UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY

W. C. MENDENHALL, Director

Water-Supply Paper 733

SURFACE WATER SUPPLY *of the* UNITED STATES

1932

PART 8

WESTERN GULF OF MEXICO BASINS

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Prepared in cooperation with the

STATES OF NEW MEXICO AND TEXAS

UNITED STATES

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SURFACE WATER SUPPLY OF WESTERN GULF OF MEXICO BASINS, 1932

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1932.

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, 1895–1933

1895	$12,500.00	1911–17	$150,000.00	1928	$147,000.00
1896	24,500.00	1918	175,000.00	1929	270,500.00
1897–99	50,000.00	1919	148,244.10	1930	275,000.00
1900	70,000.00	1920	175,000.00	1931	565,000.00
1901–2	100,000.00	1921–23	180,000.00	1932	711,000.00
1903–6	200,000.00	1924–25	170,000.00	1933	600,000.00
1907	150,000.00	1926	165,000.00		
1908–10	100,000.00	1927	151,000.00		

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 6,590 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1932, 2,790 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, 1931, and ending September 30, 1932. At the beginning of January in most parts of the United States much of the precipitation in the preceding 3 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.

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

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 discharges, 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 instrument 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.

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

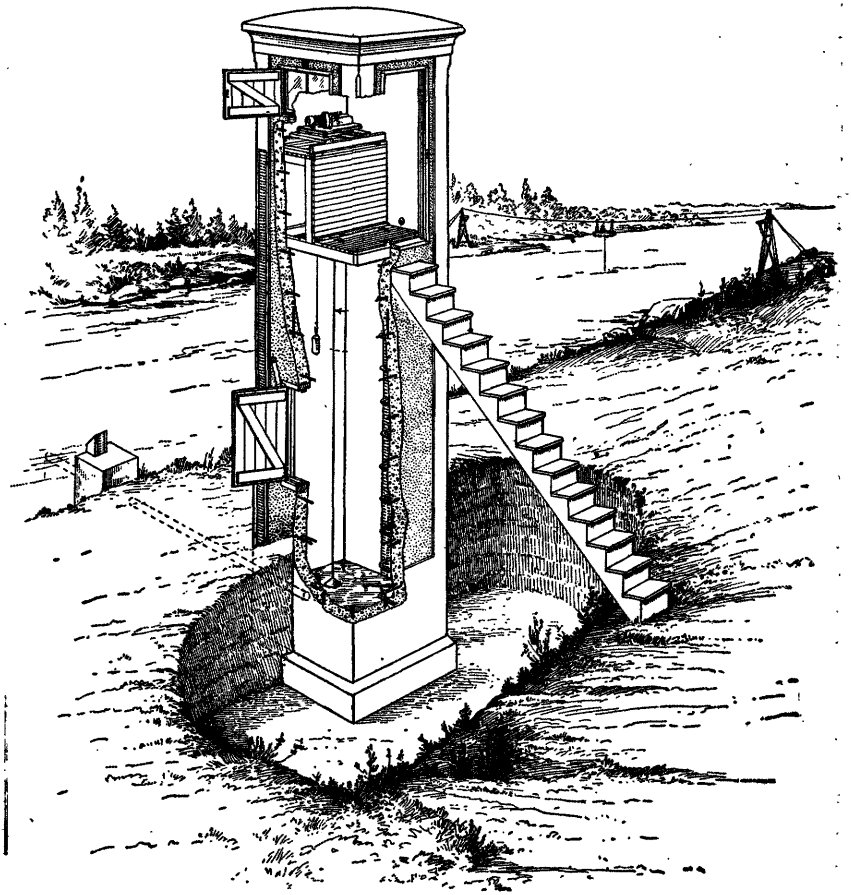

FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

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 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", 20 percent 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 Mississippi River).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Hudson Bay and upper Mississippi River 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 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, Maine., Statehouse.
Boston, Mass., 945 Post Office Building.
Hartford, Conn., 203 Federal Building.
Albany, N.Y., 603 State Public Works Building.
Trenton, N.J., 228 Federal Building.
Harrisburg, Pa., 492 Education Building.
Charlottesville, Va., 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.
Montgomery, Ala., Post Office Building.
Chattanooga, Tenn., 630 Power Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Urbana, Ill., 302 University New Agricultural Building.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 632 State Office Building.
Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
Topeka, Kans., State House.
Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Highway Building.
Santa Fe, N.Mex., State Capitol.
Tucson, Ariz., 210 Post Office Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 303 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, 429 Federal Building.
Helena, Mont., 421 Federal Building.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.

San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 510 Eighth and Figueroa Building.
Honolulu, Hawaii, 225 Federal Building.

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

Stream-flow records have been obtained at about 6,590 points in the United States, and the data obtained have been published in the reports tabulated as follows:

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

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

Report	Character of data	Year
10th A, pt. 2	Descriptive information only	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to Sept. 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893–94.
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).	1895–96.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	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	1907–8
W 261 to 272	do	1909.
W 281 to 292	do	1910.
W 301 to 312	do	1911.
W 321 to 332	do	1912.
W 351 to 362	do	1913.
W 381 to 394	do	1914.
W 401 to 414	do	1915.
W 431 to 444	do	1916.
W 451 to 464	do	1917.
W 471 to 484	do	1918.
W 501 to 514	do	1919–20.
W 521 to 534	do	1921.
W 541 to 554	do	1922.
W 561 to 574	do	1923.
W 581 to 594	do	1924.
W 601 to 614	do	1925.
W 621 to 634	do	1926.
W 641 to 654	do	1927.
W 661 to 674	do	1928.
W 681 to 694	do	1929.
W 696 to 709	do	1930.
W 711 to 724	do	1931.
W 726 to 739	do	1932.

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 1932. The data for any particular station will as a rule 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, 1889–1932

[For basins included, see p. 5]

Year	1	2	3	4	5	6	7	8	9	10	11	12-A	12-B	12-C
1889 [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] 216	[p] 126, 127	128	129	[k] 128, 130	130, [q] 131	[k] 128, 131	[r] 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	640	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
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932	726	727	728	729	730	731	732	733	734	735	736	737	738	739

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Tables for 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. Tables of 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 River.
[k] Tributaries of Mississippi River 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] The Great Basin in California, except Truckee and Carson River Basins.
[s] Below junction with Gila River.
[t] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work in New Mexico was carried on under cooperative agreement with the State through George M. Neel, State engineer.

The work in Texas was carried on under cooperative agreement with the State through the Board of Water Engineers, consisting of John A. Norris, chairman, C. S. Clark, and A. H. Dunlap.

Acknowledgments are due to the American section of the International Boundary Commission and to the United States Bureau of Reclamation for assisting in collecting the records published herein.

Assistance in collecting records was also rendered by the following cities, corporations, and individuals: In Colorado by the Marian Mining Co.; in New Mexico by the town of Alamogordo, Alamogordo Community Ditch, Aqua Pura Co., New Mexico Power Co., and Tularosa Community Ditch; in Texas by the cities of Corpus Christi, Dallas, and Fort Worth, Dallas County, Bexar-Medina-Atascosa Counties Water Improvement District no. 1, Gulf, Colorado & Santa Fe Railway Co., Humble Oil & Refining Co., San Antonio Public Service Co., Texas Power & Light Co., Central & Southwest Utilities Co., and West Texas Utilities Co.

DIVISION OF WORK

The data for the station in Colorado were collected and prepared for publication under the direction of Robert Follansbee, district engineer, assisted by J. H. Baily.

The data for stations in New Mexico were collected and prepared for publication under the direction of Berkeley Johnson, district engineer, assisted by E. L. Barrows, H. G. Neel, W. G. Bratschi, T. E. Yates, W. C. Smith, Russell Dallas, Miss G. C. Haskell, and Mrs. Jean Teague.

Data for stations in Texas were collect and prepared for publication under the direction of C. E. Ellsworth, district engineer, assisted by Trigg Twichell, Seth D. Breeding, Tate Dalrymple, W. C. Dodd, N. C. Magnuson, Tinnie Schmitt, V. W. Rupp, V. L. Austin, F. C. Ames, P. H. Holland, J. M. Terry, and R. W. Yarborough, Jr.

The records were reviewed and manuscript assembled by D. M. Corbett.

GAGING-STATION RECORDS

SABINE RIVER BASIN

SABINE RIVER NEAR LONGVIEW, TEX.

LOCATION.—Staff gage just below the 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 December 1932 (discontinued). Beginning October 1932 comparable records obtained at new station 20 miles upstream near Gladewater.

EXTREMES.—Maximum discharge during period Oct. 1, 1931, to Dec. 31, 1932, 17,300 second-feet Jan. 13 (gage height, 30.0 feet); minimum, 22 second-feet Oct. 5-26, 1931.

1904–6, 1923–32: Maximum discharge, 22,300 second-feet Dec. 26, 1928; maximum gage height, 31.90 feet May 22, 23, 1930; minimum discharge, 14 second-feet Aug. 29-31, 1925 (gage height, 1.10 feet).

REMARKS.—Daily records poor, monthly records fair, because of probable backwater from Rabbit Creek. Small diversions above station. Slight regulation at extremely low stages caused by pumping just above gage.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	31	553	589	4,240	8,600	9,740	1,620	1,600	321	151	90	52
2	28	445	780	3,330	9,620	9,620	1,480	1,530	644	176	76	45
3	23	304	800	1,900	9,980	9,140	1,190	1,300	740	143	64	36
4	23	253	780	2,300	9,980	9,020	920	1,100	740	120	54	38
5	22	185	780	8,130	9,500	9,740	800	986	607	107	50	41
6	22	143	840	9,740	8,600	9,620	720	964	463	143	50	36
7	22	107	880	8,150	7,800	8,420	682	809	338	287	50	32
8	22	90	920	7,800	6,800	7,480	663	625	253	304	47	31
9	22	77	942	7,800	5,990	6,880	625	607	185	253	44	37
10	22	66	780	8,600	4,620	6,250	553	780	168	152	41	38
11	22	56	682	12,000	3,570	5,990	499	1,070	151	463	38	152
12	22	47	682	16,400	2,680	5,680	481	1,320	176	800	34	463
13	22	42	1,740	16,600	1,980	5,620	445	1,580	168	1,070	33	607
14	22	42	2,150	16,000	1,620	5,920	427	1,820	194	1,370	36	607
15	22	43	1,010	15,200	1,700	5,990	391	2,050	185	1,600	39	463
16	22	45	780	14,400	2,020	5,920	373	2,380	160	1,820	36	253
17	22	2,140		13,800	2,770	5,500	355	2,590	128	1,950	35	151
18	22	[a] 60	3,340	13,200	3,290	4,620	338	2,230	107	1,800	34	107
19	22		3,490	12,700	5,830	3,350	338	1,650	107	1,210	39	78
20	22	72	3,880	12,110	7,400	2,180	499	1,260	202	622	42	64
21	22	[a] 78	3,790	11,700	8,780	1,520	553	1,260	160	253	42	52
22	22	[a] 84	3,410	11,200	8,420	1,100	535	1,390	128	151	41	46
23	22	90	3,130	10,900	8,060	986	517	1,510	107	120	43	41
24	22	101	3,790	10,100	8,330	900	571	1,510	95	101	43	38
25	22	114	4,280	9,500	9,740	840	701	1,350	185	90	41	34
26		128	4,150	9,260	11,300	800	800	920	135	84	37	52
27		143	4,060	8,600	12,000	780	780	607	101	83	33	81
28	[a] 280	168	4,020	7,720	11,700	780	644	427	135	83	73	70
29		168	4,020	7,250	11,200	760	800	338	135	101	95	60
30		321	4,150	7,480		780	1,320	321	120	135	82	52
31			4,470	7,800		1,160		202		114	68	

[a] Estimated or interpolated.

Discharge, in second-feet, of Sabine River near Longview, Tex., 1931–32—Continued

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1932				1932				1932			
1	48	45	84	11	139	60	95	21	47	51	236
2	43	43	90	12	391	58	107	22	43	51	253
3	41	58	82	13	373	55	114	23	38	48	287
4	45	61	78	14	236	54	120	24	34	68	548
5	43	101	78	15	135	54	120	25	32	114	935
6	42	82	80	16	101	53	135	26	30	120	1,140
7	48	64	82	17	76	53	160	27	27	114	986
8	52	60	83	18	72	52	185	28	24	114	1,070
9	54	63	84	19	62	51	194	29	23	95	1,280
10	54	61	90	20	54	51	210	30	32	90	2,340
								31	38	-------	4,420

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931–32				
October	----------	22	72.5	4,460
November	553	42	138	8,210
December	4,470	589	2,300	141,000
January	16,600	1,900	9,870	607,000
February	12,000	1,620	7,030	404,000
March	9,740	760	4,740	291,000
April	1,620	338	687	40,900
May	2,590	202	1,230	75,600
June	740	95	245	14,600
July	1,950	83	511	31,400
August	95	33	49.4	3,040
September	607	31	129	7,680
The year	16,600	22	2,250	1,630
1932				
October	391	23	79.9	4,910
November	120	43	68.1	4,050
December	4,420	78	509	31,300
The period	----------	----------	----------	40,300

SABINE RIVER AT LOGANSPORT, LA.

LOCATION.—Chain gage on highway bridge 200 feet above Houston East & West Texas Railway bridge and a quarter of a 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 1932.

EXTREMES.—Maximum discharge during year, 41,100 second-feet Feb. 23 (gage height, 35.6 feet); minimum, 34 second-feet Oct. 21–23 (gage height, 0.9 foot).

1903–6, 1923–32: Maximum discharge, that of Feb. 23, 1932; minimum probably less than 27 second-feet September 1925.

Maximum stage known, 39.4 feet, present datum, reached during 1884.

REMARKS.—Daily records poor, monthly records fair. Discharge partly estimated Oct. 19, Nov. 15–17. No diversions below station near Longview. Gage-height record furnished by United States Weather Bureau.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	58	872	8,080	22,600	17,000	8,980	1,060	848	312	139	74
2	45	81	1,160	7,660	22,000	15,400	10,000	1,040	666	282	139	81
3	45	169	1,720	7,100	21,300	14,200	10,000	1,090	516	268	129	81
4	45	282	2,070	6,970	20,000	14,100	9,840	1,110	516	254	139	88
5	45	380	2,010	8,500	18,300	14,400	9,390	1,140	496	226	129	88
6	41	436	1,790	11,600	16,600	16,000	8,080	1,140	476	240	129	95
7	41	398	1,470	16,800	15,400	17,600	6,350	1,110	476	254	120	88
8	41	312	1,520	22,300	14,200	19,400	3,880	1,140	456	254	187	81
9	41	226	1,850	23,200	13,300	20,000	2,460	1,280	436	226	248	74
10	37	139	1,960	22,000	12,500	19,400	2,120	1,420	398	240	159	68
11	37	120	2,230	20,500	12,000	18,500	1,740	1,590	398	226	129	74
12	37	95	3,120	21,000	11,600	17,400	1,590	1,800	436	226	111	68
13	37	81	3,920	21,500	11,100	16,200	1,500	1,980	398	268	103	81
14	37	74	5,500	20,800	10,700	14,600	1,350	2,380	328	344	103	129
15	37	88	6,780	20,000	10,400	13,700	1,260	2,600	328	622	111	180
16	37	149	7,800	18,900	9,930	12,600	1,160	2,990	328	776	103	268
17	37	139	9,480	20,500	9,480	11,600	1,090	3,380	296	1,090	95	398
18	37	169	11,700	21,500	9,140	10,600	1,040	3,340	268	1,260	95	416
19	37	240	13,900	24,400	10,600	9,840	1,090	3,160	240	1,520	111	362
20	37	362	15,000	27,700	16,600	9,390	920	2,870	226	1,590	103	312
21	34	436	16,000	29,000	26,600	8,900	896	2,430	226	1,470	95	191
22	34	476	16,200	28,700	36,400	8,080	896	1,820	214	1,060	88	169
23	34	436	15,000	27,000	40,200	7,520	896	2,100	202	754	81	149
24	37	398	15,200	25,100	39,300	6,780	872	1,770	202	380	74	129
25	37	398	14,200	24,100	35,600	4,780	872	1,720	240	312	74	103
26	41	436	12,300	25,400	30,400	2,910	872	1,590	254	268	68	88
27	41	496	10,500	26,000	24,100	2,460	896	1,540	268	226	68	88
28	45	556	10,000	26,700	22,600	2,240	920	1,500	282	191	68	81
29	49	644	9,660	26,400	19,600	1,690	992	1,420	296	169	68	74
30	53	732	9,140	25,100	-------	1,760	1,090	1,330	328	159	74	74
31	58	-------	8,660	23,500	-------	6,050	-------	1,160	-------	139	74	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	58	34	40.6	2,500
November	732	58	300	17,900
December	16,200	872	7,540	464,000
January	29,000	6,970	20,600	1,270,000
February	40,200	9,140	19,400	1,120,000
March	20,000	1,690	11,500	707,000
April	10,000	872	3,100	184,000
May	3,380	1,040	1,810	111,000
June	848	202	368	21,900
July	1,590	139	503	30,900
August	248	68	110	6,760
September	416	68	142	8,450
The year	40,200	34	5,420	3,940,000

SABINE RIVER NEAR BON WIER, TEX.

LOCATION.—Chain gage on highway bridge 1¼ miles east of Bon Wier, 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 1932.
EXTREMES.—Maximum discharge during year, 57,200 second-feet Feb. 28, 29 (gage height, 22.73 feet); minimum, 250 second-feet Oct. 20, Nov. 2–6.
1923–32: Maximum discharge, that of Feb. 28, 29, 1932; minimum, 185 second-feet Sept. 11, 22, and 24, 1925 (gage height, 0.50 foot).
REMARKS.—Records fair. No diversions below station near Longview. Gage-height record furnished by United States Weather Bureau.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	315	a 270	1,570	23,400	54,500	54,500	9,720	1,510	1,880	710	635	340
2	315	250	1,390	23,100	54,500	52,400	12,200	1,450	1,690	710	600	340
3	315	250	1,570	21,600	54,500	50,300	13,700	1,450	1,510	710	565	340
4	315	250	1,750	21,400	52,400	48,200	13,800	1,630	1,330	750	530	340
5	290	250	2,020	21,600	50,300	46,400	13,700	1,950	1,220	790	530	390
6	290	250	2,600	22,500	46,400	43,000	13,500	2,320	1,120	790	530	415
7	290	270	3,760	23,100	43,000	40,000	13,500	3,000	1,020	750	500	415
8	270	270	4,840	23,400	41,400	a37,400	13,800	3,760	970	710	500	415
9	270	270	5,930	23,700	38,600	a34,200	13,800	3,400	970	670	500	415
10	270	290	6,450	24,000	37,400	32,400	13,800	3,300	1,020	670	500	390
11	270	315	6,710	24,000	35,200	30,300	13,200	3,000	1,120	670	470	365
12	270	365	5,800	26,100	33,200	a28,800	10,600	2,400	1,120	635	470	365
13	270	365	5,320	29,300	31,600	a27,200	7,440	2,160	1,120	600	470	365
14	270	365	5,320	32,400	30,300	25,800	5,320	2,090	1,070	600	470	340
15	270	340	7,780	a37,400	29,300	25,000	4,480	2,020	970	600	470	340
16	270	340	11,200	43,000	28,000	24,400	3,880	2,090	920	600	440	340
17	a 270	340	13,000	44,600	26,800	23,700	3,520	2,320	870	600	415	315
18	a 270	365	15,600	43,000	25,800	23,400	3,300	2,600	830	600	415	315
19	270	440	18,400	41,400	24,700	23,100	3,000	2,800	790	670	415	315
20	250	565	20,900	40,000	24,000	22,800	2,800	3,200	790	790	415	315
21	a 270	710	21,900	40,000	26,400	22,500	a2,600	3,640	750	970	390	315
22	a 315	1,020	22,500	38,600	29,800	21,900	a2,500	3,880	710	1,220	390	365
23	a 415	1,220	23,100	38,600	34,200	21,100	a2,320	4,120	710	1,510	390	440
24	565	1,570	23,700	38,600	40,000	20,400	a2,160	4,240	710	1,630	390	500
25	635	1,750	24,000	38,600	46,400	19,200	2,090	4,240	750	1,570	390	500
26	635	1,810	24,400	40,000	50,300	17,800	a2,020	4,600	870	1,270	365	470
27	600	1,950	24,000	41,400	54,500	16,300	a1,950	3,760	1,020	1,070	365	440
28	a 500	2,060	22,800	41,400	56,600	14,000	a1,810	3,100	970	970	365	440
29	a 440	1,950	21,600	43,000	56,600	10,900	a1,750	2,600	870	870	365	440
30	a 365	1,950	21,900	46,400	-------	7,660	a1,630	2,160	790	750	340	415
31	a 315	-------	22,800	50,300	-------	6,840	-------	2,020	-------	670	340	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	635	250	344	21,200
November	2,060	250	747	44,400
December	24,400	1,390	12,700	781,000
January	50,300	21,400	33,700	2,070,000
February	56,600	24,000	39,900	2,300,000
March	54,500	6,840	28,100	1,730,000
April	13,800	1,630	7,000	417,000
May	4,240	1,450	2,780	171,000
June	1,880	710	1,020	60,700
July	1,630	600	843	51,800
August	635	340	449	27,600
September	500	315	383	22,800
The year	56,600	250	10,600	7,700,000

a Partly estimated.

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 1932.

EXTREMES.—Maximum discharge during year, 62,800 second-feet Mar. 2–3 (gage height, 15.10 feet); minimum, 405 second-feet Sept. 21–24.

1924–32: Maximum discharge, that of Mar. 2–3, 1932; minimum, 372 second-feet Sept. 11, 1925 (gage height, 1.10 feet).

River reached a stage of 15.5 feet Apr. 15, 1923 (discharge, 70,000 second-feet). River has been known to have reached higher stages in the past.

REMARKS.—Records fair for low discharges; for others good. No diversions below station near Longview.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	549	549	1,940	27,100	48,900	61,000	13,400	2,700	3,150	1,390	1,190	498
2	549	523	1,880	26,000	54,000	62,800	10,600	2,790	2,970	1,240	1,050	498
3	549	523	1,940	26,000	59,200	62,800	9,130	2,790	2,700	1,140	960	498
4	549	498	1,940	26,000	61,000	62,800	9,130	2,880	2,370	1,140	878	498
5	523	498	1,810	27,100	61,000	59,200	9,790	2,880	2,080	1,140	804	474
6	549	498	1,940	26,000	59,200	57,400	10,600	2,970	1,940	1,240	769	474
7	577	498	3,060	26,000	57,400	54,000	11,500	3,150	1,750	1,240	734	474
8	577	498	4,290	27,100	54,000	50,600	12,100	3,430	1,560	1,240	734	498
9	549	498	5,350	27,100	50,600	47,300	12,100	3,740	1,450	1,140	804	523
10	549	523	6,220	27,100	47,300	42,600	12,800	3,850	1,450	1,050	804	523
11	577	549	6,700	27,100	44,100	39,600	12,800	3,850	1,390	1,000	769	523
12	577	577	7,080	29,300	41,100	36,800	12,800	3,850	1,500	960	769	498
13	549	667	7,300	31,600	39,600	32,800	12,800	3,630	1,560	960	734	498
14	549	734	7,080	35,400	36,800	31,600	12,100	3,330	1,620	918	769	474
15	549	734	6,880	38,200	35,400	29,300	10,600	3,150	1,620	878	769	450
16	549	734	6,880	42,600	32,800	28,200	8,550	3,060	1,560	878	734	450
17	523	734	7,530	44,100	35,400	27,100	6,700	2,970	1,450	878	734	450
18	523	700	9,130	44,100	34,100	26,000	5,350	2,880	1,340	878	734	450
19	498	734	13,400	45,700	31,600	24,900	4,510	3,150	1,240	918	700	350
20	498	804	17,700	47,300	30,400	24,900	4,070	3,530	1,190	960	667	450
21	498	878	21,800	45,700	32,800	23,800	3,740	3,630	1,140	1,000	606	427
22	498	1,050	23,800	44,100	34,100	23,800	3,430	3,740	1,090	1,090	549	405
23	523	1,340	26,000	47,300	36,800	23,800	3,330	3,960	1,050	1,390	549	405
24	577	1,450	29,300	45,700	39,600	22,800	3,060	4,290	1,000	1,750	549	427
25	577	1,810	28,200	47,300	41,100	22,800	2,970	4,620	1,050	2,010	549	474
26	577	2,300	28,200	48,900	41,100	21,800	2,790	4,740	2,450	2,080	549	606
27	606	2,530	27,100	50,600	44,100	21,800	2,700	4,740	2,300	2,080	549	636
28	667	2,370	26,000	50,600	50,600	20,700	2,620	4,290	1,810	1,940	549	606
29	636	2,220	26,000	50,600	55,700	19,700	2,790	3,960	1,690	1,750	549	577
30	606	2,080	26,000	50,600	-------	17,700	2,790	3,630	1,560	1,500	523	549
31	549	-------	26,000	48,900	-------	16,800	-------	3,330	-------	1,340	523	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	667	498	556	34,200
November	2,530	498	1,000	59,500
December	29,300	1,810	13,200	812,000
January	50,600	26,000	38,100	2,340,000
February	61,000	30,400	44,500	2,560,000
March	62,800	16,800	35,400	2,180,000
April	13,400	2,620	7,720	459,000
May	4,740	2,700	3,530	217,000
June	3,150	1,000	1,700	101,000
July	2,080	878	1,260	77,500
August	1,190	523	715	44,000
September	636	405	492	29,300
The year	62,800	405	12,300	8,910,000

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 91.3 feet above mean sea level.

DRAINAGE AREA.—3,540 square miles.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 33,600 second-feet Feb. 24 (gage height, 26.7 feet); minimum, 3.0 second-feet Oct. 15 (gage height, −0.9 foot).

1923–32: Maximum discharge, 34,200 second-feet June 1, 1929 (gage height, 26.8 feet); minimum, that of Oct. 15, 1931.

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

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

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	154	298	3,600	16,200	18,800	5,570	1,550	1,550	323	136	50
2	8.0	136	616	2,990	14,500	16,200	4,750	1,350	1,420	378	119	50
3	8.0	119	996	2,590	13,600	14,900	4,100	1,270	1,350	378	103	50
4	8.0	103	1,070	2,780	12,500	14,000	3,430	1,190	1,190	378	88	61
5	8.0	119	1,040	4,490	11,600	13,300	3,100	1,190	1,040	378	88	88
6	21	61	957	5,030	10,800	12,600	2,940	1,190	840	378	88	103
7	21	61	1,210	4,750	10,000	11,500	2,890	1,190	726	378	74	136
8	14	50	2,480	4,960	9,480	10,800	2,990	1,190	613	378	74	119
9	4.0	40	2,300	5,090	8,920	10,300	3,150	1,190	540	378	74	88
10	4.0	40	2,120	5,430	8,220	9,760	3,310	1,230	470	350	61	61
11	4.0	40	2,160	6,390	7,240	9,340	3,430	1,230	438	350	61	103
12	4.0	30	2,590	9,200	6,470	8,850	3,430	1,270	378	298	50	211
13	4.0	40	3,040	11,800	5,840	8,290	3,200	1,270	350	375	50	298
14	4.0	40	3,100	14,000	5,500	7,800	3,040	1,270	323	253	90	323
15	3.0	40	2,830	14,900	5,370	7,450	2,830	1,230	298	232	323	350
16	4.0	40	2,400	14,300	5,030	7,240	2,690	1,310	298	211	298	407
17	4.0	61	2,440	13,900	5,160	6,820	2,540	1,640	275	191	211	407
18	4.0	103	3,200	13,700	5,430	6,680	2,490	1,720	275	191	136	350
19	4.0	113	4,960	14,000	6,610	6,470	2,350	1,310	275	191	103	323
20	4.0	468	5,640	14,700	8,620	6,120	2,160	1,470	275	191	74	275
21	4.0	688	6,050	15,600	13,000	5,840	1,980	1,350	232	191	74	232
22	4.0	504	6,260	15,900	20,000	5,430	1,850	1,350	232	191	61	172
23	4.0	323	6,050	15,600	29,800	5,160	1,510	1,310	232	172	61	154
24	4.0	232	5,840	14,500	33,600	4,960	1,310	1,310	232	154	88	136
25	4.0	275	5,710	14,300	31,400	4,690	1,270	1,390	275	136	88	136
26	4.0	275	5,500	14,900	29,300	4,420	1,190	1,510	275	191	74	136
27	8.0	298	5,300	16,500	26,100	4,220	1,110	1,550	275	211	61	119
28	14	298	5,090	20,400	23,600	3,960	1,110	1,590	275	211	61	119
29	40	275	4,820	22,700	21,300	3,660	1,470	1,640	275	191	61	119
30	74	275	4,550	23,200	-------	3,780	1,850	1,640	275	172	61	103
31	136	-------	4,160	19,600	-------	5,950	-------	1,590	-------	154	61	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	136	3.0	14.2	873
November	688	30	177	10,500
December	6,260	298	3,380	208,000
January	23,200	2,590	11,700	719,000
February	33,600	5,030	14,000	805,000
March	18,800	3,660	8,360	514,000
April	5,570	1,110	2,630	156,000
May	1,720	1,190	1,370	84,200
June	1,550	232	517	30,800
July	378	136	260	16,000
August	323	50	98.5	6,060
September	407	50	176	10,500
The year	33,600	3.0	3,530	2,560,000

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 1932.

EXTREMES.—Maximum discharge during year, 73,400 second-feet Feb. 29, Mar. 1 (gage height, 21.45 feet); minimum, 205 second-feet Oct. 18–21 (gage height, −0.14 foot).

1904–6, 1923–32: Maximum discharge, 83,800 second-feet June 1, 1929 (gage height, 22.20 feet); minimum, about 148 second-feet Sept. 10, 1925.

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

REMARKS.—Records good. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	217	1,700	15,400	45,600	73,400	8,970	3,320	3,730	914	535	414
2	243	217	1,650	14,900	48,800	71,000	8,970	3,730	3,530	945	513	397
3	230	256	1,500	14,400	51,000	68,600	9,600	4,050	3,320	914	492	397
4	230	315	1,500	14,000	51,000	64,100	10,500	3,960	3,060	945	492	380
5	217	347	1,700	14,400	47,800	59,600	11,300	3,660	2,840	1,010	471	397
6	230	347	2,400	14,000	44,600	55,300	11,000	3,460	2,560	1,080	432	380
7	230	331	2,900	14,000	41,400	49,900	9,810	3,320	2,300	1,150	414	397
8	230	315	3,390	14,400	38,100	44,600	8,400	3,260	2,060	1,110	397	414
9	230	315	3,600	14,900	34,000	42,400	7,590	3,120	1,830	1,040	414	414
10	243	300	4,720	16,000	32,000	38,100	7,430	3,060	1,650	977	397	414
11	243	285	5,740	16,600	29,000	34,000	7,280	3,060	1,570	945	397	414
12	230	285	6,220	18,500	26,400	30,000	7,750	3,120	1,500	945	397	397
13	230	285	6,340	19,900	25,000	28,100	7,750	3,320	1,380	884	397	380
14	217	285	6,460	21,400	23,500	25,700	8,070	3,600	1,340	855	414	363
15	205	270	6,850	22,800	22,100	24,200	8,230	3,660	1,380	797	432	363
16	217	270	7,430	26,400	21,400	22,800	8,400	3,960	1,300	768	492	414
17	217	285	7,910	30,000	20,600	21,400	8,230	3,960	1,150	740	582	513
18	205	285	8,770	35,000	19,900	20,600	7,910	3,880	1,080	713	659	558
19	205	315	9,600	40,300	18,500	19,200	7,430	4,130	1,010	740	633	607
20	205	397	10,000	43,500	17,900	17,900	6,850	4,460	945	740	633	659
21	205	607	11,000	44,600	19,900	17,900	6,340	4,540	914	713	633	659
22	217	633	12,200	44,600	20,600	16,600	5,860	4,370	884	686	607	633
23	217	826	13,200	44,600	21,400	16,000	5,320	4,050	885	659	558	582
24	230	1,380	14,900	42,400	22,100	16,000	4,720	3,960	826	633	513	513
25	217	1,740	15,400	40,300	25,000	15,400	4,210	3,880	914	633	492	471
26	230	1,830	15,400	40,300	35,000	14,400	3,800	3,960	1,010	607	492	451
27	230	1,700	16,000	40,300	53,100	13,600	3,530	3,960	977	558	492	432
28	243	1,530	16,000	40,300	67,500	12,800	3,390	3,660	977	535	471	432
29	243	1,500	16,000	40,300	73,400	11,800	3,390	3,530	945	513	451	432
30	230	1,610	16,000	41,400	-------	10,800	3,260	3,600	914	513	414	414
31	230	-------	16,600	42,400	-------	9,810	-------	3,730	-------	535	414	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	243	205	226	13,900
November	1,830	217	643	38,300
December	16,600	1,500	8,490	522,000
January	44,600	14,000	28,500	1,750,000
February	73,400	17,900	34,400	1,980,000
March	73,400	9,810	31,200	1,920,000
April	11,300	3,260	7,180	427,000
May	4,540	3,060	3,720	229,000
June	3,730	826	1,630	97,000
July	1,150	513	800	49,200
August	659	397	488	30,000
September	659	363	456	27,100
The year	73,400	205	9,750	7,080,000

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 1932.
EXTREMES.—Maximum discharge during year, 38,200 second-feet Feb. 24 (gage height, 18.26 feet); minimum, 7.3 second-feet Oct. 6.
1923–32: Maximum discharge, that of Feb. 24, 1932; minimum, that of Oct. 6, 1931.
REMARKS.—Records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.8	98	221	4,300	7,400	7,400	2,260	810	302	229	49	30
2	9.2	86	282	3,900	7,700	6,200	3,700	715	282	245	45	28
3	9.0	71	345	3,700	8,400	5,900	3,700	635	263	245	41	30
4	8.5	61	373	3,300	8,750	5,650	3,900	635	254	221	39	30
5	8.2	51	359	5,180	8,050	6,200	4,520	675	245	183	35	35
6	7.5	43	373	9,800	7,400	5,650	4,960	715	237	162	34	37
7	8.2	39	387	8,400	6,500	5,180	4,740	810	221	141	32	43
8	8.5	37	432	7,700	5,900	4,740	4,520	910	213	128	35	88
9	7.8	34	469	13,800	5,180	5,180	3,900	1,170	205	134	35	134
10	7.8	34	469	18,400	4,740	7,700	3,500	1,170	190	141	34	148
11	8.2	34	675	16,600	4,300	8,750	2,930	1,250	183	141	32	141
12	8.2	34	1,100	14,600	3,700	8,050	2,510	1,170	176	134	32	122
13	8.2	32	1,510	12,200	3,300	7,100	2,140	910	176	116	37	104
14	8.2	34	1,510	10,500	3,100	6,200	1,700	715	162	98	51	86
15	8.7	34	1,600	8,750	2,640	5,400	1,250	571	155	86	61	71
16	9.5	35	2,020	7,100	2,380	4,960	970	715	148	76	66	61
17	9.8	39	2,640	8,750	2,640	4,300	810	860	141	71	61	57
18	9.8	49	2,640	10,500	2,510	3,700	675	1,030	148	66	57	51
19	9.5	66	4,100	9,450	5,900	3,300	603	1,030	148	61	57	49
20	9.2	86	5,180	8,750	10,500	2,780	543	910	155	53	61	41
21	9.0	98	5,650	8,400	16,200	2,380	515	910	148	57	61	37
22	9.5	134	5,650	8,400	21,200	2,020	492	910	141	57	53	35
23	14	141	5,400	9,800	32,600	1,800	469	910	128	53	49	34
24	26	169	5,900	9,100	36,800	1,600	469	910	122	53	47	32
25	51	169	6,500	9,100	27,300	1,420	469	910	128	53	51	30
26	45	183	6,500	10,200	20,200	1,250	449	810	155	49	49	34
27	35	197	6,500	9,800	15,000	1,170	449	675	183	49	45	37
28	35	205	6,200	8,400	11,600	1,030	449	515	183	47	39	37
29	71	197	5,650	7,700	9,100	970	571	415	176	47	35	37
30	98	190	5,180	7,700	-------	910	760	359	197	53	34	41
31	104	-------	4,740	7,400	-------	1,250	-------	323	-------	57	30	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	104	7.5	21.7	1,330
November	205	32	89.3	5,310
December	6,500	221	2,920	180,000
January	18,400	3,300	9,090	559,000
February	36,800	2,380	10,400	598,000
March	8,750	910	4,200	258,000
April	4,960	449	1,960	117,000
May	1,250	323	806	49,700
June	302	122	186	11,100
July	245	47	107	6,580
August	66	30	44.7	2,750
September	148	28	58.0	3,450
The year	36,800	7.5	2,470	1,790,000

ANGELINA RIVER AT HORGER, TEX.

