UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 703

SURFACE WATER SUPPLY *of the* UNITED STATES 1930

PART 8
WESTERN GULF OF MEXICO BASINS

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Prepared in cooperation with the
STATE OF TEXAS

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SURFACE WATER SUPPLY OF WESTERN GULF OF MEXICO BASINS, 1930

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting records of measurements of flow made on streams in the United States during the year ending September 30, 1930.

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, 1895–1931

1895	$12,500.00	1919	$148,244.10
1896	24,500.00	1920	175,000.00
1897–1899	50,000.00	1921–1923	180,000.00
1900	70,000.00	1924–25	170,000.00
1901–2	100,000.00	1926	165,000.00
1903–1906	200,000.00	1927	151,000.00
1907	150,000.00	1928	147,000.00
1908–1910	100,000.00	1929	270,500.00
1911–1917	150,000.00	1930	275,000.00
1918	175,000.00	1931	565,000.00

In the execution of the work many private and State organizations have cooperated either by furnishing data or by assisting in collecting data. 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 6,070 points in the United States and also at many points in Alaska and the

Hawaiian Islands. In July, 1930, 2,430 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 a certain class of work. 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 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 natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1929, and ending September 30, 1930. 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, or in ponds, lakes, and swamps, or as underground 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 direct readings on a staff or chain 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 is determined.

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

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded discharge, and the accuracy of the records. The maximum discharge given under "Extremes" represents the crest discharge determined from records of stage by water-stage recorders, or in case of nonrecording gages it is determined from flood marks or from graphs based on gage readings made once daily or oftener.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height which may be a once daily reading or the mean of twice daily readings of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation the discharge obtained from the rating table and the mean daily gage height 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 at regular intervals during the day or by using the discharge integrator, an in-

strument for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station. At nonrecording-gage stations the mean daily discharge during flashy floods is determined from gage-height graphs based on gage readings made once daily or oftener.

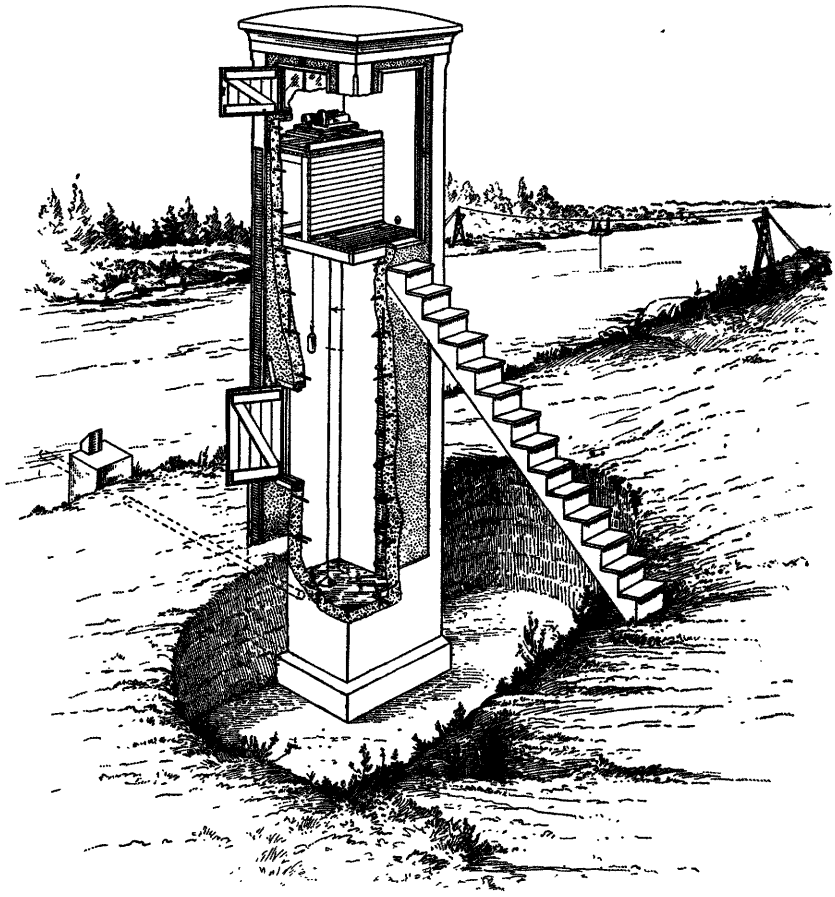

FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

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 observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that records are accurate within 5 per cent; "good," within 10 per cent; "fair," within 15 per cent; and "poor," 20 per cent or more.

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 the inclusion of 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. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows 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 data previously published.

Many gaging stations on streams in the irrigated sections of the United States are situated 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 station must first be satisfied.

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, monographs, and annual reports.

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 1. North Atlantic slope basins (St. John River to York River).
2. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Upper Mississippi River and Hudson Bay Basins.
6. Missouri River Basin.
7. Lower Mississippi River Basin.
8. Western Gulf of Mexico basins.
9. Colorado River Basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. North Pacific slope drainage basins, in three parts:
    A, Pacific slope basins in Washington and upper Columbia River Basin.
    B, Snake River Basin.
    C, Pacific slope basins in Oregon and lower Columbia River Basin.

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 in 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., Statehouse.
Boston, Mass., 2500 Customhouse.
Hartford, Conn., 318 State Office Building.
Albany, N. Y., 506 Broadway-Arcade Building.
Trenton, N. J., 710 Trenton Trust Building.
Harrisburg, Pa., Claster Building.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 220 Post Office Building.
Columbia, S. C., 801 National Loan & Exchange Bank Building.
Ocala, Fla., Post Office Building.
Tuscaloosa, Ala., Post Office Building.
Chattanooga, Tenn., 630 Power Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Chicago, Ill., 1503 Consumers Building.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 202 Old State Capitol.
Topeka, Kans., 23 Federal Building.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.

Austin, Tex., State Capitol.
Santa Fe, N. Mex., State Capitol.
Tucson, Ariz., 210 Post Office Building.
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., 416 Power Block.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 751 South Figueroa Street, room 510.
Honolulu, Hawaii, Territorial Office Building.

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

Stream-flow records have been obtained at about 6,070 points in the United States, and the data obtained have been published in the reports tabulated on pages 7 and 9.

Steam-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.
22nd 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 and 1908.
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.

Steam-flow data in reports of the United States Geological Survey—Continued

Report	Character of data	Year
W 501 to 514	Complete data	1919 and 1920.
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.
W 641 to 654	do	1927.
W 661 to 674	do	1928.
W 681 to 694	do	1929.
W 696 to 709	do	1930.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report in the same relative order as the regular gaging stations. 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 1930. The data for any particular station will be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by Part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899–1930

[For basins included see p. 6]

Year	1	2	3	4	5	6	7	8	9	10	11	12–A	12–B	12–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	[l] 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, [s] 213	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
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in Twenty-first Annual Report, Part 4.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Colorado 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. Monthly discharge for 1900 in Twenty-second Annual Report, Part 4.
[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 in Texas 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.

Acknowledgment is due to the Corps of Engineers, United States Army, for financial assistance, and to the United States Weather Bureau and the American section of the International Boundary Commission for assistance in collecting the records published herein.

Assistance was also rendered by the following municipalities, organizations, corporations, and individuals: The cities of Corpus Christi, Dallas, Fort Worth, and San Antonio; Dallas County; City and County of Dallas Levee Improvement District, Bexar-Medina-Atascosa Counties Water Improvement District No. 1, Tarrant County Water Improvement District No. 1, Zavala County Water Improvement District No. 2, Brown County Water Improvement District No. 1, Breckenridge Chamber of Commerce, St. Louis Southwestern Railway Co., Gulf, Colorado & Santa Fe Railway Co., Humble Oil & Refining Co., San Antonio Public Service Co., Texas Power & Light Co., Central & Southwest Utilities Co., West Texas Utilities Co., and Emery, Peck & Rockwood Development Co.

DIVISION OF WORK

The data for stations in Texas and New Mexico were collected and prepared for publication under the direction of C. E. Ellsworth, district engineer, assisted by Trigg Twichell, S. D. Breeding, Tate Dalrymple, W. C. Dodd, G. W. King, C. B. Tooley, G. E. Ferguson, N. C. Magnuson, Kate Casparis, A. B. Goodwin, C. A. Young, V. W. Rupp, V. L. Austin, S. H. Crowell, F. C. Ames, P. H. Holland, J. M. Terry, and R. W. Yarborough, jr.

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

GAGING-STATION RECORDS

SABINE RIVER BASIN

SABINE RIVER NEAR LONGVIEW, TEX.

LOCATION.—Staff gage just below International-Great Northern Railroad bridge and 3 miles southwest of Longview, Gregg County.

DRAINAGE AREA.—3,010 square miles.

RECORDS AVAILABLE.—January, 1904, to December, 1906; October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 21,500 second-feet May 22, 23 (gage height, 31.9 feet); minimum, 26 second-feet Aug. 16–31, Sept. 12–25 (gage height, 1.8 feet).

1904–1906, 1923–1930: Maximum discharge, 22,300 second-feet Dec. 26, 1928 (gage height 29.95 feet); minimum, 14 second-feet Aug. 29–31, 1925 (gage height, 1.1 feet).

REMARKS.—Monthly records fair. Daily records not sufficiently accurate for publication. No diversions of consequence. Slight regulation at extremely low stages caused by pumping just above the gage.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	129	47	57.2	3,520
November	1,190	160	454	27,000
December	1,920	236	648	39,800
January	2,120	341	1,140	70,100
February	7,210	1,000	3,740	208,000
March	3,780	654	1,840	113,000
April	3,600	218	676	40,200
May	21,500	534	10,200	627,000
June	10,900	96	1,920	114,000
July	417	28	101	6,210
August	34	26	27.4	1,680
September	34	26	27.6	1,640
The year	21,500	26	1,730	1,250,000

SABINE RIVER AT LOGANSPORT, LA.

LOCATION.—Chain gage on highway bridge 200 feet above Houston East & West Texas Railway bridge and one-fourth mile west of railway station in Logansport, De Soto Parish. Zero of gage is 147.5 feet above mean sea level.

DRAINAGE AREA.—4,860 square miles.

RECORDS AVAILABLE.—July, 1903, to December, 1906; October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 34,800 second-feet May 29 (gage height, 34.1 feet); minimum, 58 second-feet Oct. 31 (gage height, −0.4 foot).

1903–1906, 1923–1930: Maximum gage height, 35.8 feet May 26, 1905 (discharge not determined); minimum discharge, probably less than 27 second-feet during September, 1925.

Maximum stage known, 39.4 feet during 1884.

REMARKS.—Monthly records fair. Record of daily discharge not sufficiently accurate for publication. No diversions. Gage-height record furnished by United States Weather Bureau.

Monthly discharge, in second-feet, of Sabine River at Logansport, La., 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	149	58	104	6,400
November	1,260	129	550	32,700
December	2,740	268	996	61,200
January	8,200	1,470	6,090	374,000
February	7,240	5,450	6,360	353,000
March	7,520	968	3,470	213,000
April	1,580	436	938	55,800
May	34,800	496	10,300	633,000
June	28,700	296	8,010	477,000
July	296	129	219	13,500
August	129	88	102	6,270
September	95	88	89.9	5,350
The year	34,800	58	3,080	2,230,000

SABINE RIVER NEAR BON WIER, TEX.

LOCATION.—Chain gage on Gulf, Colorado & Santa Fe Railway bridge 1¼ miles east of Bon Weir, Newton County. Zero of gage is 45.4 feet above mean sea level.

DRAINAGE AREA.—8,390 square miles.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 26,100 second-feet June 14, 15 (gage height, 18.4 feet); minimum, 265 second-feet Oct. 26 (gage height, 0.8 foot).

1923–1930: Maximum discharge, 45,600 second-feet Apr. 21, 1927 (gage height, 20.6 feet); minimum, 185 second-feet Sept. 11, 22, 24, 1925 (gage height, 0.5 foot).

REMARKS.—Monthly records fair. Records of daily discharge not sufficiently accurate for publication. Discharge estimated Nov. 19 to Jan. 13. No diversions. Gage-height record furnished by United States Weather Bureau.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	785	265	505	31,100
November	----------	460	5,510	328,000
December	----------	----------	6,300	387,000
January	----------	----------	10,600	652,000
February	20,800	9,500	15,000	833,000
March	11,900	4,100	7,960	489,000
April	8,590	1,280	3,540	211,000
May	18,400	1,100	8,670	533,000
June	26,100	1,400	14,200	845,000
July	1,340	550	920	56,600
August	640	335	470	28,900
September	1,400	335	601	35,800
The year	26,100	265	6,120	4,430,000

SABINE RIVER NEAR RULIFF, TEX.

LOCATION.—Staff gage on Kansas City Southern Railway bridge 1½ miles east of Ruliff, Newton County, and 5 miles below mouth of Cypress Creek. Zero of gage is 4.7 feet above mean sea level.

DRAINAGE AREA.—9,450 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 23,700 second-feet Feb. 9, June 16, 17 (gage height 12.4 feet); minimum, 547 second-feet Oct. 25–27 (gage height, 2.00 feet).

1924–1930: Maximum discharge, about 61,200 second-feet June 1, 1929 (gage height, 14.4 feet); minimum, 372 second-feet Sept. 11, 1925 (gage height, 1.10 feet).

A stage of 15.5 feet occurred Apr. 15, 1923.

REMARKS.—Records good. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,010	824	5,850	8,850	19,000	13,200	9,400	1,540	13,200	1,820	824	725
2	1,010	1,060	5,250	8,070	20,100	13,200	9,700	1,540	13,200	1,680	790	725
3	932	1,540	5,100	7,600	21,300	13,200	10,000	1,540	13,200	1,610	790	725
4	895	1,820	6,330	7,390	22,500	13,800	9,700	1,480	13,200	1,540	824	725
5	859	1,820	7,390	6,820	22,500	13,800	9,120	1,420	13,800	1,540	824	725
6	790	1,680	7,830	6,330	22,500	13,800	8,580	1,420	14,300	1,610	824	725
7	757	1,300	7,390	6,010	22,500	13,200	8,070	1,480	15,500	1,680	824	725
8	725	1,150	6,490	5,700	23,700	12,800	7,830	1,540	16,200	1,610	824	725
9	725	971	5,700	6,170	23,700	12,300	7,390	1,540	17,000	1,540	824	725
10	693	1,390	5,400	7,390	23,700	11,900	7,000	1,820	18,000	1,540	824	757
11	693	3,100	5,250	8,850	22,500	11,900	6,490	3,240	19,000	1,420	824	757
12	693	5,510	5,100	10,700	21,300	11,500	5,700	5,130	20,100	1,360	790	725
13	662	8,320	4,560	12,300	20,100	11,500	4,960	7,000	21,300	1,250	757	693
14	662	10,400	4,070	13,800	19,000	11,100	4,070	9,120	22,500	1,150	725	632
15	693	11,500	3,850	15,500	18,000	10,400	3,640	10,000	22,500	1,100	725	693
16	693	12,300	4,190	17,000	17,000	9,120	3,440	10,700	23,700	1,010	693	757
17	662	13,200	4,960	19,000	17,000	7,830	3,240	9,700	23,700	1,010	662	790
18	662	13,200	5,700	20,100	17,000	6,820	3,040	8,580	22,500	1,010	632	1,100
19	632	12,300	6,330	20,100	17,000	6,330	2,850	8,070	22,500	1,010	632	1,610
20	632	10,700	7,000	20,100	17,000	5,700	2,670	8,070	22,500	1,010	632	1,820
21	603	7,390	7,390	20,100	17,000	5,700	2,490	8,850	21,300	1,010	632	1,540
22	575	5,700	7,390	20,100	17,000	6,330	2,310	10,400	18,000	1,010	632	1,250
23	575	5,550	7,000	19,000	15,500	7,000	2,220	11,900	14,300	971	632	1,010
24	575	5,850	6,650	19,000	15,500	7,600	2,140	13,200	9,510	932	632	1,010
25	547	6,650	6,490	20,100	14,900	7,830	1,980	14,900	6,110	895	632	1,010
26	547	7,600	6,650	21,300	14,300	8,070	1,820	15,500	4,070	859	632	971
27	547	7,830	7,390	21,300	13,200	7,830	1,820	15,500	3,040	859	632	932
28	575	7,830	7,830	21,300	13,200	7,830	1,750	15,500	2,490	824	632	932
29	603	7,390	8,320	21,300	-------	7,600	1,680	14,900	2,140	824	632	895
30	662	6,490	8,850	20,100	-------	7,830	1,610	14,300	1,980	824	632	971
31	725	-------	8,850	19,000	-------	8,320	-------	13,800	-------	824	693	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,010	547	697	42,900
November	13,200	824	6,080	362,000
December	8,850	3,850	6,340	390,000
January	21,300	5,700	14,500	892,000
February	23,700	13,200	18,900	1,050,000
March	13,800	5,700	9,850	606,000
April	10,000	1,610	4,890	291,000
May	15,500	1,420	7,860	483,000
June	23,700	1,980	15,000	893,000
July	1,820	824	1,200	73,800
August	824	632	718	44,100
September	1,820	632	913	54,300
The year	23,700	547	7,160	5,180,000

NECHES RIVER BASIN

NECHES RIVER NEAR ROCKLAND, TEX.

LOCATION.—Staff gage half a mile above Texas & New Orleans Railroad bridge 1 mile north of Rockland, Tyler County. Zero of gage is 95.50 feet above mean sea level.

DRAINAGE AREA.—3,540 square miles.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 10,500 second-feet May 30 (gage height, 18.5 feet); minimum, 30 second-feet Oct. 22–26 (gage height, −0.70 foot).

1923–1930: Maximum discharge, 34,200 second-feet June 1, 1929 (gage height, 26.8 feet); minimum, 7.0 second-feet Aug. 23, 24, 1925 (gage height, −1.2 feet).

Maximum stage known, 28.9 feet Apr. 2, 1922 (discharge, about 45,800 second-feet).

REMARKS.—Records fair. No diversions above gage. Gage-height records furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	61	650	1,110	5,910	4,480	4,160	378	9,830	242	81	111
2	74	61	840	1,040	5,710	4,620	3,960	378	9,550	242	81	128
3	74	61	726	996	5,500	4,620	3,310	378	9,200	222	81	128
4	61	61	650	1,040	7,100	4,290	3,100	378	8,780	201	68	128
5	61	61	576	1,040	7,520	4,030	2,940	378	8,220	201	81	128
6	50	88	576	1,040	8,010	3,490	2,680	378	7,660	182	81	145
7	50	119	613	1,070	8,710	3,040	2,300	438	7,030	182	68	182
8	50	154	613	1,350	9,130	2,590	2,120	576	6,330	182	68	145
9	50	191	576	2,890	9,270	2,440	1,850	576	5,640	182	56	111
10	50	504	540	4,550	8,920	2,300	1,760	504	4,960	182	56	96
11	50	378	540	4,820	8,290	2,210	1,680	650	4,290	201	56	81
12	40	802	540	5,230	7,590	2,210	1,590	802	3,720	201	56	68
13	40	2,300	540	6,190	6,820	2,210	1,590	1,040	3,260	201	68	68
14	40	1,470	576	6,470	5,980	2,120	1,510	1,190	2,780	182	68	68
15	40	1,110	650	6,820	5,570	2,120	1,420	1,590	2,400	182	68	128
16	40	996	726	6,610	5,090	2,120	1,350	1,760	1,940	163	56	145
17	40	996	1,040	6,120	4,750	2,120	1,190	1,760	1,590	163	56	145
18	40	957	1,310	4,820	4,620	2,120	1,110	1,760	1,110	145	45	128
19	40	879	1,190	3,660	4,690	2,730	957	2,300	957	145	45	128
20	40	802	1,190	2,590	4,690	2,890	879	2,490	879	128	45	128
21	40	726	1,110	4,030	4,480	2,730	802	2,590	726	111	45	111
22	30	1,190	1,040	3,720	4,160	3,550	726	2,680	650	111	35	96
23	30	1,040	996	3,960	3,840	3,720	650	2,990	576	111	35	81
24	30	918	957	4,290	3,550	3,720	576	3,490	504	96	35	81
25	30	918	1,110	4,290	3,260	3,550	576	4,160	438	96	45	96
26	30	957	1,230	4,220	2,990	3,430	504	6,400	378	81	35	128
27	40	918	1,310	4,360	2,730	3,310	438	8,290	336	81	35	163
28	40	879	1,270	4,480	4,360	3,430	438	9,900	336	81	35	163
29	50	802	1,230	5,770	-------	4,220	378	10,400	310	81	68	128
30	50	726	1,190	5,980	-------	4,360	378	10,500	286	81	81	111
31	50	-------	1,150	6,120	-------	4,420	-------	10,100	-------	81	81	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	88	30	46.4	2,850
November	2,300	61	704	41,900
December	1,310	540	879	54,000
January	6,820	996	3,890	239,000
February	9,270	2,730	5,830	324,000
March	4,620	2,120	3,200	197,000
April	4,160	378	1,560	92,800
May	10,500	378	2,940	181,000
June	9,830	286	3,490	208,000
July	242	81	153	9,410
August	81	35	58.5	3,600
September	182	68	118	7,020
The year	10,500	30	1,880	1,360,000

NECHES RIVER AT EVADALE, TEX.

LOCATION.—Staff gage at Gulf, Colorado & Santa Fe Railway bridge at Evadale, Jasper County. Zero of gage is 7.20 feet above mean sea level.

DRAINAGE AREA.—7,910 square miles.

RECORDS AVAILABLE.—July, 1904, to December, 1906; October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 20,600 second-feet Feb. 15–16 (gage height, 16.2 feet); minimum, 292 second-feet Aug. 28–30 (gage height, 0.3 foot).

1904–1906, 1923–1930: Maximum discharge, 67,600 second-feet June 1, 1929 (gage height, 22.2 feet); minimum, about 148 second-feet Sept. 10, 1925.

Maximum stage known, 33.4 feet during 1884, from records of Gulf, Colorado & Santa Fe Railway.

REMARKS.—Records good. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	535	471	2,900	5,120	14,900	11,000	9,600	1,570	11,800	1,080	414	348
2	535	535	2,900	4,920	14,900	11,600	10,000	1,500	12,800	1,010	397	397
3	513	535	3,060	4,620	16,000	11,000	10,000	1,460	13,600	1,010	397	432
4	492	558	3,460	4,460	17,200	11,300	9,600	1,420	14,400	945	397	432
5	471	558	3,460	4,290	17,200	11,000	9,180	1,420	14,900	945	414	397
6	451	513	3,260	4,130	17,900	11,600	8,770	1,420	15,400	945	397	432
7	432	492	3,060	4,130	17,900	11,300	8,070	1,420	15,400	884	397	451
8	432	471	2,900	4,210	18,500	10,500	7,590	1,380	15,400	855	397	432
9	414	471	2,900	4,460	19,200	9,390	6,850	1,380	14,900	797	414	432
10	397	700	3,120	5,120	19,200	8,770	6,220	1,530	14,000	768	414	414
11	397	997	3,120	6,590	19,900	8,070	5,620	3,120	12,800	740	397	397
12	397	1,870	3,010	8,070	19,900	7,430	5,220	3,730	11,600	713	380	397
13	380	3,130	2,670	9,600	20,600	7,280	4,720	4,290	10,000	713	364	364
14	380	4,460	2,560	10,800	20,600	7,130	4,460	4,460	8,280	686	364	348
15	380	5,980	2,460	11,800	20,600	6,590	4,210	4,540	6,720	659	364	364
16	380	6,720	2,350	12,500	19,900	6,460	3,880	4,460	5,740	659	380	333
17	364	6,340	2,250	13,200	19,200	6,460	3,730	4,290	4,920	686	364	333
18	364	5,620	2,510	14,000	18,500	6,460	3,530	4,290	4,290	713	364	364
19	364	5,320	2,950	14,900	17,900	6,590	3,320	4,920	3,730	713	348	492
20	364	3,800	3,800	15,400	17,200	6,590	3,060	5,420	3,120	659	333	535
21	364	3,260	3,530	17,200	16,600	6,990	2,900	5,860	2,670	633	333	492
22	348	3,010	4,620	17,900	15,400	7,750	2,620	6,590	2,350	582	333	451
23	348	2,730	4,720	17,200	14,400	8,580	2,460	6,990	2,110	535	319	432
24	348	3,320	5,120	16,600	14,000	9,180	2,250	7,130	1,920	513	305	471
25	348	3,730	4,920	16,600	13,600	9,600	2,110	7,280	1,740	513	305	471
26	333	3,660	5,020	16,000	12,800	9,390	1,970	7,430	1,570	492	305	451
27	348	3,460	5,320	15,400	11,600	9,180	1,870	7,910	1,460	471	305	451
28	364	3,390	5,520	14,900	11,600	8,970	1,780	8,230	1,300	451	292	432
29	364	3,260	5,620	15,400	-------	8,580	1,700	8,970	1,190	432	292	471
30	364	3,060	5,520	14,900	-------	8,580	1,610	10,000	1,150	432	292	513
31	432	-------	5,420	14,400	-------	9,180	-------	11,000	-------	414	319	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	535	333	400	24,600
November	6,720	471	2,750	164,000
December	5,620	2,250	3,680	226,000
January	17,900	4,130	10,900	670,000
February	20,600	11,600	17,000	944,000
March	11,600	6,460	8,810	542,000
April	10,000	1,610	4,960	295,000
May	11,000	1,380	4,690	288,000
June	15,400	1,150	7,710	459,000
July	1,080	414	698	42,900
August	414	292	358	22,000
September	535	333	424	25,200
The year	20,600	292	5,120	3,700,000

ANGELINA RIVER NEAR LUFKIN, TEX.

LOCATION.—Chain gage on highway bridge 1 mile above Houston East & West Texas Railway bridge and 8 miles north of Lufkin, Angelina County.
DRAINAGE AREA.—1,580 square miles.
RECORDS AVAILABLE.—October, 1923, to September, 1930.
EXTREMES.—Maximum discharge during year, about 10,300 second-feet May 21 (gage height, 13.67 feet); minimum, 14 second-feet Aug. 21–24.
1923–1930: Maximum discharge, about 30,200 second-feet Nov. 19–21, 1925 (gage height, 15.99 feet at gage on railroad bridge 1 mile downstream); minimum, 10 second-feet Oct. 2, 3, 1928 (gage height, 1.72 feet).
REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	34	407	980	2,400	1,520	1,580	245	3,140	86	18	17
2	26	41	387	1,040	2,600	1,790	1,520	265	2,730	77	17	19
3	24	56	367	1,040	3,000	1,940	1,460	289	2,100	74	17	19
4	23	71	349	930	4,710	1,860	1,400	316	1,580	71	16	22
5	23	68	349	880	4,710	1,860	1,340	331	1,040	71	17	23
6	22	77	331	830	4,950	1,940	1,220	331	830	86	18	24
7	22	97	427	830	4,260	2,100	1,040	316	650	111	30	26
8	20	111	500	1,520	3,640	2,300	930	387	525	132	41	24
9	20	132	427	1,650	3,460	2,500	830	387	475	125	32	23
10	19	164	427	1,650	4,040	2,600	730	407	407	118	26	24
11	19	235	450	1,520	5,450	2,600	640	500	407	118	23	26
12	18	301	525	1,460	6,280	2,500	580	690	387	104	22	24
13	18	484	610	1,650	6,000	2,300	550	980	349	83	22	22
14	19	525	690	1,720	5,720	2,100	525	1,160	301	66	22	19
15	19	475	780	1,580	4,950	1,860	475	1,340	277	56	20	23
16	20	450	1,460	1,580	4,480	1,650	450	1,520	301	48	18	23
17	22	450	1,650	1,520	3,840	1,460	427	1,790	349	44	17	26
18	22	450	1,340	1,580	3,290	1,340	407	2,300	316	41	16	28
19	20	475	1,040	1,520	3,000	1,290	387	4,190	301	38	15	23
20	20	500	980	1,720	2,600	1,220	349	9,040	255	35	15	19
21	19	500	980	2,300	2,300	1,280	331	9,930	235	32	14	17
22	19	550	980	2,400	2,020	1,460	316	9,200	215	30	14	16
23	19	580	1,040	2,300	1,790	1,400	301	8,160	197	29	14	16
24	18	550	1,100	2,200	1,650	1,460	289	7,500	188	28	14	17
25	18	550	1,160	2,100	1,520	1,460	265	7,190	172	26	15	18
26	18	525	1,160	2,020	1,400	1,340	255	7,190	156	24	15	24
27	18	525	1,160	2,100	1,520	1,340	245	6,580	140	22	19	30
28	22	500	1,160	2,300	1,460	1,650	245	6,000	125	22	22	34
29	23	475	1,100	2,500	-------	1,650	245	5,200	111	20	20	30
30	28	427	1,040	2,500	-------	1,720	245	4,480	97	19	18	28
31	32	-------	980	2,500	-------	1,650	-------	3,840	-------	19	17	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	32	18	21.3	1,310
November	580	34	346	20,600
December	1,650	331	818	50,300
January	2,500	830	1,690	104,000
February	6,280	1,400	3,470	193,000
March	2,600	1,220	1,780	109,000
April	1,580	245	653	38,900
May	9,930	245	3,290	202,000
June	3,140	97	612	36,400
July	132	19	59.8	3,680
August	41	14	19.5	1,200
September	34	16	22.8	1,360
The year	9,930	14	1,050	762,000

ANGELINA RIVER AT HORGER, TEX.

LOCATION.—Chain gage on Zavala-Jasper highway bridge one-fourth mile east of Horger, Jasper County, and 20 miles above mouth.

DRAINAGE AREA.—3,440 square miles.

RECORDS AVAILABLE.—March, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 9,960 second-feet Feb. 8 (gage height, 20.76 feet); minimum, 36 second-feet Oct. 18, 19.

1928–1930: Maximum discharge, 33,300 second-feet May 30, 1929 (gage height, 34.50 feet); minimum, that of Oct. 18, 19, 1929.

Maximum stage known, about 39.50 feet during August, 1914.

REMARKS.—Records fair. Discharge estimated Aug. 24 to Sept. 8. No diversions above station. There is a possibility of backwater at times from Neches River.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	50	978	2,430	7,670	5,960	4,300	522	7,260	322	89	
2	89	50	906	2,380	7,750	5,800	4,010	522	7,200	307	89	
3	77	72	978	2,380	8,280	5,400	3,720	522	7,010	280	89	
4	77	102	1,260	2,380	9,280	5,100	3,580	522	6,600	294	83	
5	72	102	1,300	2,330	9,760	4,600	3,340	522	6,220	294	83	70
6	67	102	1,290	2,290	9,860	4,160	3,050	522	5,700	280	96	
7	67	110	1,390	2,430	9,860	3,870	2,670	587	5,100	267	117	
8	67	110	1,300	3,340	9,960	3,720	2,430	726	4,350	254	102	
9	65	198	1,300	4,450	9,760	3,580	2,200	870	3,720	254	77	64
10	63	610	1,300	5,500	9,570	3,440	2,100	1,180	2,860	254	72	63
11	59	1,280	1,260	5,900	9,280	3,340	1,920	1,520	2,150	242	96	60
12	57	2,200	1,220	6,490	9,000	3,240	1,830	1,600	1,390	230	125	72
13	51	2,860	1,180	7,140	8,730	3,150	1,740	2,010	1,180	230	117	77
14	52	3,200	1,050	7,460	8,460	3,240	1,600	2,520	1,010	230	117	72
15	49	3,290	978	8,820	8,130	3,290	1,470	2,150	942	365	102	136
16	43	2,570	978	9,180	8,050	3,340	1,260	1,740	834	365	102	242
17	38	2,100	1,780	9,370	7,980	3,390	1,090	2,200	798	280	89	219
18	37	2,010	2,520	9,570	7,670	3,820	1,090	3,050	726	219	83	187
19	36	1,970	2,720	9,660	7,330	4,300	1,050	3,530	726	177	77	149
20	49	1,920	2,760	9,760	7,010	4,850	1,010	3,960	798	158	67	158
21	50	1,880	2,810	9,570	6,880	4,950	942	3,920	762	149	67	177
22	52	1,880	2,910	9,370	6,660	4,650	906	3,870	690	141	83	177
23	51	1,920	3,100	9,180	6,270	4,350	870	3,920	620	149	72	141
24	50	2,010	3,100	7,670	5,700	4,160	798	4,200	554	141		117
25	48	2,330	2,860	7,260	5,250	3,720	726	4,600	490	125		102
26	47	2,860	2,760	7,010	4,900	3,200	690	4,650	458	102		149
27	45	2,960	3,150	6,880	4,400	3,050	655	5,800	396	141	70	158
28	46	2,670	3,050	6,710	4,900	3,200	620	6,270	396	89		141
29	48	2,100	2,960	7,070	------	3,820	620	6,710	365	83		141
30	51	1,300	2,760	7,670	------	4,700	587	7,010	350	83		149
31	52	------	2,570	7,750	------	4,650	------	7,260	------	77		------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	96	36	56.5	3,470
November	3,290	50	1,560	92,800
December	3,150	906	1,950	120,000
January	9,760	2,290	6,430	395,000
February	9,960	4,400	7,800	433,000
March	5,960	3,050	4,070	250,000
April	4,300	587	1,760	105,000
May	7,260	522	2,870	176,000
June	7,260	350	2,390	142,000
July	365	77	212	13,000
August	------	------	85.6	5,260
September	242	------	117	6,960
The year	9,960	36	2,410	1,740,000

TRINITY RIVER BASIN

WEST FORK OF TRINITY RIVER AT BRIDGEPORT, TEX.

LOCATION.—Staff gage at Chicago, Rock Island & Gulf Railway Co.'s pumping plant half a mile southwest of Bridgeport, Wise County.
DRAINAGE AREA.—1,010 square miles.
RECORDS AVAILABLE.—October, 1914, to March, 1930 (discontinued).
EXTREMES.—Maximum discharge during year, 1,410 second-feet Dec. 14 (gage height, 9.80 feet); no flow during several periods.
1914–1930: Maximum gage height, 28.9 feet June 8, 1915 (discharge not determined); no flow during several periods.
REMARKS.—Records fair except those for periods of ice effect, Jan. 16–23, which are poor. Small amount of water diverted above station for water supply of Bridgeport.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	0	34	0.6	0.4	0.6	9.7	16	433	9.7	59		0.1	------
2	0	16	.4	.2	.9	5.8	17	161	7.1	16		.1	------
3	0	11	.2	.2	1.2	4.5	18	50	4.5	7.1		.1	------
4	0	7.1	.2	.2	1.5	3.7	19	23	4.0	3.4		.1	------
5	0	4.0	.1	.1	1.5	2.9	20	13	2.9	2.6	0.1	.1	------
6	0	2.9	0	.1	1.2	------	21	7.8	2.3	1.7		.1	------
7	0	2.3	0	0	.6	------	22	4.5	1.8	1.7		.1	------
8	0	1.8	0	0	1.1	------	23	7.1	1.7	1.2		.1	------
9	0	50	.1	0	.6	------	24	7.1	1.6	1.1	.1	0	------
10	0	61	.1	0	.2	------	25	4.5	1.3	1.1	.1	24	------
11	0	245	.1	0	.2	------	26	4.0	1.2	1.0	0	95	------
12	0	81	.1	.1	.3	------	27	6.4	1.1	.8	0	25	------
13	0	37	.2	.2	.3	------	28	12	1.0	.6	0	13	------
14	0	23	694	.3	.2	------	29	75	.8	.6	0	------	------
15	317	13	282	.4	.1	------	30	142	.8	.6	.4	------	------
							31	70	------	.5	.6	------	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	433	0	43.1	2,650
November	245	.8	21.0	1,250
December	694	0	34.7	2,130
January	------	0	.14	8.6
February	96	0	6.01	334
March 1–5	9.7	2.9	5.32	53
The period	------	------	------	6,430

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

LOCATION.—Water-stage recorder just above Lake Worth Dam, 4½ miles north west of Tarrant County courthouse in Fort Worth.
DRAINAGE AREA.—1,870 square miles.
RECORDS AVAILABLE.—October, 1923, to September, 1930.
EXTREMES.—Maximum discharge during year, 7,120 second-feet May 13 (gage height, 2.15 feet); no flow during several periods.
1923–1930: Maximum discharge, 7,600 second-feet Nov. 18, 1923 (gage height, 2.25 feet); no flow during several periods.
REMARKS.—Records good. Diversions for municipal use only; amount not known.

Daily and monthly discharge, in second-feet of West Fork of Trinity River at Lake Worth Dam, above Fort Worth, Tex., 1929–30

Day	Nov.	Dec.	May	June	July	Day	Nov.	Dec.	May	June	July
1	0	0	0	78	46	16	54	130	4,080	179	0
2	0	0	0	54	20	17	46	432	3,620	361	0
3	0	0	0	38	12	18	30	322	3,320	974	0
4	0	0	0	30	2.4	19	27	86	2,960	1,540	0
5	0	0	0	46	12	20	20	46	2,860	1,920	0
6	0	0	.7	62	4.0	21	14	25	2,960	2,550	0
7	0	0	332	46	4.0	22	14	20	3,210	4,310	0
8	0	0	1,100	143	1.6	23	9.2	14	3,810	4,510	0
9	0	0	1,200	429	1.6	24	6.6	14	3,470	3,220	0
10	0	0	1,110	594	20	25	4.0	14	2,470	1,320	0
11	0	0	1,050	551	30	26	2.4	9.2	1,630	547	0
12	2.1	0	1,130	332	30	27	1.6	14	1,000	272	0
13	20	0	6,190	202	30	28	0	3.2	527	168	0
14	38	1.2	5,110	144	17	29	0	1.6	303	102	0
15	46	25	4,120	156	2.4	30	0	.8	179	70	0
						31	0	0	110		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	54	0	11.2	666
December	432	0	37.4	2,300
May	6,190	0	1,870	115,000
June	4,510	30	832	49,500
July	46	0	7.52	462
The year	6,190	0	232.0	168,000

NOTE.—No flow during months for which no discharge is shown.

WEST FORK OF TRINITY RIVER AT FORT WORTH, TEX.

LOCATION.—Water-stage recorder in old pump house of Fort Worth Power & Light Co.'s plant in Fort Worth, Tarrant County, 150 feet above Paddock viaduct. Zero of gage is 519.26 feet above mean sea level.

DRAINAGE AREA.—2,430 square miles.

RECORDS AVAILABLE.—October, 1920, to September, 1930.

EXTREMES.—Maximum discharge during year, 13,100 second-feet May 13 (gage height, 14.40 feet); no flow during several periods.

1920–1930: Maximum discharge (determined by slope-area method), 85,000 second-feet Apr. 25, 1922 (gage height, 23.95 feet); no flow during several periods.

REMARKS.—Monthly records fair. Daily discharge not sufficiently accurate for publication. About 15 second-feet diverted by city of Fort Worth for municipal use. Flow partly regulated by Lake Worth Reservoir. Discharge estimated May 23 to June 23; partly estimated May 13, 14, 22, June 24, July 17, 18.

Monthly discharge, in second-feet, 1929-30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	17	0	2.04	125
November	37	2.7	12.5	744
December	549	2.7	55.4	3,410
January	26	2.0	6.08	374
February	36	3.8	13.6	755
March	44	3.1	11.8	726
April	27	2.7	7.71	459
May	11,300	3.1	2,240	138,000
June			888	52,800
July	33	.1	7.07	435
August	77	0	2.87	176
The year	11,300	0	274	198,000

NOTE.—No flow during September.

WEST FORK OF TRINITY RIVER AT GRAND PRAIRIE, TEX.

LOCATION.—Chain gage at highway bridge on Grand Prairie-Sowers-Irving road 1 mile northeast of Grand Prairie, Dallas County. Zero of gage is 412.99 feet above mean sea level.

DRAINAGE AREA.—2,890 square miles.

RECORDS AVAILABLE.—March, 1925, to September, 1930.

EXTREMES.—Maximum discharge during year, 15,200 second-feet May 14 (gage height, 25.95 feet); minimum, 11 second-feet Apr. 12, 13 (gage height, 2.12 feet).

1925–1930: Maximum discharge, that of May 14, 1930; minimum, 3.2 second-feet June 6, 1925.

Maximum stage known, about 29 feet during April, 1922.

REMARKS.—Records good. Numerous small diversions above gage; amount not known. Largest diversion is about 15 second-feet by city of Fort Worth. Flow partly regulated by storage at Lake Worth Reservoir.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	83	30	29	24	17	20	48	232	91	17	18
2	12	39	30	29	24	17	18	39	165	74	15	17
3	12	21	20	29	24	17	18	43	139	57	14	17
4	12	18	20	29	29	14	20	857	133	47	15	17
5	15	14	15	29	35	14	20	301	115	33	15	17
6	15	18	16	23	35	14	14	242	292	29	193	18
7	15	18	20	19	24	14	14	897	204	60	101	18
8	13	18	20	19	24	14	14	676	152	69	35	18
9	12	21	20	19	19	14	14	1,180	139	43	29	18
10	12	97	15	19	19	21	14	1,340	405	33	19	18
11	12	51	20	19	18	19	12	1,470	619	28	19	18
12	13	32	30	19	18	17	11	1,290	563	32	15	18
13	18	28	33	24	38	17	11	7,500	422	35	15	18
14	21	28	30	24	23	17	816	13,600	261	36	15	16
15	15	63	30	24	23	36	392	12,800	204	21	15	15
16	15	53	115	24	23	127	725	8,100	308	21	15	14
17	16	48	90	19	23	74	133	4,900	308	20	15	12
18	18	50	371	19	23	48	67	5,060	356	21	15	14
19	18	54	498	19	23	63	53	5,670	942	21	15	14
20	18	33	204	19	23	65	34	3,420	1,390	21	15	14
21	18	33	97	19	18	50	31	2,780	1,730	21	16	14
22	15	34	61	18	45	83	24	3,160	2,160	15	17	14
23	15	28	54	16	42	158	21	3,930	3,460	17	16	14
24	15	31	42	16	40	71	23	4,310	4,060	17	19	13
25	15	31	41	24	35	44	23	3,630	3,250	16	29	14
26	15	20	29	24	35	33	25	2,400	1,330	14	20	15
27	15	18	35	21	22	31	42	1,550	600	17	25	16
28	15	21	38	19	20	25	35	1,090	324	17	25	14
29	41	32	31	19	------	23	51	733	204	17	20	18
30	41	30	29	19	------	23	45	473	133	14	20	24
31	146	------	29	24	------	23	------	261	------	14	19	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	146	12	20.9	1,290
November	97	14	35.5	2,110
December	498	15	68.2	4,190
January	29	16	21.7	1,330
February	45	18	26.8	1,490
March	158	14	38.8	2,390
April	816	11	91.3	5,430
May	13,600	39	3,020	186,000
June	4,060	115	820	48,800
July	91	14	31.3	1,920
August	193	14	26.9	1,660
September	24	12	16.2	964
The year	13,600	11	356	258,000

TRINITY RIVER AT DALLAS, TEX.

LOCATION.—Chain gage, installed July 21, at Millers Ferry Bridge, 6 miles below Commerce Street viaduct at Dallas, Dallas County. Zero of gage is 365.06 feet above mean sea level. Prior to July 21 a chain gage at the Commerce Street viaduct, with zero 368.05 feet above mean sea level, was used.

DRAINAGE AREA.—6,040 square miles.

RECORDS AVAILABLE.—October, 1898, to December, 1899; July, 1903, to December, 1906; October, 1920, to September, 1930.

EXTREMES.—Maximum discharge during year, 34,200 second-feet May 14 (gage height, 36.2 feet); minimum, 17 second-feet Oct. 23.

1898–99, 1903–1906, 1920–1930: Maximum discharge, 75,100 second-feet Apr. 27, 1922 (gage height, 42.35 feet at Commerce Street site); minimum, 6.8 second-feet Sept. 11, 1924 (gage height, 4.27 feet at Commerce Street).

Maximum stage known, 52.6 feet at Commerce Street site May 26, 1908. Practically no flow during parts of 1917 and 1918.

REMARKS.—Records fair. Discharge estimated June 1 to July 20. Discharge for Millers Ferry station slightly greater than at Commerce Street site. Only known diversions are for municipal uses. Low-water flow partly regulated by dams upstream. Gage-height record furnished by United States Weather Bureau prior to July 21, 1930.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	467	282	85	92	107	132	107	152			49	49
2	557	108	85	123	123	107	107	123			55	46
3	757	92	85	132	123	99	99	166			49	55
4	737	71	78	123	162	99	99	2,770			39	55
5	757	64	92	107	259	92	99	3,340			59	55
6	797	47	85	107	377	107	85	3,900			63	52
7	777	64	92	115	254	92	85	5,150			87	43
8	737	71	99	107	142	92	85	4,020			92	44
9	757	132	92	123	142	85	78	2,290			87	44
10	737	111	99	115	132	92	78	3,220			79	71
11	737	235	99	107	107	92	64	3,740		68	71	59
12	737	123	99	107	107	85	52	6,310			67	56
13	737	85	123	123	99	85	52	13,800			59	47
14	737	78	176	107	115	99	130	32,800			59	37
15	737	71	1,840	107	107	142	2,270	27,000			53	53
16	737	107	2,700	92	99	123	905	17,700	1,110		51	53
17	717	85	2,520	107	99	233	817	15,000			47	52
18	697	92	2,050	85	99	123	270	14,500			46	35
19	408	92	2,290	85	92	123	123	23,200			42	35
20	45	92	3,260	115	99	115	92	15,000			33	34
21	24	78	2,780	115	99	132	85	10,300		37	32	36
22	24	78	2,050	115	303	237	78	8,020		23	30	63
23	17	64	1,510	115	317	480	71	9,520		24	35	52
24	24	71	2,780	92	246	268	64	12,500		46	46	52
25	64	64	1,600	92	183	152	64	10,200		42	47	51
26	85	71	720	107	152	132	88	7,520		30	48	84
27	140	58	142	115	183	132	682	5,090		32	49	57
28	52	58	123	107	162	115	592	2,780		40	50	257
29	52	78	123	123	-------	115	287	1,460		49	50	126
30	199	92	115	107	-------	115	194	993		47	55	96
31	539	-------	92	107	-------	107	-------	949	-------	45	59	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	797	17	471	29,000
November	282	47	93.8	5,580
December	3,260	78	906	55,700
January	132	85	109	6,700
February	377	92	160	8,890
March	480	85	136	8,360
April	2,270	52	263	15,600
May	32,800	123	8,500	523,000
June	-------	-------	1,110	66,000
July	-------	-------	57.3	3,520
August	92	30	54.5	3,350
September	257	34	61.4	3,650
The year	32,800	17	1,010	729,000

TRINITY RIVER NEAR OAKWOOD, TEX.

LOCATION.—Chain gage on International-Great Northern Railroad bridge 4 miles northeast of Oakwood, Anderson County.

DRAINAGE AREA.—12,800 square miles.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 84,400 second-feet May 23 (gage height, 46.35 feet); minimum, 50 second-feet Sept. 25–27 (gage height, 3.4 feet).

1923–1930: Maximum discharge, that of May 23, 1930; minimum, probably less than 28 second-feet in August, 1925.

A stage of about 53.5 feet was recorded June 4, 1908.

REMARKS.—Monthly records fair. Daily-discharge record not sufficiently accurate for publication. No diversions above station except for municipal uses. Gage-height record furnished by United States Weather Bureau.

Monthly discharge, in second-feet, 1929-30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	866	86	597	36,700
November	4,940	198	1,290	76,800
December	20,800	280	4,300	264,000
January	2,200	582	1,120	68,900
February	17,600	708	5,180	288,000
March	6,900	542	1,980	122,000
April	6,300	447	1,200	71,400
May	81,000	2,270	36,600	2,250,000
June	30,600	1,040	5,610	334,000
July	1,880	54	335	20,600
August	120	54	74.0	4,550
September	70	50	62.8	3,740
The year	81,000	50	4,890	3,540,000

TRINITY RIVER AT RIVERSIDE, TEX.

LOCATION.—Chain gage on International-Great Northern Railroad bridge at Riverside, Walker County. Zero of gage is 93.7 feet above mean sea level.

DRAINAGE AREA.—15,500 square miles.

RECORDS AVAILABLE.—January, 1903, to December, 1906; October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 75,200 second-feet May 29 (gage height, 45.8 feet); minimum, 130 second-feet Aug. 9–14 (gage height, 0.40 foot).

1903–1906, 1923–1930: Maximum discharge, 76,100 second-feet June 1, 1929 (gage height, 46.10 feet); minimum, 70 second-feet Aug. 20–26 and Sept. 8–13, 1925 (gage height, 0.2 foot).

