-feet, were made from October 1 to June 30, and frequent measurements were made thereafter. Daily discharge based largely on discharge measurements.

COOPERATION.—Station maintained and records furnished by Mexican section of International Boundary Commission.

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Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	520	215	325	290	255	330	620	1,625	510	1,275	900
2	920	525	215	330	285	285	640	670	1,400	505	1,525	1,000
3	840	515	215	325	280	310	1,050	745	1,475	500	1,450	1,150
4	800	510	210	335	280	305	950	820	1,500	495	1,350	730
5	780	505	205	340	275	280	760	985	2,500	500	1,125	495
6	710	500	200	365	270	265	640	1,650	1,525	575	1,025	400
7	640	495	210	380	270	295	570	1,225	1,275	1,025	1,000	280
8	660	460	215	395	270	330	525	1,200	1,325	780	975	375
9	1,100	450	225	385	255	285	450	1,275	1,325	960	950	270
10	940	455	260	395	250	275	365	1,475	1,600	1,000	755	240
11	760	460	245	440	260	260	435	1,925	1,375	830	550	205
12	1,025	460	235	460	300	250	310	1,750	1,150	800	640	150
13	1,075	425	255	455	315	245	270	1,500	1,100	1,400	640	115
14	950	365	255	450	285	230	265	1,125	1,025	1,300	675	100
15	930	330	265	450	255	235	370	960	920	1,150	1,075	95
16	920	300	250	440	255	215	435	885	825	1,300	890	280
17	900	305	260	425	245	210	810	790	750	1,400	1,000	1,250
18	860	300	265	385	240	205	1,000	875	710	1,475	2,375	2,100
19	780	305	250	355	235	200	1,150	680	890	1,625	2,300	1,200
20	655	260	245	345	230	195	1,025	575	890	1,675	1,525	950
21	610	265	240	325	225	195	910	525	740	1,775	1,200	830
22	595	265	240	330	225	310	980	490	655	1,650	1,800	760
23	550	280	215	335	215	350	920	475	595	1,550	3,000	695
24	510	275	210	320	200	330	890	465	560	1,450	2,775	660
25	640	250	210	315	195	315	765	470	635	1,525	2,200	630
26	580	235	220	310	190	335	765	580	575	1,400	1,850	1,200
27	645	220	240	305	185	345	580	450	575	1,050	1,250	1,375
28	605	225	255	310	180	350	695	415	615	1,200	1,200	930
29	565	230	250	305	------	350	670	395	610	1,200	990	1,800
30	540	235	230	300	------	290	685	620	570	1,025	860	2,300
31	535	------	225	310	------	285	------	1,400	------	1,050	965	------

Monthly discharge of Rio Grande above Presidio, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	1,100	510	757	46,600
November	525	220	364	21,700
December	265	200	233	14,300
January	460	300	363	22,300
February	315	180	249	13,800
March	350	195	277	17,000
April	1,150	265	674	40,100
May	1,920	395	904	55,600
June	2,500	560	1,040	62,100
July	1,780	495	1,120	68,800
August	3,000	550	1,330	81,700
September	2,300	95	782	46,500
The year	3,000	95	678	490,000

RIO GRANDE BELOW PRESIDIO, TEX.

LOCATION.—At west end of canyon section of Rio Grande, 6 miles below Presidio, Presidio County, and 7 miles below mouth of Rio Conchos.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1900, to July 31, 1915; September 1, 1919, to March 31, 1920; August 1, 1923, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder.

DISCHARGE MEASUREMENTS.—Made from cable or from boat.

CHANNEL AND CONTROL.—Bed of sand; shifts. Right bank not subject to overflow. Left bank wooded and subject to overflow at gage height 20 feet for about 750 feet. Overflow area is cultivated land with small brush. Control consists of sand; shifts. Alamito Creek, an intermittent stream, which reaches the river a quarter of a mile below station, is subject to torrential floods that bring large quantities of boulders and gravel into the Rio Grande, forming a temporary dam which causes changes in stage-discharge relation.

EXTREMES OF DISCHARGE.—Maximum mean daily discharge during year, 13,400 second-feet August 27; minimum, 1,420 second-feet May 28–29.

1900–1915, 1919–20, 1923–1926: Maximum stage recorded, 26.35 feet September 11, 1904 (discharge, 149,200 second-feet); minimum mean daily discharge, 5 second-feet May 4–14, 1904.

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow partly regulated by storage at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent. 77 discharge measurements, ranging between 1,429 and 10,526 second-feet, were made from October 1 to June 30, and frequent measurements were made thereafter. Determination of discharge based on discharge measurements.

COOPERATION.—Station maintained and records furnished by Mexican section of International Boundary Commission.

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,075	5,175	2,350	1,745	1,600	2,075	1,675	2,250	3,625	2,125	5,675	7,000
2	6,275	5,050	2,325	1,850	1,825	2,025	1,750	2,000	3,300	2,275	7,300	6,700
3	6,100	5,000	2,275	1,975	1,775	1,975	2,000	2,100	2,750	2,125	6,075	6,650
4	6,025	4,700	2,200	2,050	1,725	2,000	1,975	2,000	3,400	1,975	5,650	6,650
5	5,700	4,400	2,175	2,025	1,700	2,050	1,975	2,125	3,100	2,000	5,400	6,600
6	5,225	4,250	2,125	1,900	1,575	2,075	1,925	2,750	4,275	2,150	5,050	6,525
7	5,200	4,325	2,100	1,925	1,775	2,050	1,775	2,500	3,600	3,175	4,800	6,125
8	4,575	4,100	2,000	1,900	1,800	2,050	1,750	2,300	3,150	2,750	4,675	6,100
9	6,175	3,300	2,100	1,925	1,800	2,075	1,725	2,350	3,150	2,350	4,275	6,175
10	5,600	3,600	2,100	2,025	1,775	2,100	1,650	2,450	4,025	2,375	4,150	7,925
11	5,500	4,325	2,175	2,025	1,825	2,125	1,700	2,325	3,500	2,325	4,075	10,200
12	8,200	4,500	1,850	2,025	1,850	2,125	1,725	2,250	3,275	2,425	3,850	11,700
13	9,800	4,325	1,825	2,050	1,775	2,125	1,750	2,175	3,200	3,075	3,800	11,500
14	7,775	3,750	1,800	1,975	1,800	2,125	1,800	2,125	3,100	3,000	3,775	10,400
15	7,700	3,700	1,775	1,925	1,850	2,150	1,850	2,075	3,000	2,600	4,125	8,900
16	8,150	3,300	1,925	2,025	1,825	2,200	1,725	2,125	2,925	2,700	3,600	7,900
17	9,200	3,600	2,050	2,025	1,850	2,200	1,675	2,175	2,750	2,900	3,450	7,500
18	11,300	4,000	2,100	1,975	1,875	2,150	2,000	2,025	2,675	2,950	3,500	7,350
19	11,450	3,300	2,125	1,950	1,875	2,075	2,100	1,900	2,650	3,025	5,925	7,200
20	10,600	2,550	2,075	1,900	1,825	1,950	2,150	1,750	2,625	3,075	5,275	6,600
21	9,400	2,625	1,900	1,875	1,775	1,850	2,025	1,625	2,800	3,100	4,550	5,800
22	9,450	2,700	1,875	1,825	1,800	1,775	2,000	1,550	2,650	3,025	7,400	6,375
23	8,550	2,725	1,850	1,850	1,775	1,625	1,975	1,625	2,625	2,875	11,400	6,650
24	8,300	2,750	1,800	1,875	1,775	1,550	1,950	1,600	2,575	2,325	10,800	7,450
25	7,900	2,725	1,725	1,950	1,825	1,575	1,950	1,650	2,925	2,450	9,850	7,550
26	7,475	2,525	1,800	1,975	1,850	1,600	1,900	1,750	2,675	3,200	12,600	7,575
27	7,225	2,375	1,850	1,975	1,900	1,650	1,850	1,650	2,450	2,550	13,400	7,700
28	6,775	2,400	1,925	1,875	1,925	1,600	1,900	1,425	2,325	2,750	11,800	7,300
29	6,200	2,500	1,725	1,825	-------	1,600	1,875	1,425	2,375	3,225	10,700	7,700
30	5,975	2,525	1,750	1,875	-------	1,625	2,150	1,550	2,275	5,150	9,200	8,300
31	5,750	-------	1,775	1,850	-------	1,650	-------	1,775	-------	4,800	7,425	-------

Monthly discharge of Rio Grande below Presidio, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	11,400	4,580	7,410	455,000
November	5,180	2,380	3,570	212,000
December	2,350	1,720	1,980	122,000
January	2,050	1,740	1,930	119,000
February	1,920	1,600	1,800	99,800
March	2,200	1,550	1,930	119,000
April	2,150	1,650	1,870	112,000
May	2,750	1,420	1,980	122,000
June	4,280	2,280	2,990	178,000
July	5,150	1,980	2,800	172,000
August	13,400	3,450	6,570	404,000
September	11,700	5,800	7,600	452,000
The year	13,400	1,420	3,550	2,570,000

RIO GRANDE AT LANGTRY, TEX.

LOCATION.—At east end of canyon section, half a mile from Langtry, Val Verde County, one-fourth mile below Pump Canyon, and 13 miles above mouth of Pecos River.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—January 20, 1924, to September 30, 1926; May 1, 1900, to October 15, 1914; December 1, 1919, to March 31, 1920.

GAGE.—Vertical and inclined staff on right bank; read by H. T. Dodd.

DISCHARGE MEASUREMENTS.—Made from cable 500 feet below gage or by wading.

CHANNEL AND CONTROL.—Channel straight for 1 mile above and one-fourth mile below station. One channel at all stages. Bed of sand and gravel; fairly permanent. Right bank of rock, permanent, and is not overflowed. Left bank of rock overlain by sand and not subject to overflow. Control is sand, gravel, and boulder riffle, 1,000 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from graph drawn from gage readings, 10.72 feet at 11 p. m. August 25 (discharge, 24,500 second-feet); minimum stage, 1.85 feet from 5 p. m. July 3 to 8 a. m. July 8 (discharge, 1,340 second-feet).

1900–1914, 1919–20, 1924–1926: Maximum stage recorded, 34.25 feet September 13, 1904 (discharge, 132,000 second-feet); minimum discharge, 270 second-feet May 8–13, 1904. A float measurement by W. H. Dodd on September 16, 1919, at a stage of 46.9 feet, present gage datum (by levels to point shown by W. H. Dodd), showed discharge of 152,000 second-feet. A stage of 56.9 feet, present gage datum, was reached about June 18, 1922; determined by leveling to flood mark made by W. H. Dodd.

ICE.—None.

DIVERSIONS.—Considerable water is diverted in Colorado, New Mexico, Texas, and Mexico; amount not known. Records of the Board of Water Engineers for the State of Texas show that about 180,000 acres was irrigated in 1920 by diversions below the station, practically all in Hidalgo and Cameron Counties.

REGULATION.—Flow partly regulated by storage on Mexican tributaries and at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read to half-tenths twice daily. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Shifting-control method used June 19 and July 16 to September 30. Records fair.