LOCATION.—Chain gage on Zavalla-Jasper Highway bridge a quarter of a mile east of Horger, Jasper County, and 20 miles above mouth.
DRAINAGE AREA.—3,440 square miles.
RECORDS AVAILABLE.—March 1928 to September 1932.
EXTREMES.—Maximum discharge during year, 48,800 second-feet Feb. 24 (gage height, 36.35 feet); minimum, 35 second-feet Oct. 12, 19.
1928–32: Maximum discharge, that of Feb. 24, 1932; minimum, that of Oct. 12, 19, 1931.
Maximum stage known, about 39.50 feet August 1914.
REMARKS.—Records good. There is a possibility of backwater at times from Neches River. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	89	663	8,230	22,400	31,400	7,550	1,470	900	330	178	124
2	43	89	600	7,930	20,800	27,600	6,630	1,430	770	310	170	117
3	41	83	932	7,630	19,200	24,600	4,980	1,430	650	310	162	117
4	38	89	1,560	7,120	17,600	22,200	3,570	1,390	592	310	146	117
5	38	96	1,870	9,140	16,300	20,000	3,150	1,430	540	292	131	124
6	44	102	1,820	9,850	14,800	18,300	3,270	1,350	514	350	124	131
7	49	110	1,640	10,500	13,600	16,500	3,570	1,270	490	350	124	154
8	42	110	2,100	11,400	12,200	14,400	3,940	1,190	466	350	117	138
9	39	96	3,340	10,900	11,600	12,900	4,400	1,190	442	330	124	131
10	38	89	3,340	10,000	11,200	11,600	4,790	1,350	442	310	117	124
11	36	83	3,030	9,770	10,700	10,700	5,050	1,640	418	274	124	117
12	35	74	3,240	13,700	10,300	9,990	5,180	1,740	418	256	178	117
13	36	71	4,070	18,200	9,770	9,130	5,180	1,740	514	238	202	124
14	38	71	4,440	21,800	9,440	8,650	5,120	1,690	442	238	202	138
15	41	69	4,980	26,400	8,910	8,250	4,790	1,640	394	238	202	146
16	44	68	4,810	27,300	8,380	8,170	4,270	1,600	350	238	220	154
17	42	122	5,250	25,800	7,850	8,330	3,820	1,880	350	229	238	146
18	38	167	5,940	23,600	7,850	8,650	3,390	2,030	330	220	310	131
19	36	158	7,750	21,800	8,150	8,730	2,880	2,030	310	202	274	138
20	37	388	8,760	20,300	9,060	8,650	2,490	1,690	310	202	238	131
21	38	604	9,600	18,600	13,700	8,330	2,180	1,560	292	194	211	124
22	36	940	10,000	17,600	18,900	7,700	1,880	1,510	274	194	202	117
23	44	1,060	9,690	16,500	30,000	7,120	1,560	1,430	292	186	211	103
24	56	1,060	9,140	16,000	46,700	6,280	1,430	1,390	292	178	186	103
25	49	1,020	8,840	15,900	47,400	5,580	1,390	1,310	292	170	154	96
26	50	905	8,680	16,800	44,600	4,790	1,350	1,270	292	162	146	96
27	52	870	8,610	18,200	41,400	4,270	1,270	1,230	292	178	138	96
28	53	835	8,530	20,800	38,100	3,750	1,230	1,190	330	194	138	110
29	58	870	8,460	22,200	35,600	3,390	1,270	1,150	350	186	117	103
30	70	800	8,150	22,800	-------	3,210	1,390	1,150	350	194	131	96
31	83	-------	8,230	23,100	-------	5,930	-------	1,040	-------	194	131	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	83	35	44.8	2,750
November	1,060	68	373	22,200
December	10,000	600	5,420	333,000
January	27,300	7,120	16,400	1,010,000
February	47,400	7,850	19,560	1,120,000
March	31,400	3,210	11,300	695,000
April	7,550	1,230	3,480	204,000
May	2,030	1,040	1,460	89,800
June	900	274	423	25,200
July	350	162	245	15,100
August	310	117	172	10,600
September	154	96	122	7,260
The year	47,400	35	4,870	2,530,000

TRINITY RIVER BASIN

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

LOCATION.—Water-stage recorder just above Lake Worth Dam and 4½ miles northwest of Tarrant County Courthouse, in Fort Worth.

DRAINAGE AREA.—1,870 square miles.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 4,880 second-feet Jan. 22 (gage height, 1.67 feet); no flow at times.

1923–32: Maximum discharge, 7,600 second-feet Nov. 18, 1923 (gage height, 2.25 feet); no flow at times.

REMARKS.—Records fair except those below 100 second-feet, which are poor. Diversions for municipal use only; amount not known.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	e1,350	e 958	7.6	e 1,600	2,670	0	49	320	110	7.6	0
2	0	e1,040	e 712	7.6	e 1,120	1,980	0	25	500	99	3.8	0
3	0	e 758	e 580	27	e 827	1,420	0	20	600	187	2.4	0
4	0	e 560	e 560	239	303	804	.6	14	877	499	2.4	0
5	0	e 388	e 580	540	110	491	1.2	14	1,070	758	3.8	e2,320
6	0	e 254	e 580	666	99	303	1.8	14	1,150	1,410	3.8	e1,690
7	0	193	e 560	968	58	320	11	74	758	1,750	3.0	e1,260
8	0	78	e 481	1,290	58	303	3.8	110	600	1,980	4.8	e1,070
9	0	35	e 371	1,530	41	238	24	193	540	2,310	9.0	e1,120
10	0	20	e 320	1,790	49	193	24	427	388	2,740	7.6	1,240
11	0	11	e 270	2,050	96	e193	.8	830	337	3,320	e 3.8	1,180
12	0	7.6	e 238	1,790	68	178	0	1,610	354	3,540	e 2.4	1,040
13	0	6.6	e 164	1,470	58	150	0	1,720	337	3,540	1.2	781
14	0	3.8	e 88	1,150	137	150	0	1,440	286	3,350	0	500
15	0	2.4	e 78	e 781	320	150	0	1,150	238	1,300	0	270
16	0	.6	e 110	e1,270	1,390	122	0	931	150	2,880	0	164
17	4.5	3.8	e 110	1,630	1,720	49	0	735	110	2,630	0	110
18	303	1.8	e 68	1,890	1,660	e 25	0	804	110	2,080	.8	68
19	1,020	1.2	58	2,050	e 1,790	e 16	4.6	1,070	68	1,600	.6	25
20	1,500	0	88	2,490	2,310	e 11	11	1,290	49	1,600	0	20
21	1,790	0	122	3,170	3,280	e 9.0	30	1,410	30	1,690	0	14
22	2,050	0	164	4,520	4,490	e 0	49	1,410	25	e 1,720	0	7.6
23	1,690	0	270	3,920	4,680	0	118	1,290	30	1,600	0	3.8
24	1,440	1.2	388	3,320	4,520	0	88	1,210	58	1,410	0	3.8
25	1,470	.6	481	e3,100	4,180	0	68	958	58	1,010	0	5.6
26	1,600	2.4	580	e3,320	e 3,920	0	41	604	35	500	0	6.6
27	1,850	7.6	600	e3,460	e 3,760	0	25	286	336	270	0	5.6
28	2,080	e 106	520	e3,650	e 3,390	0	78	e 178	354	136	0	4.6
29	2,310	e 580	286	e3,390	e 3,240	0	88	e 136	270	78	0	2.4
30	2,120	e 958	164	e2,880	-------	0	41	122	193	41	0	1.8
31	e1,870	-------	25	2,080	-------	0	-------	178	-------	16	0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,310	0	746	45,900
November	1,350	0	212	12,600
December	958	25	341	21,000
January	4,520	7.6	1,950	120,000
February	4,680	41	1,700	97,800
March	2,670	0	315	19,400
April	118	0	23.6	1,400
May	1,720	14	655	40,300
June	1,150	25	341	20,300
July	3,540	16	1,550	95,300
August	9.0	0	1.84	113
September	2,320	0	430	25,600
The year	4,680	0	688	500,000

e Partly estimated.

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 519.2 feet above mean sea level (erroneous elevation published in Water-Supply Paper 718).

DRAINAGE AREA.—2,430 square miles.

RECORDS AVAILABLE.—October 1920 to September 1932.

EXTREMES.—Maximum discharge during year, 18,200 second-feet Sept. 5 (gage height, 16.95 feet); no flow Oct. 1–11.

1920–32: Maximum discharge (determined by slope-area method), 85,000 second-feet Apr. 25, 1922 (gage height, 23.95 feet); no flow at times.

REMARKS.—Records good. Considerable water diverted above for municipal use. Flow partly regulated by Lake Worth Reservoir.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1,480	1,060	66	1,980	2,970	86	136	309	239	24	2.3
2	0	1,120	858	24	1,520	2,340	80	106	425	225	17	2.3
3	0	858	705	47	1,110	1,800	73	83	607	647	12	14
4	0	648	613	500	736	1,160	73	70	814	1,520	15	25
5	0	475	613	1,190	407	1,020	70	64	985	1,040	14	9,830
6	0	314	634	829	336	586	70	64	1,480	2,490	14	2,660
7	0	253	620	910	268	560	107	442	851	2,340	12	1,550
8	0	114	580	1,140	244	534	80	414	656	2,220	15	1,230
9	0	51	469	1,380	216	488	67	469	691	2,280	39	1,160
10	0	39	364	1,620	216	413	239	615	573	2,520	59	1,220
11	0	29	314	1,980	326	413	96	910	431	2,970	31	1,180
12	4.3	22	230	1,980	249	425	61	1,460	401	3,240	18	1,040
13	11	22	268	1,450	230	370	54	1,740	376	3,310	12	829
14	6.6	22	136	1,140	679	358	49	1,460	314	3,170	8.1	566
15	22	20	99	940	1,540	342	47	1,350	273	2,900	8.1	320
16	18	18	117	4,650	*5,820	326	47	2,540	211	2,700	3.4	172
17	3.4	24	140	3,580	4,340	253	47	918	144	2,460	3.1	110
18	161	28	92	2,220	3,990	202	59	866	132	2,040	75	73
19	93	11	106	2,280	3,100	168	80	1,030	89	1,540	17	54
20	1,450	15	148	2,400	2,970	152	83	1,220	64	1,430	8.1	42
21	1,740	15	185	2,970	3,520	264	89	1,380	67	1,620	9.5	35
22	2,040	9.5	216	*10,900	5,690	162	117	1,360	47	1,560	8.1	39
23	1,920	5.2	336	7,660	5,710	106	224	1,310	59	1,440	8.1	37
24	1,490	8.1	456	4,000	5,000	106	216	1,190	106	1,330	5.2	37
25	1,450	8.1	573	3,920	4,540	103	156	1,020	96	985	3.8	42
26	1,490	14	648	4,080	4,080	99	110	705	67	540	3.4	37
27	1,680	15	656	3,680	3,920	132	86	376	1,570	273	3.4	35
28	1,920	85	540	3,750	3,750	99	187	220	1,070	148	3.4	33
29	2,169	493	334	3,680	3,450	96	220	220	431	83	3.1	31
30	2,220	955	225	3,310	-------	103	164	244	314	59	3.1	28
31	1,980	-------	235	2,520	-------	106	-------	211	-------	37	2.7	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,220	0	705	43,300
November	1,480	5.2	239	14,200
December	1,060	92	405	24,900
January	10,900	24	2,610	160,000
February	5,820	216	2,410	139,000
March	2,970	96	524	32,200
April	239	47	105	6,250
May	1,740	64	748	46,000
June	1,570	47	455	27,100
July	3,310	37	1,590	97,800
August	75	2.7	14.8	910
September	9,830	2.3	748	44,500
The year	10,900	0	877	636,000

* Partly estimated.

WEST FORK OF TRINITY RIVER AT GRAND PRAIRIE, TEX.

LOCATION.—Chain gage on 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 1932.

EXTREMES.—Maximum discharge during year, 15,400 second-feet Jan. 23 (gage height, 25.96 feet); minimum, 8.4 second-feet Oct. 1.

1925–32: Maximum discharge, that of Jan. 23, 1932 (gage height, 25.96 feet); minimum, 3.2 second-feet June 6, 1925.

Maximum stage known, about 29 feet in April 1922.

REMARKS.—Records good. Numerous small diversions above gage. Largest diversion (about 15 second-feet) is by city of Fort Worth. Flow partly regulated by storage at Lake Worth Reservoir.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.9	1,750	947	239	2,440	3,610	188	239	293	329	82	28
2	10	1,810	1,120	92	1,860	2,960	162	196	365	293	71	30
3	11	1,290	841	66	1,490	2,310	154	171	477	383	55	28
4	12	820	716	422	1,220	1,780	146	138	656	1,090	47	29
5	13	616	616	2,400	778	1,320	138	116	862	1,470	42	4,370
6	12	439	636	1,520	516	1,050	138	100	1,110	1,540	35	10,200
7	9.8	329	616	925	420	799	138	243	1,490	3,810	38	9,230
8	10	239	616	1,050	401	736	154	938	904	2,570	42	3,280
9	12	146	556	1,260	383	676	154	2,050	736	2,280	37	1,490
10	11	82	439	1,470	347	636	130	736	757	2,340	45	1,320
11	11	60	365	1,750	329	576	228	862	616	2,630	84	1,340
12	12	53	329	2,730	275	576	209	967	536	3,140	58	1,280
13	18	41	257	2,160	347	556	130	[a] 1,140	536	3,430	44	1,090
14	32	36	205	1,490	631	496	120	[a] 1,260	420	3,460	36	904
15	47	34	154	1,220	2,830	496	103	1,540	347	3,240	36	616
16	80	33	138	3,660	4,020	477	92	2,400	293	2,930	32	420
17	67	30	188	8,820	8,160	439	101	1,860	257	2,670	33	257
18	36	32	180	7,490	7,770	383	101	1,050	180	2,280	72	196
19	24	49	130	3,050	6,710	329	289	967	162	1,920	316	138
20	929	41	205	2,440	4,960	293	214	1,180	130	1,520	83	119
21	1,420	32	239	2,630	3,960	293	138	1,340	103	1,490	53	103
22	1,680	29	222	7,520	5,040	329	146	1,520	98	1,560	39	95
23	1,920	31	239	13,400	6,910	275	180	1,430	87	1,540	34	88
24	1,610	28	365	10,100	6,530	214	329	1,320	88	1,430	33	92
25	1,430	27	496	6,450	5,310	214	257	1,220	122	1,260	32	84
26	1,370	32	616	5,530	5,190	105	214	1,030	130	925	32	96
27	1,450	31	656	4,930	4,640	196	180	656	364	596	30	95
28	1,630	42	656	4,120	4,320	188	199	576	1,850	311	31	84
29	1,840	105	536	4,080	4,000	188	646	1,020	988	196	28	78
30	2,060	429	329	3,880	-------	180	347	458	439	138	28	76
31	2,040	-------	257	3,210	-------	188	-------	347	-------	114	24	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,060	8.9	639	39,300
November	1,810	27	291	17,300
December	1,120	130	447	27,500
January	13,400	66	3,550	218,000
February	8,160	275	3,170	182,000
March	3,610	180	741	45,600
April	646	92	191	11,400
May	2,400	100	938	57,700
June	1,850	87	513	30,500
July	3,810	114	1,710	105,000
August	316	24	53.3	3,280
September	10,200	28	1,240	73,800
The year	13,400	8.9	1,120	811,000

[a] Partly estimated.

TRINITY RIVER AT DALLAS, TEX.

LOCATION.—Chain gage at Millers Ferry Bridge, 6 miles below Commerce Street Viaduct, in Dallas, Dallas County. Zero of gage is 365.06 feet above mean sea level. Prior to July 21, 1930, a chain gage at Commerce Street Viaduct was used, with zero 368.05 feet above mean sea level.

DRAINAGE AREA.—6,040 square miles.

RECORDS AVAILABLE.—October 1898 to December 1899; July 1903 to December 1906; October 1920 to September 1932.

EXTREMES.—Maximum discharge during year, 44,000 second-feet Jan. 24 (gage height, 33.35 feet); minimum, 57 second-feet Nov. 23 (gage height, 2.82 feet).

1898–99, 1903–6, 1920–32: Maximum discharge, 75,100 second-feet Apr. 27, 1922 (gage height, 42.35 feet); minimum, 6.8 second-feet Sept. 11, 1924 (gage height, 4.27 feet).

Maximum stage known, 52.6 feet May 26, 1908. Practically no flow at times in 1917 and 1918.

REMARKS.—Records good. Discharge at this station slightly greater than at Commerce Street Viaduct. Only known diversions are for municipal uses. Low-water flow partly regulated by dams upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	232	2,290	853	358	7,470	8,020	1,730	1,130	779	710	244	218
2	373	1,900	1,300	373	5,020	7,080	1,700	500	688	581	205	192
3	343	1,420	1,060	406	3,280	4,690	1,670	406	827	1,360	168	205
4	358	1,060	925	800	2,690	5,320	1,670	328	851	1,340	138	390
5	182	803	779	4,570	3,850	6,890	1,670	286	875	3,390	114	1,940
6	126	623	688	7,880	3,700	7,340	1,670	272	1,150	2,940	126	8,480
7	92	460	710	8,020	3,540	5,420	1,380	440	1,570	6,250	114	12,500
8	168	373	710	5,780	3,470	3,860	474	2,230	1,360	8,380	92	11,500
9	244	272	666	3,890	3,390	2,080	358	4,780	1,090	8,160	86	6,870
10	286	258	581	3,320	3,320	1,150	328	4,550	1,090	7,410	413	3,260
11	286	218	480	3,540	3,320	1,030	373	3,580	1,090	5,570	358	1,900
12	373	328	460	6,050	3,320	1,730	480	2,580	2,060	4,780	328	1,700
13	469	231	406	7,950	3,320	3,280	773	2,610	2,110	4,970	244	1,540
14	156	156	343	6,340	3,430	3,430	343	2,830	1,000	5,070	218	1,300
15	108	102	358	3,930	5,730	3,390	300	2,470	756	5,020	218	950
16	306	92	358	3,980	7,610	3,350	272	3,400	560	4,780	192	644
17	655	104	389	10,300	12,500	3,280	272	5,620	500	4,460	168	442
18	500	413	480	15,800	25,400	3,240	300	3,600	358	4,210	218	343
19	581	402	460	18,200	27,200	2,470	419	1,670	314	3,930	375	314
20	843	192	540	14,800	22,000	812	1,020	1,380	300	3,430	360	314
21	1,300	114	688	10,100	14,800	581	482	1,480	244	2,500	205	286
22	1,540	77	827	9,450	11,500	560	358	1,640	218	1,860	156	272
23	2,180	71	710	27,100	11,700	602	373	1,730	218	1,800	132	244
24	2,610	114	602	41,400	14,100	460	688	1,600	389	1,700	138	258
25	2,040	97	644	32,600	14,800	460	688	1,510	314	1,540	132	272
26	1,900	92	710	21,500	13,400	460	460	1,360	358	1,300	132	272
27	2,140	108	756	16,600	10,900	480	389	1,150	389	827	138	286
28	1,900	120	779	13,100	9,290	480	389	1,860	1,590	500	138	272
29	2,140	192	733	10,400	8,600	480	1,140	3,580	2,870	343	126	258
30	2,290	290	602	9,140	------	692	1,970	4,330	1,380	314	120	258
31	2,470	------	424	8,310	------	1,620	------	2,220	------	218	208	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,610	92	942	57,900
November	2,290	71	432	25,700
December	1,300	343	646	39,709
January	41,400	358	10,500	646,000
February	27,200	2,690	9,060	521,000
March	8,020	460	2,730	168,000
April	1,970	272	791	47,100
May	5,620	272	2,160	133,000
June	2,870	218	907	54,000
July	8,380	218	3,210	197,000
August	413	86	194	11,900
September	12,500	192	1,920	114,000
The year	41,400	71	2,780	2,020,000

TRINITY RIVER NEAR OAKWOOD, TEX.

LOCATION.—Chain gage on Palestine-Oakwood Highway bridge 1½ miles above International-Great Northern Railroad bridge and 6 miles northeast of Oakwood, Leon County. Prior to July 15, 1932, gage at railroad bridge 1½ miles downstream. Present gage datum 1 foot higher than that of former gage. Zero of present gage is 175.4 feet above mean sea level (datum used by United States Army Engineers).

DRAINAGE AREA.—12,800 square miles.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 57,600 second-feet Feb. 25, 26 (gage height, 44.3 feet on former gage and about 44.7 feet on present gage); minimum, 62 second-feet Oct. 4.

1923–32: Maximum discharge, 84,400 second-feet May 23, 1930 (gage height, about 46.8 feet, on present gage); minimum, probably less than 28 second-feet in August 1925.

Maximum stage known, about 54.0 feet June 4, 1908, on present gage.

REMARKS.—Records fair. No diversions above station except for municipal uses. Flow partly regulated by reservoirs upstream. Gage-height record furnished by United States Weather Bureau.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	1,980	280	1,160	53,800	43,400	1,980	4,650	11,300	2,710	730	216
2	66	2,010	342	1,140	54,600	39,700	1,890	5,690	13,000	3,540	557	187
3	66	2,140	376	1,110	52,100	38,300	2,340	6,020	14,600	2,960	430	380
4	62	2,170	448	3,060	48,000	37,000	2,570	5,040	15,800	2,450	324	4,330
5	66	2,040	1,010	14,500	44,200	37,000	2,570	2,860	15,500	2,450	272	9,490
6	86	1,690	1,140	17,800	40,500	35,700	2,450	1,770	10,400	2,240	226	12,900
7	178	1,340	1,210	19,400	37,700	35,000	2,410	1,310	4,550	2,080	206	18,500
8	326	1,080	1,160	23,800	34,400	34,400	2,410	1,180	2,200	3,000	196	25,800
9	326	797	1,040	32,400	30,000	33,700	2,380	4,310	1,800	4,390	178	23,300
10	265	665	890	40,500	24,300	35,000	1,950	8,860	1,980	5,820	153	18,000
11	188	1,080	866	43,400	18,700	37,000	1,630	9,490	2,380	6,790	145	14,400
12	105	800	843	45,700	14,000	37,000	1,420	11,300	2,740	7,130	153	12,300
13	86	326	890	42,700	9,680	33,700	986	13,000	2,200	7,350	117	10,800
14	121	265	938	39,000	6,960	27,600	914	14,200	2,110	6,580	127	9,500
15	206	251	1,040	35,700	6,400	19,300	938	15,000	3,000	7,850	337	7,370
16	295	224	1,060	33,700	8,040	13,300	986	15,400	3,590	8,010	398	4,720
17	359	211	1,210	33,100	9,230	9,100	914	13,200	2,690	8,180	382	3,620
18	280	186	1,580	31,800	12,500	6,740	843	11,200	1,890	8,280	296	2,470
19	198	155	2,080	30,000	19,100	5,690	774	11,000	1,440	8,010	297	1,550
20	146	155	2,450	26,300	26,700	5,420	752	12,200	1,110	7,000	196	899
21	148	146	2,780	23,000	39,000	5,100	1,140	13,800	866	5,450	260	772
22	506	237	3,150	20,300	47,200	4,460	1,630	15,900	730	4,490	492	652
23	562	326	3,150	19,000	53,000	3,060	1,740	14,000	623	3,860	1,580	557
24	788	376	3,050	17,500	55,600	2,080	1,690	11,000	562	3,140	1,830	462
25	1,260	393	3,010	16,900	57,600	1,800	1,290	6,180	542	2,390	1,400	519
26	1,770	312	2,570	17,600	57,600	1,690	1,160	3,350	1,130	2,070	1,120	557
27	2,200	137	1,690	18,200	55,600	1,580	1,260	2,340	1,580	1,920	1,080	519
28	2,300	137	1,210	19,200	52,100	1,470	1,440	2,140	1,550	1,710	1,030	382
29	2,080	146	986	22,500	48,000	1,390	1,520	4,660	1,580	1,490	919	462
30	1,950	175	962	34,400	-------	1,360	2,040	8,040	1,800	1,220	566	446
31	1,950	-------	1,160	48,900	-------	2,700	-------	9,890	-------	940	312	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,300	62	613	37,700
November	2,170	137	732	43,600
December	3,150	280	1,440	88,500
January	48,900	1,110	25,000	1,540,000
February	57,600	6,400	35,100	2,020,000
March	43,400	1,360	19,100	1,170,000
April	2,570	752	1,600	95,200
May	15,900	1,180	8,350	513,000
June	15,800	542	4,170	248,000
July	8,280	940	4,400	271,000
August	1,830	117	526	32,300
September	25,800	187	6,200	369,000
The year	57,600	62	8,850	6,430,000

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 1932.

EXTREMES.—Maximum discharge during year, 56,300 second-feet Feb. 22 (gage height, 38.8 feet); minimum, 70 second-feet Oct. 1–4.

1903–6, 1923–32: Maximum discharge, 76,100 second-feet June 1, 1929 (gage height, 46.10 feet); minimum, 70 second-feet Aug. 20–26, Sept. 8-13, 1925, and Sept. 29 to Oct. 4, 1931.

Maximum stage known, 49.7 feet June 11, 1908 (present datum).

REMARKS.—Daily records poor, monthly records fair. No diversions except for municipal uses. Gage-height record furnished by United States Weather Bureau.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	2,460	505	1,540	27,800	44,000	6,260	2,840	8,010	1,950	1,600	*940
2	70	2,160	785	1,950	27,400	46,200	7,650	3,160	9,250	2,160	1,300	695
3	70	2,020	1,180	1,740	26,700	49,000	5,330	4,310	10,700	2,840	1,020	540
4	70	2,060	1,360	3,340	26,900	50,600	3,970	5,920	11,500	3,560	985	505
5	85	2,380	875	19,000	29,000	52,400	3,970	6,520	12,600	3,640	785	830
6	190	2,540	615	35,300	30,600	53,400	4,140	5,920	13,300	3,160	655	3,860
7	250	2,310	1,020	41,600	32,300	53,400	3,970	4,560	13,600	2,920	410	11,900
8	230	2,020	2,420	39,700	34,300	52,400	3,880	2,920	11,700	2,840	350	16,100
9	210	1,740	4,310	35,800	37,400	50,600	3,640	2,090	7,650	2,540	350	17,900
10	230	1,300	4,060	30,000	38,000	47,800	3,480	1,880	4,220	3,240		18,900
11	470	1,020	3,160	27,800	38,000	44,200	3,240	2,740	2,600	4,480		19,800
12	615	830	2,920	30,400	36,900	41,400	3,080	6,480	2,540	5,840	*510	20,400
13	505	695	3,800	34,900	34,000	39,900	2,680	9,050	2,920	6,860		20,500
14	470	695	4,820	38,300	31,900	36,900	2,160	10,500	3,320	7,380		19,300
15	380	925	3,970	37,600	28,000	33,200	2,020	11,500	3,080	7,740	380	16,900
16	250	785	3,480	36,900	22,800	31,400	2,160	12,600	2,760	8,010	350	13,500
17	190	655	3,880	41,600	20,600	30,400	1,670	13,500	3,080	8,290	325	10,100
18	150	470	5,330	42,800	15,700	28,800	1,600	14,600	3,800	8,480	350	6,390
19	250	380	7,180	41,400	23,000	25,200	1,600	14,600	4,310	8,670	505	3,560
20	325	350	11,100	39,200	37,200	19,500	1,540	13,400	2,610	8,860	540	2,160
21	325	325	12,500	36,700	53,200	11,000	1,420	12,400	2,020	8,860	470	1,540
22	300	275	9,850	36,500	56,000	8,200	1,360	12,200	1,810	8,380	410	1,240
23	410	300	7,650	41,600	54,200	7,030	1,420	12,200	2,540	7,470	350	1,080
24	440	325	7,470	38,300	50,600	6,180	2,020	12,800	1,240	5,760	380	975
25	830	300	6,690	41,200	45,200	5,160	2,380	13,200	1,300	4,900	975	875
26	975	410	6,860	49,000	41,400	4,140	2,240	11,800	1,300	4,060	1,880	785
27	1,130	410	5,840	47,500	40,200	3,480	2,460	8,580	1,130	3,240	1,740	695
28	1,480	350	4,400	43,800	41,800	3,160	2,020	5,420	1,420	2,840	1,360	615
29	2,160	325	2,840	37,600	41,600	2,920	1,950	3,640	2,020	2,380	1,240	615
30	2,760	325	2,240	32,300	-------	3,080	2,240	3,080	2,090	2,090	1,300	695
31	2,680	-------	1,810	28,800	-------	4,650	-------	4,540	-------	1,810	1,180	-------

Month	Maximum	Minimum	Mean	Run-off in inches
October	2,760	70	599	36,800
November	2,540	275	1,040	61,900
December	12,500	505	4,350	267,000
January	49,000	1,540	32,700	2,010,000
February	56,000	15,700	35,300	2,030,000
March	53,400	2,920	28,700	1,760,000
April	7,650	1,360	2,920	174,000
May	14,600	1,880	8,030	494,000
June	13,600	1,130	5,010	298,000
July	8,860	1,810	5,010	308,000
August	1,880	----------	762	46,900
September	20,500	505	7,130	424,000
The year	56,000	70	10,900	7,910,000

* Estimated.

TRINITY RIVER AT ROMAYOR, TEX.

LOCATION.—Chain gage on Gulf, Colorado & Santa Fe Railway bridge a quarter of a mile west of Romayor, Liberty County. Gage readings indicate distance from base of rail to water surface. Zero of gage (base of rail) is 89.36 feet above mean sea level (Texas Reclamation Department datum).

DRAINAGE AREA.—17,200 square miles.

RECORDS AVAILABLE.—May 1924 to September 1932.

EXTREMES.—Maximum discharge during year, 50,800 second-feet Feb. 25 (gage height, −20.5 feet); minimum not determined.

1924–32: 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. Small diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	195	2,150	960	2,580	40,600	43,400	7,500	2,150	3,700	1,730	2,270	1,340
2	195	2,210	1,240	2,390	37,000	42,700	7,600	2,390	5,400	1,730	2,090	1,290
3	195	2,150	1,910	2,270	34,200	43,400	7,900	2,650	8,100	2,030	1,850	1,140
4	195	2,090	2,090	2,210	31,700	44,800	7,300	2,930	11,500	2,650	1,550	960
5	170	2,090	1,850	8,740	30,900	45,500	6,300	3,950	11,400	3,210	1,440	870
6	170	2,270	1,790	20,100	28,600	46,200	4,500	5,740	11,600	3,630	1,240	830
7	150	2,270	1,790	29,100	29,100	46,900	4,500	6,010	12,300	3,350	1,140	1,710
8	150	2,210	3,160	33,100	29,900	47,600	4,460	5,300	12,700	3,140	1,000	6,990
9	140	2,150	5,380	33,300	30,900	48,300	4,300	3,910	12,100	3,000	870	12,600
10	146	2,090	5,290	34,500	32,000	48,600	3,910	3,000	9,330	2,930	830	14,900
11		1,910	4,780	33,100	32,000	48,300	3,840	2,510	6,500	2,650	790	16,300
12		1,730	6,900	33,100	33,100	47,600	3,700	2,270	4,500	3,490	755	17,200
13		1,550	7,500	34,800	33,600	46,600	3,630	3,870	3,420	4,700	720	18,000
14	340	1,140	6,500	36,000	33,600	44,100	3,280	6,680	3,210	5,560	1,510	18,400
15		1,140	5,740	37,000	33,600	42,700	2,790	8,340	3,420	6,400	3,490	18,000
16		1,100	5,560	37,000	32,500	40,000	2,450	10,900	3,350	6,800	2,690	16,300
17	375	1,050	6,300	37,300	29,400	37,300	2,150	11,600	3,210	7,100	1,440	14,200
18	375	1,440	7,500	38,000	28,400	35,100	2,030	13,100	3,350	7,500	1,190	11,800
19	345	1,610	9,220	40,300	25,200	33,100	1,970	13,600	3,490	7,700	960	8,780
20	320	1,790	12,700	41,300	27,400	31,700	1,910	13,900	3,630	7,900	755	6,100
21	295	1,550	13,600	40,600	36,400	24,200	1,910	13,600	3,350	8,120	685	5,980
22	405	1,140	14,000	40,300	42,000	16,900	1,910	12,900	2,790	8,230	685	3,260
23	465	790	13,000	40,000	47,600	11,600	1,790	11,800	2,270	8,230	685	1,910
24	585	830	11,600	40,600	50,500	9,000	1,670	10,600	2,030	7,200	685	1,670
25	585	1,050	9,550	41,300	50,800	7,700	1,910	10,600	2,030	5,920	650	1,390
26	585	1,240	8,340	43,400	50,500	7,300	2,330	12,300	1,970	4,700	755	1,240
27	585	1,190	7,400	45,560	49,000	5,560	2,650	11,600	1,910	3,770	950	1,100
28	1,000	1,050	6,300	46,600	47,200	4,460	2,790	10,400	1,790	3,140	1,720	1,240
29	1,240	1,340	5,290	47,600	44,800	3,910	2,650	7,300	1,730	3,000	1,850	1,240
30	1,440	1,140	4,620	46,900	-------	3,490	2,390	4,500	1,730	2,720	1,610	1,050
31	2,030	-------	3,490	44,100	-------	5,380	-------	3,700	-------	2,510	1,440	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,030	----------	464	28,500
November	2,270	790	1,580	94,000
December	14,000	960	6,300	387,000
January	47,600	2,210	32,700	2,010,000
February	50,800	25,200	36,300	2,090,000
March	48,600	3,490	31,100	1,910,000
April	7,900	1,670	3,600	214,000
May	13,900	2,150	7,550	464,000
June	12,700	1,730	5,260	313,000
July	8,230	1,730	4,670	287,000
August	3,490	650	1,300	79,900
September	18,400	830	6,930	412,000
The year	50,800	----------	11,400	8,290,000

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 3 miles southwest of Tarrant County Courthouse, in Fort Worth. Zero of gage is 532.83 feet above mean sea level.

DRAINAGE AREA.—522 square miles.

RECORDS AVAILABLE.—March 1924 to September 1932.

EXTREMES.—Maximum stage during year, 20.08 feet Sept. 5 (discharge not determined); no flow at times.

1924–32: Maximum stage, that of Sept. 5, 1932 (discharge not determined); no flow at times.

REMARKS.—Records below 2,400 second-feet good, above this stage poor. Practically all low flow diverted 800 feet below gage by Texas & Pacific Railway Co. Low flow regulated by dam just above gage.

Discharge, in second-feet, 1931–32

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	245	302	76	61	33	48	5.0	0
2	0	0	0	272	272	73	48	27	43	5.0	1.4
3	0	0	3.7	235	322	67	43	25	451	4.2	7.5
4	0	0	246	180	272	64	40	25	1,000	4.2	10
5	0	0	767	176	506	64	38	23	177	3.6	6,740
6	0	0	199	172	272	61	38	415	1,160	3.6	368
7	0	0	67	160	220	58	293	57	522	3.6	133
8	0	0	40	140	196	53	236	50	171	3.0	94
9	0	0	33	137	180	53	209	61	102	20	53
10	0	0	31	140	176	53	201	85	82	36	40
11	1.0	0	72	168	176	48	105	65	70	15	31
12	0	0	257	126	176	48	61	38	64	6.0	31
13	0	0	85		160	53	50	27	56	4.2	27
14	0	0	61		160	48	46	25	50	2.5	25
15	0	0	48	1,000	152	43	156	23	46	2.5	23
16	0	0	4,140		144	40	631	21	43	2.0	19
17	0	0	1,660	2,130	130	40	180	17	40	2.0	19
18	0	0	414	2,240	123	43	76	17	38	14	17
19	0	0	290	1,400	116	53	56	15	36	2.5	17
20	.6	0	235	1,030	116	56	48	15	43	1.6	17
21	0	0	235	910	106	48	46	15	136	2.5	19
22	0	7.1	7,420	1,820	92	40	40	13	56	2.5	21
23	0	19.0	2,330	1,220	95	54	46	17	*50	2.0	25
24	0	4.2	726	732	95	53	38	29	*40	1.2	31
25	0	2.0	1,030	588	92	38	33	21	*38	.9	25
26	0	.6	988	484	88	33	31	15	*29	.4	21
27	0	.1	532	420	79	31	29	1,360	*23	0	19
28	0	0	428	378	76	68	25	696	*17	0	19
29	0	0	343	343	76	95	68	102	*11	0	17
30	0	0	272	------	79	73	98	56	7.5	0	15
31	0	0	250	------	85	------	53	------	7.5	0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.0	0	0.05	3.1
December	19	0	1.06	65
January	7,420	0	747	45,900
February	------	------	684	39,300
March	506	76	166	10,200
April	95	31	54.2	3,230
May	631	25	101	6,210
June	1,360	13	113	6,720
July	1,160	7.5	150	9,220
August	36	0	4.84	298
September	6,740	0	263	15,600
The year	7,420	0	188	137,000

* Estimated.

NOTE.—No flow during November.

MOUNTAIN CREEK NEAR GRAND PRAIRIE, TEX.

LOCATION.—Water-stage recorder at Grand Prairie-Duncanville highway bridge 3½ miles southeast of Grand Prairie, Dallas County.
DRAINAGE AREA.—267 square miles.
RECORDS AVAILABLE.—March 1925 to September 1932.
EXTREMES.—Maximum discharge during year, 6,500 second-feet Jan. 23 (gage height, 18.63 feet); no flow at times.
1925–32: 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 at times.
REMARKS.—Records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	9.2	0.2	35	45	18	54	47	3.0	0	0
2	0	2.3	.1	39	42	15	30	36	51	0	0
3	0	2.9	1.6	45	48	13	20	27	45	0	0
4	0	1.1	511	40	63	12	15	22	36	0	0
5	0	.5	1,500	25	2,320	12	12	18	12	0	1,260
6	0	.1	418	21	486	11	12	15	114	0	1,390
7	0	0	28	20	90	12	73	13	1,460	0	1,360
8	0	0	14	20	68	10	555	11	122	0	113
9	0	0	7.9	17	55	10	295	35	24	0	15
10	0	0	5.5	17	50	9.5	66	46	14	0	7.3
11	0	0	491	20	47	8.6	56	19	9.1	0	4.6
12	0	0	2,500	26	47	8.2	37	12	6.8	0	3.2
13	0	0	364	21	41	8.0	26	9.2	6.0	0	2.5
14	0	0	38	151	39	7.7	19	7.3	4.8	0	1.8
15	19	0	24	776	37	7.4	48	5.7		0	1.4
16	a 3.4	2.0	a 800	1,400	34	7.4	1,090	4.4		0	.9
17	a .7	6.9	a 414	2,920	32	7.4	506	3.3		0	a .8
18	a 0	a 3.5	76	948	28	7.7	42	2.6	2.3	0	a .8
19	a 0	a 2.1	29	2,410	25	502	29	1.8		3.1	a .7
20	0	19	22	691	24	200	19	1.2		4.1	a .7
21	0	12	20	374	23	28	18	1.0		.9	a .7
22	0	4.6	3,160	811	19	17	22	.8	2.9	.3	a .7
23	28	2.4	4,400	889	18	39	16	1.0	1.7	.1	a .6
24	23	1.5	596	160	18	141	a 11	1.6	1.1	0	a .6
25	2.5	1.0	184	101	18	26	a 9.0	2.3	.8	0	a .6
26	.8	.7	850	79	18	12	7.7	2.5	.6	0	a .6
27	0	.6	240	65	18	8.4	888	3.0	.4	0	a .5
28	0	.4	81	56	16	73	803	68	.2	0	a .5
29	0	.3	67	50	16	1,330	a 1,850	23	.2	0	a .5
30	0	.4	53	-------	17	688	1,160	6.2	.1	0	a .4
31	0	.3	41	-------	18	---------	81	-------	0	0	--------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	28	0	2.50	154
December	19	0	2.38	146
January	4,400	.1	546	33,600
February	2,920	17	422	24,300
March	2,320	16	123	7,560
April	1,330	7.4	108	6,430
May	1,850	7.7	254	15,600
June	68	.8	14.9	887
July	1,460	0	62.3	3,830
August	4.1	0	.27	17
September	1,390	0	139	8,270
The year	4,400	0	139	101,000

a Estimated.
NOTE.—No flow during November.