United States Weather Bureau records show a stage of 49.7 feet (present datum) June 11, 1908.

REMARKS.—Records fair. No diversions except for municipal uses. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	410	2,660	975	3,000	6,200	7,200	4,560	1,440	67,200	4,310	170	230
2	410	1,480	975	1,810	5,420	8,100	3,400	5,800	62,400	3,640	150	230
3	410	875	655	1,420	7,630	7,740	3,000	7,200	57,800	2,610	150	170
4	380	575	575	1,130	19,400	5,630	2,460	7,330	53,700	1,600	190	170
5	360	540	540	925	22,700	4,220	2,090	6,780	49,500	1,240	150	230
6	380	505	540	785	22,000	3,480	1,810	4,520	45,000	925	170	190
7	350	575	505	1,120	16,900	3,320	1,600	3,480	40,400	785	150	170
8	350	1,020	655	1,670	14,600	2,090	1,420	3,880	31,200	695	150	170
9	325	2,810	1,020	1,590	14,400	1,810	1,420	5,140	21,600	575	130	170
10	325	9,630	925	2,840	14,400	1,600	1,420	8,600	10,300	505	130	170
11	655	14,400	1,080	1,880	14,400	1,240	1,130	13,600	5,760	470	130	210
12	615	14,700	925	1,810	16,200	1,300	1,080	15,200	4,740	505	130	170
13	695	9,940	830	1,740	16,500	1,300	1,020	18,500	4,060	540	130	170
14	740	6,600	740	1,670	15,600	1,360	925	21,400	3,320	540	130	170
15	740	8,100	695	1,600	10,400	1,480	830	24,400	2,920	540	170	170
16	740	7,200	695	1,540	7,040	1,300	830	25,600	2,610	540	150	190
17	695	5,840	875	1,540	4,650	1,080	785	26,500	2,380	540	170	170
18	695	4,740	925	1,540	3,970	1,420	740	31,200	2,160	505	170	170
19	695	3,970	925	1,600	3,560	1,420	695	39,200	2,020	440	190	150
20	695	2,460	830	4,630	2,920	2,160	695	45,500	1,810	380	190	170
21	695	1,880	1,140	9,650	1,810	4,820	1,870	47,200	1,600	325	190	170
22	695	3,060	5,980	7,470	1,670	9,750	2,380	49,500	1,810	275	170	170
23	695	3,640	10,000	5,840	1,540	9,450	2,020	52,900	2,020	250	170	190
24	695	2,920	9,550	4,650	1,540	9,250	1,600	58,100	1,810	230	170	170
25	695	2,310	7,920	3,800	1,540	8,580	1,080	62,600	1,480	800	250	170
26	695	2,310	5,840	3,480	1,540	7,470	875	67,500	1,420	275	210	190
27	615	1,360	5,160	3,560	1,540	7,120	740	71,900	1,880	250	190	210
28	575	1,180	4,220	6,690	4,160	12,200	655	75,000	2,380	230	170	190
29	575	1,080	4,310	9,350	-------	11,300	575	75,200	2,920	210	250	210
30	440	975	4,560	8,010	-------	9,050	655	73,600	3,970	210	250	170
31	1,540	-------	3,880	7,120	-------	6,860	-------	71,000	-------	190	230	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,540	325	600	36,900
November	14,700	505	3,980	237,000
December	10,000	505	2,530	156,000
January	9,650	785	3,400	209,000
February	22,700	1,540	9,080	504,000
March	12,200	1,080	5,010	308,000
April	4,560	575	1,480	88,100
May	75,200	1,440	32,900	2,020,000
June	67,200	1,420	16,400	976,000
July	4,310	190	795	48,900
August	250	130	173	10,600
September	230	150	183	10,900
The year	75,200	130	6,370	4,610,000

TRINITY RIVER AT ROMAYOR, TEX.

LOCATION.—Chain gage on Gulf, Colorado & Santa Fe Railway bridge one-fourth mile west of Romayor, Liberty County. Gage readings indicate distance from base of rail to water surface. Zero of gage (base of rail) is 89.00 feet above mean sea level.

DRAINAGE AREA.—17,200 square miles.

RECORDS AVAILABLE.—May, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 59,400 second-feet June 2 (gage height, −18.85 feet); minimum, 245 second-feet Sept. 22–24 (gage height, −51.40 feet).

1924–1930: Maximum discharge, 81,100 second-feet May 31, 1929 (gage height, −16.3 feet); minimum, 132 second-feet Aug. 21, 22, 1925 (gage height, −53.46 feet).

REMARKS.—Records fair. No diversions of importance above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	670	1,700	1,760	3,830	11,900	7,940	10,000	1,180	57,700	4,010	495	390
2	670	1,700	1,650	3,740	9,420	9,300	6,620	1,140	57,700	5,300	495	390
3	635	2,110	1,550	3,650	8,180	10,900	4,670	2,400	57,700	4,100	495	390
4	635	2,110	1,400	3,560	18,900	10,200	3,740	6,020	55,000	3,390	460	390
5	635	1,550	1,270	2,840	25,600	7,700	2,910	7,340	52,300	2,560	360	390
6	635	1,090	1,270	1,930	26,600	6,400	2,910	7,100	49,900	2,110	330	390
7	530	1,040	1,270	1,760	26,200	4,880	2,490	5,740	48,800	1,760	330	390
8	530	1,000	1,180	2,120	23,600	3,920	2,110	3,740	46,700	1,450	330	390
9	530	1,000	1,090	8,170	19,400	3,470	1,990	3,740	42,200	1,270	330	390
10	530	2,300	1,090	9,300	17,100	3,070	1,870	3,740	39,200	1,140	300	390
11	530	3,960	1,040	8,420	16,700	2,490	1,870	6,440	27,200	1,040	300	460
12	530	12,900	1,220	7,460	16,700	2,110	1,870	10,300	17,600	955	300	635
13	750	19,500	1,320	6,740	17,500	2,050	1,650	14,400	9,630	910	270	635
14	750	18,000	1,320	5,410	17,500	1,990	1,450	16,700	5,410	910	270	425
15	710	12,400	1,320	4,980	16,700	1,870	1,400	18,600	4,780	910	270	360
16	710	10,400	1,270	4,670	16,000	1,870	1,360	21,700	5,090	955	270	300
17	710	9,180	1,220	3,830	15,000	1,760	1,270	23,800	5,300	1,040	270	300
18	710	7,940	1,220	3,310	8,180	1,700	1,270	24,400	5,300	1,040	270	360
19	710	5,960	1,500	2,840	7,100	2,110	1,270	26,900	3,650	955	270	300
20	710	4,880	1,600	2,560	4,980	2,560	1,180	28,800	2,990	830	270	300
21	710	3,920	1,700	4,280	4,280	2,770	1,180	31,500	2,770	750	270	270
22	710	3,310	1,700	13,400	3,740	2,920	1,180	36,600	2,700	670	270	245
23	910	2,990	2,560	11,900	2,700	11,500	1,450	38,500	2,560	635	270	245
24	1,000	2,910	3,650	9,300	2,490	15,000	1,760	39,200	2,490	635	285	245
25	1,000	3,150	5,960	7,580	2,420	12,300	1,650	40,600	2,420	635	300	270
26	1,000	3,650	8,550	5,630	2,360	9,180	1,550	43,000	2,360	600	330	300
27	1,000	3,310	9,050	4,670	2,360	9,420	1,450	44,700	2,300	495	390	390
28	1,000	3,070	6,620	6,620	4,780	10,300	1,450	47,800	2,300	495	425	425
29	1,000	3,070	5,410	11,400	-------	16,700	1,270	49,900	2,560	495	425	390
30	1,000	2,490	4,670	16,100	-------	15,300	1,180	53,700	2,910	495	425	330
31	1,320	-------	4,010	13,400	-------	12,800	-------	56,400	-------	495	390	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,320	530	757	46,500
November	19,500	1,000	5,090	303,000
December	9,050	1,040	2,590	159,000
January	16,100	1,760	6,300	387,000
February	26,600	2,360	12,400	689,000
March	16,700	1,700	6,660	410,000
April	10,000	1,180	2,270	135,000
May	56,400	1,140	23,100	1,420,000
June	57,700	2,300	20,600	1,230,000
July	5,300	495	1,390	85,500
August	495	270	338	20,800
September	635	245	368	21,900
The year	57,700	245	6,780	4,910,000

CLEAR FORK OF TRINITY RIVER AT FORT WORTH, TEX.

LOCATION.—Water-stage recorder on old masonry pier 300 feet downstream from Texas & Pacific Railway bridge and 3 miles southwest of Tarrant County courthouse in Fort Worth. Zero of gage is 532.8 feet (revised) above mean sea level.

DRAINAGE AREA.—522 square miles.

RECORDS AVAILABLE.—March, 1924, to September, 1930.

EXTREMES.—Maximum gage height during year, 17.45 feet May 13 (discharge not determined); no flow during several periods.

1924–1930: Maximum gage height, 19.23 feet Apr. 3, 1928 (discharge not determined); no flow for several periods.

REMARKS.—Records for low stages good and for high stages poor. Discharge partly estimated Feb. 22–24. Practically entire low-water flow diverted 800 feet below gage by Texas & Pacific Railway; amount not known. Low flow regulated by dam just above gage.

Daily and monthly discharge, in second-feet, 1929–30

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	1.5	0.7	1.0	2.2	0.2	25	1.5
2	0	1.0	.7	1.0	3.2	.3	22	1.0
3	0	1.0	.7	.7	2.2	2.8	19	.7
4	0	.7	.3	1.0	3.2	99	22	.5
5	0	1.0	.5	1.5	1.5	57	16	.1
6	0	1.0	.7	1.5	1.5	123	59	0
7	0	.5	1.0	1.0	1.5	53	71	0
8	0	0	.7	1.5	1.0	66	25	0
9	0	0	1.5	1.0	1.5	14	14	0
10	0	0	1.5	.7	1.0	11	9.0	0
11	0	0	1.5	1.5	1.5	142	7.8	0
12	0	.3	1.5	1.0	1.0	125	5.4	0
13	0	.3	1.5	1.5	1.0	9,780	5.4	0
14	18	.3	1.0	.7	.7	1,890	6.6	0
15	83	.7	1.0	26	5.7	194	25	0
16	12	1.0	1.5	12	1.5	125	114	0
17	6.6	.2	1.5	5.4	.7	96	33	0
18	2.2	1.0	2.2	11	.7	558	16	0
19	1.5	1.0	1.0	7.8	.7	219	9.0	0
20	1.5	0	0	7.8	1.5	89	4.2	0
21	1.5	0	0	21	1.0	63	2.2	0
22	1.5	.7	.7	22	.7	50	1.5	0
23	1.0	1.0	2.0	10	.7	383	1.5	0
24	3.2	.7	3.2	6.6	.7	362	2.2	0
25	.5	1.5	2.2	5.4	1.0	92	2.2	0
26	.4	.5	1.0	2.2	.7	56	2.2	0
27	0	.3	1.0	5.4	.7	44	2.2	0
28	3.0	.3	1.0	4.2	.3	39	2.2	0
29	1.0	.3	----------	3.2	0	33	1.5	0
30	1.5	.5	----------	2.2	.2	30	1.5	0
31	1.5	.7	----------	2.2	----------	25	----------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	83	0	4.51	277
January	1.5	0	.58	36
February	3.2	0	1.15	64
March	26	.7	5.48	337
April	5.7	0	1.33	79
May	9,780	.2	478	29,400
June	114	1.5	17.6	1,050
July	1.5	0	.12	7.4
The period	9,780	0	43.2	31,200

NOTE.—No flow during months for which no discharge is shown

VILLAGE CREEK NEAR HANDLEY, TEX.

LOCATION.—Staff gage at Fort Worth-Webb road crossing 3½ miles south of Handley, Tarrant County.
DRAINAGE AREA.—130 square miles.
RECORDS AVAILABLE.—June, 1925, to March, 1930 (discontinued).
EXTREMES.—Maximum discharge during year, 327 second-feet Feb. 22 (gage height, 3.73 feet); no flow during several periods.
1925–1930: Maximum stage, 17.90 feet Dec. 17, 1928 (discharge not determined); no flow during several periods.
REMARKS.—Monthly records fair. Daily-discharge record not sufficiently accurate for publication. No diversions above station.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	29	0	1.24	76
November	3.6	0	.14	8.3
December	7.5	0	1.26	77
January	1.6	.4	.85	52
February	176	.1	8.51	473
March 1-6	.8	.6	.68	8.1
The period				694

MOUNTAIN CREEK NEAR GRAND PRAIRIE, TEX.

LOCATION.—Water-stage recorder at Grand Prairie-Duncanville highway bridge 3¼ miles southeast of Grand Prairie, Dallas County.
DRAINAGE AREA.—267 square miles.
RECORDS AVAILABLE.—March, 1925, to September, 1930.
EXTREMES.—Maximum discharge during year, about 18,800 second-feet May 13 (gage height, 20.41 feet); no flow during several periods.
1925–1930: Maximum discharge (determined by slope-area method), 35,900 second-feet, of which 2,680 second-feet was flowing through break in levee half a mile above gage, Dec. 17, 1928 (gage height, 21.41 feet); no flow during several periods.
REMARKS.—Monthly records fair. Daily-discharge record not sufficiently accurate for publication.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	356	0	19.3	1,190
November	191	.1	11.6	690
December	153	.2	7.77	478
January	5.2	.7	1.96	120
February	141	1.1	17.7	983
March	345	.8	25.2	1,550
April	513	.3	65.2	3,880
May	10,200		906	55,700
June	564	.5	28.7	1,710
July	.4	0	.03	1.8
August	9.2	0	.34	21
September	30	0	2.09	124
The year	10,200	0	91.8	66,400

ELM FORK OF TRINITY RIVER NEAR CARROLLTON, TEX.

LOCATION.—Staff gage just above Carrollton Dam, 40 feet below Dallas-Denton highway bridge and 1½ miles west of Carrollton, Dallas County.

DRAINAGE AREA.—2,540 square miles.

RECORDS AVAILABLE.—November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 10,100 second-feet May 14 (gage height, 7.20 feet); minimum not determined.

1923–1930: Maximum gage height, 12.75 feet Dec. 14, 1923 (discharge not determined); no flow during several periods.

REMARKS.—Records fair. Discharge estimated Aug. 6, 7. No diversions. Garza Dam, 20 miles upstream, regulates flow at low stages and partly regulates flow at high stages.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	90	82	76	82	96	79	49	259	23	79	40
2	678	72	82	76	82	86	79	49	245	43	79	40
3	678	72	82	76	86	82	79	52	277	34	72	40
4	678	68	86	76	90	82	79	956	377	19	25	40
5	678	68	86	82	177	82	76	2,880	447	19	1.1	37
6	678	68	90	82	264	65	68	2,740	476	21	145	37
7	678	72	90	82	133	55	68	2,740	418	148		37
8	678	72	90	82	96	58	68	1,830	346	15	178	37
9	678	93	90	82	90	68	68	800	303	12	161	37
10	678	125	90	79	90	62	62	1,170	236	58	153	37
11	678	90	90	82	90	65	49	3,930	96	65	153	37
12	678	96	93	90	82	65	46	2,480	82	65	30	37
13	678	76	93	90	82	62	43	6,490	62	65	23	37
14	678	76	509	86	82	62	278	8,100	62	65	32	37
15	678	76	2,610	82	82	82	320	1,840	127	72	32	37
16	678	76	2,350	82	82	79	133	5,510	713	72	34	37
17	678	76	2,220	79	79	76	90	5,350	293	65	32	40
18	678	82	1,580	68	76	82	62	5,100	208	65	32	40
19	136	82	2,870	72	76	79	49	4,940	133	137	37	40
20	17	82	2,870	76	76	76	49	3,820	96	82	37	40
21	12	82	2,480	72	76	82	43	3,680	79	82	43	40
22	12	82	635	68	129	90	43	3,400	62	82	40	43
23	12	82	2,610	76	100	76	43	4,300	34	86	43	43
24	76	82	2,870	79	96	76	43	3,680	25	100	43	96
25	76	82	392	79	100	76	43	3,260	23	100	46	51
26	76	82	86	79	104	79	49	2,350	19	100	43	30
27	58	79	82	79	141	82	361	1,580	19	100	43	27
28	43	79	79	82	110	82	52	296	19	100	37	15
29	68	82	76	82	------	82	62	174	30	100	37	27
30	104	82	76	82	------	82	55	277	27	100	37	23
31	96	------	76	82	------	76	------	298	------	104	37	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	678	12	411	25,300
November	125	68	80.9	4,810
December	2,870	76	826	50,800
January	90	68	79.4	4,880
February	264	76	102	5,660
March	96	55	75.7	4,650
April	361	43	88.0	5,240
May	8,100	49	2,710	167,000
June	713	19	186	11,100
July	148	12	70.9	4,360
August	------	------	62.2	3,820
September	96	15	38.6	2,300
The year	8,100	------	400	290,000

EAST FORK OF TRINITY RIVER NEAR ROCKWALL, TEX.

LOCATION.—Chain gage on Dallas-Rockwall highway bridge 3 miles southwest of Rockwall, Rockwall County.

DRAINAGE AREA.—831 square miles.

RECORDS AVAILABLE.—November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 6,030 second-feet, May 20 (gage height, 15.04 feet); no flow Oct. 1–30, July 24 to Sept. 30.

1923–1930: Maximum discharge, 23,000 second-feet July 14, 1926, May 14, 1929; maximum gage height, 19.4 feet May 14, 1929; no flow during several periods.

Maximum stage known, about 25 feet in spring of 1922.

REMARKS.—Records good. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	377	5.2	13	27	54	19	335	108	1.6
2	0	95	5.2	12	29	43	19	110	97	1.6
3	0	45	5.2	12	37	37	18	67	86	1.6
4	0	21	5.2	11	77	33	17	827	138	103
5	0	9.8	4.0	11	132	31	17	1,310	77	51
6	0	5.2	4.0	11	177	29	16	1,950	72	12
7	0	5.0	4.0	9.8	102	29	15	3,140	67	104
8	0	3.2	3.0	9.2	67	29	13	2,400	67	249
9	0	2.1	3.0	9.2	54	29	11	3,740	62	76
10	0	39	3.0	9.2	47	26	8.9	2,450	51	35
11	0	45	3.0	12	41	23	8.1	1,170	47	16
12	0	51	5.2	14	37	21	8.1	1,410	43	7.8
13	0	37	5.2	14	33	22	7.5	4,100	39	3.6
14	0	23	5.2	15	33	23	7.0	3,980	37	1.7
15	0	16	5.7	17	31	23	7.0	4,180	33	.8
16	0	12	82	17	29	24	9.8	3,880	51	.5
17	0	8.6	132	18	29	29	12	2,030	82	.3
18	0	6.4	102	17	26	35	25	3,150	54	.2
19	0	5.2	72	12	24	33	21	5,070	39	.1
20	0	4.0	37	9.2	24	33	17	5,530	29	0
21	0	2.5	27	9.2	24	37	12	2,380	23	0
22	0	4.5	17	8.6	65	58	7.5	504	18	0
23	0	5.4	15	8.6	132	47	5.0	980	14	0
24	0	5.2	15	6.4	132	43	3.2	1,020	12	0
25	0	4.5	15	7.2	97	35	2.5	614	9.5	0
26	0	4.5	15	8.1	102	33	2.1	244	8.1	0
27	0	5.9	15	12	72	33	168	184	6.2	0
28	0	6.4	14	16	77	29	1,010	156	5.0	0
29	0	6.4	14	23	-------	23	2,550	144	3.6	0
30	0	5.2	13	29	-------	21	1,690	132	2.1	0
31	207	-------	13	27	-------	20	-------	120	-------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	207	0	6.68	411
November	377	2.1	28.7	1,710
December	132	3.0	21.4	1,320
January	29	6.4	13.2	812
February	177	24	62.8	3,490
March	58	20	31.8	1,960
April	2,550	2.1	191	11,400
May	5,530	67	1,850	114,000
June	138	2.1	46.0	2,740
July	249	0	21.5	1,320
The year	5,530	0	192	139,000

NOTE.—No flow during months for which no discharge is shown.

SAN JACINTO RIVER BASIN

SAN JACINTO RIVER NEAR HUMBLE, TEX.

LOCATION.—Chain gage at bridge crossing on State highway 35, about 900 feet below Houston East & West Texas Railway bridge and 2½ miles north of Humble, Harris County.

DRAINAGE AREA.—1,810 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 11,700 second-feet Feb. 5 (gage height, 12.10 feet); minimum, 25 second-feet July 30 (gage height, 0.86 foot).

1928–1930: Maximum discharge, about 111,000 second-feet May 31, 1929 (gage height, 32.25 feet); minimum, that of July 30, 1930.

A stage of about 35 feet was reached in 1920.

REMARKS.—Records good except those for estimated periods, Dec. 18–21, May 4–11, July 1–5, which are poor. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	266	730	461	5,950	3,280	1,970	142	222		44	44
2	49	403	618	461	5,170	2,950	1,330	152	173		46	40
3	47	338	536	416	4,290	2,410	910	152	152	60	36	40
4	47	266	438	375	6,160	1,890	673		136		46	41
5	47	204	416	337	10,700	1,250	590		136		50	37
6	45	191	395	337	8,720	1,180	486		129	60	39	37
7	45	154	375	375	7,780	850	396		125	55	36	35
8	45	178	375	618	6,340	730	337	400	118	50	36	35
9	45	178	356	1,250	4,370	730	283		110	48	42	35
10	45	271	356	1,890	2,590	673	266		107	48	40	38
11	45	2,460	337	1,890	2,050	646	250		100	47	37	40
12	45	5,760	337	1,890	1,570	461	235	2,770	97	46	37	40
13	45	3,940	337	1,650	1,410	461	222	1,890	105	44	35	40
14	45	3,830	337	1,570	1,180	510	208	2,680	99	44	33	40
15	45	3,720	337	1,250	1,110	536	196	3,610	99	43	31	43
16	45	2,770	356	975	1,110	536	196	3,830	102	41	28	40
17	45	1,890	375	910	1,040	510	184	3,060	95	41	28	40
18	45	1,250		850	975	461	184	2,770	95	39	32	50
19	47	975		760	910	461	184	2,230	99	39	52	46
20	45	673	400	730	850	510	173	2,050	99	39	28	40
21	45	618		1,410	850	850	162	1,490	99	41	32	40
22	45	536	536	2,050	790	1,250	162	1,180	81	43	28	40
23	45	730	618	3,170	790	1,570	152	910	78	41	28	40
24	45	850	760	3,830	790	2,410	152	1,180	79	39	26	40
25	42	790	850	3,830	760	2,950	142	760	68	40	39	42
26	42	850	850	3,500	760	2,320	142	760	68	40	43	83
27	42	850	1,040	2,950	760	2,050	142	850	68	40	49	60
28	42	850	975	1,810	1,610	1,490	142	760	66	27	56	57
29	60	850	850	3,680	-------	1,250	142	730	61	34	50	57
30	63	790	618	5,430	-------	1,656	142	356	61	25	44	60
31	98	-------	618	6,340	-------	1,810	-------	222	-------	40	46	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	98	42	48.0	2,950
November	5,760	154	1,250	74,400
December	1,040	----------	527	32,400
January	6,340	337	1,840	113,000
February	10,700	760	2,910	162,000
March	3,280	461	1,310	80,600
April	1,970	142	358	21,300
May	3,830	----------	1,220	75,000
June	222	61	104	6,190
July	----------	25	45.0	2,770
August	56	26	38.6	2,370
September	83	35	44.0	2,620
The year	10,700	25	794	576,000

BRAZOS RIVER BASIN

DOUBLE MOUNTAIN FORK OF BRAZOS RIVER NEAR ASPERMONT, TEX.

LOCATION.—Chain gage on Aspermont-Hamlin highway bridge in southeast corner of sec. 134, 11 miles south of Aspermont, Stonewall County.

DRAINAGE AREA.—7,980 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—December, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, about 37,200 second-feet May 13 (gage height, 16.00 feet); no flow during several periods.

1923–1930: Maximum discharge (determined by slope-area method), about 45,800 second-feet Oct. 15, 1926 (gage height, 18.14 feet); no flow during several periods.

REMARKS.—Monthly records fair. Records of daily discharge not sufficiently accurate for publication. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	110	0.5	14.6	898
November	2.4	.1	.87	52
December	.2	0	.07	4.3
January	.4	0	.03	1.8
February	.4	0	.05	2.8
March	.9	0	.07	4.3
April	9,630	0	470	28,000
May	22,800	28	1,580	97,200
June	3,020	22	324	19,300
July	48	0	9.01	554
August	17	0	1.81	111
September	2,190	0	100	5,950
The year	22,800	0	210	152,000

BRAZOS RIVER AT SEYMOUR, TEX.

LOCATION.—Chain gage at Wichita Valley highway bridge, three-fourths mile above Wichita Valley Railroad bridge and 1 mile southwest of courthouse in Seymour, Baylor County.

DRAINAGE AREA.—14,500 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 79,600 second-feet June 14 (gage height, 13.00 feet); no flow during several periods.

1923–1930: Maximum discharge, that of June 14, 1930; no flow during several periods each year.

Maximum stage known, about 20.0 feet during 1916.

REMARKS.—Daily discharge not sufficiently accurate for publication; monthly records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	819	3.2	135	8,300
November	120	.9	24.3	1,450
December	3.4	0	2.05	126
January	43	0	3.31	204
February	82	0	6.20	344
March	7.6	0	1.81	111
April	41,900	0	2,150	128,000
May	21,100	56	3,040	187,000
June	39,100	12	1,790	107,000
July	166	0	13.1	806
August	263	0	23.7	1,460
September	2,910	0	194	11,500
The year	41,900	0	616	446.000

BRAZOS RIVER NEAR MINERAL WELLS, TEX.

LOCATION.—Chain gage on Mineral Wells-Palo Pinto highway bridge 4 miles west of Mineral Wells, Palo Pinto County.

DRAINAGE AREA.—23,100 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—January, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 95,600 second-feet June 16 (gage height, 28.43 feet); no flow Apr. 20–29.

1924–1930: Maximum discharge, that of June 16, 1930; no flow for several periods.

REMARKS.—Records fair. No diversions of consequence above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	191	140	38	18	18	45	18	17,200	470	97	32	270
2	169	129	37	16	17	31	14	10,500	370	88	30	208
3	144	115	38	16	16	24	11	7,600	382	80	27	158
4	115	109	35	14	14	20	11	6,220	270	75	25	122
5	100	129	34	14	14	15	10	13,300	230	78	29	100
6	84	155	34	13	14	13	9.5	8,300	302	103	34	80
7	76	140	33	12	13	12	9.0	6,920	382	1,360	32	72
8	71	137	33	12	13	10	8.2	5,190	324	2,280	29	68
9	61	155	33	11	13	9.0	7.0	2,920	855	1,230	27	55
10	49	177	31	14	16	7.0	5.8	2,440	421	990	25	51
11	40	186	31	18	41	6.0	4.7	2,260	302	542	25	250
12	33	173	33	20	35	5.2	4.0	3,120	250	324	23	280
13	553	177	33	19	31	4.8	3.4	39,500	312	285	23	3,950
14	758	215	53	18	28	4.6	2.8	47,300	275	428	21	5,500
15	4,260	195	225	16	26	4.6	3.0	42,600	50,500	470	18	3,390
16	4,400	182	245	16	24	4.8	3.2	17,600	73,000	364	16	1,530
17	1,840	173	155	18	22	5.5	2.4	12,600	18,500	270	15	900
18	3,120	164	137	22	19	5.8	1.7	12,200	14,900	222	13	598
19	1,910	151	115	22	18	6.0	1.0	8,830	10,800	194	12	442
20	1,180	103	68	20	16	6.2	0	5,180	3,800	174	12	329
21	850	59	43	20	15	6.2	0	2,460	2,240	[a]146	10	270
22	626	74	38	22	14	8.8	0	2,710	1,690	126	9.0	212
23	507	66	35	20	14	10	0	5,750	1,230	106	9.0	162
24	440	49	34	18	13	10	0	9,650	945	91	13	162
25	398	41	31	18	16	9.0	0	3,680	765	80	30	150
26	344	40	27	17	39	20	0	2,240	675	70	80	126
27	294	38	25	16	129	26	0	2,240	598	60	421	97
28	306	45	22	18	68	20	0	1,800	494	53	558	75
29	319	41	21	19	-------	22	0	1,080	414	47	945	65
30	220	41	19	18	-------	19	30,400	765	256	42	510	60
31	169	-------	18	18	-------	18	----------	590	--------	38	376	------

[a] Also Aug. 1.

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,400	33	762	46,900
November	215	38	120	7,140
December	245	18	56.6	3,480
January	22	11	17.2	1,060
February	129	13	25.6	1,420
March	45	4.6	13.2	812
April	30,400	0	1,020	60,700
May	47,300	590	9,830	604,000
June	73,000	----------	6,200	369,000
July	2,280	38	339	20,800
August	945	9.0	111	6,820
September	5,500	51	658	39,200
The year	73,000	0	1,600	1,160,000

BRAZOS RIVER NEAR GLEN ROSE, TEX.

LOCATION.—Staff gage one-fourth mile above Glen Rose-Cleburn highway bridge and 4 miles northeast of Glen Rose, Somervell County.

DRAINAGE AREA.—24,800 square miles, a large part of which is probably non-contributing.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 68,300 second-feet June 17 (gage height, 19.60 feet); minimum, 1.5 second-feet Apr. 25, 26 (gage height, —0.26 foot).

1923–1930: Maximum discharge, that of June 17, 1930; no flow Sept. 7–9, 1924.

REMARKS.—Records fair. No diversions above station. Discharge estimated Apr. 7–15 and interpolated Apr. 21, 22.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	677	466	78	66	44	37	18	25,300	1,360	644	60	666
2	568	334	78	60	63	48	17	17,900	1,360	579	44	600
3	446	262	78	57	83	60	16	9,530	1,300	568	37	437
4	382	222	72	44	93	57	14	9,230	1,300	558	29	382
5	342	210	72	41	83	54	12	7,430	1,240	526	25	334
6	283	184	75	41	72	51	11	7,130	1,240	466	39	334
7	255	156	75	37	54	48		5,630	1,060	446	24	318
8	229	150	69	37	46	51		4,300	655	427	25	318
9	190	222	69	35	44	46		3,250	622	427	22	311
10	167	248	63	34	43	39		2,550	476	1,710	24	304
11	145	248	60	37	39	34	6.0	1,960	548	3,060	24	276
12	134	446	57	41	34	32		1,820	506	2,400	24	537
13	118	342	63	43	30	30		18,300	848	906	22	600
14	113	276	63	41	29	29		40,000	894	733	24	757
15	103	262	63	41	30	27		45,900	882	699	30	6,520
16	984	229	156	43	29	32	24	42,500	36,900	871	29	6,530
17	3,230	184	446	37	25	35	20	15,800	63,100	848	27	5,050
18	3,440	262	408	34	26	43	14	12,300	25,800	802	29	2,880
19	2,100	269	248	32	27	51	12	9,840	17,100	655	32	1,820
20	3,640	210	167	34	29	57	12	6,230	7,100	456	30	1,180
21	3,250	210	156	34	30	63	9.3	2,880	2,550	262	29	744
22	2,240	197	150	37	32	54	6.7	1,690	2,400	150	30	622
23	1,620	184	128	39	34	46	4.1	1,690	2,400	128	32	466
24	1,240	150	118	41	32	43	2.3	1,620	2,400	167	35	446
25	1,060	139	98	41	30	35	1.5	4,060	2,240	162	207	446
26	940	134	88	43	30	32	1.5	4,070	1,690	150	262	437
27	860	128	78	41	34	30	1.6	3,440	1,000	150	276	427
28	906	108	75	41	37	32	4.1	2,710	744	150	664	408
29	644	108	72	43	-------	32	10	2,400	688	98	495	398
30	600	98	66	41	-------	30	16	2,100	666	66	398	390
31	710	-------	66	41	-------	29	-------	1,360	-------	44	456	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,640	103	1,030	63,300
November	466	98	221	13,200
December	446	57	115	7,070
January	66	32	41.2	2,530
February	93	25	42.2	2,340
March	63	27	41.5	2,550
April	24	1.5	9.37	558
May	45,900	1,360	10,200	627,000
June	63,100	476	6,040	359,000
July	3,060	44	623	38,300
August	664	22	112	6,890
September	6,530	276	1,160	69,000
The year	63,100	1.5	1,640	1,190,000

BRAZOS RIVER AT WACO, TEX.

LOCATION.—Water-stage recorder at Texas Electric Co.'s bridge in Waco, McLennan County. Zero of gage is 356.99 feet above mean sea level.

DRAINAGE AREA.—28,500 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—September, 1898, to December, 1911; October, 1914, to September, 1930.

EXTREMES.—Maximum discharge during year, 74,800 second-feet May 18 (gage height, 28.90 feet); minimum, 25 second-feet Aug. 21.

1898–1930: Maximum gage height, 39.7 feet Dec. 3, 1913 (discharge not determined); no flow Aug. 20–21, 1918, and probably for several days in August, 1923.

REMARKS.—Records poor. Numerous small diversions above station do not appreciably affect flow except during low stages.

Daily and monthly discharge, in second-feet, 1929–30

Date	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e 902	e 828	274	e 154	129	213	e 171	2,630	e 2,700	e 1,240	147	418
2	e 760	e 670	274	139	163	210	e 179	17,200	e 2,140	e 1,070	138	286
3	e 598	e 536	270	129	479	207	e 152	7,450	e 1,770	e 976	209	290
4	e 425	e 420	e 250	124	3,410	195	e 144	9,890	e 1,370	e 840	233	554
5	e 371	e 344	e 213	119	3,310	190	e 124	16,000	e 1,250	e 690	177	488
6	e 288	e 340	e 213	117	e 832	184	e 124	11,300	e 1,180	e 690	141	375
7	e 246	e 340	e 213	115	e 497	168	e 117	17,200	e 1,180	e 655	169	308
8	e 216	e 380	e 213	115	e 416	154	e 102	6,840	e 1,140	e 620	132	254
9	e 184	e 450	e 210	115	e 380	e 136	e 95	6,470	e 952	e 840	169	271
10	e 149	e 948	e 210	110	e 366	e 124	e 82	9,310	e 880	e 1,000	128	2,600
11	e 113	e 663	e 210	106	e 358	e 108	e 82	7,520	e 1,980	e 560	98	656
12	e 95	e 486	e 225	115	335	e 95	e 82	4,760	e 802	1,620	80	1,370
13	e 84	e 460	e 207	117	311	89	e 73	11,700	e 698	1,870	72	483
14	e 71	e 412	e 207	119	284	87	e 73	31,000	e 2,990	1,240	108	263
15	e 58	e 371	e 198	117	281	86	e 73	48,300	e 1,370	1,050	105	1,090
16	e 58	e 362	e 192	115	274	86	e 189	41,400	e 9,400	780	90	1,290
17	e 58	e 327	556	108	267	84	855	30,400	38,200	578	75	5,240
18	66	e 327	348	106	256	84	e 324	43,300	42,600	464	58	3,780
19	3,290	e 327	335	106	246	86	e 184	41,600	18,900	407	50	2,860
20	2,470	e 307	394	113	236	86	e 152	17,700	14,000	365	36	2,040
21	1,770	331	344	136	225	185	e 127	9,860	7,000	429	28	e 1,320
22	2,880	358	307	139	219	1,900	e 99	8,440	6,600	458	34	e 944
23	e 2,170	327	303	157	213	1,580	e 80	11,800	4,920	385	65	e 712
24	e 1,370	311	295	129	207	488	76	8,440	3,900	340	96	e 669
25	e 1,240	299	284	124	201	e 267	56	8,440	3,190	308	253	e 578
26	e 1,100	284	e 264	129	198	e 213	58	11,400	2,700	276	92	e 548
27	e 1,050	281	e 250	144	204	e 195	3,720	7,800	e 2,140	241	1,050	e 488
28	e 932	281	e 228	144	213	e 219	3,520	5,560	e 1,980	209	784	452
29	e 850	281	e 210	136	-------	e 232	e 1,020	e 4,180	e 1,720	185	533	627
30	e 790	281	e 195	124	-------	e 204	e 1,170	e 3,300	e 1,370	169	1,250	470
31	e 790	-------	e 173	122	-------	e 184	-------	e 3,080	-------	156	695	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,290	58	821	50,500
November	948	281	411	24,500
December	556	173	260	16,000
January	157	106	124	7,620
February	3,410	129	518	28,800
March	1,900	84	269	16,500
April	3,720	56	443	26,400
May	48,300	2,630	15,000	922,000
June	42,600	698	6,030	359,000
July	1,870	156	668	41,100
August	1,250	28	235	14,400
September	5,240	254	1,060	63,100
The year	48,300	28	2,170	1,570,000

e Partly estimated.

BRAZOS RIVER NEAR BRYAN, TEX.

LOCATION.—Chain gage at Pitts Bridge, on State highway between Bryan and Caldwell, 9 miles southwest of Bryan, Brazos County.

DRAINAGE AREA.—38,400 square miles, part of which is noncontributing.

RECORDS AVAILABLE.—September, 1925, to September, 1930. February, 1918, to September, 1925, comparable record at site 7.5 miles downstream.

EXTREMES.—Maximum gage height during year, 47.1 feet May 20 (discharge not determined); minimum discharge, 100 second-feet Apr. 27, 28.

1925–1930: Maximum stage, that of May 20, 1930; minimum discharge, that of Apr. 27, 28, 1930.

Maximum stage known, about 55.00 feet, present datum, in December, 1913.

REMARKS.—Monthly records poor. Daily discharge not sufficiently accurate for publication. Discharge estimated May 10 to July 11. Numerous small diversions above gage do not appreciably affect flow except during low stages.

Monthly discharge, in second-feet, 1929-30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,260	315	1,330	81,800
November	11,100	635	2,180	130,000
December	600	295	419	25,800
January	928	219	378	23,200
February	5,650	376	1,620	90,000
March	4,510	147	1,280	78,700
April	4,470	101	510	30,300
May	----------	2,540	37,600	2,310,000
June	----------	----------	7,140	425,000
July	----------	530	1,480	91,000
August	1,040	228	400	24,600
September	3,020	460	1,200	71,400
The year	----------	101	4,670	3,380,000

BRAZOS RIVER AT ROSENBERG, TEX.

LOCATION.—Chain gage on Rosenberg-Richmond highway bridge at Rosenberg, Fort Bend County.

DRAINAGE AREA.—44,000 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1930.

EXTREMES.—Maximum discharge during year, 78,800 second-feet May 23 (gage height, 36.8 feet); minimum, 707 second-feet Aug. 25 and 26 (gage height, 0.9 foot).

1922–1930: Maximum discharge, 123,000 second-feet June 6, 1929 (gage height, 46.2 feet); minimum, 250 second-feet Sept. 2, 1929 (gage height, 0.2 foot).

The flood of Dec. 9, 1913, reached a stage of 55.5 feet.

REMARKS.—Records fair. No diversions. Gage-height record furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,820	1,730	2,400	1,580	9,260	3,360	7,540	1,230	16,900	4,190	1,120	1,230
2	2,600	1,670	2,250	1,170	8,380	3,120	6,870	2,830	14,600	3,960	1,060	1,400
3	1,750	2,000	1,970	1,290	12,400	4,410	6,230	3,450	12,200	3,640	1,060	1,460
4	1,030	2,520	1,770	1,290	18,100	3,960	5,080	5,990	10,700	3,200	1,060	1,460
5	1,540	2,600	1,580	1,170	16,900	4,080	4,300	9,710	9,710	3,200	1,060	1,460
6	1,730	1,670	1,520	1,120	15,800	3,640	3,850	11,500	7,820	2,900	1,020	1,400
7	1,360	1,670	1,460	1,120	14,400	3,280	3,280	14,000	7,540	2,470	1,020	1,340
8	1,310	1,800	1,170	1,120	13,900	3,120	2,760	19,700	6,600	2,470	1,020	1,230
9	1,540	8,130	1,120	1,340	11,900	2,900	2,470	22,100	5,310	2,180	1,020	1,170
10	1,800	34,600	1,060	1,710	9,710	2,830	2,110	27,000	4,300	2,040	1,020	1,060
11	1,420	46,200	1,060	1,580	8,380	2,760	1,970	37,800	4,300	1,970	1,020	1,020
12	1,080	33,200	1,120	1,400	8,100	2,610	1,710	55,600	4,080	1,910	965	
13	972	20,400	1,170	1,120	6,870	2,540	1,580	59,100	3,360	1,910	965	
14	916	16,900	1,170	1,460	5,420	2,400	1,340	59,400	3,280	1,910	965	
15	1,310	15,200	1,770	1,460	4,970	2,180	1,290	60,800	3,280	1,910	1,020	
16	916	11,900	2,320	1,460	4,640	2,040	1,230	59,700	4,750	1,910	965	
17	916	10,000	2,320	1,400	3,850	1,910	1,230	60,200	7,410	1,840	965	
18	916	8,380	2,320	1,520	3,640	1,840	1,170	63,200	9,110	1,770	918	
19	760	7,280	2,180	2,830	4,080	1,640	1,060	66,200	14,500	1,770	918	
20	716	6,740	1,970	5,200	3,960	1,640	1,020	69,400	32,100	1,840	827	
21	716	6,230	1,640	6,870	3,200	1,640	965	72,900	25,500	1,640	827	2,400
22	716	5,530	1,340	7,000	2,900	2,080	918	75,700	21,100	1,580	786	
23	808	5,310	1,290	6,350	2,760	4,190	918	77,800	16,500	1,520	745	
24	1,310	4,860	1,340	4,080	2,610	4,990	918	77,000	11,700	1,520	745	
25	1,800	4,410	1,400	3,450	2,470	7,820	1,230	69,400	9,110	1,460	707	
26	1,800	4,410	1,520	3,360	2,250	7,540	1,120	58,300	7,280	1,400	707	
27	2,000	4,080	1,460	3,540	2,250	7,280	965	50,500	6,110	1,340	745	
28	2,150	3,750	1,400	5,050	2,320	6,480	871	39,700	5,420	1,290	745	
29	2,080	3,540	1,460	9,750	-------	6,600	965	33,500	4,520	1,230	965	
30	1,860	2,760	1,460	14,800	-------	7,280	918	26,500	4,190	1,290	1,120	
31	1,730	-------	1,400	11,200	-------	7,820	-------	20,200	-------	1,120	1,170	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,600	716	1,400	86,100
November	46,200	1,670	9,320	555,000
December	2,400	1,060	1,590	97,800
January	14,800	1,120	3,480	214,000
February	18,100	2,250	7,340	408,000
March	7,820	1,640	3,870	238,000
April	7,540	871	2,260	134,000
May	77,800	1,230	42,300	2,600,000
June	32,100	3,280	9,780	582,000
July	4,190	1,120	2,080	128,000
August	1,170	707	944	58,000
September	----------	----------	1,990	118,000
The year	77,800	707	7,210	5,220,000

CLEAR FORK OF BRAZOS RIVER AT NUGENT, TEX.

LOCATION.—Staff gage at highway bridge at Nugent, Jones County.
DRAINAGE AREA.—2,220 square miles.
RECORDS AVAILABLE.—February, 1924, to September, 1930.
EXTREMES.—Maximum discharge during year, 5,980 second-feet May 13 (gage height, 12.09 feet); no flow July 27 to Aug. 2.
1924–1930: Maximum discharge, 11,500 second-feet May 20, 1928 (gage height, 18.0 feet); no flow during several periods.
REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	13	10	13	11	9.5	5.4	124	20	10	0	0.4
2	25	11	10	13	11	9.5	5.4	114	19	10	0	.2
3	22	10	10	12	11	9.5	5.1	327	18	8.5	.2	15
4	21	10	10	11	11	9.5	3.3	2,150	15	8.0	5.7	89
5	20	10	10	10	10	9.5	2.9	1,680	16	5.7	2.4	44
6	19	10	10	10	10	9.5	2.6	653	147	5.1	1.4	4.5
7	18	9.0	10	10	10	10	2.2	80	87	8.0	144	2.9
8	18	9.5	10	10	10	9.5	5.1	44	253	192	279	1.9
9	18	11	13	10	10	9.5	4.8	28	440	783	13	451
10	18	11	13	10	10	9.5	4.5	70	77	328	158	2,920
11	16	10	13	10	9.5	9.5	4.2	22	416	38	23	2,470
12	21	9.0	14	12	9.5	9.5	4.2	20	480	11	62	212
13	1,020	9.0	14	12	9.5	9.5	3.9	3,370	95	10	22	68
14	1,920	9.0	14	12	10	37	4.2	4,160	538	8.0	5.7	22
15	793	9.0	14	10	9.5	166	3.9	1,920	1,660	6.5	5.1	23
16	212	9.0	14	10	9.5	9.5	3.6	1,300	3,340	3.6	3.9	8.5
17	113	9.0	13	10	9.5	8.0	3.0	136	558	2.6	111	6.5
18	76	9.0	12	10	10	9.5	2.9	1,240	270	2.9	7.0	5.1
19	285	9.0	12	12	9.5	8.0	2.7	1,190	167	2.4	2.9	4.2
20	421	9.0	11	11	9.5	7.0	2.4	176	87	1.2	1.7	2.9
21	93	9.0	11	11	9.5	7.0	2.6	68	80	.5	1.2	2.4
22	64	9.0	11	11	10	7.0	2.3	56	76	.4	.2	2.0
23	47	9.0	11	11	13	7.0	1.9	1,550	70	.2	.1	1.6
24	28	9.5	11	11	11	6.0	1.6	1,390	25	.2	.1	1.3
25	20	10	11	11	10	6.0	1.5	288	15	.1	.5	1.0
26	19	10	11	11	12	6.0	1.3	129	11	.1	112	.6
27	40	10	11	11	14	6.0	1.0	68	10	0	84	.4
28	34	9.5	11	11	13	6.0	57	38	10	0	4.8	291
29	23	9.5	11	11	-------	6.0	690	35	168	0	2.4	783
30	15	9.5	12	11	-------	6.0	307	30	23	0	1.3	643
31	14	-------	13	11	-------	6.0	-------	23	-------	0	.5	--------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,920	14	177	10,900
November	13	9.0	9.68	576
December	14	10	11.6	713
January	13	10	10.9	670
February	14	9.5	10.4	578
March	166	6.0	14.1	867
April	690	1.0	38.1	2,270
May	4,160	20	725	44,600
June	3,340	10	306	18,200
July	783	0	46.6	2,870
August	279	0	34.0	2,090
September	2,920	.2	269	16,000
The year	4,160	0	139	100,000

CLEAR FORK OF BRAZOS RIVER AT FORT GRIFFIN, TEX.

LOCATION.—Chain gage on Fort Griffin-Throckmorton highway bridge half a mile east of Fort Griffin, Shackleford County.

DRAINAGE AREA.—3,970 square miles.

RECORDS AVAILABLE.—December, 1923, to September, 1930.

EXTREMES.—Maximum gage height during year, 33.90 feet June 15 (discharge not determined); no flow during several periods.

1923–1930: Maximum gage height, that of June 15, 1930; no flow for several periods.