Discharge measurements of Rio Grande at Langtry, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 2	3.10	3,300	Feb. 27	2.24	1,780	June 26	2.06	1,530
Oct. 10	3.00	3,090	Mar. 9	2.18	1,710	July 12	2.30	1,830
Oct. 17	4.06	5,390	Mar. 16	2.04	1,520	July 17	2.71	2,400
Oct. 24	4.66	6,630	Mar. 26	2.00	1,520	July 23	3.10	3,420
Nov. 4	3.00	3,050	Apr. 9	2.16	1,670	July 29	2.87	2,880
Nov. 11	2.60	2,360	Apr. 15	1.96	1,410	Aug. 7	3.73	4.790
Dec. 5	2.38	2,010	Apr. 27	2.08	1,550	Aug. 13	2.86	2,810
Dec. 12	2.32	1,920	May 8	2.28	1,830	Aug. 20	2.94	3,060
Dec. 19	2.42	2,080	May 15	2.30	1,870	Aug. 29	9.20	20,600
Dec. 26	2.36	1,980	May 22	2.16	1,670	Sept. 4	4.39	6,410
Jan. 8	2.52	2,190	May 28	3.00	2,980	Sept. 11	3.80	4,960
Jan. 15	2.52	2,200	June 3	1.96	1,490	Sept. 17	5.86	10,500
Jan. 29	2.42	2,060	June 12	2.28	1,820	Sept. 24	3.97	5,510
Feb. 6	2.34	1,950	June 19	5.04	8,620			

Daily discharge, in second-feet, of Rio Grande at Langtry, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,410	3,620	2,040	2,040	2,040	1,760	1,510	1,630	4,260	1,510	10,800	10,600
2	3,210	3,410	2,040	2,040	2,040	1,760	1,510	2,670	1,510	1,450	10,300	8,120
3	3,020	3,410	2,040	2,040	2,040	1,760	1,510	2,340	1,570	1,390	9,590	6,920
4	2,840	3,020	2,040	2,040	2,040	1,760	1,510	2,040	1,760	1,340	6,200	6,200
5	2,670	3,020	2,040	2,040	2,040	1,760	1,510	2,040	3,410	1,340	5,480	5,720
6	2,340	2,670	2,040	2,040	1,890	1,760	1,760	3,020	3,300	1,340	5,240	5,000
7	2,670	2,670	2,040	2,190	2,040	1,760	2,190	2,040	4,520	1,340	4,760	4,280
8	2,500	2,670	2,040	2,190	2,040	1,760	1,630	1,890	3,210	1,450	4,050	3,830
9	3,020	2,500	1,890	2,190	1,890	1,760	1,760	2,190	2,670	2,190	3,830	5,480
10	3,020	2,340	1,890	2,190	1,890	1,760	1,760	2,340	2,190	2,340	3,410	5,000
11	7,420	2,340	1,890	2,190	1,890	1,760	1,510	2,190	1,890	2,190	3,210	5,000
12	9,840	2,190	1,890	2,190	1,890	1,760	1,510	2,040	1,890	1,890	3,020	9,740
13	6,680	2,190	1,890	2,190	1,890	1,630	1,510	2,190	1,760	1,760	2,670	14,700
14	10,400	2,190	1,890	2,190	1,890	1,630	1,510	2,040	1,630	2,040	4,320	15,800
15	16,000	2,190	1,890	2,190	1,890	1,630	1,450	1,890	1,510	2,040	3,410	15,800
16	6,680	2,190	1,890	2,190	1,890	1,510	1,450	1,760	1,450	2,500	2,500	14,200
17	5,480	2,190	2,040	2,190	1,890	1,570	1,510	1,760	1,390	2,340	2,840	13,200
18	5,240	2,190	2,040	2,190	1,890	1,630	1,510	1,760	1,390	2,340	2,670	10,600
19	5,240	2,190	2,040	2,190	1,890	1,630	1,450	1,760	5,490	2,340	3,020	9,090
20	5,480	2,190	2,040	2,190	1,890	1,630	1,510	1,760	2,800	2,190	3,020	8,120
21	7,160	2,190	2,040	2,190	1,890	1,630	1,630	1,760	1,760	2,340	3,820	6,920
22	7,160	2,190	2,040	2,190	1,890	1,630	1,630	1,760	1,630	4,010	4,280	6,440
23	7,400	2,190	2,040	2,190	1,890	1,570	1,630	1,760	1,630	4,440	4,050	5,960
24	6,920	2,190	2,040	2,190	1,760	1,510	2,040	2,040	1,570	2,670	5,720	5,720
25	6,200	2,040	2,040	2,040	1,760	1,510	2,040	2,190	1,570	2,670	19,000	5,480
26	5,960	2,040	2,040	2,040	1,760	1,510	1,760	2,340	1,570	2,670	18,800	5,240
27	5,480	2,040	2,040	2,040	1,760	1,510	1,630	2,040	1,510	2,670	12,100	5,000
28	5,240	2,040	2,040	2,040	1,760	1,510	1,630	2,840	1,760	2,670	18,500	4,280
29	4,520	2,040	2,040	2,040	-------	1,510	1,630	2,340	1,760	2,670	20,600	4,050
30	3,830	2,040	2,040	2,040	-------	1,510	1,630	1,760	1,510	3,960	16,300	3,830
31	3,830	-------	2,040	2,040	-------	1,510	-------	1,760	-------	13,200	14,200	-------

Monthly discharge of Rio Grande at Langtry, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16,000	2,340	5,510	339,000
November	3,620	2,040	2,410	144,000
December	2,040	1,890	2,000	123,000
January	2,190	2,040	2,130	131,000
February	2,040	1,760	1,900	106,000
March	1,760	1,510	1,640	101,000
April	2,190	1,450	1,630	96,800
May	3,020	1,630	2,060	127,000
June	5,490	1,390	2,200	131,000
July	13,200	1,340	2,620	161,000
August	20,600	2,500	7,470	460,000
September	15,800	3,830	7,680	457,000
The year	20,600	1,340	3,280	2,380,000

RIO GRANDE NEAR DEL RIO, TEX.

LOCATION.—At international highway bridge between Del Rio, Val Verde County, Tex., and Villa Acuña, Coahuila, Mexico, 3.2 miles by road from court house in Del Rio and 12 miles below mouth of Devils River.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 17, 1923, to September 30, 1926. A station was maintained 1 mile below mouth of Devils River from May 1, 1900, to April 30, 1915. A station was maintained at McKees Switch, 4½ miles below mouth of Devils River, from December 1, 1919, to March 31, 1920. Relation between gages not known. Several springs but no tributaries of importance enter the river between present location and location 1 mile below Devils River.

GAGE.—Vertical and inclined staff gage on left bank; read by T. N. McFarland.

DISCHARGE MEASUREMENTS.—Made from cable 900 feet above low-water gage or from bridge.

CHANNEL AND CONTROL.—Channel straight for half a mile above and 1,400 feet below station. Bed of solid rock overlain by about 2 inches of sand and gravel; permanent. Right bank at cable of sand and clay; not subject to overflow. Left bank of sand and clay, sodded with grass, heavily wooded with small trees and brush, and at a stage of about 13 feet subject to overflow for 3,000 feet. Both banks subject to shift. Low-water control is rock ledge, partly covered with sand and gravel, 500 feet below gage; shifts. High-stage control indefinite.

EXTREMES OF DISCHARGE.—Maximum discharge during year, from current-meter measurement, 25,100 second-feet August 26 (gage height, 7.70 feet); minimum discharge, from current-meter measurement, 2,110 second-feet July 7 (gage height, 2.20 feet).

1900–1915, 1919–20, 1923–1926: Highest stage recorded, at gage 1 mile below mouth of Devils River, 36.5 feet April 6, 1900. Highest stage at gage 4½ miles below mouth of Devils River, 41.0 feet in September, 1919 (discharge not determined). Relation to present gage not known.

Highest stage on record occurred June 18 or 19, 1922, and reached a gage height by present datum of 32.8 feet, determined in 1924 by leveling to flood mark on Mexican bank pointed out by Mexican customs officer (discharge not determined). Minimum mean daily stage, 3.25 feet May 12, 1904 (discharge, 1,120 second-feet).

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow partly regulated by storage at Elephant Butte Dam, 120 miles above El Paso, on Pecos River, and on Mexican tributaries.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined for all stages. Gage read to hundredths twice daily. Daily discharge determined by applying mean daily gage height to rating table (except from April 19 to July 18, when shifting-control method was used), or on days of considerable fluctuations in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records good.

Discharge measurements of Rio Grande near Del Rio, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 9	3.35	4,020	Mar. 5	2.80	2,670	July 19	2.70	2,930
Oct. 12	4.81	10,300	Mar. 12	2.79	2,620	July 26	3.02	3,630
Oct. 15	6.14	17,700	Mar. 19	2.76	2,640	Aug. 1	5.57	14,300
Oct. 20	4.32	7,940	Apr. 7	2.60	2,300	Aug. 3	3.84	5,990
Oct. 29	3.80	5,730	Apr. 13	2.58	2,220	Aug. 9	3.41	4,810
Nov. 8	3.28	3,740	Apr. 23	2.99	3,310	Aug. 16	3.10	3,960
Nov. 13	3.12	3,440	May 4	2.65	2,700	Aug. 24	3.51	5,020
Dec. 3	2.98	3,070	May 12	2.75	2,840	Aug. 25	5.12	12,500
Dec. 10	2.95	3,070	May 19	2.56	2,550	Aug. 26	7.70	25,100
Dec. 17	2.89	2,890	May 26	2.40	2,190	Aug. 28	5.75	14,900
Dec. 23	2.92	3,060	June 9	3.64	5,370	Aug. 30	6.62	18,900
Jan. 5	2.94	3,070	June 16	3.02	3,680	Sept. 2	4.63	9,830
Jan. 13	2.92	2,980	June 24	2.76	3,010	Sept. 9	3.45	5,010
Jan. 27	2.89	2,970	June 29	2.44	2,440	Sept. 14	5.62	15,000
Feb. 3	2.90	2,930	July 7	2.20	2,110	Sept. 21	4.40	8,320
Feb. 9	2.87	2,730	July 14	2.64	2,870			

Daily discharge, in second-feet, of Rio Grande near Del Rio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,870	4,870	3,210	3,090	2,970	2,740	2,290	3,380	2,910	2,220	11,200	11,900
2	4,560	4,560	3,090	3,210	2,970	2,740	2,290	2,910	2,910	2,220	8,610	9,500
3	4,270	4,560	3,210	3,210	2,970	2,620	2,400	2,700	2,910	2,220	6,560	8,180
4	4,270	4,270	3,210	3,090	2,970	2,740	2,290	2,700	2,600	2,220	7,350	6,950
5	4,270	4,270	3,210	3,090	2,970	2,740	2,290	3,410	5,540	2,220	8,610	6,560
6	3,990	4,270	3,210	3,090	2,970	2,860	2,290	2,910	7,020	2,140	6,950	6,190
7	3,990	3,990	3,090	3,090	2,970	2,740	2,290	2,910	6,950	2,140	5,830	6,190
8	3,990	3,990	3,090	3,210	2,970	2,740	2,400	2,910	6,190	2,310	5,480	6,190
9	4,270	3,720	3,090	3,090	2,860	2,740	2,510	2,910	5,480	2,400	5,480	5,140
10	4,870	3,720	3,090	2,970	2,860	2,740	2,510	2,910	5,140	2,500	4,210	6,190
11	6,990	3,720	3,090	2,970	2,860	2,740	2,400	3,140	4,210	2,910	3,920	5,830
12	9,460	3,460	3,090	2,970	2,860	2,740	2,290	2,910	4,210	2,910	4,210	7,350
13	7,770	3,460	3,090	2,970	2,860	2,740	2,290	2,700	3,920	2,800	3,920	12,800
14	7,770	3,460	3,090	3,090	2,860	2,620	2,180	2,910	4,860	2,910	3,650	14,300
15	14,600	3,460	2,970	3,090	2,860	2,620	2,180	2,910	3,920	2,910	4,680	14,800
16	13,400	3,460	2,970	3,090	2,740	2,620	2,180	2,700	3,650	2,700	3,920	13,800
17	6,990	3,460	2,970	3,090	2,740	2,620	2,180	2,700	3,650	3,140	3,380	12,400
18	6,240	3,460	2,970	3,090	2,740	2,620	2,290	2,600	3,920	3,380	3,920	10,400
19	6,240	3,210	2,970	2,970	2,740	2,620	2,310	2,600	5,070	2,910	4,210	9,050
20	7,770	3,210	2,970	2,970	2,740	2,620	7,700	2,500	6,300	2,700	3,380	8,610
21	9,900	3,210	2,970	2,970	2,740	2,620	5,830	2,500	3,650	2,910	3,650	8,610
22	9,460	3,210	2,970	2,970	2,740	2,510	4,820	2,500	5,730	3,140	4,820	7,350
23	8,600	3,210	2,970	3,090	2,740	2,510	3,380	2,400	4,210	7,400	5,140	6,560
24	7,380	3,090	2,970	3,090	2,740	2,510	3,140	2,400	3,140	6,190	5,690	6,190
25	7,380	3,090	2,970	2,970	2,740	4,500	2,910	2,310	2,910	3,920	12,400	6,190
26	6,990	3,090	2,970	2,970	2,740	2,620	2,600	2,220	2,910	3,380	22,500	5,830
27	6,240	3,090	2,970	2,970	2,740	2,400	2,400	2,600	2,600	3,100	14,100	5,480
28	5,890	3,210	2,970	3,210	2,740	2,510	8,350	4,030	2,500	4,500	15,300	5,140
29	5,540	3,210	2,970	2,970	------	2,510	11,100	3,180	2,400	4,820	19,200	5,140
30	5,200	3,210	2,970	2,970	------	2,400	2,910	2,700	2,310	4,210	18,800	5,480
31	5,200	------	2,970	2,970	------	2,400	------	3,570	------	3,650	15,300	------

Monthly discharge of Rio Grande near Del Rio, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	14,600	3,990	6,720	413,000
November	4,870	3,090	3,610	215,000
December	3,210	2,970	3,040	187,000
January	3,210	2,970	3,050	188,000
February	2,970	2,740	2,840	157,000
March	4,500	2,400	2,690	166,000
April	11,100	2,180	3,300	196,000
May	4,030	2,220	2,830	174,000
June	7,020	2,310	4,120	245,000
July	7,400	2,140	3,200	197,000
August	22,500	3,380	7,950	489,000
September	14,800	5,140	8,140	485,000
The year	22,500	2,140	4,300	3,110,000

RIO GRANDE AT EAGLE PASS, TEX.