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 1932.
EXTREMES.—Maximum discharge during year, 30,600 second-feet Jan. 23 (gage height, 11.30 feet); minimum, 19 second-feet Aug. 7 (gage height, 0.34 foot).
1923–32: Maximum discharge not determined; maximum gage height, 12.75 feet Dec. 14, 1923; no flow at times.
REMARKS.—Records good. No diversions above station. Garza Dam, 20 miles upstream, regulates flow at low stages and partly regulates flow at high stages.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	254	314	121	1,400	3,400	1,460	149	208	208	82	186
2	418	190	170	110	388	889	1,460	133	199	866	76	186
3	182	79	213	121	418	2,560	1,460	118	145	421	76	186
4	104	76	149	1,050	2,700	3,400	1,460	118	114	2,370	76	282
5	79	76	153	6,230	3,260	3,400	1,460	114	110	1,110	76	2,240
6	76	76	114	5,300	3,260	3,260	1,290	110	110	2,580	32	1,730
7	227	76	100	3,690	3,260	3,260	189	262	110	5,280	19	335
8	245	76	82	2,870	3,130	664	149	2,350	110	5,280	32	245
9	303	76	72	2,220	3,130	282	133	2,610	178	4,460	471	204
10	303	46	68	2,090	3,130	282	165	3,260	282	2,870	335	195
11	282	354	125	2,220	3,130	282	190	1,830	282	2,090	303	186
12	447	150	137	3,850	3,130	2,760	190	1,280	1,870	2,090	186	186
13	85	82	125	3,400	3,130	3,130	190	1,170	571	1,960	186	186
14	32	65	125	2,870	3,130	3,130	161	677	363	1,830	186	186
15	395	46	121	1,700	3,810	3,130	141	506	199	1,830	186	133
16	667	43	149	3,920	8,220	3,130	137	1,780	145	1,830	145	125
17	394	330	282	11,700	21,600	3,130	149	2,130	129	1,830	145	118
18	506	372	259	14,000	15,200	3,000	149	713	118	1,830	145	118
19	388	49	324	7,040	11,100	634	170	178	118	1,830	186	178
20	213	32	447	3,060	6,240	190	149	129	118	1,370	153	182
21	137	32	506	1,580	4,620	190	149	118	129	170	145	182
22	110	32	476	12,900	5,390	190	149	118	133	141	114	182
23	695	34	308	27,200	10,200	190	236	118	133	141	118	186
24	476	43	250	15,800	8,400	170	276	118	157	141	118	190
25	492	46	213	8,800	6,400	190	157	100	149	141	118	199
26	830	90	174	7,850	4,620	195	149	110	149	96	118	195
27	487	55	137	5,640	3,820	199	141	110	227	96	118	174
28	486	37	133	4,300	3,680	199	129	125	1,270	90	125	153
29	388	104	133	3,980	3,540	199	190	1,180	852	82	125	153
30	367	100	129	3,540	------	1,170	149	706	335	82	213	153
31	356	------	125	3,400	------	1,460	------	287	------	82	245	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	830	32	342	21,000
November	372	32	104	6,190
December	506	68	197	12,100
January	27,200	110	5,570	342,000
February	21,600	388	5,290	304,000
March	3,400	170	1,560	95,900
April	1,460	129	419	24,900
May	3,260	100	732	45,000
June	1,870	110	300	17,900
July	5,280	82	1,460	89,800
August	471	19	150	9,220
September	2,240	118	305	18,100
The year	27,200	19	1,360	986,000

EAST FORK OF TRINITY RIVER NEAR ROCKWALL, TEX.

LOCATION.—Chain gage on Dallas-Rockwall highway bridge 3 miles southwest of Rockwall, Rockwall County. Zero of gage is 404.2 feet above mean sea level.
DRAINAGE AREA.—831 square miles.
RECORDS AVAILABLE.—November 1923 to September 1932.
EXTREMES.—Maximum discharge during year, 42,300 second-feet Jan. 23 (gage height, 20.9 feet); no flow Oct. 1–14 and Nov. 8–30.
1923–32: Maximum discharge, that of Jan. 23, 1932; no flow at times.
Maximum stage known, about 25 feet in spring of 1922.
REMARKS.—Records good below and fair above 2,000 second-feet. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.7	0.7	17	493	473	158	234	174	52	13	15
2	0	.5	15	17	483	433	227	119	103	66	11	13
3	0	.4	75	17	546	413	109	75	70	449	9.0	12
4	0	.3	51	292	557	423	103	60	52	629	8.1	74
5	0	.3	22	2,090	463	1,390	97	50	50	695	8.1	780
6	0	.2	12	2,900	363	1,180	97	46	46	503	7.6	1,330
7	0	.1	8.8	5,160	333	454	91	160	42	1,220	6.2	550
8	0	0	7.4	2,570	324	315	91	761	40	11,700	5.5	124
9	0	0	5.8	590	297	270	85	1,280	48	10,200	5.0	60
10	0	0	4.3	226	270	234	80	1,040	36	3,020	84	32
11	0	0	4.1	1,110	288	225	75	448	88	511	38	26
12	0	0	4.9	4,500	324	234	80	179	182	225	21	20
13	0	0	5.3	4,500	315	225	80	133	739	158	13	16
14	0	0	4.0	4,760	317	217	70	115	239	127	8.5	14
15	75	0	3.5	2,050	1,030	209	70	103	70	109	6.7	12
16	266	0	3.1	1,010	2,000	209	65	796	46	91	5.2	24
17	46	0	42	6,240	16,900	193	62	1,070	36	80	3.8	38
18	13	0	139	14,800	15,500	179	62	409	28	70	318	21
19	5.2	0	124	5,860	5,270	172	75	151	22	60	1,280	16
20	3.0	0	91	2,440	2,600	158	75	109	19	52	2,050	10
21	1.8	0	117	1,130	1,960	151	85	91	16	48	2,360	7.6
22	1.3	0	180	3,990	1,710	145	75	85	13	46	728	6.2
23	30	0	124	33,500	2,250	133	65	80	12	46	85	5.6
24	155	0	80	13,200	3,430	127	80	70	12	42	48	5.6
25	74	0	52	4,610	3,390	127	149	62	13	38	40	4.9
26	21	0	38	2,480	1,600	127	111	55	23	36	32	4.9
27	11	0	30	1,960	865	144	65	60	82	28	27	4.9
28	5.6	0	26	2,600	616	317	52	108	499	24	24	5.3
29	3.2	0	23	1,700	524	374	125	578	515	20	21	5.9
30	2.2	0	21	910	-------	175	302	819	117	16	19	6.6
31	1.3	-------	19	606	-------	139	-------	496	-------	14	17	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	266	0	23.1	1,420
November	.7	0	.08	4.8
December	180	.7	43	2,640
January	33,500	17	4,120	253,000
February	16,900	270	2,240	129,000
March	1,390	127	309	19,000
April	302	52	95.4	5,680
May	1,280	46	317	19,500
June	739	12	114	6,780
July	11,700	14	980	60,300
August	2,360	3.8	236	14,500
September	1,330	4.9	108	6,430
The year	33,500	0	715	518,000

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 1932.

EXTREMES.—Maximum discharge during year, 17,400 second-feet Feb. 23 (gage height, 14.82 feet); minimum, 18 second-feet Oct. 21.

1928–32: Maximum discharge, about 111,000 second-feet May 31, 1929 (gage height, 32.25 feet); minimum, 14 second-feet Sept. 8–10, 1931.

A stage of about 35 feet was reached in 1920.

REMARKS.—Daily records poor; monthly records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	23	50	188	2,820	1,040	1,270	193	100	79	33	54
2	23	28	91	131	1,780	880	1,370	217	93	89	33	60
3	23	25	118	91	1,170	3,660	1,170	242	86	76	36	66
4	25	30	106	133	880	8,840	610	211	82	89	47	66
5	23	25	100	1,700	670	7,420	394	182	79	66	38	60
6	33	30	142	6,140	551	7,010	328	158	72	72	41	51
7	25	28	193	4,940	522	4,550	308	144	72	66	47	63
8	25	28	865	5,200	443	3,540	252	135	69	63	58	72
9	23	28	1,470	4,940	418	2,820	239	122	66	57	47	63
10	21	30	960	3,980	350	2,220	208	247	89	54	47	60
11	23	33	700	1,670	371	1,470	208	484	89	63	44	60
12	23	28	1,420	2,450	328	840	196	458	132	54	41	60
13	25	30	2,220	6,320	371	735	180	1,100	301	51	44	57
14	25	36	1,580	5,480	880	640	175	393	479	51	171	51
15	29	30	810	5,480	700	551	185	308	219	48	406	48
16	29	33	580	5,200	580	522	175	308	120	45	122	45
17	29	30	443	4,160	551	468	175	226	100	43	79	48
18	25	33	779	3,540	1,420	443	170	696	89	45	60	60
19	25	36	1,570	3,180	1,270	443	158	1,670	82	48	57	51
20	25	66	1,790	2,580	1,500	418	135	1,890	72	51	51	48
21	18	178	2,000	2,340	6,610	394	135	1,410	63	109	54	45
22	25	124	1,670	2,460	14,200	328	140	411	54	147	51	43
23	47	163	1,570	3,360	17,400	328	144	226	54	73	45	45
24	33	632	1,670	5,150	14,300	252	144	163	54	47	51	45
25	41	1,000	1,570	7,190	8,980	246	140	168	57	52	51	48
26	38	697	1,370	9,460	5,270	270	135	131	69	47	51	51
27	33	267	1,170	9,380	3,240	252	135	116	141	47	51	63
28	30	144	1,220	8,720	2,110	239	140	116	182	47	45	66
29	33	74	1,190	10,800	1,470	220	178	116	112	41	45	79
30	30	56	453	9,500	------	246	211	124	86	38	51	66
31	28	------	288	5,180	------	667	------	112	------	38	51	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	47	18	27.7	1,700
November	1,000	23	132	7,860
December	2,220	50	973	59,800
January	10,800	91	4,550	280,000
February	17,400	328	3,140	181,000
March	8,840	220	1,680	103,000
April	1,370	135	314	18,700
May	1,890	112	402	24,700
June	479	54	112	6,660
July	147	38	61.2	3,760
August	406	33	66.1	4,060
September	79	43	56.5	3,360
The year	17,400	18	956	695,009

BRAZOS RIVER BASIN

DOUBLE MOUNTAIN FORK OF BRAZOS RIVER NEAR ASPERMONT, TEX.

LOCATION.—Chain gage on Aspermont-Hamlin highway bridge 11 miles south of Aspermont, Stonewall County.

DRAINAGE AREA.—7,980 square miles, about 6,470 of which is probably noncontributing.

RECORDS AVAILABLE.—December 1923 to September 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), 26,400 second-feet Sept. 6 (gage height, 13.0 feet); no flow at times.

1924–32: Maximum discharge (determined by slope-area method), about 52,000 second-feet (revised) Oct. 15, 1926 (gage height, 18.14 feet); no flow at times.

REMARKS.—Daily records poor; monthly records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	7.9	27	3.9	14	32	0.2	109	100	278	7.6	4,290
2	0	5.9	20	3.2	12	26	.2	44	39	724	4.4	1,420
3	0	5.2	16	1.8	10	21	0	29	21	719	192	
4	0	3.9	14	120	8.8	15	0	19	11	2,900	123	[a]273
5	0	1.6	16	396	6.2	12	0	8.3	7.6	1,070	33	
6	0	.6	17	235	4.9	12	0	1.2	4.6	1,790	25	
7	40	.5	20	116	3.9	12	0	19	161	950	18	
8	101	.4	18	58	3.2	12	0	105	85	620	12	[a]4,990
9	12	.4	17	44	2.9	10	0	125	47	282	375	
10	0	.3	14	35	2.7	10	0	60	32	105	250	
11	142	.4	12	28	2.5	8.6	0	31	658	74	61	
12	1,000	.3	10	20	1.6	7.9	0	17	318	45	21	
13	241	.1	9.2	16	1.1	7.2	0	10	240	26	17	
14	1,540	1.1	8.8	14	1.6	7.2	0	6.5	160	20	13	
15	806	342	7.9	324	14	5.8	0	649	90	15	618	[a]1,350
16	151	2,170	8.8	298	22	5.4	0	2,650	58	10	1,290	
17	52	1,360	9.6	50	21	5.1	0	566	40	8.6	357	
18	[a]21	456	11	31	23	4.4	1.8	280	26	7.6	160	
19	[a]14	285	13	26	25	3.8	2.0	160	17	6.5	66	
20	[a]14	100	13	22	28	2.6	2.4	57	125	4.4	36	220
21	466	45	14	19	29	2.4	1.8	32	1,350	16	32	140
22	1,360	27	12	18	92	2.2	.8	26	2,610	530	30	100
23	1,560	22	11	20	1,650	1.8	318	20	1,320	906	25	62
24	780	18	9.6	20	657	1.4	58	259	615	230	21	132
25	489	15	8.8	19	265	1.2	29	503	225	125	18	250
26	197	14	20	19	155	.7	21	290	941	63	15	196
27	60	14	16	18	74	.6	82	215	3,290	38	14	128
28	42	19	12	17	46	.5	2,260	145	2,460	32	11	104
29	28	25	9.2	16	39	.3	1,470	700	815	26	9.5	340
30	14	30	6.6	15	------	.2	304	220	230	20	748	257
31	10	------	5.5	14	------	.2	------	150	------	14	8,650	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,560	0	295	18,100
November	2,170	.1	166	9,880
December	27	5.5	13.1	806
January	396	1.8	65.7	4,040
February	1,650	1.1	111	6,380
March	32	.2	7.47	459
April	2,260	0	152	9,040
May	2,650	1.2	242	14,900
June	3,290	4.6	537	32,000
July	2,900	4.4	376	23,100
August	8,650	4.4	428	26,300
September	----------	62	1,520	90,400
The year	----------	0	324	235,000

[a] Estimated.

BRAZOS RIVER AT SEYMOUR, TEX.

LOCATION.—Water-stage recorder at highway bridge three quarters of a mile above Wichita Valley Railway bridge and 1 mile southwest of courthouse in Seymour, Baylor County. Prior to July 7, 1932, chain gage at same location was used with same datum.

DRAINAGE AREA.—14,500 square miles, about 9,240 of which is probably non-contributing.

RECORDS AVAILABLE.—November 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 61,000 second-feet Sept. 7 (gage height, 11.40 feet); no flow at times.

1924–32: Maximum discharge (determined by slope-area method), 79,600 second-feet June 14, 1930 (gage height, 13.0 feet); no flow at times during each year.

Maximum stage known, about 21.0 feet, occurred prior to 1916, but exact date is not known.

REMARKS.—Daily records poor; monthly records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	37	180	67	40	1,470	5.0	1,280	681			29,400
2	0	31	190	63	37	808	5.5	819	338			6,850
3	0	31	152	62	44	81	2.0	530	156			2,890
4	0	27	140	532	42	56	3.2	252	83	2,000	215	1,870
5	0	26	117	871	39	a 54	5.0	136	56			a 1,250
6	0	27	108	564	36	a 54	.8	72	205			a 944
7	0	22	86	490	34	a 53	0	63	285	a 5,900	a 38	36,400
8	0	23	90	396	33	a 51	0	55	165	3,440		39,800
9	0	18	81	345	30	a 50	0	175	111	a 1,720	31	7,340
10	0	24	75	285	27	a 48	0	216	345	a 819	23	2,420
11	0	35	81	234	27	a 48	0	354	195	a 460	18	a 1,410
12	862	27	72	195	29	a 47	0	240	120	a 285	23	a 972
13	2,560	29	67	136	27	48	0	136		a 165	29	a 739
14	1,690	24	65	90	27	45	0	70	1,190	120	21	a 600
15	2,520	19	59	70	38	36	0	55	588	99	40	a 510
16	982	22	55	195	38	34	0	83	175	86	529	a 441
17	460	8,540	68	144	44	34	0	3,030	55	75	4,420	393
18	216	5,640	81	136	54	34	0	1,240	51	65	1,580	334
19	86	2,320	90	170	55	29	0	753	32	60	860	a 280
20	56	1,110	152	152	70	28	11	396	30	55	553	a 265
21	2,570	413	170	120	169	24	12	222	34	1,690	292	a 245
22	4,100	345	144	120	482	24	36	132	2,690	4,700	205	231
23	6,880	222	105	86	1,090	25	53	77	7,900	2,780	132	226
24	2,740	170	105	77	831	18	1,760	140	5,160	2,670	83	218
25	1,000	156	108	90	717	16	1,840	79	1,450	1,680	77	218
26	554	148	102	75	717	14	308	90	778	1,130	68	213
27	300	128	81	60	634	14	111	599	599		54	218
28	258	114	77	54	299	13	160	819	3,680		48	218
29	105	148	102	55	228	13	3,960	520	3,840	215	43	270
30	68	170	81	48	-------	12	3,340	657	1,720		37	270
31	50	-------	59	45	-------	10	---------	819	-------		8,720	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,880	0	905	55,600
November	8,540	18	668	39,700
December	190	55	101	6,210
January	871	45	194	11,900
February	1,090	27	205	11,800
March	1,470	10	106	6,520
April	3,960	0	387	23,000
May	3,030	55	455	28,000
June	7,900	30	1,090	64,900
July	5,900	55	1,320	81,200
August	8,720	18	627	38,600
September	39,800	213	4,580	273,000
The year	39,800	0	882	640,000

a Partly estimated.

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, about 9,240 of which is probably non-contributing.

RECORDS AVAILABLE.—January 1924 to September 1932.

EXTREMES.—Maximum discharge during year, 59,000 second-feet Sept. 9 (gage height, 19.40 feet); no flow Oct. 1–12.

1924–32: Maximum discharge, 95,600 second-feet June 16, 1930 (gage height, 28.43 feet); no flow at times.

REMARKS.—Daily records fair; monthly records good. No large diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	698	520	396	870	965	44	740	6,440	10,800	580	647
2	0	558	565	344	782	782	40	3,840	3,360	10,800	449	18,000
3	0	449	1,080	286	618	655	37	3,570	2,240	30,900	370	24,100
4	0	370	1,400	328	505	572	33	2,140	1,580	32,400	312	10,400
5	0	317	782	402	428	498	33	1,180	1,070	18,800	256	8,680
6	0	265	463	782	365	435	30	1,070	2,140	20,700	206	13,300
7	0	222	409	1,650	296	383	27	7,240	3,780	20,200	177	18,800
8	0	189	376	1,650	256	344	25	16,200	4,020	15,300	185	29,400
9	0	165	349	1,300	214	312	22	11,100	2,060	10,000	275	54,700
10	0	142	322	1,120	177	281	19	7,140	3,470	7,140	226	40,600
11	0	122	307	1,020	150	261	17	8,420	2,330	5,460	158	23,100
12	0	109	296	782	135	244	15	6,180	3,360	3,570	122	15,300
13	1,170	103	275	655	129	226	14	2,920	3,140	2,140	106	23,100
14	9,290	98	265	580	129	214	14	1,650	1,580	1,650	92	22,200
15	12,500	92	256	558	214	197	12	2,710	1,240	1,300	84	12,100
16	15,800	87	248	1,850	469	185	12	4,500	1,180	1,070	98	4,740
17	8,720	81	248	3,230	4,400	177	10	2,060	1,120	915	106	4,020
18	5,460	103	286	1,440	4,530	169	281	1,300	1,070	740	89	3,360
19	3,470	4,570	307	1,120	2,320	158	618	965	870	698	384	2,920
20	2,060	4,470	409	825	1,240	146	370	3,100	618	655	1,880	2,420
21	1,370	4,500	2,690	618	1,020	135	322	2,330	456	852	1,650	2,060
22	1,020	4,020	5,270	1,210	1,370	126	470	1,880	684	3,140	1,440	1,800
23	7,980	3,360	4,280	3,610	1,720	112	402	1,370	3,540	2,400	915	2,140
24	14,500	2,520	2,070	1,580	3,500	103	244	1,180	5,940	965	740	1,970
25	15,100	1,800	1,070	1,880	3,360	98	239	915	5,940	1,370	618	2,920
26	9,760	1,240	782	1,720	2,330	89	162	740	3,780	3,570	390	2,140
27	8,160	915	655	1,580	2,240	84	126	1,490	3,780	2,920	270	1,650
28	7,640	740	580	1,440	1,650	78	1,220	2,330	7,380	1,580	214	1,650
29	3,960	558	550	1,300	1,300	68	2,100	1,800	12,600	1,240	185	1,970
30	2,060	491	505	1,180	-------	58	740	1,970	14,900	965	154	1,720
31	1,180	-------	463	1,020	-------	53	-------	6,390	-------	740	126	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	15,800	0	4,230	260,000
November	4,740	81	1,120	66,600
December	5,270	248	906	55,700
January	3,610	286	1,210	74,400
February	4,530	129	1,270	73,000
March	965	53	265	16,300
April	2,100	10	257	15,300
May	16,200	740	3,560	219,000
June	14,900	456	3,520	209,000
July	32,400	655	6,930	426,000
August	1,880	84	415	25,500
September	54,700	647	11,700	696,000
The year	54,700	0	2,950	2,140,000

BRAZOS RIVER NEAR GLEN ROSE, TEX.

LOCATION.—Water-stage recorder a quarter of a mile above Glen Rose-Cleburne highway bridge and 4 miles northeast of Glen Rose, Somervell County.

DRAINAGE AREA.—24,800 square miles, about 9,240 of which is probably non-contributing.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 49,300 second-feet Sept. 10 (gage height, 16.37 feet); no flow Oct. 1–11.

1923–32: Maximum discharge, 68,300 second-feet June 17, 1930 (gage height, 19.60 feet); no flow Sept. 7–9, 1924; Sept. 13 to Oct. 11, 1931.

REMARKS.—Records for period Oct. 1 to Apr. 30, good; May 1, to Sept. 30, fair; estimated periods poor. No large diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2,270	978	562	1,010	3,130	172	2,610	4,840	14,400	1,140	322
2	0	1,580	886	487	908	2,340	163	1,920	6,380	9,020	908	347
3	0	1,110	809	469	831	1,870	150	1,310	4,280	20,900	743	22,500
4	0	853	853	728	732	1,630	145	4,150	3,340	32,900	600	16,700
5	0	721	688	1,490	622	1,570	141	3,910	2,570	[a]22,500	505	8,630
6	0	590	1,270	1,490	562	1,140	137	2,740	1,910	[a]17,400	451	12,700
7	0	514	1,580	1,460	524	966	134	2,180	4,890	[a]15,500	415	19,400
8	0	433	1,040	1,100	487	853	130	8,710	4,280	[a]16,400	356	21,100
9	0	381	754	897	433	765	122	18,700	3,120	[a]16,400	290	31,600
10	0	338	611	1,840	398	699	115	9,940	5,050	12,000	282	46,700
11	0	298	524	1,870	390	633	107	6,080	[a]5,050	9,840	338	[a]34,600
12	16	266	469	1,580	372	590	104	7,580	[a]5,040	7,280	442	[a]17,800
13	93	238	433	1,390	338	543	100	6,530	2,840	5,630	322	[a]18,800
14	122	226	398	1,110	347	505	96	3,790	4,630	4,280	232	[a]20,900
15	3,450	208	364	908	571	478	90	2,490	4,060	3,450	196	[a]18,800
16	19,400	186	356	6,890	4,050	433	90	3,250	2,740		172	[a]8,930
17	16,600	196	356	8,630	6,160	415	90	2,270	1,940		163	[a]5,190
18	9,230	202	330	5,630	9,820	390	93	2,930	1,250		168	[a]4,160
19	8,030	196	322	3,030	9,020	356	226	2,290	1,120		172	[a]3,340
20	5,630	181	330	2,250	4,540	338	154	1,500	1,500		168	[a]2,740
21	3,790	4,050	347	1,700	3,240	314	659	1,120	1,200		158	[a]2,100
22	2,720	3,910	1,260	12,000	2,840	290	1,220	2,960	908	2,180	574	1,860
23	2,360	4,030	6,110	7,120	3,790	266	633	2,490	743		1,920	1,680
24	5,910	3,130	4,740	5,590	3,030	244	460	2,080	688		1,410	1,550
25	15,500	3,130	2,550	4,030	2,840	232	338	1,680	2,450		1,100	1,910
26	13,100	2,930	1,980	3,240	4,170	226	442	1,380	5,150		820	1,580
27	[a]7,730	2,150	1,520	2,740	4,160	214	433	1,620	7,960		666	1,520
28	[a]8,030	1,710	1,100	2,530	3,340	208	364	1,380	5,160		534	2,230
29	8,630	1,380	864	2,040	3,030	176	338	1,240	4,530	2,680	433	1,570
30	5,580	1,010	754	1,600		176	502	3,520	13,300	1,940	390	1,180
31	3,340		633	1,230		176		4,650		1,460	322	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	19,400	0	4,490	276,000
November	4,050	181	1,280	76,200
December	6,110	322	1,140	70,100
January	12,000	469	2,830	174,000
February	9,820	338	2,500	144,000
March	3,130	176	715	44,000
April	1,220	90	265	15,800
May	18,700	1,120	3,840	236,000
June	13,300	688	3,760	224,000
July	32,900		7,820	481,000
August	1,920	158	529	32,500
September	46,700	322	11,100	660,000
The year	46,700	0	3,350	2,430,000

[a] Partly estimated.

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, about 9,240 of which is probably noncontributing.

RECORDS AVAILABLE.—September 1898 to December 1911; October 1914 to September 1932.

EXTREMES.—Maximum discharge during year, 62,500 second-feet Feb. 19 (gage height, 26.95 feet); minimum, 12 second-feet Oct. 8–11.

1898–1932: Maximum stage, 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 fair. Numerous small diversions above station do not appreciably affect flow except during low stages. Flow slightly regulated by Lake Waco on North Bosque River near Waco.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	3,660	1,360	1,020	3,050	6,130	a 515	1,290	6,810	16,700	1,790	810
2	14	2,860	1,240	894	4,040	5,760	a 495	1,290	6,180	13,500	1,410	3,880
3	14	2,260	1,280	866	2,450	4,570	a 495	2,320	7,480	15,600	a 1,140	1,020
4	14	1,770	1,060	2,220	2,270	8,090	a 470	3,100	4,400	24,900	a 988	21,700
5	14	1,400	884	7,610	2,040	22,200	a 480	2,140	3,330	28,600	887	12,100
6	14	1,160	884	4,800	1,870	9,900	a 786	3,820	2,740	19,700	786	10,100
7	14	985	1,380	2,320	3,020	3,750	a 1,880	6,540	3,640	18,000	738	14,000
8	12	852	1,360	2,180	1,700	5,090	a 420	7,160	4,360	19,300	636	20,000
9	12	743	1,570	1,960	1,580	5,660	a 411	36,000	4,910	20,700	575	18,000
10	12	659	1,240	1,700	1,450	2,450	a 367	21,600	6,420	13,600	536	31,900
11	12	599	1,030	3,260	2,050	3,470	a 328	11,500	7,220	9,960	470	39,300
12	13	531	1,680	5,500	1,410	2,990	a 300	7,770	5,880	7,370	430	28,300
13	13	472	749	3,530	1,330	2,110	a 335	11,800	5,940	4,930	411	16,700
14	13	440	664	3,090	2,430	3,140	a 328	7,290	5,630	3,750	470	18,300
15	1,040	396	610	2,140	2,510	1,740	a 300	7,080	3,630	3,080	480	19,300
16	10,600	360	605	1,870	4,920	2,890	a 300	22,000	4,400	2,640	411	15,000
17	16,700	360	599	13,300	21,300	1,530	a 300	13,400	2,740	2,320	363	7,370
18	12,600	323	552	7,840	18,300	2,760	a 300	3,360	2,360	2,000	332	5,300
19	8,160	316	557	5,110	54,600	a 1,250	a 272	3,530	2,840	1,740	343	4,060
20	6,400	298	531	4,140	22,600	a 1,100	2,370	3,530	a 1,410	1,530	359	3,400
21	5,080	292	501	3,330	16,000	a 2,390	1,600	2,500	a 1,330	1,370	335	2,850
22	3,780	1,720	568	12,600	10,700	a 988	1,530	2,040	1,490	1,330	300	2,500
23	4,600	3,900	843	30,800	10,600	a 866	660	2,100	1,330	1,530	276	2,320
24	4,570	4,180	4,750	8,170	9,050	810	1,530	3,200	1,210	a 1,210	279	2,140
25	8,650	3,190	4,720	8,720	8,560	2,170	2,600	3,740	1,140	a 1,100	1,410	1,960
26	15,500	2,860	2,860	8,090	7,160	810	a 780	2,180	988	2,160	1,330	1,960
27	11,000	3,300	2,360	7,420	7,870	720	a 520	1,920	5,190	3,310	1,100	2,090
28	8,000	2,260	2,040	4,930	8,150	1,530	a 575	2,840	12,600	3,600	901	1,830
29	8,680	1,870	1,670	4,750	5,110	1,300	1,640	6,970	5,640	3,140	738	1,870
30	7,960	1,570	1,360	4,770	-------	a 480	3,990	2,590	5,130	3,140	636	2,140
31	5,400	-------	1,160	3,260	-------	a 520	-------	3,020	-------	2,320	558	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,700	12	4,480	275,000
November	4,180	292	1,520	90,400
December	4,750	501	1,380	84,800
January	30,800	866	5,550	341,000
February	54,600	1,330	8,210	472,000
March	22,200	480	3,520	216,000
April	3,990	272	896	53,300
May	36,000	1,290	6,760	416,000
June	12,600	988	4,280	255,000
July	28,600	1,100	8,200	504,000
August	1,790	276	691	42,500
September	39,300	810	10,400	619,000
The year	54,600	12	4,640	3,370,000

a Partly estimated.

BRAZOS RIVER NEAR BRYAN, TEX.

LOCATION.—Chain gage on Pitts Bridge, on State highway between Bryan and Caldwell 9 miles southwest of Bryan, Brazos County. Zero of gage is 192.2 feet above mean sea level.

DRAINAGE AREA.—38,400 square miles, about 9,240 of which is noncontributing.

RECORDS AVAILABLE.—September 1925 to September 1932. Comparable record at former station 7½ miles downstream February 1918 to September 1925.

EXTREMES.—Maximum discharge during year, 75,100 second-feet Feb. 21 (gage height, 32.65 feet); minimum discharge, 133 second-feet Sept. 30.

1925–32: Maximum stage, 47.1 feet May 20, 1930 (discharge not determined); minimum discharge, 100 second-feet Apr. 27, 28, 1930.

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

REMARKS.—Monthly records fair. Daily discharge not sufficiently accurate for publication. Discharge estimated or partly estimated Dec. 5–12, Mar. 3–7, May 4–6, July 5–6, 28–30, Sept. 13–27. Numerous small diversions above gage do not appreciably affect the flow except during low stages.

Monthly discharge, in second-feet, 1931–32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	13,900	134	3,920	241,000
November	5,960	382	1,910	114,000
December			2,050	126,000
January	38,100	1,840	11,700	719,000
February	71,800	2,020	13,500	776,000
March		2,220	8,210	505,000
April	6,120	1,200	2,600	155,000
May	50,200		14,300	879,000
June	10,200	3,500	7,120	424,000
July	31,700	1,370	8,880	546,000
August	4,250	928	1,580	97,200
September	46,500	1,200	15,200	904,000
The year	71,800	134	7,560	5,490,000

BRAZOS RIVER AT RICHMOND, TEX.

LOCATION.—Water-stage recorder on highway bridge in eastern edge of Richmond, Fort Bend County, about 1,500 feet downstream from Galveston, Harrisburg & San Antonio Railway bridge. Zero of gage is 40.8 feet above mean sea level.

DRAINAGE AREA.—44,000 square miles, about 9,240 of which is probably non-contributing.

RECORDS AVAILABLE.—June 1931 to September 1932; January 1903 to June 1906 at railroad bridge 1,500 feet upstream.

EXTREMES.—Maximum discharge during year, 80,500 second-feet Feb. 24 (gage height, 31.85 feet); minimum, 382 second-feet Oct. 16 (gage height, 1.15 feet).

1903–6, 1931–32: Maximum discharge, that of Feb. 24, 1932; minimum, 363 second-feet Sept. 28, 1931 (gage height, 1.10 feet).

Flood of June 6, 1929, reached a stage of 40.6 feet, present gage datum (discharge, 120,000 second-feet). Flood of December 1913 reached a stage of 45.4 feet, present gage datum (discharge not determined).

REMARKS.—Records good except those for estimated periods, which are poor. Considerable water diverted above station for irrigation and municipal use (see records of Brazos Valley Irrigation Co.'s canal near Fulshear and Richmond Irrigation Co.'s canal near Richmond).

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	417	6,720	2,940	3,770	17,200	26,900	3,870	4,310	7,600	5,590	2,940	a 1,300
2	466	6,720	2,940	3,670	15,600	23,400	3,770	4,420	8,640	7,550	3,570	a 1,480
3	477	6,110	2,850	3,670	13,300	23,200	3,870	5,550	7,210	6,110	3,480	a 1,680
4	473	5,030	2,590	3,390	11,600	31,800	3,770	6,110	7,720	10,400	3,390	a 1,760
5	466	4,200	2,430	3,720	10,700	30,200	3,390	5,420	8,830	11,900	3,030	a 2,150
6	470	3,770	2,350	29,100	10,100	25,700	3,210	4,310	8,830	13,300	2,760	24,000
7	466	3,390	2,190	48,200	8,640	33,300	3,030	3,770	8,260	22,800	2,430	37,900
8	462	3,030	2,190	53,000	a 7,720	40,800	3,030	3,870	7,040	23,700	a 2,350	38,800
9	470	2,760	2,270	47,800	a 7,040	34,400	2,940	4,200	6,560	20,800	a 2,190	33,700
10	459	2,510	2,430	37,000	a 6,260	26,000	2,940	3,980	6,560	19,200	a 1,950	32,100
11	448	2,190	2,510	29,900	5,970	21,700	2,850	13,100	7,210	20,800	a 1,790	36,000
12	445	2,030	2,510	32,200	5,550	19,200	2,850	33,300	8,640	20,300	a 1,620	39,500
13	445	1,870	2,510	48,000	4,780	15,900	3,030	34,000	11,600	15,100	a 1,580	43,400
14	442	1,760	2,510	50,600	4,420	13,800	2,510	27,800	11,900	11,400	a 2,110	45,000
15	431	1,650	2,590	45,400	4,310	13,100	2,270	24,500	10,500	9,230	a 1,910	37,600
16	392	1,580	2,430	37,700	4,090	12,100	2,190	22,600	9,030	7,380	a 1,680	29,300
17	403	1,480	2,350	29,800	4,090	11,200	2,030	21,500	9,230	5,970	a 1,650	28,400
18	410	1,440	2,590	24,800	4,090	10,500	2,030	38,400	9,030	5,160	a 1,650	26,900
19	403	1,340	2,510	22,500	7,650	9,630	1,910	43,400	8,260	4,660	a 1,620	a 21,600
20	4,430	1,340	2,670	25,100	25,400	8,830	1,870	35,600	8,450	4,200	a 1,580	a 15,900
21	9,630	1,240	3,030	22,700	49,000	8,080	1,830	25,600	7,040	3,980	a 1,910	12,600
22	7,210	1,210	3,210	18,600	71,000	6,880	1,680	20,600	5,690	3,570	a 1,990	10,300
23	5,420	1,180	3,030	22,200	79,800	6,260	1,650	16,700	5,160	3,480	a 1,650	8,640
24	5,030	1,180	2,850	27,800	80,500	5,420	1,620	12,800	4,660	3,210	a 1,510	a 7,550
25	5,290	1,090	3,120	30,800	77,900	4,900	1,900	9,630	4,090	2,940	a 1,480	a 6,410
26	4,900	1,060	3,390	37,900	69,600	4,900	3,120	7,900	3,770	2,670	a 1,300	a 5,690
27	4,540	1,030	3,570	41,100	56,200	4,660	3,300	6,880	3,670	2,510	a 1,340	a 7,210
28	4,840	1,510	4,440	32,600	43,900	4,200	3,210	6,880	3,300	2,510	a 1,760	a 6,880
29	9,900	2,940	5,160	26,300	33,400	3,870	3,480	7,210	3,030	2,430	a 1,620	a 6,260
30	10,700	3,030	4,540	23,100	--------	3,980	4,090	6,560	2,940	a 2,110	a 1,540	a 7,900
31	7,920	--------	4,090	19,400	--------	4,200	--------	5,830	--------	a 2,030	a 1,370	--------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,700	392	2,850	175,000
November	6,720	1,030	2,550	152,000
December	5,160	2,190	2,930	180,000
January	53,000	3,390	28,400	1,750,000
February	80,500	4,090	25,500	1,470,000
March	40,800	3,870	15,800	972,000
April	4,090	1,620	2,770	165,000
May	43,400	3,770	15,100	928,000
June	11,900	2,940	7,150	425,000
July	23,700	2,030	8,940	550,000
August	3,570	1,300	2,020	124,000
September	45,000	1,300	19,300	1,150,000
The year	80,500	392	11,100	8,040,000

a Partly estimated.