REMARKS.—Records good except those for estimated periods, Mar. 21–25, June 14, 15, which are poor. Small diversions for municipal use above station; amount not known. Probably slight regulatory effect at low stages by power plant at Stamford.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	338	4.6	3.8	2.1	3.8	1.2	3,250	35	13	0	0.6
2	30	97	4.6	3.8	2.1	2.8	1.7	449	39	66	0	.4
3	18	13	5.6	4.6	2.1	2.8	1.2	683	19	35	0	0
4	10	12	5.6	4.6	2.4	2.4	1.1	406	17	13	0	0
5	6.6	11	5.6	3.8	2.8	1.4	.7	1,760	17	12	0	0
6	1.7	12	4.6	3.8	2.8	1.4	.4	1,540	35	12	0	2.1
7	.6	12	3.8	3.3	3.3	.8	.4	1,060	52	13	0	1.1
8	.9	9.7	4.6	3.0	3.3	.7	.4	401	231	14	0	.8
9	.6	9.7	4.6	3.5	3.8	0	0	140	162	217	46	.8
10	.3	8.8	3.8	3.5	3.8	0	0	238	414	682	28	2,160
11	.2	8.8	3.8	3.5	4.6	0	0	58	220	532	17	5,310
12	0	8.8	5.2	4.2	4.9	0	0	166	108	106	25	3,380
13	7.4	7.9	3.8	4.2	5.2	0	0	7,990	522	40	32	500
14	63	7.0	3.8	4.9	5.2	0	46	9,160	11,500	35	39	224
15	2,090	8.8	4.6	4.9	3.5	0	29	7,640		17	35	173
16	1,220	7.0	4.6	4.2	4.6	0	14	2,920	6,820	19	35	98
17	510	7.0	4.6	3.8	3.8	0	7.9	1,360	3,460	16	25	51
18	224	7.0	3.8	3.8	4.6	50	3.5	371	1,000	13	20	40
19	117	7.0	3.8	2.8	4.6	33	1.1	1,180	340	8.8	17	35
20	96	7.9	4.6	2.8	5.2	18	.8	1,810	198	6.3	12	21
21	96	6.3	4.2	2.8	4.6		0	447	150	3.0	12	17
22	238	6.3	3.5	3.3	4.6		0	211	129	1.7	14	12
23	140	5.6	3.5	3.3	3.8	11	0	2,540	90	1.2	12	9.2
24	78	4.2	3.0	3.3	3.8		0	894	87	1.1	9.7	7.0
25	78	3.5	3.5	2.8	3.3		0	1,710	66	.9	7.0	4.9
26	62	3.5	3.5	2.6	4.6	4.6	0	432	70	.4	6.3	2.6
27	58	3.5	3.5	2.6	4.6	3.8	0	238	56	.3	2.1	1.7
28	37	4.2	3.5	2.1	4.6	2.6	1,590	150	46	.1	1.7	.9
29	28	3.5	3.5	2.1		2.6	2,700	105	31	.1	.9	2.1
30	20	3.5	4.6	1.7		2.6	6,240	67	25	0	.9	347
31	19		3.8	2.1		2.1		51		0	.6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,090	0	171	10,500
November	338	3.5	21.5	1,280
December	5.6	3.0	4.20	258
January	4.9	1.7	3.40	209
February	5.2	2.1	3.88	215
March	50	0	6.14	378
April	6,240	0	355	21,100
May	9,160	51	1,590	97,800
June		17	1,250	74,400
July	682	0	60.6	3,730
August	46	0	12.8	787
September	5,310	0	413	24,600
The year		0	325	235,000

CLEAR FORK OF BRAZOS RIVER NEAR CRYSTAL FALLS, TEX.

LOCATION.—Staff gage at Humble Oil & Refining Co.'s pumping plant, 4 miles northeast of Crystal Falls, Stephens County, and 5 miles below mouth of Hubbard Creek.

DRAINAGE AREA.—5,690 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 17,100 second-feet May 14 (gage height, 25.1 feet); no flow during several periods.

1928–1930: Maximum discharge, 21,500 second-feet July 27, 1928 (gage height, 29.6 feet); no flow during several periods.

Maximum stage known, about 38.0 feet during 1900.

REMARKS.—Records good. Large part of ordinary flow diverted above station for municipal use and mining. Low-water flow partly regulated by dams above gage.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	19	a 2.4	6.1	10	1.0	1.3	6,080	a 68	26	0	4.3
2	24	17	2.0	6.1	a 10	a .5	1.0	2,930	49	21	0	.5
3	21	a 19	1.0	8.3	10	0	.7	557	36	55	0	0
4	19	21	.7	6.1	10	0	.5	a 790	24	49	0	0
5	16	16	.7	a 7.2	10	0	.4	614	38	36	0	0
6	a 13	14	.7	8.3	10	0	a .2	2,430	1,380	a 73	0	0
7	10	21	1.0	6.1	8.3	0	0	2,420	270	645	151	0
8	9.4	17	a .8	6.1	8.3	0	0	995	a 252	55	29	0
9	7.2	149	.7	8.3	a 7.2	0	0	326	234	24	10	172
10	6.1	a 316	.9	8.3	6.1	0	0	725	221	73	a 7.2	1,610
11	6.1	91	.4	6.1	6.1	0	0	a 913	425	520	4.3	4,670
12	5.0	46	1.0	a 5.2	6.1	0	0	986	199	438	58	4,800
13	2,010	29	1.3	4.3	6.1	0	0	13,300	106	199	16	2,500
14	5,580	16	1.0	2.8	1.0	0	36	15,700	824	84	6.1	a 428
15	1,700	10	a 1.1	2.8	1.0	0	91	10,200	2,960	52	1.3	190
16	2,810	9.4	1.2	2.8	a .8	0	10	9,010	11,800	24	221	110
17	701	a 7.8	1.3		.7	0	14	4,600	14,200	19	a 146	73
18	503	6.1	.9		.5	0	12	1,510	4,430	10	70	52
19	289	4.3	.5		.5	0	8.3	2,750	804	6.1	29	33
20	a 250	5.0	.7		.5	0	a 4.4	1,850	326	a 4.0	14	21
21	212	8.3	.9	a 6.4	.5	0	.5	1,290	194	2.0	7.2	a 18
22	503	8.3	a .8		51	0	0	425	a 152	1.0	3.5	14
23	199	8.3	.7		72	a 1.4	0	4,550	110	.5	3.5	7.2
24	117	a 7.2	1.0		24	14	0	2,350	98	0	a 31	5.0
25	77	6.1	a 1.0		7.2	8.3	0	a 1,040	87	0	473	2.0
26	58	5.0	1.0		3.5	6.1	0	1,230	70	0	1,130	2.0
27	a 68	4.3	2.8	10	1.3	7.2	0	317	64	0	164	1.0
28	77	2.8	3.5	10	1.2	6.1	0	199	58	0	49	a 11
29	55	2.8	a 3.9	10	-------	4.3	1,650	124	a 46	0	24	21
30	41	2.8	4.3	14	-------	a 3.6	3,470	98	33	0	10	144
31	41	-------	4.3	10	-------	2.8	-------	87	-------	0	a 7.2	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,580	5.0	499	30,700
November	316	2.8	29.6	1,760
December	4.3	.4	1.44	89
January	14	----------	6.87	422
February	72	.5	9.78	543
March	14	0	1.78	109
April	3,470	0	177	10,500
May	15,700	87	2,920	180,000
June	14,200	24	1,320	78,600
July	645	0	78.0	4,800
August	1,130	0	86.0	5,290
September	4,800	0	496	29,500
The year	15,700	0	472	342,000

a Estimated or interpolated.

NORTH BOSQUE RIVER NEAR CLIFTON, TEX.

LOCATION.—Staff gage one-fourth mile above Gulf, Colorado & Santa Fe Railway bridge and 1⅞ miles northwest of Clifton, Bosque County.
DRAINAGE AREA.—974 square miles.
RECORDS AVAILABLE.—November, 1923, to September, 1930.
EXTREMES.—Maximum discharge during year, about 16,200 second-feet May 18 (gage height, 12.00 feet); no flow July 22 to Aug. 24.
1924–1930: Maximum discharge, about 26,500 second-feet Sept. 8, 1929 (gage height, 16.8 feet); no flow during several periods.
REMARKS.—Monthly records fair. Daily discharge not sufficiently accurate for publication. Railroad pumps about 100,000 gallons a day above dam one-third mile below gage.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	14	0.1	1.00	61
November	6.8	1.6	2.83	168
December	6.8	2.2	3.95	243
January	5.7	3.0	3.89	239
February	17	3.6	5.55	308
March	39	2.6	6.44	396
April	923	2.6	55.3	3,290
May	8,710	7.1	482	29,600
June	6.2	1.1	3.34	199
July	1.0	0	.29	18
August	342	0	15.4	947
September	392	.8	17.9	1,070
The year	8,710	.8	50.5	36,500

SOUTH BOSQUE RIVER NEAR SPEEGLEVILLE, TEX.

LOCATION.—Chain gage on highway bridge 2 miles south of Speegleville McLennan County.
DRAINAGE AREA.—388 square miles.
RECORDS AVAILABLE.—March, 1924, to May, 1930 (discontinued).
EXTREMES.—Maximum discharge during year, about 6,350 second-feet May 10 (gage height, 11.80 feet); minimum, 0.2 second-foot Oct. 25.
1924–1930: Maximum discharge (determined by slope-area method), 54,500 second-feet June 14, 1927 (gage height, 29.37 feet, from floodmarks); no flow during several periods.
REMARKS.—Records for low and intermediate stages fair; for high stages poor. Discharge estimated Oct. 9–22. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	0.8	0.8	4.0	8.0	7.0	36	53	74
2	.7	.8	5.5	8.0	28	32	56	42
3	.6	.8	4.0	5.5	103	34	58	41
4	.7	.7	4.0	4.0	172	30	56	34
5	.5	.7	3.0	3.5	161	28	47	838
6	.6	.8	4.0	4.5	137	28	36	1,450
7	.5	1.1	4.5	6.0	99	28	25	384
8	.4	1.7	4.0	7.0	86	23	21	310
9		2.5	4.0	7.0	74	16	25	296
10		5.5	3.5	9.0	67	28	25	3,440
11		8.0	4.0	11	61	28	26	709
12		10	5.0	12	56	26	26	384
13		25	4.0	14	53	25	28	1,400
14		17	4.5	12	53	25	28	1,000
15		11	5.0	9.0	53	25	30	-------
16	.6	5.0	6.0	8.0	47	28	28	-------
17		3.0	5.5	8.0	44	32	30	-------
18		3.5	5.0	10	44	39	30	-------
19		6.0	4.0	9.0	34	39	30	-------
20		5.5	3.0	10	34	44	19	-------
21		6.0	4.0	13	36	61	15	-------
22		8.0	4.5	13	39	252	16	-------
23	.8	6.5	4.5	12	44	172	14	-------
24	.8	4.5	4.5	9.0	36	110	13	-------
25	.2	8.0	4.5	8.0	44	70	12	-------
26	.4	4.5	4.5	10	42	77	12	-------
27	1.8	2.5	4.5	11	47	83	187	-------
28	1.1	1.9	7.0	12	42	77	64	-------
29	.8	3.0	10	10	-------	74	53	-------
30	.9	4.5	8.0	6.5	-------	74	86	-------
31	1.6	-------	6.5	5.5	-------	67	-------	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.8	0.2	0.70	43
November	25	.7	5.29	315
December	10	3.0	4.81	296
January	14	3.5	8.89	547
February	172	7.0	62.2	3,450
March	252	16	55.2	3,390
April	187	12	38.3	2,280
May 1–14	3,440	34	743	20,600
The period	-------	-------	-------	30,900

LEON RIVER NEAR HAMILTON, TEX.

LOCATION.—Chain gage on St. Louis Southwestern Railway bridge 6 miles north of Hamilton, Hamilton County.

DRAINAGE AREA.—1,900 square miles.

RECORDS AVAILABLE.—January, 1925, to September, 1930.

EXTREMES.—Maximum discharge during year, 4,820 second-feet May 18 (gage height, 18.00 feet); no flow during several periods.

1925–1930: Maximum discharge, that of May 18, 1930; no flow during several periods.

Maximum stage known, 29.8 feet in May, 1908.

REMARKS.—Records fair. No diversions of consequence above station. Revised records of daily discharge for May 14, 1925, and for unpublished periods in 1925 and 1926 are contained in the following table:

Daily discharge, in second-feet, for high-water periods in the years ending Sept. 30, 1925 and 1926

Date	Discharge	Date	Discharge
1925		1926	
May 9	1,980	Apr. 10	1,850
May 10	2,330	Apr. 11	3,490
May 11	1,760	Apr. 12	4,220
May 12	1,620	Apr. 13	3,320
May 13	1,380		
May 14	652		

NOTE.—Figures for these periods, except that for May 14, 1925, were withheld from publication in the water-supply papers containing records for the years ending Sept. 30, 1925 and 1926, because rating curve was not developed for high stages. Discharge for May 14, 1925, supersedes that previously published.

Daily discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	4.1	0.7	2.9	3.1	1.0	2.7	1.2	9 9	0	0	0
2	.5	3.3	.7	2.7	2.9	.9	2.9	3.9	6.0	0	0	0
3	.4	2.6	.6	2.7	3.1	1.2	2.7	3.2	4.7	0	0	0
4	.4	1.8	.6	2.2	5.2	1.2	2.7	2.7	3.9	0	0	0
5	.2	1.0	.6	2.1	4.0	1.3	2.6	3.6	3 5	0	0	0
6	.1	.7	.6	2.1	3.8	1.3	2.3	18	3.0	6.2	0	0
7	0	.5	.6	2.1	2.8	1.3	2.1	36	5.0	5.4	0	0
8	0	.4	.6	2.1	3.3	1.3	2.0	126	139	2.6	0	0
9	0	.4	.5	2.1	2.9	1.1	1.8	158	82	.2	0	0
10	0	2.6	.5	1.9	2.6	1.2	1.0	235	43	.4		557
11	0	2.2	.5	2.0	2.6	1.4	1.1	182	24	.3	0	1,430
12	0	2.2	.5	2.1	2.5	1.5	1.3	332	14	.2	0	85
13	0	1.8	.5	2.4	2.6	1.5	1.3	378	8.0	.1		20
14	0	1.8	.5	2.6	2.5	1.6	1.8	1,600	4.4	0	0	3.7
15	13	3.4	.4	2.6	2.4	1.8	1.9	652	4.4	0	0	1.
16	264	3.3	.4	2.7	2.2	17	2.4	347	3.9	0	0	.9
17	8.1	2.9	.4	2.4	2.2	86	2.0	147	4.0	0	0	.6
18	2.8	2.4	.4	2.4	2.2	17	105	3,460	3.1	0	0	.3
19	1.8	1.6	.4	2.4	2.1	5.0	39	2,250	2.6	0	0	.2
20	1.5	1.4	21	2.5	2.4	4.2	26	1,250	2.4	0	0	.1
21	1.0	1.4	16	2.9	2.6	11	15	1,410	1.7	0	0	0
22	.9	.9	5.0	2.9	3.1	31	5.5	878	1.2	0	0	0
23	1.0	.7	5.0	2.6	11	10	4.7	294	1.2	0	0	0
24	1.2	.7	3.0	2.3	24	2.7	4.4	182	1.0	0	0	0
25	1.2	.7	3.0	2.3	6.9	2.7	3.9	147	.7	0	0	0
26	.8	.6	3.0	2.3	1.5	3.0	3.5	116	.4	0	1.3	0
27	.8	.7	3.0	2.7	1.3	3.0	36	59	.3	0	.2	0
28	.8	.7	2.7	2.7	1.2	2.7	5.6	49	.2	0	0	0
29	.6	.7	2.9	2.6	-------	2.4	3.2	36	.1	0	0	481
30	.4	.7	2.9	2.5	-------	2.4	2.1	18	·0	0	0	231
31	7.3	-------	2.9	2.7	-------	2.6	-------	4.4	-------	0	0	-------

Monthly discharge, in second-feet, of Leon River near Hamilton, Tex., 1925–26 and 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1925				
January 7–31	13	4.1	8.04	398
February	16	4.8	9.29	516
March	8.6	2.9	4.34	267
April	580	.3	28.1	1,670
May	2,330	.4	353	21,700
June	195	.2	28.4	1,690
July	127	0	9.56	588
August	249	0	17.7	1,090
September	249	0	24.2	1,440
The period				29,400
1925–26				
October	1,210	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
April	4,220	7.8	849	50,500
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
The year	4,220	0	181	131,000
1929–30				
October	264	0	9.99	614
November	4.1	.4	1.61	96
December	21	.4	2.59	159
January	2.9	1.9	2.44	150
February	24	1.2	3.89	216
March	86	.9	7.17	441
April	105	1.0	9.62	572
May	3,460	1.2	464	28,500
June	139	0	12.6	750
July	6.2	0	.50	31
August	1.3	0	.05	3.1
September	1,430	0	93.7	5,580
The year	3,460	0	51.3	37,100

NOTE.—Monthly discharge for May, 1925, and April, 1926, not previously published, because the rating curve was not defined for high stages, as indicated in the footnote on preceding page.

LEON RIVER NEAR BELTON, TEX.

LOCATION.—Staff gage one-fourth mile above Temple-Belton highway bridge and 2 miles east of Belton, Bell County.

DRAINAGE AREA.—3,550 square miles

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 14,900 second-feet May 10 (gage height, 10.60 feet); minimum, 0.5 second-foot Aug. 24 (gage height, 1.93 feet).

1923–1930: Maximum discharge, about 27,100 second-feet Oct. 2, 1927 (gage height, 15.05 feet); no flow during several periods.

Highest known stages, 21.0 feet September, 1921, and about 25 feet December, 1913.

REMARKS.—Monthly records fair. Records of daily discharge not sufficiently accurate for publication. Several small pumping plants above gage; amount of water diverted not known.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	75	8.0	25.7	1,580
November	93	11	25.8	1,540
December	38	11	15.6	959
January	38	24	29.1	1,790
February	166	22	38.5	2,140
March	307	18	50.0	3,070
April	76	16	30.4	1,810
May	7,370	22	2,050	126,000
June	463	24	120	7,140
July	346	2.7	32.7	2,010
August	597	.5	47.4	2,910
September	704	4.9	92.6	5,510
The year	7,370	.5	216	156,000

LITTLE RIVER AT CAMERON, TEX.

LOCATION.—Chain gage on highway bridge three-fourths mile above Gulf, Colorado & Santa Fe Railway bridge and 2 miles southeast of Cameron, Milam County.

DRAINAGE AREA.—7,030 square miles.

RECORDS AVAILABLE.—November, 1916, to September, 1930.

EXTREMES.—Maximum discharge during year, about 71,300 second-feet May 11 (gage height, 37.0 feet); minimum, 71 second-feet Aug. 20–23, Sept. 8–9.

1916–1930: Maximum discharge (determined by slope-area method), 647,000 second-feet Sept. 10, 1921 (gage height, about 53.8 feet, present datum); minimum, 2.6 second-feet Sept. 3, 5, 7, 1918.

REMARKS.—Records fair. Numerous small diversions for irrigation and municipal uses affect flow at station only during extremely low stages; amount diverted not known. Slight regulation by pumping above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	451	a 118	135	173	452	321	130	a 1,240	248	100	104
2	115	153	107	130	259	a 322	283	130	1,080	248	100	100
3	110	a 137	106	130	a 790	193	271	173	982	248	a 96	97
4	107	121	103	130	a 3,300	173	259	a 154	886	225	93	94
5	104	106	100	a 130		163	248	135	822	214	87	86
6	a 98	97	100	130	a 756	163	a 226	373	790	a 209	96	84
7	93	89	100	130		163	204	3,320	758	204	107	a 78
8	91	173	119	130		153	183	4,720	a 726	204	762	71
9	86	2,320	122	130		a 144	163	3,360	694	193	334	71
10	86	a 4,110	a 115	130	248	135	163	2,820	662	183	a 225	103
11	86	1,720	a 107	130	214	135	153	47,900	632	392	214	387
12	82	600	100	a 130	204	135	153	40,200	602	407		1,890
13	a 81	982	104	130	204	135	a 148	23,700	572	a 322		1,640
14	80	886	104	135	193	135	144	13,800	572	236		a 739
15	78	377	a 116	135	407	135	144	8,510	a 713	204	a 140	377
16	78	283	127	135	a 358	a 149	135	9,200	854	193		348
17	80	a 214	193	135	308	163	135	7,090	790	173		452
18	80	163	225	130	204	225	144	10,200	694	163	84	271
19	80	144	153	a 152	183	271	204	28,300	602	153	81	214
20	a 92	144	133	173	183	283	a 168	30,000	542	a 148	73	183
21	104	133	122	334	183	468	133	17,600	482	144	71	a 156
22	93	193	a 120	392	193	2,200	153	10,300	452	135	71	130
23	90	163	118	296	a 183	1,020	144	7,400	422	132	71	118
24	86	a 154	122	214	173	572	122	12,300	392	132	a 148	110
25	82	144	a 138	183	163	482	118	11,400	362	122	167	103
26	119	153	153	a 214	153	482	107	4,980	334	119	178	103
27	a 118	144	153	648	236	512	a 111	2,690	321	a 112	691	103
28	116	144	153	1,490	542	1,150	115	1,940	308	104	316	a 109
29	112	144	a 144	641		1,110	122	1,690	a 284	104	183	115
30	188	130	135	482		a 736	122	1,520	259	97	163	110
31	1,360		135	214		362		1,390		97	a 134	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,360	78	138	8,480
November	4,110	89	492	29,300
December	225	100	127	7,810
January	1,490	130	252	15,500
February		153	458	25,400
March	2,200	135	417	25,600
April	321	107	170	10,100
May	47,900	130	9,920	610,000
June	1,240	259	628	37,400
July	407	97	189	11,600
August	762	71	177	10,900
September	1,890	71	285	17,000
The year	47,900	71	1,120	809,000

a Estimated or interpolated.

LAMPASAS RIVER AT YOUNGSPORT, TEX.

LOCATION.—Staff gage half a mile northeast of Youngsport, Bell County.
DRAINAGE AREA.—1,240 square miles.
RECORDS AVAILABLE.—February, 1924, to September, 1930.
EXTREMES.—Maximum stage during year, 13.40 feet May 18 (discharge not determined); minimum discharge, 0.4 second-foot Aug. 4 (gage height, 2.42 feet).

1924–1930: Maximum stage, 23.70 feet Oct. 2, 1927 (discharge not determined); no flow July 17 to Aug. 18, 1925.

REMARKS.—Records fair. Small amount of water diverted above station for municipal uses.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	5.6	10	15	15	12	13	5.1	70	5.6	0.6	1.4
2	16	5.1	8.2	14	16	12	13	6.0	62	5.1	.5	1.3
3	16	5.1	8.2	13	16	12	13	6.0	54	4.7	.5	1.3
4	15	5.1	8.2	13	16	10	13	6.0	46	4.2	.4	1.2
5	14	5.1	8.2	13	17	10	10	1,560	46	4.2	461	1.0
6	4.7	4.2	8.2	13	22	10	10	352	43	4.2	130	.8
7	4.7	4.2	10	14	22	9.3	8.2	112	38	63	13	.7
8	4.2	7.1	10	13	22	9.3	7.1	107	36	94	8.2	.7
9	3.8	23	10	12	17	9.3	5.6	125	43	25	7.1	7.8
10	3.8	15	10	12	19	9.3	5.6	3,550	38	19	6.0	1,410
11	4.2	12	10	12	19	9.3	5.6	1,200	33	14	6.0	230
12	4.7	14	10	14	16	9.3	5.6	287	31	9.3	5.1	38
13	4.7	17	12	14	15	9.3	5.6	1,230	31	7.1	3.8	30
14	4.7	15	12	13	12	9.3	5.6	724	36	5.6	2.0	23
15	4.7	19	12	13	10	9.3	5.6	542	36	4.2	1.4	17
16	4.7	15	12	14	9.3	9.3	5.6	341	36	3.4	1.0	14
17	4.7	14	10	14	9.3	9.3	5.6	615	36	2.9	1.0	10
18	12	13	8.2	14	9.3	9.3	9.3	7,840	33	2.0	.9	7.1
19	12	10	8.2	14	9.3	12	14	1,850	27	1.5	.8	6.0
20	17	9.3	8.2	14	9.3	13	12	426	22	1.3	.7	5.1
21	20	9.3	9.3	14	9.3	12	9.3	225	22	1.1	.7	4.7
22	15	10	9.3	14	9.3	15	9.3	138	20	.9	.6	3.8
23	10	12	9.3	14	9.3	13	7.1	384	17	.8	.6	3.8
24	9.3	10	10	15	9.3	36	5.6	240	16	.7	.8	3.4
25	7.1	10	14	15	10	25	5.1	162	15	.7	1.4	2.9
26	8.2	13	14	15	12	17	4.7	143	13	.7	1.4	9.3
27	19	12	14	16	12	16	4.2	125	10	.7	1.4	7.1
28	15	10	14	15	12	19	4.7	103	8.2	.6	1.4	7.1
29	17	10	14	15	-------	17	6.0	90	7.1	.6	1.4	6.0
30	12	10	15	15	-------	16	4.7	80	6.0	.6	1.4	5.6
31	7.1	-------	15	15	-------	15	-------	70	-------	.6	1.4	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	3.8	10.0	615
November	23	4.2	10.8	643
December	15	8.2	10.7	658
January	16	12	13.9	855
February	22	9.3	13.7	761
March	36	9.3	13.0	799
April	14	4.2	7.79	464
May	7,840	5.1	730	44,900
June	70	6.0	31.0	1,840
July	94	.6	9.30	572
August	461	.4	21.4	1,320
September	1,410	.7	62.0	3,690
The year	7,840	.4	78.9	57,100

SAN GABRIEL RIVER AT CIRCLEVILLE, TEX.

LOCATION.—Chain gage on highway bridge half a mile northwest of Circleville, Williamson County, and half a mile above Missouri-Kansas-Texas Railroad bridge.

DRAINAGE AREA.—602 square miles.

RECORDS AVAILABLE.—February, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, about 48,400 second-feet May 10 (gage height, 33.20 feet); minimum, 4.4 second-feet Sept. 6.

1924–1930: Maximum discharge, about 53,400 second-feet May 29, 1929 (gage height, 34.20 feet); no flow Sept. 5, 6, 8, 11, 1924.

The river reached a stage 40.6±0.5 foot in September, 1921.

REMARKS.—Records fair. Discharge partly estimated Mar. 22–25. Several small diversions for municipal uses above station; amount diverted not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	10	18	26	27	35	47	27	164	53	14	7.5
2	9.5	12	18	24	31	33	49	27	156	49	14	7.5
3	9.0	11	18	23	44	33	53	27	148	31	14	6.5
4	9.0	10	18	23	61	31	49	27	148	31	12	5.5
5	8.0	9.0	18	21	56	31	47	26	140	44	12	4.8
6	8.0	9.0	18	23	44	31	43	38	240	44	32	4.4
7	9.0	11	18	23	39	29	41	165	280	42	24	5.5
8	9.0	21	18	23	38	29	39	122	156	40	21	5.5
9	10	48	18	21	38	29	38	63	140	44	16	5.5
10	10	93	16	21	35	29	38	19,100	126	40	14	21
11	10	54	15	24	38	27	35	2,430	119	37	12	95
12	10	35	14	24	37	27	35	551	126	36	12	58
13	10	27	14	26	38	29	35	760	133	34	11	47
14	10	56	14	24	35	29	33	1,880	140	32	11	26
15	10	46	46	23	49	31	33	871	126	29	9.5	16
16	11	34	61	19	43	34	35	348	133	27	7.5	11
17	10	27	38	18	38	36	48	4,080	112	26	7.5	8.5
18	19	21	29	14	35	43	45	8,920	105	26	7.5	8.5
19	14	19	23	23	33	36	33	3,540	93	24	7.5	7.5
20	16	18	27	29	33	34	30	620	88	23	5.5	6.5
21	13	19	27	31	37	38	28	482	85	22	5.5	6.5
22	10	19	29	27	35	564	25	392	80	22	5.5	6.5
23	10	19	29	26	33	228	23	370	75	22	5.5	9.5
24	9.0	19	27	24	33	71	23	328	71	22	5.5	8.5
5	9.0	21	23	28	35	51	22	288	66	20	8.5	6.5
26	9.0	23	23	29	35	45	22	268	65	19	11	19
27	19	21	26	27	37	47	22	248	65	19	9.5	11
28	17	19	27	27	40	65	20	228	63	20	8.5	9.5
29	16	18	27	26	------	65	28	218	61	18	7.5	11
30	14	18	26	24	------	63	28	199	53	16	11	12
31	11	------	26	24	------	57	------	182	------	15	7.5	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	19	8.0	12.1	744
November	93	9.0	25.6	1,520
December	61	14	24.2	1,490
January	31	14	24.0	1,480
February	61	27	38.5	2,140
March	564	27	62.3	3,830
April	53	20	34.9	2,080
May	19,100	26	1,530	94,100
June	250	53	118	7,020
July	53	15	29.9	1,840
August	32	5.5	11.3	695
September	95	4.4	15.3	910
The year	19,100	4.4	163	118,000

YEGUA CREEK NEAR SOMERVILLE, TEX.

LOCATION.—Chain gage on Gulf, Colorado & Santa Fe Railway bridge 2 miles south of Somerville, Burleson County. Gage reading gives distance between water surface and base of rail. Zero of gage (base of rail) is 233.52 feet above mean sea level.

DRAINAGE AREA.—990 square miles.

RECORDS AVAILABLE.—May, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 6,450 second-feet May 19 (gage height, −24.40 feet); no flow during several periods.

1924–1930: Maximum discharge, about 33,600 second-feet May 30, 1929 (gage height, −17.02 feet); no flow during several periods.

REMARKS.—Monthly records fair. Record of daily discharge not sufficiently accurate for publication. No diversions above station. Flow partly regulated by swamp upstream.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	4,230	0	531	31,600
December	17	5.6	8.24	507
January	1,240	6.9	183	11,300
February	1,800	26	363	20,200
March	700	.15	203	12,500
April	316	3.8	39.5	2,350
May	6,050	3.8	1,050	64,600
June	80	1.4	20.2	1,200
July	1.8	0	.35	22
August	.1	0	0	0
September	75	.4	10.8	643
The year	6,050	0	200	145,000

NOTE.—No flow during October.

NAVASOTA RIVER NEAR EASTERLY, TEX.

LOCATION.—Inverted staff gage at International-Great Northern Railroad bridge 6 miles northeast of Easterly, Robertson County. Gage readings show distance from base of rail to water surface. Zero of gage (base of rail) is 301.24 feet above mean sea level.

DRAINAGE AREA.—949 square miles.

RECORDS AVAILABLE.—March, 1924, to September, 1930.

EXTREMES.—Maximum stage during year, —7.6 feet May 12 (discharge not determined); minimum discharge, 0.1 second-foot Aug. 25–27 (gage height, —25.0 feet).

1924–1930: Maximum stage, —5.5 feet May 30, 1929 (discharge not determined); no flow during several periods.

REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	180	e 26	e 30	142	642	170	502	e 74	12	1.0	1.2
2	.7	106	25	28	e 191	e 602	106	682	64	9.6	1.0	1.2
3	.7	e 69	22	28	290	522	94	271	59	9.6	e 1.0	1.2
4	.7	44	22	28	428	235	149	e 118	44	8.0	1.0	1.2
5	.7	16	19	e 26	748	118	84	79	40	8.0	.7	2.0
6	e .5	9.6	32	25	895	89	e 72	54	40	e 7.2	.7	2.0
7	.3	8.0	44	22	704	79	59	108	36	6.4	.7	e 1.6
8	.3	23	e 40	22	582	74	54	402	e 34	5.0	.7	1.2
9	.3	207	36	22	e 328	e 66	49	1,240	32	5.0	.7	1.2
10	.3	e 1,500	32	25	112	59	44	3,700	28	3.8	e .7	1.2
11	.3	2,010	28	25	79	54	44	e 12,100	28	3.8	.7	.7
12	.3	1,640	36	e 30	69	49	40	13,800	25	3.8	.7	.7
13	e .3	1,340	32	36	64	44	e 38	10,800	25	e 3.8	.7	.7
14	.3	1,460	28	73	64	40	36	11,400	25	3.8	.7	e .7
15	.3	1,340	e 28	121	44	40	36	8,040	e 24	3.8	.7	.7
16	.3	1,220	28	177	e 42	e 36	36	5,930	22	e 3.5	.7	.7
17	.3	e 812	28	198	40	32	36	3,800	22	e 3.2	e .5	.7
18	.3	233	25	212	40	44	32	e 4,860	22	e 2.9	.3	1.2
19	.3	163	25	e 240	40	84	32	5,930	22	e 2.6	.3	1.2
20	e .3	142	25	268	36	156	e 30	5,120	22	e 2.3	.3	1.2
21	.3	118	28	290	40	362	28	2,930	22	2.0	.3	e 2.5
22	.3	100	e 30	312	49	682	28	2,530	19	2.0	.3	3.8
23	.3	89	32	301	e 64	e 704	28	2,320	19	2.0	.3	5.0
24	.3	e 74	32	170	79	662	25	2,080	16	2.0	e .2	5.8
25	.3	59	e 34	156	69	622	25	e 1,070	16	2.0	.1	5.0
26	.3	44	36	e 166	121	602	25	624	14	2.0	.1	5.0
27	e .3	32	36	177	255	562	e 28	315	14	e 1.6	.1	5.0
28	.3	e 32	40	163	602	522	32	257	14	1.2	.3	e 5.0
29	.3	32	e 36	149	-------	642	78	142	e 13	1.2	.7	5.0
30	62	28	32	149	-------	e 445	237	100	12	1.2	.7	5.0
31	325	-------	32	142	-------	239	-------	84	-------	1.0	e 1.0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	325	0.3	12.8	787
November	2,010	8.0	438	26,100
December	44	19	30.6	1,880
January	312	22	123	7,560
February	895	36	222	12,300
March	704	32	294	18,100
April	237	25	59.2	3,520
May	13,800	54	3,270	201,000
June	74	12	28.2	1,680
July	12	1.0	4.07	250
August	1.0	.1	.58	36
September	5.8	.7	2.32	138
The year	13,800	.1	378	273,000

e Partly estimated or interpolated.

COLORADO RIVER BASIN

COLORADO RIVER AT BALLINGER, TEX.

LOCATION.—Staff gage two-thirds of a mile below Gulf, Colorado & Santa Fe Railway bridge at Ballinger, Runnels County.

DRAINAGE AREA.—16,800 square miles, a large part of which is noncontributing.

RECORDS AVAILABLE.—December, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, about 33,500 second-feet June 14 (gage height, 27.45 feet); minimum, 0.4 second-foot Apr. 17, 18.

1915–1930: Maximum discharge, that of June 14, 1930; no flow during several periods.

REMARKS.—Records for low and medium stages fair, for high stages poor. Discharge estimated during period of ice effect Jan. 9–26. During periods of heavy local rains backwater from small creek below gage may affect records for short periods. About 6,000 acres declared irrigated above station; during low stages the diversions constitute a large part of total flow.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	26	9.0	3.0	4.5	4.5	0.9	1,290	42	150	1.8	5.5
2	17	22	8.0	3.0	4.5	4.0	.8	867	104	99	1.6	3.5
3	15	22	7.0	3.0	5.5	3.5	.9	3,340	325	70	1.6	3.0
4	17	22	6.5	3.0	6.0	4.0	.9	10,700	224	60	1.8	4.0
5	10	20	6.5	3.0	5.5	4.0	.9	17,400	130	51	2.6	3.5
6	10	20	6.0	3.0	5.5	2.6	1.0	1,990	459	44	289	2.8
7	8.0	18	6.5	3.0	5.5	1.8	.9	782	750	37	1,910	2.0
8	7.0	17	6.5	3.0	5.5	1.6	.8	410	284	33	780	2.6
9	6.0	17	6.5		5.5	2.0	.6	249	338	28	886	2.2
10	5.0	17	7.5		5.0	2.0	.6	325	613	27	886	2.2
11	5.0	15	7.0		5.0	1.6	.5	140	960	26	851	99
12	6.0	14	7.0		4.5	1.6	.5	195	520	21	291	35
13	5,300	13	7.5		4.5	1.6	.5	8,940	6,540	21	257	17
14	4,090	10	10		4.5	1.8	.6	2,550	26,600	18	143	7.5
15	3,450	11	9.0		4.5	636	.6	1,480	17,500	14	88	5.0
16	920	12	12		4.5	160	.6	520	2,450	10	66	2.8
17	492	12	14		4.5	55	.4	465	1,960	7.0	53	2.6
18	249	12	10	3.5	4.5	26	.4	278	1,160	6.0	46	2.2
19	171	12	9.0		5.0	16	.6	988	748	6.5	35	2.2
20	257	12	8.0		5.0	7.5	54	338	410	4.5	26	1.8
21	171	12	6.5		5.5	6.5	169	186	257	7.5	17	1.4
22	88	10	6.0		5.0	2.8	40	124	186	3.0	15	1.4
23	60	10	5.5		5.5	2.6	7.2	93	137	2.2	13	1.4
24	57	10	5.5		5.0	2.0	2.2	73	99	2.6	12	1.4
25	53	10	5.5		4.5	1.6	81	62	83	2.6	82	1.4
26	46	11	5.5		4.5	1.6	55	55	75	2.4	64	1.2
27	49	10	4.5	3.5	4.5	1.8	16	49	62	2.2	47	1.4
28	42	9.0	4.5	3.5	4.5	1.6	234	46	55	4.0	33	2.2
29	35	9.0	4.0	4.5	-------	1.6	4,910	42	49	3.0	15	2.2
30	32	9.0	4.0	4.5	-------	1.6	4,730	47	44	2.6	8.0	2.2
31	32	-------	3.5	4.5	-------	1.6	--------	47	--------	2.0	7.0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,300	5.0	507	31,200
November	26	9.0	14.1	839
December	14	3.5	7.05	433
January	4.5	----------	3.47	213
February	6.0	4.5	4.95	275
March	636	1.6	31.0	1,910
April	4,910	.4	344	20,500
May	17,400	42	1,740	107,000
June	26,600	42	2,100	125,000
July	150	2.0	24.7	1,520
August	1,910	1.6	224	13,800
September	99	1.2	7.42	442
The year	26,600	.4	419	303,000

COLORADO RIVER NEAR MILBURN, TEX.

LOCATION.—Combination staff and chain gage at steel highway bridge 1½ miles northwest of Milborn, McCullough County.

DRAINAGE AREA.—24,600 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 42,300 second-feet June 15 (gage height, 38.3 feet); minimum, 2.2 second-feet Apr. 14, 15 (gage height, 3.55 feet).

1923–1930: Maximum discharge, that of June 15, 1930; no flow Aug. 8–10, Sept. 1–5, 1929.

REMARKS.—Records fair except those for estimated periods, which are poor. Discharge interpolated Apr. 8, 9. Considerable water diverted for irrigation above station; amount not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	427	65	48	45	23	20	4,320	205	189	40	76
2	53	404	65	48	45	14	20	1,460	186	176		51
3	40	382	65	48	51	11	19	5,140	156	165	73	40
4	31	382	65	48	53	9.8	14	10,700	131	159	55	38
5	24	364	65	48	48	9.8	12	18,000	240	151	55	33
6	19	364	65	48	48	8.4	11	20,900	5,050	146	421	32
7	16	345	65	48	50	8.4	9.8	2,750	1,860	138	131	26
8	13	345	65		50	7.0	7.4	1,280	2,000	126	863	21
9	7.0	345	65		50	6.3	5.0	825	1,900	110	1,070	18
10	6.3	258	65		50	5.6	2.6	477	605	90	537	112
11	4.6	192	65		48	5.6	2.6	364	382	74	951	294
12	3.4	138	65		47	5.6	2.5	364	1,050	74	1,720	1,030
13	3.0	98	65		47	4.9	2.4	427	1,050	65	528	364
14	8,200	80	65		45	4.9	2.2	6,920	9,680	58	328	214
15	8,200	76	63		45	4.9	2.2	2,450	29,000	53	224	143
16	4,250	73	63	40	45	240	14	1,860	29,100	51	205	116
17	1,680	69	63		45	605	74	1,770	10,500	48	173	94
18	1,050	65	63		42	328	63	9,140	3,000	38	134	69
19	640	65	63		42	211	53	23,000	1,350	29	92	51
20	507	65	63		42	151	27	14,200	1,120	28	67	47
21	382	65	63		42	138	19	2,750	862	20	53	37
22	310	65	62		42	112	15	1,680	537	18	53	28
23	427	65	62		41	92	9.1	788	382	18	45	24
24	292	65	62		40	73	6.0	427	292	18	47	20
25	258	65	58	34	37	55	5.2	328	237	18	655	13
26	382	65	55	34	34	45	5.2	275	202	18	129	10
27	675	65	51	32	32	42	65	230	168		122	10
28	571	65	48	32	30	37	56	224	131		173	8.4
29	1,280	65	48	34	-------	31	139	224	114	40	146	8.4
30	477	65	48	37	-------	27	3,950	224	114		112	7.0
31	427	-------	48	40	-------	21	---------	218	--------		102	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,200	3.0	977	60,100
November	427	65	173	10,300
December	65	48	61.1	3,760
January	48	----------	40.6	2,500
February	53	30	44.1	2,450
March	605	4.9	75.4	4,640
April	3,950	2.2	154	9,160
May	23,000	218	4,310	265,000
June	29,100	114	3,390	202,000
July	189	----------	73.5	4,520
August	1,720	----------	301	18,500
September	1,030	7.0	101	6,010
The year	29,100	2.2	813	589,000

COLORADO RIVER NEAR SAN SABA, TEX.

LOCATION.—Water-stage recorder at Red Bluff crossing, 5.7 miles below confluence with San Saba River and 9.2 miles east of San Saba, San Saba County.
DRAINAGE AREA.—30,600 square miles, part of which is probably noncontributing.
RECORDS AVAILABLE.—August and September, 1930.
EXTREMES.—Maximum discharge during period, 5,360 second-feet Sept. 11 (gage height, 8.35 feet); minimum, 52 second-feet Sept. 29 (gage height, 2.12 feet).
REMARKS.—Records good. Discharge partly estimated Aug. 30, Sept. 9, 10, 13. Considerable water diverted above for irrigation; amount not known.

Daily and monthly discharge, in second-feet, 1930

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-------	130	11	-------	3,520	21	-------	107
2	-------	112	12	-------	3,180	22	-------	105
3	-------	98	13	-------	1,250	23	-------	102
4	-------	88	14	-------	636	24	-------	98
5	-------	117	15	-------	416	25	-------	88
6	-------	75	16	-------	285	26	-------	81
7	-------	73	17	-------	216	27	-------	70
8	-------	77	18	-------	167	28	-------	62
9	-------	98	19	-------	142	29	-------	55
10	-------	499	20	-------	122	30	178	61
						31	153	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
September	3,520	55	404	24,000

COLORADO RIVER NEAR TOW, TEX.

LOCATION.—Water-stage recorder at highway bridge 1¼ miles northeast of Tow, Llano County.

DRAINAGE AREA.—31,100 square miles, a large part of which is probably noncontributing.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 31,600 second-feet June 18 (gage height, 16.92 feet); minimum, 20 second-feet Aug. 5 (gage height, 4.93 feet).

1923–1930: Maximum discharge, 35,000 second-feet May 29, 1929 (gage height, 17.40 feet); minimum, that of Aug. 5, 1930.

Highest stage known, 28.4 feet during April, 1900.

REMARKS.—Records good except those for estimated periods, Oct. 1–12, Apr. 24–30, May 13, 14, which are fair. Numerous small diversions above station; amount diverted not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	151	293	136	142	113	98	103	123	282	215	23	201
2	151	261	139	139	118	94	103	5,740	250	179	22	142
3	148	239	129	139	139	94	103	2,580	220	159	23	115
4	123	220	126	132	139	85	103	2,580	201	142	22	98
5	103	191	123	132	132	81	98	14,200	175	132	22	85
6	90	179	123	129	132	79	92	16,400	215	126	22	77
7	86	175	126	126	132	77	88	20,000	6,050	110	63	94
8	83	171	126	120	132	74	85	13,200	6,780	423	81	71
9	81	167	126	118	126	69	77	2,440	2,100	637	60	79
10	77	171	129	118	123	67	72	2,970	3,940	327	163	266
11	72	167	126	118	115	64	69	5,140	1,420	239	623	2,850
12	69	191	129	118	115	61	66	2,080	849	163	574	3,390
13	72	387	126	120	118	63	63	4,700	618	123	424	2,360
14	79	304	155	123	113	60	64		1,130	101	611	1,240
15	11,200	225	163	123	110	58	63	13,600	3,830	83	611	762
16	10,800	191	142	120	103	58	66	15,500	17,100	74	418	524
17	7,900	175	132	118	103	56	67	3,400	21,100	64	405	374
18	4,550	159	163	103	101	57	58	4,860	30,800	58	277	271
19	2,370	151	139	129	98	300	79	11,400	10,900	54	210	215
20	1,470	139	126	118	103	545	220	20,000	2,440	47	196	171
21	1,240	136	129	113	101	399	167	24,900	1,660	42	155	139
22	1,250	129	142	113	101	356	129	7,880	1,330	38	126	115
23	814	129	144	129	94	430	103	1,540	977	36	103	110
24	779	136	139	132	101	387		1,020	754	35	94	86
25	754	136	144	120	108	310		771	596	33	77	77
26	567	132	155	110	101	239	100	779	497	29	77	74
27	490	129	163	115	96	191		762	411	27	249	64
28	424	129	155	120	94	148		552	362	25	456	63
29	463	136	151	120	------	113		430	293	24	261	66
30	567	136	148	118	------	108		368	244	23	183	61
31	380	------	144	118	------	108	------	322	------	23	229	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,200	69	1,530	94,100
November	387	129	183	10,900
December	163	123	139	8,550
January	142	103	122	7,500
February	139	94	113	6,280
March	545	56	159	9,780
April	------	------	94.6	5,630
May	24,900	123	6,610	406,000
June	30,800	175	3,920	233,000
July	637	23	122	7,500
August	623	22	221	13,600
September	3,390	61	475	28,300
The year	30,800	22	1,150	831,000

COLORADO RIVER AT AUSTIN, TEX.

LOCATION.—Water-stage recorder at Congress Avenue viaduct in Austin, Travis County. Zero of gage is 431.77 feet above mean sea level.

DRAINAGE AREA.—38,200 square miles, part of which is noncontributing.

RECORDS AVAILABLE.—February, 1898, to September, 1930.

EXTREMES.—Maximum discharge during year, 37,300 second-feet May 11 (gage height, 11.00 feet); minimum, 27 second-feet Aug. 12 (gage height, −0.31 foot).

1898–1930: Maximum discharge, about 236,000 second-feet a few minutes after failure of Austin Dam Apr. 7, 1900 (gage height, 33.5 feet). At time of failure depth of water over dam was 11.07 feet (computed discharge, 151,000 second-feet); flood appeared to be practically at its crest when dam failed. Minimum discharge, 13 second-feet Aug. 18, 1918.

REMARKS.—Records good. Daily discharge partly estimated or interpolated Feb. 13, July 5–10, 24–29, Aug. 1–3. About 36,000 acres declared irrigated above station. Flow at low stages affected by diversions of city of Austin pumping plant.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	320	625	290	280	305	299	378	285	1,160	605	84	252
2	290	755	315	280	336	200	348	336	871	526	80	310
3	275	647	245	280	402	230	320	305	719	476	75	280
4	265	510	260	275	444	195	305	3,750	575	438	70	240
5	250	432	250	300	432	205	290	3,250	595	366	58	240
6	205	408	260	305	426	240	280	6,900	683	315	67	215
7	200	420	270	315	518	230	250	15,200	755	275	67	180
8	185	484	260	310	492	195	230	19,400	659	275	64	158
9	176	659	260	315	484	185	215	18,100	5,720	275	59	156
10	176	635	260	265	432	215	205	14,500	5,560	260	57	221
11	176	605	265	280	384	195	180	28,000	3,300	265	54	210
12	166	605	265	305	384	171	185	9,840	4,210	471	46	500
13	158	518	265	310	325	176	171	6,300	2,840	518	45	3,810
14	148	647	270	310	275	171	148	4,860	4,990	414	45	4,340
15	140	659	280	315	306	176	153	3,820	9,120	342	141	3,250
16	1,260	625	280	280	245	176	158	8,180	4,340	285	402	2,150
17	11,000	595	285	315	250	200	176	17,700	11,900	250	426	1,550
18	9,760	492	280	255	255	276	148	10,700	25,200	230	575	1,140
19	6,900	444	270	240	240	230	153	21,500	30,700	195	510	842
20	4,860	408	275	336	240	220	131	13,500	17,700	180	420	798
21	3,430	360	285	354	230	245	140	20,600	6,250	171	414	526
22	2,500	336	275	250	245	230	140	26,500	3,820	158	348	467
23	1,880	305	275	235	230	781	153	16,800	2,940	153	285	408
24	1,950	310	280	275	225	1,120	225	6,780	2,480	131	260	366
25	1,580	315	270	330	285	595	275	3,820	2,040	115	280	330
26	1,190	325	280	354	225	518	250	2,840	1,640	107	250	376
27	1,250	320	280	342	245	615	250	2,310	1,350	107	235	300
28	1,160	315	275	310	220	526	215	1,860	1,120	103	205	320
29	1,010	330	275	315	-------	458	249	1,750	900	84	176	290
30	842	270	275	310	-------	444	215	1,580	695	81	166	280
31	683	-------	285	320	-------	384	-------	1,430	-------	84	153	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,000	140	1,750	108,000
November	755	270	479	28,500
December	315	245	273	16,800
January	354	235	299	18,400
February	518	220	324	18,000
March	1,120	171	326	20,000
April	378	131	218	13,000
May	28,000	285	9,440	580,000
June	30,700	575	5,160	307,000
July	605	81	266	16,400
August	575	45	197	12,100
September	4,340	156	817	48,600
The year	30,700	45	1,640	1,190,000

EVAPORATION AT AUSTIN, TEX.