LOCATION.—At international highway bridge between Eagle Pass, Maverick County, Tex., and Piedras Negras, Coahuila, Mexico, 1 mile above Southern Pacific Co.'s railroad bridge, and 4 miles by air line below mouth of Elm Creek.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 26, 1923, to September 30, 1926; May 1, 1900, to March 31, 1914; August 10, 1914, to April 30, 1916. United States Weather Bureau has obtained records of stage since January 1, 1901.

GAGE.—Vertical staff on left bank.

DISCHARGE MEASUREMENTS. Made from highway or railroad bridge.

CHANNEL AND CONTROL.—Bed of sand or limestone; fairly permanent. Channel straight for half a mile above and 1 mile below station. One channel at all stages. Banks of sand and clay, and subject to overflow for 600 feet on both sides of low-water channel at stage of 14 feet. Drift collecting on temporary highway bridge may cause change in stage-discharge relation. Control probably a gravel bar around an old steel highway-bridge span lying in river just below railroad bridge; shifts.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 8.46 feet at 12.15 a. m. August 27 (discharge, 25,000 second-feet); minimum stage not determined.

1900–1916, 1923–1926: Maximum stage, 34.6 feet at midnight June 29, 1905 (mean daily discharge, June 30, 1905, 238,000 second-feet); minimum mean daily discharge, 1,030 second-feet April 15, 1913.

DIVERSIONS.—Considerable water is diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow partly regulated by storage at Elephant Butte Dam, 120 miles above El Paso, on Pecos River, and on Mexican tributaries.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read once daily to tenths, but gage readings not always accurate. Daily discharge ascertained by applying daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings; shifting-control method used April 21 to September 3. Records poor.

COOPERATION.—Gage-height records furnished by United States Weather Bureau.

Discharge measurements of Rio Grande at Eagle Pass, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 7	3.65	4,670	Feb. 12	3.00	3,040	June 22	3.31	3,970
Oct. 13	5.55	10,700	Mar. 4	2.80	2,670	June 28	2.90	3,050
Oct. 21	5.39	10,300	Mar. 11	2.90	2.850	July 8	2.60	2,270
Oct. 27	4.62	7,520	Mar. 29	2.86	2,690	July 16	2.92	2.880
Nov. 7	3.65	4,550	Apr. 6	2.72	2,450	July 20	2.93	2,990
Nov. 12	3.44	3,950	Apr. 12	2.72	2,490	July 27	3.35	3,800
Dec. 2	3.20	3.420	Apr. 19	2.68	2,390	Aug. 2	5.60	11,400
Dec. 9	3.18	3,420	Apr. 21	7.85	16,800	Aug. 11	3.54	4,260
Dec. 16	3.12	3,270	Apr. 22	4.80	7,240	Aug. 17	3,32	3,670
Dec. 22	3.18	3,490	May 3	3.35	3,840	Aug. 27	7.06	18,100
Jan. 4	3.18	3,440	May 11	3.35	4,050	Sept. 1	5.95	12,700
Jan. 12	3.16	3,240	May 17	3.90	5,210	Sept. 8	4.26	6,470
Jan. 26	3.18	3,380	June 8	4.22	6,730	Sept. 13	5.36	10,300
Feb. 2	3.16	3,250	June 15	3.61	4,840	Sept. 20	4.88	8,290

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,890		3,680	3,460	3,320		2,450	5,580	3,930	3,030	4,180	12,400
2	5,580		3,420	3,460	3,250	2,860	2,450	4,710	3,240	2,450	10,000	9,900
3	5,280		3,460	3,460			2,450	3,930	3,460	2,290	7,180	7,510
4	5,280	6,040	3,460	3,460		2,670	2,450	3,930	3,240	2,630	6,530	6,850
5	4,990		3,460	3,460			2,450	3,930	4,080	2,290	7,180	6,850
6	4,710		3,460	3,460			2,450	3,930	7,840	2,290	7,840	6,210
7	4,710	4,550	3,460	3,460	3,140	2,760	2,450	3,930	7,510	2,290	6,210	6,850
8	4,440		3,460	3,460			2,450	3,930	6,530	2,290	4,990	6,530
9	4,440		3,460	3,460			2,290	3,690	6,210	2,290	4,710	6,530
10	4,710	4,250	3,460	3,240			2,290	3,930	5,890	2,450	3,930	5,890
11	7,180		3,460	3,240		2,850	2,290	4,180	5,890	2,450	4,180	6,530
12	10,600	3,950	3,460	3,240	3,040	2,820	2,450	4,180	4,710	3,030	3,930	6,530
13	10,600		3,240	3,240		2,820	2,450	4,710	4,440	3,240	3,930	9,260
14	8,520		3,240	3,240		2,820	2,450	3,930	4,710	2,820	3,690	12,000
15	12,400		3,240	3,240		2,820	2,450	3,930	4,710	3,030	3,690	12,800
16	16,200		3,240	3,240		2,820	2,450	4,990	4,440	2,820	4,990	13,200
17	9,200		3,240	3,240		2,630	2,450	5,580	4,180	2,820	5,020	11,700
18	7,510		3,240	3,240		2,630	2,450	4,440	4,180	2,820	5,500	9,900
19	7,180		3,240	3,240		2,630	2,450	4,180	5,280	3,460	4,440	9,200
20	7,510		3,240	3,240		2,630	2,820	3,240	5,890	3,030	4,440	8,520
21	10,300	3,680	3,240	3,240	2,860	2,630	12,100	3,240	5,890	2,820	3,690	8,860
22			3,240	3,240		2,820	7,220	3,240	4,440	3,030	4,180	9,900
23			3,460	3,240		2,820	4,710	3,030	9,010	4,180	4,990	9,900
24	8,910		3,460	3,460		3,030	7,180	2,820	3,930	5,890	4,990	9,550
25			3,460	3,460		3,690	6,850	3,030	2,820	5,280	6,860	9,550
26			3,460	3,380		4,180	4,990	3,030	2,820	4,990	17,000	9,550
27	7,520		3,460			3,240	3,930	3,030	2,820	3,690	18,300	8,860
28			3,460			2,820	3,690	3,240	3,030	5,480	8,530	9,990
29			3,460	3,320		2,630	4,440	3,930	3,030	9,000	15,800	9,900
30	6,040		3,460			2,630	6,210	3,030	2,820	5,280	16,900	9,900
31		-------	3,460		-------	2,630	-------	3,240	-------	4,180	14,400	-------

NOTE.—Mean daily discharge is result of current-meter measurements Oct. 21, 27, Nov. 7, 12, Dec. 2, Jan. 26, Feb. 2, 12, Mar. 4 and 11. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Rio Grande at Eagle Pass, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	16,200	4,440	7,530	463,000
November	----------	----------	4,270	254,000
December	----------	3,240	3,390	209,000
January	----------	----------	3,340	205,000
February	----------	----------	2,990	166,000
March	4,180	----------	2,850	175,000
April	12,100	2,290	3,670	219,000
May	5,580	2,820	3,860	237,000
June	9,010	2,820	4,700	280,000
July	9,000	2,290	3,470	214,000
August	18,300	3,690	7,170	441,000
September	13,200	5,890	9,030	538,000
The year	18,300	----------	4,700	3,400,000

RIO GRANDE AT LAREDO, TEX.

LOCATION.—At National Railways of Mexico bridge at Laredo, Webb County, 1 mile above international highway bridge and 2 miles above mouth of Arroyo Chacon.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1900, to March 31, 1914; November 1, 1922, to September 30, 1926. Records of stage have been obtained by United States Weather Bureau at international highway bridge since January 1, 1901.

GAGE.—Stevens continuous water-stage recorder at downstream side of left bridge abutment.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet below gage.

CHANNEL AND CONTROL.—Channel straight for 1,000 feet above and below gage. Right bank of sand and silt; wooded for 25 feet from low-water edge and clean farther back; subject to overflow at a stage of about 10 feet. Left bank of sand and silt; wooded with mesquite, grangeno, and willows; subject to overflow at a stage of 30 feet. Bed of sand; shifts. Control is stretch of channel; shifts.

EXTREMES OF DISCHARGE.—Maximum mean daily stage for year, 18.24 feet April 22 (discharge, 75,000 second-feet); minimum mean daily stage, 3.50 feet April 20 (discharge, 2,080 second-feet).

1900–1914, 1922–1926: Maximum stage recorded, 35.0 feet at 11 p. m. May 31, 1925 (discharge, about 205,000 second-feet); minimum mean daily discharge, 955 second-feet August 17, 1910.

The highest stage known was about 46 feet June 20, 1922 (datum of gage from November 1, 1922, to September, 1925; discharge not determined).

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

REGULATION.—Flow partly regulated by storage at Elephant Butte Dam, 120 miles above El Paso, on Pecos River, and on Mexican tributaries.

ACCURACY.—Stage-discharge relation not permanent. Sixty-seven discharge measurements, ranging between 2,130 and 28,462 second-feet, were made from October 1 to June 30, and frequent measurements thereafter. Owing to shifting control, daily discharge is based on frequent discharge measurements.

COOPERATION.—Daily gage height and discharge furnished by Mexican section of International Boundary Commission.

Daily discharge, in second-feet, of Rio Grande at Laredo, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,800	5,200	3,200	3,300	3,125	2,450	2,450	7,925	2,275	3,925	4,625	15,900
2	7,500	4,950	3,275	3,250	3,125	2,400	2,450	8,075	3,850	3,900	5,100	13,700
3	6,400	4,900	3,250	3,225	3,150	2,425	2,450	8,200	3,775	3,875	5,675	10,250
4	5,850	5,200	3,175	3,200	3,100	2,425	2,425	8,225	3,500	4,550	7,750	8,400
5	5,350	5,300	3,175	3,200	3,050	2,450	2,850	10,500	3,275	4,125	6,550	8,250
6	5,100	6,100	3,175	3,225	3,000	2,425	3,075	9,800	2,800	2,700	7,100	7,500
7	4,400	5,400	3,175	3,350	2,975	2,425	2,925	7,900	3,075	2,125	7,975	6,150
8	4,350	5,100	3,225	3,575	2,875	2,450	2,750	7,800	4,675	2,175	6,675	6,000
9	4,300	4,850	3,200	3,475	2,825	2,475	2,425	7,700	6,000	2,875	5,650	5,800
10	4,650	4,500	3,150	3,350	2,825	3,700	5,500	5,500	5,550	2,900	5,200	5,425
11	5,250	4,250	3,150	3,225	2,850	3,150	3,400	3,675	3,825	2,925	5,650	5,075
12	5,600	4,200	3,175	3,150	2,825	3,150	3,350	3,375	3,225	2,400	5,025	5,900
13	10,000	4,200	3,175	3,075	2,850	3,000	2,500	3,375	3,150	3,500	4,350	6,000
14	8,950	3,975	3,175	3,025	2,800	2,600	2,225	3,375	3,100	5,000	4,125	7,500
15	7,700	3,975	3,200	3,050	2,775	2,375	2,200	3,225	3,650	3,425	4,250	15,500
16	9,100	3,950	3,175	3,025	2,825	2,350	2,175	3,200	3,650	3,275	4,250	16,800
17	14,500	3,825	3,175	3,050	2,775	2,350	2,150	3,175	4,025	2,850	4,175	13,500
18	10,500	3,650	3,175	3,150	2,775	2,350	2,151	6,500	4,300	2,875	3,925	11,500
19	7,000	3,550	3,175	3,225	2,700	2,350	2,150	5,150	6,275	3,100	4,250	10,300
20	5,800	3,600	3,175	3,275	2,650	2,700	2,075	5,000	3,800	3,150	4,225	9,200
21	6,500	3,475	3,175	3,250	2,575	2,775	19,000	3,300	5,975	3,150	4,550	8,025
22	8,800	3,475	3,150	3,100	2,575	2,525	75,000	2,975	8,000	3,275	6,100	7,900
23	10,100	3,475	3,175	3,000	2,575	2,400	18,500	2,900	6,025	3,250	6,075	7,500
24	9,800	3,300	3,175	3,000	2,975	2,350	4,100	2,800	4,675	3,600	6,475	7,000
25	9,200	3,300	3,225	3,025	2,600	2,400	3,825	2,775	4,225	5,475	8,200	6,500
26	8,600	3,300	3,200	3,225	2,525	2,375	3,875	2,775	4,100	5,850	7,825	6,250
27	7,900	3,325	3,275	3,200	2,450	4,175	3,825	2,750	3,075	5,000	17,000	6,100
28	7,750	3,325	3,875	3,175	2,450	3,700	2,775	2,475	2,975	5,150	18,400	5,700
29	6,900	3,250	3,925	3,150	-------	2,525	3,850	2,475	3,200	5,350	13,700	5,675
30	5,600	3,250	3,900	3,075	-------	2,550	6,300	2,325	3,975	3,700	15,500	5,525
31	4,850	-------	3,800	3,100	-------	2,525	--------	2,200	-------	3,825	17,500	-------