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 1932.
EXTREMES.—Maximum discharge during year, about 47,000 second-feet Sept. 8 (gage height, 27.05 feet); no flow Oct. 1–11.
1924–32: Maximum discharge, about 47,000 second-feet Sept. 8, 1932 (gage height, 27.05 feet); no flow during several periods.
REMARKS.—Records fair. Discharge interpolated June 2–4, Aug. 21–27. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	33	45	20	20	28	12	332	510	3,970	43	2,120
2	0	28	43	17	20	23	12	59	393	1,580	43	7,340
3	0	25	40	14	17	22	9.7	34	277	2,850	47	8,790
4	0	23	37	34	16	22	9.7	32	161	4,930	45	3,900
5	0	22	34	128	14	22	9.7	29	45	1,790	44	1,900
6	0	21	34	369	13	22	9.7	27	40	1,130	43	4,220
7	0	20	33	325	13	22	9.7	5,450	40	792	43	28,200
8	0	18	32	47	13	20	9.7	5,880	824	390	43	30,800
9	0	17	32	34	13	16	9.7	886	355	430	43	15,300
10	0	17	32	29	13	15	9.7	510	338	410	57	5,380
11	0	15	32	27	13	15	8.1	1,660	290	222	98	2,260
12	.1	17	32	24	13	15	8.1	2,820	246	126	62	1,280
13	994	17	32	24	13	15	4.8	950	124	115	57	850
14	3,660	16	29	22	13	15	4.8	186	117	106	50	709
15	3,650	16	29	17	13	15	4.2	112	113	98	153	600
16	1,160	15	30	38	491	15	4.2	143	110	94	338	532
17	630	950	29	67	534	15	4.2	319	104	86	321	470
18	64	1,430	27	41	157	15	5.6	166	100	82	110	290
19	13	811	27	20	108	15	4.8	321	65	78	90	320
20	13	328	34	17	88	15	7.3	184	37	106	51	320
21	476	148	57	24	94	15	4.8	115	45	113	46	260
22	2,280	246	50	80	179	15	7.3	44	18	124	41	260
23	6,300	113	44	43	176	15	509	4.8	315	150	37	290
24	6,780	94	36	32	104	13	4,470	1.6	230	69	33	470
25	2,550	100	29	29	69	13	870	971	96	57	29	650
26	1,070	53	28	29	56	13	174	875	110	48	25	490
27	96	44	28	27	50	13	27	338	187	37	21	390
28	80	43	27	23	41	13	587	233	6,650	48	17	338
29	54	40	24	21	33	11	1,860	1,210	19,300	51	27	275
30	45	43	23	20	------	11	1,280	1,000	12,300	30	24	246
31	45	------	21	20	------	11	---------	700	--------	24	32	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,780	0	966	59,400
November	1,430	15	159	9,460
December	57	21	33.2	2,040
January	369	14	53.5	3,290
February	534	13	82.7	4,760
March	28	11	16.3	1,000
April	4,470	4.2	332	19,800
May	5,880	1.6	826	50,800
June	19,300	18	1,450	86,300
July	4,930	24	650	40,000
August	338	17	68.2	4,190
September	30,800	246	3,980	237,000
The year	30,800	0	713	518,000

CLEAR FORK OF BRAZOS RIVER AT FORT GRIFFIN, TEX.

LOCATION.—Water-stage recorder at old Fort Griffin-Throckmorton highway bridge half a mile east of Fort Griffin, Shackleford County. Prior to June 23, 1932, a chain gage to same datum and at same location was used.

DRAINAGE AREA.—3,970 square miles.

RECORDS AVAILABLE.—December 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 33,600 second-feet Sept. 10 (gage height, 35.09 feet); no flow Oct. 1–13.

1924–32: Maximum discharge, that of Sept. 10, 1932; no flow at times.

REMARKS.—Records good. Small diversions above station for municipal and irrigation uses.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	75	83	21	40	81	6.2	1,260	690	20,600	68	1,840
2	0	68	68	20	38	67	6.2	407	600	16,300	64	3,550
3	0	45	65	30	31	58	5.4	187	336	4,510	60	6,390
4	0	47	68	50	28	44	4.2	92	143	4,610	267	10,100
5	0	45	81	137	24	37	5.0	64	191	5,620	89	8,440
6	0	24	71	334	23	44	5.8	56	1,730	2,980	58	2,660
7	0	3.8	64	807	23	44	4.2	3,480	134	4,280	52	4,170
8	0	.6	58	348	18	49	4.2	7,110	147	3,280	54	11,000
9	0	44	52	134	17	38	2.8	7,340	143	965	56	21,200
10	0	38	47	107	14	28	2.2	1,450	1,330	765	140	30,800
11	0	23	45	91	12	24	2.5	429	815	478	71	19,900
12	0	22	44	65	14	21	2.5	915	492	315	71	5,950
13	0	18	41	58	16	16	2.4	2,970	286	256	106	1,950
14	823	18	34	52	18	17	2.4	865	470	217	94	1,270
15	4,290	4.6	29	47	20	18	2.8	442	223	194	76	1,040
16	4,520	11	27	46	27	19	3.4	1,340	130	176	256	940
17	1,560	181	28	50	387	20	3.4	990	81	163	290	840
18	634	1,030	31	50	765	18	3.4	905	56	153	411	740
19	280	2,610	32	53	390	16	4.2	765	36	140	290	668
20	174	2,280	256	62	212	16	3.4	447	27	130	155	586
21	71	2,050	145	62	239	16	2.8	91	775	1,160	136	537
22	117	656	73	60	447	14	2.8	119	915	965	91	542
23	3,040	248	117	59	568	12	2.5	59	456	1,020	68	514
24	6,980	136	130	64	438	12	52	38	196	452	56	514
25	8,630	145	97	75	402	11	3,560	107	505	239	49	609
26	4,860	189	84	65	270	8.1	1,440	1,060	225	145	44	790
27	1,650	138	79	59	165	8.6	187	765	514	132	40	740
28	388	106	64	56	134	6.6	114	604	2,530	111	36	640
29	114	81	47	50	111	5.0	162	1,260	7,690	92	35	542
30	142	81	32	46	------	3.8	1,720	2,770	15,900	84	35	492
31	107	--------	25	42	------	3.8	--------	1,300	--------	75	38	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,630	0	1,240	76,200
November	2,610	.6	347	20,600
December	256	25	68.3	4,200
January	807	20	103	6,330
February	765	12	169	9,720
March	81	3.8	25.0	1,540
April	3,560	2.2	244	14,500
May	7,340	38	1,280	78,700
June	15,900	27	1,260	75,000
July	20,600	75	2,280	140,000
August	411	35	108	6,640
September	30,800	492	4,670	278,000
The year	30,800	0	979	711,000

CLEAR FORK OF BRAZOS RIVER NEAR CRYSTAL FALLS, TEX.

LOCATION.—Water-stage recorder at Texas Co.'s pumping plant 2½ miles below Hubbard Creek and 3¼ miles northeast of Crystal Falls, Stephens County. Prior to Aug. 7, 1932, a staff gage (set to different datum) 2½ miles downstream was used.

DRAINAGE AREA.—5,690 square miles.

RECORDS AVAILABLE.—July 1928 to September 1932.

EXTREMES.—Maximum discharge during year, 22,700 second-feet Sept. 8 (gage height, 28.10 feet); no flow Oct. 1–11.

1928–32: Maximum discharge, that of Sept. 8, 1932 (gage height, 28.10 feet, on new gage); no flow at times.

Maximum stage known, about 34.0 feet (present datum) in 1900.

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

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	113	963	55	55	148	4.3	1,790	1,060	9,400	77	1,080
2	0	91	1,170	55	e 43	121	4.3	621	614	13,800	70	2,350
3	0	80	328	64	46	102	4.3	312	557	17,000	77	3,140
4	0	64	160	177	41	87	4.3	168	284	14,500	121	5,040
5	0	55	121	234	e 38	77	4.3	98	168	5,660	342	7,160
6	0	46	110	303	e 31	67	4.3	73	2,810	6,180	140	12,500
7	0	41	106	478	e 31	58	4.3	7,270	998	5,240	78	16,100
8	0	36	98	353	31	52	3.5	8,470	317	4,870	66	20,200
9	0	29	77	e 190	31	43	2.8	6,190	732	2,640	58	13,700
10	0	26	67	e 160	31	41	2.0	7,110	2,760	913	60	11,200
11	0	21	61	132	31	38	2.0	1,250	3,840	730	130	15,900
12	2,870	21	55	e 102	e 31	36	1.2	853	832	425	78	21,400
13	10,200	21	52	e 87	e 31	31	1.0	1,990	530	322	63	17,400
14	14,800	21	52	64	e 31	31	.7	2,500	667	284	90	2,450
15	11,500	19	49	e 52	31	26	.7	660	1,030	238	143	1,300
16	6,060	19	52	e 67	3,500	26	.7	879	425	216	597	1,080
17	3,320	354	91	e 117	2,040	26	.7	1,590	190	199	338	945
18	1,230	304	331	168	957	21	135	730	113	172	328	848
19	586	1,650	2,490	e 124	797	21	707	790	77	164	380	763
20	350	2,500	6,390	e 106	503	21	453	714	41	1,630	234	685
21	168	2,170	8,320	95	510	19	58	503	2,720	582	153	590
22	303	1,930	5,700	80	1,820	16	425	212	1,730	1,340	126	761
23	6,090	630	1,920	e 109	1,260	16	19	124	1,560	1,150	90	1,180
24	9,270	546	321	296	820	16	12	245	745	848	68	672
25	6,360	294	234	168	672	12	48	1,390	284	350	58	608
26	7,110	181	212	e 140	450	9.4	2,750	601	450	221	51	903
27	6,010	168	152	e 132	303	9.4	546	941	341	148	47	978
28	1,260	160	113	106	230	8.3	212	701	2,980	121	42	796
29	347	113	91	e 64	177	7.2	390	2,980	9,330	98	40	666
30	199	91	77	e 61	-------	7.2	1,030	9,260	6,170	91	38	566
31	140	-------	58	e 58	-------	7.2	---------	3,080	-------	84	45	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	14,800	0	2,840	175,000
November	2,500	19	393	23,400
December	8,320	49	968	59,500
January	478	52	142	8,730
February	3,500	31	502	28,900
March	148	7.2	38.7	2,380
April	2,750	.7	228	13,600
May	9,260	73	2,070	127,000
June	9,330	41	1,480	88,100
July	17,000	84	2,890	178,000
August	597	38	136	8,360
September	21,400	566	5,430	323,000
The year	21,400	0	1,430	1,040,000

e Partly estimated.

NORTH BOSQUE RIVER NEAR CLIFTON, TEX.

LOCATION.—Staff gage a quarter of a mile above Gulf, Colorado & Santa Fe Railway bridge and 1⅝ miles northwest of Clifton, Bosque County.

DRAINAGE AREA.—974 square miles.

RECORDS AVAILABLE.—November 1923 to September 1932.

EXTREMES.—Maximum discharge during year, about 31,200 second-feet Feb. 18 (gage height, 15.4 feet); minimum, 1.7 second-feet Oct. 10 (gage height, 0.36 foot).

1924–32.—Maximum discharge, about 34,900 second-feet (revised) Sept. 8, 1929 (gage height, 16.8 feet); no flow at times.

REMARKS.—Records good below and poor above 10,000 second-feet. Railway company pumps about 100,000 gallons a day above control dam a third of a mile below gage.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	4.8	26	7.9	211	456	167	163	159	53	14	4.4
2	2.7	4.4	272	7.9	239	420	167	138	126	51	11	206
3	2.7	4.4	91	16	250	624	151	112	112	931	10	1,950
4	2.7	4.4	49	1,290	206	586	142	91	98	1,360	10	192
5	2.6	4.4	31	2,460	159	3,570	142	83	91	636	10	78
6	2.4	4.8	23	250	167	850	134	80	86	130	11	3,880
7	2.1	4.8	17	155	159	643	126	392	80	898	17	1,380
8	1.8	4.8	17	126	142	605	126	1,280	72	277	16	206
9	1.8	4.8	16	80	134	576	119	5,820	134	112	13	67
10	1.7	4.4	13	64	130	465	112	822	579	75	10	51
11	1.9	4.4	13	220	142	474	105	1,060	657	55	10	40
12	2.0	4.4	11	444	134	474	98	404	167	51	7.9	35
13	2.7	4.4	10	159	119	412	98	262	105	44	7.9	26
14	4.1	4.1	7.9	94	119	404	98	206	91	40	7.9	23
15	275	4.1	7.9	75	1,680	373	91	530	80	31	7.9	21
16	538	4.1	10	64	8,110	357	88	5,430	457	31	7.9	17
17	539	5.8	9.0	2,770	3,220	327	88	678	86	29	6.9	14
18	60	4.8	16	361	12,300	293	88	327	69	26	60	14
19	31	4.4	16	167	7,020	273	2,330	244	55	24	23	14
20	21	4.4	20	138	2,830	256	957	196	51	130	16	13
21	16	4.1	23	126	1,740	227	216	177	49	86	13	13
22	16	4.1	144	8,140	1,370	206	151	159	44	60	10	11
23	1,570	5.8	60	2,880	1,010	201	159	151	42	49	7.9	192
24	150	6.9	35	652	900	216	151	134	42	29	7.9	72
25	44	6.9	26	614	750	206	116	159	105	29	7.9	42
26	28	55	21	1,250	662	196	94	138	67	26	6.9	28
27	17	33	18	558	605	192	83	112	51	23	6.9	23
28	13	21	16	404	529	177	472	105	750	18	7.9	18
29	9.0	23	14	341	510	172	1,030	187	130	17	7.9	17
30	5.8	20	10	262	------	163	262	1,120	69	16	5.8	14
31	4.8	------	7.9	227	------	167	------	239	------	14	5.8	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,570	1.7	109	6,700
November	55	4.1	9.02	537
December	272	7.9	33.9	2,080
January	8,140	7.9	787	48,400
February	12,300	119	1,570	90,300
March	3,570	163	470	28,900
April	2,330	83	272	16,200
May	5,820	80	677	41,600
June	750	42	157	9,340
July	1,360	14	173	10,600
August	60	5.8	11.8	726
September	3,880	4.4	289	17,200
The year	12,300	1.7	376	273,000

LEON RIVER NEAR BELTON, TEX.

LOCATION.—Water-stage recorder a quarter of a 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 1932.

EXTREMES.—Maximum discharge during year, about 20,300 second-feet May 9 (gage height, 12.3 feet); minimum, 1.8 second-feet Oct. 18 (gage height, 2.17 feet).

1923–32: Maximum stage, 15.35 feet Oct. 6, 1930 (discharge not determined); no flow at times.

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

REMARKS.—Records of daily discharge not sufficiently accurate for publication. Monthly records fair. Several small pumping plants divert water above station.

Monthly discharge, in second-feet, 1931–32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,510	2.0	361	22,200
November	105	26	38.9	2,310
December	1,170	47	195	12,000
January	2,720	120	953	58,600
February	10,200	189	2,220	128,000
March	5,230	398	1,270	78,100
April	1,560	220	503	29,900
May	13,300	648	2,770	170,000
June	4,360	406	1,640	97,600
July	1,180	92	389	23,900
August	774	60	162	9,960
September	2,340	68	664	39,500
The year	13,300	2.0	925	672,000

LITTLE RIVER AT CAMERON, TEX.

LOCATION.—Chain gage on highway bridge three quarters of a 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 1932.

EXTREMES.—Maximum discharge during year, 19,000 second-feet Sept. 4 (gage height, 34.10 feet); minimum, 48 second-feet Oct. 12–16, 19, 20.

1916–32: 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 good except those estimated, which are fair. Numerous small diversions for irrigation and municipal uses affect flow only during extremely low stages. Slight regulation caused by pumping above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	a 278	88	512	1,260		866	a 1,900	2,700	1,110	194	224
2	50	267	96	380	1,000		832	1,400	2,260	798	184	444
3	50	214	96	380	866		a 798	1,440	2,030	a 764	166	5,960
4	50	175	96	2,300	730		764	1,330	2,030	832	175	17,800
5	50	157	96	12,100	630	a 5,200	764	1,080	a 2,070	832	166	17,300
6	50	135	a 104	10,200	564		730	1,080	2,660	832	155	10,300
7	50	130	112	3,340	a 532		696	1,040	3,040	630	a 190	4,360
8	50	a 118	139	1,150	500		696	970	2,590	663	224	5,910
9	50	107	157	a 866	438		663	3,060	1,500	764	256	6,660
10	50	104	214	a 764	438	a 3,860	a 630	7,540	1,900	a 900	267	4,390
11	50	96	214	1,050	438	2,670	597	12,300	4,200	1,040	352	a 1,610
12	49	91	194	6,250	380	2,260	564	16,000	a 3,370	1,080	267	1,000
13	48	86	184	4,630	438	a 2,140	564	13,700	2,950	832	224	1,040
14	48	85	157	794	a 408	2,070	532	9,110	3,360	663	a 214	1,110
15	53	a 82	153	532	380	1,960	532	6,110	3,770	564	354	1,290
16	48	80	148	468	380	1,840	532	7,540	4,620	500	1,410	1,620
17	50	79	153	a 468	677	1,770	a 516	11,100	4,660	a 408	1,820	1,660
18	49	76	139	438	1,180	1,620	500	12,400	3,090	380	599	a 1,180
19	48	73	139	408	6,340	1,550	500	11,900	2,450	380	468	730
20	60	73	a 148	339	11,600	a 1,440	500	8,100	2,030	438	798	532
21	1,330	73	157	528	14,000	1,330	1,730	5,020	1,700	339	764	438
22	1,970	a 70	157	1,350	15,500	1,260	1,710	3,020	1,400	380	1,410	380
23	2,300	66	157	1,360	10,500	1,150	798	2,570	1,110	408	1,320	438
24	a 1,720	65	157	a 1,880	8,620	1,080	a 1,370	2,140	866		597	438
25	a 984	64	a 139	2,400	7,780	1,040	1,660	1,840	798		408	a 326
26	730	68	121	2,780	6,050	1,000	1,400	1,700	a 935	a 305	301	696
27	663	73	a 114	2,780	a 3,880	a 985	1,510	1,550	1,080		256	832
28	468	73	106	2,820	a 2,280	970	1,360	1,400	866		a 246	630
29	301	a 73	707	2,700		935	3,110	a 1,330	663		290	500
30	235	73	1,150	2,700		900	3,370	1,360	815	204	278	438
31	a 204		925	a 1,980		866		1,750		a 199	235	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,300	48	384	23,600
November	278	64	107	6,370
December	1,150	88	217	13,300
January	12,100	339	2,280	140,000
February	15,500	380	3,450	198,000
March		866	2,630	162,000
April	3,370	500	1,030	61,300
May	16,000	970	4,930	303,000
June	4,660	663	2,250	134,000
July	1,110	199	573	35,200
August	1,820	155	471	29,000
September	17,800	224	3,010	179,000
The year	17,800	48	1,770	1,280,000

a Estimated or interpolated.

LAMPASAS RIVER AT YOUNGSPORT, TEX.

LOCATION.—Water-stage recorder 300 feet above highway bridge and half a mile northeast of Youngsport, Bell County.

DRAINAGE AREA.—1,240 square miles.

RECORDS AVAILABLE.—February 1924 to September 1932.

EXTREMES.—Maximum stage during year, 13.7 feet about Sept. 3 (discharge not determined); minimum discharge, 5.3 second-feet Oct. 22 (gage height, 2.74 feet).

1924–32: Maximum stage, 23.70 feet Oct. 2, 1927 (discharge not determined); no flow July 17 to Aug. 18, 1925.

Flood of Dec. 2, 1913, reached a stage of 35.1 feet; flood of September 1873 reached a stage of about 44.2 feet (present gage datum.)

REMARKS.—Records fair except those estimated May 9–16 and July 25 to Sept. 15, which are poor. Small amount of water diverted above station for municipal uses.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	14	15	23	26	225	147	268	252	64		
2	8.6	14	17	21	20	215	138	201	225	67		
3	7.9	14	21	26	18	498	130	168	210	185		
4	7.2	12	17	54	21	529	123	147	196	111		
5	7.9	13	15	328	18	3,030	123	127	186	97		
6	8.6	12	18	261	18	907	119	119	177	77		
7	7.9	12	20	90	17	622	115	934	160	84		
8	8.6	12	21	59	14	538	115	2,120	151	130		[a] 840
9	8.6	11	20	41	13	477	111		142	67		
10	6.5	11	17	32	13	431	111		288	51		
11	6.5	12	14	32	18	424	104		235	41		
12	6.1	10	15	30	18	424	93		196	39		
13	6.5	11	18	32	17	399	90	[a] 3,040	151	37		
14	6.5	11	20	34	14	361	84		142	34		
15	10	11	18	30	23	336	80		726	32		54
16	10	10	23	26	30	307	77		242	30	[a] 104	49
17	8.6	13	28	23	1,130	284	77	1,020	147	30		46
18	7.9	13	30	21	525	252	77	740	111	28		41
19	7.2	15	30	18	5,910	235	1,560	637	90	25		39
20	6.5	15	28	20	1,070	215	813	573	80	210		34
21	6.1	14	26	17	770	215	256	518	74	134		32
22	6.1	12	23	20	608	186	168	464	67	62		32
23	113	12	20	49	497	172	151	431	64	44		28
24	382	13	21	111	444	168	177	392	87	41		82
25	80	12	25	64	374	168	151	392	290	41		263
26	41	12	23	49	319	164	108	348	198	37		135
27	25	12	21	46	290	172	87	301	104	32		77
28	21	12	21	49	268	155	185	336	98	28		62
29	20	13	18	41	246	147	926	313	176	26		54
30	17	14	23	34	------	147	449	524	84	23		46
31	15	------	23	30	------	160	------	319	------	18		------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	382	6.1	28.4	1,750
November	15	10	12.4	738
December	30	14	20.9	1,290
January	328	17	55.2	3,390
February	5,910	13	440	25,300
March	3,030	147	405	24,900
April	1,560	77	231	13,700
May	----------	119	1,150	70,700
June	726	64	178	10,600
July	210	18	62.1	3,820
August	----------	----------	[a] 104	6,400
September	----------	----------	428	25,500
The year	----------	6.1	259	188,000

[a] Estimated.

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 1932.

EXTREMES.—Maximum discharge during year, 5,360 second-feet Mar. 5 (gage height, 15.6 feet); minimum, 4.4 second-feet July 17 (gage height, 1.32 feet).

1924–32: Maximum discharge, about 53,400 second-feet May 29, 1929 (gage height, 34.20 feet); no flow Sept. 5, 6, 8, 11, 1924.

Maximum stage known, about 40.6 feet in September 1921.

REMARKS.—Records of daily discharge poor, monthly records fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	7.7	31	9.9	29	68	86	105	75	22	5.6	34
2	8.2	7.7	32	11	31	73	81	83	80	28	5.6	26
3	7.2	8.8	21	19	29	128	81	61	75	28	5.6	1,530
4	7.2	7.7	15	183	25	174	76	61	73	42	6.0	753
5	7.2	9.9	11	488	25	3,240	73	59	69	32	59	163
6	10	7.7	15	205	25	526	71	59	66	26	46	207
7	9.4	8.8	40	70	23	276	73	61	61	22	14	520
8	7.7	8.8	42	42	23	256	68	121	57	22	8.4	279
9	6.6	8.8	25	38	23	218	66	119	74	14	6.6	127
10	6.6	8.8	23	31	21	174	66	1,220	324	12	6.0	70
11	6.6	7.7	19	138	29	166	59	537	118	12	6.0	48
12	5.5	7.7	18	156	23	166	56	212	80	11	5.2	42
13	6.6	8.2	15	38	23	166	54	171	73	11	6.0	40
14	6.6	11	13	35	25	158	54	148	83	11	8.4	40
15	7.7	11	11	33	29	150	54	839	64	9.0	107	33
16	6.6	11	15	29	40	150	54	2,020	46	5.6	148	25
17	11	13	21	25	27	134	54	345	46	4.4	54	24
18	7.7	13	21	29	39	126	52	204	44	6.6	41	22
19	6.6	15	21	29	166	119	49	156	42	7.2	137	21
20	7.7	13	20	27	218	112	49	141	36	128	131	19
21	7.7	14	19	29	158	105	44	134	30	236	133	18
22	8.8	13	19	29	134	99	43	120	30	44	184	19
23	9.9	13	17	29	105	102	92	120	29	24	74	19
24	8.2	14	16	29	97	97	73	113	32	17	41	39
25	7.2	15	13	29	91	97	64	179	32	15	26	102
26	7.2	15	13	33	83	92	56	120	30	7.8	21	84
27	7.2	15	13	31	78	91	43	113	28	7.8	21	59
28	6.6	17	13	29	73	88	348	163	26	6.6	22	41
29	6.0	17	13	28	71	86	607	120	21	5.6	36	42
30	6.6	18	13	27	-------	97	149	93	22	6.6	55	28
31	6.6	-------	11	25	-------	86	-------	83	-------	6.6	28	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	5.5	7.51	462
November	18	7.7	11.5	684
December	42	11	19.0	1,170
January	488	9.9	63	3,870
February	218	21	60.8	3,500
March	3,240	68	246	15,100
April	607	43	93.2	5,550
May	2,020	59	261	16,000
June	324	21	62.2	3,700
July	236	4.4	26.8	1,650
August	184	5.2	46.7	2,870
September	1,530	18	149	8,870
The year	3,240	4.4	87.4	63,400

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 1932.

EXTREMES.—Maximum discharge during year, 15,500 second-feet Jan. 7 (gage height, −21.54 feet); no flow at times.

1924–32: Maximum discharge, about 33,600 second-feet May 30, 1929 (gage height, −17.02 feet); no flow at times.

REMARKS.—Monthly records fair. Gage read about 3 times a week; discharge estimated for days when gage was not read. Records of daily discharge not sufficiently accurate for publication. No diversions above station.

Monthly discharge, in second-feet, 1931–32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	26	0.1	4.78	294
November	.1	0	.02	1.2
December	316	.1	67.7	4,160
January	14,700	8.9	3,000	184,000
February	13,600	52	2,060	118,000
March	4,850	36	816	50,200
April	102	36	49.7	2,960
May	960	23	135	8,300
June	515	2.3	91.7	5,460
July	5.9	0	.85	52
August	2.3	0	.27	17
September	2,310	0	543	32,300
The year	14,700	0	561	406,000

NAVASOTA RIVER NEAR EASTERLY, TEX.

LOCATION.—Water-stage recorder at highway bridge 3,000 feet above Missouri Pacific Railroad bridge and 6 miles northeast of Easterly, Robertson County. Zero of gage is 276.42 feet above mean sea level. Prior to June 11, 1932, a staff gage at railroad bridge 3,000 feet downstream was used with different datum.

DRAINAGE AREA.—949 square miles.

RECORDS AVAILABLE.—March 1924 to September 1932.

EXTREMES.—Maximum discharge during year, about 48,500 second-feet Sept. 5 (gage height, 21.9 feet); minimum discharge, 0.3 second-foot Oct. 1–25, Oct. 27 to Nov. 14.

1924–32: Maximum discharge, that of Sept. 5, 1932; no flow during several periods.

REMARKS.—Daily records not sufficiently accurate for publication. Monthly records fair. Discharge for numerous days estimated or partly estimated. No diversions above station.

Monthly discharge, in second-feet, 1931-32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0.3	0.31	19
November	14	.3	2.37	141
December	502	19	146	8,980
January	27,100	12	3,500	215,000
February	13,700	94	2,030	117,000
March	2,610	49	547	33,600
April	221	25	69	4,110
May	2,320	25	475	29,200
June	1,340	13	171	10,200
July	39	.8	6.23	383
August	----------	----------	.57	35
September	----------	----------	3,220	192,000
The year	----------	.3	841	611,000

BRAZOS VALLEY IRRIGATION CO.'S CANAL NEAR FULSHEAR, TEX.

LOCATION.—Water-stage recorder 1 mile below point of diversion and 3 miles south of Fulshear, Fort Bend County.

RECORDS AVAILABLE.—October 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 280 second-feet July 11 (gage height, 8.57 feet); no flow at times.

REMARKS.—Records good. Discharge estimated Apr. 11–14, Apr. 29 to June 2, June 5–28, Aug. 16–23. Station above all diversions from canal. Flow controlled by pumping plant. Canal diverts from left bank of Brazos River 14½ miles above Richmond. Water used for irrigation near Sugarland. Records Oct. 1 to Apr. 14 furnished by Brazos Valley Irrigation Co.

Discharge, in second-feet, 1931–32

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	0	0	144	246	246	27	16	49	[a]127		262	0	73
2	0	0		246	246	115	17	3.7			240	0	1.4
3	0	0	202	240	246	57	18	61			251	0	0
4	0	0	158	256	246	0	19	18			212	0	0
5	0	0		262	240	0	20	64			134		43
6	0	0		218	174	0	21	69			133	169	0
7	0			218	180	63	22	125		[b]171	132		0
8	0			202	240	158	23	124			131		0
9	0			278	234	134	24	83			158	122	0
10	0		[b]171	278	229	1.8	25	121			246	120	0
11		[a]127		154	125	0	26	132			240	120	0
12				190	163	26	27	133			240	109	0
13	91			273	135	33	28	97			240	88	0
14				268	0	27	29	1.8		114	240	0	0
15	86			262	0	119	30	0		185	240	0	0
							31				240	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April	133	0	51.0	3,030
May		0	102	6,270
June			168	10,000
July	278	131	224	13,800
August	246	0	127	7,810
September	158	0	29.3	1,740
The year		0	58.8	42,600

[a] Mean discharge for period May 7–31.

[b] Mean discharge for period June 5–28.

NOTE.—No flow during months omitted.

RICHMOND IRRIGATION CO.'S CANAL NEAR RICHMOND, TEX.

LOCATION.—Water-stage recorder 600 feet below crossing of Richmond-Rosenburg highway, about 1½ miles below point of diversion, and 1½ miles west of Richmond, Fort Bend County.

RECORDS AVAILABLE.—October 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 234 second-feet June 6 (gage height, 9.04 feet); no flow at times.

REMARKS.—Records good. Discharge estimated Sept. 15–22. Station above all diversions from canal. Flow controlled by pumping plant. Canal diverts from right bank of Brazos River 5 miles above Richmond. Water used for irrigation south of Richmond. Records Oct. 1 to Apr. 18 furnished by Richmond Irrigation Co.

Discharge, in second-feet, 1931–32

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1	0	0	226	218	190	94	16	65	0	198	198	0	
2	0	0	218	218	186	94	17	28	0	198	183	0	
3	0	0	226	218	194	49	18	46	0	198	194	0	
4	0	0	226	218	194	0	19	37	0	198	198	0	74
5	0	0	226	218	194	0	20	9.2	13	198	202	0	
6	0	0	226	226	194	0	21	0	116	202	198	67	
7	0	0	218	210	194	0	22	0	109	202	190	190	
8	0	0	218	164	194	0	23	0	141	202	134	167	0
9	0	0	218	210	194	0	24	0	137	210	94	186	0
10	0	0	202	210	194	0	25	0	134	210	91	186	0
11	0	0	194	218	194	22	26	0	134	210	94	186	0
12	0	0	182	226	112	88	27	0	218	178	91	178	0
13	0	0	178	218	86	91	28	0	226	194	91	164	0
14	0	0	194	202	1.8	91	29	0	226	202	178	73	0
15	46	0	198	202	0	74	30	0	226	202	182	37	0
							31	0	218	------	186	94	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	65	0	7.46	459
May	226	0	61.2	3,760
June	226	178	205	12,200
July	226	91	183	11,300
August	194	0	124	7,620
September	----------	0	37.4	2,230
The year	226	0	51.7	37,600

NOTE.—No flow during months omitted.

COLORADO RIVER BASIN

COLORADO RIVER AT BALLINGER, TEX.

LOCATION.—Water-stage recorder at Ballinger-Paint Rock highway bridge in Ballinger, Runnels County. Zero of gage is 1,594.4 feet above mean sea level.

DRAINAGE AREA.—16,800 square miles, about 11,500 of which is probably noncontributing.

RECORDS AVAILABLE.—December 1915 to September 1932.

EXTREMES.—Maximum discharge during year, 26,200 second-feet Sept. 2 (gage height, 21.30 feet); minimum, 0.7 second-foot Oct. 9.

1915–32: Maximum discharge, about 33,500 second-feet June 14, 1930 (gage height, 27.45 feet); no flow at times.

REMARKS.—Records good except those estimated, which are poor. During periods of heavy local rains backwater from Elm Creek below gage affects records. Diversions for irrigation above station affect low flow.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	85	48	a21	19	110	15	1,690	626	1,870	58	13,900
2	2.4	70	48	a21	22	90	15	765	481	1,210	50	22,900
3	1.9	58	52	9.4	24	75	14	398	283	a2,420	44	3,100
4	1.4	56	50	14	16	63	12	228	202		40	2,230
5	1.2	52	136	75	15	52	11	165	150	a1,050	36	2,080
6	1.1	52	113	65	15	42	7.6	123	298	a690	33	a9,380
7	1.1	48	104	50	15	40	6.8	903	281	574	30	
8	1.1	42	80	40	15	38	6.4	a6,880	320	342	56	10,800
9	1.3	42	70	33	15	35	5.6	4,320	165	248	462	14,100
10	1.3	42	56	30	15	33	5.2	a9,590	123	193	1,730	10,600
11	1.0	36	58	28	15	30	5.2	19,200	3,670	293	a2,800	2,480
12	a2,820	33	50	54	15	30	4.8	7,970	1,810	210	a1,220	1,430
13		32	40	52	15	27	4.4	1,420	1,270	158	a546	976
14	4,660	30	35	44	16	25	4.4	836	643	126	a428	751
15	1,130	27	32	38	19	25	4.8	559	410	107	a288	630
16	1,080	24	a28	36	53	24	4.4	600	223	93	a214	540
17	444	3,130	a28	33	294	24	4.0	580	158	85	a1,770	465
18	257	4,680	a28	44	228	24	1,280	496	130	75	a782	410
19	180	1,920	a24	158	113	24	348	434	110	68	a406	369
20	93	975	25	99	96	22	82	272	82	60	a210	336
21	75	556	25	75	85	21	42	197	877	404	a133	942
22	58	314	24	54	184	19	27	154	224	202	a96	1,700
23	a11,800	202		42	493	19	41	123	242	162	a77	966
24		133		38	1,320	19	90	544	617	102	a63	1,080
25	2,270	90		33	795	18	60	a3,060	688	75	a50	a882
26	806	65	a24	32	474	19	38	722	398	290	46	844
27	456	63		33	304	19	74	314	a3,900	238	46	3,560
28	262	46		33	206	18	2,270	262		158	46	4,490
29	193	40		30	147	19	7,760	6,070	11,800	113	48	1,440
30	136	40	a24	25	-------	19	6,740	3,810	8,750	88	50	818
31	102	-------	a24	25	-------	18	-------	1,650	--------	70	5,640	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	----------	1.0	1,340	82,400
November	4,680	24	433	25,800
December	136	----------	44.2	2,720
January	158	9.4	44.0	2,710
February	1,320	15	174	10,000
March	110	18	33.6	2,070
April	7,760	4.0	633	37,700
May	19,200	123	2,400	148,000
June	11,800	82	1,430	85,100
July	----------	60	458	28,200
August	5,640	30	564	34,700
September	22,900	336	4,120	245,000
The year	22,900	1.0	969	704,000

a Estimated or partly estimated.

COLORADO RIVER NEAR MILBURN, TEX.

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

DRAINAGE AREA.—24,600 square miles, about 11,800 of which is probably noncontributing.

RECORDS AVAILABLE.—November 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 41,800 second-feet May 12 (gage height, 38.6 feet); minimum, 1.2 second-feet Oct. 9.

1923–32: Maximum discharge, 76,100 second-feet Oct. 15, 1930 (gage height, 48.71 feet); no flow Aug. 8–10, Sept. 1–5, 1929.

REMARKS.—Records fair. Diversions for irrigation and municipal use above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.9	244	172	50	87	311	29	7,810	2,760	9,870	168	3,050
2	3.7	200	165	47	81	252	27	2,200	1,400	4,800	128	21,200
3	3.5	172	168	52	78	224	28	1,180	934	10,100	112	27,800
4	2.7	141	147	54	73	204	31	690	1,060	30,800	114	9,160
5	2.4	124	128	144	63	186	28	525	720	21,400	106	2,480
6	1.3	112	114	126	63	150	26	399	606	3,020	87	1,710
7	1.4	106	108	121	63	121	24	284	552	1,910	80	11,900
8	1.7	94	186	302	70	110	20	284	525	1,570	74	20,100
9	1.3	87	186	220	65	102	20	12,700	500	1,240	68	17,400
10	1.8	85	172	159	60	94	17	24,000	552	934	62	16,500
11	1.7	78	147	131	56	87	15	28,000	1,440	690	1,440	13,200
12	3,560	74	126	112	59	96	15	38,300	6,140	606	2,890	3,030
13	4,120	71	110	96	55	83	15	26,500	3,200	578	1,600	1,840
14	9,450	68	96	87	52	74	14	3,560	2,520	474	934	1,440
15	5,240	65	87	106	153	65	13	2,740	1,240	399	812	1,120
16	1,570	63	83	2,200	138	60	14	2,020	873	329	606	934
17	1,240	78	87	1,160	126	66	15	1,180	634	268	424	812
18	782	2,240	85	235	881	80	15	1,060	500	220	609	720
19	449	5,230	80	126	1,180	85	22	1,060	399	197	1,060	634
20	338	2,300	76	94	525	76	810	934	347	186	940	578
21	276	1,280	76	90	528	83	363	782	306	162	424	578
22	190	812	74	375	606	76	186	662	252	150	311	2,810
23	162	552	68	370	374	60	124	552	861	275	208	4,820
24	9,400	578	68	224	370	50	83	474	424	358	159	2,850
25	6,200	316	65	186	1,360	44	65	634	525	276	128	1,780
26	3,280	232	60	144	1,120	44	48	8,480	782	208	104	1,370
27	1,440	186	59	112	751	60	37	2,900	1,080	168	92	1,370
28	842	147	57	96	500	52	1,880	1,180	6,890	220	80	3,600
29	500	131	56	89	374	43	3,680	2,550	9,750	311	73	4,030
30	324	128	54	83	-------	37	10,400	17,600	12,600	240	65	1,780
31	224	-------	52	83	-------	33	-------	8,070	-------	186	314	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,200	1.3	1,920	118,000
November	5,230	63	533	31,700
December	186	52	104	6,400
January	2,200	47	241	14,800
February	1,360	52	342	19,700
March	311	33	100	6,150
April	10,400	13	602	35,800
May	38,300	284	6,430	395,000
June	12,600	252	2,010	120,000
July	30,800	150	2,970	183,000
August	2,890	62	460	28,300
September	27,800	578	6,020	358,000
The year	38,300	1.3	1,810	1,320,000

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, about 11,800 of which is probably noncontributing.