LOCATION.—In State capitol grounds at Austin, Travis County, since June 4, 1930. Prior to that date at Hill ranch, 5 miles southeast of Austin.

RECORDS AVAILABLE.—April, 1916, to September, 1930.

EQUIPMENT.—Since June 4, 1930, one land evaporation pan with auxiliary equipment consisting of hook gage, rain gage, anemometer, and maximum and minimum thermometers. Prior to that date two pans were used, one on surface of reservoir on Hill ranch and one on land 30 feet from reservoir.

REMARKS.—Records fair. Observations made daily at 8 a. m. Computations made by United States Weather Bureau.

Evaporation at Austin, Tex., 1929–30

	Temperature (° F.)					Mean relative humidity (per cent) [a]	Wind		Rainfall (inches)	Evaporation (inches)	
	Air			Water			Average velocity (miles an hour)	Prevailing direction		Floating pan	Land pan
	Mean maximum	Mean minimum	Mean	Floating pan (mean)	Land pan (mean)						
October	82.6	56.1	69.4	66.7	62.5	81	1.3	S.	3.02	[b] 5.330	[b] 5.947
November	61.2	40.6	50.9	48.0	47.3	81	3.7	N.	4.68	[b] 2.583	[b] 2.899
December	63.1	35.9	49.5	52.0h	49.9g	81	2.4	N.	2.03	[b] 2.117	2.196
January	49.1b	29.8e	39.4d	46.0n	42.0n	85	3.7	N.	1.39	[b] 1.301	[b] 1.393
February	69.8	44.6	57.2	56.0	52.4	86	2.4	S.	1.71	[b] 2.386	[b] 3.302
March	66.8	43.4	55.1	56.2	49.8	78	3.0	N.	1.91	----	4.376
April	81.3o	57.0	69.2h	65.1r	62.7a	82	1.1	S.	0.89	----	5.977
May	81.2	65.3	73.2	----	71.0	89	0.7	S.	8.60	----	[b] 4.698
June	90.9a	69.0	80.0	----	----	85	0.9	----	1.69	----	[b] 7.299
July	96.8b	73.3a	85.0b	----	----	82	1.0	----	0.48	----	[b] 9.451
August	98.5a	73.4a	86.0a	----	----	82	1.0	----	1.33	----	[b] 9.325
September	91.6a	68.3	80.0	----	----	85	0.9	----	4.33	----	[b] 6.750
The year	77.7	54.7	66.2	----	----	----	1.8	----	32.06	----	63.523

[a] Relative humidity at United States Weather Bureau station at Austin.
[b] Estimated.

NOTE.—Letters following figures indicate number of days of missing record: a, 1 day; b, 2 days; etc.

COLORADO RIVER AT SMITHVILLE, TEX.

LOCATION.—Staff gage 800 feet above highway bridge at Smithville, Bastrop County. Zero of gage is 270.01 feet above mean sea level.
DRAINAGE AREA.—39,600 square miles, part of which is probably noncontributing.
RECORDS AVAILABLE.—July to September, 1930.
EXTREMES.—Maximum discharge during year, 3,680 second-feet Sept. 16 (gage height, 5.06 feet); minimum, 111 second-feet Aug. 17, 18 (gage height, 0.74 foot).
Maximum known stage, about 47.4 feet in December, 1913.
REMARKS.—Records good. Considerable water diverted above station for irrigation; amount not known.

Daily and monthly discharge, in second-feet, 1930

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-------	206	227	11	-------	144	674	21	-------	524	810
2	-------	192	216	12	-------	137	392	22	-------	469	674
3	-------	182	202	13	-------	128	303	23	-------	442	582
4	-------	179	268	14	-------	128	938	24	295	392	496
5	-------	172	303	15	-------	122	3,320	25	284	346	442
6	-------	179	287	16	-------	117	3,150	26	264	303	392
7	-------	159	260	17	-------	111	2,140	27	249	299	346
8	-------	153	257	18	-------	131	1,600	28	234	303	369
9	-------	159	238	19	-------	342	1,250	29	227	272	346
10	-------	150	576	20	-------	496	1,020	30	220	257	303
								31	210	242	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
July 24–31	295	210	248	3,930
August	524	111	240	14,800
September	3,320	202	746	44,400
The period	-------	-------	-------	63,100

COLORADO RIVER AT COLUMBUS, TEX.

LOCATION.—Water-stage recorder at county highway bridge in eastern edge of Columbus, Colorado County, 400 feet below Galveston, Harrisburg & San Antonio Railway bridge.

DRAINAGE AREA.—40,800 square miles, part of which is probably noncontributing.

RECORDS AVAILABLE.—January, 1903, to December, 1911; May, 1916, to November, 1930 (discontinued).

EXTREMES.—Maximum discharge during period Oct. 1, 1929, to Nov. 23, 1930, 56,300 second-feet Oct. 21, 1930 (gage height, 31.85 feet); minimum, 208 second-feet Aug. 21.

1903–1911, 1916–1930: Maximum discharge, 110,000 second-feet June 1, 1929 (gage height, 38.00 feet); minimum, 10 second-feet Sept. 9, 10, 1910.

Stage of 44.6 feet was reached in 1869 and Dec. 6, 1913, when river divided into channels and left Columbus on an island.

REMARKS.—Records fair. About 36,000 acres declared irrigated above Austin.

Daily discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929–30												
1	e 940	1,420	e 655	542	1,330	1,420	880	328	e 2,400	1,610	368	325
2	e 880	1,180	e 630	534	e 1,000	880	780	325	e 2,160	1,450	366	360
3	e 805	e 1,030	e 590	514	1,090	730	705	321	e 1,920	1,330	340	316
4	e 730	1,000	e 590	501	1,240	655	655	321	1,680	1,210	326	314
5	e 655	1,000	e 550	498	1,360	610	610	316	1,510	1,150	350	302
6		1,000	e 550	501	1,450	534	550	323	1,360	e 1,060	304	296
7		1,000	e 530	495	1,420	492	538	1,020	1,270	e 970	290	325
8		1,000	e 522	498	1,210	465	501	4,950	1,150	910	280	344
9		24,800	518	489	1,000	456	474	11,300	1,180	910	270	321
10		e 26,300	514	486	910	450	459	14,000	1,180	830	261	426
11	e 618	e 8,500	514	474	880	453	435	13,800	1,610	705	246	730
12		e 3,450	510	480	855	450	420	24,800	4,920	705	238	630
13		e 2,030	514	495	830	441	388	19,100	3,640	655	236	755
14		e 1,480	510	489	780	435	380	17,300	4,260	610	224	570
15		e 1,420	534	465	730	450	374	7,880	3,540	570	220	468
16		e 1,270	570	453	e 680	450	350	6,470	3,980	610	220	1,420
17	e 453	1,060	610	453	630	444	350	4,810	8,210	705	217	3,040
18	453	1,030	730	459	630	444	344	15,700	5,140	630	215	2,480
19	2,900	1,000	705	465	655	447	317	15,000	9,610	570	213	1,890
20	6,990	940	590	905	630	444	310	12,200	18,700	e 550	211	1,540
21	5,620	e 880	855	4,520	610	450	306	14,800	18,900	530	219	1,300
22	e 4,040	e 855	830	e 2,110	590	1,220	293	11,300	11,200	501	390	1,090
23	e 3,040	e 805	705	855	590	730	286	17,600	6,480	486	498	940
24	e 2,320	e 805	655	730	590	550	283	22,400	4,920	462	504	805
25	e 1,890	e 805	610	730	590	495	279	12,500	4,040	435	480	705
26	e 1,610	e 780	610	680	590	462	e 280	7,260	3,240	414	438	680
27	1,640	e 730	610	655	590	550	283	5,380	2,800	e 402	396	630
28	1,510	e 680	590	1,570	887	1,240	286	4,260	2,400	e 389	362	590
29	1,330	e 680	e 577	8,260	-------	1,480	298	3,440	e 2,100	e 377	346	811
30	1,240	e 680	e 563	3,750	-------	1,300	321	2,960	1,820	e 364	340	940
31	1,240	-------	e 550	1,610	-------	1,210	-------	e 2,640	-------	352	336	-------

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1930			1930			1930		
1	590	3,840	11	e 51,500	1,960	21	51,100	1,580
2	483	3,340	12	46,900	1,890	22	21,500	1,480
3	453	3,040	13	32,200	1,820	23	9,980	1,480
4	447	2,800	14	13,300	1,820	24	7,510	------
5	e 686	2,640	15	10,600	1,890	25	6,340	------
6	1,550	2,560	16	16,200	1,960	26	8,200	------
7	6,860	2,480	17	26,000	1,820	27	5,380	------
8	e 15,100	2,320	18	37,100	1,820	28	6,600	------
9	e 41,600	2,170	19	45,900	1,820	29	5,620	------
10	e 51,900	2,100	20	53,100	1,720	30	5,740	------
						31	4,590	------

e Estimated or interpolated.

Monthly discharge, in second-feet, of Colorado River at Columbus, Tex., 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1929–30				
October	6,990	453	1,520	93,500
November	26,300	680	2,990	178,000
December	855	510	600	36,900
January	8,260	453	1,150	70,700
February	1,450	590	870	48,300
March	1,480	435	672	41,300
April	880	279	424	25,200
May	24,800	316	8,860	545,000
June	18,900	1,150	4,580	273,000
July	1,610	352	724	44,500
August	504	211	313	19,200
September	3,040	296	845	50,300
The year	26,300	211	1,970	1,430,000
1930				
October	53,100	447	18,900	1,160,000
November 1–23	3,840	1,480	2,190	99,900
The period				1,260,000

CONCHO RIVER NEAR SAN ANGELO, TEX.

LOCATION.—Water-stage recorder half a mile below confluence of North Concho and South Concho Rivers and 1¼ miles southeast of San Angelo, Tom Green County.

DRAINAGE AREA.—4,490 square miles.

RECORDS AVAILABLE.—September, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, about 61,600 second-feet June 13 (gage height, 29.30 feet); minimum, 1. 2 second-feet Oct. 4 (gage height, 0.24 foot).

1915–1930: Maximum discharge, about 139,000 second-feet Apr. 26, 1922 (gage height, 36.8 feet); no flow Nov. 29, 1921.

REMARKS.—Records for low and medium stages good; for high stages fair. Discharge estimated Mar. 27 to Apr. 15 and partly estimated Mar. 26, Apr. 16. About 11,000 acres declared irrigated above station. Flow at low stages affected by diversions and storage above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	1.4	32	26	26	32	14		78	15	5.8	1.7	1.8
2	1.4	33	23	24	33	14		64	16	5.6	1.7	1.7
3	1.4	28	25	20	35	15		45	14	5.4	1.6	1.6
4	1.3	23	20	22	32	16		135	11	4.7	1.6	1.7
5	1.4	22	20	25	32	15		590	9.3	4.4	1.6	1.7
6	1.4	28	16	24	33	19		128	12	4.7	2.0	1.5
7	1.5	27	14	23	31	12		67	10	4.9	1.8	1.5
8	1.6	28	15	23	30	14	4.5	43	11	3.6	1.7	2.0
9	1.4	24	16	25	28	16		47	10	3.2	1.6	1.5
10	1.4	31	18	25	28	13		54	9.0	3.4	1.6	1.5
11	1.5	26	20	28	26	10		32	7.7	3.3	1.6	1.4
12	16.3	27	18	28	16	10		25	8.0	3.4	1.6	1.4
13	3,120	24	24	27	14	9.7		28	9,270	3.4	1.6	1.4
14	2,120	17	22	28	14	12		294	3,080	3.3	1.6	1.4
15	2,190	22	23	31	14	10		170	1,830	2.9	1.7	1.4
16	584	34	24	28	16	12	3.8	94	366	2.8	1.5	1.5
17	149	35	18	29	16	11	3.2	44	62	2.4	1.6	1.6
18	78	33	16	28	13	9.7	3.2	3,830	40	2.1	1.7	1.6
19	172	31	18	28	13	9.7	86	338	28	2.0	1.7	1.5
20	317	32	20	28	15	8.7	25	126	23	2.0	1.6	1.4
21	106	32	25	28	16	8.7	14	80	19	2.5	1.5	1.4
22	59	30	30	28	14	9.0	9.3	35	17	2.1	1.6	1.5
23	44	29	32	28	16	10	7.7	44	16	1.8	1.7	1.4
24	47	31	32	28	15	8.7	6.5	25	12	1.7	5.6	1.4
25	43	32	32	31	13	8.4	34	17	12	1.6	2.4	1.4
26	38	27	34	35	14	7.7	20	13	9.0	1.5	1.9	1.4
27	44	26	35	34	13		36	20	7.4	1.4	1.9	1.5
28	42	26	33	35	14		179	21	7.0	1.5	2.0	1.6
29	36	26	32	34	------	4.5	356	20	6.0	1.5	2.1	1.5
30	31	32	30	34	------		143	25	6.0	1.6	1.9	1.5
31	32	------	30	33	------		------	16	------	1.6	1.9	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,120	1.3	299	18,400
November	35	17	28.3	1,680
December	35	14	23.9	1,470
January	35	20	28.0	1,720
February	35	13	20.9	1,160
March	19	----------	10.5	646
April	356	----------	33.1	1,970
May	3,830	13	211	13,000
June	9,270	6.0	498	29,600
July	5.8	1.4	2.97	183
August	5.6	1.5	1.86	114
September	2.0	1.4	1.53	91
The year	9,270	1.3	96.8	70,000

CONCHO RIVER NEAR PAINT ROCK, TEX.

LOCATION.—Water-stage recorder at Concho, San Saba & Llano Valley Railroad bridge 2 miles northwest of Paint Rock, Concho County.

DRAINAGE AREA.—5,530 square miles.

RECORDS AVAILABLE.—September, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, about 26,900 second-feet June 14 (gage height, 15.50 feet); no flow July 5 to Aug. 26.

1915–1930: Maximum stage, 27.5 feet Apr. 27, 1922 (discharge not determined); no flow during several periods.

REMARKS.—Records for low stages good; for high stages fair. About 11,000 acres practically all above station, declared irrigated from Concho River. Flow during low stages materially affected by diversions and storage above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	1.6	29	20		29	4.3	0.3	160	109		0	1.1
2	1.5	29	20		30	4.0	.4	2,820	106		0	.9
3	1.2	29	21		30	4.6	.5	1,270	106	[a] 15	0	.8
4	1.0	28	22		30	6.4	.4	1,680	106		0	.7
5	.9	28	21		29	4.3	.4	956	104		0	.7
6	.7	25	22		29	3.5	.3	344	532	0	0	.7
7	.7	23	21		30	2.9	.3	143	115	0	0	.6
8	.7	27	20	[a] 30	29	2.1	.2	93	109	0	0	.4
9	.6	28	17		29	2.6	.1	64	104	0	0	489
10	.6	29	15		28	2.6	.1	62	104	0	0	79
11	.5	28	15		28	4.6	.1	60	101	0	0	27
12	.4	28	16		28	4.6	.2	58	101	0	0	13
13	.6	28	17		27	4.3	.2	54	4,260	0	0	7.2
14		27	19		24	149	.2	52	11,300	0	0	4.3
15		28	19		20	80	.3	257	6,860	0	0	4.0
16		27	19	33	15	8.6	.3	167	1,850	0	0	3.2
17	[a] 1,200	24	19	32	14	5.5	.2	115	[a] 240	0	0	2.4
18		24	19	29	14	5.5	.2	2,880		0	0	1.8
19		30	18	27	14	4.3	.3	1,270		0	0	1.6
20		32	14	24	14	1.8	.3	267		0	0	1.3
21		29	14	22	11	1.2	27	140		0	0	1.2
22	140	27	16	21	9.0	1.8	21	129		0	0	1.0
23	79	25	20	21	8.6	1.7	10	126		0	0	.8
24	52	27	23	21	10	1.1	6.4	120	[a] 15	0	0	.7
25	44	23	30	23	9.0	.7	4.6	118		0	0	.6
26	49	23	32	24	7.2	.5	73	115		0	0	.4
27	47	24	29	25	5.9	.4	287	115		0	8.6	.3
28	42	24		27	4.6	.4	86	112		0	5.5	.2
29	40	22	[a] 30	25	-------	.4	628	109		0	3.2	.3
30	37	20		28	-------	.4	342	106		0	1.7	.6
31	33	-------		30	-------	.3	-------	106	-------	0	1.5	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	----------	0.4	328	20,200
November	32	20	26.5	1,580
December	----------	----------	21.2	1,300
January	----------	----------	27.8	1,710
February	30	4.6	19.9	1,110
March	149	.3	10.1	621
April	628	.1	49.7	2,960
May	2,880	52	454	27,900
June	11,300	----------	880	52,400
July	----------	0	2.42	149
August	8.6	0	.66	41
September	489	.2	21.5	1,280
The year	11,300	0	154	111,000

[a] Estimated.

SPRING CREEK NEAR TANKERSLY, TEX.

LOCATION.—Water-stage recorder 2¾ miles above confluence with Middle Concho River and 6½ miles east of Tankersly, Tom Green County.
DRAINAGE AREA.—734 square miles.
RECORDS AVAILABLE.—February to September, 1930.
EXTREMES.—Maximum discharge during year, 1,660 second-feet Apr. 27 (gage height, 6.29 feet); no flow for several periods.
REMARKS.—Records good for low stages and poor for high stages. Several small diversions above station for irrigation; amount diverted not known.

Daily and monthly discharge, in second-feet, 1930

Day	Feb.	Mar.	Apr.	May	June	July	Day	Feb.	Mar.	Apr.	May	June	July
1	-------	1.3	1.8	19	8.1	0.2	16	2.0	0.9	0	4.9	72	0
2	-------	1.3	.1	24	2.3	.2	17	1.8	.7	0	3.1	22	0
3	-------	2.0	0	23	.8	0	18	1.5	.9	0	11	6.8	0
4	-------	2.0	0	21	.6	0	19	1.3	1.0	1.5	11	2.6	0
5	-------	3.1	0	24	.5	0	20	1.0	1.0	17	2.8	1.0	0
6	-------	2.3	.1	24	.2	0	21	.9	1.0	4.2	2.6	.6	0
7	-------	3.1	.1	22	0	0	22	.9	1.0	2.3	2.3	.4	0
8	-------	1.8	.1	16	.3	0	23	1.0	1.0	2.0	2.3	.2	0
9	-------	1.3	.8	15	.3	0	24	.9	1.0	2.0	1.5	.1	0
10	4.2	.8	.8	16	.3	0	25	1.0	1.3	2.6	.8	0	0
11	2.8	1.0	.9	14	.3	0	26	1.5	1.3	3.3	.6	0	0
12	2.3	1.8	.8	15	.2	0	27	1.5	.9	234	.4	0	0
13	2.3	2.0	.8	16	.2	0	28	1.0	.9	60	.4	0	0
14	1.8	1.5	.3	19	.1	0	29	-------	3.6	183	.4	.1	0
15	1.8	1.0	0	10	11	0	30	-------	8.7	33	75	.1	0
							31	-------	4.9	-------	29	-------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February 10-28	4.2	0.9	1.66	63
March	8.7	.7	1.82	112
April	234	0	18.4	1,090
May	75	.4	13.7	842
June	72	0	4.37	260
July	.2	0	.01	.6
The period				2,370

NOTE.—No flow during August and September.

NORTH CONCHO RIVER NEAR CARLSBAD, TEX.

LOCATION.—Water-stage recorder just above State Sanatorium Dam, 2 miles above Carlsbad, Tom Green County.

DRAINAGE AREA.—1,530 square miles.

RECORDS AVAILABLE.—March, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, about 63,600 second-feet June 13 (gage height, 18.2 feet); no flow during several periods.

1924–1930: Maximum discharge, that of June 13, 1930; no flow during several periods.

REMARKS.—Records for low stages fair and for high stages poor. Discharge estimated Dec. 16–23. Flow affected by pumping at low stage; capacity of pumps 40 second-feet but actual amount of water diverted not known. Low-water flow partly regulated by small reservoir above gage.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	3.8	3.8	3.8	4.5	2.5	3.8	5.1	5.8	2.2
2	0	3.8	3.8	3.2	4.5	2.5	3.8	5.1	5.8	2.2
3	0	3.8	3.2	3.2	5.1	3.2	3.8	4.5	5.8	1.7
4	0	3.2	3.8	3.2	4.5	3.2	3.2	581	5.8	1.9
5	0	3.8	3.8	3.2	3.8	2.5	3.2	222	5.1	1.9
6	0	3.8	3.8	3.2	3.8	3.2	2.5	29	5.1	1.9
7	0	3.8	3.8	3.8	3.8	3.8	2.5	13	5.1	1.9
8	0	4.5	3.8	3.8	3.8	3.2	2.5	10	5.1	.8
9	0	5.1	3.8	3.8	4.5	3.8	2.5	7.9	5.1	.7
10	0	5.1	3.8	3.8	4.5	3.8	2.2	5.8	4.5	.7
11	0	5.8	3.8	3.8	4.5	3.8	2.2	5.8	5.1	.7
12	0.1	8.9	3.8	3.8	3.8	3.2	2.5	5.8	5.1	.8
13	2,440	7.9	4.5	3.8	3.8	3.2	2.5	53	5,600	.7
14	853	6.8	5.1	4.5	4.5	3.8	3.2	18	278	.7
15	60	5.8	4.5	4.5	5.1	4.5	2.5	132	191	.3
16	19	5.8	4.5	3.8	5.1	4.5	2.5	22	18	.3
17	11	6.8		3.8	5.1	3.8	2.5	1,100	11	.3
18	6.8	16		3.8	4.5	4.5	2.2	2,090	6.8	.3
19	4.5	11		3.2	3.8	3.8	2.5	79	5.1	.1
20	188	10	3.8	3.8	3.2	3.8	2.5	22	4.5	.1
21	17	10		4.5	3.2	3.8	3.2	15	4.5	.1
22	6.8	11		4.5	3.8	4.5	2.5	11	4.5	0
23	5.8	12	3.8	4.5	3.8	3.2	2.2	5.8	4.5	0
24	5.1	12	3.8	4.5	3.8	3.2	2.2	5.1	4.5	0
25	4.5	15	3.8	4.5	2.5	3.2	3.8	5.1	3.2	0
26	3.8	15	3.8	4.5	2.2	3.2	3.8	5.8	2.5	0
27	4.5	17	3.8	4.5	2.5	3.2	3.8	5.8	2.5	0
28	4.5	12	3.8	5.1	2.5	4.5	39	5.8	3.2	0
29	3.8	3.8	3.8	5.8	-------	4.5	10	5.8	3.2	0
30	4.5	3.8	3.8	5.1	-------	3.8	4.5	5.8	2.5	0
31	4.5	-------	4.5	5.1	-------	3.8	-------	5.8	----------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,440	0	118	7,260
November	17	3.2	7.90	470
December	5.1	3.2	3.91	240
January	5.8	3.2	4.08	251
February	5.1	2.2	3.95	219
March	4.5	2.5	3.60	221
April	39	2.2	4.34	258
May	2,090	4.5	145	8,920
June	5,600	2.5	207	12,300
July	2.2	0	.54	33
The year	5,600	0	41.6	30,200

NOTE.—No flow during months for which no discharge is shown.

NORTH CONCHO RIVER AT SAN ANGELO, TEX.

LOCATION.—Water-stage recorder at concrete viaduct in San Angelo, Tom Green County, 1 mile above confluence with South Concho River.

DRAINAGE AREA.—1,800 square miles.

RECORDS AVAILABLE.—October, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, about 47,000 second-feet June 13 (gage height, 22.52 feet); no flow July 19 to Sept. 30.

1915–1930: Maximum discharge, that of June 13, 1929; no flow during several periods.

REMARKS.—Low-stage records good; high-stage records fair. Discharge partly estimated Oct. 15–19, May 18–26. Several small diversions above station; amount diverted not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0.8	1.7	1.4	2.0	4.0	2.6	3.8	10	4.5	2.3
2	.8	1.5	1.5	1.9	3.7	2.4	3.8	5.5	3.6	2.2
3	.8	1.3	1.5	1.7	4.0	2.4	4.0	4.2	3.4	2.2
4	.6	1.0	1.4	1.8	4.0	2.5	3.6	287	3.2	2.0
5	.6	1.0	1.3	2.1	3.6	4.8	3.2	705	3.0	1.9
6	.6	.8	1.4	2.0	2.8	5.2	3.1	100	4.2	1.7
7	.5	.6	1.8	2.2	2.5	3.4	3.0	46	2.5	1.4
8	.4	.4	2.3	2.6	2.4	2.8	2.8	28	2.4	1.1
9	.4	.6	2.1	2.8	2.2	2.3	2.5	20	2.8	1.0
10	.4	.8	2.3	2.8	1.9	2.1	2.3	12	2.5	1.0
11	.3	1.1	2.5	3.1	2.6	2.1	2.0	9.1	2.3	1.6
12	192	1.2	2.4	3.2	2.6	2.2	1.9	6.0	2.3	2.0
13	2,070	1.3	2.5	3.7	2.8	2.4	1.6	6.0	9,790	2.0
14	1,730	1.3	2.6	3.8	2.6	2.4	1.3	44	2,180	1.0
15	234	1.2	2.5	3.8	2.4	2.3	1.0	23	1,120	.6
16	53	1.2	2.5	2.6	2.3	2.1	1.1	22	233	.4
17	25	1.0	2.6	2.8	2.5	2.0	1.0	3.4	52	.2
18	17	.7	2.2	3.2	2.1	1.8	1.0	4,580	32	.1
19	12	.6	2.0	3.2	2.6	2.0	145	78	25	0
20	118	.5	2.0	3.7	3.0	2.1	21	18	19	0
21	62	.6	2.0	3.7	3.0	1.9	7.2	6.5	15	0
22	26	.6	2.0	3.7	3.2	1.8	3.6	6.0	12	0
23	12	.7	1.9	3.4	4.8	2.0	3.1	6.0	8.4	0
24	6.2	.7	2.0	3.6	3.4	2.1	2.8	5.8	7.8	0
25	4.5	.8	2.0	3.7	2.8	2.5	32	5.8	7.2	0
26	3.1	.9	2.0	3.8	2.5	2.5	12	5.6	5.2	0
27	3.2	.9	2.2	3.7	3.0	2.8	4.0	5.2	5.2	0
28	3.2	1.0	2.4	3.7	3.0	3.1	18	4.8	4.2	0
29	2.4	1.2	2.6	4.2	-------	3.6	160	4.8	3.4	0
30	2.0	1.2	2.5	4.0	-------	3.8	29	5.6	2.8	0
31	1.7	-------	2.2	4.0	-------	3.8	-------	5.2	-------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,070	0.3	148	9,100
November	1.7	.4	.95	57
December	2.6	1.3	2.08	128
January	4.2	1.7	3.11	191
February	4.8	1.9	2.94	163
March	5.2	1.8	2.64	162
April	160	1.0	16.0	952
May	4,580	3.4	196	12,100
June	9,790	2.3	452	26,900
July	2.3	0	.80	49
The year	9,790	0	68.7	49,800

NOTE.—No flow during months for which no discharge is shown

PECAN BAYOU AT BROWNWOOD, TEX.

LOCATION.—Water-stage recorder at Fort Worth & Rio Grande Railway bridge 1 mile north of Brownwood, Brown County. Zero of gage is 1,319.26 feet above mean sea level.

DRAINAGE AREA.—1,610 square miles.

RECORDS AVAILABLE.—May, 1917, to June, 1918; October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 22,300 second-feet May 13 (gage height, 14.65 feet); no flow during several periods.

1917–18, 1923–1930: Maximum discharge, 22,600 second-feet May 20, 1928 (gage height, 14.30 feet at old site); no flow during several periods.

REMARKS.—Records good. Discharge estimated July 10–18. 590 acres declared irrigated above station. Flow regulated during low stages by storage reservoirs and pumping plants above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Sept.
1	0	0	0	1.6	0	10	6.8	0
2	0	0	0	1.4	0	7.6	6.0	0
3	0	0	0	1.0	0	6.0	5.2	0
4	0	0	0	.6	198	3.6	3.6	0
5	0	0	0	.6	5,950	1.0	2.0	0
6	0	0	0	.6	268	4,640	1,030	0
7	0	0	0	.6	122	469	189	0
8	0	0	0	.4	358	145	74	0
9	0	170	0	0	387	78	21	593
10	0	54	0	0	396	38		1,550
11	0	17	0	0	91	25		2,410
12	0	6.8	0	0	17	17		217
13	1,050	4.4	0	0	16,000	12		78
14	1,620	2.0	0	0	10,500	709	5.0	41
15	640	1.2	302	22	364	1,070		27
16	282	.6	35	84	127	1,870		.6
17	140	0	12	17	70	304		0
18	51	0	6.8	6.8	9,820	127		0
19	25	0	3.6	2.8	7,320	67	0	0
20	35	0	2.8	2.8	424	48	0	0
21	14	0	3.6	1.6	165	38	0	0
22	7.6	0	2.8	1.2	85	32	0	0
23	14	0	17	.4	54	28	0	0
24	17	0	6.8	0	386	25	0	0
25	9.2	0	3.6	0	185	23	0	0
26	6.0	0	2.0	0	82	21	0	0
27	6.8	0	2.0	0	48	19	0	0
28	8.4	0	1.8	0	32	17	0	246
29	6.0	0	2.0	0	23	10	0	257
30	3.6	0	3.6	0	17	8.4	0	38
31	1.2		2.0		14		0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,620	0	127	7,810
November	170	0	8.53	508
March	302	0	13.2	812
April	84	0	4.85	289
May	16,000	0	1,730	106,000
June	4,640	1.0	329	19,600
July	1,030	0	44.6	2,740
September	2,410	0	182	10,800
The year	16,000	0	205	149,000

NOTE.—No flow during month, for which no discharge is given.

SAN SABA RIVER AT MENARD, TEX.

LOCATION.—Staff gage 1,000 feet above highway bridge in Menard, Menard County, and half a mile below mouth of Las Moras Creek.

DRAINAGE AREA.—1,150 square miles.

RECORDS AVAILABLE.—September, 1915, to September, 1930.

EXTREMES.—Maximum stage during year, 17.2 feet Oct. 13 (discharge not determined); no flow July 30 to Aug. 1.

1915–1930: Maximum stage, that of Oct. 13, 1929; no flow during several periods.

On June 5, 6, 1899, river reached a stage of 25.4 feet.

REMARKS.—Records fair for low stages and poor for high stages. Flow at low stages during irrigation season regulated by diversions to Noyes Canal, 4 miles above Menard. About 4,300 acres above and 7,700 acres below gage declared irrigated.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	14	18	23	8.3	9.0	17	7.5	1.9	1.7	0	0.6
2	7.9	14	23	23	8.3	8.7	17	6.4	1.9	1.1	.5	.4
3	7.9	14	32	22	8.7	11	17	6.4	.9	.9	.5	.3
4	7.9	14	32	22	8.7	11	17	78	.8	.5	.5	.3
5	7.9	14	32	24	7.5	11	18	38	.6	.5	.5	.4
6	7.5	14	34	24	8.7	13	29	28	1.5	.6	.6	.4
7	7.5	22	33	24	8.3	9.0	26	26	.9	.9	.5	.9
8	7.1	22	33	24	8.3	11	9.8	25	.7	.7	.4	1.5
9	7.1	14	27	24	5.7	13	6.0	20	.5	1.0	.2	1,820
10	7.1	16	17	24	5.7	13	4.2	14	.6	1.0	.2	130
11	7.9	15	22	24	5.4	14	4.2	18	.7	.8	.4	135
12	7.9	13	37	25	5.4	13	4.8	10	.7	.7	.4	46
13	3,510	15	33	26	5.4	13	4.8	6.4	.7	.6	.7	17
14	201	17	22	27	5.4	14	4.5	112	79	.5	1.1	5.4
15	131	17	21	26	5.4	16	3.9	39	2,400	.5	.9	3.3
16	170	13	18	25	5.1	14	4.8	13	322	.5	.7	1.9
17	70	13	15	25	5.1	11	4.8	7.9	58	.5	.3	1.3
18	41	14	16	25	5.1	9.0	4.8	7.1	21	.4	.8	.9
19	43	16	15	24	5.1	9.4	4.8	4.2	14	.4	.5	.8
20	17	17	16	24	5.1	11	4.5	3.6	14	.5	.5	.9
21	16	15	16	24	5.1	12	4.2	3.3	13	.5	.4	.9
22	13	15	22	24	5.4	10	3.9	2.0	11	.4	.3	.8
23	13	14	21	27	10	13	3.9	1.9	7.1	.3	.2	.9
24	15	14	21	29	9.8	13	4.2	1.9	6.8	.5	.2	3.0
25	15	15	21	33	9.4	12	5.1	1.5	5.1	.5	.4	8.3
26	14	14	21	35	10	12	6.4	1.5	3.6	.5	.9	7.9
27	14	13	22	35	9.0	13	28	1.1	5.4	.5	.9	6.8
28	15	17	21	23	6.8	18	9.0	.8	3.6	.4	.6	9.4
29	14	16	21	17	-------	18	9.0	1.3	2.6	.2	.4	10
30	14	17	21	9.8	-------	18	9.0	.9	1.9	0	.3	9.4
31	14	-------	22	9.8	-------	18	-------	2.2	-------	0	.7	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,510	7.1	143	8,790
November	22	13	15.3	910
December	37	15	23.4	1,440
January	35	9.8	24.2	1,490
February	10	5.1	7.01	389
March	18	8.7	12.6	775
April	29	3.9	9.65	574
May	112	.8	15.8	972
June	2,400	.5	99.4	5,910
July	1.7	0	.58	36
August	1.1	0	.50	31
September	1,820	.3	74.2	4,420
The year	3,510	0	35.5	25,700

SAN SABA RIVER NEAR SAN SABA, TEX.

LOCATION.—Staff gage 200 feet above Beveridge highway bridge and 2 miles northwest of San Saba, San Saba County.

DRAINAGE AREA.—3,040 square miles.

RECORDS AVAILABLE.—December, 1904, to December, 1906; September, 1915, to August, 1930 (discontinued).

EXTREMES.—Maximum discharge during year, 8,640 second-feet Oct. 14 (gage height, 23.85 feet); no flow July 17–20, 31.

1904–1906, 1915–1930: Maximum stage, about 37.0 feet Apr. 26, 27, 1922 (discharge not determined); no flow Aug. 9, 10, 1918, July 17–20, 31, 1930.

REMARKS.—Records good. Considerable water is diverted above gage for irrigation and municipal use; amount not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	41	52	42	60	67	50	53	68	32	21	8.2
2	41	46	40	60	67	48	46	50	32	24	14
3	41	43	40	57	68	44	46	40	28	17	20
4	41	42	40	54	76	49	46	36	27	13	15
5	37	38	40	54	66	42	44	340	21	13	14
6	34	38	40	54	66	40	44	542	207	16	13
7	36	38	42	54	55	35	43	198	72	16	16
8	36	41	44	54	52	33	38	126	36	13	14
9	36	45	46	54	55	38	41	78	34	11	17
10	36	53	46	54	58	36	36	1,640	32	18	18
11	36	60	49	60	55	33	41	752	31	14	18
12	36	50	55	62	55	40	38	188	31	14	16
13	38	50	57	66	52	36	36	132	32	19	14
14	4,990	60	60	66	49	36	36	158	49	16	12
15	725	60	61	64	46	36	61	107	276	9.8	9.8
16	380	49	57	60	48	40	45	76	1,970	4.9	12
17	198	44	57	60	50	37	42	215	1,250	0	18
18	230	44	55	58	53	45	37	881	402	0	18
19	158	44	53	45	52	41	32	405	251	0	12
20	107	46	52	55	45	34	28	142	158	0	12
21	96	46	61	60	57	37	22	88	117	13	13
22	88	49	70	62	57	49	21	87	90	6.1	13
23	75	49	75	42	52	46	17	58	73	4.0	14
24	73	46	76	60	53	44	20	53	52	5.5	16
25	70	49	73	64	58	37	20	48	38	9.8	18
26	66	52	75	64	61	35	22	44	31	9.8	17
27	64	49	75	64	62	38	25	41	29	14	16
28	124	49	70	64	57	38	134	37	29	14	16
29	82	48	64	66	-------	41	146	35	30	5.2	16
30	61	44	62	70	-------	41	70	35	24	.4	------
31	54	-------	60	68	-------	43	-------	33	-------	0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,990	34	262	16,100
November	60	38	47.5	2,830
December	76	40	56 0	3,440
January	70	42	59.2	3,640
February	76	45	56.9	3,160
March	50	33	40.1	2,470
April	146	17	44.3	2,640
May	1,640	33	217	13,300
June	1,970	21	183	10,900
July	24	0	10.4	640
August 1–29	20	8.2	14.8	851
The period				60,000

SAN SABA RIVER AT SAN SABA, TEX.

LOCATION.—Water-stage recorder at San Saba-Chadwick Mill highway bridge, three-fourths mile northeast of San Saba, San Saba County, and 15 miles above confluence with Colorado River. Zero of gage is 1,152.4 feet above mean sea level.

DRAINAGE AREA.—3,050 square miles.

RECORDS AVAILABLE.—August and September, 1930. Comparable records at site 4¼ miles upstream, from December, 1904, to December, 1906, and September, 1915, to August, 1930.

EXTREMES.—Maximum discharge during year, 3,060 second-feet Sept. 10 (gage height, 14.88 feet); minimum, 15 second-feet Aug. 29 (gage height, 3.00 feet). 1904–1906, 1915–1930: Maximum stage, 42.1 feet on present gage Apr. 26, 1922 (discharge not determined); no flow Aug. 9, 10, 1918.

REMARKS.—Records good. Considerable water is diverted above gage for irrigation and municipal use; amount not known.

Daily and monthly discharge, in second-feet, 1930

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1		17	11		774	21		35
2		17	12		222	22		33
3		18	13		138	23		31
4		18	14		142	24		28
5		18	15		106	25		26
6		19	16		76	26		24
7		20	17		62	27		22
8		21	18		53	28	17	22
9		25	19		47	29	17	25
10		1,250	20		42	30	17	27
						31	17	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
September	1,250	17	112	6,660

NOYES CANAL AT MENARD, TEX.

LOCATION.—Staff gage 1,000 feet above highway bridge in Menard, Menard County, and 4 miles below head gates.

RECORDS AVAILABLE.—March, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 37 second-feet Dec. 17, 18 (gage height, 1.90 feet); no flow during several periods.

1924–1930: Maximum discharge, 55 second-feet May 12, June 13, 1927; no flow during several periods.

REMARKS.—Records good. Canal diverts from San Saba River 4 miles above Menard. Water used for irrigation near Menard; 10 acres irrigated above station. Flow regulated at head gates.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	0	17	10	24	20	15	20	21	20	18	17
2	16	0	1.1	10	24	20	15	18	21	17	18	17
3	16	0	0	10	22	20	15	18	21	17	18	16
4	16	0	0	10	24	18	15	18	21	18	18	16
5	16	20	0	12	21	18	8.2	0	18	17	20	16
6	16	18	0	12	20	18	0	0	20	20	16	16
7	16	16	0	11	20	17	6.0	0	21	22	18	17
8	16	15	0	11	21	16	16	0	24	21	15	17
9	16	15	0	11	24	15	17	8.3	21	20	17	28
10	16	0	16	11	22	15	16	22	20	20	17	28
11	15	7.0	15	11	22	15	16	29	21	18	18	25
12	15	20	16	10	22	16	20	26	22	20	10	24
13	12	15	16	9.8	22	15	18	22	24	15	18	22
14	0	15	16	9.8	22	15	18	26	24	14	14	17
15	0	15	16	9.8	22	15	18	26	25	18	15	17
16	0	17	15	9.8	22	17	18	24	20	17	15	17
17	0	15	26	9.8	22	18	18	22	17	17	17	17
18	0	14	37	9.8	22	17	18	22	16	17	15	17
19	0	11	33	9.8	22	17	18	21	16	17	15	17
20	0	8.6	25	8.8	22	16	18	21	16	21	16	20
21	0	12	14	8.2	22	17	17	21	16	24	15	21
22	0	9.6	14	8.4	21	17	17	20	16	21	15	21
23	0	5.6	15	3.1	21	17	17	20	20	17	16	21
24	18	26	15	0	21	17	17	20	21	16	17	0
25	21	28	15	0	20	16	17	20	20	16	20	0
26	0	25	13	0	20	15	18	20	20	18	20	0
27	0	28	12	0	21	15	20	20	22	18	18	0
28	0	20	12	24	21	15	20	20	22	14	18	0
29	0	17	12	24	------	15	20	18	22	8.2	18	9
30	0	17	11	24	------	15	20	25	21	17	17	0
31	0	------	10	24	------	15	------	25	------	17	17	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (15 days)	21	12	16.1	478
November (25 days)	28	5.6	16.4	813
December (24 days)	37	10	16.3	778
January (27 days)	24	3.1	11.9	639
February	24	20	21.8	1,210
March	20	15	16.5	1,010
April (29 days)	20	6.0	16.8	964
May (27 days)	29	8.3	21.2	1,140
June	25	16	20.3	1,210
July	24	8.2	17.8	1,090
August	20	10	16.7	1,030
September (23 days)	28	16	19.3	881
The year				11,200

NORTH LLANO RIVER NEAR JUNCTION, TEX.

LOCATION.—Water-stage recorder 500 feet above remains of old Wilson Dam and 3 miles northwest of Junction, Kimble County.

DRAINAGE AREA.—914 square miles.

RECORDS AVAILABLE.—September, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, 3,280 second-feet Apr. 24 (gage height, 5.45 feet); no flow during several periods.

1915–1930: Maximum discharge, about 43,100 second-feet Apr. 24, 1923 (gage height, 23 feet); no flow during several periods.

REMARKS.—Records good except those for estimated periods, which are poor. Some water diverted above station for irrigation; amount not known. During low stage diversions materially reduce flow.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	6.6	7.7	13	10	7.7	7.7	12	2.0	3.5	1.4	.0
2	1.8		7.7	13	9.2	8.4	7.7	11	1.3	2.1	.8	0
3	1.6			13	9.2	9.2	7.7	11	1.5	e2.0	.6	0
4	1.5			13	8.4	8.4	7.7	9.2	1.3	1.8	.6	0
5	1.5			13	8.4	8.4	7.7	8.4	1.3	1.6	.5	0
6	1.2			13	8.4	7.7	7.7	8.4	1.2	1.8	.5	0
7	1.2			13	8.4	7.7	7.7	8.4	1.3	1.8	.2	0
8	1.0		e8.0	12	7.7	7.0	7.0	7.0	1.5	1.6	0	63
9	1.0			12	7.7	7.0	6.1	7.0	1.6	1.3	0	31
10	.9			12	7.7	7.0	6.1	28	1.2	1.0	.2	9.2
11	.8			12	7.7	7.0	6.1	22	.8	.9	.2	3.0
12	.8			12	7.7	7.0	6.1	13	1.3	.8	.3	1.3
13	57			12	7.7	6.6	6.1	11	2.6	.7	.3	.9
14	11		17	12	7.0	6.6	6.1	132	2.6	.6	.3	.8
15	4.4		15	11	7.0	6.6	5.7	27	7.0	.6	.1	.7
16	2.3	e97.2	15	11	7.7	6.6	4.8	18	257	.2	0	.4
17	1.6		15	11	7.0	6.1	4.8	16	161	0	0	0
18	1.2		15	11	6.6	6.6	4.8	14	69	0	0	0
19	1.0		14	11	7.0	7.0	4.4	12	39	0	.2	.3
20	34		14	11	7.0	7.0	4.8	10	30	0	.2	.5
21	9.2		15	11	7.0	12	3.9	8.4	26	0	.2	.5
22	6.6		15	11	7.0	9.2	3.5	7.7	21	0	.2	.5
23	5.7		14	11	7.0	7.7	3.5	7.7	17	.2	.2	.5
24	e5.7		14	11	6.6	7.7	574	6.1	14	.3	.2	.5
25			14	11	6.6	7.7	62	3.9	13	0	.2	.5
26	e6.7		14	11	7.0	7.7	27	3.5	13	0	.2	.5
27			14	11	7.7	7.7	20	2.4	11	0	.2	.5
28			13	11	8.4	8.4	15	2.1	10	.2	.1	.5
29	7.7		13	11	-------	8.4	14	2.3	7.0	.4	0	.6
30	7.0		13	10	-------	7.7	13	2.0	5.2	.4	0	.6
31	7.0	-------	13	10	-------	7.7	-------	1.6	-------	6.7	0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	57	0.8	6.56	403
November	----------	----------	7.18	427
December	----------	----------	11.6	713
January	13	10	11.6	713
February	10	6.6	7.67	426
March	12	6.1	7.66	471
April	574	3.5	28.8	1,710
May	132	1.6	14.0	861
June	257	.8	24.1	1,430
July	6.7	0	.98	60
August	1.4	0	.25	15
September	63	0	3.88	231
The year	574	0	10.3	7,460

e Estimated.

LLANO RIVER NEAR JUNCTION, TEX.

LOCATION.—Water-stage recorder 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.

RECORDS AVAILABLE.—September, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, 2,770 second-feet Apr. 24 (gage height, 4.20 feet); minimum, 31 second-feet Sept. 2–8 (gage height, 1.40 feet).

1915–1930: Maximum discharge, about 98,800 second-feet Sept. 16, 1915 (gage height, 26.3 feet); minimum, 13 second-feet Aug. 23–28, 1918 (gage height, 1.32 feet).

REMARKS.—Low-stage records good; high-stage records fair. About 2,500 acres above and 1,300 acres below station declared irrigated. Diversions slightly reduce flow at station during low stages. Slight regulation by water-power plant on South Llano River.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	58	58	69	60	48	48		50	58	39	33
2	48	55	58	69	60	48	48	*50	50	58	104	31
3	48	55	58	66	60	48	48		50	58	72	31
4	48	55	58	69	60	46	48	50	50	58	66	31
5	48	55	58	69	60	48	46		50	55	63	31
6	48	55	58	69	60	48	48		50	55	63	31
7	48	55	58	72	58	48	48		50	52	60	31
8	48	55	60	72	58	48	46		50	52	58	31
9	46	55	60	74	58	48	46	*49	50	52	58	35
10	46	55	60	74	58	48	46		50	50	58	55
11	48	55	60	80	58	48	46		46	50	58	52
12	48	55	63	80	58	48	46		46	50	58	52
13	*116	55	74	80	55	48	46	48	46	50	58	48
14		55	80	80	55	48	44	112	46	48	58	46
15	44	55	84		55	48	44	170	58	46	58	46
16	46	58	80		55	48	50	134	362	46	60	48
17	46	55	77		58	48	48	109	360	46	52	46
18	46	55	77	*72	58	46	46	109	203	46	50	48
19	46	52	80		58	46	44	98	147	44	48	48
20	*92	52	77		55	46	44	84	120	44	44	46
21		52	77		55	46	44	77	109	42	44	44
22	48	52	77		55	48	44	74	102	42	42	44
23	48	52	77	63	55	48	44	72	91	39	39	42
24	48	52	77	63	55	48	388	69	80	39	39	42
25	48	52	74	63	55	48	106	66	74	39	37	42
26	48	52	74	63	50	48	63	60	69	39	37	42
27	50	55	74	63	52	48	55	60	63	39	37	42
28	52	55	74	63	48	48		60	63	39	37	42
29	55	55	74	63	------	48	*48	55	63	39	35	42
30	52	58	72	63	------	48		50	60	39	33	42
31	55	------	69	63	------	48	------	50	------	37	35	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	----------	44	55.5	3,410
November	58	52	54.5	3,240
December	84	58	69.6	4,280
January	----------	----------	69.9	4,300
February	60	48	56.5	3,140
March	48	46	47.7	2,930
April	388	44	60.6	3,610
May	170	----------	69.3	4,260
June	362	46	90.3	5,370
July	58	37	46.8	2,880
August	104	33	51.6	3,170
September	55	31	41.4	2,460
The year	388	31	59.5	43,000

* Estimated.

LLANO RIVER NEAR CASTELL, TEX.

LOCATION.—Water-stage recorder installed Sept. 3, 4 miles above mouth of Hickory Creek and 6 miles east of Castell, Llano County. Prior to Sept. 3 a staff gage at same location was used.