Monthly discharge of Rio Grande at Laredo, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	14,500	4,300	7,230	444,000
November	6,100	3,250	4,140	246,000
December	3,920	3,150	3,280	202,000
January	3,580	3,000	3,180	196,000
February	3,150	2,450	2,810	156,000
March	4,180	2,350	2,650	163,000
April	75,000	2,080	6,490	386,000
May	10,500	2,200	4,880	300,000
June	8,000	2,280	4,130	246,000
July	5,850	2,120	3,650	225,000
August	18,400	3,920	7,350	452,000
September	16,800	5,080	8,490	505,000
The year	75,000	2,080	4,860	3,520,000

RIO GRANDE NEAR BROWNSVILLE, TEX.

LOCATION.—Opposite Matamoras, Tamaulipas, Mexico, at international railroad bridge 1 mile above Brownsville, Cameron County, and 20 miles in an air line above mouth of Rio Grande.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—October 1, 1922, to September 30, 1926; April 29, 1900, to March 31, 1914 (discharge not computed).

GAGE.—Stevens continuous water-stage recorder attached to pier of bridge.

DISCHARGE MEASUREMENTS.—Made from cable near gage.

CHANNEL AND CONTROL.—Bed of sand; shifting. Channel straight for 500 feet above and 2,000 feet below station. Banks of sand and clay; subject to overflow at extremely high stages. Control of sand; shifts.

EXTREMES OF DISCHARGE.—Maximum mean daily discharge during year, 29,000 second-feet April 25; minimum mean daily discharge, 1,680 second-feet March 12.

1923–1926: Maximum mean daily discharge, that of April 25, 1926; minimum, 225 second-feet May 30, 1925.

DIVERSIONS.—Considerable water diverted in Colorado, New Mexico, Texas, and Mexico; amount not known.

Between Roma and Brownsville there are many lagoons (old river channels) which take flow during moderate floods, and a large area is overflowed deeply in large floods. Much of this water returns slowly to the river as the floods subside, thus making the flow more uniform at Brownsville than at Roma. During extremely high stages large quantities also leave the river entirely, reaching the Gulf of Mexico by other channels.

REGULATION.—Flow partly regulated by storage at Elephant Butte Dam, 120 miles above El Paso.

ACCURACY.—Stage-discharge relation not permanent. Seventy-five discharge measurements, ranging between 1,899 and 29,000 second-feet, were made from October 1 to June 30, and frequent measurements made thereafter. Daily discharge determined largely by measurements.

COOPERATION.—Records furnished by Mexican section of International Boundary Commission.

Daily discharge, in second-feet, of Rio Grande near Brownsville, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21,800	9,650	4,225	4,800	4,700	2,800	3,375	6,250	2,625	4,400	5,350	10,750
2	22,000	8,850	3,750	4,775	4,675	2,550	3,550	6,675	2,600	4,375	5,700	14,300
3	20,700	8,525	3,625	4,775	4,550	2,225	3,425	10,800	2,675	4,475	5,925	16,000
4	21,300	8,275	3,525	4,800	4,375	2,025	3,250	14,500	2,675	7,000	6,750	15,200
5	21,000	7,850	3,600	4,900	4,225	1,850	3,225	11,200	3,600	19,500	10,000	12,200
6	19,500	7,600	3,900	5,050	4,050	1,875	2,850	12,300	4,825	24,000	12,600	11,000
7	16,200	7,450	4,200	5,375	4,075	2,100	2,625	16,000	6,800	23,000	12,000	10,900
8	13,000	9,850	4,250	5,475	4,150	2,475	2,325	18,200	6,500	12,500	9,500	8,300
9	11,400	9,700	4,300	5,225	4,025	2,250	2,200	16,500	5,575	8,500	7,775	6,825
10	10,500	7,525	4,225	5,275	3,725	2,025	2,275	11,100	5,200	6,500	7,925	5,550
11	10,000	6,600	4,250	5,550	3,450	1,950	2,450	7,650	5,725	5,700	7,400	5,150
12	9,950	5,800	4,300	5,100	3,425	1,675	2,800	6,500	6,850	5,100	6,000	5,050
13	9,500	5,550	4,375	5,075	3,400	1,750	2,425	6,050	7,000	4,875	5,250	4,900
14	9,200	5,425	4,550	5,050	3,600	1,850	2,375	5,875	6,300	4,650	5,100	4,725
15	11,200	5,475	4,450	4,900	3,700	2,175	3,000	6,900	5,700	4,375	5,125	4,175
16	12,700	5,300	4,500	4,800	3,475	2,525	3,125	6,600	5,450	5,225	5,100	3,950
17	13,100	5,175	4,625	4,825	3,125	2,875	2,775	5,900	4,150	8,600	4,925	6,200
18	12,800	5,050	4,650	4,600	3,100	3,275	2,700	5,375	3,525	8,500	4,550	12,200
19	15,000	5,025	4,625	4,500	3,100	3,475	2,700	5,225	3,100	7,100	4,025	13,500
20	16,700	5,000	4,600	4,350	3,050	3,600	2,350	4,950	3,075	6,550	3,775	12,800
21	12,600	4,900	4,650	4,275	3,075	3,750	2,525	4,625	3,200	9,600	3,525	11,300
22	9,700	4,900	4,625	4,250	3,250	3,925	1,875	5,250	2,950	12,500	3,600	9,500
23	8,300	4,950	4,500	4,200	2,975	3,925	2,225	7,050	4,500	10,000	3,800	7,600
24	8,100	4,725	4,400	4,450	2,500	3,800	25,000	6,150	6,600	7,900	3,500	6,850
25	10,300	4,450	4,475	4,600	2,425	3,775	29,000	5,375	18,000	6,350	3,175	6,300
26	11,700	4,175	4,525	4,650	2,250	3,600	12,500	4,350	22,400	5,625	3,075	6,700
27	11,500	4,300	4,575	4,500	2,225	3,525	6,650	3,625	14,300	5,475	2,950	7,100
28	11,600	4,200	4,625	4,450	2,450	3,675	7,400	3,075	9,400	7,900	2,925	6,425
29	11,400	4,200	4,600	4,600	-------	3,800	7,975	2,850	5,700	8,800	4,100	5,600
30	10,500	4,375	4,675	4,700	-------	3,550	9,200	2,775	5,000	6,800	13,800	7,750
31	10,200	-------	4,750	4,775	-------	3,200	---------	2,775	---------	5,600	14,000	-------

Monthly discharge of Rio Grande near Brownsville, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	22,000	8,100	13,300	820,000
November	9,850	4,180	6,160	367,000
December	4,750	3,520	4,350	268,000
January	5,550	4,200	4,800	295,000
February	4,700	2,220	3,470	193,000
March	3,920	1,680	2,830	174,000
April	29,000	1,880	5,340	318,000
May	18,200	2,780	7,500	461,000
June	22,400	2,600	6,200	369,000
July	24,000	4,380	8,430	519,000
August	14,000	2,920	6,230	383,000
September	16,000	3,950	8,630	513,000
The year	29,000	1,680	6,460	4,680,000

RIO GRANDE SEEPAGE INVESTIGATION

During this series of measurements the river was at a constant stage, and the measurements represent the natural conditions.

Discharge measurements to determine seepage on Rio Grande in February and March, 1926

From Del Rio to Eagle Pass, Tex.

Date	Stream or diversion	Location	Approximate distance from initial point, in miles	Discharge in second-feet				
				Main stream	Tributary	Diversion	Gain or loss in section	Total gain or loss
Feb. 9	Rio Grande	Gaging station near Del Rio.	0	2,730				
Mar. 2	San Felipe Creek	Near springs 5 miles above mouth.	3		76			
3	Sycamore Creek	2 miles above mouth	12		1			
Feb. 10	Rio Grande	¾ mile above, Bedell-Moore pumping plant.	14	2,830			+23	+23
Mar. 3	Pinto Creek	1 mile above mouth	21		6			
Feb. 11	Rio San Diego	do	26		77			
Mar. 3	Las Moras Creek	do	32½		7			
Feb. 11	Rio San Rodrigro	Mouth	40		27			
12	Rio Grande	3 miles below Jimenez, Mexico.	43	3,060			+113	+136
12	do	Gaging station at Eagle Pass.	57	3,040			−20	+116

From Eagle Pass to San Ygnacio, Tex.

Feb. 12	Rio Grande	Gaging station at Eagle Pass.	0	3,040				
13	Rio Chico	Mouth	3		71			
13	Rio Grande	About 1 mile above mouth of Rio Santo Domingo.	11	2,950			−161	−161
13	Rio Santo Domingo.	Mouth	12		[a] 10			
14	Rio Grande	Opposite Indio ranch	19	2,980			+20	−141
14	do	About 2 miles above long series of islands and shoals.	29	3,000			+20	−121
15	do	At lower edge of shoals	41	2,970			−30	−151
16	do	Half a mile below mouth of San Ambrosia Creek.	55	2,870			−100	−251

[a] Estimated.

Discharge measurements to determine seepage on Rio Grande in February and March, 1926—Continued

From Eagle Pass to San Ygnacio, Tex.—Continued

Date	Stream or diversion	Location	Approximate distance from initial point, in miles	Discharge in second-feet				
				Main stream	Tributary	Diversion	Gain or loss in section	Total gain or loss
Feb. 16	Rio Grande	At head of island 2 miles below San Lorenzo Creek.	67	2,990			+120	−131
17	do	1 mile below Apache ranch.	77	2,880			−110	−241
17	do	1 mile below Palafox	89	2,970			+90	−151
18	do	Minera	99	2,900			−70	−221
18	Several irrigation pumps.	Between 99 and 111 miles.				[a] 5		
18	Rio Grande	3 miles southeast of Isletas.	111	2,910			+15	−206
19	do	2½ miles southeast of San Isabel.	116½	2,790			−120	−326
19	Several irrigation pumps.	Between mile 111 and Laredo.				[a] 5		
19	Rio Grande	At gaging station 1½ miles above Laredo.	127½	2,760			−25	−351
20	Several irrigation pumps.	Between Laredo and mile 193½.				[a] 15		
21	Rio Grande	½ mile below Santa Rosa ranch.	139½	2,750			+5	−346
21	do	1 mile southeast of Los Castios ranch.	146	2,790			+40	−306
22	do	¼ mile below mouth of La Perla Creek.	157	2,760			−30	−336
22	do	San Ygnacio	167	2,760			0	−336

[a] Estimated.

NOTE.—Assuming that the rate of evaporation was 60 inches a year, that the average velocity of the water was 1 mile an hour, and that the average width of the river was 500 feet, the loss due to evaporation would be approximately 0.4 second-foot per mile. If the evaporation loss were 0.4 second-foot per mile, the total gain due to seepage from Del Rio to Eagle Pass would be 116 + (0.4×57) = 139 second-feet, and the total loss from Eagle Pass to San Ygnacio would be 336 − (0.4×167) = 269 second-feet. Figures in columns headed "Gain or loss in section" and "Total gain or loss" computed from discharge of main stream and tributaries and diversions.

GOOSE CREEK AT WAGONWHEEL GAP, COLO.

LOCATION.—In SE. ¼ SW. ¼ sec. 27, T. 40 N., R. 1 E., at concrete dam of A. E. Humphreys's reservoir, 6 miles south of Wagonwheel Gap, Mineral County. Nearest tributary, Roaring Fork, enters just above reservoir.