RECORDS AVAILABLE.—August 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 39,800 second-feet May 11 (gage height, 26.85 feet); minimum, 40 second-feet Oct. 13.

1930–32: Maximum discharge, 78,900 second-feet Oct. 17, 1930 (gage height, 39.90 feet); minimum, that of Oct. 13, 1931.

Flood of Sept. 25, 1900, reached a stage of about 57.5 feet. Flood of Apr. 6, 1922, reached a stage of about 54 feet.

REMARKS.—Records good except those estimated, which are fair. Diversions above station for irrigation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	e 440	507	227	266	840	208	8,440	14,400	10,800	505	503
2	59	394	e 1,010	214	259	701	196	8,760	3,930	17,300	462	4,430
3	59	350	504	208	262	1,490	190	3,110	1,960	22,400	408	12,800
4	59	318	480	250	266	1,520	187	1,710	1,440	14,500	372	21,000
5	55	289	444	1,060	253	3,930	184	1,130	1,440	28,500	572	20,300
6	55	262	368	497	253	1,920	184	768	1,090	32,500	435	e 8,160
7	55	240	338	453	246	750	178	4,010	950	27,800	355	e 8,960
8	53	214	322	466	240	575	172	2,250	3,040	15,100	342	20,600
9	50	205	322	404	224	505	167	4,200	1,890	13,400	314	21,400
10	46	190	364	453	224	448	161	20,100	2,630	12,700	299	25,600
11	46	187	368	381	214	426	145	35,500	4,340	e 11,400	286	24,900
12	48	178	338	334	214	404	145	33,300	3,530	e 9,640	560	e 17,200
13	3,590	164	322	289	211	386	138	30,200	6,560	e 8,560	2,980	e 4,760
14	11,100	156	310	266	205	381	136	33,600	e 6,420	5,130	2,070	2,510
15	18,500	148	279	224	281	364	133	e 24,100	4,640	1,160	2,980	2,350
16	16,900	148	256	232	2,920	342	133	e 3,920	2,120	859	1,660	1,980
17	5,760	158	240	6,010	2,820	326	131	3,110	1,480	768	1,240	1,520
18	1,660	187	237	6,330	6,990	310	152	2,520	1,020	689	985	1,240
19	1,150	1,200	230	1,410	11,900	292	3,500	2,260	807	635	1,530	1,090
20	677	5,070	234	473	3,820	289	1,180	1,600	701	665	1,630	985
21	530	2,520	246	334	2,010	289	1,130	1,400	641	618	1,190	939
22	559	e 1,810	237	2,680	2,740	279	727	1,160	596	665	762	3,280
23	2,260	e 1,090	772	5,210	2,400	269	435	985	570	1,110	520	6,300
24	1,050	e 712	957	1,660	1,690	269	314	859	1,160	1,980	435	6,160
25	11,600	788	394	1,020	1,280	262	246	768	1,520	755	372	3,800
26	15,400	534	330	635	1,730	250	205	1,020	1,350	641	359	2,350
27	e 8,060	430	299	510	1,860	230	178	8,000	1,020	575	330	1,980
28	e 1,920	350	286	444	1,400	221	1,030	4,320	1,070	535	314	1,860
29	e 1,150	299	275	381	1,060	214	6,000	1,900	8,630	520	299	3,740
30	e 665	282	259	326	-------	214	4,340	4,110	13,800	520	292	5,040
31	e 462	-------	240	296	-------	214	-------	14,200	-------	545	364	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,500	46	3,340	205,000
November	5,070	148	644	38,300
December	1,010	230	380	23,400
January	6,330	208	1,090	67,000
February	11,900	205	1,660	95,500
March	3,930	214	610	37,500
April	6,000	131	741	44,100
May	35,500	768	8,490	522,000
June	14,400	570	3,160	188,000
July	32,500	520	7,840	482,000
August	2,980	286	814	50,100
September	25,600	503	7,920	471,000
The year	35,500	46	3,070	2,220,000

e Discharge partly estimated.

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, about 11,800 of which is probably non-contributing.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 38,400 second-feet May 12 (gage height, 18.2 feet); minimum, 54 second-feet Oct. 12 (gage height, 5.35 feet). 1923–32: Maximum discharge, 69,900 second-feet Oct. 17, 1930 (gage height, 22.53 feet); minimum, 20 second-feet Aug. 5, 1930 (gage height, 4.93 feet). Maximum stage known, 28.4 feet April 1900.

REMARKS.—Records good except those estimated, which is fair. Numerous small diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	594	396	178	314	1,170	309	7,070	16,800	10,800	508	383
2	66	492	1,050	178	292	1,000	292	10,200	6,800	13,800	448	1,360
3	66	412	943	175	275	1,210	275	5,080	2,600	24,500	426	10,400
4	67	364	554	197	259	1,770	264	2,200	1,770		352	18,700
5	66	320	500	341	250	3,740	259	1,540	1,540		352	22,300
6	66	292	448	990	235	3,860	259	1,150	1,380	[a] 21,000	627	11,000
7	64	264	383	470	230	1,540	254	4,250	1,150		448	9,040
8	62	230	345	441	216	1,000	250	5,100	1,680		339	17,300
9	60	205	309	462	205	825	235	6,500	3,040		303	20,800
10	59	193	292	377	201	[a] 720	230	22,200	1,790	13,400	275	24,400
11	57	178	314	448	201	[a] 678	226	31,000	4,290	12,400	259	25,300
12	59	175	333	412	197	[a] 636	212	34,800	4,140	11,800	245	20,200
13	62	169	320	333	189	602	212	29,200	5,310	10,800	1,430	8,490
14	8,570	166	292	281	189	586	201	31,400	7,380	8,640	2,680	3,180
15	15,600	159	270	250	197	570	197	30,600	6,910	2,220	2,660	2,470
16	18,500	150	254	230	914	546	193	8,640	2,890	1,130	2,600	2,260
17	9,670	162	245	2,030	4,590	515	189	4,600	1,890	930	1,400	1,890
18	2,540	166	226	8,000	4,880	478	239	3,070	1,400	807	1,340	1,490
19	1,600	172	221	3,400	14,000	455	2,600	2,400	[a] 1,090	695	1,080	1,320
20	1,120	3,970	221	1,050	6,920	426	2,890	2,200	[a] 890	627	2,060	1,180
21	780	3,040	221	578	2,760	419	1,190	1,950	780	661	1,460	1,090
22	586	2,010	226	522	2,200	397	1,290	1,710	712	636	1,220	1,320
23	2,100	1,620	221	7,080	3,160	397	861	1,490	670	661	816	6,470
24	1,170	1,050	891	2,440	2,140	383	594	1,360	636	2,090	586	6,880
25	6,340	861	721	1,460	1,660	377	462	1,290	1,570	1,260	478	5,590
26	15,000	852	370	960	1,390	377	377	1,170	1,320	780	405	2,910
27	11,900	602	298	704	2,070	352	309	4,810	1,460	618	383	2,330
28	3,060	492	259	578	1,770	320	538	7,150	1,070	530	352	2,070
29	1,540	390	245	485	1,410	309	4,040	3,110	3,800	485	326	2,400
30	1,060	333	216	405	-------	298	5,180	2,660	14,300	478	303	6,330
31	772	-------	201	339	-------	298	-------	10,700	-------	470	298	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,500	57	3,310	204,000
November	3,970	150	669	39,800
December	1,050	201	380	23,400
January	8,000	175	1,150	70,700
February	14,000	189	1,840	106,000
March	3,860	298	847	52,000
April	5,180	189	821	48,900
May	34,800	1,150	9,050	556,000
June	16,800	636	3,370	201,000
July	-------	470	7,970	490,000
August	2,680	245	854	52,500
September	25,300	383	8,030	478,000
The year	34,800	57	3,200	2,320,000

[a] Estimated.

COLORADO RIVER AT AUSTIN, TEX.

LOCATION.—Water-stage recorder at Congress Avenue Viaduct, in Austin, Travis County. Zero of gage is 421.77 feet above mean sea level.

DRAINAGE AREA.—38,200 square miles, about 11,800 of which is probably noncontributing.

RECORDS AVAILABLE.—February 1898 to September 1932.

EXTREMES.—Maximum discharge during year, 77,500 second-feet Sept. 3 (gage height, 19.00 feet); minimum, 84 second-feet Oct. 1 (gage height, −0.36 foot).

1898–1932: 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 excellent except those partly estimated, Oct. 17–19, Feb. 17–27, July 17–19, which are good. About 36,000 acres irrigated above station. Low-water flow affected by diversions by city of Austin pumping plant.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	1,660	854	594	929	2,750	627	6,990	5,000	7,430	782	660
2	112	1,310	782	550	842	2,460	616	8,190	15,800	12,500	748	2,250
3	105	1,050	737	572	794	2,350	605	9,460	12,300	40,000	704	61,800
4	112	878	796	721	726	3,270	616	9,060	5,700	54,800	759	41,000
5	126	759	1,390	955	704	5,770	616	4,660	3,380	24,400	759	24,200
6	112	660	1,240	2,140	649	15,400	583	2,800	2,460	24,600	704	25,800
7	140	594	1,110	2,170	616	9,340	605	2,040	2,080	30,600	627	20,000
8	175	550	1,040	1,610	605	5,680	550	1,720	1,950	31,900	572	21,800
9	126	500	1,020	1,540	561	3,500	533	6,200	1,740	22,100	671	20,900
10	126	450	1,390	1,170	561	2,580	530	7,320	1,930	15,600	682	23,000
11	140	434	1,270	1,100	594	2,080	460	20,700	3,280	14,200	616	23,400
12	189	402	1,010	994	540	1,830	426	31,500	2,460	13,600	572	25,400
13	196	362	878	994	530	1,660	418	36,200	4,550	12,500	530	22,600
14	196	362	782	1,200	530	1,540	426	30,600	4,440	11,800	627	15,300
15	316	338	737	1,140	550	1,460	410	31,800	7,690	10,800	655	8,110
16	10,400	314	748	994	520	1,420	394	32,800	8,190	7,210	2,580	5,000
17	18,100	330	715	903	583	1,290	434	16,800	6,020	3,640	2,880	4,040
18	13,900	330	671	830	870	1,190	480	7,430	3,320	2,170	3,080	3,500
19	6,750	306	682	2,350	6,130	1,120	480	5,580	2,350	1,740	2,080	3,080
20	3,110	306	649	6,520	15,500	1,020	450	4,440	1,870	1,890	1,830	2,650
21	2,040	290	649	3,770	13,000	1,020	1,930	3,640	1,540	1,660	1,850	2,350
22	1,610	1,750	638	2,080	7,200	818	3,090	3,120	1,260	1,320	2,580	2,150
23	1,270	3,830	660	1,390	4,850	806	1,960	2,680	1,110	1,160	2,600	1,960
24	1,020	6,200	682	1,620	4,310	759	1,540	2,300	994	1,110	1,830	2,550
25	1,340	3,350	638	6,040	4,720	748	1,410	2,000	916	1,040	1,420	9,840
26	1,950	2,000	594	3,500	3,640	748	1,050	1,810	866	1,360	1,110	10,800
27	10,400	1,460	921	2,300	3,080	748	830	1,650	1,030	1,980	903	8,360
28	14,200	1,270	1,040	1,780	2,620	660	818	1,580	1,600	1,440	830	6,520
29	7,960	1,140	818	1,480	2,920	671	794	6,050	1,540	1,140	748	5,280
30	3,640	942	726	1,190	-------	704	3,030	5,840	1,420	968	726	4,310
31	2,300	-------	638	1,020	-------	660	-------	4,040	-------	842	704	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,100	105	3,300	203,000
November	6,200	290	1,140	67,800
December	1,390	594	855	52,600
January	6,520	550	1,780	109,000
February	15,500	520	2,750	158,000
March	15,400	660	2,450	151,000
April	3,090	394	890	53,000
May	36,200	1,580	10,000	615,000
June	15,800	866	3,630	216,000
July	54,800	842	11,500	707,000
August	3,080	530	1,220	75,000
September	61,800	660	13,600	809,000
The year	61,800	105	4,430	3,220,000

EVAPORATION AT AUSTIN, TEX.

LOCATION.—In State Capitol grounds at Austin, Travis County.
RECORDS AVAILABLE.—April 1916 to September 1932.
EQUIPMENT.—One land evaporation pan with auxuliary equipment consisting of hook gage, rain gage, anemometer, and maximum and minimum thermometers.
REMARKS.—Records fair. Observations made daily at 8 a.m. Computations made by United States Weather Bureau.

Evaporation at Austin, Tex., 1931–32

Month	Temperature (° F.)			Mean relative humidity (percent)	Average wind velocity (miles per hour)	Rainfall (inches)	Evaporation (inches)
	Mean maximum	Mean minimum	Mean				
October	89.9	64.5	77.2	83	1.0	0.18	6.426
November	75.3	53.2	64.2	84	1.2	.99	3.112
December	61.9	41.8	51.8	88	.9	4.34	1.651
January	62.9	41.1	52.0	86	1.1	6.15	2.456
February	70.2	48.1	59.2	85	1.2	3.00	2.882
March	67.9	42.5	55.2	78	2.0	2.01	4.887
April	81.5	56.8	69.2	81	1.6	2.62	6.363
May	85.6	63.4	74.5	94	.9	1.01	6.911
June	93.7	72.1	82.9	85	1.4	1.79	8.356
July	97.6	74.3	86.0	83	1.0	1.97	9.426
August	95.0	73.5	84.2	88	.9	4.78	7.630
September	86.5	67.5	77.0	88	.4	5.50	5.032
The year	80.7	58.2	69.4	85	1.1	34.34	65.132

NOTE.—Relative humidity values are for regular United States Weather Bureau station located about 2,000 feet away, 129 feet above ground, and 82 feet above evaporation pan.

COLORADO RIVER AT SMITHVILLE, TEX.

LOCATION.—Water-stage recorder 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, about 11,800 of which is probably noncontributing.

RECORDS AVAILABLE.—July 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 66,400 second-feet Sept. 4 (gage height, 21.08 feet); minimum, 173 second-feet Oct. 13 (gage height, 1.12 feet).

1930–32: Maximum discharge, 67,500 second-feet Oct. 9, 19, 1930 (gage height, 21.40 feet); minimum, 111 second-feet Aug. 17, 18, 1930 (gage height, 0.74 foot).

Maximum stage known, about 47.4 feet in December 1913.

REMARKS.—Records excellent except those estimated or interpolated, which are good. Diversion for irrigation and municipal use above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	222	2,820	1,240	639	1,520	2,760	990	2,030	4,310	1,570	1,160	791
2	214	2,220	1,020	568	1,420	2,940	892	5,200	4,540	4,970	1,010	744
3	206	1,720	885	546	1,240	7,830	840	5,300	14,300	12,600	945	6,400
4	206	1,420	784	7,050	1,110	4,290	812	7,880	11,300	41,900	938	55,200
5	206	1,200	724	17,800	1,030	3,620	770	8,000	6,010	48,800	885	44,400
6	203	1,020	833	4,460	945	7,610	750	5,020	3,920	23,400	892	29,000
7	199	922	1,380	1,670	885	13,100	724	3,400	3,140	27,400	855	31,200
8	206	819	1,420	2,340	870	8,380	718	2,700	2,580	33,400	791	21,500
9	206	738	1,200	1,770	812	5,770	705	2,220	2,160	31,000	738	24,200
10	195	681	1,070	1,570	777	4,180	663	4,450	2,490	20,500	681	23,100
11	[a] 189	633	1,110	3,690	744	3,400	633	6,340	2,580	16,000	724	24,500
12	[a] 183	603	1,380	9,450	712	2,880	627	19,900	3,080	14,600	731	25,600
13	177	563	1,200	2,410	731	2,580	585	29,400	2,820	13,500	687	26,600
14	180	536	990	1,280	712	[a] 2,400	552	32,500	3,600	12,700	1,150	23,000
15	188	502	840	1,110	687	[a] 2,220	546	29,800	4,310	12,000	1,280	15,300
16	188	480	784	1,280	669	2,160	541	34,400	6,130	10,500	900	8,800
17	5,140	465	777	1,200	687	2,040	530	32,400	7,280	7,010	1,270	5,940
18	15,100	435	750	1,420	681	1,920	519	16,000	5,920	4,320	2,520	4,720
19	11,400	430	705	998	3,200	1,770	514	8,180	3,860	3,400	3,140	4,180
20	6,450	425	675	890	9,770	1,670	497	6,430	2,880	[a] 2,820	2,700	3,790
21	3,660	407	663	5,000	19,600	1,570	486	5,150	2,340		2,280	3,270
22	2,640	394	627	4,050	12,300	1,420	506	4,310	1,920	[a]2,000	2,040	2,880
23	2,100	384	621	2,760	7,040	1,380	2,800	3,920	1,670		2,220	2,640
24	1,670	2,730	1,160	1,920	5,000	1,200	2,460	3,400	1,420		2,700	2,520
25	1,380	5,000	770	1,470	4,310	1,160	1,870	3,080	1,280	1,520	2,160	2,520
26	1,160	3,530	645	4,870	4,580	1,110	1,720	2,700	1,160	1,420	1,770	8,440
27	1,820	2,460	591	3,980	3,920	1,070	1,470	[a] 2,460	1,030	1,330	1,420	10,500
28	7,670	1,820	563	2,940	3,400	1,030	1,640	[a] 2,100	960	1,880	1,200	7,990
29	12,500	1,420	833	2,460	2,880	990	4,050	[a] 1,820	1,390	1,870	998	6,600
30	7,140	1,280	885	2,280	-------	930	1,960	4,180	1,620	1,520	922	5,300
31	3,920	-------	731	1,770	-------	938	-------	5,880	-------	1,280	840	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	15,100	177	2,800	172,000
November	5,000	384	1,270	75,600
December	1,420	563	899	55,300
January	17,800	546	3,090	190,000
February	19,600	669	3,180	183,000
March	13,100	930	3,110	191,000
April	4,050	486	1,080	64,300
May	34,400	1,820	9,700	596,000
June	14,300	960	3,730	222,000
July	48,800	1,280	11,700	719,000
August	3,140	681	1,370	84,200
September	55,200	744	14,400	857,000
The year	55,200	177	4,690	3,410,000

[a] Estimated or interpolated.

COLORADO RIVER NEAR EAGLE LAKE, TEX.

LOCATION.—Water-stage recorder at Lakeside Irrigation Co.'s pumping plant 1 mile below San Antonio & Aransas Pass Railway bridge and 5 miles southwest of Eagle Lake, Colorado County.

DRAINAGE AREA.—40,900 square miles, about 11,800 of which is probably noncontributing.

RECORDS AVAILABLE.—September 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 50,200 second-feet Jan. 5; maximum height, 18.63 feet Sept. 6; minimum discharge, 244 second-feet Oct. 18 (gage height 1.35 feet).

1930–32: Maximum discharge, 57,500 second-feet Oct. 21, 1930 (gage height; 20.48 feet); minimum not determined.

Maximum stage known, about 32.0 feet in December 1913.

REMARKS.—Records good. Discharge tables include flow of Lakeside Irrigation Co.'s canal. Diversion above station for irrigation and municipal uses.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	5,020	1,510	980	2,370	3,580	a 1,080	3,350	5,270	1,320	1,550	1,070
2	301	3,500	1,430	910	2,020	3,280	a 1,080	1,960	4,940	1,540	1,370	980
3	301	2,650	1,380	850	1,900	9,330	a 1,060	2,160	3,980	1,700	1,230	1,080
4	301	2,090	1,250	1,020	1,840	10,500	a 1,020	4,860	10,300	12,300	1,080	8,340
5	301	1,720	1,130	39,700	a 1,540	7,730	a 990	5,510	11,400	34,500	1,030	42,400
6	287	1,480	1,090	29,600	a 1,390	5,030	a 960	7,800	7,120	39,100	931	41,800
7	301	1,330	1,090	8,540	a 1,280	7,100	a 910	6,000	4,970	22,100	879	29,700
8	294	1,190	1,160	3,660	a 1,220	12,700	a 880	4,220	3,580	23,900	906	29,700
9	274	1,110	1,460	2,650	1,160	9,780	a 860	3,070	2,880	29,100	953	21,500
10	274	1,030	1,520	2,720	1,120	7,020	a 810	2,440	2,540	28,700	889	22,000
11	274	960	1,360	3,040	1,070	5,340	a 790	2,190	2,530	20,200	816	22,000
12	268	900	1,280	17,700	1,010	4,060	a 780	4,990	2,600	15,700	752	23,400
13	268	860	1,250	13,800	980	3,280	a 771	18,600	2,530	14,300	731	24,400
14	262	810	1,350	5,940	1,040	2,790	a 752	27,500	3,020	13,300	1,580	25,400
15	262	780	1,300	3,140	1,000	2,580	714	29,500	2,630	12,300	2,160	24,100
16	262	742	1,180	2,230	960	2,370	695	29,000	3,670	11,900	2,790	15,500
17	256	714	1,100	2,300	920	2,230	676	32,400	4,470	10,900	1,880	10,500
18	487	667	1,300	2,370	1,080	2,090	667	29,000	6,390	8,580	1,230	7,200
19	11,800	648	1,170	2,020	1,430	1,960	667	15,300	6,580	6,110	1,160	5,660
20	11,200	639	1,070	1,900	7,570	1,900	648	9,000	4,730	4,560	3,240	4,860
21	7,430	621	1,040	a 1,600	35,900	1,840	639	6,920	3,380	3,950	3,280	4,220
22	4,860	611	1,030	4,770	27,500	1,660	a 621	5,870	2,680	3,020	2,860	3,660
23	3,420	593	970	12,800	13,800	1,600	a 611	4,810	a 2,200	2,610	2,650	3,210
24	2,580	566	1,080	5,640	8,670	a 1,530	a 602	4,120		2,340	2,160	3,070
25	2,020	520	2,230	3,500	6,300	a 1,530	a 1,780	3,510		a 2,100	2,020	3,070
26	1,720	2,530	1,900	7,520	5,340	a 1,530	2,020	3,380	1,600	a 1,820	2,440	3,420
27	1,660	4,060	1,200	6,480	5,020	a 1,510	1,660	2,890		a 1,720	2,090	5,460
28	1,660	3,070	970	5,660	4,860	a 1,420	1,840	2,500		a 1,480	1,780	14,500
29	3,560	2,230	890	4,060	4,220	a 1,320	2,680	2,240		1,400	1,530	10,200
30	11,500	1,720	840	3,210	-------	a 1,220	2,090	2,020	a 1,140	1,760	1,340	a 7,800
31	8,420	-------	860	2,650	-------	a 1,100	-------	2,010	-------	1,860	1,180	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,800	256	2,490	153,000
November	5,020	520	1,510	89,800
December	2,230	840	1,240	76,200
January	39,700	850	6,550	403,000
February	35,900	920	4,980	286,000
March	12,700	1,100	3,900	240,000
April	2,680	602	1,050	62,500
May	32,400	1,960	9,000	553,000
June	11,400	1,140	3,840	228,000
July	39,100	1,320	10,800	664,000
August	3,280	731	1,630	100,000
September	42,400	980	14,000	833,000
The year	42,400	256	5,090	3,690,000

a Partly estimated.

ELM CREEK AT BALLINGER, TEX.

LOCATION.—Water-stage recorder 1,000 feet above city water-supply storage dam in Ballinger, Runnels County, and 1¼ miles above confluence with Colorado River. Zero of gage is 1,618.36 feet above mean sea level.

DRAINAGE AREA.—458 square miles.

RECORDS AVAILABLE.—April to September 1932.

EXTREMES.—Maximum stage during period, 9.40 feet July 3 (discharge not determined); no flow at times.

REMARKS.—Records below 1,500 second-feet good except for very low stages, fair from 1,500 to 15,000 second-feet, and poor above. Discharge for part of days July 3, 4 based on extension of rating curve and subject to considerable error.

Discharge, in second-feet, 1932

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	0	3.7	21	285	5.0	762	16	0	61	3.7	11	14	21
2	0	1.9	106	77	3.7	398	17	0	25	1.9	11	17	17
3	0	.7	21	14,200	3.7	61	18	0	11	1.9	11	8.7	17
4	0	.1	6.6	4,150	2.7	25	19	0	6.6	.9	11	6.6	14
5	0	0	5.0	152	2.7	25	20	0	5.0	.7	8.7	5.0	14
6	0	0	3.7	75	1.9	1,510	21	0	3.7	105	8.7	3.7	17
7	0	55	5.0	61	1.2	5,360	22	0	3.7	36	8.7	3.7	14
8	0	3,640	5.0	42	12	655	23	0	2.7	11	6.6	2.7	39
9	0	408	398	30	185	182	24	0	20	5.0	8.7	2.7	25
10	0	4,740	833	25	36	98	25	0	2,870	2.7	6.6	2.7	25
11	0	781	1,920	21	21	54	26	0	463	1.9	6.6	2.7	36
12	0	98	245	17	8.7	42	27	0	61	5,030	5.0	2.7	25
13	0	30	42	17	6.6	30	28	16	25	1,950	5.0	2.7	17
14	0	14	14	14	5.0	25	29	8.7	1,330	124	5.0	3.7	11
15	0	211	8.7	11	21	21	30	8.7	348	48	5.0	3.7	11
							31	------	48	-------	5.0	5.0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April	16	0	1.11	66
May	4,740	0	492	30,300
June	5,030	.7	365	21,700
July	14,200	5.0	623	38,300
August	185	1.2	13.0	799
September	5,360	11	318	18,900
The period				110,000

SOUTH CONCHO RIVER AT CHRISTOVAL, TEX.

LOCATION.—Water-stage recorder at Panhandle & Santa Fe Railway bridge in Christoval, Tom Green County. Zero of gage is 2,010.2 feet above mean sea level (railway datum).

DRAINAGE AREA.—434 square miles.

RECORDS AVAILABLE.—February 1930 to September 1932.

EXTREMES.—Maximum stage during year, 11.18 feet July 3 (discharge not determined); minimum discharge, 8.6 second-feet Oct. 21, 22, Apr. 15–17, 20–22.

1930–32: Maximum stage, 20.20 feet Oct. 13, 1930 (discharge not determined); minimum discharge, 2.8 second-feet Sept. 27–28, 1930 (gage height, 0.73 foot).

Flood of Aug. 6, 1906, reached a stage of about 20.0 feet, but discharge was probably greater than flood of Oct. 13, 1930, because railroad dump did not confine flow in 1906.

REMARKS.—Records good except those for medium discharges, which are fair. Diversons for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	10	11	17	18	16	12	12	32	20	15	388
2	11	10	11	17	19	17	12	12	31	20	56	181
3	11	10	11	18	17	17	12	11	31	-------	34	25
4	11	10	11	20	17	17	12	11	32	84	17	23
5	11	9.5	11	21	17	17	12	11	31	28	19	27
6	11	10	11	20	17	17	12	11	28	24	16	47
7	10	10	11	19	17	18	13	11	27	23	12	39
8	10	10	11	19	17	18	13	10	26	23	13	35
9	10	10	11	19	13	18	13	11	26	23	13	33
10	10	10	12	20	10	18	14	-------	26	23	13	33
11	10	10	11	19	9.5	19	14	288	26	28	19	33
12	10	10	11	19	9.5	19	14	160	26	24	18	34
13	10	10	11	19	11	18	14	39	26	23	18	35
14	10	10	10	19	11	18	12	30	25	22	19	36
15	10	10	10	16	13	18	8.6	31	25	22	15	33
16	10	10	10	17	14	17	8.6	35	25	22	14	35
17	10	10	10	18	14	17	8.6	35	24	22	14	37
18	9.5	10	10	22	13	17	9.5	33	24	21	14	39
19	9.5	10	10	22	13	17	9.5	33	24	20	14	37
20	9.5	10	10	22	13	17	8.6	34	24	19	12	39
21	8.6	10	10	22	14	17	8.6	34	28	19	12	39
22	8.6	10	12	19	15	16	8.6	34	23	19	12	42
23	9.5	10	12	18	15	16	9.5	34	22	19	13	41
24	10	10	16	18	16	12	9.5	34	22	19	11	52
25	9.5	10	16	18	16	12	9.5	33	22	17	10	59
26	9.5	10	18	18	16	12	9.5	33	22	17	10	45
27	9.5	10	18	18	15	12	9.5	33	26	17	11	46
28	9.5	10	18	18	16	12	30	34	20	17	11	47
29	10	10	19	18	16	12	17	35	20	16	11	47
30	10	10	20	17	-------	12	15	33	20	17	12	48
31	10	-------	20	18	-------	12	-------	33	-------	16	17	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	8.6	9.94	611
November	10	9.5	9.98	594
December	20	10	12.7	781
January	22	16	18.9	1,160
February	19	9.5	14.6	840
March	19	12	16.0	984
April	30	8.6	12.0	714
May	----------	10	----------	----------
June	32	20	25.5	1,520
July	----------	16	----------	----------
August	56	10	16.0	984
September	388	23	55.2	3,280

NOTE.—Stage was above limit for which rating curve is defined on May 10, July 3.

SOUTH CONCHO RIVER AT SAN ANGELO, TEX.

LOCATION.—Water-stage recorder at highway bridge half a mile south of San Angelo, Tom Green County, and 1 mile above confluence with North Concho River.

DRAINAGE AREA.—2,690 square miles, about 152 of which is noncontributing.

RECORDS AVAILABLE.—October 1931 to September 1932.

EXTREMES.—Maximum stage during year, 10.98 feet May 10 (discharge not determined); no flow at times.

REMARKS.—Records good except those for high-water periods, which are fair. Discharge estimated Nov. 19–24, Dec. 8–31, May 4–9, July 7–12. Diversions above station for irrigation, municipal, and power uses. Flow partly regulated by reservoirs above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0	0.5	11	24	60	2.5	86	219	108	31	a 1,730
2	.2	0	.5	10	35	20	4.0	62	201	108	33	a 762
3	.1	0	.5	22	31	43	15	37	210	10,600	31	465
4	.1	0	.5	57	18	35	9.2		219	1,690	24	109
5	0	0	.7	115	42	20	4.5		134	415	4.5	210
6	0	0	.9	78	51	71	2.0	105	14	264	1.0	a 219
7	0	0	1.7	54	32	24	3.0		8.1		.8	264
8	0	0		58	20	7.0	2.0		35		.9	3,020
9	0	0		44	31	12	1.3		161		a 1.6	381
10	0	.2		73	40	22	1.2	a 12,800	154	175	a 17	167
11	0	22		12	50	31	.9	11,400	154		a 65	128
12	.2	1.9		82	15	35	.8	2,790	161		69	121
13	.7	.9		15	10	56	.8	705	174	35	69	121
14	.7	.6		18	8.1	38	.8	1,180	154	35	16	121
15	.7	.5		11	24	45	.8	183	154	35	10	121
16	.7	.6		22	51	67	.8	167	161	35	5.5	121
17	.6	1.0		29	37	12	.8	255	148	35	3.5	121
18	.6	a .8		26	59	6.5	.9	183	141	33	2.0	62
19	.5		5.7	50	54	29	.9	205	22	33	a 1.8	43
20	.5			80	48	45	.9	201	9.2	54	a 1.6	43
21	.4	.5		26	65	46	.9	161	20	43	a 1.4	71
22	.2			16	115	5.5	.8	148	10	37	1.0	2,480
23	.3			28	82	4.0	.9	154	10	37	.8	234
24	.2			24	63	10	1.0	154	14	37	.8	87
25	.1	a .2		26	43	20	1.0	2,710	69	35	.9	246
26	.1	.2		61	29	20	.9	255	95	31	1.0	269
27	.1	.2		45	28	7.0	.8	246	204	31	1.6	108
28	0	.2		43	29	3.5	1,490	246	288	31	4.5	115
29	0	.2		24	37	4.0	415	3,690	174	33	6.0	167
30	0	.3		28	------	15	183	445	134	33	4.5	183
31	0	------		22	------	5.5	------	312	------	33	52	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0	0.23	14
November	22	0	1.09	65
December	------	------	4.58	282
January	115	10	39.0	2,400
February	115	8.1	40.4	2,320
March	71	3.5	26.4	1,620
April	1,490	.8	71.6	4,260
May	12,800	------	1,270	78,100
June	288	8.1	122	7,260
July	10,600	31	481	29,600
August	69	.8	14.9	916
September	3,020	43	410	24,400
The year	12,800	0	208	151,000

a Partly estimated.

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. Zero of gage is 1,776.8 feet above mean sea level.

DRAINAGE AREA.—4,490 square miles, about 275 of which is probably non-contributing.

RECORDS AVAILABLE.—September 1915 to September 1932.

EXTREMES.—Maximum discharge during year, about 66,600 second-feet May 10 (gage height, 29.90 feet); minimum, 2.1 second-feet Oct. 10 (gage height 0.53 foot).

1915–32: Maximum discharge, about 139,000 second-feet Apr. 26, 1932 (gage height, 36.8 feet); no flow Nov. 29, 1921.

REMARKS.—Records good except those for high-water periods, which are fair. Discharge estimated July 22 to Aug. 29. Some water diverted above station for municipal and irrigation uses. Low flow affected by diversions and storage above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	4.7	7.0	17	34	58	7.7	163	332	254		3,560
2	3.6	4.4	5.2	11.4	44	32	6.3	152	304	192		1,060
3	3.4	4.0	4.7	22	42	42	13	46	290	8,490		524
4	3.2	3.8	4.4	91	26	44	11	27	282	1,710		139
5	3.2	3.4	3.4	117	40	32	8.0	24	198	456		276
6	2.8	3.3	3.6	67	50	68	6.7	36	45	356		684
7	2.6	3.3	5.4	51	30	34	6.5	516	44	643		2,230
8	2.5	3.0	5.6	54	25	13	6.5	2,350	58	265		3,260
9	2.3	2.9	5.2	43	30	14	6.0	3,400	204	251		812
10	2.2	3.4	5.2	69	49	25	5.6	29,300	201	207		387
11	6.0	25	5.2	21	62	34	5.2	16,200	198	154	28	224
12	9.5	9.7	4.7	93	20	37	4.5	3,370	1,180	144		185
13	4.9	7.4	5.2	28	14	58	4.4	820	397	52		172
14	4.9	6.3	5.4	18	12	47	4.2	1,190	234	46		166
15	4.7	5.6	5.4	20	29	46	3.9	260	208	44		160
16	4.7	8.3	5.6	31	52	72	3.8	265	208	43		154
17	4.7	168	5.6	38	55	22	4.2	349	198	42		152
18	4.5	37	4.7	38	83	13	4.2	279	192	38		92
19	4.4	34	4.7	55	59	30	3.9	276	48	38		62
20	3.9	20	4.7	84	51	45	4.4	279	26	60		60
21	3.6	12	5.2	36	122	45	4.2	227	104	54		402
22	8.7	8.0	5.2	27	188	11	4.2	201	68			2,920
23	790	6.5	4.5	37	134	8.4	5.4	198	38			420
24	399	5.8	14	32	90	12	4.7	292	34			127
25	104	5.2	9.3	36	63	22	4.4	3,900	88			301
26	34	4.4	5.8	58	51	22	4.2	412	122	28	4.8	335
27	19	4.0	6.0	42	46	12	3.6	307	289			140
28	5.6	3.8	10	41	44	8.0	1,990	604	342			149
29	8.4	3.4	36	29	46	6.7	1,050	7,930	1,450			211
30	6.5	6.5	35	36	------	14	353	1,190	687		5.4	230
31	5.4	------	25	32	------	8.4	---------	514	------		687	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	790	2.2	47.3	2,910
November	168	2.9	13.9	827
December	36	3.4	8.29	510
January	117	11	44.3	2,720
February	188	12	54.9	3,160
March	72	6.7	30.2	1,860
April	1,990	3.6	118	7,020
May	29,300	24	2,420	149,000
June	1,450	26	269	16,000
July	8,490	----------	446	27,400
August	687	----------	42.5	2,610
September	3,560	60	653	38,900
The year	29,300	2.2	348	253,000

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, about 275 of which is probably non-contributing.

RECORDS AVAILABLE.—September 1915 to September 1932.

EXTREMES.—Maximum discharge during year, about 40,800 second-feet May 11 (gage height, 19.50 feet); no flow Oct. 1–10.

1915–32: Maximum stage, 27.5 feet Apr. 27, 1922 (discharge not determined); no flow at times.