DRAINAGE AREA.—3,510 square miles.

RECORDS AVAILABLE.—November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 49,000 second-feet June 13 (gage height, 15.70 feet); minimum, 17 second-feet Aug. 30 to Sept. 5.

1923–1930: Maximum discharge, about 59,500 second-feet May 30, 1925 (gage height, 16.8 feet); minimum, 16 second-feet Aug. 17, Sept. 4, 5, 1929 (gage height, 0.59 foot).

REMARKS.—Records good. Several small diversions above station; amount diverted not known. Diversions slightly reduce flow during low stages.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	60	57	88	74	63	67	124	46	57	18	17
2	28	57	54	82	75	60	64	98	44	53	28	17
3	27	53	56	79	80	59	62	82	41	49	39	17
4	26	49	54	79	73	57	62	72	41	44	53	17
5	26	48	56	79	73	57	60	67	39	41	42	17
6	26	47	57	79	73	60	58	62	41	40	151	20
7	25	42	57	76	71	59	56	57	38	40	40	20
8	25	46	59	76	70	58	52	54	37	39	31	20
9	24	60	59	81	69	57	47	50	471	39	27	20
10	24	61	59	76	67	57	45	62	210	38	24	2,680
11	25	71	61	76	67	56	42	325	104	46	22	580
12	24	82	63	79	66	54	41	204	75	41	21	212
13	52	82	66	82	66	54	41	426	12,600	37	20	162
14	269	93	79	82	66	54	42	252	1,350	35	19	110
15	136	88	98	81	66	56	42	136	820	34	17	88
16	104	75	104	76	66	56	46	93	870	32	19	71
17	69	60	98	76	63	60	49	116	330	28	31	62
18	58	58	93	98	63	62	251	1,200	360	28	26	54
19	52	57	88	88	63	61	145	644	360	27	69	51
20	147	56	98	78	63	59	88	204	252	26	47	48
21	125	57	110	80	64	59	68	136	190	24	31	47
22	82	58	124	68	64	64	57	104	169	23	22	45
23	61	58	124	66	67	98	51	93	143	23	20	33
24	52	58	124	70	67	82	49	81	130	23	20	40
25	48	60	110	82	71	67	58	76	117	22	20	39
26	53	63	104	81	68	60	279	76	104	21	18	35
27	110	67	104	76	68	62	123	67	98	20	18	34
28	130	67	98	76	69	68	136	59	88	19	18	38
29	93	64	93	76	-------	69	136	56	76	18	18	42
30	78	58	88	74	-------	69	143	52	63	18	17	42
31	71	-------	88	72	-------	67	-------	49	--------	18	17	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	269	24	67.7	4,160
November	93	42	61.8	3,680
December	124	54	83.3	5,120
January	98	66	78.5	4,830
February	80	63	68.3	3,790
March	98	54	62.1	3,820
April	279	41	82.0	4,880
May	1,200	49	167	10,300
June	12,600	37	644	38,300
July	57	18	32.4	1,990
August	151	17	31.1	1,910
September	2,680	17	156	9,280
The year	12,600	17	127	92,100

PEDERNALES RIVER AT STONEWALL, TEX.

LOCATION.—Staff gage at Stonewall, Gillespie County, 2 miles below mouth of South Grape Creek. Zero of gage is 1,418.85 feet above mean sea level.

DRAINAGE AREA.—647 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, about 31,100 second-feet May 18 (gage height, 12.50 feet); minimum, 2.1 second-feet Sept. 8 (gage height, 0.36 foot).

1924–1930: Maximum discharge, about 38,100 second-feet May 28, 1929 (gage height, 14.25 feet); minimum, 1.8 second-feet July 30, 31, 1925 (gage height, 0.33 foot).

River reached a stage of about 24.0 feet in 1900.

REMARKS.—Records good. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	3.5	3.9	4.3	4.3	4.1	7.5	25	15	6.0	2.4	2.3
2	3.3	3.5	3.7	4.3	5.2	3.9	7.5	16	15	4.5	3.1	2.3
3	3.3	3.5	3.9	4.3	6.8	3.9	7.5	12	12	4.5	3.3	2.4
4	3.1	3.5	3.9	4.3	6.8	3.9	6.0	10	12	4.1	2.9	2.3
5	3.3	3.5	3.9	4.3	6.0	3.9	6.0	9.0	11	4.1	2.7	2.3
6	3.3	3.5	3.9	4.3	5.2	3.9	6.0	15	10	4.1	2.4	2.3
7	3.1	3.5	3.9	4.3	5.2	3.9	4.5	12	9.0	3.9	2.4	2.3
8	2.9	4.1	3.9	4.3	4.3	3.9	4.5	9.0	9.0	9.0	2.4	2.2
9	3.1	4.3	3.9	4.5	4.3	3.9	4.5	9.0	9.0	6.8	2.4	2.4
10	3.3	4.3	3.9	4.3	4.3	3.9	4.3	3,440	7.5	8.2	2.4	325
11	3.3	4.3	3.9	4.3	4.3	3.9	4.3	330	7.5	3.9	2.3	9.0
12	3.3	6.0	3.9	4.5	4.3	3.9	4.3	80	10	3.9	2.2	4.1
13	3.3	42	4.3	4.5	4.3	3.9	4.1	77	1,540	3.5	2.2	3.7
14	3.3	13	33	4.5	4.3	4.3	4.1	46	263	3.1	2.3	4.1
15	3.3	6.8	35	4.5	4.1	4.3	4.1	35	60	3.1	2.2	4.1
16	3.3	5.2	16	4.3	3.9	4.3	4.5	32	55	2.9	2.7	3.9
17	5.2	4.3	9.0	4.3	3.9	5.2	4.3	25	39	2.7	2.7	3.7
18	3.9	4.3	6.8	4.3	3.9	6.0	4.3	10,500	28	2.7	2.9	3.7
19	3.7	4.1	5.2	4.3	3.9	5.2	4.1	514	21	2.7	2.7	3.7
20	24	3.9	4.3	4.5	3.9	5.2	4.1	144	16	2.7	2.7	3.7
21	6.8	3.9	6.0	4.3	3.9	5.2	4.1	85	13	2.7	2.7	3.7
22	4.1	4.3	6.0	4.3	4.1	54	4.1	64	11	2.4	2.7	3.7
23	3.5	3.9	6.0	4.3	4.1	40	4.1	53	9.8	2.5	2.7	3.7
24	3.5	3.9	5.2	4.3	4.1	21	4.1	55	9.0	2.5	2.7	4.1
25	3.1	6.8	5.2	4.3	4.3	11	4.3	40	9.0	2.4	3.1	4.1
26	3.5	6.0	5.2	4.3	4.3	9.0	4.5	34	8.2	2.4	2.9	6.0
27	9.0	6.8	5.2	4.3	4.3	11	4.1	28	6.8	2.4	2.7	3.9
28	5.2	5.2	4.5	4.3	4.3	10	4.5	25	6.0	2.4	2.5	3.7
29	6.8	4.3	4.3	4.3	-------	10	40	22	6.0	2.4	2.2	3.7
30	4.5	4.3	4.3	4.3	-------	8.2	58	21	6.0	2.4	2.2	3.7
31	3.9	-------	4.3	4.3	-------	7.5	-------	18	---------	2.4	2.2	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	24	2.9	4.60	283
November	42	3.5	6.02	358
December	35	3.7	6.98	429
January	4.5	4.3	4.34	267
February	6.8	3.9	4.52	251
March	54	3.9	8.78	540
April	58	4.1	7.74	461
May	10,500	9.0	509	31,300
June	1,540	6.0	74.5	4,430
July	9.0	2.4	3.65	224
August	3.3	2.2	2.58	159
September	325	2.2	14.3	851
The year	10,500	2.2	54.6	39,600

PEDERNALES RIVER NEAR SPICEWOOD, TEX.

LOCATION.—Staff gage 2½ miles below mouth of Fall Creek and 8 miles southeast of Spicewood, Burnet County.
DRAINAGE AREA.—1,290 square miles.
RECORDS AVAILABLE.—November, 1923, to September, 1930.
EXTREMES.—Maximum discharge during year, about 36,600 second-feet May 10 (gage height, 18.50 feet); no flow Aug. 15 to Sept. 11.
1923–1930: Maximum discharge, about 155,000 second-feet May 28, 1929 (gage height, 40.4 feet); no flow during several periods.
REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929-30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	12	22	22	18	13	27	7.0	66	17	1.6	0
2	2.3	10	21	21	18	13	25	7.5	61	13	1.6	0
3	1.9	8.5	19	20	19	13	22	7.5	57	10	1.6	0
4	1.7	7.0	18	19	20	13	20	7.5	55	9.2	1.4	0
5	1.5	6.3	18	19	20	13	18	14	46	8.0	1.4	0
6	1.5	6.3	16	18	20	12	17	35	57	6.8	1.6	0
7	1.3	6.6	17	18	20	12	16	227	55	4.8	2.0	0
8	1.3	15	18	18	20	11	15	102	49	4.4	1.9	0
9	1.5	67	18	18	20	10	14	62	44	6.2	1.7	0
10	1.9	80	19	16	18	10	14	13,400	41	5.0	1.3	0
11	1.9	62	20	17	18	9.5	13	3,060	39	4.6	.9	0
12	1.9	42	21	18	17	9.5	11	528	38	4.6	.7	119
13	2.3	136	22	19	17	9.5	9.5	284	58	12	.4	60
14	2.3	100	22	19	17	9.5	9.5	212	626	14	.2	38
15	2.3	74	27	19	17	9.5	8.5	176	284	12	0	26
16	2.7	53	94	19	17	9.5	8.5	148	158	13	0	16
17	3.1	37	96	19	17	10	8.5	132	119	12	0	10
18	3.5	26	76	19	15	13	7.5	6,040	89	9.2	0	6.2
19	3.1	22	49	18	15	15	7.0	7,630	76	6.8	0	4.2
20	2.5	20	35	18	14	26	6.3	430	65	5.0	0	3.2
21	2.1	15	34	18	14	32	5.6	240	56	4.4	0	2.7
22	1.9	16	31	18	14	25	5.2	176	50	4.0	0	2.4
23	1.9	16	27	20	14	20	5.2	576	44	3.6	0	2.3
24	1.7	15	25	20	14	18	4.9	328	38	3.2	0	2.1
25	1.5	18	26	18	14	15	4.9	128	33	2.8	0	1.8
26	1.5	21	28	18	12	13	6.0	109	27	2.6	0	3.6
27	5.2	21	30	18	12	20	6.0	100	26	2.2	0	4.8
28	3.8	24	27	19	12	37	6.3	87	24	2.2	0	6.8
29	5.2	28	26	19	-------	37	8.5	80	20	2.0	0	4.8
30	7.5	26	24	18	-------	35	7.0	75	17	1.8	0	3.4
31	9.5	-------	22	18	-------	34	-------	72	-------	1.7	0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	9.5	1.3	2.72	167
November	136	6.3	33.0	1,960
December	96	16	30.6	1,880
January	22	16	18.6	1,140
February	20	12	16.5	916
March	37	9.5	17.0	1,050
April	27	4.9	11.2	666
May	13,400	7.0	1,110	68,200
June	626	17	80.6	4,800
July	17	1.7	6.71	413
August	2.0	0	.59	36
September	119	0	10.6	631
The year	13,400	0	113	81,900

ONION CREEK NEAR DEL VALLE, TEX.

LOCATION.—Staff gage at Del Valle-Creedmore highway crossing, 2 miles below mouth of Williamson Creek and 2½ miles southwest of Del Valle, Travis County.

DRAINAGE AREA.—337 square miles.

RECORDS AVAILABLE.—May, 1924, to March, 1930 (discontinued).

EXTREMES.—Maximum discharge during period, 701 second-feet Dec. 15 (gage height, 7.40 feet); minimum, 1.2 second-feet Oct. 11.

1924–1930: Maximum discharge, 76,000 second-feet May 28, 1929 (gage height, 24.75 feet); no flow during several periods.

REMARKS.—Monthly records fair. Record of daily discharge not sufficiently accurate for publication. No diversions above station.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5.0	1.6	2.67	164
November	59	1.8	6.27	373
December	336	1.4	14.4	885
January	17	2.9	4.72	290
February	33	2.9	7.10	394
March 1–15	9.5	3.8	4.85	144
The period				2,250

GUADALUPE RIVER BASIN

GUADALUPE RIVER NEAR COMFORT, TEX.

LOCATION.—Staff gage at low-water bridge and dam on State highway 27, 2.6 miles west of Comfort, Kendall County.

DRAINAGE AREA.—916 square miles.

RECORDS AVAILABLE.—December, 1917, to September, 1930.

EXTREMES.—Maximum stage during year, 15.0 feet May 18 (discharge not determined); minimum discharge, 9.2 second-feet Aug. 14, 15, 18 (gage height, 1.42 feet).

1917–1930: Maximum stage from floodmarks, about 41 feet Aug. 21, 1919 (discharge not determined); minimum discharge, about 0.40 second-foot Aug. 2, 1918 (gage height, 0.80 foot).

REMARKS.—Records fair. Discharge estimated Apr. 6–20, 22–26. Some water diverted above station for irrigation; amount not known. Several pumping plants 8 miles upstream. Small water plants upstream partly regulate low-water flow.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	28	31	41	36	35	37	51	41	34	16	14
2	26	30	30	41	37	35	37	47	38	30	13	13
3	24	25	30	38	41	34	37	44	37	25	12	12
4	22	25	34	38	42	33	37	42	37	27	16	14
5	21	23	31	42	41	33	37	46	35	27	16	14
6	21	22	31	41	40	30		86	33	25	17	13
7	19	23	31	41	37	38		75	33	22	16	12
8	18	24	36	41	37	35		58	35	22	15	13
9	18	31	34	43	37	35		66	51	58	14	23
10	20	31	41	41	35	30		676	40	53	13	18
11	20	31	38	41	38	30		298	36	31	12	28
12	21	36	36	42	37	30		128	50	33	11	36
13	21	35	48	41	40	27	35	113	146	27	11	28
14	21	31	77	41	37	33		104	282	25	9.2	24
15	22	30	115	41	37	35		71	318	25	9.2	27
16	38	28	71	41	37	37		64	184	22	9.9	17
17	48	28	59	38	35	35		86	139	20	9.9	17
18	33	25	59	40	35	52		8,920	108	20	9.2	15
19	29	24	51	37	37	47		589	88	18	11	14
20	25	22	47	37	34	44		162	75	18	13	14
21	22	24	46	40	34	40	33	110	68	19	15	14
22	22	24	48	40	36	35		90	61	17	15	15
23	22	28	53	47	38	71		71	58	17	13	15
24	22	31	48	37	37	44	35	68	52	17	14	15
25	21	36	48	37	40	40		55	51	16	15	15
26	22	41	48	40	38	37		55	47	15	14	17
27	30	37	48	42	38	41	40	50	42	15	16	17
28	50	37	46	42	37	41	44	47	40	16	15	17
29	41	31	46	42	------	46	70	47	38	15	15	17
30	34	31	46	40	------	46	59	44	33	15	14	17
31	31	------	46	37	------	41	------	42	------	16	14	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	50	18	26.1	1,600
November	41	22	29.1	1,730
December	115	30	46.9	2,880
January	47	37	40.3	2,480
February	42	34	37.4	2,080
March	71	27	38.4	2,360
April			37.7	2,240
May	8,920	42	400	24,600
June	318	33	76.5	4,550
July	58	15	23.9	1,470
August	17	9.2	13.3	818
September	36	12	17.5	1,040
The year	8,920	9.2	66.1	47,800

GUADALUPE RIVER NEAR SPRING BRANCH, TEX.

LOCATION.—Water-stage recorder at New Braunfels-Blanco highway bridge 4 miles southeast of Spring Branch, Comal County.

DRAINAGE AREA.—1,430 square miles.

RECORDS AVAILABLE.—June, 1922, to September, 1930.

EXTREMES.—Maximum discharge during year, 13,300 second-feet June 12 (gage height, 15.80 feet); minimum, 14 second-feet Aug. 22–24, Sept. 8, 9.

1922–1930: Maximum discharge, about 19,800 second-feet Apr. 21, 1926 (gage height, 20.70 feet); minimum, about 4.7 second-feet Aug. 18, 1923 (gage height, about 1.74 feet).

REMARKS.—Records good except those for Dec. 18–24 and Jan. 10–21, which were estimated. Discharge partly estimated May 19–25. About 400 acres declared irrigated above station. Slight regulation during low water caused by operation of water-power plant upstream.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	53	51	59	57	56	62	57	86	110	30	16
2	24	51	50	56	57	57	62	69	80	105	30	17
3	24	48	48	54	59	51	59	62	75	100	30	17
4	24	57	47	50	64	50	54	62	75	93	31	16
5	23	45	47	47	65	48	57	54	71	88	27	16
6	25	40	45	48	64	47	53	2,740	71	82	26	15
7	25	40	47	51	61	48	47	737	69	80	25	15
8	25	44	47	59	59	48	45	219	62	82	21	14
9	24	38	47	62	59	45	43	125	57	86	21	14
10	23	54	44		56	48	43	923	61	76	22	29
11	23	51	44		53	48	37	973	82	100	22	30
12	22	51	44		53	48	41	776	2,100	113	21	32
13	23	51	45		56	47	43	872	3,340	91	19	24
14	27	47	51		54	44	41	428	404	80	18	19
15	29	47	152		251	51	43	223	479	76	17	17
				60								
16	29	54	160		67	51	41	252	1,410	75	16	21
17	29	48	122		57	51	45	205	606	71	16	22
18	32	47			56	57	43	198	433	65	15	21
19	41	44			53	57	40	1,500	349	64	15	20
20	47	44			54	71	38	566	294	61	20	20
			94									
21	54	45			53	71	38	298	252	54	17	18
22	40	43		57	54	62	38	219	230	53	14	17
23	33	41		59	54	59	36	190	212	50	14	17
24	29	40		56	54	56	38	169	194	47	14	16
25	29	47	67	56	56	71	40	162	180	44	15	16
26	32	53	65	56	53	69	44	137	162	41	17	24
27	41	54	65	61	56	65	44	125	154	40	17	21
28	54	56	64	60	54	62	44	116	144	37	18	19
29	54	57	64	61	------	59	50	110	128	35	17	20
30	50	54	62	62	------	57	53	103	116	31	16	21
31	61	------	59	61	------	59	------	100	------	31	16	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	61	22	33.0	2,030
November	57	38	48.1	2,860
December	160	44	70.8	4,350
January	------	------	57.9	3,560
February	251	53	63.9	3,550
March	71	44	55.3	3,400
April	62	36	45.4	2,700
May	2,740	54	412	25,300
June	3,340	57	399	23,800
July	113	31	69.7	4,290
August	31	14	19.9	1,220
September	32	14	19.5	1,160
The year	3,340	14	108	78,200

GUADALUPE RIVER ABOVE COMAL RIVER, AT NEW BRAUNFELS, TEX.

LOCATION.—Water-stage recorder 1.1 miles above Comal River and 1.3 miles northeast from center of New Braunfels, Comal County. Zero of gage is 586.56 feet above mean sea level.

DRAINAGE AREA.—1,670 square miles.

RECORDS AVAILABLE.—December, 1927, to September, 1930.

EXTREMES.—Maximum discharge during year, 9,760 second-feet June 13 (gage height, 9.00 feet); minimum, 20 second-feet Aug. 30, 31, Sept. 1, 2, 4–6, 8, 20–23.

1927–1930: Maximum discharge, 19,700 second-feet May 30, 1929 (gage height, 15.10 feet); minimum, 14 second-feet July 19, 20, 1928 (gage height, 0.88 foot).

Maximum stage known, 38 feet in 1869 and in December, 1913.

REMARKS.—Records good. Discharge estimated Jan. 20–31, Feb. 2–8, June 12–14, 16. About 400 acres declared irrigated above station. Slight regulation during low water caused by operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	72	74	77	75	68	78	58	164	194	46	20
2	51	81	74	75	78	67	78	59	152	186	45	20
3	50	77	70	75		65	78	65	145	177	41	21
4	49	72	65	72		64	75	81	132	164	40	20
5	46	68	64	71	75	67	72	78	126	152	40	20
6	43	67	64	71		65	64	2,140	120	142	40	20
7	40	67	63	72		64	63	3,110	116	135	41	21
8	41	70	63	74	78	60	63	650	110	124	39	20
9	41	87	63	75	74	59	58	336	103	124	40	21
10	43	92	63	75	72	59	55	278	96	135	36	24
11	45	90	64	74	71	58	55	1,660	93	126	35	26
12	47	87	65	74	71	58	54	1,130	120	122	31	32
13	46	81	68	74	70	59	54	1,550	4,520	142	29	26
14	46	74	71	75	68	61	50	863	836	135	29	28
15	52	70	93	74	68	64	50	614	503	120	30	30
16	49	67	98	72	182	67	49	503	1,110	107	29	29
17	46	64	214	72	126	68	47	431	1,180	100	28	26
18	49	68	152	74	87	71	47	394	666	93	27	24
19	49	68	124	71	77	68	46	696	537	87	26	22
20	54	64	105		74	68	47	1,530	455	81	26	20
21	54	63	103		72	70	45	690	400	77	26	20
22	58	61	96		72	81	44	439	362	75	25	20
23	68	61	90		70	82	40	349	336	70	24	20
24	77	61	84		68	74	38	290	319	65	24	21
25	65	65	82	75	68	67	46	252	295	63	24	21
26	63	67	81		67	65	51	226	278	56	24	22
27	68	68	82		71	92	49	210	257	54	24	21
28	70	70	82		70	103	52	194	242	52	23	22
29	68	72	80		-------	90	65	186	226	51	22	22
30	86	72	80		-------	84	59	180	206	46	20	22
31	95	-------	78	74	-------	80	-------	170	-------	46	20	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	95	40	55.2	3,390
November	92	61	71.5	4,250
December	214	63	85.6	5,260
January	----------	----------	74.1	4,560
February	182	----------	78.7	4,370
March	103	58	69.9	4,300
April	78	38	55.7	3,310
May	3,110	58	626	38,500
June	4,520	93	474	28,200
July	194	46	106	6,520
August	46	20	30.8	1,890
September	32	20	22.7	1,350
The year	4,520	20	146	106,000

GUADALUPE RIVER BELOW CUERO, TEX.

LOCATION.—Water-stage recorder three-fourths mile upstream from Heards Bridge on Arneckville road and 2½ miles southeast of Cuero, De Witt County. Zero of gage is 125.45 feet above mean sea level.

DRAINAGE AREA.—5,070 square miles.

RECORDS AVAILABLE.—August, 1916, to September, 1930. From December, 1902, to December, 1906, and August, 1915, to August, 1916, at Schleicher Bridge, 4 miles upstream.

EXTREMES.—Maximum discharge during year, 8,500 second-feet June 19 (gage height, 11.67 feet); minimum not determined.

1916–1930: Maximum discharge, about 101,000 second-feet May 30, 1929 (gage height, 35.2 feet); minimum, about 80 second-feet Nov. 1, 1917 (gage height, 0.58 foot).

Maximum stage known, 37.6 feet Nov. 4, 1913.

REMARKS.—Records fair. Discharge estimated May 5, 6, 8, 9, June 20 to July 1, Sept. 11–30. Flow is probably not materially affected by numerous small diversions above station. Flow partly regulated by operation of water-power plants upstream.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	557	527	623	641	1,800	708	714	545	825	1,120	449	334
2	539	587	623	683	812	806	695	635	747	818	444	350
3	521	665	671	641	1,210	641	747	557	858	786	454	350
4	551	527	593	647	2,350	647	683	527	623	754	493	317
5	504	557	635	587	2,880	510	671	454	665	714	427	306
6	521	515	629	647	2,650	599	689	565	689	728	476	372
7	504	539	617	629	1,300	575	683		721	721	410	334
8	653	563	647	617	825	563	617	1,600	683	689	432	322
9	322	3,660	611	683	799	599	599	4,140	623	689	427	339
10	438	3,120	617	629	647	527	641	3,580	623	702	432	356
11	527	1,860	575	611	754	563	629	1,900	611	922	460	
12	449	1,820	623	641	683	569	599	1,410	671	858	466	
13	493	922	653	653	721	593	575	4,990	677	689	438	
14	482	786	623	641	611	635	569	6,780	728	740	366	
15	539	766	1,950	611	632	671	539	4,780	1,350	665	383	
16	422	754	1,340	659	533	629	482	2,420	3,100	617	378	
17	498	689	1,020	760	471	641	539	1,980	2,420	659	378	
18	545	623	858	587	599	689	575	2,000	5,770	659	361	
19	504	635	747	605	554	629	551	5,660	8,240	635	394	
20	515	641	773	653	695	641	498	6,460	4,610	623	378	
21	504	641	754	1,140	695	623	449	2,650		611	400	338
22	449	623	695	1,600	722	714	504	1,790		599	410	
23	504	605	683	1,300	617	702	493	1,820		527	394	
24	471	653	702	825	575	714	482	2,280		510	372	
25	488	740	671	754	605	677	482	2,420		539	400	
26	488	760	747	721	581	599	563	1,520	1,120	482	356	
27	533	647	671	702	533	721	449	1,200		482	372	
28	611	708	653	1,070	825	728	510	1,020		504	317	
29	623	683	665	3,760	------	806	493	809		515	328	
30	587	617	671	3,700	------	922	515	922		432	334	
31	780	------	617	3,270	------	858	------	890		640	334	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	780	322	520	32,000
November	3,660	515	914	54,400
December	1,950	575	741	45,600
January	3,760	587	1,020	62,700
February	2,880	471	953	52,900
March	922	510	661	40,600
April	747	449	574	34,200
May	6,780	454	2,220	136,000
June	8,240	611	1,590	94,600
July	----------	432	660	40,600
August	493	317	402	24,700
September	----------	----------	338	20,100
The year	8,240	----------	883	638,000

COMAL RIVER AT NEW BRAUNFELS, TEX.

LOCATION.—Water-stage recorder 200 feet upstream from San Antonio Street viaduct in New Braunfels, Comal County. Zero of gage is 582.61 feet above mean sea level.

RECORDS AVAILABLE.—December, 1927, to September, 1930.

EXTREMES.—Maximum gage height during year, 13.58 feet June 16 (discharge not determined); minimum discharge, about 172 second-feet Apr. 17 (gage height, 2.36 feet).

1927–1930: Maximum gage height, that of June 16, 1930; minimum discharge, about 142 second-feet Dec. 11, 1928 (gage height, 2.12 feet).

Maximum stage known, 35.8 feet in December, 1913 (probably some backwater from Guadalupe River).

REMARKS.—Records for low stages fair, for medium and high stages poor. About 635 acres declared irrigated above station. Flow partly regulated by steam-power plant half a mile upstream. Mean gage height for June 16, when stage was beyond limit of rating curve, 4.37 feet. Stage-discharge relation affected by backwater May 6, 7, June 13.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	297	294	294	278	278	264	249	294	291	300	294	264
2	297	291	289	278	272	262	249	294	291	300	294	264
3	297	294	289	280	280	259	246	291	291	291	291	264
4	291	289	291	280	278	262	249	289	291	294	286	264
5	291	289	286	280	275	259	251	291	289	294	286	262
6	289	294	286	283	272	257	254	-------	291	294	283	264
7	291	294	291	283	272	259	254	-------	289	294	280	264
8	289	300	291	283	272	264	254	289	289	294	278	262
9	289	308	294	283	272	264	257	294	294	294	275	264
10	289	302	294	280	275	262	259	297	289	294	272	267
11	286	297	297	280	270	259	259	297	289	300	270	267
12	289	297	291	278	270	262	259	297	297	300	262	267
13	289	291	294	283	272	259	257	294	-------	305	259	264
14	286	294	289	280	270	262	257	286	297	314	259	264
15	291	294	302	280	272	259	254	289	354	294	262	264
16	289	294	283	280	272	259	254	297	-------	302	262	264
17	289	297	280	278	264	257	254	300	364	305	262	264
18	286	294	280	278	264	251	257	308	308	308	259	262
19	286	294	278	278	264	259	257	311	308	305	262	264
20	283	294	275	280	264	257	257	305	305	305	262	262
21	283	291	278	273	264	257	262	294	305	302	259	259
22	280	289	278	267	264	251	270	294	302	302	262	259
23	286	286	280	272	264	254	272	297	202	302	262	264
24	289	291	280	272	264	254	278	294	302	305	262	270
25	289	294	278	267	264	254	280	294	305	302	259	270
26	291	283	380	272	264	251	278	294	308	300	262	272
27	294	294	278	272	270	251	283	289	305	294	262	267
28	291	291	280	278	264	249	283	286	305	297	262	270
29	289	291	278	278	-------	249	283	291	305	294	262	270
30	302	291	278	272	-------	249	289	291	300	289	262	259
31	302	-------	278	272	-------	249	-------	291	-------	297	262	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	302	280	290	17,800
November	308	283	293	17,400
December	302	275	285	17,500
January	283	267	278	17,100
February	280	264	270	15,000
March	264	249	257	15,800
April	289	246	262	15,600
July	214	289	299	18,400
August	294	259	269	16,500
September	272	259	265	15,800

BLANCO RIVER AT WIMBERLEY, TEX

LOCATION.—Water-stage recorder 800 feet below mouth of Cypress Creek and one-fourth mile south of Wimberley, Hays County.

DRAINAGE AREA.—378 square miles.

RECORDS AVAILABLE.—August, 1924, to September, 1926; June, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 8,910 second-feet May 6 (gage height, 9.26 feet); minimum, 9.8 second-feet Apr. 27 (gage height, 0.25 foot).

1924–1926, 1928–1930: Maximum discharge (by slope-area method), 113,000 second-feet May 28, 1929 (gage height, 31.10 feet); minimum, 4.0 second-feet Sept. 20, 1928 (gage height, 0.30 foot).

REMARKS.—Records fair. No diversions. Daily discharge estimated Oct. 23 to Nov. 4, Dec. 26 to Jan. 23; partly estimated Nov. 5, Apr. 25–29.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22		27		20	19	22	11	64	64	23	12
2	20		25		20	19	22	12	60	62	23	12
3	19	20	25		20	19	20	12	55	60	23	12
4	19		23		22	19	23	12	53	55	23	14
5	16	20	23		22	19	19	12	51	53	23	14
6	16	20	23		22	19	19	2,310	49	51	25	14
7	16	22	23		22	19	19	666	49	47	23	16
8	16	28	23		20	19	19	141	47	47	23	16
9	14	38	23		19	19	19	89	45	45	23	16
10	14	33	22		19	17	19	2,180	43	130	22	30
11	16	33	22		19	17	17	625	43	69	20	19
12	19	39	23	20	19	17	17	248	296	53	20	16
13	19	35	23		19	17	17	296	398	47	19	16
14	19	31	23		17	17	17	207	231	45	19	16
15	19	30	27		19	20	17	174	174	43	19	14
16	20	28	25		17	19	17	150	181	41	20	14
17	20	27	23		17	17	16	141	160	39	17	14
18	20	27	23		17	20	14	144	137	37	17	12
19	19	27	25		19	17	14	128	125	37	17	12
20	19	27	25		19	14	14	114	114	35	17	12
21	19	27	28		17	11	12	105	108	35	16	12
22	19	27	28		19	16	11	99	102	30	14	12
23		28	28		17	16	11	97	97	30	16	12
24		28	25	19	19	20	11	108	92	33	16	12
25		30	20	20	20	20	14	92	86	30	16	12
26	20	28	22		19	20	16	81	84	30	14	16
27		25	20		20	20	9.8	81	81	28	14	14
28		25	20		20	20	11	74	76	28	14	16
29		25	20		20	------	16	71	74	27	12	16
30		25	20		20	------	11	69	69	27	11	14
31		------	20		19	------	22	------	67	------	25	12	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	----------	14	18.7	1,150
November	39	----------	27.1	1,610
December	28	----------	23.4	1,440
January	----------	----------	20.0	1,230
February	22	17	19.2	1,070
March	22	11	18.4	1,130
April	23	9.8	16.1	958
May	2,310	11	278	17,100
June	398	43	108	6,430
July	130	25	44.6	2,740
August	25	11	18.4	1,130
September	30	12	14.6	869
The year	2,310	9.8	50.9	36,900

SAN MARCOS RIVER AT OTTINE, TEX.

LOCATION.—Water-stage recorder at highway bridge one-fourth mile southwest of Ottine, Gonzales County.

DRAINAGE AREA.—1,250 square miles.

RECORDS AVAILABLE.—June, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, 7,980 second-feet June 17 (gage height, 25.65 feet); minimum, 61 second-feet Sept. 18.

1915–1930: Maximum discharge, about 202,000 second-feet May 29, 1929 (gage height, 43.32 feet); no flow July 29, 1923, Mar. 31, 1925, June 24, 1926. Maximum stage known, about 44.0 feet in December, 1913.

REMARKS.—Records good. Discharge estimated Nov. 30 to Dec. 3. Diversions above station for irrigation and municipal use are small. Low flow regulated by operation of small cotton gin above gage. Most of normal flow from large springs near San Marcos.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	223		180	177	216	194	195	202	238	142	110
2	177	175	171	182	209	188	187	187	202	238	184	127
3	160	174		178	345	182	191	170	196	230	168	120
4	163	164	167	174	815	181	189	170	198	230	182	118
5	171	163	171	175	489	182	175	157	202	223	146	116
6	148	161	174	156	238	187	182	189	192	188	155	116
7	167	167	177	184	201	195	173	1,370	182	202	140	115
8	181	171	181	178	184	187	187	1,410	182	223	141	104
9	156	230	174	174	171	196	188	446	174	245	141	114
10	131	223	171	171	171	192	216	331	178	307	139	209
11	160	216	174	173	171	201	155	1,750	170	202	128	223
12	170	202	171	170	177	202	166	2,540	192	223	141	139
13	154	202	182	182	173	203	171	735	202	223	135	125
14	163	185	170	175	166	202	168	635	454	209	136	113
15	164	187	234	184	178	209	175	472	421	199	131	113
16	177	169	202	175	171	216	175	396	2,100	201	133	119
17	166	209	182	173	157	216	173	2,120	6,390	180	135	112
18	175	177	175	161	180	209	173	4,300	1,030	184	123	114
19	164	177	174	161	173	216	180	816	438	178	131	113
20	168	175	168	199	164	196	208	562	371	182	134	119
21	163	174	174	223	173	209	223	331	347	181	129	109
22	161	187	178	201	168	216	198	291	323	163	124	116
23	159	173	189	184	175	202	189	275	323	174	129	113
24	162	174	187	180	174	192	159	347	307	160	127	118
25	164	184	189	182	173	184	163	315	299	154	111	115
26	177	189	181	166	174	191	195	260	283	142	129	110
27	209	178	188	187	181	201	177	245	268	148	134	119
28	188	181	181	191	216	283	180	230	260	147	123	118
29	174	175	180	260	------	355	223	223	260	146	116	116
30	171	171	182	209	------	223	230	216	252	143	123	118
31	214	------	177	192	------	209	------	216	------	141	112	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	214	131	169	10,400
November	230	161	185	11,000
December	234	167	180	11,100
January	260	156	183	11,300
February	815	157	219	12,200
March	355	181	208	12,800
April	230	155	185	11,000
May	4,300	157	706	43,400
June	6,390	170	553	32,900
July	307	141	194	11,900
August	184	111	136	8,360
September	223	104	123	7,320
The year	6,390	104	254	184,000

PLUM CREEK NEAR LOCKHART, TEX.

LOCATION.—Staff gage at steel highway bridge 700 feet below mouth of Dry Creek and 7 miles southeast of Lockhart, Caldwell County. Zero of gage is 371.39 feet above mean sea level.

DRAINAGE AREA.—184 square miles.

RECORDS AVAILABLE.—January, 1925, to March, 1930 (discontinued).

EXTREMES.—Maximum discharge during year, 722 second-feet Feb. 4 (gage height, 11.00 feet); minimum, 0.1 second-foot Oct. 4–10.

1925–1930: Maximum discharge, about 26,000 second-feet Apr. 21, 1926 (gage height, 22.6 feet); no flow during several periods.

The flood of December, 1913, reached a stage of 26.8 feet, determined by levels to floodmarks.

REMARKS.—Records poor. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	0.3	0.7	1.7	2.1	2.1	13	16	0.4	0.8	2.4	2.0	3.6	3.9
2	.3	.5	1.7	2.1	2.8	10	17	.4	.8	2.0	1.8	3.2	6.7
3	.2	.5	1.7	2.0	109	8.4	18	.3	.8	1.6	1.8	3.2	6.7
4	.1	.4	1.8	1.9	381	4.6	19	.3	.8	1.3	1.7	3.4	5.4
5	.1	.4	2.1	1.7	40	4.3	20	.4	.9	1.4	2.1	3.4	4.9
6	.1	.6	2.3	1.7	18	4.0	21	.5	1.3	1.8	3.5	3.4	5.0
7	.1	.6	2.3	1.6	16	3.6	22	.3	2.4	2.4	4.4	3.6	5.3
8	.1	.8	2.4	1.6	15	3.3	23	.3	2.0	2.6	4.4	3.7	5.3
9	.1	8.6	2.3	1.5	13	3.2	24	.3	1.6	2.4	4.0	3.8	5.4
10	.1	3.4	2.4	1.6	7.9	3.0	25	.3	1.3	2.6	3.4	4.0	5.0
11	.2	.9	2.4	1.7	6.1	3.0	26	1.4	1.4	2.3	3.1	3.9	5.0
12	.4	1.4	2.4	1.7	5.3	3.0	27	4.5	1.3	2.2	2.8	4.9	42
13	.3	4.8	2.4	1.8	4.6	2.8	28	2.0	1.1	2.1	3.2	16	241
14	.3	.7	2.4	2.0	4.2	2.9	29	.7	1.1	2.1	6.3	------	49
15	.3	.7	2.6	2.0	3.8	3.0	30	.6	1.4	2.1	11	------	14
							31	2.8	------	2.1	3.4	------	10

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.5	0.1	0.60	37
November	8.6	.4	1.47	87
December	2.6	1.3	2.14	132
January	11	1.5	2.77	170
February	381	2.1	24.6	1,370
March	241	2.8	15.7	965
The period				2,760

PLUM CREEK NEAR LULING, TEX.

LOCATION.—Water-stage recorder at highway bridge 2 miles above Southern Pacific Railroad bridge and about 3 miles northeast of Luling, Caldwell County.

DRAINAGE AREA.—356 square miles.

RECORDS AVAILABLE.—March to September, 1930.

EXTREMES.—Maximum discharge during year, 4,270 second-feet June 16 (gage height, 16.68 feet); minimum, 2.2 second-feet Aug. 2 (gage height, −0.17 foot).

Maximum stage known, 22.0 feet.

REMARKS.—Records fair except those for estimated periods, which are poor. No diversions.

Daily and monthly discharge, in second-feet, 1930

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		18	20	12	8.5	3.4	5.0
2		17	14	11	8.0	4.5	5.0
3		16	12	11	8.2	4.5	5.0
4		15	11	10	7.8	4.5	5.2
5		14	11	9.6	7.5	4.8	5.5
6		14	13	9.3	7.5	6.2	5.5
7		12	48	9.0	7.5	8.0	5.5
8		12	89	8.8	7.2	5.8	5.5
9		12	20	8.5	15	5.2	5.5
10		11	16	8.5	[a] 66	4.8	72
11		11	922	8.0		4.8	55
12		11	575	8.2		4.8	9.0
13		11	244	10		4.8	6.8
14		11	125	13		4.8	5.5
15		11	[a] 87	9.9		5.0	5.2
16		10	[a] 66	1,960		5.0	5.0
17		11	1,180	1,920		5.0	4.5
18		11	1,650	68		5.0	5.0
19		11	443	30	[b] 6.8	4.8	4.8
20		10	[a] 67	21		4.8	5.0
21	[a] 18	10	[a] 32	16		4.2	5.0
22	19	10	25	16		4.5	5.0
23	18	9.9	22	15		4.5	5.0
24	18	9.9	172	14		5.0	5.2
25	18	9.9	34	11		5.0	5.0
26	18	10	20	10		5.0	5.0
27	29	9.3	16	9.9		5.0	5.0
28	153	9.6	14	9.6	[a] 4.0	5.0	5.0
29	107	45	14	8.8	3.6	5.0	5.2
30	30	40	14	8.8	3.6	5.0	6.0
31	21		14		3.4	5.0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 21-31	153	18	40.8	891
April	45	9.3	13.8	821
May	1,650	11	193	11,900
June	1,960	8.0	142	8,450
July	66	3.4	8.82	542
August	8.0	3.4	4.96	305
September	72	4.5	9.23	549
The period				23,500

[a] Partly estimated. [b] Estimated.

PEACH CREEK NEAR DILWORTH, TEX.

LOCATION.—Water-stage recorder at San Antonio & Aransas Pass Railway bridge 1½ miles west of Dilworth, Gonzales County.
DRAINAGE AREA.—445 square miles.
RECORDS AVAILABLE.—March to September, 1930.
EXTREMES.—Maximum discharge during year, about 4,670 second-feet May 13 (gage height, 21.09 feet); no flow July 28 to Sept. 30.
REMARKS.—Records fair. Discharge estimated May 18, 19, July 2–27; partly estimated May 17, 23, 24. No diversions above station.

Daily and monthly discharge, in second-feet, 1930

Day	Mar.	Apr.	May	June	July	Day	Mar.	Apr.	May	June	July
1		6.8	0.9	5.0	0.3	16		0.6	33	38	
2		4.2	.7	4.5		17		.6	95	341	
3		2.7	.8	3.4		18	2.7	.6	480	156	
4		1.8	.8	2.7		19	1.8	.5	433	27	
5		1.7	.7	2.0		20	1.3	.5	86	12	
6		1.3	2.5	1.4		21	2.0	.5	30	6.2	
7		1.1	155	1.1		22	18	.4	17	4.0	
8		1.0	44	.9		23	11	.4	266	4.2	
9		.9	10	.8	[a] 2.5	24	7.7	.3	475	3.2	[a] 2.5
10		.8	2.7	.8		25	6.2	.2	147	4.0	
11		.8	1.1	.7		26	4.0	.3	32	2.0	
12		.7	1,930	.7		27	4.3	.3	16	.9	
13		.7	4,310	1.4		28	23	.3	11	.6	0
14		.7	1,650	1.4		29	9.5	.6	9.5	.5	0
15		.7	139	1.9		30	11	.6	7.7	.4	0
						31	9.5		7.1		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 18–31	23	1.3	8.00	222
April	6.8	.2	1.09	[a] 65
May	4,310	.7	335	20,600
June	341	.4	21.0	1,250
July		0	2.11	130
The period				22,360

[a] Estimated mean, July 2–27.

NOTE.—No flow during August and September.

SANDIES CREEK NEAR WESTHOFF, TEX.

LOCATION.—Water-stage recorder at Westhoff-Cheapside highway bridge 2 miles northeast of Westhoff, DeWitt County.
DRAINAGE AREA.—493 square miles.
RECORDS AVAILABLE.—March to September, 1930.
EXTREMES.—Maximum discharge during year, 746 second-feet June 18 (gage-height, 11.82 feet); minimum, 0.4 second-foot Aug. 9–15.
REMARKS.—Records good. Discharge estimated Mar. 21–28, Sept. 4–10. No diversions above station.

Daily and monthly discharge, in second-feet, 1930

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		12	10	3.0	3.7	1.3	0.6
2		10	6.0	2.7	3.3	1.4	.6
3		8.1	5.5	2.8	2.8	1.3	.6
4		6.8	5.0	3.1	2.3	1.2	
5		6.4	4.8	2.9	2.0	.9	
6		6.0	4.4	2.1	1.6	.7	.6
7		5.9	5.0	2.0	1.3	.5	
8		5.8	99	2.0	1.2	.5	
9		5.3	131	1.8	2.4	.4	
10	7.9	4.9	31	2.0	3.1	.4	
11	7.6	4.6	12	1.4	79	.4	.5
12	7.1	4.4	7.9	1.3	38	.4	.5
13	6.7	4.6	6.1	2.7	18	.4	.5
14	7.6	4.5	5.9	4.0	8.2	.4	.5
15	7.0	4.6	7.2	5.5	5.4	.4	.6
16	6.7	4.5	7.7	4.7	4.6	.7	.6
17	6.8	4.7	6.1	100	12	.9	.6
18	7.6	4.7	5.4	619	6.8	1.1	.6
19	7.4	4.7	72	148	5.4	1.2	.6
20	6.4	4.5	74	50	4.0	.9	.6
21		4.1	19	14	3.0	.9	.6
22		4.2	9.5	9.1	2.4	.9	.5
23		4.1	7.3	7.3	1.8	.7	.5
24		4.0	21	6.1	1.3	.6	.5
25	10	3.8	38	5.5	.9	.6	.5
26		3.9	22	5.2	.8	.6	.5
27		3.9	10	4.6	.6	.6	.7
28		3.9	5.4	4.3	.6	.6	.9
29	62	6.9	4.5	3.6	1.2	.6	.9
30	23	8.2	3.6	3.7	1.5	.6	.8
31	13		3.0		1.5	.6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 10–31			11.7	509
April	12	3.8	5.47	325
May	131	3.0	20.9	1,290
June	619	1.3	34.1	2,030
July	79	.6	7.12	438
August	1.4	.4	.73	45
September			.60	36
The period				4,670

COLETO CREEK NEAR SCHROEDER, TEX.

LOCATION.—Staff gage 1 mile below Schroeder-Nursery highway bridge, 1 mile east of Schroeder, Goliad County, and about 15 miles above Galveston, Harrisburg & San Antonio Railway bridge.
DRAINAGE.—365 square miles.
RECORDS AVAILABLE.—January to September, 1930.
EXTREMES.—Maximum discharge during year, about 3,170 second-feet Jan. 29 (gage height, 6.20 feet); minimum, 1.4 second-feet Sept. 7, 8, 19.
REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1930

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	36	26	14	14	26	4.2	3.0	2.2
2	------	42	19	18	13	17	4.5	2.6	2.0
3	------	658	17	16	14	13	4.2	2.6	1.8
4	------	1,070	16	16	13	11	4.2	2.6	2.2
5	------	189	16	14	12	11	5.1	2.2	2.2
6	------	58	17	14	12	9.8	7.2	2.2	2.0
7	------	39	16	13	283	9.0	5.1	3.2	1.4
8	14	32	14	12	109	34	5.6	3.8	1.4
9	14	29	14	12	31	16	9.8	3.4	1.6
10	14	27	14	11	22	13	18	3.4	1.8
11	14	24	14	12	19	14	16	2.2	2.0
12	16	24	14	11	154	11	11	2.2	2.0
13	16	23	15	14	27	12	5.6	2.0	2.2
14	16	22	16	14	20	10	5.3	1.8	2.2
15	16	20	26	12	16	9.4	4.9	2.2	1.8
16	14	19	21	16	15	11	5.1	2.0	1.8
17	14	19	18	16	12	9.0	4.2	2.0	1.8
18	14	18	18	14	12	7.5	3.8	2.2	1.8
19	15	18	16	13	13	7.2	3.8	2.0	1.4
20	16	18	16	12	11	6.3	3.4	2.2	1.8
21	36	19	16	10	12	6.3	3.6	2.0	1.6
22	87	19	19	10	11	5.8	3.2	2.0	1.8
23	18	19	16	10	348	5.8	14	1.8	1.8
24	18	18	16	10	270	5.6	5.6	2.0	1.8
25	15	17	14	11	26	5.3	5.3	2.2	1.8
26	15	17	13	11	17	4.9	5.6	2.0	2.0
27	14	16	18	10	14	4.9	4.7	2.0	1.8
28	129	19	24	13	12	4.9	4.0	1.8	1.8
29	1,190	------	21	16	12	4.5	3.4	1.6	1.8
30	195	------	19	16	16	4.7	3.2	1.8	1.8
31	54	------	17	------	176	------	3.0	2.0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 8–31	1,190	14	81.8	3,900
February	1,070	16	90.3	5,020
March	26	13	17.3	1,060
April	18	10	13.0	774
May	348	11	56.0	3,440
June	34	4.5	10.3	613
July	18	3.0	6.02	370
August	3.8	1.6	2.29	141
September	2.2	1.4	1.85	110
The period	------	------	------	15,400

SAN ANTONIO RIVER NEAR FALLS CITY, TEX.

LOCATION.—Water-stage recorder at highway bridge half a mile above Scared Dog Creek and 3.4 miles southwest of Falls City, Karnes County.

DRAINAGE AREA.—2,070 square miles.