DRAINAGE AREA.—49 square miles (measured on topographic map).

RECORDS AVAILABLE.—October 1, 1924, to July 3, 1926, when station was discontinued.

GAGE.—Vertical staff attached to upstream face of dam some distance from spillway; read by Roy Lees.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge just below dam.

CHANNEL AND CONTROL.—Control is concrete spillway; permanent except for flow through valves in dam at rare intervals. A trash rack installed at control July 3, 1926, collects so much débris that gage heights are not a true index of discharge.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 1.50 feet at 5 p. m. June 6 (discharge, 425 second-feet); minimum stage, 0.22 foot February 19 to March 20 (discharge, 25 second-feet).

1925–26: Maximum stage recorded, that of June 6, 1926; minimum stage, 0.08 foot November 29 to December 16, 1925 (discharge, 8 second-feet).

ICE.—Spillway kept open during winter.

REGULATION.—Creek partly regulated by reservoir, which has capacity of 842 second-feet.

ACCURACY.—Stage-discharge relation permanent; not affected by ice. Rating curve well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Base data furnished by State engineer and A. E. Humphreys.

The following discharge measurement was made:

July 27: Gage height (affected by backwater from trash racks), 1.13 feet; discharge, 45.8 second-feet.

Daily discharge, in second-feet, of Goose Creek near Wagonwheel Gap, Colo., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	56	52	49	32	28	25	26	102	293
2	56	52	49	32	28	25	26	105	296
3	56	54	49	32	28	25	26	102	286
4	59	56	49	32	26	25	26	94	312
5	63	59	49	32	26	25	26	111	320
6	75	59	49	32	26	25	26	111	360
7	77	59	49	32	26	25	26	97	340
8	72	61	47	32	26	25	26	102	300
9	70	59	52	32	26	25	26	88	332
10	72	59	49	32	26	25	26	80	344
11	77	54	49	30	26	25	30	80	336
12	70	52	49	30	26	25	30	72	320
13	70	52	47	30	26	25	28	99	282
14	70	52	45	30	26	25	28	68	276
15	72	52	43	30	26	25	28	77	252
16	72	50	41	29	26	25	30	80	235
17	68	50	40	29	26	25	33	91	219
18	66	50	40	29	26	25	41	108	193
19	63	50	40	29	25	25	47	145	186
20	61	49	38	28	25	25	43	242	167
21	59	47	36	28	25	26	43	252	177
22	59	50	35	28	25	26	49	293	164
23	63	50	33	28	25	26	52	348	164
24	66	49	32	28	25	26	75	286	151
25	63	49	32	28	25	26	77	279	138
26	63	49	32	28	25	26	91	276	138
27	59	49	32	28	25	26	85	245	138
28	59	49	32	28	25	26	83	219	132
29	59	49	32	28	------	26	97	219	120
30	59	49	32	28	------	26	102	272	114
31	54	------	32	28	------	26	------	265	------

Monthly discharge of Goose Creek near Wagonwheel Gap, Colo., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	77	54	64.8	3,980
November	61	47	52.4	3,120
December	52	32	41.4	2,550
January	32	28	29.7	1,830
February	28	25	25.9	1,440
March	26	25	25.4	1,560
April	102	26	45.1	2,680
May	348	72	162	9,960
June	360	114	236	14,000
The period				41,100

PECOS RIVER NEAR ANGELES, TEX.

LOCATION.—In T. 26 S., R. 29 E., just below Pecos Valley Railroad bridge crossing Delaware Creek at its mouth, 2 miles north of New Mexico-Texas State line and 8½ miles northwest of Angeles, Reeves County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 27, 1914, to September 30, 1926.

GAGE.—Stevens continuous water-stage recorder at outcrop of rock on right bank 600 feet below railroad bridge and mouth of Delaware Creek; inspected by United States Geological Survey engineers or W. F. Gerlach.

DISCHARGE MEASUREMENTS.—Made by wading or from cable half a mile downstream.

CHANNEL AND CONTROL.—Bed and banks of sand, gravel, and rock; banks not subject to overflow. Control formed by a series of rapids 200 feet below gage; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 9.04 feet at 4.15 p. m. May 29 (discharge, 14,000 second-feet; determined from extension of curve and may be subject to error); minimum discharge, 80 second-feet at 7–8 a. m. April 13.

1914–1926: Maximum stage recorded, 21.5 feet at 10 a. m. August 8, 1916, measured by leveling from flood marks (discharge not determined); minimum discharge, 45 second-feet July 4–5, 1925.

ICE.—Stage-discharge relation not seriously affected by ice; open-channel rating assumed applicable.

DIVERSIONS.—Carlsbad project of United States Bureau of Reclamation, with reservoirs having a capacity of 58,500 acre-feet, diverts a large part of the natural run-off above Carlsbad, N. Mex. During season of irrigation considerable water is returned to stream by seepage from lands in vicinity of Carlsbad. In addition to water used by Carlsbad projects, some diversions are made for irrigation in basin above storage reservoir of project.

REGULATION.—Operation of Carlsbad Electric Light & Power Co.'s water-power plant of 300-horsepower capacity above station, just below Carlsbad, N. Mex., does not materially regulate flow at gage. The flow is, however, regulated to a large extent by waters stored in reservoirs of the Carlsbad project. In the season of irrigation the effect of the regulation is decreased by return seepage waters; during winter the flow depends on water released at reservoirs.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined from 50 to 10,000 second-feet. Operation of water-stage recorder satisfactory, except as indicated by breaks in record. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Pecos River near Angeles, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	0.38	277	Feb. 17	0.28	173	July 22	0.22	186
Nov. 12	.55	353	Apr. 4	−.02	111	Sept. 21	.27	180

Daily discharge, in second-feet, of Pecos River near Angeles, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	July	Aug.	Sept.
1	362	350	350	276	244	131	122	151	2,340	114	686	165
2	333	345	345	276	249	135	119	135	538	111	312	157
3	328	350	345	276	240	131	114	144	1,270	108	368	157
4	307	350	345	272	235	131	111	1,760	810	103	333	154
5	307	350	328	267	231	131	103	667	1,130	108	268	165
6	339	339	333	276	223	135	92	328	1,820	125	198	168
7	356	339	328	272	215	131	87	204	983	125	157	364
8	333	333	328	267	215	135	94	154	550	128	151	364
9	302	333	317	263	207	131	100	135	1,120	111	147	299
10	286	345	312	263	203	135	94	149	1,770	108		1,590
11	276	350	307	258	215	138	138	187	1,520	2,310		452
12	276	350	302	258	199	138	90	144	266	1,640		223
13	281		312	253	176	267	82	144	501	805		332
14	291		307	258	165	263	87	187	585	1,720	180	391
15	286		302	258	165	249	92	564	526	1,200		438
16	291	342	291	253	165	258	92	440	972	3,180		841
17	297		291	253	172	253	92	383	892	1,940		549
18	317		291	253	172	227	94	728	261	422		292
19	297		286	253	165	219	105	584	128	195	215	199
20	333		307	258	157	215	117	442	131	180	199	180
21	312	333	276	249	157	211	122	436	131	180	165	180
22	272	339	286	263	154	199	108	401	234	187	144	197
23	297	339	286	258	147	187	117	373	240	152	144	199
24	333	350	286	258	141	176	111	302	240	141	188	211
25	356	345	281	258	138	161	125	281	253	153	248	222
26	362	356	276	258	135	151	128	272	235	278	215	288
27	368	345	281	258	135	144	114	2,390	195	286	215	374
28	362	356	281	258	128	144	131	3,050	168	203	215	849
29	356	356	281	253	-------	131	165	5,370	151	172	211	416
30	356	350	276	258	-------	128	154	4,230	119	403	199	436
31	345	-------	281	253	-------	125	-------	4,650	-------	2,570	216	------

NOTE.—Discharge partly estimated Nov. 21, May 5–9, June 1–4, 12–13, 18–20, July 18–22, Aug. 1–4, Sept. 12 and 18–21. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Pecos River near Angeles, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	368	272	320	19,700
November	-------	-------	345	20,500
December	350	276	304	18,700
January	276	249	261	16,000
February	249	128	184	10,200
March	267	125	171	10,500
April	165	82	110	6,550
May	5,370	135	948	58,300
June	2,340	119	669	39,800
July	3,180	103	628	38,600
August	686	-------	220	13,500
September	1,590	154	362	21,500
The year	5,370	82	378	274,000

PECOS RIVER NEAR PORTERVILLE, TEX.

LOCATION.—At highway bridge on Pecos-Porterville road half a mile east of Arno station on Atchison, Topeka & Santa Fe Railway, 2 miles west of Porterville, Loving County, and 20 miles north of Pecos.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—February 1, 1922, to July 18, 1926, when station was discontinued.

GAGE.—Chain gage attached to downstream side of highway bridge; read by Tom Wright.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of silt, sand, and gravel; shifts.

EXTREMES OF DISCHARGE.—Maximum stage during period from graph drawn from gage readings, 11.8 feet at 4 p. m. May 30 (discharge, 5,140 second-feet); minimum discharge, 63 second-feet at 3.40 p. m. April 9.

1922–1926: Maximum stage recorded, 12.70 feet at 11 a. m. August 12, 1925 (discharge, 5,690 second-feet); minimum discharge, 20 second-feet July 25, 1925.

DIVERSIONS.—The Carlsbad project of the United States Bureau of Reclamation, with reservoir having a capacity of 58,500 acre-feet, diverts a large part of the natural run-off above Carlsbad, N. Mex. During the season of irrigation considerable water is returned to the stream by seepage from lands in the vicinity of Carlsbad. In addition to the water used by the Carlsbad project, some diversions are made for irrigation in the basin above the storage reservoir of the project.

REGULATION.—The operation of the Carlsbad Electric Light & Power Co.'s water-power plant of 300-horsepower capacity, above the station, just below Carlsbad, N. Mex., does not materially regulate the flow at gage. The flow is, however, regulated to a large extent by water stored in the reservoir of the Carlsbad project. In the season of irrigation the effect of the regulation is decreased by return seepage waters, but during winter the flow depends on water released at the reservoir.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read to hundredths once daily. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings, except as noted in footnote to table of daily discharge. Records fair.

Discharge measurements of Pecos River near Porterville, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 13	1.38	285	Feb. 17	0.62	169	July 17	7.84	2,770
Oct. 31	1.54	363	Apr. 3	.58	158	July 18	3.60	887

Daily discharge, in second-feet, of Pecos River near Porterville, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	393	370	326	326	326	172	172	172	3,160	182
2	370	370	326	326	326	163	172	158	1,120	163
3	348	370	326	326	304	163	154	144	1,090	154
4	326	370	326	326	304	154	145	144	1,540	144
5	304	348	326	304	304	163	136	1,240	986	133
6	304	348	326	326	304	163	117	465	733	97
7	326	348	326	326	294	163	99	304	638	192
8	348	337	326	326	283	163	84	242	701	144
9	348	326	326	326	304	163	70	202	836	172
10	326	326	326	326	304	154	122	172	1,110	154

Daily discharge, in second-feet, of Pecos River near Porterville, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
11	294	348	326	326	283	144	210	163	1,480	280
12	262	348	326	326	283	154	102	202	733	1,970
13	294	348	326	326	272	163	117	182	608	1,270
14	283	326	326	326	262	222	83	163	521	1,320
15	272	348	348	304	252	283	74	182	521	910
16	262	370	348	304	242	283	81	192	417	1,480
17	272	370	348	304	182	252	77	313	708	2,470
18	283	370	348	304	154	283	78	304	808	1,080
19	294	348	326	304	154	272	81	558	468	-------
20	304	348	326	304	154	242	88	494	370	-------
21	304	326	326	304	154	202	92	442	304	-------
22	304	326	326	304	154	182	110	417	202	-------
23	272	326	304	326	154	172	99	417	262	-------
24	294	304	326	326	154	144	99	417	262	-------
25	321	326	326	326	172	172	94	304	262	-------
26	348	326	326	326	172	163	88	348	283	-------
27	348	326	315	304	172	192	114	252	268	-------
28	370	326	304	326	172	187	140	2,100	252	-------
29	348	326	304	326	-------	182	106	3,580	232	-------
30	348	326	304	326	-------	172	136	4,890	202	-------
31	370	-------	304	326	-------	154	-------	4,110	-------	-------

NOTE.—Discharge interpolated Oct. 4, 11, 18, 25, Nov. 1, 8, 15, 22, 29, Dec. 6, 13, 20, 27, Jan. 3, 10, 17, 24, 31, Feb. 7, 14, 21, 28, Mar. 7, 28, Apr. 4, 18, 25, May 2, June 27, July 4.