REMARKS.—Records good except those for high-water periods, which are fair. Discharge estimated Sept. 25–30. Diversions above station for irrigation and municipal use. Low-water flow materially affected by diversions and storage above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	8.8	23	31	31	51	11	253	460	454	34	11,500
2	0	7.0	15	30	34	51	12	140	338	724	33	3,840
3	0	7.0	14	23	34	56	13	122	306	3,530	34	1,170
4	0	5.7	14	26	42	43	12	78	293	7,130	29	430
5	0	5.1	11	58	38	45	10	48	281	682	24	198
6	0	4.5	8.8	122	31	42	10	36	211	551	24	541
7	0	3.9	8.8	85	33	38	14	598	93	752	22	2,420
8	0	3.6	8.8	65	43	65	12	1,680	70	382	17	3,060
9	0	3.3	8.8	53	29	40	9.4	5,550	63	269	14	1,540
10	0	3.0	7.6	56	29	26	7.6	13,700	172	250	9.4	684
11	.6	3.0	8.2	51	26	20	5.1	26,700	194	204	10	334
12	35	3.0	8.8	63	40	24	3.9	9,300	578	157	59	225
13	57	3.0	8.8	38	45	35	3.6	1,040	1,090	146	65	183
14	27	2.4	8.2	76	28	42	3.3	1,460	334	91	67	161
15	14	7.0	8.8	41	29	61	2.7	596	236	63	65	151
16	9.4	8.8	8.8	26	24	53	2.7	316	204	57	39	146
17	7.0	14	8.8	23	22	56	3.0	281	197	54	26	140
18	5.1	98	9.4	26	48	70	2.7	352	186	53	20	138
19	3.9	84	8.8	35	67	34	2.7	265	180	49	17	107
20	3.6	40	9.4	38	72	21	2.7	281	102	43	15	72
21	3.3	35	9.4	60	61	24	2.4	265	111	69	14	510
22	4.5	29	9.4	81	114	46	2.4	214	147	76	13	2,960
23	8.8	21	10	48	180	48	2.7	194	148	59	11	1,640
24	733	15	8.2	34	132	27	2.7	186	78	51	9.4	269
25	285	13	8.2	30	117	19	2.4	3,780	51	49	8.2	
26	124	8.8	8.2	33	87	15	2.0	1,170	58	48	7.6	
27	66	8.2	12	34	68	16	1.4	403	584	45	6.3	226
28	38	7.6	16	51	57	24	861	306	505	40	9.1	
29	29	7.0	12	46	53	23	2,260	9,300	733	38	5.7	
30	18	12	10	40	-------	21	549	3,380	1,460	35	3.6	
31	12	-------	26	33	-------	15	-------	928	-------	34	41	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	733	0	47.9	2,950
November	98	2.4	15.7	934
December	26	7.6	10.9	670
January	122	23	47	2,890
February	180	22	55.7	3,200
March	70	15	37.1	2,280
April	2,260	1.4	128	7,620
May	26,700	36	2,670	164,000
June	1,460	51	315	18,700
July	7,130	34	522	32,100
August	67	3.6	24.3	1,490
September	11,500	72	1,130	67,200
The year	26,700	0	419	304,000

MIDDLE CONCHO RIVER NEAR TANKERSLY, TEX.

LOCATION.—Water-stage recorder at Twelvemile Bridge, 3 miles northeast of Tankersly, Tom Green County, and 7½ miles above confluence with Spring Creek. Zero of gage is 1,919.5 feet above mean sea level.

DRAINAGE AREA.—1,280 square miles, about 152 of which is probably noncontributing.

RECORDS AVAILABLE.—February 1930 to September 1932.

EXTREMES.—Maximum discharge during period ending Sept. 30, 1930, 1,940 second-feet May 13 (gage height, 7.80 feet).

Maximum discharge during year ending Sept. 30, 1931, 8,830 second-feet Oct. 14 (gage height, 18.30 feet).

Maximum discharge during year ending Sept. 30, 1932, 12,500 second-feet May 11 (gage height, 22.45 feet); no flow at times.

REMARKS.—Records good. Small diversions for irrigation above station affect low flow.

Daily discharge, in second-feet, for high-water periods in 1930 and 1931

1930:		1930:	
May 13	202	Oct. 14	4,350
May 14	79	Oct. 15	260
May 18	128	1931:	
Oct. 12	202	Apr. 18	199
Oct. 13	1,520	July 16	150

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

Discharge, in second-feet, 1931–32

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	0	0.7	137	9.4	0	96	16	0	90	14	5.0	3.3	22
2	0	0	88	9.4	0	50	17	0	119	11	4.2	2.4	19
3	0	0	59	1,410	0	10	18	0	48	9.4	4.5	1.5	18
4	0	0	41	1,580	0	6.2	19	0	32	8.4	2.1	2.4	17
5	0	0	33	132	0	6.6	20	0	25	7.2	.9	1.5	16
6	0	0	24	71	0	30	21	0	20	8.9	.7	1.1	1,020
7	0	405	19	234	0	1,420	22	0	17	9.4	1.3	.4	974
8	0	143	17	30	0	1,110	23	0	15	85	1.5	0	126
9	0	176	15	20	0	235	24	0	509	78	1.2	0	84
10	0	5,280	14	16	0	99	25	0	1,040	26	.9	0	84
11	0	10,100	12	13	.4	63	26	0	66	15	1.2	0	67
12	0	1,380	446	11	5.0	46	27	0	29	220	.5	0	56
13	0	256	64	8.4	3.9	36	28	320	20	48	.2	0	48
14	0	466	24	7.2	2.4	30	29	76	2,880	19	.2	0	48
15	0	117	16	6.2	3.0	25	30	6.2	374	13	.2	.2	48
							31	------	120	------	.1	64	------

Discharge, in second-feet, of Middle Concho River near Tankersly, Tex., 1930–32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930				
April	43	0	3.56	212
May	202	0	17.7	1,090
June	4.4	0	.39	23
The period				1,320
1930–31				
October	4,350	0	215	13,200
November	4.3	0	.78	46
December	25	0	4.43	272
January	.6	0	.25	15
February	3.1	0	.17	9.4
April	199	0	9.98	594
May	3.1	0	.33	20
July	150	0	4.98	306
The year	4,350	0	20.0	14,500
1931–32				
April	320	0	13.4	797
May	10,100	0	765	47,000
June	446	7.2	52.7	3,140
July	1,580	.1	116	7,130
August	64	0	2.95	181
September	1,420	6.2	197	11,700
The year	10,100	0	96.4	69,900

NOTE.—Monthly discharge for May and October 1930, April and July 1931 not previously published because of lack of definition of rating curve for high stages. No flow for months omitted in discharge tables after beginning of record on Feb. 10, 1930.

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. Zero of gage is 1,874.6 feet above mean sea level.

DRAINAGE AREA.—734 square miles.

RECORDS AVAILABLE.—February 1930 to September 1932.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 16,100 second-feet Oct. 14 (gage height, 17.34 feet).

Maximum discharge during year ending Sept. 30, 1932, 17,000 second-feet May 10 (gage height, 17.70 feet); no flow Oct. 1–21, Oct. 24 to Nov. 13.

REMARKS.—Records good for discharge below 600 second-feet and fair above. Several small diversions above station for irrigation. The following daily, mean monthly, and annual figures are submitted for completion of tables in Water-Supply Paper 718: Oct. 13, 2,710 second-feet, Oct. 14, 4,020 second-feet; mean for October, 248 second-feet; run-off, 15,200 acre-feet; mean for year, 36.2 second-feet; run-off for year, 26,110 acre-feet.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	14	20	18	18	2.5	25	53	26	2.1	1,030
2	0	0	13	21	18	19	2.5	16	50	37	2.1	359
3	0	0	9.9	19	19	20	2.1	10	47	5,910	1.6	98
4	0	0	9.4	47	17	21	2.1	8.8	46	354	1.3	73
5	0	0	9.4	47	17	20	2.1	8.3	62	119	1.3	67
6	0	0	8.8	35	17	19	2.1	9.4	49	84	1.4	73
7	0	0	13	29	17	19	2.5	82	49	260	1.4	101
8	0	0	17	25	17	19	2.5	40	46	89	1.3	403
9	0	0	13	25	16	19	2.5	24	43	70	1.4	127
10	0	0	11	25	13	19	2.5	7,290	46	62	4.5	101
11	0	0	13	25	8.3	20	2.1	1,510	36	58	13	92
12	0	0	11	26	5.7	20	2.5	352	40	54	9.9	88
13	0	0	11	24	4.9	20	2.5	384	43	47	7.3	84
14	0	.5	10	19	4.9	19	2.8	180	35	44	8.3	82
15	0	.5	14	19	11	18	2.5	92	34	39	25	79
16	0	.8	15	19	8.8	17	2.5	125	33	37	25	78
17	0	14	14	19	9.9	10	2.5	154	30	35	21	76
18	0	2.2	13	19	15	8.3	2.8	76	28	33	19	74
19	0	6.2	13	19	13	4.9	3.2	64	29	25	18	73
20	0	4.2	16	19	9.4	5.7	2.8	56	18	15	18	71
21	0	2.8	16	19	18	5.7	2.8	53	23	13	19	70
22	.2	3.2	16	19	36	3.5	2.8	48	31	10	19	199
23	.4	4.9	16	17	16	2.8	3.2	48	25	7.3	17	88
24	0	4.2	16	17	12	4.2	2.5	46	41	5.7	12	104
25	0	2.8	16	17	13	2.1	2.8	785	29	7.8	9.9	102
26	0	2.1	16	19	15	2.1	3.2	96	25	8.3	8.3	80
27	0	2.5	16	19	15	2.1	2.8	67	95	5.2	8.3	75
28	0	4.5	19	18	16	1.8	1,880	60	64	3.5	12	75
29	0	6.8	20	18	16	1.8	241	455	38	2.1	13	82
30	0	8.3	25	17	-------	2.1	55	92	33	1.4	10	82
31	0	-------	22	18	-------	2.1	---------	58	------	1.6	133	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.4	0	0.02	1.2
November	14	0	2.35	140
December	25	8.8	14.4	885
January	47	17	22.5	1,380
February	36	4.9	14.4	828
March	21	1.8	11.8	726
April	1,880	2.1	74.9	4,460
May	7,290	8.3	397	24,400
June	95	18	40.7	2,420
July	5,910	1.4	241	14,800
August	133	1.3	14.3	879
September	1,030	67	140	8,330
The year	7,290	0	81.6	59,200

NORTH CONCHO RIVER NEAR CARLSBAD, TEX.

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

DRAINAGE AREA.—1,530 square miles, about 123 of which is probably noncontributing.

RECORDS AVAILABLE.—March 1924 to September 1932.

EXTREMES.—Maximum discharge during year, about 15,000 second-feet May 10 (gage height, 11.50 feet); no flow Oct. 1–11, 13–22.

1924–32: Maximum discharge, about 63,600 second-feet June 13, 1930 (gage height, 18.2 feet); no flow at times.

REMARKS.—Records good except those for high-water periods, which are poor. Discharge estimated Oct. 12, 23–26, May 10–12. Diversions by pumping above station affect low-water flow; pump capacity, 40 second-feet. Low-water flow partly regulated by small reservoir above gage.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2.5	2.2	4.2	4.2	7.0	4.7	20	49	91	4.2	78
2	0	2.2	1.9	3.4	4.2	6.0	5.3	13	34	52	4.2	26
3	0	1.7	2.5	3.1	4.2	6.0	5.3	9.2	28	39	4.2	13
4	0	1.3	3.1	3.7	4.2	6.0	4.7	8.0	24	30	3.4	9.2
5	0	1.1	3.1	5.3	4.2	5.3	4.7	8.0	19	25	3.4	9.2
6	0	1.3	3.4	4.7	4.2	5.3	4.7	7.0	18	21	3.4	961
7	0	1.1	3.7	4.7	4.7	6.0	4.2	43	24	19	3.4	346
8	0	.8	4.2	4.2	4.7	5.3	3.7	2,170	21	19	3.4	579
9	0	.5	4.2	4.2	4.2	6.0	3.4	1,350	18	18	4.7	398
10	0	.4	4.2	4.7	4.7	5.3	3.1		16	16	7.0	87
11	0	.4	4.7	4.7	4.2	6.0	3.1	3,510	16	15	7.0	33
12	1.5	.4	4.7	4.7	4.2	7.0	3.1		635	14	6.0	19
13	0	.6	4.7	5.3	4.2	7.0	3.1	105	56	13	6.0	12
14	0	.8	4.2	5.3	4.2	7.0	3.1	64	27	12	5.3	6.0
15	0	.8	3.7	5.3	4.2	7.0	3.1	44	28	10	7.0	5.3
16	0	2.3	4.2	5.3	6.0	7.0	3.4	34	23	8.0	6.0	4.7
17	0	53	3.7	5.3	8.0	7.0	3.4	30	19	7.0	4.2	4.2
18	0	48	3.1	6.0	8.0	7.0	3.4	27	15	7.0	4.7	3.7
19	0	8.0	3.4	6.0	7.0	7.0	3.4	25	13	6.0	4.7	3.7
20	0	3.1	3.4	5.3	6.0	7.0	3.4	21	12	5.3	4.2	3.7
21	0	1.9	3.7	5.3	7.0	6.0	3.1	20	56	5.3	4.2	163
22	0	1.7	3.7	4.7	58	5.3	3.1	20	19	5.3	3.7	145
23		1.5	4.7	4.2	45	6.0	3.7	20	20	5.3	3.4	23
24		1.1	4.2	4.2	20	6.0	3.4	246	24	5.3	3.4	14
25	330	1.0	3.4	4.2	13	6.0	3.4	488	21	5.3	3.1	13
26		1.0	3.7	4.2	10	6.0	4.2	80	16	4.7	3.1	12
27	8.0	1.1	3.7	4.2	9.2	5.3	12	33	32	5.3	3.1	9.2
28	4.7	1.0	4.2	4.2	7.0	5.3	877	702	106	4.7	3.1	9.2
29	3.7	1.1	4.2	4.2	7.0	5.3	173	3,090	2,170	4.7	2.8	8.0
30	3.1	1.7	3.4	4.2	------	5.3	41	428	364	4.7	3.4	8.0
31	2.8	------	3.1	4.2	------	5.3	------	98	------	4.2	12	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	----------	0	43.3	2,660
November	53	.4	4.78	284
December	4.7	1.9	3.69	227
January	6.0	3.1	4.62	284
February	58	4.2	9.51	547
March	7.0	5.3	6.10	375
April	877	3.1	40.0	2,380
May	----------	7.0	637	39,200
June	2,170	12	131	7,800
July	91	4.2	15.6	959
August	12	2.8	4.57	281
September	961	3.7	100	5,950
The year	----------	0	83.9	60,900

PECAN BAYOU AT BROWNWOOD, TEX.

LOCATION.—Water-stage recorder at Fort Worth & Rio Grande Railway bridge 1 mile north of Brownwood, Brown County, 10 miles below Brownwood Reservoir (completed in 1932; capacity, 140,000 acre-feet). Zero of gage is 1,319.2 feet (revised) above mean sea level.

DRAINAGE AREA.—1,610 square miles.

RECORDS AVAILABLE.—May 1917 to June 1918; October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 28,800 second-feet Oct. 13 (gage height, 15.18 feet); no flow at times.

1917–18; 1923–32: Maximum discharge, 52,700 second-feet Oct. 14, 1930 (gage height, 16.92 feet); no flow at times.

Flood of July 3, 1932, probably the greatest known, reached a discharge of about 235,000 second-feet (computed from rate of storage in reservoir, data furnished by engineers of Brown County Water Improvement District No. 1). From 7 a.m. July 3 to 8 a.m. July 4 the reservoir, which was empty, was filled to capacity with all sluice gates open (maximum discharge through gates, about 12,000 second-feet). All storage was released by July 31.

REMARKS.—Records below 3,000 second-feet good, fair above. Discharge estimated Nov. 5 to Dec. 9, July 18–21. Flow regulated by storage in reservoir above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	34		40	24	85	3.9	0	146	178	0.3	17
2	0	34		37	22	74	3.9	0	12	354	0	134
3	0	22		34	22	70	3.9	0	15	4,250	0	159
4	0	.7		37	20	74	2.7	0	15	12,400	0	278
5	0	1.1	37	142	17	60	1.8	.1	10	14,800	0	522
6	0			228	17	54	1.1	8.1	153	14,500	0	656
7	0			183	17	48	1.1	6.5	3,120	13,600	0	4,170
8	0			104	17	43	.5	1,340	177	12,900	0	10,300
9	0		29	67	15	34	0	5,720	2,890	12,100	0	9,550
10	0		32	51	17	32	0	4,160	3,420	11,400	0	1,700
11	0		40	40	15	29	0	2,520	1,110	10,500	0	345
12	11,600		34	34	12	29	0	552	584	8,940	0	152
13	26,500		32	32	12	27	0	198	4,670	766	0	306
14	6,340		17	29	12	27	0	109	582	586	96	610
15	6,200		1.8	27	15	27	0	950	355	546	309	396
16	601		1.1	3,060	37	24	0	1,010	140	498	514	135
17	135		1.1	2,900	93	24	0	231	74	436	338	96
18	67	33	.5	200	143	22	0	104	51		297	67
19	37		.1	93	278	20	81	63	37	115	27	60
20	20		.3	57	225	17	115	32	32		20	54
21	15		292	46	410	15	24	5.1	24	.5	20	48
22	12		1,110	254	525	10	8.1	1.1	20	2,490	20	260
23	2,880		236	435	359	10	2.7	0	469	242	40	408
24	4,500		135	162	266	10	.5	0	410	63	54	159
25	402		104	85	198	8.1	0	0	713	6.5	34	122
26	178		82	74	159	8.1	0	429	96	55	29	236
27	104		70	63	131	6.5	0	236	948	92	17	204
28	67		60	51	109	5.1	0	93	5,240	40	17	149
29	51		54	43	96	2.7	0	1,250	1,710	37	15	89
30	40		48	34	------	5.1	0	4,410	304	32	17	74
31	34	------	43	29	------	3.9	-------	581	------	15	15	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	26,500	0	1,930	119,000
November	------	------	30.6	1,820
December	1,110	.1	87.7	5,390
January	3,060	27	280	17,200
February	525	12	113	6,500
March	85	2.7	29.2	1,800
April	115	0	8.34	496
May	5,720	0	774	47,600
June	5,240	10	918	54,600
July	14,800	.5	3,940	242,000
August	514	0	60.6	3,730
September	10,300	17	1,050	62,500
The year	26,500	0	775	563,000

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 1932.

EXTREMES.—Maximum stage during year, 15.9 feet Sept. 6 (discharge not determined); minimum discharge, 6.0 second-feet Oct. 14–15.

1915–32: Maximum stage, 18.3 feet Oct. 6, 1930 (discharge not determined); no flow at times. Maximum stage known, 25.4 feet June 5, 6, 1899.

REMARKS.—Records fair except those for high-water periods, which are poor. Low-water flow during irrigation season regulated by diversions to Noyes Canal, 4 miles above Menard. About 4,300 acres above and 7,700 acres below gage have been declared irrigated.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	17	23	36	35	17	16	33	23	18	18	30
2	7.0	22	24	37	36	15	15	19	22	27	14	942
3	7.0	28	23	38	36	16	15	12	23	5,510	12	570
4	7.0	28	22	39	35	19	20	15	23	1,240	14	93
5	7.4	28	22	41	35	17	16	15	31	123	16	45
6	7.4	26	22	40	35	16	16	15	25	68	16	5,430
7	8.4	27	28	37	34	16	16	14	23	55	14	959
8	8.1	27	28	37	34	16	16	12	23	44	28	176
9	6.7	27	25	37	34	16	17	1,950	21	49	29	105
10	6.7	24	23	37	34	17	15	1,720	21	34	13	88
11	7.7	16	23	37	35	18	14	439	20	34	12	74
12	7.4	15	22	37	34	19	11	355	21	34	14	70
13	8.1	16	22	37	34	19	10	242	22	32	12	67
14	6.7	15	22	37	34	18	11	93	22	32	11	67
15	6.4	16	23	38	48	18	12	61	18	30	12	66
16	10	16	38	40	42	18	12	55	19	30	11	61
17	13	16	39	40	35	17	14	340	19	28	9.9	55
18	11	18	37	38	26	16	14	108	19	28	11	51
19	10	17	37	37	20	16	13	74	19	26	9.2	50
20	11	18	37	36	16	16	14	56	17	24	10	50
21	10	17	44	37	17	16	18	49	21	24	10	49
22	8.4	19	38	39	19	15	28	45	37	22	9.5	52
23	26	19	38	38	16	16	29	45	27	21	8.4	66
24	25	19	38	36	14	16	28	43	20	22	8.4	72
25	17	21	37	36	14	15	30	41	20	22	10	62
26	14	21	37	37	14	14	26	40	20	21	11	56
27	16	21	38	37	14	14	21	39	20	19	10	52
28	16	21	38	35	11	15	41	39	20	19	9.9	52
29	16	21	38	35	16	15	50	60	20	23	9.5	53
30	16	21	38	35	-------	15	19	48	19	18	9.2	51
31	16	-------	37	35	-------	15	-------	24	-------	18	9.2	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	26	6.4	11.1	682
November	28	15	20.6	1,230
December	44	22	31.0	1,910
January	41	35	37.3	2,290
February	48	11	27.8	1,600
March	19	14	16.3	1,000
April	50	10	19.2	1,140
May	1,950	12	197	12,100
June	37	17	21.8	1,300
July	5,510	18	248	15,200
August	29	8.4	12.6	775
September	5,430	30	320	19,000
The year	5,510	6.4	80.4	58,200

SAN SABA RIVER AT SAN SABA, TEX.

LOCATION.—Water-stage recorder at the San Saba-Chadwick Mill highway bridge three quarters of a 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 1930 to September 1932. Comparable records obtained at site 4½ miles upstream from December 1904 to December 1906 and September 1915 to August 1930.

EXTREMES.—Maximum discharge during year, 34,000 second-feet July 2 (gage height, 34.33 feet); minimum, 34 second-feet Oct. 9–12 (gage height, 3.19 feet):
1904–6, 1915–32: Maximum stage, 42.1 feet (present datum) Apr. 26, 1922, possibly affected by backwater from Colorado River (discharge not determined); no flow Aug. 9, 10, 1918.

REMARKS.—Records good. Diversions above station for irrigation and municipal use.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	61	118	84	97	222	124	280	275	200	114	173
2	40	62	135	83	96	223	123	225	241	14,400	110	155
3	40	62	130	84	97	597	120	166	211	8,740	109	527
4	40	61	110	105	94	540	119	145	201	7,040	111	1,220
5	39	63	95	215	92	849	121	141	198	3,790	119	514
6	38	63	89	121	91	437	119	125	211	958	125	441
7	38	61	90	92	90	312	114	915	217	508	119	4,550
8	37	63	98	84	89	275	109	788	196	482	129	5,970
9	36	65	110	93	87	250	106	6,850	185	399	115	1,020
10	36	64	101	81	88	233	105	7,090	190	350	115	514
11	36	64	97	83	87	233	102	15,000	217	302	111	364
12	37	60	93	80	85	225	99	3,240	228	275	111	293
13	37	57	91	80	83	220	96	1,240	882	250	117	250
14	67	57	90	78	84	215	93	852	404	233	169	225
15	94	58	86	75	88	209	93	678	225	212	244	206
16	69	57	87	75	447	204	94	555	179	198	138	190
17	61	67	91	575	310	196	96	460	154	188	120	177
18	56	74	92	348	2,580	183	101	534	137	179	109	169
19	51	66	94	167	4,020	176	629	578	126	171	111	162
20	49	61	97	123	992	171	124	419	117	166	114	155
21	49	56	98	108	588	164	101	340	113	166	114	181
22	72	58	96	834	610	158	94	302	110	170	117	692
23	150	70	92	1,040	524	154	94	275	104	156	114	290
24	65	71	92	305	440	153	92	250	136	149	110	223
25	62	91	91	195	360	150	88	250	265	142	105	312
26	72	103	89	158	302	150	84	225	117	135	105	331
27	69	98	87	138	275	142	83	253	111	130	102	250
28	67	85	88	125	250	137	310	332	108	127	103	219
29	64	80	88	115	233	130	1,860	346	103	124	105	198
30	63	79	88	108	------	130	573	751	99	123	109	211
31	62	------	85	101	------	126	------	302	------	121	121	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	150	36	56.0	3,440
November	103	56	67.9	4,040
December	135	85	96.4	5,930
January	1,040	75	192	11,800
February	4,020	83	458	26,300
March	849	126	244	15,000
April	1,860	83	202	12,000
May	15,000	125	1,420	87,300
June	882	99	202	12,000
July	14,400	121	1,310	80,600
August	244	102	120	7,380
September	5,970	155	673	40,000
The year	15,000	36	421	306,000

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 1932.

EXTREMES.—Maximum discharge during year, 30 second-feet May 9, 10, Sept. 3, 4, 6, 7; maximum gage height, 1.80 feet Sept. 3, 4, 6, 7; no flow at times.

1924–32: Maximum discharge, about 58 second-feet Feb. 2, 1931 (gage height, 2.70 feet); no flow at times.

REMARKS.—Records fair. Canal diverts from San Saba River 4 miles above Menard. Water used for irrigation near Menard; 10 acres irrigated above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	14	16	0	0	18	20	24	23	23	19	27
2	20	15	16	0	0	20	18	22	23	22	19	28
3	20	0	15	0	0	20	18	22	26	23	20	30
4	20	0	14	0	0	18	22	20	24	18	20	28
5	19	0	13	0	0	18	22	19	24	11	20	26
6	22	0	14	0	0	18	20	20	24	9.3	19	30
7	20	0	14	0	0	17	19	23	24	8.4	18	20
8	19	0	14	0	0	17	18	23	22	8.4	1.0	7.8
9	20	0	14	0	0	18	18	23	23	4.3	0	2.6
10	20	4.8	14	0	0	18	18	30	23	9.8	21	1.8
11	20	17	14	0	0	18	18	26	23	19	24	0
12	19	16	14	0	0	18	20	24	23	20	22	0
13	19	16	14	0	0	18	22	23	23	20	23	0
14	19	16	14	0	0	19	22	20	23	20	23	0
15	19	16	7.2	0	0	19	20	20	20	20	24	0
16	19	16	.7	0	0	18	20	14	20	20	22	0
17	17	16	.7	0	0	18	20	16	19	20	22	0
18	18	15	.7	0	27	18	18	11	19	19	26	0
19	18	15	.7	0	26	18	18	8.0	19	20	23	0
20	18	15	.7	0	24	18	18	7.2	19	22	24	0
21	18	15	.4	0	26	18	2.9	7.6	19	20	24	1.8
22	17	15	.2	0	26	18	0	7.6	11	22	23	6.5
23	18	15	0	0	26	18	0	7.6	22	24	23	8.2
24	14	15	0	0	24	19	0	7.6	22	24	23	6.3
25	13	16	0	0	24	19	0	7.6	23	24	23	6.5
26	14	15	0	0	24	19	0	7.4	24	22	23	6.5
27	13	15	0	0	23	18	7.4	6.9	23	22	23	6.2
28	13	15	0	0	23	18	23	6.5	23	22	23	5.8
29	13	15	0	0	20	19	23	6.9	23	12	23	5.8
30	13	15	0	0	------	20	23	14	23	20	24	5.8
31	14	------	0	0	------	20	------	23	------	19	24	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	22	13	17.6	1,080
November	17	0	11.4	678
December	16	0	6.82	419
January	0	0	0	0
February	27	0	10.1	581
March	20	17	18.4	1,130
April	23	0	15.6	928
May	30	6.5	16.1	990
June	26	11	21.9	1,300
July	24	4.3	18.3	1,130
August	26	0	20.8	1,280
September	30	0	8.69	517
The year	30	0	13.8	10,000

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. Zero of gage is 1,699.9 feet above mean sea level.

DRAINAGE AREA.—914 square miles.

RECORDS AVAILABLE.—September 1915 to September 1932.

EXTREMES.—Maximum discharge during year, 37,600 second-feet Sept. 1 (gage height, 17.80 feet); minimum, 0.5 second-foot Oct. 13–15, Aug. 26.

1915–32: Maximum stage, 23 feet Apr. 24, 1923 (discharge, 43,100 second-feet, previously published is too small; revised figure withheld from publication until curve is better defined); no flow at times.

REMARKS.—Records good below 5,000 second-feet, poor above. Diversions above station for irrigation materially reduce low-water flow. Discharge partly estimated Sept. 8–12.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	3.0	9.6	12	13	18	14	12	23	7.6	2.1	21,900
2	.6	3.4	9.6	13	13	20	13	12	21	151	1.8	17,100
3	.6	3.4	9.6	14	13	32	13	11	21	1,500	1.6	1,850
4	.6	3.4	10	14	14	26	13	10	21	176	1.5	1,680
5	.6	3.4	10	14	13	23	12	9.6	26	74	1.5	556
6	.6	3.4	10	14	13	23	13	9.6	28	48	1.4	9,450
7	.6	3.4	14	14	12	23	13	185	28	34	1.2	1,860
8	.6	3.4	14	14	12	21	12	103	24	30	1.2	565
9	.6	3.0	14	14	12	21	12	757	20	28	.8	390
10	.6	3.0	13	14	13	19	11	86	19	24	1.0	275
11	.6	3.0	13	14	14	19	11	61	18	23	1.0	263
12	.6	3.0	13	14	14	19	11	108	18	20	1.1	236
13	.5	3.4	21	14	14	20	11	69	18	20	1.1	225
14	.5	3.9	19	14	14	21	11	52	18	18	1.2	206
15	.5	3.9	19	14	14	21	11	45	15	15	1.4	191
16	.6	3.9	19	31	14	21	11	671	14	15	1.2	180
17	.6	5.4	19	19	15	21	11	201	14	14	1.1	169
18	.6	5.9	18	16	20	21	11	102	12	13	1.1	162
19	.6	5.4	18	15	20	21	11	74	9.6	10	1.1	155
20	.6	4.8	18	14	20	20	11	66	8.3	8.3	1.4	148
21	.6	5.4	18	14	20	19	11	61	8.3	7.6	1.5	134
22	.6	5.4	16	14	20	19	11	55	7.0	6.5	1.2	134
23	1.1	5.4	16	14	20	19	11	50	5.9	5.9	1.0	151
24	.8	5.4	15	14	19	19	10	45	5.9	5.4	1.0	131
25	.8	5.9	15	14	19	19	9.6	45	7.6	5.4	1.0	124
26	.8	6.5	14	14	19	18	9.6	40	6.5	5.4	.8	114
27	.9	7.0	14	14	19	18	9.6	36	5.4	5.4	.6	108
28	1.4	7.0	14	14	18	16	15	34	3.0	4.3	.6	102
29	2.0	7.6	14	13	18	15	14	32	2.1	3.4	.6	102
30	2.1	7.6	14	13	------	15	13	26	3.4	3.0	.6	99
31	2.3	------	13	12	------	15	------	24	------	2.3	4.2	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.3	0.5	0.81	50
November	7.6	3.0	4.62	275
December	21	9.6	14.6	898
January	31	12	14.6	898
February	20	12	15.8	909
March	32	15	20.1	1,240
April	15	9.6	11.7	696
May	757	9.6	99.7	6,130
June	28	2.1	14.4	857
July	1,500	2.3	73.7	4,530
August	4.2	.6	1.25	77
September	21,900	99	1,960	117,000
The year	21,900	.5	183	134,000

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 1932.

EXTREMES.—Maximum discharge during year, about 106,000 second-feet Sept. 1 (gage height, 27.15 feet); minimum, 39 second-feet Nov. 11 (gage height, 1.44 feet).

1915–32: Maximum discharge, that of Sept. 1, 1932; minimum, 13 second-feet Aug. 23–28, 1918 (gage height, 1.32 feet).

REMARKS.—Records good except those estimated Aug. 1–8, Sept. 1–12, which are fair. About 2,500 acres above and 1,300 acres below station have been declared irrigated. Diversions slightly reduce low-water flow. Slight regulations by water-power on South Llano River.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	46	71	60	62	60	57	54	85	68	101	
2	42	44	65	60	62	65	54	52	79	11,700	98	
3	42	44	60	62	62	76	54	49	76	7,020	92	18,100
4	42	44	57	62	62	74	54	46	76	1,120	85	
5	42	44	57	62	62	74	54	44	76	530	76	
6	42	42	57	60	62	71	54	42	76	379	71	10,600
7	42	42	62	57	62	68	54	99	76	292	65	5,720
8	42	42	62	52	62	68	54	131	68	248	62	1,900
9	42	42	62	49	60	65	54	810	65	218	62	1,230
10	42	42	60	49	60	68	54	128	65	189	62	910
11	42	39	57	49	60	68	54	104	62	172	62	655
12	42	42	57	49	60	68	54	128	60	154	62	538
13	42	42	54	49	60	68	52	108	60	143	62	515
14	42	44	54	49	60	68	49	95	60	139	60	478
15	42	44	54	49	60	65	49	88	62	128	62	434
16	42	44	54	57	60	60	46	656	60	128	60	407
17	44	54	54	65	60	60	46	248	54	128	60	379
18	46	52	54	65	65	60	44	150	46	121	57	359
19	46	52	54	62	68	57	42	121	46	114	60	340
20	46	52	54	60	71	57	42	111	46	118	65	322
21	46	52	54	60	71	57	42	108	46	118	62	303
22	46	49	54	79	71	57	42	98	46	118	62	1,080
23	57	49	54	71	68	57	42	95	46	114	62	4,930
24	52	52	57	71	68	57	42	88	49	114	57	1,870
25	49	54	57	68	65	57	42	85	49	118	57	2,360
26	46	54	57	68	65	57	42	85	49	114	57	1,100
27	44	54	57	68	62	57	42	889	46	114	57	647
28	44	54	54	65	60	57	69	180	46	111	57	500
29	44	54	54	56	60	57	74	125	46	111	57	449
30	46	54	57	65	------	57	62	108	46	111	57	413
31	46	------	60	62	------	57	------	95	------	104	74	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	57	42	44.3	2,720
November	54	39	47.4	2,820
December	71	54	57.2	3,520
January	79	49	60.3	3,710
February	71	60	63.1	3,630
March	76	57	62.8	3,860
April	74	42	50.7	3,020
May	889	42	168	10,300
June	85	46	58.9	3,500
July	11,700	68	786	48,300
August	101	57	65.9	4,050
September	----------	303	4,300	256,000
The year	----------	39	476	345,000

LLANO RIVER NEAR CASTELL, TEX.

LOCATION.—Water-stage recorder 4 miles above mouth of Hickory Creek and 6 miles east of Castell, Llano County.

DRAINAGE AREA.—3,510 square miles.

RECORDS AVAILABLE.—November 1923 to September 1932.

EXTREMES.—Maximum discharge during year, about 73,700 second-feet Sept. 2 (gage height, 20.0 feet); minimum, 31 second-feet June 24 (gage height, 0.73 foot).

1924–32: Maximum discharge, about 89,800 second-feet Oct. 6, 1930 (gage height, 22.3 feet); minimum discharge, 16 second-feet Aug. 17, Sept. 4, 5, 1929 (gage height, 0.59 foot).

REMARKS.—Records below 10,000 second-feet good, fair above; estimated periods, July 2–4, 20, July 27 to Aug. 17, Sept. 1–3, poor. Small diversions above station slightly reduce low-water flow.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	46	153	80	92	132	92	145	158	64		26,500
2	32	47	153	80	92	301	90	114	134	19,400		
3	33	48	135	86	94	902	87	95	121			
4	34	50	115	94	91	583	86	88	112			4,340
5	34	50	99	101	88	1,100	85	88	118	1,700		3,090
6	36	51	96	108	86	414	82	80	112	928		3,820
7	37	52	162	101	85	276	80	118	109	692		14,400
8	38	53	168	95	83	222	78	346	103	532		4,540
9	38	53	145	92	82	194	77	2,210	96	439	79	2,160
10	39	53	121	90	81	177	71	1,580	98	360		1,530
11	38	52	109	90	86	169	69	1,330	92	314		1,080
12	40	51	101	91	86	166	66	543	404	280		884
13	41	52	94	90	86	166	65	343	450	251		745
14	39	52	90	88	82	162	66	258	160	222		653
15	38	52	90	88	88	153	68	216	99	202		598
16	40	53	92	88	344	147	68	183	77	186		555
17	41	65	92	102	340	142	69	443	63	173	76	505
18	44	70	92	145	491	135	71	626	56	160	74	464
19	44	80	95	115	572	127	71	326	48	151	75	439
20	42	77	98	106	386	121	70	226	43	140	69	411
21	43	74	98	102	340	114	71	181	38	134	68	449
22	48	78	95	325	298	106	71	151	34	126	66	473
23	74	71	92	484	284	103	72	134	32	120	66	4,590
24	72	76	91	213	230	102	71	122	31	116	70	4,320
25	70	77	88	160	200	102	68	118	44	112	65	2,560
26	65	75	86	140	175	101	63	112	63	105	60	2,580
27	64	74	85	127	158	95	60	138	64		58	1,380
28	60	77	85	115	145	94	437	666	72		60	940
29	54	80	85	105	135	92	285	586	50	92	66	745
30	51	83	83	99	-------	94	210	359	40		66	624
31	48	-------	81	94	-------	94	-------	204	-------		68	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	72	32	45.5	2,800
November	83	46	62.4	3,710
December	168	81	105	6,460
January	484	80	126	7,750
February	572	81	186	10,700
March	1,100	92	222	13,600
April	437	60	97.3	5,790
May	2,210	80	391	24,000
June	450	31	104	6,190
July	----------	64	2,130	131,000
August	----------	58	73.3	4,510
September	----------	411	4,610	274,000
The year	----------	31	677	491,000

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 1932.
EXTREMES.—Maximum discharge during year, 18,800 second-feet July 2 (gage height, 11.8 feet); minimum, 4.3 second-feet Oct. 1–11, 13–15, 17–21 (gage height, 0.46 foot).

1924–32: Maximum discharge, about 28,300 second-feet (revised) May 28, 1929 (gage height, 14.25 feet); minimum, 1.8 second-feet July 30, 31, 1925 (gage height, 0.33 foot).

River reached stage of about 24.0 feet in 1900.
REMARKS.—Records good. No diversions above station.