RECORDS AVAILABLE.—April, 1925, to September, 1930.

EXTREMES.—Maximum discharge during year, 1,290 second-feet May 16 (gage height, 2.97 feet); minimum, 43 second-feet Aug. 26, Sept. 20 (gage height, 1.04 feet).

1925–1930: Maximum discharge, 10,100 second-feet May 29, 1929 (gage height, 11.15 feet); minimum, 36 second-feet May 11, 12, 1928 (gage height, 0.97 foot).

Maximum stage known, 28.36 feet in 1913.

REMARKS.—Records good except those for estimated periods, Nov. 30, Dec. 1–8, 21–28 and June 19–22, which are fair. Slight regulation caused by operation of Medina Dam. For diversions see records of Medina Canal near Riomedina.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	114		109	298	106	109	204	81	84	67	50
2	102	98		114	220	106	109	232	74	84	71	50
3	102	92		109	129	109	106	145	74	81	74	50
4	102	92		109	129	109	106	119	78	78	92	54
5	106	95	114	109	129	106	102	114	74	78	78	106
6	102	95		119	140	106	102	119	74	84	67	84
7	102	98		124	119	106	102	150	74	81	67	60
8	102	102		124	114	102	102	124	71	158	64	57
9	106	106	109	129	109	102	102	109	71	150	60	54
10	109	129	114	129	109	102	98	109	71	182	60	54
11	109	353	114	155	106	106	98	106	71	438	57	114
12	114	248	114	210	106	106	98	106	64	284	57	78
13	114	95	114	145	106	106	98	106	102	124	57	64
14	124	92	114	124	106	106	98	395	436	102	54	60
15	166	88	119	160	106	106	98	235	654	95	57	50
16	322	78	178	140	155	109	95	1,160	381	88	54	47
17	166	78	534	166	242	114	95	725	546	88	54	47
18	129	78	392	119	124	193	125	325	810	84	50	47
19	116	78	259	160	109	381	529	259	810	84	50	47
20	129	78	182	124	109	370	444	171	516	71	47	43
21	129	81		124	106	234	204	129	281	71	47	47
22	129	81		134	106	119	106	109	150	71	47	43
23	106	81		188	106	109	98	109	109	71	50	50
24	102	84		160	106	109	95	106	109	71	50	50
25	98	92	138	129	106	106	95	92	106	71	47	50
26	128	95		119	102	106	95	88	98	71	43	54
27	351	176		114	102	106	92	84	92	67	50	54
28	129	176		114	102	102	98	84	88	64	54	54
29	134	119	95	119	------	106	106	84	84	60	54	57
30	113	114	102	182	------	124	109	84	84	64	54	57
31	140	------	106	303	------	119	------	81	------	64	54	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	351	98	132	8,120
November	353	78	113	6,720
December	534	----------	150	9,220
January	303	109	141	8,670
February	298	102	129	7,160
March	381	102	132	8,120
April	529	92	130	7,740
May	1,160	81	196	12,100
June	810	64	211	12,600
July	438	60	105	6,460
August	92	43	57.6	3,540
September	114	43	57.7	3,430
The year	1,160	43	130	93,900

MEDINA RIVER NEAR PIPE CREEK, TEX.

LOCATION.—Water-stage recorder 3½ miles above mouth of Pipe Creek and 4 miles southwest of Pipe Creek post office, Bandera County.

DRAINAGE AREA.—412 square miles.

RECORDS AVAILABLE.—December, 1922, to September, 1930.

EXTREMES.—Maximum discharge during year, about 5,230 second-feet May 12 (gage height, 9.13 feet); minimum, 3.2 second-feet Sept. 16–23 (gage height, 0.61 foot).

1923–1930: Maximum stage, 19.8 feet Apr. 21, 1926 (discharge not determined); minimum discharge, 2.2 second-feet Sept. 9, 1927.

The flood of 1919 reached a stage of about 42 feet.

REMARKS.—Records for low stages good, for high stages poor. No diversions above station. Discharge estimated Dec. 23–28; partly estimated or interpolated Dec. 22, 29, Jan. 23–25.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	20	22	24	18	14	16	29	54	86	14	5.8
2	9.2	22	24	24	20	14	16	27	50	77	12	5.8
3	9.2	22	27	24	20	14	16	27	47	67	14	5.8
4	9.2	20	27	24	18	14	16	24	42	60	12	5.8
5	9.2	20	27	24	20	14	14	24	40	52	14	5.8
6	8.0	20	27	24	20	16	14	746	38	44	12	6.8
7	6.8	20	27	22	16	16	16	174	35	42	12	6.8
8	8.0	20	24	22	16	14	16	119	31	31	12	20
9	8.0	20	29	24	18	14	16	89	35	29	9.2	8.0
10	8.0	20	38	24	18	14	16	383	40	35	9.2	6.8
11	8.0	16	35	24	18	14	16	336	42	52	9.2	6.8
12	8.0	14	35	24	20	14	16	895	42	52	9.2	6.8
13	8.0	12	38	24	20	14	16	939	320	40	8.0	5.8
14	8.0	12	50	24	20	16	16	1,510	280	38	8.0	5.8
15	8.0	12	119	24	20	18	14	236	429	35	8.0	3.9
16	8.0	14	60	22	20	18	14	172	487	31	8.0	3.2
17	8.0	14	50	22	18	18	12	151	300	31	51	3.2
18	8.0	18	44	22	18	18	12	123	223	29	8.0	3.2
19	8.0	18	42	20	20	20	12	174	181	27	6.8	3.2
20	8.0	18	42	20	20	18	12	125	153	27	6.8	3.2
21	11	18	42	20	20	20	11	102	131	24	6.8	3.2
22	9.2	18	38	20	20	16	11	91	121	24	8.0	3.2
23	9.2	18		20	20	18	11	81	117	22	8.0	3.2
24	9.2	18		20	22	18	11	72	115	22	8.0	3.9
25	9.2	22		20	20	16	9.2	54	115	22	8.0	4.8
26	9.2	24	31	20	18	16	14	54	113	20	8.0	4.8
27	21	24		20	16	16	16	54	111	20	8.0	5.8
28	18	22		20	16	16	14	54	100	18	6.8	6.8
29	20	22	24	24	-------	16	20	54	91	20	6.8	6.8
30	20	20	27	20	-------	16	29	52	91	20	6.8	6.8
31	20	-------	27	20	-------	12	-------	54	-------	18	6.8	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	6.8	10.3	633
November	24	12	18.6	1,110
December	119	22	36.5	2,240
January	24	20	22.1	1,360
February	22	16	19.0	1,060
March	20	12	15.9	977
April	29	9.2	14.7	875
May	1,510	24	227	14,000
June	487	31	132	7,860
July	86	18	36.0	2,210
August	51	6.8	10.5	646
September	20	3.2	5.73	341
The year	1,510	3.2	45.9	33,300

MEDINA RIVER NEAR RIOMEDINA, TEX.

LOCATION.—Water-stage recorder just above Medina Valley Irrigation Co.'s diversion dam 6 miles northwest of Riomedina, Medina County.
DRAINAGE AREA.—606 square miles.
RECORDS AVAILABLE.—January, 1922, to September, 1930.
EXTREMES.—No flow over dam during year.
1922–1930: Maximum discharge, about 11,800 second-feet Apr. 21, 1926 (gage height, 5.17 feet); no flow over dam during several periods.
REMARKS.—Monthly seepage records fair. Record of daily seepage published under "Medina River seepage investigation." Seepage estimated Oct. 1 to Nov. 10, on basis of discharge measurements. Water to irrigate about 5,000 acres is diverted to Medina Canal above gage; see "Medina Canal near Riomedina." Flow regulated by storage dam 4 miles upstream, except when main reservoir is full and water flows over spillway.

Monthly seepage, in second-feet, past station on Medina River near Riomedina, Tex., 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			21.0	1,290
November			20.0	1,190
December	22	20	21.1	1,300
January	21	19	19.9	1,220
February	20	19	19.1	1,060
March	21	19	19.9	1,220
April	23	21	22.3	1,330
May	23	22	22.2	1,360
June	23	21	22.2	1,320
July	22	20	21.4	1,320
August	26	22	23.6	1,450
September	26	22	24.2	1,440
The year			21.4	15,500

MEDINA RIVER SEEPAGE INVESTIGATIONS

Staff gages, each having a range of about 3 feet, were installed at the stations listed below. From 11 to 15 discharge measurements were made at each station. On several occasions the stage rose above the gages; at those times and at times of apparent local run-off from rains daily discharge was not determined. Records good for stations near Cassin and below Von Ormy; fair for other stations.

Near Mico, Tex.—On left bank 600 feet above Stegall Bridge, 2,000 feet below Medina Dam, and 1 mile southwest of Mico post office, Medina County. Gates in dam closed Oct. 6–20, 23–30, Nov. 1–4, 8–20, 25–30, Dec. 1, 2, 7–14, 22–31. One discharge measurement made Mar. 20, 1931, while gates were closed, used as basis for estimating discharge for these periods. Period of record, Jan. 1 to Dec. 31, 1930.

Near Riomedina, Tex.—On right bank 2,000 feet below diversion dam and 6 miles west of north of Riomedina, Medina County. Period of record, Nov. 11, 1929, to Dec. 31, 1930.

Above Castroville, Tex.—Since Oct. 1, 1929, on right bank just above Draugel's road crossing and 2 miles north of Castroville, Medina County. Prior to Oct. 1, 1929, on right bank about half a mile below dam at Castroville and below return water of power plant. Period of record, July 9, 1929, to Sept. 30, 1930.

Below Von Ormy, Tex.—On left bank 50 feet below San Antonio-Somerset highway bridge and 2½ miles below International-Great Northern Railroad bridge at Von Ormy, Bexar County. Period of record, July 9, 1929, to Dec. 31, 1930.

Near Cassin, Tex.—On right bank about 500 feet northwest of J. N. Arnold's house and 1¼ miles above San Antonio, Uvalde & Gulf Railway bridge at Cassin, Bexar County. Period of record, July 10, 1929, to Dec. 31, 1930.

At Losoya, Tex.—On right bank just below bridge over Medina River on old San Antonio-Corpus Christi road, one-fourth mile from Losoya, Bexar County, and 3½ miles below Mitchell Lake. Period of record, Oct. 1, 1929, to Dec. 31, 1930.

Daily discharge, in second-feet, of Medina River, 1929–30

Day	July			August			September			October			
	Above Castroville	Below Von Ormy	Near Cassin	Above Castroville	Below Von Ormy	Near Cassin	Above Castroville	Below Von Ormy	Near Cassin	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1929													
1	-------	-------	-----	24	14	9.6	22	6.2	4.4	19	9.1	5.4	9.8
2	-------	-------	-------	28	12	9.6	17	5.4	4.4	19	8.7	5.7	9.8
3	-------	-------	-------	15	10	9.6	17	5.9	4.4	19	7.8	5.7	9.8
4	-------	-------	-------	18	10	8.7	50	5.6	4.0	19	7.8	5.7	9.8
5	-------	-------	-------	22	9.1	7.8	16	5.6	4.0	19	7.8	5.7	9.8
6	-------	-------	-------	19	8.7	7.8	15	6.2	4.0	19	7.8	5.4	10
7	-------	-------	-------	28	9.6	6.9	19	5.6	4.0	19	7.8	5.2	10
8	-------	-------	-------	17	7.8	6.3	18	5.1	3.7	19	7.8	5.2	-------
9	13	42	-----	17	10	5.7	17	5.4	3.7	19	9.6	5.2	-------
10	24	33	38	17	7.8	5.7	17	5.6	3.7	19	7.8	5.2	10
11	38	25	30	17	7.8	5.2	24	5.6	3.3	19	8.7	5.2	10
12	11	22	30	17	7.4	5.2	17	5.4	3.3	-------	14	-------	-------
13	14	22	20	9.5	7.4	4.8	17	7.0	3.0	-------	11	18	-------
14	19	21	19	24	7.4	4.8	24	7.4	3.0	21	12	8.7	-------
15	24	21	19	20	7.4	5.2	-------	7.8	12	22	12	7.8	-------
16	24	20	19	24	7.0	5.7	-------	13	8.7	22	10	7.8	-------
17	36	17	16	26	7.0	6.3	28	9.1	8.7	21	12	7.3	12
18	16	17	16	22	8.7	5.7	19	13	7.8	21	12	6.9	12
19	26	19	15	19	7.0	5.7	18	11	6.9	21	12	6.9	12
20	18	16	15	17	6.2	5.2	17	9.6	6.9	21	12	13	-------
21	26	17	15	17	7.0	5.2	56	9.6	6.3	21	12	8.7	-------
22	33	13	14	14	7.0	5.2	37	9.1	6.3	21	14	8.2	-------
23	12	17	13	17	7.0	4.8	18	10	6.3	20	12	7.8	14
24	19	17	13	17	7.0	4.8	17	7.8	5.7	21	12	7.8	14
25	19	10	12	18	6.2	4.8	18	7.8	5.7	21	12	7.8	14
26	19	13	12	19	6.6	4.8	22	7.8	5.2	-------	15	11	-------
27	20	16	12	17	8.2	4.4	18	7.8	5.2	-------	16	18	-------
28	18	14	12	12	7.0	4.4	18	7.8	5.7	25	17	15	19
29	17	13	11	17	7.0	4.4	18	7.8	5.7	22	17	14	19
30	28	13	11	17	6.6	4.4	18	7.8	5.4	23	16	14	19
31	28	12	11	28	6.2	4.4	-------	-------	-------	22	15	13	18

Daily discharge, in second-feet, of Medina River, 1929–30—Continued

Day	November						December					
	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1929												
1	------	------	22	15	12	18	------	20	21	22	23	24
2	------	------	22	16	12	------	------	20	21	22	23	24
3	------	------	22	16	12	------	------	20	21	22	24	24
4	------	------	22	16	13	17	------	20	21	22	24	25
5	------	------	22	16	13	17	------	20	21	22	25	26
6	------	------	22	16	14	18	------	20	22	22	25	26
7	------	------	22	16	14	------	------	21	22	22	25	27
8	------	------	23	17	17	20	------	21	22	22	27	28
9	------	------	------	25	15	35	------	21	22	24	27	29
10	------	------	------	19	15	------	------	21	22	22	28	30
11	------	20	------	19	16	21	------	21	22	24	28	30
12	------	20	23	18	16	21	------	21	23	24	27	30
13	------	20	23	18	16	20	------	21	23	24	27	30
14	------	20	23	19	16	19	------	21	23	24	28	30
15	------	20	22	18	16	19	------	21	------	61	------	------
16	------	19	21	19	17	19	------	22	------	31	38	------
17	------	20	21	19	17	20	------	21	23	27	27	------
18	------	20	21	19	17	21	------	21	22	25	24	------
19	------	20	21	19	17	21	------	21	22	24	23	30
20	------	20	21	17	18	21	------	22	22	22	23	28
21	------	20	22	17	18	21	------	21	------	27	23	28
22	------	20	22	21	19	21	------	21	------	25	30	------
23	------	20	------	21	21	21	------	22	------	24	31	41
24	------	20	------	21	21	------	------	21	------	29	27	30
25	------	20	------	25	25	30	------	21	------	28	25	30
26	------	20	25	25	25	30	------	21	23	28	25	30
27	------	20	23	27	24	28	------	22	23	28	25	30
28	------	20	23	25	24	26	------	22	23	26	24	21
29	------	20	22	22	23	26	------	22	23	24	24	33
30	------	20	21	22	23	24	------	22	23	22	23	38
31	------	------	------	------	------	------	------	22	23	22	21	28

Day	January						February					
	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1930												
1	61	21	24	22	25	29	49	19	------	24	25	35
2	45	21	24	22	25	30	49	19	------	24	25	36
3	4.5	21	23	22	24	28	49	19	------	26	27	38
4	16	21	23	22	24	29	56	19	24	26	27	35
5	61	21	22	22	25	30	60	19	22	24	25	35
6	65	21	22	22	25	30	62	19	26	24	25	33
7	59	21	21	22	25	30	69	19	26	24	25	44
8	59	20	22	22	25	33	69	19	22	25	25	33
9	59	20	22	22	25	33	69	19	22	25	24	34
10	59	20	21	21	25	------	67	19	22	22	24	34
11	59	20	------	22	26	------	62	20	22	22	24	37
12	59	20	------	22	25	------	62	20	22	24	23	37
13	59	20	22	24	26	35	61	19	22	22	23	39
14	68	20	22	25	26	33	61	20	22	22	23	41
15	74	20	21	22	26	35	61	20	21	22	22	37
16	74	20	21	22	26	33	58	19	21	22	21	36
17	74	20	21	22	26	35	61	19	21	22	21	35
18	74	20	21	22	26	28	67	19	21	22	22	35
19	68	20	22	24	27	30	69	19	21	22	22	35
20	55	20	24	25	26	33	67	19	21	21	21	38
21	54	20	24	26	26	35	64	19	22	21	21	39
22	54	20	23	25	28	35	65	19	22	22	21	39
23	54	19	22	26	28	30	69	19	22	21	21	37
24	54	19	23	26	27	30	69	19	21	21	21	35
25	54	19	24	25	28	30	64	19	21	21	21	33
26	59	19	24	25	28	32	69	19	21	19	21	29
27	64	19	24	25	28	35	69	19	21	20	21	30
28	64	19	24	25	26	35	69	19	21	20	21	30
29	57	19	24	26	42	41	------	------	------	------	------	------
30	49	19	23	27	28	38	------	------	------	------	------	------
31	53	19	22	26	26	38	------	------	------	------	------	------

Daily discharge, in second-feet, of Medina River, 1929–30—Continued

Day	March						April					
	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1930												
1	69	19	21	21	21	30	52	21	21	22	21	28
2	69	19	20	20	21	29	52	21	21	22	21	29
3	69	19	20	20	21	28	52	21	21	22	21	29
4	69	19	20	20	21	28	59	21	20	22	21	30
5	69	19	20	21	22	30	63	22	19	22	22	32
6	69	19	21	20	22	30	64	22	19	22	21	29
7	69	19	20	21	21	32	64	22	19	20	20	26
8	69	20	20	20	21	32	75	22	19	18	19	26
9	84	20	20	20	20	35	79	22	19	17	19	26
10	92	20	20	20	20	38	86	22	19	16	18	35
11	95	20	20	18	19	35	90	22	19	18	18	23
12	92	20	20	18	19	32	84	22	19	18	18	24
13	90	20	21	17	19	33	79	22	19	17	19	24
14	72	20	21	17	19	34	79	22	19	18	19	24
15	52	20	-------	22	23	33	79	22	19	17	19	26
16	51	20	-------	24	31	-------	82	22	21	17	19	26
17	51	20	-------	25	28	-------	81	22	22	55	-------	-------
18	51	20	-------	24	25	-------	79	23	19	21	27	-------
19	51	20	22	22	24	38	79	23	19	19	20	-------
20	51	20	21	22	24	32	79	23	19	19	19	26
21	51	20	22	22	24	34	74	23	19	17	18	24
22	54	20	21	22	23	30	78	23	19	17	17	24
23	55	20	20	22	23	29	87	23	19	16	16	24
24	80	20	20	20	22	28	95	23	19	16	16	23
25	67	20	20	18	22	26	84	23	19	17	16	24
26	53	20	20	19	21	26	55	23	25	19	21	26
27	53	21	23	22	23	28	73	23	-------	18	19	32
28	53	21	24	22	21	28	63	23	-------	21	21	35
29	53	21	21	24	21	28	55	23	-------	25	-------	-------
30	53	21	20	24	22	29	55	23	23	22	29	41
31	51	21	20	22	21	30	-------	-------	-------	-------	-------	-------

Day	May						June					
1930												
1	55	23	20	20	28	30	74	22	18	20	20	28
2	55	23	21	18	19	28	74	22	17	20	20	28
3	54	23	21	17	19	27	78	22	17	18	19	28
4	54	23	22	17	19	27	92	22	16	18	19	24
5	55	23	22	18	19	27	111	22	17	19	19	24
6	62	23	21	17	19	26	125	22	16	19	18	24
7	64	22	-------	17	18	26	108	22	16	18	18	25
8	64	22	22	17	18	25	113	22	16	19	19	24
9	73	22	22	19	18	26	119	23	17	17	19	23
10	72	22	23	17	19	27	120	23	17	16	17	23
11	62	22	22	18	19	27	125	23	18	16	16	24
12	62	22	20	17	19	27	61	23	19	-------	21	33
13	64	22	23	16	19	27	21	23	-------	-------	-------	-------
14	54	22	-------	-------	-------	-------	53	23	-------	35	49	-------
15	43	22	-------	-------	-------	-------	61	23	-------	-------	46	-------
16	22	22	26	61	-------	-------	33	23	-------	-------	-------	-------
17	32	22	-------	43	46	-------	21	22	-------	-------	-------	-------
18	45	22	-------	36	43	-------	21	22	21	62	-------	-------
19	50	22	21	32	34	27	21	22	19	40	43	44
20	54	22	19	28	30	44	46	22	19	33	29	44
21	56	22	19	26	28	44	66	22	19	31	26	44
22	61	22	19	26	25	24	69	22	18	29	23	36
23	84	22	18	24	24	34	75	22	17	27	23	28
24	84	22	18	24	22	34	80	22	17	27	22	27
25	84	22	18	22	21	31	92	22	18	27	21	27
26	84	22	18	20	20	28	107	22	17	26	21	27
27	84	22	18	20	25	28	107	22	17	25	20	27
28	88	22	18	20	28	28	100	22	16	33	21	27
29	93	22	19	21	25	28	107	21	16	22	16	25
30	85	22	19	21	22	28	111	21	16	16	15	23
31	66	22	19	21	21	28	-------	-------	-------	-------	-------	-------

Daily discharge, in second-feet, of Medina River, 1929–30—Continued

Day	July						August					
	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1930												
1	144	22	16	17	15	22	133	23	16	9.6	8.2	12
2	144	22	16	19	16	22	133	23	16	9.6	8.2	12
3	144	21	16	19	15	21	137	23	16	10	7.3	12
4	144	22	16	18	15	21	149	23	16	10	7.3	11
5	144	22	16	16	14	21	157	23	16	10	7.8	11
6	144	22	16	16	14	20	148	24	16	9.6	7.3	10
7	144	22	16	16	14	18	144	24	16	10	7.8	10
8	109	21	16	16	15	18	144	24	16	9.6	8.7	10
9	22	21	-------	21	17	18	140	24	16	9.6	7.3	10
10	43	21	22	30	-------	22	133	24	16	9.1	7.3	10
11	80	21	19	28	29	22	133	24	16	9.1	7.8	10
12	92	20	17	21	22	23	133	23	16	9.1	7.8	10
13	104	20	16	19	18	21	133	22	16	9.1	7.3	10
14	104	20	16	17	16	19	133	22	16	8.7	7.3	10
15	97	21	19	17	33	19	133	23	16	8.7	7.8	10
16	93	21	16	15	15	19	133	23	16	7.8	7.3	10
17	99	21	16	16	15	19	133	23	16	8.2	6.6	9.9
18	133	21	16	14	14	17	133	23	16	7.8	6.9	9.8
19	133	21	16	13	12	17	133	23	16	7.8	6.6	9.8
20	133	21	16	13	11	18	140	23	16	7.4	6.3	9.8
21	133	21	16	13	11	18	144	24	16	7	6.3	9.5
22	133	21	16	13	11	18	133	24	16	7	5.7	9.5
23	133	22	16	12	11	18	133	24	16	6.6	5.7	9.5
24	133	22	16	12	9.6	19	133	24	16	6.6	6.3	9.0
25	137	22	16	12	8.7	21	140	24	16	6.6	6.6	8.5
26	144	22	16	10	8.7	21	144	24	16	7.4	6.6	8.5
27	144	22	16	11	7.8	16	133	24	16	7.0	6.6	8.2
28	144	22	16	10	8.7	12	133	25	17	7.4	6.9	8.2
29	144	22	16	11	8.7	12	133	25	17	7.4	6.9	8.2
30	133	22	16	10	8.2	12	133	25	17	7.4	6.9	8.5
31	133	22	16	10	7.8	12	130	26	17	9.1	8.7	8.5

Day	September						October					
1930												
1	102	26	17	-------	6.6	8.5	113	25	20	7.0	8.7	-------
2	79	26	17	-------	5.2	8.2	101	25	19	7.0	8.7	-------
3	108	26	17	-------	5.4	8.2	74	26	20	7.4	8.2	-------
4	122	26	18	-------	10	8.8	63	26	21	8.2	9.1	-------
5	122	26	18	9.6	7.8	8.5	49	26	-------	8.7	9.1	-------
6	109	26	18	8.7	8.7	8.5		27	-------	13	18	-------
7	104	26	18	7.0	9.1	9.0		27	26	17	17	-------
8	101	25	18	5.9	10	9.5		26	24	16	16	-------
9	97	24	18	5.9	-------	9.5		26	24	12	14	-------
10	90	24	18	7.4	15	9.5		25	25	10	14	-------
11	90	24	18	7.8	11	9.2		25	-------	10	10	-------
12	115	24	18	6.6	7.3	9.2		26	-------	11	-------	-------
13	140	23	17	7.4	6.9	7.9	4.8	27	-------	12	25	-------
14	133	24	17	7.4	7.8	7.9		28	21	13	22	-------
15	114	24	17	5.4	6.9	7.9		28	19	14	14	20
16	104	24	17	4.1	5.4	7.9		22	19	13	13	21
17	113	23	16	4.3	4.8	5.5		22	18	12	11	21
18	119	24	16	4.8	4.4	5.5		21	16	12	10	21
19	104	23	17	5.1	5.7	5.5		21	16	11	16	18
20	90	23	17	5.1	6.0	5.5		21	16	12	16	16
21	74	23	17	5.9	5.7	5.5	275	22	16	12	15	16
22	64	23	17	6.2	6.0	5.5	188	24	16	12	16	16
23	53	23	16	5.9	6.9	5.5		24	-------	16	16	16
24	50	23	16	6.2	7.3	5.5		24	22	18	32	41
25	79	23	16	5.9	7.3	8.5		22	21	20	17	41
26	157	22	15	5.9	8.2	8.5	4.8	21	20	18	21	32
27	144	24	15	5.6	7.8	8.5		21	19	16	15	23
28	144	24	17	5.6	8.2	8.8		21	19	16	14	23
29	122	25	19	5.9	7.8	9.2		20	19	16	15	23
30	122	25	20	6.2	8.2	9.2		20	17	15	12	24
31	-------	-------	-------	-------	-------	-------	203	-------	16	14	12	21

Daily discharge, in second-feet, of Medina River, 1929–30—Continued

Day	November						December					
	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya	Near Mico	Near Riomedina	Above Castroville	Below Von Ormy	Near Cassin	At Losoya
1930												
1		20	16	15	14	21		18	17	22	19	21
2		20	18	14	14	22	4.8	18	16	21	19	24
3	4.8	20	19	14	13	22	252	18	17	20	19	24
4		20	17	15	13	23	145	18	17	21	22	24
5	144	20	16	15	14	22	67	19	22	22	21	24
6	67	20	17	16	16	22	61	19	22	21	20	24
7	67	21	19	15	16	22		19	21	21	21	24
8		20	19	16	17	22		18	21	21	22	24
9		20	------	17	18	22		18	20	22	22	24
10		20	------	18	19	23		18	20	22	23	24
11		19	------	19	19	23	4.8	18	20	22	23	24
12		19	19	19	18	23		18	19	22	23	24
13		19	18	19	18	24		17	18	22	23	24
14	4.8	19	23	19	21	24		17	18	21	22	24
15		19	22	18	17	23	178	18	17	21	22	24
16		18	19	19	17	23	63	18	16	21	21	24
17		18	16	18	17	23	62	18	17	21	21	29
18		18	16	16	16	23	62	18	19	21	21	24
19		18	15	17	16	23	62	18	19	21	21	24
20		18	15	17	16	22	62	18	19	22	21	23
21	252	18	14	16	16	21	62	18	20	22	22	23
22	133	19	15	16	15	21		18	20	22	25	23
23	74	19	17	18	18	22		18	20	22	23	23
24	74	19	19	17	18	22		17	19	22	23	23
25		19	19	18	17	21		17	19	22	23	24
26		19	19	20	17	21	4.8	17	19	22	23	25
27	4.8	18	19	20	18	23		17	18	22	23	24
28		18	19	20	18	23		17	18	22	23	26
29		18	------	21	19	23		17	17	22	23	27
30		18	------	21	19	22		17	16	22	23	------
31		------	------	------	------	------		17	16	21	22	29

NOTE.—Braced figures for station near Mico show estimated mean daily discharge for periods indicated; gates in dam were closed and discharge is seepage past dam.

MEDINA CANAL NEAR RIOMEDINA, TEX.

LOCATION.—Water-stage recorder just above upper end of flume 1, one-third mile below head of canal, and 6 miles north of Riomedina, Medina County.

RECORDS AVAILABLE.—March, 1922, to September, 1930.

EXTREMES.—Maximum discharge during year, 91 second-feet July 2 (gage height, 1.95 feet); no flow during several periods.

1922–1930: Maximum discharge, 128 second-feet June 26, 1923, June 5, 6, 1925; no flow during several periods.

REMARKS.—Records good. Discharge estimated Jan. 11, 25, July 7–13, 18–31, Sept. 29, 30. Station is above all diversions from canal. Flow controlled by head gates. Canal diverts from Medina River. Water is used for irrigation near Lacoste and Natalia.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	20	9.0	13	0	21	0	2.2	15	87		49
2	50	20	20	23	0	20	0	2.2	15	90		33
3	62	20	31	22	0	20	2.3	2.2	19	89		58
4	62	25	41	2.8	5.4	20	6.4	2.2	39	89		69
5	54	34	41	0	6.7	20	14	7.2	55	87		65
6	52	34	41	10	16	20	18	22	74	86		53
7	50	34	33	21	13	19	14	21	57	84	81	54
8	38	17	36	11	15	21	24	15	62			53
9	36	12	39	6.2	15	38	31	14	76			52
10	36	12	39	8.6	15	45	38	12	77	39		52
11	36	12	35	13	15	48	44	9.4	80			52
12	36	12	21	15	15	48	41	9.4	42			61
13	35	4.2	21	15	12	48	38	12	13	45	81	66
14	34	1.8	20	15	7.4	28	37	5.2	20	45	81	71
15	34	1.9	22	15	7.6	15	37	0	23	43	80	64
16	39	7.2	17	15	7.9	5.7	34	0	3.4	43	80	61
17	44	26	3.0	15	14	3.0	31	0	0	43	81	62
18	44	35	2.8	16	21	3.0	29	0	0		83	64
19	39	47	2.3	12	20	3.0	30	0	0		83	62
20	33	54	2.2	4.2	16	2.9	29	0	2.5		83	55
21	33	35	2.2	4.1	16	2.9	29	0	16		82	45
22	32	25	2.2	4.2	17	2.8	32	19	21		82	34
23	33	25	2.1	3.6	21	2.8	45	35	31		83	23
24	34	25	2.0	12	21	28	54	20	38		83	14
25	33	16	1.9	15	21	14	31	21	56	81	81	8.1
26	20	8.3	2.0	13	21	.1	9.3	24	63		82	20
27	9.3	8.5	8.3	11	21	.2	32	27	61		84	48
28	10	9.0	18	0	21	.1	11	38	63		83	63
29	14	9.4	12	0	-------	0	2.3	43	74		81	68
30	15	9.9	13	0	-------	0	2.2	35	77		83	66
31	20	-------	13	8.3	-------	0	-------	15	-------		76	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	62	9.3	35.7	2,200
November	54	1.8	20.0	1,190
December	41	1.9	17.8	1,090
January (27 days)	23	2.8	12.0	643
February (25 days)	21	5.4	15.2	756
March (28 days)	48	.1	17.8	991
April (28 days)	54	2.2	26.6	1,480
May (24 days)	43	2.2	17.2	819
June (27 days)	80	2.5	43.4	2,330
July	----------	----------	69.7	4,290
August	----------	----------	81.4	5,010
September	71	8.1	51.5	3,060
The year	----------	----------	----------	23,900

NUECES RIVER BASIN

NUECES RIVER AT LAGUNA, TEX.

LOCATION.—Water-stage recorder 1 mile northeast of Laguna, Uvalde County.
DRAINAGE AREA.—764 square miles.
RECORDS AVAILABLE.—October, 1923, to September, 1930.
EXTREMES.—Maximum discharge during year, about 47,500 second-feet June 15 (gage height, 20.10 feet); minimum not determined.

1923–1930: Maximum discharge, that of June 15, 1930; minimum, 8.9 second-feet Sept. 9–11, 1924.

The floods of 1913 and Sept. 21, 1923, reached stage of 26.5 feet (discharge by slope-area method, 74,500 second-feet). Floods of 1903 reached a slightly higher stage.

REMARKS.—Records for low stage fair and for high stage poor. No diversions above station. Discharge partly estimated Jan. 15, Feb. 3, Apr. 26, Aug. 9, Sept. 13, and estimated Jan. 16 to Feb. 2, Apr. 15–25, Aug. 10 to Sept. 12.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	17	19	36	40	35	30	24	56	144	41	
2	24	17	20	36		35	30	23	52	140	39	
3	24	16	21	36	40	35	30	21	52	131	36	
4	23	16	21	36	39	35	28	21	52	123	33	
5	22	16	21	36	40	35	31	21	51	117	31	
6	22	16	21	36	40	35	30	22	59	114	28	22
7	21	17	21	36	39	34	30	22	60	109	26	
8	21	17	21	36	40	34	30	22	59	104	24	
9	20	17	21	36	40	35	28	22	59	99	23	
10	20	17	21	36	39	35	27	24	59	96		
11	19	17	21	36	40	33	26	24	60	92		
12	19	17	21	36	39	33	26	26	70	87		
13	19	17	50	36	39	33	26	30	1,150	82		21
14	26	17	49	36	40	33	26	28	532	82		20
15	24	17	56	36	39	33		30	14,200	80		19
16	20	17	51		39	32		36	2,810	76		19
17	18	17	48		39	33		46	858	74		19
18	18	17	46		39	32		48	621	72		18
19	17	17	45		39	32		49	429	70		18
20	17	17	45		39	32	25	49	343	66	22	18
21	16	18	44		38	32		49	277	60		18
22	16	18	42		38	33		48	230	60		18
23	15	18	42	38	36	32		48	222	59		18
24	15	18	40		36	31		48	196	57		18
25	15	20	40		40	31		46	174	54		17
26	17	19	39		36	31	22	45	174	52		18
27	26	19	39		35	33	21	45	163	51		18
28	21	19	39		35	33	27	45	160	49		18
29	19	19	39		-------	32	34	45	156	48		18
30	18	19	39		-------	31	26	79	150	45		17
31	17	-------	38		-------	31	-------	70	-------	44		-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	26	15	19.8	1,220
November	20	16	17.4	1,040
December	56	19	34.8	2,140
January	----------	----------	37.0	2,280
February	----------	35	38.7	2,150
March	35	31	33.0	2,030
April	----------	----------	26.8	1,590
May	79	21	37.3	2,290
June	14,200	51	784	46,700
July	144	44	81.8	5,030
August	----------	----------	24.7	1,520
September	----------	----------	19.8	1,180
The year	14,200	----------	95.5	69,200

NUECES RIVER NEAR UVALDE, TEX.

LOCATION.—Water-stage recorder at Tom Nunn crossing, 6 miles south of Southern Pacific Railroad bridge and 9 miles west of Uvalde, Uvalde County.

DRAINAGE AREA.—1,930 square miles, a large part of which is noncontributing at low stage, owing to water entering fault a few miles above gage.

RECORDS AVAILABLE.—October, 1927, to September, 1930.

EXTREMES.—Maximum discharge during year, about 57,500 second-feet June 15 (gage height, 15.73 feet); minimum 0.3 second-foot Apr. 26, 27, May 6 (gage height, 0.39 foot).

1928–1930: Maximum discharge, that of June 15, 1930; minimum not determined.

The river reached a stage of 26.4 feet during December, 1913.

REMARKS.—Records good. Discharge partly estimated Apr. 25, 26. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.7	1.4	1.0	0.6	0.9	0.5	0.4	0.5	16	4.4	1.7
2	1.4	1.7	1.4	1.0	.6	.8	.5	.4	.4	16	8.8	1.5
3	1.4	1.7	1.4	.9	.7	.9	.5	.4	.4	12	3.3	1.5
4	1.4	1.7	1.4	1.0	.8	.9	.5	.4	.5	10	3.3	1.5
5	1.2	1.9	1.2	1.0	.7	.8	.5	.4	.5	9.1	3.3	1.5
6	1.4	1.9	1.2	.9	.8	.7	.5	.3	.6	8.0	2.8	1.5
7	1.4	1.9	1.0	.9	.9	.8	.6	.4	.6	8.0	2.8	1.4
8	1.5	2.1	1.0	.9	.9	.9	.6	.4	.6	8.0	2.8	1.4
9	1.5	2.1	1.0	.9	.9	.9	.6	.4	.6	7.5	2.8	1.4
10	1.5	2.1	1.0	.9	1.0	.9	.6	.4	.6	7.5	2.8	1.4
11	1.5	2.1	1.0	.9	1.0	.9	.5	.4	.6	7.0	2.8	1.4
12	1.4	2.1	1.0	.9	1.0	.9	.5	.6	.9	7.0	2.6	1.2
13	1.4	1.9	1.2	.9	.9	.9	.5	.8	.6	7.0	2.6	1.2
14	200	2.3	1.0	.8	1.0	.9	.5	.5	242	14	2.6	1.2
15	105	2.1	1.0	.7	1.0	1.0	.5	.5	19,500	9.4	2.6	1.2
16	4.9	1.7	1.0	.7	1.0	.9	.6	.5	6,740	7.0	2.6	1.2
17	3.8	1.9	1.0	.7	.9	.9	.5	.4	1,560	7.0	2.6	1.2
18	2.8	1.5	1.0	.7	.9	.8	.5	.5	653	7.0	2.4	1.2
19	2.8	1.7	1.0	.7	.9	.7	.5	.4	440	6.4	2.4	1.2
20	2.6	1.5	1.0	.6	.8	.7	.4	.5	339	6.4	2.3	1.2
21	2.6	1.4	1.0	.7	.8	.7	.4	.5	229	6.4	2.3	1.2
22	2.4	1.4	1.0	.6	.8	.7	.4	.5	166	6.4	2.3	1.2
23	2.4	1.5	1.0	.6	.8	.6	.4	.6	114	5.9	2.3	1.2
24	2.4	1.5	1.0	.6	.8	.6	.4	.4	84	5.4	2.3	1.0
25	2.3	1.7	1.0	.6	.8	.6	.4	.4	60	5.4	2.1	1.0
26	2.3	1.4	1.0	.6	.8	.6	.3	.4	44	4.9	2.1	1.4
27	2.1	1.4	1.0	.7	.8	.7	.3	.4	40	4.9	2.1	1.2
28	1.9	1.4	1.0	.6	.8	.8	.8	.4	28	4.4	2.1	1.2
29	1.7	1.4	1.0	.7	------	.6	2.4	.5	24	4.4	1.9	1.0
30	1.7	1.4	1.0	.6	------	.6	.6	.6	19	4.4	1.9	1.0
31	1.7	------	1.0	.6	------	.5	------	.5	------	4.4	1.7	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	200	1.2	11.7	719
November	2.3	1.4	1.74	104
December	1.4	1.0	1.07	66
January	1.0	.6	.77	47
February	1.0	.6	.85	47
March	1.0	.5	.78	48
April	2.4	.3	.56	33
May	.8	.3	.46	28
June	19,500	.4	1,010	60,100
July	16	4.4	7.66	471
August	4.4	1.7	2.60	160
September	1.7	1.0	1.28	76
The year	19,500	.3	85.5	61,900

NUECES RIVER AT COTULLA, TEX.

LOCATION.—Staff gage 100 feet upstream from Farmer Dam, half a mile below International-Great Northern Railroad bridge, and 1.9 miles by road from post office at Cotulla, La Salle County. Zero of gage is 376.36 feet above mean sea level.

DRAINAGE AREA.—5,260 square miles, a large part of which is noncontributing at low stages, owing to water entering a fault near Uvalde.

RECORDS AVAILABLE.—October, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 6,940 second-feet June 22 (gage height, 5.20 feet); no flow during several periods.

1923–1930: Maximum discharge, about 49,500 second-feet June 3, 1925 (gage height, 14.89 feet); no flow during several periods.

REMARKS.—Records fair. Most of low-water flow is diverted by pumping from storage reservoir upstream; amount diverted not known. Low-water flow is regulated by storage reservoir above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July
1	31	8.2	0	3.7	0	3.4	4,520	78	78
2	16	7.0	0	3.1	0	2.8	4,920	240	60
3	12	4.0	0	2.5	0	2.5	3,980	231	37
4	8.8	17	0	1.3	0	1.9	2,400	177	33
5	6.4	12	0	.9	0	1.3	1,530	82	29
6	4.0	8.2	0	.3	0	1.0	668	78	16
7	2.8	7.6	0	0	0	.8	300	60	8.8
8	1.9	6.4	0	0	0	.7	177	46	4.0
9	1.3	5.8	0	0	0	.3	116	29	18
10	.9	4.6	0	0	0	0	82	18	16
11	.7	4.0	0	0	0	0	73	37	12
12	.3	3.1	0	0	0	0	35	60	5.8
13	.1	2.5	0	0	0	0	24	116	4.0
14	0	1.9	0	0	0	0	13	480	10
15	0	1.3	62	.3	0	0	9.4	948	8.8
16	0	.9	420	.8	0	0	7.0	1,340	5.2
17	0	.5	1,160	.9	223	0	4.6	1,700	4.0
18	550	0	1,700	.8	642	0	4.6	2,220	3.4
19	542	0	1,090	.4	962	0	5.8	3,280	2.8
20	348	0	252	.4	420	0	6.4	4,720	1.0
21	288	0	123	.2	177	0	7.0	5,920	.7
22	186	0	82	.1	78	0	8.2	6,940	0
23	143	0	50	0	68	0	9.4	6,520	0
24	82	0	16	0	28	0	10	3,980	0
25	64	0	15	0	15	0	82	1,960	0
26	53	0	13	0	12	0	240	802	0
27	41	1.3	12	0	9.4	0	240	300	0
28	29	3.7	10	0	7.0	1,690	222	177	0
29	17	3.1	8.2	0	5.2	2,920	213	130	0
30	15	0	7.0	0	4.0	2,580	177	96	0
31	9.4	------	4.0	0	3.4	------	109	------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	550	0	79.1	4,860
November	17	0	3.44	205
December	1,700	0	162	9,960
January	3.7	0	.51	31
March	962	0	85.6	5,260
April	2,920	0	240	14,300
May	4,920	4.6	651	40,000
June	6,940	18	1,420	84,500
July	78	0	11.5	707
The year	6,940	0	221	160,000

NOTE.—No flow during months for which no discharge is given.

NUECES RIVER NEAR THREE RIVERS, TEX.

LOCATION.—Staff gage at San Antonio, Uvalde & Gulf Railroad bridge 2 miles southeast of Three Rivers, Live Oak County, and half a mile below Frio River. Zero of gage is 101.08 feet above mean sea level.

DRAINAGE AREA.—15,600 square miles, part of which is noncontributing at low stages, owing to water entering faults near Uvalde.

RECORDS AVAILABLE.—July, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, 10,100 second-feet June 14 (gage height, 30.8 feet); no flow Aug. 15 to Sept. 3, Sept. 15–30.

1915–1930: Maximum stage, 46.0 feet (probably affected by strong upstream wind from Gulf storm) Sept. 18, 1919 (discharge not determined); no flow during several periods.

REMARKS.—Records fair. About 10,000 acres declared irrigated above station. At very low stages flow is regulated for short periods by railroad pumping plant just above control. Gage-height records furnished by United States Weather Bureau.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,760	176	25	31	14	4.0	38	6,720	1,930	4,640	4.0	0
2	6,080	75	19	31	14	14	38	4,640	1,630	4,400	4.0	0
3	6,000	96	14	25	14	6.5	31	3,240	1,420	3,700	2.4	0
4	4,080	214	10	25	19	6.5	25	2,260	850	1,960	2.4	2.4
5	2,710	33	10	25	31	10	19	1,450	490	200	2.4	1.3
6	461	25	6.5	19	19	10	19	1,480	315	246	1.3	71
7	137	25	6.5	14	14	10	14	1,810	710	276	1.3	69
8	75	77	4.0	14	10	10	10	2,200	820	146	1.3	19
9	48	48	4.0	14	10	10	10	2,650	610	54	1.3	14
10	31	31	45	10	10	10	6.5	3,170	490	2,250	.6	4.0
11	25	60	143	10	6.5	10	6.5	3,700	790	1,870	.6	.6
12	19	43	18	10	6.5	2.4	4.0	4,010	910	671	.6	.6
13	14	95	10	14	6.5	2.4	2.4	3,590	2,640	121	.6	.6
14	14	60	25	10	6.5	4.0	2.4	4,000	8,320	282	.6	.6
15	10	38	1,250	10	6.5	263	2.4	8,050	8,510	214	0	0
16	318	25	757	10	6.5	315	4.0	8,410	6,480	95	0	0
17	292	19	363	10	4.0	117	817	6,370	7,960	60	0	0
18	52	14	490	6.5	4.0	195	1,480	3,940	7,780	48	0	0
19	26	10	760	6.5	2.4	137	400	3,560	6,680	38	0	0
20	49	6.5	820	6.5	2.4	117	282	2,170	5,520	31	0	0
21	25	6.5	760	10	2.4	95	116	1,420	4,960	25	0	0
22	95	4.0	585	10	4.0	176	38	1,150	5,240	19	0	0
23	265	4.0	585	10	4.0	379	14	1,330	5,900	135	0	0
24	331	6.5	214	10	4.0	560	14	1,510	5,340	72	0	0
25	214	22	137	10	6.5	635	1,710	1,330	3,520	31	0	0
26	117	56	95	10	4.0	428	2,290	4,200	2,620	19	0	0
27	324	48	95	10	4.0	126	1,330	5,020	2,230	14	0	0
28	619	31	60	14	4.0	95	1,550	4,040	2,800	10	0	0
29	157	19	48	10	------	48	7,110	3,170	3,560	6.5	0	0
30	75	19	38	31	------	38	8,230	2,770	4,160	4.0	0	0
31	195	------	31	14	------	38	------	2,350	------	4.0	0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,080	10	923	56,800
November	214	4.0	46.3	2,760
December	1,250	4.0	240	14,800
January	31	6.5	14.2	873
February	31	2.4	8.56	475
March	635	2.4	125	7,690
April	8,230	2.4	854	50,800
May	8,410	1,150	3,410	210,000
June	8,510	315	3,510	209,000
July	4,640	4.0	698	42,900
August	4.0	0	.75	46
September	71	0	6.10	363
The year	8,510	0	823	597,000

NUECES RIVER AT CALALLEN, TEX.

LOCATION.—Staff gage at old pump house for city of Corpus Christi, half a mile northwest of Calallen, Nueces County, and half a mile above edge of tidewater and breakwater dam.

DRAINAGE AREA.—16,900 square miles, a large part of which is noncontributing at low stages, owing to water entering fault near Uvalde.

RECORDS AVAILABLE.—August, 1915, to September, 1930. (Records of discharge from 1915 to 1918, only.)

EXTREMES.—Maximum stage during year, 8.70 feet June 22; minimum stage, 0.85 foot Oct. 25.

1915–1930: During September, 1919, the river reached a stage of about 12 feet, as determined from floodmarks on gage. This stage probably exceeds any that occurred for many years prior to the establishment of this station. No flow Aug. 23–29, 1918.

REMARKS.—Discharge not computed. Gage-height record furnished by city of Corpus Christi.