Monthly discharge of Pecos River near Porterville, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	393	262	317	19,500
November	370	304	342	20,400
December	348	304	325	20,000
January	326	304	319	19,600
February	326	154	236	13,100
March	283	144	188	11,600
April	210	70	111	6,620
May	4,890	144	751	46,200
June	3,160	202	703	41,800
July 1-18	2,470	97	684	24,400
The period	----------	----------	----------	223,000

PECOS RIVER ABOVE BARSTOW, TEX.

LOCATION.—400 feet below dam and diversion of Barstow Canal (Ward County Irrigation District No. 1), and 10 miles northwest of Barstow, Ward County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—February 1, 1916, to May 11, 1921; and March 22, 1922, to July 16, 1926, when station was discontinued.

GAGE.—Stevens continuous or Au fuzee recorder on left bank; attended by United States Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made by wading, from cable near gage, or from Texas & Pacific Railway bridge near Pecos.

CHANNEL AND CONTROL.—Channel straight for several hundred feet above and below station. Bed of rock; permanent. Banks of silt and sand; shift; subject to overflow at extremely high stages. Low-water control is rock ledge 150 feet below gage; permanent. Point of zero flow is 1.27 feet.

EXTREMES OF DISCHARGE.—Maximum stage during period, from water-stage recorder, 8.71 feet at 5 a. m. June 11 (discharge, 3,960 second-feet); minimum stage not determined.

1915–1926: Maximum stage, from water-stage recorder, 12.1 feet (by datum of former location) at 6 a. m. August 10, 1916 (discharge not determined); minimum discharge, 0.2 second-foot April 27–29, June 25 to July 10, July 13–20, and July 24 to August 21, 1923.

DIVERSIONS.—In addition to water diverted in New Mexico by the Carlsbad Project, the three principal diversions in Texas are the Farmers Independent, Cedarvale (formerly Biggs), and Barstow Canals. Small amounts diverted by Boxley and Porterville irrigation systems. According to records of the Board of Water Engineers for the State of Texas, these projects have declared a total of 17,500 acres irrigated.

REGULATION.—Flow during low and medium stages regulated by storage reservoir on Carlsbad project in New Mexico and by diversion dams in Texas. Flood flow partly regulated by reservoirs on Carlsbad project.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined below 1,000 second-feet and fairly well defined from 1,000 to 3,500 second-feet. Operation of water-stage recorder not satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements of Pecos River above Barstow, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 10	3.17	257	Apr. 3	1.80	3.38
Feb. 16	2.34	47.7	July 16	3.76	504

Daily discharge, in second-feet, of Pecos River above Barstow, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	343			102		8.0	3.9	0.9	3,620
2	330			117		6.0	3.6	.9	1,660
3	313			102		6.0	3.6	.9	1,200
4	301			90		6.0	3.6	.9	1,850
5	290			131		5.6	3.6	916	1,190
6	278	222		183		6.0	2.8	294	1,550
7	263			190		6.0	2.8	42	1,100
8	252			218		5.6	2.2	29	800
9	241			151		5.6	2.0		
10	234	231		163		5.6	1.7		
11	228	234		168		5.6	35		
12	221	240		168		5.3	53		
13	215	241		143		5.3	21		
14	208	241	127	165		5.3	28		
15	202	234	146			142	13		
16	196		135		63	46	1.5		
17	186		122		23	5.6	1.4	186	
18	177		174		8.5	5.6	1.5		
19	174		163		8.0	15	1.5	338	
20	190		279		8.5	81	1.5	304	
21	190		245		8.5	32	1.5	168	
22	221		165		8.0	5.0	1.5	294	
23	199		160		8.0	4.2	1.7	585	
24	183		231		9.0	35	1.7	265	
25	193		190		9.0	11	1.5	176	
26	212		154		9.0	38	1.4	200	
27			151		9.5	31	1.4	115	
28			168	160	10	4.1	1.1	2,100	
29	222		154	133		3.2	1.2	2,420	
30			125	149		3.6	1.1	3,360	
31			113			3.6		3,700	

NOTE.—No record for periods when discharge is not given. Discharge partly estimated Nov. 10, 15, Dec. 14, Jan. 14, 28–30, Feb. 16, and June 8. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Pecos River above Barstow, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	343	174	231	14,200
November 1–15			228	6,780
December 14–31	279	113	167	5,950
February 16–28	63	8.0	14.0	361
March	142	3.2	17.7	1,090
April	53	1.1	6.71	399
May				
June 1–8	3,620	800	1,620	25,700

PECOS RIVER NEAR GRANDFALLS, TEX.

LOCATION.—At site of old highway bridge where Grandfalls-Fort Stockton road formerly crossed Pecos River, 1½ miles upstream from present Grandfalls-Fort Stockton road crossing at iron bridge, 2 miles below diversion dam for low-line (silt-line) canal of Imperial Irrigation Co., 3 miles south of Grandfalls, Ward County, and 4½ miles above diversion dam of Zimmerman project.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—November 6, 1915, to July 19, 1926, when station was discontinued. At iron bridge 1½ miles downstream from November 6, 1915, to August 3, 1917. Discharge at both points believed to be comparable.

GAGE.—Stevens water-stage recorder on downstream side of old bridge pier near left bank; inspected by United States Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made by wading, from cable 50 feet above, or during extremely high stages at iron bridge.

CHANNEL AND CONTROL.—Bed rough, solid rock, and permanent, except for small deposits of sand and gravel. Channel straight for 100 feet above and below station. One channel below gage height of 8 feet; above this stage banks, which are of dirt and wooded, are overflowed. Rock ledge extending diagonally across stream just below gage serves as low-water control; shifts, owing to clogging of crevices.

EXTREMES OF DISCHARGE.—1915–1926: Maximum stage, from water-stage recorder, 9.6 feet from 2 to 6 a. m. September 25, 1919 (discharge, 13,000 second-feet); minimum discharge, less than 0.5 second-foot for several periods in 1925.

DIVERSIONS.—Station is 2 miles below diversion of low-line (silt-line) canal of Imperial Irrigation Co., 18½ miles below diversion for Imperial Reservoir (capacity, 17,000 acre-feet), 25½ miles below diversion for Ward County Water Improvement District No. 2 (of which the old Grandfalls project is a part), and 4½ miles above diversion for Zimmerman project. Available data show that tracts aggregating about 143,000 acres are irrigable between station and lower limits of Carlsbad project of United States Bureau of Reclamation. Records of the Board of Water Engineers for the State of Texas show about 58,000 acres declared irrigated in Texas above station. The effect of diversions is somewhat counterbalanced by water returned to stream by seepage. The only diversion of importance below the station is that for the Zimmerman project, which has declared an irrigated area of 2,005 acres.

REGULATION.—Slight regulatory effect caused by operation of storage reservoirs on Carlsbad project.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages during period. Operation of water-stage recorder not satisfactory owing to improper attendance. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements of Pecos River near Grandfalls, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	0.32	[a] 0.50	Feb. 19	0.34	2.55	July 19	3.11	926
Oct. 28	.34	[a] .50	Apr. 6	.78	52			

[a] Estimated.

Daily discharge, in second-feet, of Pecos River near Grandfalls, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	196		187	2.8	77	1.5	73
2			174	2.1	86	1.5	71
3			148	1.8	73	1.5	62
4			165	1.5	31	1.8	60
5			165	1.8	18	1.8	60
6			159	3.1	12	1.8	57
7			159	5.3	13	1.5	57
8			104	26	21	1.5	58
9			48	38	27	1.8	60
10			41	40	16	1.8	58
11			33	27	12	1.8	51
12			28	24	23	1.8	48
13			27	19	28	1.8	41
14			27	11	9.8	1.8	44
15			26	2.8	19	1.8	43
16			31	8.8	7.6	1.8	41
17	.7	168	28	57	4.4	1.8	29
18	.9	168	27	69	3.4	1.8	7.6
19	1.1	168	27	92	2.8	4.1	5.3
20	.9	} 154	26	104	2.8	4.4	4.4
21	.7		26	73	2.5	12	4.4
22	.7		31	84	2.5	187	4.4
23	.5	139	40	102	2.1	114	6.4
24	.7	138	26	75	2.1	57	13
25	.9	136	23	96	1.5	84	13
26	.5	162	33	122	1.5	75	-------
27	.5	168	26	120	1.5	89	-------
28	.5	150	22	102	1.5	66	-------
29	-------	162	21	73	-------	60	-------
30	-------	174	21	64	-------	69	-------
31	-------	-------	15	57	-------	69	-------

NOTE.—No record for days when discharge is not published. Discharge partly estimated or interpolated Nov. 17-19, 23-25. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Pecos River near Grandfalls, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
November 17-30	174	136	157	4,350
December	187	15	61.7	3,800
January	122	1.5	48.5	2,990
February	86	1.5	17.9	996
March	187	1.5	29.7	1,830
April 1-25	73	4.4	38.9	1,930

PECOS RIVER NEAR BUENA VISTA, TEX.

LOCATION.—At highway bridge on Fort Stockton-Midland road 4½ miles east of Buena Vista, Pecos County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 5, 1921, to July 19, 1926, when station was discontinued.

GAGE.—Stevens continuous water-stage recorder attached to downstream side of left abutment of bridge.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of silt, sand, and gravel; shifts. Banks subject to overflow during extremely high stages.

EXTREMES OF DISCHARGE.—1921–1926: Maximum stage, 7.77 feet at 2 a. m. October 19, 1923 (discharge, 2,640 second-feet); minimum discharge, 6.5 second-feet July 27, 1925.

DIVERSIONS.—Station is below all diversions. During much of the time practically the only flow past the station is waste and seepage water from the irrigated area above gage.

REGULATION.—Flow regulated by storage and diversion dams in New Mexico and Texas.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Operation of water-stage recorder not satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements of Pecos River near Buena Vista, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 17	0.98	116	Apr. 6	0.48	37.2
Feb. 19	.93	112	July 19	3.44	778

Daily discharge, in second-feet, of Pecos River near Buena Vista, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	193	122	193	85				36
2	139	124	211	85				36
3	108	133	182	85				36
4	103	137	176	85				36
5	101	135	201	85				36
6	101	144	201	87			38	38
7	103	140	199				35	218
8	90	133	197				43	306
9	97	139	133		133		57	135
10	139	101	90		137		60	108
11	121	96	85		135		59	74
12	139	104	85		128		54	57
13	106	135	84		130		51	51
14	104	140	84		122		41	51
15	110	140	82		112		38	52
16	113	142	80		115		38	80
17	110	121	80		112		38	87
18	110	115	79		113		38	89
19	112	110	77		113		38	115
20	115	108	75		97		46	121

Daily discharge, in second-feet, of Pecos River near Buena Vista, Tex., for the year ending September 30, 1926—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
21	121	162	77		96		44	124
22	121	187	77		90		36	117
23	121	182	79		87	87	35	103
24	121	176	79		87		35	124
25	119	168	79		87		35	
26	116	178	79		87		35	
27		187	79				35	
28	113	187	80				35	
29	117	182	80				35	
30	119	201	82				35	
31	122		84					

NOTE.—No record for days for which discharge is not given. Discharge partly estimated Oct. 28, Jan. 6, Feb. 9, Mar. 23, and Apr. 6. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Pecos River near Buena Vista, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	193	90	117	7,180
November	201	96	144	8,590
December	211	75	112	6,880
January 1–6			85.3	1,020
February 9–26			110	3,930
March 23			87	173
April 5–30	60	35	41.4	2,050
May 1–24	306	36	92.9	4,420

PECOS RIVER NEAR COMSTOCK, TEX.

LOCATION.—At Pecos High Bridge of Galveston, Harrisburg & San Antonio Railway, 12 miles northwest of Comstock, Val Verde County, and 5½ miles above confluence with Rio Grande; below all tributaries.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—May 1, 1900, to September 30, 1926; also gage heights for 1898.

GAGE.—Vertical staff attached to downstream side of bridge pier on left bank; read by J. R. Hutchins.

DISCHARGE MEASUREMENTS.—Made from cable 1,000 feet above bridge.

CHANNEL AND CONTROL.—Bed and banks composed of rock and gravel. Water flows through a series of rapids and pools in a canyon approximately 300 feet deep. Banks not subject to overflow. Stage-discharge relation at low stages changes slightly.