Discharge, in second-feet, for high-water periods in 1929 and 1930

1929:	
May 28	15,400
May 29	2,550
1930:	
May 10	3,160
May 18	7,540
Oct. 12	3,650

NOTE.—The above figures supersede those published in Water-Supply Papers 688, 703, 718.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	5.0	23	13	21	45	53	53	20	324	12	317
2	4.3	5.0	16	13	23	49	53	43	18	8,810	11	1,140
3	4.3	5.4	14	15	23	491	51	39	18	1,610	10	488
4	4.3	5.4	13	374	21	104	51	34	18	355	12	91
5	4.3	5.4	12	712	18	1,850	51	38	18	179	16	124
6	4.3	5.4	13	51	18	386	51	38	16	246	10	228
7	4.3	5.4	214	34	18	210	49	909	16	267	9.1	138
8	4.3	5.4	73	27	18	151	47	157	16	108	9.1	61
9	4.3	5.8	32	24	18	117	47	71	14	75	8.4	47
10	4.3	5.8	24	22	18	107	43	55	16	61	8.4	39
11	4.3	5.8	21	130	18	107	39	49	13	55	8.4	34
12	4.6	5.4	17	36	18	98	39	47	125	49	7.8	32
13	4.3	5.4	18	26	18	95	39	41	48	45	7.8	29
14	4.3	5.4	18	22	18	88	39	38	32	39	36	26
15	4.3	5.6	15	21	23	83	39	36	18	36	106	26
16	4.6	5.8	17	22	352	78	39	781	12	34	24	23
17	4.3	12	17	21	370	73	43	125	10	32	15	21
18	4.3	9.1	15	20	95	68	39	55	9.8	29	26	21
19	4.3	9.1	24	18	323	63	38	43	8.4	27	15	21
20	4.3	7.8	20	18	130	63	83	38	8.4	127	32	20
21	4.3	6.5	20	18	95	59	45	34	8.4	34	23	39
22	5.0	2,590	17	21	73	55	39	29	7.2	24	18	210
23	5.8	111	17	21	63	55	51	29	7.8	23	13	766
24	6.1	38	17	21	57	59	45	29	16	21	31	274
25	6.5	20	15	27	51	59	38	26	18	21	18	474
26	5.8	16	15	26	47	59	32	26	8.4	18	12	166
27	5.8	14	15	23	47	55	29	23	7.2	18	12	91
28	5.4	12	15	22	43	55	356	23	7.2	16	12	73
29	5.0	12	15	24	43	55	212	22	6.1	14	12	68
30	5.0	14	15	22	-------	59	71	24	6.5	14	927	61
31	5.0	-------	13	21	-------	55	-------	21	-------	12	228	------

Monthly discharge, in second-feet, of Pedernales River at Stonewall, Tex., 1928–31

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1928–29				
October	4.5	3.1	3.49	215
November	9.0	3.7	4.71	280
December	60	4.5	9.04	556
January	410	4.3	26.0	1,600
February	6.8	5.2	5.77	320
March	27	4.5	8.32	512
April	450	5.2	51.3	3,050
May	15,400	3.6	751	46,200
June	251	8.2	45.5	2,710
July	2,270	8.2	136	8,360
August	7.5	3.7	4.15	255
September	5.2	3.3	3.58	213
The year	15,400	3.1	88.8	64,300
1929–30				
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	7,540	9.0	405	24,900
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	7,540	2.2	45.8	33,200
1930–31				
October	3,650	3.5	280	17,200
November	28	13	16.9	1,010
December	21	13	16.0	984
January	482	13	53.5	3,290
February	596	57	147	8,160
March	395	51	92.4	5,690
April	2,650	55	174	10,400
May	769	39	116	7,130
June	802	9.0	80.9	4,810
July	658	10	72.0	4,430
August	123	4.1	11.1	682
September	6.8	4.3	4.88	290
The year	3,650	3.5	88.3	64,100
1931–32				
October	6.5	4.3	4.72	290
November	2,590	5.0	98.6	5,870
December	214	12	25.5	1,570
January	712	13	60.2	3,700
February	370	18	71.7	4,120
March	1,850	45	160	9,840
April	356	29	61.7	3,670
May	909	21	96.0	5,900
June	125	6.1	18.2	1,080
July	8,810	12	410	25,200
August	927	7.8	54.5	3,350
September	1,140	20	172	10,200
The year	8,810	4.3	103	74,800

NOTE.—Monthly discharge for May 1929, May, October 1930, and yearly figures for 1929–31 supersede those published in Water-Supply Papers 688, 703, 718. Monthly discharge for other months republished in order to complete record.

PEDERNALES RIVER NEAR SPICEWOOD, TEX.

LOCATION.—Staff gage 2½ miles below mouth of Fall Creek and 8 miles southeast of Spicewood, Burnet County. Zero of gage is 624.8 feet above mean sea level.
DRAINAGE AREA.—1,290 square miles.
RECORDS AVAILABLE.—November 1923 to September 1932.
EXTREMES.—Maximum discharge during year, 18,500 second-feet July 3 (gage height, 14.00 feet); minimum, 1.4 second-feet Oct. 2–5.
1924–32: Maximum discharge, about 155,000 second-feet May 28, 1929 (gage height, 40.4 feet); no flow at times.
REMARKS.—Records good. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	4.1	35	25	42	99	106	178	28	18	13	484
2	1.5	5.5	33	25	45	99	102	127	27	389	12	955
3	1.4	6.5	36	27	45	725	97	102	26	8,420	12	2,460
4	1.4	7.0	41	60	45	706	92	84	25	827	10	582
5	1.4	6.5	42	718	42	7,040	90	74	24	346	9.5	222
6	1.8	6.0	44	514	40	1,660	90	72	23	215	8.5	439
7	1.9	5.5	55	178	40	652	88	72	23	190	7.5	915
8	2.0	5.0	70	123	37	448	84	803	23	254	8.0	228
9	2.0	5.0	228	93	36	376	81	295	23	133	15	129
10	1.8	5.0	131	76	35	295	79	160	33	115	14	111
11	1.8	5.0	88	65	35	267	77	121	26	93	12	84
12	1.8	5.0	65	70	35	254	72	97	25	76	11	70
13	2.3	5.0	54	198	32	254	70	84	90	59	10	60
14	2.3	6.5	44	115	32	241	67	79	153	50	12	55
15	2.0	7.5	36	84	35	215	65	72	102	44	14	48
16	2.6	8.0	40	69	37	202	65	79	77	41	21	44
17	2.6	10	38	62	41	190	65	463	45	36	52	42
18	2.0	10	37	60	211	176	65	228	29	31	62	40
19	2.0	10	41	59	544	167	69	137	24	227	44	37
20	2.0	10	45	52	684	158	69	101	20	86	37	35
21	2.0	10	44	48	340	150	76	83	16	57	79	32
22	2.0	109	50	47	254	133	79	72	14	93	41	31
23	2.6	2,100	52	45	202	127	95	59	14	59	29	31
24	2.6	337	42	45	169	123	88	50	13	41	41	458
25	2.6	148	38	45	148	121	81	45	12	29	33	356
26	3.2	84	35	45	131	119	76	41	12	24	33	649
27	3.5	62	32	45	119	115	72	38	31	21	32	262
28	3.8	45	29	45	110	111	94	36	38	19	28	156
29	3.2	37	29	48	102	110	482	33	27	17	24	115
30	2.6	35	29	45	------	108	340	31	21	16	20	99
31	2.9	------	28	45	------	111	------	29	------	14	316	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.8	1.4	2.23	137
November	2,100	4.1	103	6,130
December	228	28	52.0	3,200
January	718	25	102	6,270
February	684	32	126	7,250
March	7,040	99	502	30,900
April	482	65	103	6,130
May	803	29	127	7,810
June	153	12	34.8	2,070
July	8,420	14	388	23,900
August	316	7.5	34.2	2,100
September	2,460	31	308	18,300
The year	8,420	1.4	157	114,000

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 1932 (discontinued).

EXTREMES.—Maximum discharge during year (determined by slope-area method), 182,000 second-feet July 1 (gage height, 27.65 feet); minimum, 33 second-feet Oct. 11 (gage height, 2.31 feet).

1917–32: Maximum stage and discharge, that of July 1, 1932 (highest known); maximum stage previously published, about 41 feet Aug. 21, 1919, occurred on former gage at different datum; minimum discharge, about 0.40 second-foot Aug. 2, 1918 (gage height, 0.80 foot).

REMARKS.—Records good below 3,000 second-feet for period Oct. 1 to July 2; poor for estimated period July 3 to Sept. 30 and for discharges above 3,000 second-feet. Some water diverted above for irrigation; several pumping plants 8 miles upstream. Small power plants upstream partly regulate low-water flow.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	50	79	55	70	106	97	182	101	27,100		
2	37	52	79	62	68	138	92	151	92	37,500		708
3	37	50	70	92	70	272	94	135	104			
4	40	50	62	88	66	204	92	128	97			
5	40	50	59	146	62	696	92	130	104			
6	45	50	88	106	62	395	90	133	106			
7	45	50	106	83	59	290	94	227	104			
8	41	50	135	79	60	238	92	185	94			
9	40	50	113	75	66	210	88	159	83			
10	35	47	92	70	62	196	88	151	97			
11	33	45	83	75	66	185	88	527	85			
12	35	47	75	75	64	170	85	342	97			
13	37	47	75	68	66	165	81	248	79			207
14	40	47	75	68	66	153	83	192	79			
15	37	47	70	68	88	148	83	165	70			
16	37	48	72	70	120	143	81	248	62		142	
17	42	64	70	83	161	138	81	192	62	546		
18	42	68	66	81	244	130	83	159	52			
19	41	72	70	79	238	125	202	148	50			
20	40	57	70	79	206	120	108	140	48			
21	42	55	70	75	153	113	92	130	48			
22	42	201	70	75	143	108	88	125	48			
23	55	116	75	106	133	104	101	125	48			
24	66	88	62	75	125	111	88	118	48			2,780
25	62	79	62	75	118	113	88	111	92			
26	72	79	62	75	113	113	79	120	62			
27	64	70	59	70	108	99	77	490	59			
28	64	70	62	70	108	101	7,780	188	52			551
29	60	72	59	66	101	101	1,160	116	50			
30	54	68	57	64	-------	101	255	106	48			
31	54	-------	60	64	-------	97	-------	101	-------			-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	72	33	45.7	2,810
November	201	45	64.6	3,840
December	135	57	74.4	4,570
January	146	45	78.0	4,800
February	244	59	106	6,100
March	696	97	174	10,700
April	7,780	77	390	23,200
May	527	101	183	11,300
June	106	48	74.0	4,400
July	37,500	----------	2,590	159,000
August	----------	----------	142	8,730
September	----------	----------	572	34,000
The year	37,500	33	377	273,000

GUADALUPE RIVER NEAR SPRING BRANCH, TEX.

LOCATION.—Water-stage recorder at New Braunfels-Blanco highway bridge 4 miles southeast of Spring Branch, Comal County. Zero of gage is 947.37 feet above mean sea level.

DRAINAGE AREA.—1,430 square miles.

RECORDS AVAILABLE.—June 1922 to September 1932.

EXTREMES.—Maximum discharge during year, 121,000 second-feet July 3 (gage height, 42.10 feet); minimum, 50 second-feet Oct. 13, 14.

1922–32: Maximum discharge, that of July 3, 1932; minimum, about 4.7 second-feet Aug. 18, 1923 (gage height, about 1.74 feet).

REMARKS.—Records good except those for high-water periods, which are fair. Discharge estimated Mar. 7–14. About 400 acres have been declared irrigated above station. Slight regulation during low-water periods caused by operation of water-power plants upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	64	82	88	105	183	190	366	150	67	246	658
2	53	62	84	88	105	186	186	287	143	28,500	243	805
3	54	62	86	93	110	286	180	243	134	62,800	239	572
4	54	61	96	624	119	438	176	213	134	6,800	236	442
5	53	62	93	592	108	1,020	173	199	137	2,270	236	366
6	54	62	93	321	105	1,050	173	196	134	1,560	232	335
7	54	62	110	203	100		173	196	137	1,400	236	272
8	53	64	128	173	98		170	219	147	1,140	219	243
9	56	62	156	147	96		166	265	131	945	206	261
10	57	61	160	134	93		163	232	125	820	199	246
11	56	59	140	134	93	437	156	216	119	752	193	222
12	53	59	119	134	96		147	498	116	685	190	206
13	51	59	113	125	93		147	458	113	640	190	196
14	51	57	108	119	91		143	343	128	618	199	186
15	51	57	100	113	96	306	143	283	108	577	225	180
16	51	57	100	116	103	302	140	356	100	546	183	170
17	53	61	98	116	122	294	140	398	91	530	173	166
18	53	61	93	116	189	280	140	283	84	502	173	156
19	54	65	100	116	279	265	143	246	78	510	190	156
20	54	69	103	113	410	250	211	222	76	568	236	153
21	56	71	100	113	313	246	180	206	73	454	225	147
22	56	143	98	113	280	229	143	193	69	434	186	150
23	56	350	96	108	246	219	147	176	67	406	183	1,130
24	56	173	93	108	236	216	153	170	67	386	160	7,240
25	61	110	93	122	222	216	153	160	69	362	173	1,020
26	71	91	91	125	209	213	143	156	82	346	170	1,010
27	75	86	91	110	199	213	125	182	100	332	147	662
28	76	84	88	108	193	206	131	367	80	317	153	559
29	75	80	88	110	190	196	2,060	216	75	283	153	530
30	71	80	91	108	-------	196	530	186	67	272	153	498
31	69	-------	91	103	-------	203	-------	163	-------	250	420	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	76	51	57.7	3,550
November	350	57	83.1	4,940
December	160	82	103	6,330
January	624	88	158	9,720
February	410	91	162	9,320
March	1,050	183	345	21,200
April	2,060	125	234	13,900
May	498	156	255	15,700
June	150	67	104	6,190
July	62,800	67	3,740	230,000
August	420	147	205	12,600
September	7,240	147	631	37,500
The year	62,800	51	511	371,000

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

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

DRAINAGE AREA.—1,660 square miles (revised).

RECORDS AVAILABLE.—December 1927 to September 1932.

EXTREMES.—Maximum discharge during year, 95,200 second-feet July 3 (gage height, 32.48 feet); minimum, 70 second-feet Oct. 17 (gage height, 1.47 feet).

1928–32: Maximum discharge, that of July 3, 1932; minimum, 14 second-feet July 19, 20, 1928 (gage height, 0.88 foot).

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

REMARKS.—Records excellent below 3,500 second-feet, good above. Discharge partly estimated Nov. 26–29, Dec. 1, Jan. 1. Small diversions above station for irrigation. Slight regulation during low-water periods caused by operation of small power plants upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	89	109	105	180	302	264	606	184	92	253	428
2	77	88	105	103	180	307	253	431	171	1,060	249	839
3	76	84	107	131	180	307	245	336	162	67,200	245	744
4	78	84	109	333	177	415	245	285	162	23,600	241	633
5	78	83	111	1,640	174	597	241	264	160	3,180	237	494
6	82	80	118	654	174	1,590	241	245	160	2,000	232	510
7	78	80	153	486	171	1,150	237	237	162	1,620	228	372
8	77	80	168	343	171	841	232	237	162	1,470	232	307
9	76	80	160	291	165	688	224	241	162	1,220	228	275
10	74	80	174	264	165	606	220	285	165	1,050	216	275
11	80	77	191	253	162	553	212	253	160	932	208	269
12	100	77	177	275	160	519	208	253	154	851	202	249
13	84	77	157	249	157	494	205	404	151	773	198	237
14	76	77	141	237	157	469	205	469	141	716	228	224
15	73	80	134	220	157	453	205	365	148	661	237	212
16	71	78	131	216	160	438	202	350	136	615	253	205
17	71	80	134	216	160	423	198	394	120	571	212	198
18	71	78	126	208	162	409	198	416	111	527	249	191
19	73	78	136	205	332	386	198	296	102	510	269	184
20	74	77	141	202	572	365	198	264	94	580	232	180
21	74	80	141	205	652	350	227	245	88	588	249	180
22	77	91	138	202	553	329	245	228	84	478	258	174
23	78	152	131	198	486	314	212	216	83	423	212	177
24	78	321	129	188	431	296	205	208	83	401	216	5,650
25	77	188	122	184	401	291	202	198	83	379	198	2,110
26	77	143	116	188	372	291	198	194	80	350	194	1,380
27	80	118	116	198	350	285	194	191	76	343	208	1,150
28	91	109	114	194	329	280	229	210	94	314	188	841
29	94	107	113	191	314	275	948	329	97	307	191	698
30	92	105	113	191	------	275	1,400	228	88	291	188	615
31	92	------	109	184	------	264	-------	198	-------	280	188	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	100	71	79.3	4,880
November	321	77	101	6,010
December	191	105	133	8,180
January	1,640	103	282	17,300
February	652	157	269	15,500
March	1,590	264	470	28,900
April	1,400	194	283	16,800
May	606	191	293	18,000
June	184	76	127	7,560
July	67,200	92	3,660	225,000
August	269	188	224	13,800
September	5,650	174	667	39,700
The year	67,200	71	553	402,000

GUADALUPE RIVER BELOW CUERO, TEX.

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

DRAINAGE AREA.—5,070 square miles.

RECORDS AVAILABLE.—August 1916 to September 1932. Comparable records at Schleicher Bridge, 4 miles upstream, December 1902 to December 1906, August 1915 to August 1916.

EXTREMES.—Maximum discharge during year, 17,500 second-feet July 8 (gage height, 21.07 feet); minimum discharge not determined.

1902–6, 1915–32: Maximum discharge, about 101,000 second-feet May 30, 1929 (gage height, 35.2 feet); minimum discharge, about 80 second-feet Nov. 1, 1917 (gage height, 0.58 foot).

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

REMARKS.—Records good. Discharge partly estimated Oct. 30 to Nov. 20. Flow not materially affected by numerous small diversions above station. Low-water flow regulated by operation of water-power plants upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	545	416	532	653	786	955	1,100	10,500	799	444	760	653
2	444	444	592	623	825	1,270	1,100	4,600	734	515	754	806
3	449	498	531	638	858	1,490	1,100	2,050	683	1,060	799	858
4	482	504	582	3,470	858	2,860	990	1,710	708	1,200	825	1,980
5	476	482	641	7,720	858	5,740	792	1,560	714	3,360	792	2,720
6	476	454	766	10,900	858	3,610	955	1,240	575	8,690	825	2,280
7	482	498	721	12,700	786	3,660	990	955	521	12,700	792	2,650
8	471	476	563	13,300	734	2,580	990	990	671	16,900	747	2,580
9	427	545	728	5,530	689	1,980	922	890	575	13,500	605	2,200
10	449	466	990	1,900	773	1,790	955	890	599	3,700	825	1,600
11	438	410	858	1,640	766	1,710	955	990	689	2,720	647	1,130
12	344	533	689	1,750	773	1,750	792	922	677	1,770	665	806
13	482	498	653	3,500	773	1,410	955	990	587	1,340	695	551
14	438	493	617	4,060	734	1,300	1,060	1,060	551	1,490	858	806
15	498	482	527	1,750	734	1,300	922	858	641	1,560	1,690	611
16	460	563	695	1,130	659	1,300	890	4,370	635	1,560	3,660	563
17	471	476	721	1,100	825	1,300	890	3,710	587	1,600	3,420	521
18	378	449	708	1,100	754	1,300	747	3,020	504	1,600	1,990	493
19	471	504	653	1,060	1,170	1,270	806	1,900	476	1,560	4,780	515
20	476	471	629	1,160	2,110	1,270	825	1,380	599	1,560	2,200	545
21	454	689	635	1,020	8,170	1,200	825	1,160	383	1,710	2,350	581
22	471	515	587	1,290	8,240	955	792	1,060	521	1,710	2,350	504
23	471	471	593	2,050	8,160	1,240	773	890	510	1,300	1,710	599
24	488	556	990	2,420	4,120	1,200	806	671	545	1,300	1,160	683
25	471	593	818	1,860	1,790	1,200	806	714	504	1,300	922	1,750
26	504	754	728	1,130	1,410	1,100	806	728	438	708	990	2,950
27	493	583	587	1,520	1,340	1,020	818	683	482	825	858	4,700
28	498	648	623	1,520	1,300	825	1,260	653	488	1,020	818	2,800
29	557	605	551	1,130	1,060	858	8,030	659	378	1,060	683	2,950
30	539	554	623	955	------	1,020	10,600	623	432	1,020	647	3,020
31	454	------	617	858	------	1,060	------	599	------	922	677	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	557	344	470	28,900
November	754	410	521	31,000
December	990	527	669	41,100
January	13,300	623	2,950	181,000
February	8,240	659	1,820	105,000
March	5,740	825	1,660	102,000
April	10,600	747	1,480	88,100
May	10,500	599	1,710	105,000
June	799	378	574	34,200
July	16,900	444	2,960	182,000
August	4,780	605	1,340	82,400
September	4,700	493	1,510	89,800
The year	16,900	344	1,480	1,070,000

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 1932.

EXTREMES.—Maximum stage during year, 29.51 feet July 3, affected by backwater from Guadalupe River (discharge not determined); minimum discharge not determined.

1928–32: Maximum stage, that of July 3, 1932; minimum discharge, about 142 second-feet Dec. 11, 1928 (gage height, 2.12 feet).

Maximum stage known, 35.4 feet December 1913, revised (probably some backwater from Guadalupe River).

REMARKS.—Records excellent except those estimated, which are fair. Discharge not determined Apr. 28 because stage was beyond defined limits of rating curve, and Sept. 24 because stage-discharge relation was seriously affected by backwater from Guadalupe River. About 635 acres irrigated above station. Flow partly regulated by steam-power plant half a mile above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	315	308	297	294	311	308	308	294	308	315	344	347
2	315	308	297	294	311	315	304	e 294	e 308	315	340	351
3	311	304	297	297	311	315	304		e 304		344	379
4	311	300	294	311	311	315	300		304		344	344
5	315	300	294	e 354	315	336	311		304		340	344
6	315	300	294		308	351	308	b 294	308		340	344
7	315	300	300		308	358	304		308			340
8	315	297	300		308	362	304		308			340
9	315	297	300	b 326	308	358	300		308			340
10	315	300	300		308	358	300	300	311	b 330		340
11	318	290	300		308	351	300	300	311		b 342	340
12	318	294	297	e 326	308	344	300	308	311			333
13	318	290	297	329	308	340	304	304	315			333
14	318	290	297	326	308	340	304	308	311			336
15	318	290	294	326	308	322	308	308	315			340
16	315	290	297	326	308	322	308	336	315			e 347
17	315	290	294	326	304	329	e 308	311	318		b 350	e 344
18	315	290	294	326	304		e 308	311	315			e 340
19	315	297	297	326	412		308	311	315		e 372	336
20	322	294	294	326	318	b 324	304	311	315		365	336
21	315	294	294	326	315		304	311	315		354	336
22	311	297	294	322	311		304	311	315	b 340	351	336
23	311	297	294	326	308	318	304	308	308		351	336
24	315	297	294	326	329	315	304	300	308		347	-------
25	311	297	294	322	336	318	304	300	311		347	e 326
26	311	294	294	322	326	308	304	304	308		347	326
27	311	297	294	318	315	304	308	304	311	e 344	347	333
28	311	294	294	322	308	304	-------	304	e 308	336	347	329
29	311	297	294	315	308	311	486	304	e 308	336	344	329
30	315	297	294	315	-------	311	344	304	315	336	344	326
31	315	-------	294	311	-------	308	-------	304	-------	340	347	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	322	311	315	19,400
November	308	290	296	17,600
December	300	294	296	18,200
January	-------	294	322	19,800
February	412	304	315	18,100
March	362	304	327	20,100
April	-------	300	-------	-------
May	336	-------	303	18,600
June	318	304	311	18,500
July	-------	-------	334	20,500
August	-------	-------	347	21,300
September	-------	326	-------	-------

e Partly estimated.
b Estimated.

SAN MARCOS RIVER AT OTTINE, TEX.

LOCATION.—Water-stage recorder at highway bridge a quarter of a mile southwest of Ottine, Gonzales County. Zero of gage is 285.1 feet above mean sea level.

DRAINAGE AREA.—1,250 square miles.

RECORDS AVAILABLE.—June 1915 to September 1932.

EXTREMES.—Maximum discharge during year, 8,160 second-feet Jan. 6 (gage height, 25.82 feet); minimum, 41 second-feet July 18.

1915–32: 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 fair except those estimated Oct. 15-18, Jan. 27-30, Feb. 1-17, which are poor. Small diversions above station for irrigation and municipal use. Low-water flow regulated by operation of several small power plants above station. Most of normal flow from large springs near San Marcos.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	140	168	143		268	260	291	202	159	118	209
2	135	130	161	143		268	260	260	187	166	131	148
3	134	127	151	182		3,100	260	230	184	161	119	173
4	130	139	148	3,150		2,430	245	209	182	156	118	304
5	133	135	145	6,480		1,590	245	199	167	156	120	363
6	136	137	152	6,610		1,530	238	195	202	156	119	397
7	133	134	182	1,240		719	230	194	188	157	120	556
8	133	139	264	363		506	230	191	139	154	122	207
9	133	133	192	283		446	223	188	173	151	102	170
10	133	139	174	252	200	412	223	187	167	137	132	170
11	129	136	170	720		387	216	187	187	138	166	155
12	137	139	156	2,570		371	209	216	174	148	120	127
13	129	139	167	920		363	209	184	178	148	99	140
14	135	143	194	291		355	209	194	171	137	371	137
15		141	181	260		355	209	181	177	143	329	131
16	133	142	110	268		347	209	488	171	139	154	127
17		147	147	308		339	209	457	156	122	133	122
18		147	147	348	185	331	209	252	150	133	180	125
19	131	146	148	252	1,780	323	209	223	171	127	286	99
20	131	146	178	230	3,580	307	209	230	139	389	417	122
21	134	139	163	223	2,960	299	194	216	182	209	430	119
22	135	143	154	238	1,270	275	189	209	125	209	177	120
23	135	151	159	223	438	283	194	195	149	168	142	121
24	134	154	194	223	363	299	199	192	191	155	147	179
25	135	145	180	216	331	283	194	196	148	152	137	464
26	134	142	151	230	315	283	188	192	167	135	123	178
27	135	145	148		299	283	188	187	130	135	140	141
28	135	147	145	215	291	268	241	188	156	135	139	356
29	116	152	146		283	268	2,700	188	147	129	142	147
30	142	151	146			260	1,560	182	160	127	146	135
31	137		141	245		268		178		118	151	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			133	8,180
November	154	127	142	8,450
December	264	110	163	10,000
January	6,610	143	886	54,500
February	3,580		534	30,700
March	3,100	260	575	35,400
April	2,700	188	345	20,500
May	488	178	222	13,600
June	202	125	167	9,940
July	389	118	156	9,590
August	430	99	172	10,600
September	556	99	198	11,800
The year	6,610	99	308	223,000

BLANCO RIVER AT WIMBERLEY, TEX.

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

DRAINAGE AREA.—378 square miles.

RECORDS AVAILABLE.—August 1924 to September 1926; June 1928 to September 1932.

EXTREMES.—Maximum discharge during year, 1,690 second-feet Mar. 5 (gage height, 3.22 feet); minimum, about 8.0 second-feet Aug. 4 (gage height, 0.21 foot).

1924–26; 1928–32: 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 good except those estimated, which are fair. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	23	30	26		96	94		40	30	23	26
2	24	23	29	26		94	84	*50	40	32	21	26
3	24	23	27	38		120	84		38	34	21	27
4	24	24	27	182		147	82	48	38	38	17	30
5	26	23	27	404		732	79	48	38	38	20	32
6	26	23	29	134		356	77	48	38	38	21	50
7	26	23	42	79		258	77	48	38	36	20	88
8	26	23	36	63	*40	224	77	48	36	34	20	59
9	26	23	32	57		199	74	48	32	34	21	52
10	26	21	32	54		188	72	50	36	32	18	40
11	27	21	30	54		185	*70	48	34	32	18	36
12	29	21	30	52		175		48	38	30	18	34
13	26	21	29	54		166		48	38	29	17	30
14	26	21	27	50		156		46	34	27	29	27
15	24	20	27	48		153		46	36	27	164	27
16	24	20	30	52	*38	147		52	34	26	94	26
17	24	24	29	50	38	135		102	32	24	46	*25
18	24	23	27	46	42	129		82	30	24	38	*24
19	24	21	32	44	78	123		61	29	26	38	24
20	24	21	30	*44	181	115		57	29	37	36	24
21	24	23	29		144	112	*60	54	29	60	36	24
22	24	23	29		135	107		52	29	42	34	24
23	24	23	29		123	101		50	29	34	32	24
24	23	26	27		118	101		48	29	32	29	26
25	23	27	27		112	101		46	29	30	29	24
26	23	27	27	*43	107	99		44	27	30	27	23
27	23	27	27		104	96		44	27	27	27	23
28	23	29	27		101	91		44	26	27	27	24
29	23	30	26		99	89		42	26	26	30	26
30	24	27	24		-------	89		40	26	23	26	23
31	24	-------	24		-------	99	-------	40	-------	24	26	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	29	23	24.5	1,510
November	30	20	23.5	1,400
December	42	24	29.0	1,780
January	404	----------	65.5	4,030
February	181	----------	69.7	4,010
March	732	89	161	9,900
April	94	----------	67.0	3,990
May	102	40	51.0	3,140
June	40	26	32.8	1,950
July	60	23	31.7	1,950
August	164	17	33.0	1,880
September	88	23	31.6	1,880
The year	732	17	51.7	37,600

* Estimated.

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. Zero of gage is 326.5 feet above mean sea level.

DRAINAGE AREA.—356 square miles.

RECORDS AVAILABLE.—March 1930 to September 1932.

EXTREMES.—Maximum discharge during year, about 3,980 second-feet Jan. 5 (gage height, 16.83 feet); minimum, 1.6 second-feet Aug. 4.

1930–32: Maximum discharge, 4,270 second-feet June 16, 1930; maximum gage height, 16.83 feet Jan. 5, 1932; minimum discharge, 1.5 second-feet Sept. 29, 1931 (gage height, −0.23 foot).

A stage of 22.0 feet has been reached.

REMARKS.—Records fair except those for medium and high-water periods, which are poor. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	3.0	6.8	5.6	14	20	26	40	6.6	9.1	2.1	18
2	2.1	3.2	6.4	5.6	12	21	27	24	6.4	7.6	2.1	6.4
3	2.2	3.4	6.6	9.8	14	2,230	23	16	6.4	7.6	2.0	27
4	2.2	3.2	5.6	2,040	14	866	21	13	6.4	7.3	1.8	149
5	2.4	3.2	5.0	3,820	12	1,360	21	12	6.4	6.8	2.1	94
6	2.7	3.2	5.0	2,050	9.7	382	19	10	6.4	6.4	2.4	211
7	2.7	3.0	9.8	51	9.4	56	18	10	6.4	6.2	2.2	238
8	2.7	3.0	14	28	9.7	41	17	10	6.4	6.0	2.8	32
9	2.6	3.0	7.6	21	10	36	16	9.7	6.4	5.8	2.2	9.7
10	2.4	3.0	5.8	18	10	31	16	9.7	9.1	5.4	2.8	6.2
11	2.7	3.2	5.2	613	11	29	13	11	9.7	5.2	2.7	5.6
12	2.7	3.2	5.2	2,480	11	28	12	16	9.1	4.8	2.2	5.0
13	2.7	3.4	5.2	169	10	28	13	9.4	7.6	4.4	2.2	4.8
14	2.8	3.2	5.0	26	12	28	12	8.8	7.3	4.8	121	4.6
15	2.8	3.2	4.8	18	14	27	12	9.1	7.0	4.4	98	4.4
16	2.8	3.2	5.0	42	14	27	12	77	6.8	4.2	8.2	4.0
17	2.7	3.2	5.8	91	14	26	12	187	6.6	3.8	4.2	3.6
18	2.7	3.4	6.4	76	13	25	12	14	6.4	3.0	3.2	3.4
19	2.7	3.2	5.4	20	1,630	24	12	9.7	6.2	98	110	3.2
20	2.7	3.2	7.3	14	2,130	24	12	8.8	6.0	148	307	3.0
21	2.8	3.2	6.6	12	2,260	24	11	7.9	6.0	4.8	89	3.4
22	3.0	3.6	6.2	11	348	23	9.7	7.6	6.0	19	8.6	3.2
23	3.0	3.6	5.8	9.4	73	23	12	7.3	6.0	11	5.0	4.4
24	3.0	3.8	14	9.4	43	24	12	7.0	7.0	3.2	4.2	20
25	3.0	4.0	18	9.4	35	25	12	6.8	7.6	2.4	3.2	88
26	3.0	3.8	7.0	18	30	27	10	6.8	7.3	2.8	3.4	14
27	3.0	4.0	6.6	15	27	27	9.7	6.8	7.0	2.2	3.8	12
28	3.0	4.4	6.0	12	24	26	186	6.8	6.4	2.4	3.6	26
29	3.0	4.4	6.2	12	22	26	3,040	7.0	6.6	2.2	4.2	7.9
30	3.0	4.8	6.2	56	------	26	481	6.8	10	2.2	4.2	6.4
31	3.0	------	5.8	30	------	25	------	6.6	------	2.2	11	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.0	2.0	2.71	167
November	4.8	3.0	3.44	205
December	18	4.8	6.98	429
January	3,820	5.6	380	23,400
February	2,260	9.4	236	13,600
March	2,230	20	180	11,100
April	3,040	9.7	137	8,150
May	187	6.6	18.8	1,160
June	10	6.0	6.98	415
July	148	2.2	13.0	799
August	307	1.8	26.5	1,630
September	238	3.0	33.9	2,020
The year	3,820	1.8	86.8	63,100

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 1930 to September 1932.
EXTREMES.—Maximum discharge during year, 5,310 second-feet Jan. 6 (gage height, 21.1 feet); no flow at times.
1930–32: Maximum discharge, that of Jan. 6, 1932; no flow at times. Maximum stage known, 23.0 feet (discharge, about 10,400 second-feet).
REMARKS.—Records good except those estimated, which are poor. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	16	22	9.8	43		0.1	0	4.0
2	0	.1	23	29	9.5	27		.1	0	2.9
3	0	.1	39	728	8.9	18		.1	0	381
4	0	882	30	844	8.6	[a]15	[b]5.6	0	0	[a]728
5	0	3,500	18	226	8.6			70	0	454
6	0	4,950	13	219	8.3			253	0	263
7	0	2,250	12	72	8.0	[b]8.1	[a]10	43	0	700
8	0	136	11	38	7.7		.9	0	0	870
9	0	37	11	31	7.1		.7	0	0	360
10	0	20	11	25	6.5	[a]33	2.1	0	0	37
11	0	96	10	23	6.2		1.8	0	0	15
12	0	668	9.5	22	5.3	[b]3.2	2.1	0	0	7.4
13	0	616	8.6	21	4.7		1.1	0		4.7
14	0	120	9.2	20	4.7		1.4	0		2.3
15	0	34	9.2	19	4.5	[a]89	.9	0		1.4
16	0	38	10	18	4.2	44	.7	0		1.0
17	0	47	12	18	4.2	316	.5	0		1.0
18	0	51	10	17	4.2	68	.3	0		.9
19	0	31	156	16	4.7		.2	20		.8
20	0	18	800	14	4.7		.1	129		.6
21	0	14	2,000	14	4.5		.1	154	[b]720	.6
22	0	404	2,470	13	4.2		0	24		.5
23	0	1,010	985	12	3.7		0	8.9		.4
24	45	709	113	11	4.2		3.3	10		15
25	14	118	57	11	4.5	[b]5.6	1.1	13		553
26	3.4	572	38	11	4.0		.6	7.7		810
27	1.1	458	31	11	4.0		.4	2.3		386
28	.8	96	27	11	[a]625		.2	.8		532
29	.5	38	24	11	[a]1,170		.2	.4		870
30	.3	23	----	10	120		.1	.1	[a]14	342
31	.2	18	----	10	----		----	0	7.4	----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	45	0.0	2.11	130
January	4,950	.1	547	33,600
February	2,470	8.6	240	13,800
March	844	10	82.2	5,050
April	1,170	3.7	69.1	4,110
May	440	----	37.9	2,330
June	----	0	1.78	106
July	253	0	23.8	1,460
August	----	0	396	24,300
September	870	.4	245	14,600
The year	4,950	0	137	99,500

[a] Partly estimated. [b] Estimated.

NOTE.—No flow during October and November.

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 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 5,780 second-feet Apr. 30 (gage height, 21.79 feet); no flow Aug. 11.

1930–32: Maximum discharge, that of Apr. 30, 1932 (gage height, 21.79 feet); no flow Aug. 11, 1932.

Maximum stage known, about 25.1 feet in 1913 (discharge, about 18,000 feet).

REMARKS.—Records poor below and good above 10 second-feet. No diversions second-above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.4	2.2	1.9	8.0	9.6	3.4	1,260	4.6	3.4	0.1	5.2
2	.4	4	2.5	1.7	10	8.5	3.3	77	4.3	2.8	.1	5.1
3	.4	4	2.9	42	10	11	3.1	33	4.0	2.2	.1	87
4	.4	.5	3.2	739	9.8	123	3.0	19	3.8	1.6	.1	235
5	.4	.5	3.2	2,940	7.6	157	2.7	14	3.6	1.3	.1	474
6	.4	.5	4.7	4,700	6.3	298	2.6	11	3.5	1.2	.1	326
7	.4	.5	18	1,990	5.9	154	2.5	9.5	3.3	1.0	.1	149
8	.4	.6	25	207	5.8	41	2.6	8.6	3.2	.7	.1	79
9	.4	.7	32	37	5.4	24	2.5	7.9	3.1	.5	.1	46
10	.4	.7	9.6	20	5.4	19	2.3	7.3	3.2	.4	.1	22
11	.3	.7	3.8	48	5.4	14	2.3	6.8	3.4	.3	0	12
12	.3	.8	2.0	90	5.3	9.1	2.0	6.7	2.9	.3	.1	6.1
13	.3	.8	1.5	59	5.0	8.5	1.8	6.3	2.6	.3	.1	4.2
14	.3	.8	1.4	62	5.1	7.9	1.5	5.9	3.1	.3	46	3.1
15	.3	.7	1.1	24	5.4	7.2	1.5	5.8	2.9	.2	203	2.5
16	.3	1.1	1.1	16	5.4	6.6	1.5	348	2.7	.2	348	2.0
17	.3	1.6	2.6	17	5.1	6.3	1.5	859	2.6	.2	100	1.7
18	.3	1.5	1.9	15	5.0	6.0	1.5	382	2.6	.2	105	1.6
19	.3	1.3	1.9	14	41	5.9	1.5	66	2.3	.2	429	1.4
20	.3	2.3	2.7	22	240	5.4	1.5	25	2.0	.2	379	1.3
21	.3	1.8	2.3	12	705	5.2	1.4	17	1.9	.2	692	1.2
22	.3	1.7	1.8	29	970	4.9	1.3	12	1.8	.2	478	1.1
23	.3	2.0	2.9	202	416	4.3	1.3	8.2	1.9	.2	76	1.0
24	.4	2.3	29	214	69	4.1	1.4	6.8	2.0	.1	21	1.9
25	.4	2.3	4.5	53	30	4.1	1.7	6.2	2.3	.1	12	46
26	.4	1.9	1.9	34	22	3.7	1.7	5.6	2.5	.1	8.8	66
27	.4	1.8	1.3	72	16	3.7	1.6	5.3	1.8	.1	6.3	24
28	.4	1.7	1.4	40	13	3.7	54	5.0	1.4	.1	4.6	119
29	.5	1.6	1.7	20	11	3.5	2,500	4.9	1.4	.1	4.4	148
30	.4	1.9	2.0	13	------	3.6	4,900	4.7	2.8	.1	4.7	42
31	.4	------	2.0	9.3	------	3.7	------	4.6	------	.1	5.0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.5	0.3	0.36	22
November	2.3	.4	1.19	71
December	32	1.1	5.62	346
January	4,700	1.7	379	23,300
February	970	5.0	91.3	5,250
March	298	3.5	31.2	1,920
April	4,900	1.3	250	14,900
May	1,260	4.6	104	6,400
June	4.6	1.4	2.78	165
July	3.4	.1	.61	38
August	692	0	94.3	5,800
September	474	1.0	63.8	3,800
The year	4,900	0	85.4	62,000

COLETO CREEK NEAR SCHROEDER, TEX.