Daily gage height, in feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.30	2.38	2.05	2.35	2.85	2.85	2.42	7.58	7.02	6.18	2.60	2.30
2	1.25	2.12	2.02	2.32	2.80	2.85	2.62	7.22	6.48	6.45	2.58	2.22
3	1.40	2.00	1.95	2.18	2.75	2.85	2.75	7.80	5.65	6.80	2.60	2.20
4	1.72	1.85	1.88	2.15	2.72	2.78	2.78	8.02	4.92	7.05	2.40	2.28
5	2.02	1.62	1.78	2.15	2.55	2.70	2.68	8.15	4.55	7.20	2.28	2.38
6	2.60	1.30	1.85	2.15	2.40	2.65	2.60	7.80	4.15	6.85	2.38	2.40
7	2.98	1.15	1.98	2.85	2.38	2.65	2.50	6.95	3.75	4.92	2.48	2.80
8	3.18	1.10	2.08	3.30	2.28	2.58	2.28	5.68	3.45	3.60	2.55	2.55
9	3.25	1.20	2.20	3.12	2.32	2.52	2.08	4.98	3.20	3.20	2.55	2.45
10	3.32	1.25	2.30	2.98	2.52	2.48	2.10	5.02	3.52	2.90	2.55	2.35
11	3.38	1.65	2.50	2.85	2.58	2.28	2.32	5.62	3.60	3.22	2.52	2.22
12	3.40	2.85	2.58	2.78	2.75	2.02	2.38	6.75	3.60	4.28	2.50	2.10
13	3.45	3.35	2.70	2.70	3.02	1.92	2.40	7.00	3.85	4.28	2.48	2.02
14	3.38	3.18	2.80	2.68	3.10	1.98	2.25	7.00	4.02	3.70	2.45	2.10
15	3.32	3.10	2.95	2.58	3.12	2.05	2.00	7.08	5.12	3.20	2.50	2.18
16	3.30	2.92	3.00	2.40	3.15	2.10	1.78	7.28	6.15	3.12	2.52	2.42
17	3.28	2.62	3.00	2.12	3.10	2.42	1.68	7.52	7.12	2.90	2.45	2.45
18	3.00	2.45	3.00	1.95	3.02	2.60	1.80	7.85	7.72	2.62	2.22	2.55
19	2.60	2.20	2.88	2.38	3.05	2.58	1.88	8.15	8.18	2.35	2.00	2.42
20	2.40	1.90	2.78	3.22	3.18	2.52	1.98	8.38	8.52	2.15	1.88	2.40
21	2.18	1.72	2.70	3.40	3.15	2.35	2.08	8.32	8.62	2.02	1.85	2.40
22	1.80	1.70	2.65	3.40	3.18	2.20	2.05	7.75	8.68	1.88	1.72	2.40
23	1.50	1.62	2.58	3.32	3.20	2.10	2.00	6.65	8.62	1.95	1.75	2.40
24	1.22	1.50	2.50	3.25	3.20	2.08	1.95	6.20	8.45	1.95	1.98	2.42
25	.95	1.62	2.48	3.20	3.15	2.02	1.98	6.25	8.22	1.98	2.15	2.35
26	.90	1.88	2.42	3.18	3.05	1.88	2.40	5.12	8.08	2.00	2.12	2.38
27	1.28	1.98	2.45	3.20	2.95	1.85	3.22	4.88	7.95	2.10	2.15	2.32
28	2.58	2.02	2.40	3.20	2.90	2.02	3.22	5.48	7.50	1.98	2.10	2.30
29	3.18	2.05	2.35	3.18	-------	2.02	5.60	6.35	6.78	2.05	2.10	2.22
30	3.08	2.05	2.35	3.02	-------	2.02	7.08	7.02	6.25	2.40	2.18	2.08
31	2.75	-------	2.35	2.92	-------	2.15	-------	7.25	-------	2.50	2.30	-------

FRIO RIVER AT CONCAN, TEX.

LOCATION.—Staff and chain gages half a mile below Concan post office, Uvalde County, four-fifths mile below Shut In.
DRAINAGE AREA.—485 square miles.
RECORDS AVAILABLE.—October, 1923, to September, 1930.
EXTREMES.—Maximum and minimum discharge during year not determined. 1923–1930: Maximum discharge, about 30,400 second-feet July 13, 1926 (gage height, 14.50 feet); minimum, 8.1 second-feet Aug. 2, 3, 1928. Highest known stage, 28.8 feet Sept. 18, 1923.
REMARKS.—Daily and monthly records of discharge not sufficiently accurate for publication. Only discharge measurements made during year published.

Discharge measurements, 1929–30

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 8	1.50	14.9	June 18	2.46	299
Nov. 13	1.58	23.0	July 2	1.92	90.9
Feb. 4	1.62	32.2	Sept. 13	1.50	13.0
Apr. 27	1.56	22.2			

FRIO RIVER NEAR DERBY, TEX.

LOCATION.—Staff gage at International-Great Northern Railroad bridge 900 feet below mouth of Leona River and 4 miles south of Derby, Frio County.

DRAINAGE AREA.—3,490 square miles, a large part of which is noncontributing at low stages, owing to water entering fault near Uvalde.

RECORDS AVAILABLE.—August, 1915, to September, 1930.

EXTREMES.—Maximum discharge during year, 5,400 second-feet June 17 (gage height, 8.90 feet); no flow during several periods.

1915–1930: Maximum discharge, about 34,400 second-feet Sept. 18, 1919 (gage height, 18.5 feet); no flow during several periods of each year.

REMARKS.—Records poor. Diversions for irrigation above station; amount diverted not known.

Daily and monthly discharge, in second-feet, 1928–29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	0	0.8	0	0	43	0.8	1.4
2	0	0	1.1	0	0	31	.8	.8
3	0	0	1.4	0	0	15	.8	.8
4	0	0	1.1	0	0	6.8	.8	.3
5	0	0	1.4	0	0	2.1	.8	.3
6	0	0	.8	0	0	1.4	.8	0
7	0	0	.8	0	0	1.4	.8	0
8	0	0	.8	0	0	.8	.8	0
9	0	0	.8	0	0	.6	2.5	0
10	0	0	.8	0	0	.5	34	0
11	0	0	.5	0	0	.5	12	0
12	0	0	.4	0	0	.3	5.4	0
13	0	0	0	0	0	.3	6.1	0
14	0	1.7	0	.2	0	209	200	0
15	.6	.8	0	.3	0	859	128	0
16	263	.6	0	3.0	0	730	928	0
17	145	.3	0	4.7	0	126	3,860	0
18	58	.3	0	4.7	0	57	3,860	0
19	13	.4	0	3.0	0	19	1,660	0
20	6.1	.6	0	2.1	0	8.4	485	0
21	3.0	.6	0	0	0	2.1	127	0
22	1.7	.4	0	0	0	2.1	56	0
23	.5	.8	0	0	0	6.1	23	0
24	.1	.8	0	0	0	3.5	7.6	0
25	0	.6	0	0	48	6.1	3.0	0
26	0	.8	0	0	50	9.2	2.1	0
27	0	.8	0	0	87	6.8	2.1	0
28	0	1.4	0	0	237	2.1	2.1	0
29	0	1.1	-------	0	208	.8	2.1	0
30	0	.6	-------	0	62	.8	2.1	0
31	0	1.1	-------	0	-------	.8	-------	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	263	0	15.8	972
January	1.7	0	.44	27
February	1.4	0	.38	21
March	4.7	0	.58	36
April	237	0	23.1	1,370
May	859	.3	69.4	4,270
June	3,860	.8	380	22,600
July	1.4	0	.12	7.4
The year	3,860	0	40.5	29,300

NOTE.—No flow during months for which no discharge is shown.

RIO GRANDE BASIN

RIO GRANDE AT SAN MARCIAL, N. MEX.

LOCATION.—Water-stage recorder in sec. 17, T. 7 S., R. 1 W., at highway bridge half a mile northeast of San Marcial.

DRAINAGE AREA.—30,000 square miles.

RECORDS AVAILABLE.—January, 1895, to September, 1930. Records prior to January, 1922, at station 1½ miles downstream.

EXTREMES.—Maximum discharge during year, 5,880 second-feet July 26 (gage height, 3.94 feet); no flow during several periods.

1895–1930: Maximum mean daily discharge, 33,000 second-feet Oct. 11, 1904 (maximum discharge Sept. 24, 1929, was probably about same as in flood of 1904); no flow during several periods.

REMARKS.—Records fair. Discharge interpolated or estimated Jan. 21–25, Aug. 27–30, Sept. 4–14. Water diverted from Rio Grande and tributaries above station for irrigation of 600,000 acres.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,610	1,280	933	870	880	1,450	1,050	4,140	1,910	0	1,850	0
2	3,240	1,250	974	795	880	1,230	772	3,570	2,910	0	1,350	0
3	3,150	1,030	1,130	784	880	1,080	905	3,300	2,680	0	1,070	0
4	3,040	947	1,140	784	797	923	815	3,150	2,890	0	850	368
5	2,840	1,080	1,240	737	684	818	757	3,440	2,680	0	788	89
6	2,510	908	1,200	749	628	754	772	3,950	2,070	0	806	19
7	2,190	908	1,130	820	639	809	815	3,440	1,780	0	1,320	601
8	2,080	1,240	1,070	761	639	818	1,060	3,150	1,720	0	1,140	713
9	1,900	1,620	1,040	703	639	892	2,000	2,490	1,160	0	670	359
10	2,000	2,020	1,060	737	684	912	2,970	2,250	1,160	0	980	118
11	1,960	1,900	1,000	795	758	870	3,100	1,700	1,300	0	2,680	74
12	1,730	1,900	1,120	749	758	818	3,980	1,620	1,180	0	2,890	46
13	1,750	1,710	1,060	670	661	775	4,090	1,200	1,030	0	2,860	21
14	1,770	1,710	1,000	585	745	761	4,890	1,180	950	112	1,890	3.2
15	2,910	1,600	1,030	596	824	740	4,820	830	815	2,540	1,040	0
16	3,050	1,280	1,060	749	851	754	4,790	605	715	2,540	886	0
17	3,080	1,120	1,100	585	925	834	4,850	592	631	1,540	705	0
18	2,300	1,080	974	659	910	978	4,670	1,200	631	881	648	0
19	1,790	988	920	659	1,020	1,260	4,140	1,740	686	497	508	0
20	1,680	968	883	726	1,110	1,880	3,300	1,540	686	240	437	0
21	1,410	1,180	883	749	1,170	1,930	2,760	1,230	467	346	390	0
22	1,500	1,330	960	694	1,220	1,240	2,760	1,080	363	1,280	268	0
23	1,520	1,450	908	638	1,270	902	3,070	950	293	3,920	211	0
24	1,380	1,380	772	606	1,260	809	3,820	1,490	262	4,670	183	0
25	1,190	1,240	714	575	1,360	818	4,220	2,180	196	4,200	124	0
26	1,200	1,120	606	649	1,480	1,050	4,250	1,850	165	4,670	100	0
27	1,250	1,080	566	670	1,440	1,370	4,640	1,620	117	3,230		0
28	933	1,020	596	489	1,560	1,520	5,140	1,600	57	3,150	31	0
29	908	947	772	772	-------	1,450	4,700	1,620	21	2,540		0
30	920	974	772	1,200	-------	1,390	4,450	1,560	0	1,940		0
31	1,160	-------	820	1,040	-------	1,090	-------	1,890	-------	1,600	0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,610	908	2,000	123,000
November	2,020	908	1,280	76,200
December	1,240	566	949	58,400
January	1,200	489	729	44,800
February	1,560	628	953	52,900
March	1,930	740	1,060	65,200
April	5,140	757	3,130	186,000
May	4,140	592	2,010	124,000
June	2,910	0	1,050	62,500
July	4,670	0	1,290	79,300
August	2,890	0	863	53,100
September	713	0	80.4	4,780
The year	5,140	0	1,280	930,000

RIO GRANDE BELOW ELEPHANT BUTTE DAM, N. MEX.

LOCATION.—Water-stage recorder in sec. 25, T. 13 S., R. 4 W., just below Elephant Butte Dam. Mescal Canyon enters half a mile downstream.
RECORDS AVAILABLE.—October, 1916, to September, 1930.
EXTREMES.—No data.
REMARKS.—Records good. Considerable water is diverted above station; amount not known. Flow controlled by Elephant Butte Dam, which forms reservoir having capacity of 2,638,000 acre-feet. Records furnished by United States Bureau of Reclamation.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	482	500	76	3	280	842	1,730	1,260	1,640	2,360	1,470	1,790
2	482	500	260	3	553	785	1,720	1,430	1,640	2,360	1,630	1,790
3	482	500	260	3	558	780	1,720	1,610	1,660	2,360	1,710	1,670
4	482	418	260	3	348	770	1,750	1,610	1,740	2,360	1,900	1,480
5	440	3	98	3	396	780	2,120	1,600	1,800	2,360	2,180	1,470
6	3	3	3	3	580	785	2,080	1,560	1,810	2,330	2,290	1,450
7	3	3	3	3	512	770	2,070	1,530	2,300	2,450	1,740	1,580
8	3	3	3	3	307	635	2,090	1,520	2,050	2,450	2,100	1,550
9	3	3	3	3	304	630	2,250	1,490	2,070	2,300	1,960	1,330
10	3	3	3	3	301	635	2,200	1,320	2,110	2,300	1,780	1,330
11	3	3	3	3	295	790	2,240	1,310	2,090	2,280	1,800	1,330
12	3	3	3	3	292	800	2,380	1,310	1,890	2,060	1,650	1,330
13	3	3	3	3	283	830	2,380	1,290	1,880	2,060	1,500	1,400
14	3	10	38	3	280	836	2,370	1,160	1,750	2,060	1,470	1,400
15	3	120	365	3	377	1,160	2,060	1,400	1,750	2,060	1,610	1,400
16	3	120	365	3	620	1,550	2,110	1,470	1,670	1,740	1,640	1,400
17	440	120	365	3	620	1,380	2,140	1,630	1,500	1,440	2,040	1,400
18	300	74	365	3	625	1,360	2,140	1,620	1,490	1,510	2,040	1,400
19	260	3	365	3	630	1,360	1,900	1,620	1,500	1,700	2,160	1,400
20	3	3	61	3	635	1,350	1,900	1,660	1,570	1,700	2,230	1,190
21	3	3	3	3	635	1,390	1,900	2,080	1,900	1,720	2,470	1,190
22	3	3	3	3	794	1,580	1,880	2,180	1,900	1,930	2,580	1,160
23	3	3	3	3	910	1,660	1,760	2,060	1,920	1,530	2,620	1,100
24	3	3	3	3	905	1,640	1,760	2,200	1,940	1,460	2,560	1,100
25	3	3	3	3	900	1,630	1,740	2,200	2,080	1,460	2,520	1,100
26	3	3	3	3	900	1,630	1,710	2,200	2,210	1,460	2,380	1,060
27	3	3	3	3	900	1,630	1,670	2,160	2,340	1,460	2,320	850
28	3	3	3	3	895	1,620	1,670	1,900	2,340	1,460	2,310	850
29	3	3	3	3	------	1,730	1,590	1,900	2,340	1,460	2,220	850
30	3	3	3	3	------	1,710	1,400	1,220	2,340	1,460	2,160	850
31	3	------	3	3	------	1,730	------	1,500	------	1,460	2,160	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	482	3	111	6,820
November	500	3	80.8	4,810
December	365	3	94.7	5,820
January	3	3	3.00	184
February	910	280	558	31,000
March	1,730	630	1,190	73,200
April	2,380	1,400	1,950	116,000
May	2,200	1,160	1,640	101,000
June	2,340	1,490	1,910	114,000
July	2,450	1,440	1,910	117,000
August	2,620	1,470	2,040	125,000
September	1,790	850	1,310	77,900
The year	2,620	3	1,070	773,000

RIO GRANDE NEAR EL PASO, TEX.

LOCATION.—Water-stage recorder in SE. ¼ sec. 9, T. 29 S., R. 4 E., at Courchesnes quarries, 4 miles northeast of El Paso, El Paso County. Zero of gage is 3,718.04 feet above mean sea level.

RECORDS AVAILABLE.—May, 1897, to September, 1930. May, 1889, to June, 1893, at station at old Fort Bliss, 1,500 feet above Mexican Dam. January, 1895, to May, 1897, at station at pumping house of smelter company, 1 mile below present gage.

EXTREMES.—Maximum discharge during year, 3,310 second-feet Aug. 8 (gage height, 4.14 feet); minimum, 102 second-feet Jan. 25 (gage height, 0.30 foot).
1889–1893, 1895–1930: Maximum mean daily discharge, 23,700 second-feet June 12, 1905; no flow for several periods prior to construction of Elephant Butte Dam.

REMARKS.—Records good. Discharge partly estimated Sept. 20–23. Considerable water is diverted above station; amount not known. Flow regulated by Elephant Butte Reservoir, diversions, and return water from irrigated lands between reservoir and gaging station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	519	226	154	154	126	598	827	971	2,070	1,130	953	1,260
2	487	198	146	134	126	644	916	824	1,090	1,100	880	1,020
3	443	178	170	142	118	701	845	606	750	1,180	889	1,100
4	374	190	162	146	130	604	810	782	760	1,380	863	1,160
5	342	414	150	158	148	526	750	1,160	742	1,720	802	1,100
6	369	474	191	162	325	462	845	1,040	742	1,210	1,060	944
7	397	540	230	150	363	499	1,240	1,060	784	1,300	1,260	1,010
8	431	480	257	142	363	506	989	1,120	1,140	1,050	2,270	1,100
9	456	325	234	146	325	519	953	1,020	2,040	1,300	2,340	872
10	403	280	186	154	391	448	989	971	1,280	1,500	2,280	872
11	330	234	158	150	347	358	1,100	1,050	1,370	1,600	1,480	828
12	290	222	174	142	280	305	1,010	1,020	1,410	1,490	1,840	668
13	270	214	158	130	239	290	1,160	776	1,490	1,540	1,930	629
14	315	214	154	134	230	325	1,250	636	1,330	1,540	1,650	742
15	352	222	162	130	226	403	1,200	613	1,520	1,390	1,310	759
16	937	222	166	126	226	449	1,150	590	1,400	1,320	845	734
17	1,270	210	166	130	226	734	1,150	560	1,150	1,390	790	710
18	701	206	170	118	218	1,110	1,050	793	1,070	1,070	1,660	734
19	601	194	146	122	226	916	1,200	845	953	793	971	768
20	488	198	244	126	266	863	1,260	802	925	784	916	802
21	403	230	363	126	315	760	1,210	776	810	1,040	916	863
22	369	218	330	126	280	784	1,020	768	836	1,050	889	907
23	374	174	336	122	295	776	971	750	1,020	1,360	1,080	858
24	305	174	336	122	363	916	1,060	1,300	1,060	1,980	1,260	829
25	270	162	330	118	380	1,050	1,060	1,330	953	1,770	1,390	819
26	280	166	257	118	519	889	1,050	1,530	907	2,040	1,540	734
27	290	158	214	118	547	998	1,260	1,280	989	1,540	1,490	750
28	257	162	190	122	613	1,110	1,160	1,250	1,080	1,440	1,760	858
29	270	170	170	122	------	971	971	1,290	1,300	1,240	1,490	863
30	248	162	154	126	------	1,030	944	1,060	1,300	1,190	1,540	742
31	230	------	154	122	------	1,050	------	1,070	------	1,070	1,650	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,270	230	422	25,900
November	540	158	241	14,300
December	363	146	207	12,700
January	162	118	133	8,180
February	613	118	293	16,300
March	1,110	290	697	42,800
April	1,260	750	1,050	62,500
May	1,530	560	956	58,800
June	2,070	742	1,140	67,800
July	2,040	784	1,340	82,400
August	2,340	790	1,350	83,000
September	1,260	629	872	51,900
The year	2,340	118	728	527,000

RIO GRANDE AT TORNILLO BRIDGE, NEAR FABENS, TEX.

LOCATION.—Water-stage recorder in NE. ¼ NW. ¼ sec. 26, T. 34 S., R. 8 E., at highway bridge 4½ miles southeast of Fabens.

RECORDS AVAILABLE.—October, 1927, to September, 1930.

EXTREMES.—Maximum discharge during year, 1,640 second-feet Aug. 11, 12 (gage height, 12.63 feet); no flow Mar. 14.

1927–1930: Maximum discharge, 3,440 second-feet Aug. 14, 1929 (gage height, 14.72 feet); no flow June 14, 1929, Mar. 14, 1930.

REMARKS.—Records good. Considerable water is diverted above station; amount not known. Flow regulated by Elephant Butte Reservoir, diversions, and return water from irrigated lands between reservoir and gaging station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	218	144	159	128	109	187	60	520	118	166	661
2	32	195	144	156	124	132	70	73	898	33	74	302
3	16	179	142	151	126	205	22	63	306	16	36	127
4	21	179	135	149	124	250	23	38	88	47	14	213
5	33	209	71	154	137	193	84	84	40	117	8.2	262
6	64	204	52	156	135	126	163	219	40	431	11	272
7	29	187	32	154	130	66	138	298	30	232	100	302
8	47	298	88	142	105	40	184	244	98	195	562	524
9	87	286	86	142	93	89	58	218	485	41	1,120	380
10	71	248	63	144	165	118	44	168	708	150	1,370	259
11	81	298	88	154	155	46	38	301	722	500	1,540	176
12	58	247	41	154	166	10	66	250	699	543	1,360	124
13	73	221	26	151	105	1.4	98	159	813	616	1,210	52
14	82	198	91	144	124	3.8	187	50	823	562	1,150	19
15	82	198	164	147	39	3.8	201	13	717	294	910	33
16	204	174	169	139	28	16	178	10	818	310	552	14
17	681	109	164	137	36	68	233	7.2	551	302	327	5.0
18	773	71	156	133	30	93	344	5.0	344	327	213	3.4
19	522	67	159	144	32	318	313	13	310	168	165	4.7
20	457	54	147	137	5.0	227	436	11	172	129	91	10
21	356	69	184	124	2.8	185	418	12	118	171	63	16
22	244	81	221	128	5.6	122	192	14	72	219	20	138
23	190	62	82	128	13	163	66	32	48	552	25	162
24	256	64	244	128	9.4	167	47	7.9	41	768	56	166
25	265	63	168	128	27	224	72	250	95	970	229	111
26	298	106	160	130	21	228	210	429	68	970	287	137
27	277	122	91	128	50	190	288	466	15	1,150	318	176
28	277	151	63	128	110	267	373	351	27	1,090	339	173
29	259	154	64	130	-------	336	248	396	113	662	528	226
30	274	144	118	128	-------	310	126	369	188	421	430	280
31	274	-------	149	130	-------	301	-------	304	-------	252	611	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	773	16	207	12,700
November	298	54	162	9,640
December	244	26	120	7,380
January	159	124	140	8,610
February	166	2.8	79.5	4,420
March	336	1.4	149	9,160
April	436	22	170	10,100
May	466	5.0	159	9,780
June	898	15	332	19,800
July	1,150	16	399	24,500
August	1,540	8.2	448	27,500
September	661	3.4	178	10,600
The year	1,540	1.4	213	154,000

RIO GRANDE BELOW OLD FORT QUITMAN, NEAR FINLAY, TEX.

LOCATION.—Water-stage recorder at lower end of El Paso Valley, 1½ miles below Old Fort Quitman and 11½ miles south of Finlay, Hudspeth County. Zero of gage is 3,452.64 feet (revised) above mean sea level.

RECORDS AVAILABLE.—January, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 1,360 second-feet Aug. 14 (gage height, 4.64 feet); minimum, 58 second-feet July 5 (gage height, 0.54 foot). 1923–1930: Maximum mean daily discharge, 2,600 second-feet Sept. 11, 1925; minimum, 20 second-feet July 23, 24, 1925.

REMARKS.—Records good. Considerable water diverted above station; amount not known. Flow regulated by storage at Elephant Butte Reservoir, diversions, and return water from irrigated lands between reservoir and gaging station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	213	362	204	185	172	100	270	268	302	86	384	232
2	200	351	197	190	172	110	277	211	265	113	251	354
3	188	327	190	190	175	134	240	201	371	113	182	340
4	188	298	180	195	172	181	183	213	530	82	140	219
5	175	276	181	195	172	206	154	191	306	64	117	138
6	170	280	180	197	170	242	169	167	166	67	88	128
7	168	288	224	195	169	252	137	171	123	110	90	207
8	192	386	228	197	178	209	154	202	120	205	178	210
9	180	371	197	199	227	186	162	236	176	207	317	200
10	183	417	195	199	248	160	180	213	168	190	830	340
11	175	440	221	197	256	152	170	214	650	144	1,040	322
12	204	362	208	199	240	170	144	199	840	182	1,160	260
13	217	330	208	197	275	167	142	250	920	390	1,260	210
14	209	294	200	195	300	133	158	284	940	415	1,320	174
15	778	274	183	195	236	94	169	248	1,000	440	1,240	149
16	888	266	170	195	229	77	175	166	940	402	1,080	126
17	443	256	162	192	196	87	191	121	940	285	712	118
18	528	274	193	188	172	92	167	116	900	239	455	90
19	825	284	192	188	134	102	194	106	712	260	335	66
20	724	258	188	185	128	117	272	113	545	318	253	71
21	648	234	176	183	106	211	242	112	440	253	192	84
22	547	228	176	180	77	211	280	92	302	266	133	90
23	479	219	173	175	65	213	217	79	258	402	104	80
24	472	236	236	170	73	220	162	82	200	415	82	90
25	456	246	244	172	84	191	161	99	158	545	69	95
26	446	236	292	175	92	196	151	122	135	760	64	117
27	685	238	348	176	87	202	139	144	123	840	77	120
28	536	213	348	173	107	246	170	331	140	920	135	107
29	436	180	276	172	-------	230	242	339	106	1,040	151	154
30	401	186	226	170	-------	242	313	272	92	815	160	176
31	377	-------	192	170	-------	290	-------	302	-------	530	235	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	888	168	397	24,400
November	440	180	287	17,100
December	348	162	212	13,000
January	199	170	187	11,500
February	300	65	168	9,330
March	290	77	175	10,800
April	313	137	193	11,500
May	339	79	189	11,600
June	1,000	92	429	25,500
July	1,040	64	358	22,000
August	1,320	64	415	25,500
September	354	66	169	10,000
The year	1,320	64	266	192,000

RIO GRANDE AT BOQUILLAS, TEX.

LOCATION.—Water-stage recorder 4.0 miles below mouth of Tornillo Creek and a quarter of a mile south of Boquillas, Brewster County.

RECORDS AVAILABLE.—June, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 10,400 second-feet Aug. 15 (gage height, 6.39 feet); minimum, 123 second-feet Sept. 29, 30 (gage height, 0.35 foot).

1928–1930: Maximum discharge, 27,600 second-feet Sept. 11, 1929 (gage height, 11.90 feet); minimum, that of Sept. 29, 30, 1930.

REMARKS.—Records good. Discharge partly estimated Aug. 30, 31. Considerable water is diverted above station; amount not known. Flow partly regulated by Elephant Butte Dam and dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,390	2,170	1,290	1,240	883	672	325	396	365	286	1,610	565
2	1,390	1,890	1,260	1,410	883	759	320	493	412	254	2,240	505
3	1,340	1,780	1,250	1,480	838	711	325	406	268	232	3,300	469
4	1,310	1,760	1,250	1,350	829	650	320	335	307	209	2,450	493
5	1,210	1,650	1,280	1,180	793	665	320	281	656	186	1,690	529
6	1,120	1,640	1,300	1,230	919	665	305	245	1,230	191	1,320	434
7	1,120	1,620	1,260	1,180	901	612	280	222	1,470	182	1,420	396
8	1,100	1,600	1,180	1,120	901	568	300	214	1,040	196	3,980	370
9	1,060	1,510	1,180	1,140	910	517	300	218	1,090	240	2,120	340
10	1,040	1,390	1,220	1,150	892	496	295	240	822	254	4,620	355
11	1,040	1,400	1,190	1,130	865	496	290	232	712	186	7,900	340
12	1,020	1,440	1,250	1,080	874	496	276	218	1,380	149	6,380	310
13	975	1,410	1,810	1,070	883	503	403	222	1,350	1,400	6,140	365
14	1,070	1,470	1,410	1,120	874	503	258	222	946	946	6,380	268
15	1,600	1,470	1,170	1,170	838	510	396	200	705	677	8,100	240
16	2,700	1,470	1,180	1,210	820	496	320	196	1,340	892	6,860	214
17	2,060	1,410	1,210	1,230	820	475	290	196	1,540	705	6,140	155
18	2,620	1,410	1,260	1,210	820	456	254	186	1,170	635	4,320	191
19	3,220	1,440	1,250	1,150	802	430	240	191	1,160	691	4,720	182
20	3,220	1,500	1,280	1,130	802	416	245	186	965	475	3,570	200
21	2,620	1,400	1,280	1,130	838	410	240	186	814	475	2,880	200
22	1,920	1,380	1,170	1,060	865	404	236	178	822	412	2,360	191
23	1,900	1,360	1,140	985	820	390	236	182	806	982	1,900	182
24	1,880	1,280	1,220	1,020	793	371	240	182	698	972	1,620	173
25	1,760	1,260	1,300	1,020	751	358	245	160	635	1,780	1,380	160
26	1,750	1,290	1,400	985	719	339	263	155	600	1,720	1,160	151
27	1,790	1,340	1,430	965	695	333	290	476	553	2,040	1,020	139
28	2,470	1,350	1,320	937	680	315	325	360	428	1,750	1,140	135
29	3,300	1,380	1,290	919	------	315	418	740	380	2,060	814	135
30	3,130	1,320	1,250	901	------	315	401	517	330	2,020	705	139
31	2,450	------	1,280	910	------	327	------	340	------	1,780	614	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,300	975	1,830	113,000
November	2,170	1,260	1,490	88,700
December	1,810	1,140	1,280	78,700
January	1,480	901	1,120	68,900
February	919	680	832	46,200
March	759	315	483	29,700
April	418	236	299	17,800
May	740	155	277	17,000
June	1,470	268	850	50,600
July	2,060	149	806	49,600
August	8,100	614	3,250	200,000
September	565	135	284	16,900
The year	8,100	135	1,070	777,000

RIO GRANDE AT LANGTRY, TEX.

LOCATION.—Water-stage recorder at east end of canyon section 1 mile southwest of Langtry, Val Verde County, and 13 miles above Pecos River.

RECORDS AVAILABLE.—May, 1900, to October, 1914; December, 1919, to March, 1920; January, 1924, to September, 1930.

EXTREMES.—Maximum discharge during year, 9,700 second-feet Aug. 16 (gage height, 6.15 feet) minimum, 407 second-feet May 25, 26 (gage height, 0.55 foot).

1900–1914, 1919–20, 1924–1930: Maximum discharge, 132,000 second-feet Sept. 13, 1904 (gage height, 34.25 feet); minimum, 270 second-feet May 8, 13, 1903.

A float measurement by W. H. Dodd Sept. 16, 1919, at stage of 46.9 feet showed discharge of 152,000 second-feet. A stage of 56.9 feet (from floodmark by W. H. Dodd) occurred about June 18, 1922.

REMARKS.—Records good. Considerable water is diverted above station; amount not known. Flow partly regulated by storage at Elephant Butte Dam and at dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	2,990	1,590	1,480	1,230	960	620	612	760	672	2,230	1,000
2	1,700	2,600	1,540	1,540	1,230	920	612	680	704	612	2,020	920
3	1,640	2,370	1,480	1,540	1,210	912	605	642	561	567	1,820	856
4	1,640	2,090	1,480	1,640	1,190	952	599	650	592	536	2,540	824
5	1,590	2,020	1,480	1,700	1,160	1,020	586	696	612	501	3,360	768
6	1,590	2,020	1,540	1,640	1,140	968	580	612	660	479	2,480	728
7	1,540	1,950	1,590	1,480	1,120	928	580	548	2,200	458	2,020	776
8	1,430	1,880	1,540	1,540	1,160	936	574	525	1,860	448	1,760	792
9	1,430	1,880	1,540	1,480	1,200	904	555	519	1,700	437	3,400	712
10	1,380	1,820	1,480	1,430	1,180	872	555	479	1,330	432	2,580	665
11	1,330	1,820	1,480	1,430	1,170	824	561	463	1,380	448	2,870	628
12	1,310	1,700	1,480	1,480	1,150	792	574	468	1,480	442	7,620	586
13	1,300	1,640	2,660	1,480	1,130	776	574	490	1,340	484	6,460	592
14	1,300	1,640	2,020	1,430	1,140	784	574	490	1,620	484	6,550	580
15	2,730	1,640	2,090	1,380	1,140	800	628	479	1,650	931	6,930	561
16	1,430	1,700	1,700	1,430	1,140	800	688	468	1,480	1,210	7,680	605
17	2,160	1,700	1,480	1,480	1,120	808	574	468	1,400	952	8,010	530
18	2,520	1,760	1,430	1,480	1,100	800	672	448	1,440	1,030	7,120	496
19	2,370	1,700	1,430	1,480	1,110	768	592	442	1,760	968	5,510	474
20	3,230	1,640	1,430	1,540	1,090	744	555	437	1,430	888	4,670	468
21	3,230	1,640	1,480	1,430	1,090	728	548	432	1,430	944	4,330	463
22	3,310	1,640	1,480	1,430	1,090	712	525	427	1,280	792	3,400	453
23	2,440	1,640	1,540	1,380	1,110	688	519	432	1,140	696	2,910	442
24	2,090	1,640	1,430	1,360	1,150	672	914	427	1,100	704	2,370	453
25	2,160	1,640	1,380	1,320	1,100	665	571	417	1,100	917	2,020	453
26	2,160	1,590	1,430	1,340	1,050	650	713	412	992	1,310	1,760	437
27	2,160	1,590	1,480	1,350	1,020	650	525	427	904	1,770	1,540	427
28	2,090	1,590	1,590	1,310	1,010	642	697	458	880	1,850	1,380	432
29	2,090	1,590	1,590	1,280	-------	642	796	496	832	2,160	1,250	427
30	3,110	1,590	1,540	1,250	-------	635	672	767	752	1,950	1,380	442
31	3,650	-------	1,540	1,230	-------	628	-------	971	-------	2,230	1,140	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,650	1,300	2,060	127,000
November	2,990	1,590	1,820	108,000
December	2,660	1,380	1,580	97,200
January	1,700	1,230	1,440	88,500
February	1,230	1,010	1,130	62,800
March	1,020	628	793	48,800
April	914	519	611	36,400
May	971	412	525	32,300
June	2,200	561	1,210	72,000
July	2,230	432	913	56,100
August	8,010	1,140	3,580	220,000
September	1,000	427	600	35,700
The year	8,010	412	1,360	985,000

RIO GRANDE NEAR DEL RIO, TEX.

LOCATION.—Water-stage recorder 900 feet upstream from international highway bridge between Del Rio, Val Verde County, and Villa Acuña, Mexico.

RECORDS AVAILABLE.—December, 1923, to September, 1930. May, 1900, to April, 1915, at station 11 miles upstream; December, 1919, to March, 1920, at McKees Switch, 7½ miles upstream. Several springs but no important tributaries enter river between the various sites.

EXTREMES.—Maximum discharge during year, 11,200 second-feet Aug. 17 (gage height, 5.20 feet); minimum, 938 second-feet May 23–26 (gage height, 1.42 feet).

1900–1915, 1919–20, 1923–1930: Maximum stage, 36.5 feet at site 11 miles upstream Apr. 6, 1900, and 41.0 feet at site 7½ miles upstream during September, 1919 (discharge not determined); minimum discharge, that of May 23–26, 1930.

Highest stage known, 32.8 feet (present gage datum) June 18 or 19, 1922.

REMARKS.—Records good. Discharge estimated Aug. 12–20; partly estimated June 27, 28, Aug. 6–8. Considerable water diverted above station; amount not known. Flow partly regulated by storage at Elephant Butte Dam and at dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,580	4,420	2,280	2,350	1,950	1,700	1,470	1,360	1,530	1,590	2,740	1,680
2	2,540	3,590	2,260	2,310	1,940	1,680	1,250	1,360	1,420	1,490	2,740	1,550
3	2,440	3,360	2,220	2,310	1,920	1,690	1,250	1,320	1,310	1,410	2,350	1,470
4	2,370	3,130	2,150	2,260	1,940	1,630	1,330	1,280	1,210	1,360	2,110	1,420
5	2,370	2,920	2,170	2,410	1,920	1,660	1,330	1,240	1,130	1,280	2,430	1,380
6	2,330	2,870	2,240	2,480	1,880	1,730	1,260	1,280	1,230	1,260	3,250	1,300
7	2,280	2,780	2,220	2,310	1,880	1,650	1,250	1,200	1,320	1,240	2,890	1,270
8	2,240	2,720	2,240	2,280	1,840	1,640	1,230	1,140	3,310	1,240	2,600	1,280
9	2,170	2,720	2,220	2,260	1,880	1,660	1,280	1,130	3,130	1,250	2,430	1,310
10	2,120	2,680	2,220	2,120	1,910	1,590	1,460	1,090	2,370	1,190	4,000	1,280
11	2,110	2,600	2,170	2,220	1,860	1,560	1,440	1,060	1,980	1,220	2,850	1,240
12	2,030	2,560	2,170	2,090	1,860	1,500	1,420	1,040	3,480	1,140		1,230
13	2,120	2,460	2,330	2,110	1,800	1,470	1,420	1,010	2,780	1,150		1,210
14	2,060	2,390	3,530	2,140	1,810	1,440	1,410	1,080	2,540	1,170		1,210
15	4,830	2,370	3,040	2,120	1,820	1,440	1,410	1,060	2,330	1,240		1,240
16	3,990	2,440	3,860	2,150	1,800	1,440	1,400	1,030	6,560	1,320	6,980	1,180
17	2,680	2,480	2,830	2,240	1,810	1,440	1,490	1,060	5,970	1,880		1,210
18	2,980	2,480	2,390	2,350	1,800	1,640	1,390	1,030	3,150	1,690		1,220
19	3,380	2,500	2,440	2,300	1,800	1,480	1,240	1,030	2,600	1,720		1,130
20	3,230	2,460	2,210	2,220	1,760	1,370	1,190	1,020	2,940	1,800		1,120
21	4,270	2,440	2,310	2,300	1,780	1,380	1,140	986	2,740	1,520	5,540	1,140
22	4,420	2,390	2,310	2,240	1,780	1,420	1,140	962	2,680	1,540	4,420	1,060
23	4,130	2,410	2,370	2,170	1,740	1,350	1,110	946	2,330	1,490	3,720	1,040
24	3,330	2,390	2,410	2,150	1,770	1,400	1,120	946	2,150	1,480	3,200	1,030
25	2,920	2,370	2,240	2,220	1,810	1,370	1,360	946	2,040	1,480	2,760	1,070
26	2,980	2,390	2,190	2,070	1,780	1,320	1,170	946	2,060	1,560	2,460	1,100
27	3,100	2,310	2,260	2,060	1,760	1,650	1,250	970	2,040	2,090	2,280	1,090
28	3,060	2,310	2,300	2,070	1,690	1,610	1,970	978	1,770	2,360	2,190	1,090
29	2,960	2,300	2,390	2,010	------	1,640	3,170	1,010	1,640	2,640	2,030	1,040
30	2,940	2,370	2,390	2,000	------	1,560	1,700	1,310	1,560	2,890	1,810	1,060
31	4,130	------	3,390	1,980	------	1,560	------	1,440	------	2,680	1,820	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,830	2,030	2,940	181,000
November	4,420	2,300	2,650	158,000
December	3,860	2,150	2,410	148,000
January	2,480	1,980	2,200	135,000
February	1,950	1,690	1,830	102,000
March	1,730	1,320	1,540	94,700
April	3,170	1,110	1,400	83,300
May	1,440	946	1,110	68,200
June	6,560	1,130	2,440	145,000
July	2,890	1,140	1,590	97,800
August	------	1,810	4,050	249,000
September	1,680	1,030	1,220	72,600
The year	------	946	2,120	1,530,000

RIO GRANDE AT EAGLE PASS, TEX.

LOCATION.—Water-stage recorder half a mile above international highway bridge between Eagle Pass, Maverick County, and Piedras Negras, Coahuila, Mexico. Zero of gage is 682.99 feet above mean sea level.

RECORDS AVAILABLE.—May, 1900, to April, 1916; November, 1923, to September, 1930.

EXTREMES.—Maximum discharge during year, 14,300 second-feet Dec. 14 (gage height, 7.42 feet); minimum, 940 second-feet May 26 (gage height, 2.51 feet).

1900–1916; 1923–1930: Maximum mean daily discharge, 238,000 second-feet June 30, 1905; maximum stage, 34.6 feet at bridge gage June 29, 1905; minimum discharge, that of May 26, 1930.

In June, 1922, the river reached a stage of 43.7 feet (present gage datum).

REMARKS.—Records good. Considerable water diverted above gage; amount not known. Flow partly regulated by storage at Elephant Butte Dam and at dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,820	4,180	2,430	2,540	2,120	1,730	1,620	1,660	1,590	2,430	3,010	2,010
2	2,720	4,180	2,360	2,540	2,100	1,710	1,550	1,630	1,740	2,430	3,010	1,820
3	2,630	3,740	2,360	2,540	2,070	1,700	1,300	1,640	1,680	2,230	3,010	1,680
4	2,540	3,520	2,350	2,450	2,060	1,710	1,270	1,580	1,550	2,100	2,820	1,590
5	2,540	3,210	2,280	2,450	2,020	1,630	1,360	1,500	1,460	2,040	2,720	1,540
6	2,450	3,010	2,310	2,630	2,010	1,680	1,350	1,420	1,360	1,880	2,820	1,470
7	2,450	3,010	2,380	2,630	1,980	1,710	1,280	1,430	1,460	1,870	3,320	1,430
8	2,400	2,920	2,330	2,540	1,930	1,630	1,260	1,360	1,610	1,820	3,010	1,420
9	2,310	2,920	2,360	2,420	1,920	1,600	1,220	1,320	3,870	1,870	2,820	1,460
10	2,230	2,920	2,350	2,380	1,960	1,630	1,270	1,270	3,320	1,870	2,630	1,490
11	2,220	2,820	2,350	2,350	1,980	1,570	1,480	1,200	2,720	1,750	3,110	1,460
12	2,180	2,820	2,310	2,380	1,980	1,540	1,490	1,210	3,510	1,750	3,210	1,370
13	2,140	2,720	3,710	2,300	1,920	1,490	1,480	1,220	10,500	1,640	[a] 6,560	1,360
14	2,330	2,630	6,400	2,330	1,920	1,490	1,490	1,160	7,030	1,670	[a] 6,880	1,340
15	4,180	2,540	6,400	2,330	1,960	1,470	1,480	1,190	5,510	1,730	6,320	1,320
16	5,200	2,540	4,070	2,310	1,920	1,540	1,470	1,160	5,260	1,750	6,180	1,380
17	3,800	2,630	3,740	2,350	1,860	1,520	1,470	1,150	9,100	1,960	6,320	1,310
18	2,920	2,630	2,920	[a] 2,330	1,840	1,580	1,530	1,170	6,180	2,350	[a] 7,180	1,310
19	3,520	2,630	2,540	[a] 2,330	1,840	1,770	1,440	1,100	[a] 4,770	2,120	[a] 7,780	1,340
20	3,520	2,630	2,540	[a] 2,330	1,810	1,520	1,240	1,080	[a] 4,420	2,180	6,180	1,210
21	3,520	2,630	2,450	[a] 2,430	1,780	1,420	1,190	1,060	[a] 4,070	2,200	5,260	1,190
22	4,300	2,540	2,540	2,450	1,840	1,400	1,140	1,010	[a] 3,960	1,920	5,140	1,210
23	4,300	2,540	2,540	2,420	1,810	1,420	1,150	990	3,740	1,940	4,530	1,140
24	3,960	2,540	2,540	2,360	1,770	1,340	1,210	970	3,320	1,920	3,960	1,080
25	3,320	2,540	2,540	2,310	1,820	1,380	1,160	950	3,110	1,860	3,420	1,090
26	3,110	2,450	2,420	2,300	1,810	1,370	1,370	950	3,010	1,800	3,010	1,120
27	3,320	2,450	2,400	2,230	1,800	1,340	1,220	960	2,920	1,960	2,720	1,150
28	3,320	2,450	2,430	2,260	1,780	1,660	4,520	1,140	2,820	2,380	2,540	1,160
29	3,210	2,400	2,450	2,230	-------	1,660	5,380	1,090	2,630	2,820	2,380	1,200
30	3,110	2,350	2,540	2,150	-------	1,680	3,120	1,960	2,540	2,920	2,220	1,120
31	3,210	-------	2,540	2,140	-------	1,620	-------	1,640	-------	3,210	1,960	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,200	2,140	3,090	190,000
November	4,180	2,350	2,840	169,000
December	6,400	2,280	2,830	174,000
January	2,630	2,140	2,380	146,000
February	2,120	1,770	1,910	106,000
March	1,770	1,340	1,560	95,900
April	5,380	1,140	1,650	98,200
May	1,960	950	1,260	77,500
June	10,500	1,360	3,690	220,000
July	3,210	1,640	2,070	127,000
August	7,780	1,960	4,070	250,000
September	2,010	1,080	1,360	80,900
The year	10,500	950	2,400	1,730,000

[a] Partly estimated.

RIO GRANDE AT ROMA, TEX.

LOCATION.—Water-stage recorder at international highway bridge between Roma, Starr County, and San Pedro, Tamaulipas Mexico. Zero of gage is 145.94 feet above mean sea level.

RECORDS AVAILABLE.—March, 1929, to September 1930.

EXTREMES.—Maximum discharge during year, 59,000 second-feet June 12 (gage height, 16.72 feet); minimum, 1,100 second-feet Apr. 14 (gage height, 2.24 feet).

1929–30: Maximum discharge, that of June 12, 1930; minimum, that of Apr. 14, 1930.

A stage of 35.0 feet was reached June 22, 1922 (discharge by slope-area method, 240,000 second-feet).

REMARKS.—Records good. Considerable water diverted above gage; amount not known. Flow partly regulated by storage at Elephant Butte Dam and at dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,890	3,300	2,380	2,460	2,170	1,640	1,460	7,720	7,910	2,760	2,220	2,500
2	3,550	3,150	2,330	2,540	2,200	1,680	1,590	6,340	6,910	2,560	2,590	2,400
3	3,220	3,200	2,260	2,590	2,150	1,650	1,590	4,220	4,060	2,480	2,760	2,350
4	3,210	4,270	2,260	2,550	2,120	1,650	1,560	5,840	3,140	2,300	2,780	2,550
5	3,600	4,180	2,310	2,500	2,150	1,570	1,510	5,170	2,320	2,230	2,800	4,960
6	3,510	3,700	2,260	2,510	2,110	1,560	1,500	3,190	2,070	2,110	2,960	2,860
7	3,580	3,350	2,280	2,510	2,060	1,520	1,380	4,740	2,450	2,040	2,730	2,090
8	3,390	3,150	2,330	2,450	1,990	1,500	1,260	5,580	3,320	2,450	2,580	1,790
9	3,300	2,960	2,200	2,350	1,990	1,460	1,220	2,840	3,260	2,110	2,720	1,680
10	3,230	2,940	2,290	2,450	1,950	1,480	1,210	2,030	15,900	2,340	3,280	2,350
11	3,040	2,870	2,290	2,400	1,990	1,540	1,200	3,740	17,900	2,870	2,960	2,410
12	2,780	2,850	2,330	2,370	1,920	1,560	1,130	3,620	41,500	2,850	2,670	1,580
13	3,260	2,760	2,330	2,350	1,850	1,560	1,130	4,750	50,800	2,180	2,450	1,430
14	2,860	2,670	2,330	2,320	1,890	1,530	1,100	2,320	28,400	1,960	3,100	1,360
15	5,520	2,640	2,740	2,370	3,830	1,550	1,200	1,520	15,600	1,850	3,100	1,340
16	7,990	2,490	13,500	2,300	5,930	2,050	1,380	1,340	13,100	1,800	6,400	1,550
17	9,050	2,520	7,160	2,250	6,240	1,680	1,960	1,350	11,000	2,400	6,490	2,990
18	5,470	2,490	4,630	2,230	5,740	2,740	4,220	1,300	11,200	2,520	6,390	2,530
19	5,350	2,460	4,200	2,230	2,940	2,760	2,760	11,200	11,700	1,970	6,750	1,520
20	4,230	2,530	3,930	2,230	2,040	1,780	2,380	11,300	8,400	1,940	7,740	1,320
21	5,310	2,530	3,280	2,250	1,880	1,520	1,770	4,720	5,970	1,810	7,020	1,250
22	3,000	2,550	2,800	2,310	1,800	1,440	1,730	2,880	4,850	2,050	6,590	1,180
23	3,720	2,620	2,720	2,360	1,780	1,540	1,580	2,000	4,500	1,960	5,410	1,200
24	3,640	2,580	2,590	2,380	1,800	1,460	1,380	5,540	4,290	2,050	4,970	1,170
25	4,320	2,660	2,520	2,400	1,780	1,340	1,210	6,610	4,090	1,950	4,720	1,110
26	4,410	2,740	2,510	2,410	1,730	1,270	7,540	3,100	3,770	1,760	4,170	1,470
27	4,140	2,660	2,510	2,370	1,710	1,310	22,600	3,930	3,350	1,750	3,910	2,220
28	3,630	2,580	2,510	2,330	1,690	1,350	9,430	22,500	3,160	1,690	3,300	1,540
29	3,710	2,470	2,470	2,290	-------	1,410	17,100	25,200	2,960	1,690	3,000	2,270
30	3,760	2,470	2,360	2,230	-------	1,410	15,300	26,300	2,850	1,640	2,740	2,210
31	3,460	-------	2,420	2,170	-------	1,390	-------	11,600	-------	1,830	2,580	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	9,050	2,780	4,100	252,000
November	4,270	2,460	2,880	171,000
December	13,500	2,200	3,130	192,000
January	2,590	2,170	2,370	146,000
February	6,240	1,690	2,480	138,000
March	2,760	1,270	1,610	99,000
April	22,600	1,100	3,750	223,000
May	26,300	1,300	6,600	406,000
June	50,800	2,070	10,000	595,000
July	2,870	1,640	2,130	131,000
August	7,740	2,220	4,000	246,000
September	4,960	1,110	1,970	117,000
The year	50,800	1,100	3,750	2,720,000

RIO GRANDE AT HIDALGO, TEX.