EXTREMES OF DISCHARGE.—Maximum stage during year, 5.20 feet at 1 p. m. July 23 (discharge, 4,380 second-feet); minimum stage, 0.18 foot September 15 and 17 (discharge, 179 second-feet).

1900–1926: Maximum stage recorded, 35.75 feet April 6, 1900 (discharge not determined) minimum discharge recorded, 106 second-feet July 29 to August 1, 1918.

DIVERSIONS.—Considerable water is diverted and stored above station for irrigation. Lakes McMillan and Avalon of Carlsbad project of United States Bureau of Reclamation, with a combined capacity of 58,500 acre-feet, are on Pecos River a few miles above Carlsbad, N. Mex. In addition to water stored in New Mexico, water from Pecos River is used to irrigate large areas

of land near Barstow and Grandfalls, Tex. No diversions below station. Return waters tend to equalize effects of diversions in lower part of drainage basin.

REGULATION.—Flow partly controlled by storage and diversions for irrigation above station. No water-power plants of any importance operated in drainage basin, except a public-utility plant of about 300 horsepower near Carlsbad, N. Mex.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Gage read to hundredths twice daily and oftener during floods. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day, using gage-height graph based on daily gage readings. Records good.

Discharge measurements of Pecos River near Comstock, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 5	0.78	417	Mar. 27	0.86	442	June 5	3.86	2,720
Oct. 19	.84	404	Apr. 8	.38	227	June 21	1.20	604
Nov. 5	.72	362	Apr. 26	.48	262	July 13	.37	233
Dec. 8	.83	422	May 10	.48	253	July 22	1.04	507
Dec. 18	.64	326	May 21	.30	209	Aug. 19	.30	204
Jan. 9	.56	313	June 2	.61	275	Sept. 3	.22	189
Jan. 28	.58	318	June 4	2.07	1,180	Sept. 16	.20	184
Mar. 10	.52	292	Do	2.23	1,260			

Daily discharge, in second-feet, of Pecos River near Comstock, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	494	377	421	317	336	280	259	259	280	317	317	199
2	925	377	421	317	336	280	252	235	280	280	317	190
3	570	356	399	317	336	280	242	280	248	280	280	184
4	493	356	399	317	336	280	235	245	1,170	280	252	184
5	421	356	421	317	336	298	235	242	2,200	280	235	182
6	444	356	399	317	336	280	231	458	2,130	262	235	199
7	421	356	421	317	336	280	231	504	2,330	245	285	209
8	399	356	421	317	356	280	225	435	2,430	242	444	202
9	399	356	399	317	356	280	225	298	1,840	238	377	212
10	544	356	421	317	336	298	222	252	1,580	228	317	206
11	544	356	421	317	317	280	231	231	1,350	225	317	193
12	598	377	421	317	317	280	231	255	1,420	222	262	184
13	625	356	444	298	317	280	248	356	1,200	277	259	184
14	598	356	421	298	317	280	228	317	995	346	242	184
15	570	356	377	298	298	262	218	280	832	238	228	179
16	698	336	336	298	298	280	225	280	865	212	212	182
17	598	317	336	317	298	280	231	262	1,140	209	202	179
18	468	317	317	317	298	298	235	245	995	209	202	184
19	399	336	317	317	298	298	225	235	970	206	202	187
20	399	377	317	317	298	280	906	228	625	209	231	215
21	399	356	317	317	298	280	545	206	625	259	206	215
22	377	356	317	317	298	280	587	209	544	502	206	215
23	377	356	298	317	298	280	612	202	570	2,210	199	209
24	421	356	298	336	298	280	356	196	598	1,230	202	190
25	444	336	298	356	298	280	280	193	544	570	215	298
26	399	336	298	356	298	317	262	193	468	444	317	317
27	377	336	317	336	298	421	242	209	421	399	280	298
28	377	336	298	317	280	336	238	222	377	377	252	280
29	356	377	317	336	-------	317	280	209	356	317	218	280
30	356	399	317	356	-------	298	262	243	336	317	209	280
31	356	-------	317	336	-------	262	-------	317	-------	280	206	-------

Monthly discharge of Pecos River near Comstock, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	925	356	479	29,400
November	399	317	354	21,100
December	444	298	362	22,300
January	356	298	321	19,700
February	356	280	315	17,500
March	421	262	290	17,900
April	906	218	300	17,800
May	504	193	268	16,500
June	2,430	248	991	58,900
July	2,210	206	384	23,600
August	444	199	256	15,700
September	317	179	214	12,700
The year	2,430	179	377	273,000

LIMPIA CREEK NEAR FORT DAVIS, TEX.

LOCATION.—At State highway No. 27 crossing, 13½ miles northeast of Fort Davis, Jeff Davis County, and 8½ miles above mouth of Horse Thief Creek.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—February 27, 1925, to September 30, 1926.

GAGE.—Au 60-day water-stage recorder on right bank.

DISCHARGE MEASUREMENTS.—Made from cable 300 feet below gage by wading, or by timing drift.

CHANNEL AND CONTROL.—Bed of gravel and small rock. Channel straight for 300 feet above and 200 feet below gage. One channel for low and medium stages and several for high stages. Banks of gravel, rock, and earth, sparsely covered with brush and weeds, and subject to overflow. Low-water control is concrete weir with steel edge. Intermediate and high-stage control is bed and banks of stream.

EXTREMES OF DISCHARGE.—Maximum stage during year not determined but probably occurred during period of missing record; no flow for several periods.

1925–1926: Maximum stage, from water-stage recorder, 5.95 feet at 5 p. m. August 11, 1925 (discharge, 2,250 second-feet; determined from extension of rating curve and may be subject to error); no flow for several periods.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water stage recorder satisfactory prior to April 5; not satisfactory thereafter. Daily discharge determined by applying to rating table mean daily gage heights obtained from recorder graph by inspection. Records good prior to April 5 and fair thereafter.

Discharge measurements of Limpia Creek near Fort Davis, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	1.59	4.64	Feb. 18	1.40	0.44	July 24	1.26	[a]0.02
Nov. 20	1.44	[a]1.0	Apr. 5	1.40	[a]1.00	Sept. 22	1.29	[a].25
Dec. 13	1.39	[a].8	July 15	1.33	[a].20			

[a] Estimated.

Daily discharge, in second-feet, of Limpia Creek near Fort Davis, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	July	Aug.	Sept.
1	2.1	1.0	0.6	0.4	0.4	1.0	0.7	-------	0.2	
2	2.0	.7	.6	.4	.4	1.1	.7	-------	.2	
3	1.5	.6	.6	.5	.6	1.1	.7	-------	.1	
4	1.3	.6	.5	.5	.6	1.1	.7	-------	.0	
5	1.3	.6	.4	.4	.7	1.0	.7	-------	.0	
6	1.4	.6	.4	.4	.7	1.0	-------	-------	.0	
7	1.8	.6	.3	.4	.8	.8	-------	-------		
8	1.4	.6	.3	.3	.8	.7	-------	-------		
9	15	.6	.4	.2	.8	.7	-------	-------		
10	11	.6	.4	.1		.6	-------	-------		
11	15	.6	.5	0		.6	-------	-------		
12	15	.6	.6	0		.5	-------	-------		
13	10	.6	.6	0		.4	-------	-------		
14	7.0	.6	.6	0	.7	.4	-------	-------		
15	5.4	.7	.6	0		.4	-------			1.3
16	7.8	.7	.5	0		.4	-------			
17	6.2	.8	.4	0		.4	-------			
18	4.1	.8	.4	0	.7	.4	-------			
19	3.3	1.1	.4	0	.6	.4	-------	.1	1.3	
20	3.0	1.3	.2	0	.6	.4	-------			
21	2.1	1.3	.2	0	.5	.5	-------			
22	2.1	1.3	.1	0	.6	.6	-------			
23	1.8	1.3	0	0	.6	.7	-------			
24	1.7	1.3	0	0	.6	1.3	-------	.0		
25	1.8	1.3	0	0	.6	.7	-------	.4		
26	1.8	1.1	0	0	.7	.7	-------	.6		
27	1.4	1.0	0	0	.8	.8	-------	.3		
28	1.1	1.0	0	0	1.0	.8	-------	.2		
29	1.0	.8	0	0	-------	.8	-------	.2		
30	1.1	.8	.2	.2	-------	.8	-------	.2		
31	1.1	-------	.2	.2	-------	.7	-------	.2		-------

NOTE.—Discharge partly estimated Feb. 9, 18, and Apr. 5; no record Apr. 6 to July 14. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Limpia Creek near Fort Davis, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	15	1.0	4.28	263
November	1.3	.6	.85	50.6
December	.6	.0	.32	19.8
January	.5	.0	.13	7.9
February	-------	-------	.67	37.1
March	1.3	.4	.70	43.2
April 1–5	-------	-------	.70	6.9
July 15–31	-------	-------	.18	6.0
August	-------	.0	1.06	65.5
September	-------	-------	1.30	77.4

BARRILLA CREEK NEAR SARAGOSA, TEX.

LOCATION.—At Old Spanish Trail highway bridge, 2.8 miles from Reeves-Pecos county line and 15.5 miles by road southeast of Saragosa, Reeves County.

DRAINAGE AREA.—Not measured.

RECORDS AVAILABLE.—December 6, 1924, to July 15, 1926, when station was discontinued.

GAGE.—Au 60-day water-stage recorder attached to downstream side of concrete pier of bridge; attended by United States Geological Survey engineers.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed of sand, gravel, and small boulders with some vegetation; shifting. Channel straight for 300 feet above and 500 feet below gage. Banks fairly clean and subject to overflow. Low-stage control is gravel bar 30 feet below gage; shifts badly.

EXTREMES OF DISCHARGE.—Maximum stage during period, from water-stage recorder, 4.50 feet at 12.01 a. m. May 29 (discharge, 1,580 second-feet); no flow except May 24–25 and 28–29.

1925–26: Maximum stage, 8.81 feet at 1.10 a. m. July 31, 1925 (discharge, 5,700 second-feet; determined from extension of rating curve and may be subject to error); no flow for several periods.

DIVERSIONS.—Small diversions above station; amount not known.

REGULATION.—None of importance.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records fair.

Discharge measurements February 18, April 5, and July 15, showed no flow. The daily discharge, in second-feet, for the period October 1, 1925, to July 15, 1926, was as follows: May 24, 1.7; May 25, 24; May 28, 61; May 29, 200. The total run-off for the period was 569 acre-feet.

DEVILS RIVER NEAR JUNO, TEX.

LOCATION.—500 feet below Bakers Crossing and Walter Baker ranch house, 2 miles above mouth of Phillips Creek, 8 miles below headwater spring, and 13½ miles southwest of Juno, Val Verde County.

DRAINAGE AREA.—2,730 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—May 26, 1925, to September 30, 1926.

GAGE.—Au continuous water-stage recorder on left bank; attended by W. C. Dodd.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Bed of boulders and gravel; fairly permanent except for considerable aquatic growth. Channel straight for half a mile above and 1 mile below station. Right bank of gravel, sand, and clay; sodded and heavily wooded with trees and shrubs; subject to shift and overflow. Left bank of sand and clay; fairly clean; fairly permanent and not subject to overflow. Low-water control is bedrock with some gravel 230 feet below gage; fairly permanent except for aquatic growth. At high and intermediate stages control is partly formed by gravel bar on right and may shift.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.23 feet at 1.30 a. m. October 16 (discharge, 136 second-feet); minimum discharge, 74 second-feet August 14–19, and September 4–5.

1925–26: Maximum stage recorded, 15.8 feet at 11 p. m. May 29, 1925 (discharge, 43,700 second-feet, determined by slope method and may be subject to error); minimum stage, that of August 14–19 and September 4–5, 1926.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation not permanent. Rating curve well defined for all stages during year. Operation of water-stage recorder satisfactory. Daily discharge determined by shifting-control method or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records good.