LOCATION.—Water-stage recorder at international highway bridge between Hidalgo, Hidalgo County, and Reynosa, Tamaulipas, Mexico, seven-tenths mile southwest of Hidalgo. Also, water-stage recorder on each of two floodway channels at point of crossing of East McAllen-Hidalgo highway. Zero of gages is 80 feet above mean sea level.

RECORDS AVAILABLE.—July, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 43,200 second-feet June 15 (gage height, 21.50 feet); minimum, 784 second-feet Apr. 16.

1928–1930: Maximum discharge, about 47,500 second-feet Sept. 25, 1928 (gage height, 20.20 feet); minimum, that of Apr. 16, 1930.

The river reached a stage of 26.6 feet June 23, 1922.

REMARKS.—Records good. No flow in floodway channels during year. Discharge partly estimated Feb. 17, 18, Mar. 11. Considerable water diverted above gage; amount not known. Flow partly regulated by storage at Elephant Butte Dam and at dams on tributaries.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,450	3,980	2,700	2,620	2,200	1,600	1,340	16,200	31,000	4,330	2,010	2,850
2	4,350	3,880	2,520	2,560	2,200	1,590	1,320	7,690	26,800	3,980	2,010	2,540
3	4,330	3,730	2,440	2,560	2,080	1,530	1,260	5,650	14,400	3,680	2,170	2,360
4	4,040	3,640	2,520	2,600	2,110	1,660	1,340	4,250	7,720	3,470	2,590	2,360
5	3,780	3,880	2,490	2,570	2,220	1,620	1,460	4,800	5,630	3,270	2,590	2,390
6	3,880	4,230	2,510	2,540	2,140	1,580	1,490	5,490	4,610	3,230	2,520	3,650
7	3,880	4,180	2,410	2,360	1,910	1,470	1,360	4,020	4,710	3,140	2,520	3,740
8	3,650	3,880	2,480	2,330	1,880	1,280	1,240	4,520	4,560	2,870	2,590	2,780
9	3,470	3,620	2,480	2,490	1,860	1,250	1,080	5,320	6,160	2,990	2,460	2,100
10	3,380	3,440	2,400	2,460	1,960	1,260	940	4,260	8,270	3,520	2,390	1,710
11	3,380	3,260	2,400	2,540	1,970	1,120	875	2,940	21,600	4,050	2,620	1,690
12	3,310	3,300	2,460	2,630	1,900	1,260	940	3,270	32,900	4,160	2,830	2,340
13	3,210	3,130	2,510	2,710	1,810	1,270	960	4,100	40,100	4,320	2,700	2,340
14	3,580	2,980	2,470	2,510	1,820	1,290	905	4,950	42,900	3,800	2,460	1,930
15	3,990	2,930	2,490	2,430	1,560	1,340	815	3,480	42,800	3,140	2,320	1,770
16	4,380	2,970	3,900	2,410	2,700	1,380	800	2,390	38,300	2,710	2,780	1,690
17	10,700	2,880	13,200	2,340	5,690	1,460	920	1,760	33,900	2,630	4,050	1,840
18	11,200	2,800	8,170	2,260	5,130	1,570	1,380	1,500	25,700	3,880	5,770	2,840
19	6,610	2,630	4,850	2,210	4,630	1,700	4,240	1,450	20,300	3,620	5,820	3,770
20	5,710	2,620	4,020	2,220	3,290	2,360	4,040	7,660	16,600	3,140	6,220	2,960
21	4,700	2,520	4,080	2,030	2,760	2,510	3,930	9,350	13,000	2,630	6,900	1,930
22	4,240	2,630	3,830	2,160	2,240	1,940	2,810	4,230	11,400	2,340	6,930	1,500
23	4,330	2,630	3,430	2,220	2,000	1,550	2,180	3,170	10,200	2,080	6,170	1,440
24	4,360	2,720	2,980	2,320	1,870	1,480	1,830	2,820	9,040	2,240	5,450	1,140
25	4,190	2,810	2,890	2,320	1,590	1,500	1,660	4,800	7,850	2,190	4,820	1,080
26	4,230	2,720	2,790	2,340	1,580	1,340	1,520	6,240	6,750	2,420	4,730	1,030
27	4,610	2,720	2,760	2,390	1,580	1,210	6,160	4,580	6,250	2,420	4,120	2,470
28	4,470	2,810	2,610	2,230	1,640	1,300	16,500	12,000	5,620	2,160	3,920	6,780
29	4,110	2,750	2,690	2,350	-------	1,290	13,600	28,100	5,170	2,200	3,640	2,680
30	3,980	2,660	2,690	2,330	-------	1,180	18,300	30,600	4,620	2,080	3,280	1,730
31	4,050	-------	2,710	2,280	-------	1,220	-------	31,100	-------	2,080	3,140	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,200	3,210	4,600	283,000
November	4,230	2,520	3,160	188,000
December	13,200	2,400	3,380	208,000
January	2,710	2,030	2,400	148,000
February	5,690	1,560	2,370	132,000
March	2,510	1,120	1,490	91,600
April	18,300	800	3,240	193,000
May	31,100	1,450	7,510	462,000
June	42,900	4,560	17,000	1,010,000
July	4,330	2,080	3,060	188,000
August	6,930	2,010	3,690	227,000
September	6,790	1,030	2,380	142,000
The year	42,900	800	4,520	3,270,000

PECOS RIVER NEAR ANGELES, TEX.

LOCATION.—Water-stage recorder in T. 26 S., R. 29 E., just below Delaware Creek and 8½ miles northwest of Angeles.

RECORDS AVAILABLE.—May, 1914, to September, 1930.

EXTREMES.—Maximum discharge during year, 2,370 second-feet May 17 (gage height, 2.77 feet); minimum not determined.

1914–1930: Maximum stage from floodmarks, 21.5 feet Aug. 8, 1916 (discharge not determined); minimum discharge, 45 second-feet July 4, 5, 1925.

REMARKS.—Records fair. Discharge estimated Apr. 12–19, May 29 to June 2, June 7–18. Large part of natural flow above Carlsbad, N. Mex., diverted for irrigation; considerable water returned by seepage. Flow regulated to large extent by storage in reservoirs of Carlsbad project.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	175	354	317	291	155	158	129	155	290	78	98	117
2	187	338	296	277	138	191	95	183		65	72	144
3	161	327	317	277	155	191	95	135	158	63	76	135
4	179	291	306	565	135	191	95	129	235	65	83	120
5	172	306	311	938	135	187	88	141	596	72	81	132
6	179	317	311	554	132	165	95	141	248	74	105	108
7	240	311	311	726	132	161	103	168		90	111	155
8	218	296	311	660	135	138	95	161		90	111	141
9	223	306	301	576	158	155	93	161		78	135	148
10	194	301	317	493	141	144	95	158		74	141	158
11	267	296	317	435	144	148	96	165		67	141	151
12	301	311	317	410	202	144	263	179		67	135	161
13	1,460	311	311	343	231	123	135	191	200	76	126	114
14	1,010	296	311	332	257	129	132	158		85	120	135
15	355	301	311	301	267	135	141	144		106	120	135
16	257	306	301	338	272	132	141	132		93	103	138
17	218	301	317	296	272	135	123	114		81	111	175
18	244	291	317	286	272	117	129	123		76	111	231
19	244	306	311	286	262	129	123	135	129	72	120	210
20	248	306	306	282	262	123	117	151	132	78	101	144
21	286	306	311	301	257	132	126	155	117	85	90	132
22	306	282	317	282	253	114	129	135	103	93	81	158
23	306	296	327	282	210	117	129	111	103	85	95	148
24	332	301	327	306	194	114	114	126	98	236	114	148
25	301	301	322	317	183	111	111	132	93	179	161	148
26	327	306	327	306	191	101	120	129	85	135	111	144
27	393	311	332	248	168	101	132	138	83	144	98	158
28	370	311	301	172	168	117	132	148	81	132	108	161
29	370	306	291	148	-------	148	126		81	135	138	183
30	388	327	282	158	-------	129	144	290	74	135	129	283
31	370	-------	301	138	-------	120	-------		-------	135	129	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,460	161	332	20,400
November	354	282	307	18,300
December	332	282	311	19,100
January	938	138	367	22,600
February	272	132	196	10,900
March	191	101	139	8,550
April	263	88	122	7,260
May	----------	111	160	9,840
June	----------	74	180	10,700
July	236	63	98.2	6,040
August	161	72	111	6,820
September	283	108	154	9,160
The year	1,460	63	207	150,000

PECOS RIVER NEAR COMSTOCK, TEX.

LOCATION.—Staff gage at bridge of Galveston, Harrisburg & San Antonio Railway 12 miles northwest of Comstock, Val Verde County, 5½ miles above confluence with Rio Grande, and below all tributaries.

RECORDS AVAILABLE.—May, 1900, to September, 1930.

EXTREMES.—Maximum discharge during year, 6,320 second-feet Oct. 14 (gage height, 6.53 feet); minimum, 97 second-feet Aug. 31 (gage height, −0.15 foot).

1900–1930: Maximum stage, 35.75 feet Apr. 6, 1900 (discharge not determined); minimum discharge, that of Aug. 31, 1930.

REMARKS.—Records good. Considerable water diverted and stored above station for irrigation. In lower part of basin return waters tend to equalize effects of diversions. Flow at station partly controlled by storage and diversions upstream.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	173	245	203	262	262	208	203	317	173	156	121	102
2	163	245	203	262	262	200	203	245	170	146	113	102
3	158	245	203	262	262	212	200	228	158	142	110	102
4	163	245	197	262	262	216	200	222	156	140	106	102
5	156	245	194	245	262	222	200	228	148	142	112	102
6	153	245	194	245	262	222	203	212	153	142	108	105
7	153	245	194	245	262	222	203	181	184	142	105	105
8	153	245	194	245	245	212	203	178	545	140	112	102
9	151	245	203	228	225	212	203	178	240	136	117	103
10	158	245	206	228	219	210	200	178	206	132	319	102
11	153	245	219	222	219	212	197	173	228	132	192	102
12	158	262	228	216	209	212	186	168	298	128	148	102
13	1'0	245	245	216	203	212	186	165	298	132	140	102
14	2,140	245	245	216	203	212	186	163	228	128	140	102
15	1,220	245	1,290	262	203	212	184	158	228	128	136	102
16	710	245	493	399	197	212	192	153	1,620	124	136	102
17	493	245	336	468	197	206	189	178	707	121	128	103
18	377	228	298	421	206	203	184	212	388	117	122	102
19	336	228	298	377	203	186	181	181	298	115	113	102
20	317	228	280	356	206	178	181	156	262	113	113	102
21	280	228	298	336	203	173	178	148	245	113	110	102
22	298	228	298	336	203	175	178	142	228	110	106	102
23	317	228	298	317	203	181	175	151	222	113	105	102
24	317	228	262	298	203	184	175	142	219	110	106	102
25	298	228	262	280	225	189	192	144	216	110	105	102
26	280	216	245	298	219	173	189	140	212	108	105	115
27	298	209	228	280	209	189	356	140	200	108	106	112
28	262	203	228	280	206	206	360	148	197	106	110	115
29	262	206	228	262	------	200	376	148	181	105	103	119
30	245	203	245	262	------	212	262	450	165	105	102	113
31	245	------	245	262	------	212	------	211	------	106	98	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,140	151	347	21,300
November	262	203	235	14,000
December	1,290	194	283	17,400
January	468	216	285	17,500
February	262	197	223	12,400
March	222	173	202	12,400
April	376	175	211	12,600
May	450	140	188	11,600
June	1,620	148	292	17,400
July	156	105	124	7,620
August	319	98	124	7,620
September	119	102	104	6,190
The year	2,140	98	218	158,000

LIMPIA CREEK NEAR FORT DAVIS, TEX.

LOCATION.—Water-stage recorder on State highway 3, 13½ miles northeast of Fort Davis, Jeff Davis County, and 16 miles southwest of Balmorhea.
DRAINAGE AREA.—272 square miles.
RECORDS AVAILABLE.—February, 1925, to September, 1930.
EXTREMES.—Maximum discharge during year, 790 second-feet July 23 (gage height, 3.82 feet); no flow during several periods.
1925–1930: Maximum discharge, about 3,420 second-feet Aug. 26, 1928 (gage height, 7.00 feet); no flow during several periods.
REMARKS.—Records fair. Discharge estimated May 25–30. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	May	June	July	Aug.
1	0	0.2	0.2	0.1	0	0	0	0
2	0	.1	.2	.1	0	0	0	0
3	0	0	.2	.1	0	0	0	0
4	0	0	.2	.1	0	0	0	0
5	0	0	.2	.1	0	0	0	0
6	0	0	.2	.1	0	10	0	0
7	0	0	.2	.1	0	10	0	32
8	0	.1	.2	.1	0	0	0	33
9	0	.1	.2	.1	0	0	0	156
10	0	0	.2	0	0	0	0	2.8
11	9.2	0	.1	0	0	0	0	0
12	1.8	.1	.2	0	0	6.2	0	0
13	67	.1	.2	0	0	0	0	0
14	8.4	.1	.1	0	0	0	0	0
15	.2	.1	.1	0	0	0	0	0
16	.2	.1	.1	0	0	0	0	0
17	1.0	.1	.1	0	0	0	0	0
18	2.4	.1	.1	0	0	0	0	0
19	.2	.2	.1	0	0	0	0	0
20	.2	.2	.1	0	0	0	0	0
21	.2	.2	.1	0	0	0	2.4	0
22	.2	.2	.1	0	0	1.4	16	0
23	.2	.1	.1	0	0	0	44	0
24	.2	.1	.1	0	0	0	0	0
25	.2	.1	.1	0		0	0	0
26	.2	.1	.1	0		0	0	0
27	.2	.1	.1	0	6.0	0	0	0
28	.2	.1	.2	0		0	0	0
29	.2	.1	.1	0		0	0	0
30	.2	.2	.1	0		0	0	0
31	.2		.1	0	0		0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	67	0	2.99	184
November	.2	0	.10	6.0
December	.2	.1	.14	8.6
January	.1	0	.03	1.8
May		0	1.16	71
June	10	0	.92	55
July	44	0	2.01	124
August	156	0	7.22	444
The year	156	0	1.24	894

NOTE.—No flow during months for which no discharge is shown.

GOODENOUGH SPRINGS NEAR COMSTOCK, TEX.

LOCATION.—Water-stage recorder half a mile above mouth of Arroyo that drains into Rio Grande 11¾ miles southwest of Comstock, Val Verde County.
RECORDS AVAILABLE.—February, 1929, to September, 1930.
EXTREMES.—Maximum stage during year, 2.98 feet Apr. 28 (discharge not determined); minimum, 93 second-feet Apr. 4 (gage height, 0.27 foot).
1929–30: Maximum stage, that of Apr. 28, 1930; minimum that of Apr. 4, 1930.
REMARKS.—Records fair. Discharge estimated Jan. 24–31. No diversions.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	132	114	110	107	104	96	139	100	143	128	114
2	139	132	114	110	107	100	96	143	100	143	128	114
3	139	132	114	107	107	100	96	143	104	143	128	114
4	139	128	114	107	104	104	96	143	104	139	128	114
5	139	132	114	110	104	104	96	143	104	139	128	114
6	139	132	114	110	104	104	96	135	104	139	124	114
7	139	128	114	110	104	104	96	135	104	139	124	114
8	139	128	121	107	104	104	96	124	111	139	124	114
9	139	128	124	104	107	107	96	124	107	139	124	114
10	139	128	121	107	104	107	96	121	104	135	124	110
11	135	128	121	107	107	104	96	114	104	135	121	110
12	135	132	121	107	107	104	96	110	142	135	121	110
13	135	132	118	107	107	104	96	110	179	135	121	110
14	135	132	118	107	107	104	96	104	179	135	121	110
15	135	132	118	107	107	100	100	104	175	135	121	110
16	135	132	118	104	104	100	96	104	175	135	121	110
17	135	132	118	107	107	100	96	104	175	135	121	110
18	135	128	118	104	107	100	96	100	171	135	121	107
19	135	128	114	104	107	100	96	100	171	135	121	107
20	135	124	114	107	107	100	96	100	167	135	121	107
21	135	124	114	104	107	100	96	100	159	135	121	107
22	135	121	114	104	107	100	96	104	155	132	121	107
23	132	121	114	104	107	100	96	100	151	132	121	107
24	132	121	114		107	100	96	100	151	132	118	107
25	132	121	114		104	100	96	100	147	132	118	107
26	132	118	114		104	100	96	100	147	132	118	107
27	135	118	114	106	104	96	96	100	147	132	118	104
28	135	118	114		104	96	106	100	147	132	114	104
29	135	114	110		-------	96	118	100	143	132	114	104
30	132	114	114		-------	96	128	106	143	132	114	104
31	132	-------	114		-------	96	-------	96	-------	132	114	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	139	132	136	8,360
November	132	114	126	7,500
December	124	110	116	7,130
January	110	104	107	6,580
February	107	104	106	5,890
March	107	96	101	6,210
April	128	96	98.3	5,850
May	143	96	113	6,950
June	179	100	139	8,270
July	143	132	136	8,360
August	128	114	121	7,440
September	114	104	110	6,550
The year	179	96	117	85,100

DEVILS RIVER NEAR JUNO, TEX.

LOCATION.—Water-stage recorder 500 feet below Walter Baker ranch house, 2 miles above mouth of Phillips Creek, and 13½ miles southwest of Juno, Val Verde County.

DRAINAGE AREA.—2,730 square miles.

RECORDS AVAILABLE.—May, 1925, to September, 1930.

EXTREMES.—Maximum discharge during year, 510 second-feet June 15 (gage height, 3.80 feet); minimum, 48 second-feet June 4, 5, 6 (gage height, 2.25 feet).

1925–1930: Maximum discharge by slope-area method, 43,700 second-feet May 29, 1925 (gage height, 15.8 feet); minimum, that of June 4, 5, 6, 1930. Maximum stage known, 22.1 feet about Sept. 1, 1916.

REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	76	78	70	64	63	62	64	51	74	60	54
2	74	76	78	70	64	63	62	64	50	72	58	53
3	72	75	78	70	64	64	62	63	49	70	58	54
4	72	75	78	70	64	64	62	62	49	70	57	54
5	72	75	76	70	64	64	63	62	48	69	57	56
6	72	75	76	70	63	63	63	58	49	69	56	56
7	72	75	76	70	63	63	62	58	51	68	57	56
8	72	75	76	70	62	62	62	60	53	68	56	56
9	74	76	76	69	62	62	62	60	54	69	56	57
10	74	76	76	69	62	63	64	58	53	70	56	57
11	74	76	76	69	62	63	66	57	53	69	56	56
12	74	76	76	69	62	63	66	58	57	68	56	57
13	76	76	76	69	62	64	68	58	56	68	54	57
14	82	76	76	69	62	63	68	58	54	68	54	57
15	78	78	75	68	62	63	68	57	110	68	54	56
16	75	78	75	66	62	63	68	57	176	66	54	54
17	76	78	75	68	62	64	68	56	117	64	56	56
18	78	78	75	68	63	64	68	56	95	66	54	56
19	80	78	75	66	62	63	66	53	86	66	54	54
20	80	76	74	66	62	62	64	53	84	66	56	54
21	80	76	75	66	63	63	66	53	84	66	54	54
22	80	76	74	66	62	62	64	53	82	66	54	54
23	80	78	74	66	64	63	64	52	81	66	53	54
24	80	76	74	66	63	63	66	52	80	66	53	53
25	80	76	74	66	63	63	70	51	78	66	54	53
26	80	76	74	66	63	63	68	52	76	64	56	53
27	80	76	72	66	63	64	66	52	76	62	56	56
28	78	76	72	66	63	64	68	52	75	62	56	57
29	78	76	72	66	-------	64	69	52	74	62	57	56
30	76	76	72	66	-------	64	68	58	74	62	56	54
31	76	-------	72	66	-------	63	-------	53	-------	62	54	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	82	72	76.4	4,700
November	78	75	76.2	4,530
December	78	72	75.0	4,610
January	70	66	67.8	4,170
February	64	62	62.7	3,480
March	64	62	63.2	3,890
April	70	62	65.4	3,890
May	64	51	56.5	3,470
June	176	48	72.5	4,310
July	74	62	66.8	4,110
August	60	53	55.5	3,410
September	57	53	55.1	3,280
The year	176	48	66.1	47,900

DEVILS RIVER NEAR DEL RIO, TEX.

LOCATION.—Water-stage recorder 2,200 feet above Southern Pacific Railroad bridge and Sells Creek and 12 miles northwest of Del Rio, Val Verde County.

DRAINAGE AREA.—4,000 square miles.

RECORDS AVAILABLE.—December, 1923, to September, 1930. May, 1900, to March, 1914, at Devils River, 1 mile down stream.

EXTREMES.—Maximum discharge during year, 10,200 second-feet June 16 (gage height, 6.68 feet); minimum, 82 second-feet Sept. 2 (gage height, 1.17 feet).

1900–1914, 1923–1930: Maximum gage height, 24.96 feet May 29, 1925 (discharge not determined); minimum not determined.

Maximum stages known, 25.4 feet, former gage datum Apr. 6, 1900, and 30.15 feet, present gage datum, October, 1914.

REMARKS.—Records below 7,000 second-feet good; above that, poor. Discharge estimated Mar. 28 to Apr. 3, Apr. 6–22, and in part Apr. 4, 5. No diversions above station. Flow partly regulated by dams above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	276	276	318	264	288		159	215	382	328	184
2	363	305	299	293	264	282	508	159	199	367	361	130
3	276	305	264	293	293	264		159	184	343	253	174
4	270	305	282	282	288	236	305	159	179	311	199	174
5	282	324	318	353	288	270	293	154	174	311	220	179
6	259	282	331	210	293	264		154	169	311	236	184
7	282	259	282	305	293	264		154	164	337	205	189
8	282	311	276	293	305	288		164	179	318	253	189
9	293	324	270	247	305	259		164	174	274	293	194
10	282	318	288	328	311	282		164	184	361	236	199
11	264	276	299	337	259	236		164	199	324	286	205
12	264	318	288	247	247	259		154	336	282	368	236
13	337	305	335	253	276	247		184	436	270	254	276
14	293	259	337	282	264	253	444	184	466	325	179	279
15	318	288	331	324	276	231		164	264	324	331	272
16	382	282	318	293	247	220		159	4,920	305	253	236
17	382	270	258	318	282	288		189	2,090	292	231	305
18	305	305	345	311	293	409		164	816	320	199	253
19	337	288	305	242	264	236		164	654	371	226	205
20	270	318	259	264	242	210		169	637	346	276	334
21	331	276	293	318	270	194		164	645	236	276	236
22	337	282	266	288	259	331	226	164	513	236	259	242
23	318	270	293	282	247	259	226	164	329	276	253	231
24	293	288	282	299	242	293	226	164	379	376	205	259
25	270	282	259	293	282	293	174	174	386	389	189	311
26	288	293	305	288	282	179	184	205	369	396	184	264
27	337	324	293	288	210	503	184	189	416	363	275	270
28	324	288	276	299	259		199	194	363	356	322	276
29	337	299	288	270	-------	508	216	189	274	403	311	270
30	331	337	310	282	-------		144	184	359	392	189	276
31	311	-------	293	293	-------		-------	184	-------	282	189	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	382	259	306	18,800
November	337	259	295	17,600
December	345	258	294	18,100
January	353	210	290	17,800
February	311	210	272	15,100
March	-------	-------	302	18,600
April	-------	-------	367	21,800
May	205	154	170	10,500
June	4,920	164	556	33,100
July	402	236	328	20,200
August	368	179	252	15,500
September	334	130	234	13,900
The year	4,920	130	305	221,000

PINTO CREEK NEAR DEL RIO, TEX.

LOCATION.—Water-stage recorder 500 feet above Del Rio-Eagle Pass highway crossing, 4½ miles above confluence with Rio Grande, and 16 miles southeast of Del Rio, Val Verde County.

DRAINAGE AREA.—242 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 2,000 second-feet Apr. 28 (gage height, 6.50 feet); no flow during several periods.

1928–1930: Maximum stage, 9.77 feet July 3, 1929 (discharge not determined); no flow during several periods.

REMARKS.—Records fair. Small diversions above station for irrigation. Amount diverted not known.

Daily and monthly discharge, in second-feet, 1929–30

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	0	0	0	0.2	4.0	0
2	0	0	.2	0	.2	1.7	0
3	0	0	.2	0	.2	1.2	0
4	0	.2	.2	0	.2	.7	0
5	0	0	.2	0	.1	.2	0
6	0	0	.2	0	0	.2	0
7	0	.2	.2	0	0	0	0
8	0	1.2	.2	0	0	0	0
9	0	.2	.2	0	0	0	0
10	0	0	.3	0	0	0	0
11	0	0	.3	0	0	0	0
12	0	0	.3	0	0	0	4.7
13	22	0	.2	0	0	0	2.7
14	87	.2	.2	0	0	0	2.0
15	97	.2	.2	0	0	0	83
16	14	.2	.2	0	0	0	78
17	5.2	.2	.2	0	0	0	19
18	2.2	0	.2	0	0	0	9.0
19	1.2	0	.1	0	0	0	4.0
20	1.2	0	.1	.1	0	0	2.5
21	1.2	0	0	.1	0	0	2.0
22	1.2	0	0	.2	0	0	1.5
23	.7	0	0	.1	0	0	1.0
24	.7	0	.1	.2	0	0	0
25	.7	0	.1	.1	0	0	0
26	.2	.7	.1	.1	0	0	0
27	0	1.2	0	.2	0	0	0
28	0	1.2	0	.2	299	0	0
29	0	.2	-------	.2	68	0	0
30	0	0	-------	.3	9.0	4.3	0
31	0	0	-------	.3	-------	1.7	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	97	0	7.56	465
January	1.2	0	.19	12
February	.3	0	.15	8.3
March	.3	0	.07	4.3
April	299	0	12.6	750
May	4.3	0	.45	28
June	83	0	6.81	405
The year	299	0	2.31	1,670

NOTE.—No flow during months for which no discharge is shown.

GOODWIN CANAL ABOVE PENITAS, TEX.

LOCATION.—Two Venturi meters at point of diversion, 2 miles above Penitas, Hidalgo County.

RECORDS AVAILABLE.—August, 1928, to September, 1930.

EXTREMES.—Maximum mean daily discharge during year, 38 second-feet Apr. 9, Aug. 26; no flow during several periods.

1928–1930: Maximum mean daily discharge, 42 second-feet Mar. 8, 1929; no flow during several periods.

Total capacity of pumping plant, 102 second-feet.

REMARKS.—Records fair. Station is above all diversions from canal. Flow controlled by pumping plant. Canal diverts from left bank of Rio Grande for irrigation near Mission. Base data furnished by Hidalgo County Water Control and Improvement District No. 6.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	8.7	0	0	0	0	11	13	0	0	15	0
2	0	0	0	0	0	0	12	0	0	0	17
3	6.8	0	0	0	0	10	26	0	0	0	21
4	0	0	0	0	0	13	16	0	0	14	35
5	3.2	0	0	0	0	17	12	1.0	3.8	0	0
6	0	0	8.5	0	3.1	15	14	0	0	15	0
7	8.9	0	16	0	0	31	7.9	0	0	17	0
8	7.3	5.5	10	0	0	8.4	14	0	0	24	20
9	0	0	10	0	0	0	38	0	0	13	19
10	0	0	0	0	0	25	27	0	0	0	15
11	6.1	0	0	21	0	13	16	0	0	34	38
12	0	3.4	0	16	0	26	29	5.2	0	27	24
13	0	0	4.5	17	0	17	0	0	0	15	0
14	0	6.2	0	0	0	13	35	0	2.2	28	0
15	10	1.5	0	30	0	16	18	6.9	0	28	16
16	0	0	0	20	0	9.2	28	4.3	0	8.8	11
17	0	0	9.2	0	0	16	14	6.7	21	17	0
18	0	7.7	0	0	0	26	34	0	32	0	0
19	9.9	2.8	0	0	0	28	33	0	28	31	28
20	0	0	0	0	0	14	0	0	0	31	18
21	0	0	0	2.0	0	28	34	0	9.2	16	17
22	13	0	0	0	27	17	17	0	15	32	37
23	0	0	0	4.3	9.6	0	16	2.4	17	19	0
24	0	0	0	0	11	0	31	0	31	0	22
25	8.0	0	0	0	28	20	22	0	27	3.3	27
26	0	0	0	0	34	12	0	0	12	38	18
27	0	0	0	0	10	20	0	0	0	36	0
28	0	0	0	2.1	11	13	2.2	0	11	33	0
29	4.6	0	0	0	------	12	0	0	16	16	32
30	0	0	4.9	1.2	------	0	0	0	12	17	26
31	0	------	0	0	------	13	------	0	15	0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (11 days)	13	3.2	7.86	172
November (6 days)	7.7	1.5	4.52	54
December (7 days)	16	4.5	9.01	125
January (9 days)	30	1.2	12.6	225
February (8 days)	34	3.1	16.7	265
March (26 days)	31	8.4	17.1	880
April (24 days)	38	2.2	21.2	1,010
May (6 days)	6.9	1.0	4.42	53
July (15 days)	32	2.2	15.8	470
August (24 says)	38	3.3	22.0	1,050
September (19 days)	37	11	23.2	875
The year				5,180

NOTE.—No flow during June.

EDINBURG CANAL AT PENITAS, TEX.

LOCATION.—Six Venturi meters at point of diversion in Penitas, Hidalgo County.
RECORDS AVAILABLE.—July, 1928, to September, 1930.
EXTREMES.—Maximum mean daily discharge during year, 230 second-feet July 11; no flow during several periods.
1928–1930: Maximum mean daily discharge, 316 second-feet Feb. 22, 1929; no flow during several periods.
Total capacity of pumping plant, about 350 second-feet.
REMARKS.—Records good. Station is above all diversions from canal. Flow controlled by pumping plant. Canal diverts from left bank of Rio Grande for irrigation near Edinburg. Base data furnished by Hidalgo County Water Control and Improvement District No. 1.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	80	0	0	0	119	122	113	0	0	80	125
2	71	65	75	0	0	93	115	0	0	79	140
3	48	0	0	0	79	106	115	0	0	0	99
4	79	0	30	0	101	99	120	0	0	0	0
5	114	0	0	0	0	115	114	0	0	103	0
6	0	67	0	141	41	113	84	0	0	103	0
7	0	0	43	130	101	116	97	0	0	106	0
8	49	0	0	93	122	116	105	0	0	136	0
9	112	0	64	0	0	108	100	0	0	106	102
10	97	0	0	0	126	146	89	0	114	0	152
11	68	22	0	0	151	147	115	0	230	94	164
12	34	59	0	0	160	141	144	0	74	107	135
13	0	0	0	0	171	131	118	0	0	99	99
14	0	60	0	117	174	94	117	0	0	52	147
15	0	0	0	0	63	77	129	104	0	82	143
16	80	0	0	0	0	74	90	100	0	85	135
17	0	0	0	0	0	62	62	90	54	121	154
18	49	90	0	0	184	68	154	95	0	144	135
19	50	67	0	0	186	130	209	55	38	173	34
20	0	70	95	67	182	150	120	0	0	175	77
21	0	0	15	132	113	118	117	0	57	109	105
22	102	0	0	51	129	52	59	51	76	0	112
23	43	0	0	24	88	0	121	82	138	0	105
24	31	0	0	0	148	99	129	86	154	0	103
25	31	0	0	0	129	106	0	0	104	174	103
26	0	0	127	0	139	101	0	112	0	140	98
27	0	0	147	0	118	40	0	140	0	119	113
28	0	0	124	126	119	0	0	0	0	121	118
29	0	28	0	0	-------	0	0	0	52	118	106
30	61	0	124	0	-------	0	0	0	74	122	81
31	58	-------	0	0	-------	0	-------	0	76	132	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (19 days)	114	31	66.2	2,490
November (9 days)	90	22	58.7	1,050
December (10 days)	147	15	84.4	1,670
January (9 days)	141	24	97.9	1,750
February only (23 days)	186	41	128	5,840
March (26 days)	150	40	105	5,400
April (24 days)	209	59	114	5,430
May (10 days)	140	51	91.5	1,810
July (13 days)	230	38	95.5	2,460
August (25 days)	175	52	115	5,710
September (25 days)	164	34	115	5,720
The year				39,300

NOTE.—No flow during June.

MISSION CANAL NEAR MISSION, TEX.

LOCATION.—Water-stage recorder 1,200 feet downstream from Mission pumping plant and 3.4 miles south of Mission, Hidalgo County.

RECORDS AVAILABLE.—August, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 234 second-feet Oct. 28 (gage height, 5.17 feet); no flow for several periods.

1928–1930: Maximum discharge, 290 second-feet July 9, 1929 (gage height, 5.36 feet); no flow during several periods.

REMARKS.—Records fair. Discharge estimated June 2, 5, 8. Canal diverts water from left bank of Rio Grande 3½ miles south of Mission for irrigation near Mission. Flow regulated by pumps. Granjeno Canal diverts water from this canal above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	32	0	0	0	24	61	0	0	0	0	148
2	39	0	102	0	0	0	23	0	.8	0	0	148
3	8.6	0	50	0	65	61	6.4	0	0	6.6	0	135
4	0	.9	7.2	0	96	58	0	0	0	0	110	0
5	0	23	0	0	41	94	0	2.8	.8	7.1	135	22
6	81	112	0	96	0	107	0	0	0	0	152	0
7	119	15	12	174	83	117	83	0	0	0	152	15
8	140	0	0	114	55	148	120	0	.8	2.7	156	70
9	104	0	0	21	34	166	124	0	0	0	152	73
10	.2	0	0	0	3.3	194	156	0	0	0	147	156
11	0	6.5	0	0	0	208	160	0	0	0	152	138
12	0	48	0	0	0	212	135	0	0	0	152	114
13	0	64	0	0	35	203	96	0	0	0	143	96
14	0	67	0	0	14	151	91	0	0	0	135	87
15	0	2.0	0	0	0	127	129	28	0	0	135	66
16	23	0	59	0	48	59	127	0	0	0	122	44
17	0	24	77	0	100	89	123	1.8	0	.2	123	51
18	0	77	15	58	89	76	124	0	0	0	135	39
19	0	35	0	0	58	38	113	6.2	0	.5	128	40
20	76	21	0	61	91	87	20	0	0	45	127	31
21	98	0	0	54	58	32	78	0	0	53	135	34
22	3.6	0	0	0	42	0	75	0	0	83	134	41
23	0	0	0	0	57	0	81	50	0	122	92	114
24	0	0	20	59	143	17	102	44	0	110	69	133
25	0	0	0	70	172	102	125	12	0	92	136	148
26	0	0	0	0	188	75	22	0	0	14	156	148
27	0	0	0	0	132	62	0	0	0	70	156	111
28	125	0	0	0	76	0	62	0	0	93	174	102
29	66	0	0	0	-------	20	0	0	0	47	170	104
30	0	0	1.8	0	-------	71	0	0	0	.7	156	43
31	0	-------	0	25	-------	17	-------	0	-------	.3	152	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (13 days)	140	0.2	68.0	1,750
November (14 days)	112	.9	37.7	1,050
December (9 days)	102	1.8	38.2	682
January (10 days)	174	21	73.2	1,450
February (22 days)	188	3.3	76.4	3,330
March (27 days)	212	17	96.9	5,190
April (24 days)	160	6.4	93.2	4,440
May (7 days)	50	1.8	20.7	287
June (3 days)	.8	.8	.8	4.8
July (17 days)	122	.2	43.9	1,480
August (28 days)	174	69	139	7,710
September (28 days)	156	15	87.5	4,860
The year				32,200

GRANJENO CANAL NEAR MISSION, TEX.

LOCATION.—Water-stage recorder near Mission pumping plant, 3.6 miles south of Mission, Hidalgo County.

RECORDS AVAILABLE.—August, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year not determined; no flow during several periods.

1928–1930: Maximum discharge, 108 second-feet Feb. 28, 1929; no flow for several periods.

REMARKS.—Monthly records fair. Daily records not sufficiently accurate for publication. Station above all diversions from canal. Canal diverts from Mission Canal 200 feet above station. Flow regulated at head gates. Water used for irrigation near Mission.

Monthly discharge, in second-feet, 1929–30

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (9 days)	34	0.3	12.1	217
November (2 days)	4.2	2.2	3.20	13
December (4 days)	11	2.2	5.35	42
January (4 days)	16	3.1	9.62	76
February (12 days)	64	17	39.0	928
March (27 days)	77	8.4	40.5	2,170
April (26 days)	41	.1	13.1	675
May (2 days)			16.0	63
July (4 days)	18	.2	5.70	45
August (28 days)	38	5.0	20.6	1,150
September (21 days)	33	1.2	10.7	444
The year				5,820

NOTE.—No flow during June.

McALLEN CANAL NEAR HIDALGO, TEX.

LOCATION.—Water-stage recorder 200 feet upstream from West McAllen-Hidalgo highway crossing and 1.1 miles north of Hidalgo, Hidalgo County.

RECORDS AVAILABLE.—July, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year, 72 second-feet Feb. 13 (gage height, 4.62 feet); no flow during several periods.

1928–1930: Maximum discharge, that of Feb. 13, 1930; no flow during several periods.

REMARKS.—Records fair. Canal diverts water from Rio Grande 1.3 miles northwest of Hidalgo for irrigation near McAllen. Entire flow regulated by pumps. Rio Bravo Canal diverts water from this canal above station.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	12	0	0	13	20	10	6.8	0	0	23	7.9
2	13	0	0	4.6	0	0	16	0	2.5	4.5	27
3	12	0	2.9	2.8	0	10	30	0	0	0	17
4	0	0	0	0	6.9	5.7	25	0	0	8.6	0
5	0	6.6	0	0	22	40	28	0	0	23	0
6	0	11	0	0	37	49	4.4	0	0	32	0
7	0	6.2	0	0	37	39	29	4.0	0	29	2.8
8	21	4.9	0	9.1	26	15	24	0	0	19	4.5
9	22	0	0	18	0	4.3	28	0	0	7.2	20
10	20	0	10	16	21	38	32	0	0	0	27
11	16	0	9.7	5.4	43	43	35	0	0	0	26
12	1.9	2.6	4.5	1.8	63	27	16	0	0	8.1	23
13	0	5.0	2.7	8.8	62	27	2.4	0	0	24	9.3
14	0	16	0	2.9	50	29	21	0	0	38	0
15	0	10	0	12	25	20	23	.1	12	33	5.4
16	0	0	0	10	8.4	0	22	0	11	19	0
17	3.5	0	6.6	15	23	24	12	3.4	4.4	0	18
18	1.9	0	3.2	0	23	28	0	0	0	0	27
19	2.0	0	14	0	42	.3	.1	0	0	11	23
20	0	0	6.6	0	34	15	5.0	2.0	0	26	1.7
21	3.1	0	0	0	34	12	36	4.7	0	35	0
22	12	0	0	0	14	2.9	43	0	0	15	0
23	13	0	0	0	6.3	0	39	0	10	0	12
24	7.3	0	3.5	0	30	3.0	21	0	20	0	24
25	3.2	0	0	0	32	13	0	0	25	16	14
26	0	0	0	0	29	8.4	0	0	9.0	31	17
27	0	0	0	4.5	31	4.9	0	0	0	30	13
28	0	0	0	11	26	.1	0	0	0	27	0
29	0	0	0	20	-------	0	0	0	0	12	9.0
30	0	0	0	21	-------	0	0	0	0	0	18
31	7.8	-------	8.1	6.6	-------	0	-------	0	18	0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (17 days)	22	1.9	10.1	341
November (8 days)	16	2.6	7.79	124
December (11 days)	14	2.7	6.53	142
January (18 days)	21	1.8	10.1	362
February (25 days)	63	2.0	29.1	1,440
March (25 days)	49	.1	18.7	929
April (23 days)	43	.1	21.7	989
May (5 days)	4.7	.1	2.8	28
July (9 days)	25	2.5	12.4	222
August (22 days)	38	4.5	21.4	935
September (22 days)	27	1.7	15.8	687
The year				6,200

NOTE.—No flow during June.

RIO BRAVO CANAL NEAR HIDALGO, TEX.

LOCATION.—Great Western meter at head gates of Rio Bravo Canal, 1.3 miles northwest of Hidalgo, Hidalgo County.

RECORDS AVAILABLE.—July, 1928, to September, 1930.

EXTREMES.—Maximum discharge during year not determined; no flow during several periods.

1928–1930: Maximum discharge not determined; no flow during several periods.

REMARKS.—Records fair. Discharge measured in acre-feet by Great Western meter. Canal diverts water from left bank of McAllen Canal for purpose of irrigation near Hidalgo. Flow regulated by head gates.

Daily and monthly discharge, in second-feet, 1929–30

Day	Oct.	Feb.	Mar.	Apr.	Aug.	Day	Oct.	Feb.	Mar.	Apr.	Aug.
1	0	0	0	15	0	16	0	2.8	0.5	0	0
2	0	0	0	14	0	17	0	2.8	3.1	0	0
3	0	0	0	14	0	18	0	2.9	3.9	0	0
4	0	0	0	17	1.5	19	0	9.6	0	0	0
5	0	0	6.2	8.5	2.5	20	0	9.0	6.2	0	0
6	0	6.8	6.9	12	6.6	21	0	2.7	9.6	3.9	0
7	0	6.8	4.0	13	3.8	22	0	0	0	3.7	0
8	0	4.7	1.2	14	0	23	0	0	0	1.9	0
9	5.5	0	0	8.4	0	24	0	0	1.2	0	0
10	5.8	7.1	3.5	0	0	25	0	0	8.5	0	0
11	.9	9.7	1.5	0	0	26	0	0	16	0	0
12	1.8	8.7	2.2	0	0	27	0	0	1.4	0	0
13	0	8.5	1.3	0	0	28	0	0	0	0	0
14	0	12	1.6	0	0	29	0		0	0	0
15	0	1.1	1.0	0	0	30	0		0	0	0
						31	0		0		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October (4 days)	5.8	0.9	3.50	28
February (15 days)	12	1.1	6.35	189
March (19 days)	16	.5	4.20	158
April (12 days)	15	1.9	10.4	249
August (4 days)	6.6	1.5	3.60	29
The year				653

NOTE.—No flow during months for which no discharge is shown.

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to the records of flow obtained at the gaging stations and reported in the preceding pages, measurements were made at other points as shown by the following table:

Miscellaneous discharge measurements in Western Gulf of Mexico basins during the year ending September 30, 1930

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
Jan. 6	Neches River	Gulf of Mexico	Former gaging station near Reese, Tex.	−22.72	171
Aug. 5	Brazos River	do	U. S. Weather Bureau gage near Valley Junction, Tex.	9.10	358
Aug. 13	Colorado River	do	400 feet below Austin Dam, near Austin, Tex.		18.9
13	do	do	One-fourth mile below Deep Eddy, near Austin, Tex.		30.9
Apr. 8	do	do	Bastrop, Tex		321
July 9	do	do	7 miles above Smithville, Tex.		502
Apr. 9	do	do	4 miles above Smithville, Tex.		330
July 9	do	do	3 miles above La Grange, Tex.		633
Feb. 28	South Concho River	Concho River	1,000 feet above confluence with Middle Concho River, near San Angelo, Tex.		12.4
Apr. 17	do	do	100 feet below Nasworthy Dam, near San Angelo, Tex.		11.5
Feb. 27	Irrigation Canal	South Concho River	Christoval, Tex		5.96
Apr. 1	do	do	do		7.34
May 8	do	do	do		11.4
June 17	do	do	do		18.0
July 25	do	do	do		9.54
Aug. 9	do	do	do		7.54
Sept. 25	do	do	do		7.72
Nov. 20	Barton Springs	Barton Creek	Near Austin, Tex		[a] 27.9
Jan. 4	do	do	do		[a] 23.4
Feb. 13	do	do	do		[a] 22.5
Mar. 21	do	do	do		[a] 28.9
Apr. 5	do	do	do		[a] 24.2
July 11	do	do	do		[a] 36.5
July 29	do	do	do		[a] 28.4
Aug. 12	do	do	do		[a] 24.0
Sept. 15	do	do	do		[a] 20.4
Oct. 30	Costley Spring	Colorado River	Near Delvalle, Tex		.67
Dec. 7	Guadalupe River	Gulf of Mexico	Victoria, Tex	.56	811
Jan. 29	do	do	do	9.35	4,170
Feb. 17	do	do	do	−.18	408
Apr. 4	do	do	do	.64	687
26	do	do	do	.05	481
May 15	do	do	do	13.50	5,770
June 20	do	do	do	15.90	7,450
July 30	do	do	do	−.02	520
Sept. 12	do	do	do	−.33	395
Feb. 5	Spring Branch	Guadalupe River	Near Spring Branch, Tex		1.05
Dec. 11	Comal River	do	New Braunfels, Tex		[b] 274
Feb. 17	do	do	do		[b] 262
17	do	do	do		[b] 263
Apr. 14	do	do	do		[b] 258
14	do	do	do		[b] 258
May 16	do	do	do		[b] 261
16	do	do	do		[b] 260
July 9	do	do	do		[b] 275
9	do	do	do		[b] 277
Aug. 14	do	do	do		[b] 260
14	do	do	do		[b] 260
Sept. 30	do	do	do		[b] 255
30	do	do	do		[b] 255
Nov. 5	San Marcos River	do	San Marcos, Tex		130
Feb. 3	do	do	do		108
Mar. 17	do	do	do		116
June 6	do	do	do		117
July 14	do	do	do		127
Aug. 11	do	do	do		128
Sept. 17	do	do	do		123

[a] Flow of Old Mill Spring not included.
[b] Total flow of springs.

Miscellaneous discharge measurements in Western Gulf of Mexico basins during the year ending September 30, 1930—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
Oct. 3	San Marcos River	Guadalupe River	Near Prairie Lea, Tex		164
3	Plum Creek	San Marcos River	Above Clear Fork, near Luling, Tex.		.83
3	do	do	1 mile above mouth, near Luling, Tex.		6.36
3	Clear Fork of Plum Creek.	Plum Creek	2 miles above mouth, near Luling, Tex.		.57
Dec. 31	Spring	Medina River	Gaging station near Pipe Creek, Tex.		7.47
Nov. 14	San Antonio River	Guadalupe River	Gaging station in San Antonio, Tex.	1.36	45.3
Oct. 31	Coconut Spring		Alpine, Tex		.50
Apr. 7	Musquiz Canyon	Paisano Creek	15 miles north of Alpine, Tex.		.11
Oct. 29	San Felipe Creek	Rio Grande	Del Rio, Tex		[b] 44.7
Nov. 29	do	do	do		[b] 42.0
Jan. 3	do	do	do		[b] 49.7
Feb. 14	do	do	do		[b] 44.0
Mar. 21	do	do	do		[b] 40.6
May 10	do	do	do		[b] 43.5
July 24	do	do	do		[b] 55.5
Sept. 12	do	do	do		[b] 43.0
Oct. 31	Pharr-Sanduan Canal	do	Hidalgo, Tex		81.3
Nov. 15	do	do	do		72.2
May 15	South Reservoir Drain	Donna Drain	Engleman Tract, near Edinburg, Tex.		.89

[b] Total flow of springs.

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