Discharge measurements of Devils River near Juno, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 1	2.10	104	Mar. 8	1.98	83	July 10	2.05	82
Nov. 3	2.06	106	Apr. 3	1.99	78	Aug. 6	2.04	77
Dec. 4	2.03	90	May 7	2.00	83	Sept. 6	2.16	99
Jan. 7	2.02	92	June 5	2.10	87			

Daily discharge, in second-feet, of Devils River near Juno, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	108	90	92	84	82	78	84		81	81	75
2	104	108	90	92	84	82	78	82	85	82	80	75
3	104	106	90	92	84	82	78	82		82	78	75
4	104	106	90	92	84	82	78	82		82	76	74
5	102	106	90	92	84	82	78	82	87	82	76	74
6	104	104	92	92	84	82	78	82	87	82	76	88
7	104	104	92	92	84	82	78	82	84	81	75	84
8	104	104	92	92	84	82	78	84	82	81	75	80
9	104	104	92	92	84	84	78	86	82	81	75	78
10	104	104	92	92	84	86	78	84	82	82	75	76
11	104	102	92	92	84	86	78	87	81	81	75	75
12	106	100	92	92	84	84	80	88	81	81	75	75
13	104	100	94	92	84	82	80	90	81	84	75	75
14	104	100	94	92	84	82	80	87	82	88	74	75
15	108	100	94	92	84	82	80	87	82	88	74	75
16	114	100	92	92	84	84	80	87	82	87	74	75
17	108	100	92	90	84	84	80	87	81	86	74	75
18	108	98	92	88	84	81	80	86	81	84	74	75
19	108	96	92	88	84	80	80	86	81	82	74	75
20	106	96	92	88	84	80	80	84	81	81	80	75
21	106	96	92	88	84	82	80	84	80	81	75	75
22	106	96	92	88	82	82	80	82	80	87	76	75
23	106	96	92	87	82	82	80	84	81	86	76	75
24	110	94	92	87	82	81	80	84	81	86	82	75
25	110	94	92	87	82	81	78	82	80	84	78	78
26	108	94	92	86	82	81	78		80	84	76	76
27	108	94	92	86	82	81	78		81	82	76	78
28	108	92	92	86	82	81	78	86	80	81	76	76
29	106	92	94	86	-------	82	86		80	81	75	75
30	108	92	94	86	-------	81	82		80	82	75	75
31	108	-------	94	84	-------	80	-------		-------	84	75	------

NOTE.—Discharge partly estimated June 5. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Devils River near Juno, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	114	102	106	6,530
November	108	92	99.5	5,920
December	94	90	92.1	5,660
January	92	84	89.6	5,510
February	84	82	83.5	4,640
March	86	80	82.1	5,050
April	86	78	79.3	4,720
May	90	82	84.9	5,220
June	87	80	82.0	4,880
July	88	81	83.1	5,110
August	82	74	76.0	4,670
September	88	74	76.2	4,540
The year	114	74	86.2	62,400

DEVILS RIVER NEAR DEL RIO, TEX.

LOCATION.—2,200 feet above Southern Pacific Co.'s railroad bridge and mouth of Sells Creek, 1.8 miles below State highway No. 3 crossing, 1.9 miles northeast of Devils River railroad station, and 12 miles northwest of Del Rio, Val Verde County.

DRAINAGE AREA.—4,000 square miles (measured on topographic maps, United States Army progressive military maps, and base map of Texas).

RECORDS AVAILABLE.—December 6, 1923, to September 30, 1926. May 1, 1900, to March 31, 1914, at station known as Devils River at Devils River, 1 mile downstream.

GAGE.—Stevens continuous recorder on left bank.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Bed of solid rock; rough; permanent. High-water channel of rock, overlain by gravel, with some trees and brush. Left bank of rock and clay, covered with timber and not subject to overflow; permanent. Right bank is rough rock bluff, covered with timber and not subject to overflow. Channel straight for 1,000 feet above and below station. Control is solid-rock ledge 80 feet below gage; rough; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.77 feet at 4 a. m. April 29 (discharge, 20,900 second-feet); minimum discharge (estimated), 366 second-feet September 15–22.

1900–1914, 1924–1926: Maximum stage recorded, 24.96 feet at 3 p. m. May 29, 1925 (discharge not determined); minimum mean daily stage, 2.0 feet June 8, 1912 (discharge, 245 second-feet).

On April 6, 1900, a stage of 25.4 feet by datum of gage established May 1, 1900, was reached. A stage of 30.15 feet, present gage datum, was reached in October, 1914, by levels to flood marks in December, 1924.

DIVERSIONS.—None.

REGULATION.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined from 330 to 3,000 second-feet and poorly defined from 3,000 to 32,000 second-feet. Operation of water-stage recorder satisfactory, except for short breaks in the records. Daily discharge determined by applying mean daily gage height to rating table or, on days of considerable fluctuation in stage, by averaging discharge for intervals of a day. Records good.

Discharge measurements of Devils River near Del Rio, Tex., during the year ending September 30, 1926

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	1.90	478	Mar. 6	1.85	400	July 6	1.79	397
Oct. 14	1.94	521	Mar. 20	1.82	394	July 21	1.76	390
Nov. 2	1.92	469	Apr. 5	1.80	395	Aug. 5	1.77	389
Nov. 9	1.90	457	Apr. 17	1.77	373	Aug. 18	1.77	387
Dec. 1	1.88	452	Apr. 29	3.72	2,680	Sept. 7	1.78	387
Dec. 15	1.86	418	May 1	2.55	984	Sept. 15	1.75	380
Jan. 6	1.84	416	May 13	1.84	430			
Jan. 18	1.84	407	June 10	1.79	401			
Feb. 4	1.82	402	June 17	1.77	391			

Daily discharge, in second-feet, of Devils River near Del Rio, Tex., for the year ending September 30, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	489	481	452	445	410	403	396	1,260	466	541	396	372
2	481	481	452	452	410	403	396	597	445		390	374
3	481	481	452	445	410	403	396	542	438	396	384	376
4	474	481	452	431	410	417	396	519	459	396	378	378
5	474	481	445	431	410	417	396	489		390	378	380
6	466	489	438	424	410	417	403	466	424	384	378	382
7	466	489	445	424	410	417	410	452		384	378	384
8	466	474	452	424	410	403	396	438		384	372	378
9	474	466	445	424	417	403	390	431		378	372	377
10	512	474	445	424	410	481	396	424	390	378	372	376
11	496	474	438	424	410	438	390	417	390	384	372	374
12	496	466	438	424	410	410	390	431	384	384	372	372
13	489	466	445	424	417	403	396	424	390	390	372	370
14	496	466	452	424	417	403	390	424	390	410	378	368
15	519	459	438	424	410	410	390	417	384	396	378	366
16	597	459	438	424	403	431	384	417	378	396	378	366
17	519	459	445	424	403	445	378	417	378	390	378	366
18	512	466	445	424	410	424	378	417	372	384	378	366
19	504	466	445	417	403	410	378	417	378	384	372	366
20	496	459	438	424	396	410	384	410	390	378	372	366
21	489	452	438	431	403	410	3,780	410	378	372	378	366
22	496	452	431	424	410	417	565	410	378	372	378	366
23	496	445	431	431	410	410	489	410		474	372	368
24	496	445	431	445	403	435	445	410		431	396	370
25	504	445	431	438	396	1,280	438	403		396	384	372
26	504	452	431	431	396	512	417	403	541	384	384	374
27	489	452	431	424	396	445	403	410		384	378	376
28	489	445	431	417	396	431	608	410		384	378	377
29	489	445	431	417	-------	431	5,730	403		378	378	378
30	489	445	438	417	-------	445	757	512		390	378	372
31	489	-------	438	417	-------	403	-------	512	-------	403	372	------

NOTE.—Discharge partly estimated June 4, 10, 22, July 3, Sept. 1, 7–8, 15, 29. Discharge from one staff-gage reading Sept. 22. Braced figures show estimated mean discharge for periods indicated.

Monthly discharge of Devils River near Del Rio, Tex., for the year ending September 30, 1926

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	597	466	495	30,400
November	489	445	464	27,600
December	452	431	441	27,100
January	452	417	427	26,300
February	417	396	407	22,600
March	1,280	403	451	27,700
April	5,730	378	715	42,600
May	1,260	403	468	28,800
June	----------	372	441	26,300
July	----------	372	401	24,700
August	396	372	378	23,300
September	----------	366	373	22,200
The year	5,730	366	455	330,000

MISCELLANEOUS DISCHARGE MEASUREMENTS

Discharge measurements of streams in the western Gulf of Mexico basins at points other than regular gaging stations are listed in the following table:

Miscellaneous discharge measurements in western Gulf of Mexico basins during the year ending September 30, 1926

Trinity River Basin

Date	Stream	Tributary to—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Nov. 17	West Fork of Trinity River.	Trinity River	½ mile below Lake Worth Dam above Fort Worth, Tex.		15.9
Oct. 18	Trinity River	Gulf of Mexico	Below Lock No. 7 near Rosser, Tex.	14.54	4,140
20	do	do	do	15.80	4,210
21	do	do	do	9.07	1,640
23	do	do	do	1.59	541

Colorado River Basin

Oct. 20	Colorado River	Gulf of Mexico	Wharton, Tex	24.65	26,000
28	Old Mill Springs	Barton Creek	Near Austin, Tex		1.21
Nov. 30	do	do	do		2.80
June 17	do	do	do		10.1

Guadalupe River Basin

Oct. 7	Rebecca Springs	Rebecca Creek	Near Spring Branch, Tex		0.40
6	Comal Springs	Guadalupe River	Landa Park, New Braunfels, Tex		[a] 304
Dec. 2	do	do	do		[a] 290
Mar. 3	do	do	do		[a] 295
Aug. 20	Geronimo Creek	do	Geronimo, Tex		1.15
20	do	do	Near Seguin, Tex		3.75
20	Ewing Spring	Geronimo Creek	Near Geronimo, Tex		0.44
Oct. 6	San Marcos River	Guadalupe River	Austin-San Antonio highway crossing at San Marcos, Tex.		124
Dec. 3	do	do	do		144
Mar. 3	do	do	do		135
June 5	do	do	do		236
July 12	do	do	do		220
Mar. 3	Blanco River	San Marcos River	Above post-road crossing near Kyle, Tex.		15.6
Sept. 11	Cold Springs	Medina River	Near Pipe Creek, Tex		7.7
Apr. 16	Cibolo Creek	San Antonio River	18 miles above mouth, near Kosciusco, Tex.		24.3
15	do	do	1.4 miles above mouth, near Panna Maria, Tex.		36.1

Rio Grande Basin

Feb. 20	Pecos River	Rio Grande	Near Sheffield, Tex	2.10	140
Nov. 10	Goodenough Springs.	do	Near Comstock, Tex		177
Jan. 14	do	do	do		158
Apr. 14	do	do	do		149
June 18	do	do	do		146
Aug. 22	do	do	do		144
Oct. 9	Las Vacas River	do	Near Villa Acuna, Coahuila, Mex.		[b] 3.5
12	do	do	do		[b] 5.0
20	do	do	do		[b] 5.0
29	do	do	do		[b] 4.0
Nov. 8	do	do	do		[b] 4.0
13	do	do	do		[b] 4.0
Dec. 3	do	do	do		[b] 3.5
10	do	do	do		[b] 4.0
17	do	do	do		[b] 4.0
23	do	do	do		4.0

[a] Total flow of the springs. [b] Estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the year ending September 30, 1926—Continued

Rio Grande Basin—Continued

Date	Stream	Tributary to—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Jan. 5	Las Vacas River	Rio Grande	Near Villa Acuna, Coahuila, Mex.		[b] 4.0
13	do	do	do		[b] 4.0
27	do	do	do		[b] 4.0
Feb. 3	do	do	do		[b] 4.0
Mar. 5	do	do	do		[b] 3.0
12	do	do	do		[b] 3.0
19	do	do	do		[b] 3.5
Apr. 7	do	do	do		[b] 3.0
13	do	do	do		[b] 3.0
23	do	do	do		27.6
May 4	do	do	do		11.4
26	do	do	do		[b] 5.0
June 9	do	do	do		[b] 4.0
16	do	do	do		[b] 3.5
24	do	do	do		[b] 8.0
29	do	do	do		[b] 5.0
July 7	do	do	do		[b] 4.0
14	do	do	do		[b] 4.0
19	do	do	do		[b] 4.0
26	do	do	do		[b] 6.0
Aug. 3	do	do	do		[b] 4.0
16	do	do	do		[b] 3.5
24	do	do	do		[b] 3.5
25	do	do	do		[b] 3.5
Sept. 9	do	do	do		[b] 3.5
13	do	do	do		[b] 3.5
21	do	do	do		[b] 3.5
Oct. 30	San Felipe Springs	do	Near Del Rio, Tex.		[a] 93.7
Dec. 30	do	do	do		[a] 91.7
Mar. 2	do	do	do		[a] 75.5
May 20	do	do	do		[a] 79.9
July 28	do	do	do		[a] 87.7
Sept. 28	do	do	do		[a] 97.1

[a] Total flow of the springs.

[b] Estimated.

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