LOCATION.—Staff gage about 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 AREA.—365 square miles.

RECORDS AVAILABLE.—January 1930 to September 1932.

EXTREMES.—Maximum discharge during year (by slope-area method), 28,600 second-feet Jan. 4 (gage height, 14.14 feet); minimum, 2.6 second-feet Aug. 9, 12–13.

1930–32: Maximum discharge, that of Jan. 4, 1932; minimum, 1.4 second-feet Sept. 7, 8, 19, 1930.

REMARKS.—Records fair except those for high-water periods, which are poor. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	5.1	8.4	8.8	52	36	20	78	10	9.0	3.6	6.0
2	4.3	5.4	8.4	8.0	144	41	19	53	11	9.0	3.0	6.0
3	4.8	4.8	7.7	1,100	47	893	19	48	11	8.0	3.0	27
4	5.4	4.8	7.4	8,230	36	78	18	38	11	8.0	3.0	148
5	5.4	4.8	7.0	1,020	31	44	20	31	10	7.0	3.0	56
6	5.8	4.8	36	277	28	37	19	27	10	7.0	3.0	34
7	5.4	4.1	89	110	28	35	19	25	10	7.0	3.0	12
8	4.8	4.8	75	78	28	35	19	24	10	6.5	3.0	8.0
9	4.6	4.3	25	65	28	32	18	23	9.5	6.0	2.6	7.5
10	4.3	5.4	18	56	27	30	17	22	11	6.0	3.0	7.0
11	4.3	6.1	16	168	25	29	15	22	10	6.0	2.8	6.0
12	4.8	5.1	16	464	24	28	15	19	10	6.0	2.6	6.0
13	4.3	4.8	14	102	23	26	14	18	10	6.0	2.6	5.4
14	4.8	6.7	14	55	25	26	14	17	9.5	5.7	7.0	4.8
15	4.6	5.4	12	47	24	27	14	18	10	5.4	3.6	4.2
16	11	5.1	13	43	24	26	14	1,270	10	5.1	3.0	5.4
17	14	5.8	9.6	43	25	25	15	274	8.0	5.4	3.0	8.0
18	7.0	5.8	8.0	56	26	23	15	50	8.0	5.7	3.0	5.1
19	6.1	5.1	11	43	97	22	15	27	8.0	6.0	3.0	4.8
20	6.1	5.4	10	35	670	23	15	21	8.0	5.7	3.6	4.8
21	6.4	5.4	8.8	32	3,580	21	14	19	7.5	5.4	4.2	4.8
22	6.1	5.4	8.8	203	281	20	15	17	8.0	5.4	4.2	4.8
23	6.1	5.1	11	270	102	21	15	17	12	5.4	3.6	4.8
24	5.4	5.1	28	64	64	19	15	14	19	5.4	4.8	7.0
25	5.8	4.8	20	46	57	17	15	14	23	4.8	3.0	14
26	4.8	5.1	14	51	48	18	14	13	17	4.2	4.2	10
27	4.8	5.1	10	45	45	20	14	12	9.5	4.5	8.0	9.5
28	4.8	5.4	11	37	40	19	5,540	11	9.0	4.2	4.8	9.0
29	5.8	5.4	10	37	37	20	1,280	11	10	4.2	6.0	7.5
30	5.4	8.0	9.6	31	-------	21	221	11	9.0	4.2	7.5	6.0
31	4.8	-------	9.6	29	-------	19	-------	10	-------	3.6	7.0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	14	4.3	5.70	350
November	8.0	4.1	5.28	314
December	89	7.0	17.6	1,080
January	8,230	8.0	415	25,500
February	3,580	23	195	11,200
March	893	17	55.8	3,430
April	5,540	14	249	14,800
May	1,270	10	72.7	4,470
June	23	7.5	10.6	631
July	9.0*	3.6	5.86	360
August	8.0	2.6	3.93	242
September	148	4.2	14.8	881
The year	8,230	2.6	87.2	63,300

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 1932.
EXTREMES.—Maximum discharge during year, 1,660 second-feet Feb. 20 (gage height, 3.50 feet); minimum, 60 second-feet Aug. 13–14.
1925–32: 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). In 1913 river reached stage of 28.36 feet.
REMARKS.—Records fair. Slight regulation caused by operation of Medina Dam. Medina Canal diverts above station. (See p. 91).

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	87	95	116	134	139	125	534	112	82	74	121
2	87	87	95	112	134	139	121	346	108	91	67	279
3	87	91	108	116	144	162	125	234	103	551	71	720
4	87	91	99	235	148	332	125	197	91	745	71	867
5	91	91	95	460	148	257	121	182	95	574	71	421
6	91	87	99	930	144	212	125	177	95	229	67	688
7	95	87	108	392	144	212	121	121	95	177	78	817
8	95	91	148	207	144	162	112	91	99	162	74	496
9	95	91	335	177	144	148	116	87	99	148	74	251
10	95	91	157	162	144	148	112	82	99	167	67	153
11	91	91	112	187	144	139	99	82	99	134	67	130
12	87	95	108	223	139	134	95	82	182	121	64	116
13	82	95	108	212	139	134	99	78	112	116	64	112
14	87	95	112	162	139	134	91	87	108	108	67	112
15	87	99	112	153	139	134	91	78	108	108	67	108
16	91	95	108	153	139	134	91	629	103	103	71	103
17	87	91	108	148	144	134	95	354	103	99	74	95
18	87	95	197	148	144	139	99	371	95	99	71	91
19	87	103	257	144	178	139	95	167	91	95	96	87
20	78	99	246	182	1,350	134	95	134	82	112	576	87
21	82	125	268	296	792	130	103	121	74	134	641	82
22	82	187	218	302	404	130	95	116	82	157	177	82
23	87	187	197	290	313	130	99	112	82	99	130	78
24	87	192	197	268	197	125	108	112	82	91	216	809
25	103	187	187	246	148	125	139	112	87	87	152	1,200
26	99	223	134	223	144	121	125	112	82	82	78	765
27	91	257	108	172	144	121	125	121	87	82	95	440
28	91	223	108	139	144	121	330	172	82	82	95	285
29	91	148	103	139	144	125	303	125	87	82	71	459
30	91	95	112	144	-------	130	580	112	82	74	99	428
31	87	-------	121	144	-------	125	-------	112	-------	74	99	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	103	78	89.3	5,490
November	257	87	123	7,320
December	335	95	147	9,040
January	930	112	225	13,800
February	1,350	134	225	12,900
March	332	121	150	9,220
April	580	91	139	8,270
May	629	78	175	10,800
June	182	74	96.9	5,770
July	745	74	163	10,000
August	641	64	122	7,500
September	1,200	78	349	20,800
The year	1,350	64	167	121,000

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 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), 64,000 second-feet July 1 (gage height, 33.8 feet); minimum, 17 second-feet Oct. 14–17, Nov. 11 (gage height, 0.71 foot).

1923–32: Maximum discharge, that of July 1, 1932 (gage height, 33.8 feet); minimum, 2.2 second-feet Sept. 9, 1927.

Maximum stage known, about 42 feet in 1919.

REMARKS.—Records good below and fair above 250 second-feet. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	23		47	38	72	72	159	a 57	a15,100	a 148	
2	21	24		42	38	72	70	132	57	a16,000	a 142	
3	23	24		44	38	130	68	115	57	a 5,020	a 135	b 313
4	23	24		124	40	100	64	101	57	a 3,020	142	
5	23	23		160	38	309	63	100	a 59	a 2,140	147	
6	23	23		64	38	217	61	125	a 66	a 1,610	132	235
7	23	23		55	40	176	63	197	68	a 1,260	a 125	352
8	21	23		49	40	156	61	116	64	a 991	a 118	302
9	19	21		47	40	142	61	115	61	a 785	115	252
10	19	21	b 45	44	40	132	57	110	59	a 686	113	228
11	19	17		44	40	a 125	53	101	57	a 545	113	a 210
12	19	19		44	36	a 120	55	106	55	a 500	103	a 193
13	19	21		44	34	a 113	55	110	a 47	456	100	186
14	17	21		44	36	a 111	53	98	a 44	403	100	176
15	17	23		44	38	108	53	96	a 41	362	101	166
16	17	24		40	42	105	53	144	a 38	333	103	157
17	17	26		40	51	96	a 55	116	a 36	a 297	101	149
18	19	28		40	64	89		103	a 33		100	142
19	19	28		40	342	89		93	a 30		111	139
20	19	28	a 44	40	166	88		86	30	b 266	108	137
21	19	28	47	40	a116	86	b 59	82	28		105	134
22	19	32	49	40	103	77		77	28	a 235	105	1,410
23	21	a 36	52	40	94	76		74	28	a 226	101	3,650
24	24	a 35	55	40	89	76	61	74	26		a 170	a 540
25	23	a 33	57	40	82	76	59	70	26			b 662
26	24	a 32	57	38	77	77	57	72	26	b 194	a 110	a 545
27	24	a 31	59	47	72	76	53	196	26			443
28	23	a 29	55	51	a 68	74	1,370	88	26		89	384
29	30	a 28	51	49	a 72	72	349	a 80	26		89	356
30	28	a 28	51	49	------	74	202	a 72	24	a 162	94	327
31	24	------	49	44	------	72	------	a 65	------	a 155	1,200	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	30	17	21.2	1,300
November	36	17	25.9	1,540
December	------	------	47.8	2,940
January	160	38	50.8	3,120
February	342	34	69.4	3,990
March	309	72	109	6,700
April	1,370	53	117	6,960
May	197	65	106	6,520
June	68	24	42.7	2,540
July	16,000	155	1,690	104,000
August	1,200	------	150	9,220
September	3,650	134	435	25,900
The year	16,000	17	241	175,000

a Partly estimated or interpolated.
b Estimated.

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 1932.
EXTREMES.—No flow over dam during year.

1922–32: Maximum discharge, about 11,800 second-feet Apr. 21, 1926 (gage height, 5.17 feet); no flow over dam at times.

REMARKS.—Yearly seepage record fair; monthly records not sufficiently accurate for publication. Water to irrigate about 5,000 acres is diverted to Medina Canal above gage (see p. 91). Flow regulated by storage dam 4 miles upstream except when reservoir is full and water flows over spillway.

Seepage past diversion dam measured at Haby's crossing 1 mile downstream was 17,900 acre-feet for year ending Sept. 30, 1932.

MEDINA CANAL NEAR RIOMEDINA, TEX.

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

RECORDS AVAILABLE.—March 1922 to September 1932.

EXTREMES.—Maximum discharge during year, 93 second-feet June 24 (gage height, 1.87 feet); no flow July 6–7.

1922–32: Maximum discharge, 128 second-feet June 26, 1923, June 5, 6, 1925; no flow at times.

REMARKS.—Records good. Discharge partly estimated Feb. 9–28. Station is above all diversions from canal. Canal diverts from Medina River for irrigation near Lacoste and Natalia.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	50	15	13	10	10	19	36	61	27	76	0.4
2	72	49	15	13	9.7	10	15	36	54	9.9	79	.1
3	67	50	14	14	10	8.9	28	34	54	9.2	81	.1
4	63	51	12	14	9.7	11	34	29	55	9.2	81	.3
5	62	52	12	12	9.7	9.7	55	29	58	2.9	76	.1
6	61	52	12	10	9.4	14	60	28	59	0	71	4.7
7	62	52	13	7.8	12	14	51	29	59	0	65	14
8	68	54	12	12	19	11	52	29	62	4.2	54	22
9	19	40	11	12	19	7.0	48	24	63	21	54	50
10	37	40	11	13	21	7.0	40	23	74	32	54	48
11	66	39	11	13	21	7.2	43	30	74	19	56	48
12	69	39	10	13	16	6.8	54	36	74	19	65	39
13	64	40	11	14	10	6.8	57	36	77	19	64	13
14	55	42	11	13	10	8.9	54	36	77	24	56	13
15	54	39	12	11	10	13	43	36	82	31	53	10
16	45	40	13	11	12	13	43	23	82	34	54	13
17	39	40	12	10	15	13	54	19	83	34	58	33
18	45	39	13	10	15	13	58	14	86	35	57	41
19	60	40	13	10	15	12	65	27	88	45	27	22
20	50	39	12	11	12	13	69	48	88	42	10	39
21	50	31	11	11	11	14	79	36	92	54	11	42
22	50	31	12	11	11	26	80	31	91	78	13	16
23	50	31	14	11	11	31	73	34	91	76	17	.2
24	55	25	14	10	11	31	73	39	91	71	21	.2
25	54	14	13	9.9	11	11	78	52	78	70	24	.1
26	53	20	13	9.7	11	11	76	46	66	71	24	.1
27	49	19	13	9.7	9.4	11	77	43	66	73	21	.1
28	48	18	13	9.7	8.3	23	66	42	66	74	17	28
29	46	15	12	9.9	8.1	34	37	46	64	76	17	32
30	48	15	12	9.7	-------	25	26	52	54	76	17	.1
31	51	-------	12	9.9	-------	18	-------	56	-------	76	10	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	73	19	54.4	3,340
November	54	14	36.9	2,200
December	15	10	12.4	762
January	14	7.8	11.2	689
February	21	8.1	12.3	708
March	34	6.8	14.3	879
April	80	15	53.6	3,190
May	56	14	34.8	2,140
June	92	54	72.3	4,300
July	78	0	39.1	2,400
August	81	10	44.6	2,740
September	50	.1	17.6	1,050
The year	92	0	33.6	24,400

CIBOLO CREEK NEAR FALLS CITY, TEX.

LOCATION.—Water-stage recorder 200 feet downstream from Cestohowa Bridge, 6 miles above confluence with San Antonio River, and 6 miles northeast of Falls City, Karnes County.

DRAINAGE AREA.—831 square miles.

RECORDS AVAILABLE.—November 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 4,200 second-feet Apr. 29 (gage height, 16.25 feet); minimum, 6.8 second-feet Oct. 31, Nov. 1.

1930–32: Maximum discharge, 5,620 second-feet July 19, 1931 (gage height, 19.15 feet); minimum, that of Oct. 31, Nov. 1, 1931.

REMARKS.—Records excellent below 600 second-feet; fair above. Discharge estimated or partly estimated June 15 to July 25. No large diversions above station.

Discharge, in second-feet, for high-water periods, 1930–31

Jan. 17	98	June 27	255
Jan. 18	817	June 28	
Feb. 3	695	June 29	
Mar. 20	* 773	June 30	
Mar. 21	* 2,430	July 18	* 970
May 1	484	July 19	
May 2	1,020	July 20	
May 3	450	July 21	

* Not previously published.

NOTE.—The above figures, except as noted, supersede those published in Water-Supply Paper 718 because of revision of rating curve for high stages.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	7.2	10	10	14	18	14	116	14		7.5	12
2	8.6	7.2	10	10	14	17	14	65	13		7.5	14
3	8.6	7.5	10	39	14	149	15	45	13		7.9	53
4	8.6	7.5	10	185	14	419	15	34	13		7.5	113
5	8.6	7.9	10	756	14	165	14	27	12		7.5	96
6	9.3	7.9	11	560	13	309	14	23	12		7.5	100
7	10	7.9	16	77	13	99	14	21	12		7.5	143
8	9.7	7.9	14	37	13	48	14	19	12		7.5	17
9	9.0	7.9	14	22	13	32	14	19	12		7.5	46
10	8.6	8.2	12	17	13	22	13	17	19		7.9	22
11	8.2	7.9	16	16	13	20	14	18	15		7.5	14
12	8.2	7.9	14	566	14	18	13	20	14		7.5	11
13	8.6	7.9	13	101	13	17	13	18	13	18	7.5	9.7
14	8.2	7.9	12	48	13	17	13	17	13		10	9.3
15	8.2	7.9	12	30	14	16	13	16	12		15	8.6
16	8.2	8.2	12	22	14	16	13	154	11		9.3	8.2
17	8.2	8.6	12	19	14	16	13	685	10		8.6	15
18	8.2	8.2	12	18	14	16	13	145	10		8.6	8.6
19	8.2	7.9	13	17	228	15	13	63			10	7.9
20	8.6	7.9	13	15	2,440	15	13	40			10	7.9
21	9.0	7.5	13	14	339	14	13	28			10	7.9
22	9.0	7.5	12	14	218	15	13	22			9.7	8.2
23	9.0	8.2	12	14	83	14	14	20			9.3	8.6
24	8.6	9.0	12	14	50	14	14	18	10		9.7	22
25	8.2	9.0	12	14	36	14	14	17		8.2	22	28
26	8.6	8.6	12	14	28	14	13	16		8.2	10	13
27	7.9	8.2	12	14	23	14	13	16		8.2	10	55
28	7.9	8.6	11	14	21	14	241	16		7.9	14	48
29	7.5	9.0	11	14	19	14	2,670	16		7.9	12	83
30	7.5	9.3	11	14	-------	15	573	18		7.5	11	79
31	7.5	-------	11	14	-------	14	-------	16	-------	7.5	11	-------

Discharge, in second-feet, of Cibolo Creek near Falls City, Tex., 1930–32—Continued

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
November 4-30	16	9.5	10.8	579
December		9.8	11.5	707
January	817		71.1	4,370
February	695	14	69.8	3,880
March	2,430	13	144	8,850
April	138	16	27.5	1,640
May	1,020	16	98.9	6,080
June			44.4	2,640
July			146	8,980
August			13.4	824
September			11.3	672
The period				39,200
1931–32				
October	10	7.5	8.49	522
November	9.3	7.2	8.08	481
December	16	10	12.1	744
January	756	10	87.7	5,390
February	2,440	13	128	7,360
March	419	.14	51.6	3,170
April	2,670	13	128	7,620
May	685	16	56.9	3,500
June			11.7	696
July			15.7	965
August	22	7.5	9.63	592
September	143	7.9	35.6	2,120
The year	2,670	7.2	45.7	33,200

NOTE.—Monthly discharge for March and July 1931 not previously published because of lack of definition of rating curve for high stages. Those for January, February, May, and June supersede those published in Water-Supply Paper 718.

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 1932.
EXTREMES.—Maximum discharge during year, about 41,800 second-feet Sept. 1 (gage height, 18.9 feet); minimum, 35 second-feet June 28, 29.

1923–32: Maximum discharge, about 47,500 second-feet June 15, 1930 (gage height, 20.1 feet); minimum, 8.9 second-feet Sept. 9–11, 1924.

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

REMARKS.—Records good below 3,000 second-feet; poor above. Discharge estimated or partly estimated May 11 to June 22. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	65	62	70	65	65	77	122		2,530	147	20,700
2	65	62	62	70	59	67	77	110		14,500	147	9,020
3	65	62	62	67	56	77	77	110		1,860	147	2,270
4	62	62	62	65	62	90	77	110		356	145	1,370
5	59	62	62	65	62	103	77	107		273	144	1,560
6	59	62	65	67	62	100	77	141		233	144	1,810
7	59	62	73	67	62	93	77	125		222	142	2,690
8	59	62	67	67	62	86	77	125		192	140	1,520
9	59	62	67	70	59	86	77	122		186	140	1,110
10	56	62	70	67	56	83	77	110		174	138	924
11	56	62	70	65	54	83	77		59	166	138	818
12	54	62	67	65	56	83	77			161	136	700
13	51	62	67	65	56	80	73			159	136	656
14	51	65	70	62	51	80	73			153	134	616
15	51	65	70	62	51	80	70			151	132	549
16	54	65	70	62	59	77	70			149	131	520
17	51	67	70	62	59	77	70			149	131	499
18	51	67	70	65	65	77	67			147	131	478
19	51	65	70	65	59	80	67			147	132	464
20	48	65	67	65	59	80	65			147	133	444
21	46	65	65	62	59	86	65	90		147	145	440
22	46	62	65	59	62	86	62		43	144	134	483
23	116	62	65	62	65	86	67		41	142	131	532
24	125	62	67	65	65	86	67		41	142	131	898
25	90	65	70	65	65	86	65		39	140	129	1,000
26	80	65	70	65	65	83	65		37	136	129	835
27	73	62	70	62	65	83	114		37	134	127	770
28	70	62	70	62	65	83	173		35	131	127	663
29	67	62	67	65	65	80	169		35	129	126	616
30	65	62	67	65	------	77	148		37	138	126	584
31	65	------	70	65	------	77	------		------	149	3,480	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	125	46	63.5	3,900
November	67	62	63.2	3,760
December	73	62	67.4	4,140
January	70	59	64.8	3,980
February	65	51	60.3	3,470
March	103	65	82.6	5,080
April	173	62	82.5	4,910
May	141	----------	99.1	6,090
June	----------	35	52.8	3,140
July	14,500	129	761	46,800
August	3,480	126	244	15,000
September	20,700	440	1,850	110,000
The year	20,700	35	290	210,000

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, large part of which is noncontributing at low stages, owing to water entering fault a few miles above gage.

RECORDS AVAILABLE.—October 1927 to September 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), 188,000 second-feet Sept. 1 (gage height, 23.25 feet); minimum, 5.3 second-feet Apr. 9, 10 (gage height, 0.63 foot).

1928–32: Maximum discharge, that of Sept. 1, 1932; minimum not determined but probably less than 0.3 second-foot.

Maximum stage known, 26.4 feet in December 1913.

REMARKS.—Records good below 10,000 second-feet, fair above. Discharge estimated July 12–24. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	9.6	9.6	8.3	7.8	7.8	6.7	6.2	6.7	12,300	58	77,100
2	10	9.6	9.6	8.3	7.8	9.4	6.7	6.2	6.7	44,300	56	48,100
3	10	9.6	9.6	8.3	7.8	7.8	6.2	6.7	6.7	9,840	52	11,400
4	10	9.6	9.6	8.3	7.8	7.8	6.2	6.7	6.7	3,200	48	4,590
5	9.6	9.6	9.6	7.8	7.8	7.8	6.2	6.7	7.4	1,500	46	2,730
6	9.6	8.8	9.6	7.8	7.8	7.8	6.2	6.7	6.7	834	42	2,010
7	9.6	8.8	9.6	8.3	7.8	7.8	6.2	6.7	6.7	600	42	3,830
8	8.8	8.8	9.6	8.3	7.8	7.8	6.2	7.2	6.7	520	40	2,970
9	8.8	8.8	9.6	7.8	7.8	7.8	6.2	7.8	6.7	445	38	2,490
10	9.6	8.8	9.6	8.3	7.8	7.8	5.3	7.8	6.7	427	36	1,710
11	9.6	8.8	9.6	7.8	7.8	7.8	6.2	7.8	6.7	416	36	1,160
12	9.6	8.8	9.6	7.2	7.8	7.8	6.2	7.8	6.7		36	834
13	10	8.8	10	7.8	7.8	7.2	6.2	7.8	6.7		36	699
14	10	8.8	10	7.2	7.8	6.7	6.7	7.8	6.7		36	635
15	10	8.8	8.8	7.8	7.8	6.7	6.7	7.8	6.7		34	593
16	10	8.8	9.6	7.8	7.8	6.7	7.2	7.8	6.7		34	552
17	10	8.8	9.6	7.8	7.8	6.7	6.7	7.8	6.7		34	526
18	10	9.6	9.6	7.8	7.8	7.2	6.2	7.2	6.7	275	34	506
19	10	9.6	10	7.8	7.2	7.2	6.2	7.8	6.7		40	482
20	10	9.6	10	7.8	7.2	7.2	6.2	7.2	6.7		32	470
21	9.6	9.6	10	7.8	7.2	7.2	6.2	7.2	6.7		32	463
22	9.6	9.6	9.6	7.8	7.2	8.3	6.2	6.7	6.2		30	506
23	9.6	9.6	9.6	7.8	6.7	8.3	6.2	6.7	6.2		30	586
24	9.6	8.8	8.8	7.8	6.7	8.3	6.2	6.7	6.2		30	1,000
25	9.6	8.8	8.8	7.8	6.7	7.8	6.2	7.2	6.2	89	28	2,300
26	9.6	9.6	8.8	7.8	6.7	7.8	5.8	7.2	6.2	83	28	1,540
27	9.6	9.6	8.8	7.8	7.2	7.2	10	7.2	6.2	80	26	1,040
28	9.6	9.6	8.8	7.8	7.2	7.8	6.2	7.2	6.2	78	26	1,710
29	9.6	9.6	8.8	7.8	7.2	7.2	5.8	7.2	6.2	73	26	862
30	9.6	9.6	8.8	7.8	------	7.2	6.2	6.7	7.8	70	25	691
31	9.6	------	8.8	7.8	------	6.7	------	7.2	------	63	540	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	8.8	9.74	599
November	9.6	8.8	9.23	549
December	10	8.8	9.43	580
January	8.3	7.2	7.87	484
February	7.8	6.7	7.50	431
March	9.4	6.7	7.57	465
April	10	5.3	6.39	380
May	7.8	6.2	7.18	441
June	7.8	6.2	6.63	395
July	44,300	63	2,530	156,000
August	540	25	52.6	3,230
September	77,100	463	5,800	345,000
The year	77,100	5.3	701	509,000

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 from post office at Cotulla, LaSalle County. Zero of gage is 376.36 feet above mean sea level.

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

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 40,500 second-feet Sept. 7 (gage height, 16.05 feet); no flow at times.

1923–32: Maximum discharge, about 49,500 second-feet June 3, 1925; maximum gage height, 16.05 feet Sept. 7, 1932; no flow at times.

REMARKS.—Records good. Discharge estimated Feb. 28 to Mar. 20, May 25, 26. Most of low-water flow is diverted by pumping above station. Low-water flow partly regulated by storage reservoirs above station.

Discharge, in second-feet, 1932

Day	Feb.	Mar.	May	July	Aug.	Sept.	Day	Feb.	Mar.	May	July	Aug.	Sept.
1	0		0	0	81	104	16	0		1,440	480	15	1,440
2	0		0	0	69	720	17	0		1,010	408	14	1,140
3	0		0	0	69	2,480	18	0	[a] 10	904	360	13	1,010
4	0		0	185	59	6,730	19	315		817	326	290	832
5	0		0	1,400	54	13,200	20	282		420	304	744	730
6	0		0	8,080	45	34,200	21	349	0	270	270	530	680
7	0		0	25,800	38	38,100	22	218	0	123	248	432	630
8	0	[a] 10	0	27,600	31	26,500	23	148	0	45	218	396	618
9	0		0	19,300	26	16,200	24	115	0	31	198	248	744
10	0		0	12,000	24	10,500	25	45	0	20	178	81	744
11	0		0	7,150	21	7,360	26	38	0		158	54	860
12	0		464	3,450	20	5,520	27	24	0	0	140	38	1,090
13	0		1,880	1,620	19	4,330	28	22	0	0	123	35	1,620
14	0		1,700	991	18	3,100	29		0	0	107	29	2,920
15	0		1,440	642	16	1,960	30	------	0	0	94	24	3,980
							31	------	0	0	87	54	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February	349	0	54.4	3,130
March	------	0	6.45	397
May	1,880	0	341	21,000
July	27,600	0	3,610	[b] 222,000
August	744	13	116	7,130
September	38,100	104	6,330	377,000
The year	38,100	0	869	631,000

[a] Mean discharge for Mar. 1-20.

[b] Several thousand acres was overflowed between this station and station near Three Rivers. Since rainfall was negligible over this area, a great loss of flow occurred between stations.

NOTE.—No flow during months omitted.

NUECES RIVER NEAR THREE RIVERS, TEX.

LOCATION.—Water-stage recorder 100 feet below San Antonio, Uvalde & Gulf Railroad bridge, half a mile below Frio River, and 2 miles southeast of Three Rivers, Live Oak County. Zero of gage is 101.08 feet above mean sea level. Prior to Apr. 5, 1932, staff gage used with same datum.

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 1932.

EXTREMES.—Maximum discharge during year, 56,000 second-feet July 8 (gage height, 43.72 feet); no flow at times.

1915–32: Maximum discharge, about 85,000 second-feet Sept. 18, 1919 (gage height, 46.0 feet); no flow at times.

REMARKS.—Records good. Discharge partly estimated Feb. 29. About 10,000 acres irrigated above station. At very low stages flow is regulated for short periods by railroad pumping plant just above control. Gage-height record furnished by United States Weather Bureau for period Oct. 1 to Apr. 5.

Discharge, in second-feet, 1931–32

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.6	7.0	71	5.0	514	81	0	220	1,810
2	0	1.8	7.0	50	5.0	579	42	0	193	2,380
3	0	10	7.0	48	5.0	690	24	0	169	2,430
4	0	108	7.0	49	3.2	525	55	176	152	3,620
5	0	257	7.0	138	3.2	372	42	1,900	136	3,670
6	0	641	7.0	59	2.6	230	27	3,800	119	3,240
7	4.4	380	7.0	157	2.4	112	16	23,500	110	4,690
8	253	93	7.0	74	2.6	59	9.1	49,500	96	6,140
9	344	44	7.0	144	2.7	37	5.8	40,900	85	6,870
10	162	30	7.0	57	2.6	25	3.7	25,600	77	6,040
11	61	22	5.0	47	1.9	16	2.4	15,800	69	5,530
12	31	23	5.0	39	1.6	13	1.5	9,490	61	15,400
13	23	17	5.0	31	1.6	14	1.0	6,890	55	25,200
14	19	24	5.0	24	1.4	11	.6	11,200	190	24,800
15	14	19	5.0	19	1.2	7.4	.3	15,300	71	19,800
16	10	14	5.0	14	1.1	70	.1	13,500	44	15,000
17	7.0	14	5.2	14	1.1	575	0	10,200	40	11,000
18	5.0	10	28	10	1.1	602	0	7,620	36	8,560
19	5.0	10	51	10	1.1	644	0	5,730	108	6,850
20	5.0	10	378	10	1.0	690	0	4,430	672	5,670
21	5.0	7.0	1,320	7.0	1.0	790	0	3,810	386	4,800
22	10	7.0	375	7.0	.8	868	0	2,870	193	4,180
23	10	7.0	178	5.0	1.0	952	0	1,110	316	3,690
24	7.0	7.0	178	5.0	1.0	1,010	0	740	623	3,560
25	5.0	7.0	247	5.0	1.3	717	0	623	581	3,630
26	5.0	7.0	247	5.0	1.8	187	0	524	715	3,810
27	5.0	7.0	192	3.2	1.4	93	0	448	581	3,440
28	3.2	7.0	144	3.2	1.1	61	0	382	467	3,500
29	3.2	10	110	5.0	3,040	45	0	334	243	3,940
30	3.2	7.0	-------	5.0	2,970	139	0	286	334	4,460
31	3.2	7.0	-------	3.2	-------	108	-------	254	619	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	344	0	32.4	1,990
January	641	1.6	58.4	3,590
February	1,320	5.0	123	7,080
March	157	3.2	36.1	2,220
April	3,040	.8	202	12,000
May	1,010	7.4	347	21,300
June	81	0	10.4	619
July	49,500	0	8,290	510,000
August	715	36	250	15,400
September	25,200	1,810	7,260	432,000
The year	49,500	0	1,390	1,010,000

NOTE.—No flow during October and November.

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 tidewater and breakwater dam.

DRAINAGE AREA.—16,900 square miles.

RECORDS AVAILABLE.—August 1915 to September 1932; records of discharge only from 1915 to 1918.

EXTREMES.—Maximum stage during year, 10.70 feet July 13; minimum stage, 2.85 feet June 18.

1915–32: During September 1919 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 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, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jnne	July	Aug.	Sept.
1	3.40	3.28	3.88	3.75	4.00	4.40	3.95	6.15	4.12	3.60	4.35	4.40
2	3.32	3.42	3.95	3.78	4.00	4.32	3.95	6.62	4.30	3.60	4.28	5.08
3	3.30	3.58	4.00	3.80	4.00	4.30	4.00	5.90	4.28	3.60	4.22	5.65
4	3.42	3.38	3.90	5.32	4.00	4.30	3.90	5.05	4.20	3.52	4.20	6.15
5	3.42	3.25	3.80	6.00	3.92	4.25	3.88	5.10	4.12	3.45	4.15	6.30
6	3.40	3.30	4.05	5.68	3.98	4.50	3.82	4.95	4.08	3.48	4.12	6.50
7	3.42	3.48	4.22	4.55	3.95	4.38	3.80	4.72	4.08	5.32	4.10	6.72
8	3.38	3.62	4.28	4.80	3.95	4.30	3.78	4.58	4.10	5.85	4.05	6.68
9	3.38	3.65	4.25	4.60	3.92	4.32	3.78	4.40	4.05	6.45	4.02	6.78
10	3.45	3.58	4.40	4.15	3.90	4.30	3.92	4.28	4.00	6.85	4.00	7.02
11	3.58	3.60	4.75	3.95	3.90	4.48	3.88	4.25	3.95	7.42	3.98	7.35
12	3.55	3.62	4.42	3.90	3.90	4.32	3.78	4.28	4.00	10.40	3.95	7.65
13	3.48	3.60	4.25	3.82	3.90	4.18	3.58	4.12	3.95	10.65	3.95	7.88
14	3.45	3.55	4.08	3.78	3.95	4.10	3.38	4.08	3.85	10.30	3.95	7.98
15	3.42	3.62	4.00	3.75	3.92	4.10	3.32	4.05	3.78	9.72	3.92	8.08
16	3.60	3.75	3.95	3.72	3.88	4.10	3.38	4.08	3.42	9.22	4.12	8.45
17	3.65	3.72	3.90	3.72	3.88	4.10	3.50	4.08	3.08	8.90	4.28	9.32
18	3.70	3.65	3.82	3.72	4.00	4.02	3.65	4.05	2.98	8.85	3.95	9.75
19	3.65	3.58	3.85	3.70	4.00	4.02	3.60	4.68	2.98	9.02	3.88	9.65
20	3.55	3.55	3.80	3.68	4.00	4.05	3.55	5.00	3.18	9.08	3.82	9.40
21	3.45	3.48	3.80	3.62	4.25	3.98	3.50	5.00	3.32	8.95	4.08	9.12
22	3.42	3.58	3.80	3.65	5.35	3.98	3.50	5.08	3.45	8.72	4.55	8.85
23	3.42	3.70	3.78	3.68	5.75	3.92	3.48	5.18	3.45	8.30	4.55	8.60
24	3.50	3.65	3.80	3.70	4.98	3.90	3.60	5.25	3.48	7.72	4.25	8.25
25	3.68	3.58	3.80	3.72	4.52	3.90	3.70	5.30	3.48	6.60	4.18	7.88
26	3.65	3.50	3.80	3.70	4.38	3.92	3.65	5.35	3.55	5.22	4.58	7.42
27	3.60	3.50	3.85	3.95	4.42	4.00	3.58	5.15	3.52	4.82	4.60	7.18
28	3.55	3.45	3.85	3.98	4.55	3.92	3.50	4.62	3.48	4.65	4.72	7.15
29	3.45	3.58	3.82	4.00	4.50	3.85	3.85	4.38	3.42	4.55	4.68	7.08
30	3.35	3.80	3.80	3.98	-------	3.88	5.40	4.22	3.50	4.50	4.60	6.92
31	3.25	-------	3.78	3.95	-------	3.98	-------	4.18	-------	4.42	4.35	-------

NUECES RIVER SEEPAGE INVESTIGATION

During the investigations the river was at a constant stage, and measurements represent natural conditions.

Discharge measurements of Nueces River to determine seepage from gaging station at Laguna, Tex., to gas well 5 miles northeast of La Pryor, Tex. 1931–32

Date	Location	Distance in miles from initial point	Discharge in second-feet		
			Measured	Gain or loss in section	Total gain or loss above point of measurement
Nov. 14	Laguna	0.0	64.2		
14	6.8 miles above West Fork	6.2	43.0	−21.2	−21.2
15	2.6 miles above West Fork	10.4	14.9	−28.1	−49.3
15	Mouth of West Fork	13.0	0	−14.9	−64.2
15	Southern Pacific Railroad bridge	18.0	0	0	−64.2
15	Uvalde-Del Rio road crossing	20.6	0	0	−64.2
15	Gaging station near Uvalde	22.7	9.0	+9.0	−55.2
15	Uvalde-Eagle Pass road crossing	28.2	16.8	+7.8	−47.4
16	San Antonio Uvalde & Gulf Railroad bridge	31.6	12.7	−4.1	−51.5
16	Gas well 5 miles northeast of La Pryor	39.6	4.0	−8.7	−60.2
Jan. 24	Laguna	0.0	64.0		
24	6.8 miles above West Fork	6.2	46.2	−17.8	−17.8
24	2.6 miles above West Fork	10.4	22.9	−23.3	−41.1
24	Mouth of West Fork	13.0	0	−22.9	−64.0
24	Southern Pacific Railroad bridge	18.0	0	0	−64.0
24	Uvalde-Del Rio road crossing	20.6	0	0	−64.0
24	Gaging station near Uvalde	22.7	8.1	+8.1	−55.9
25	Uvalde-Eagle Pass road crossing	28.2	14.4	+6.3	−49.6
25	San Antonio, Uvalde & Gulf Railroad bridge	31.6	12.8	−1.6	−51.2
25	Old Uvalde-La Pryor road crossing	36.3	8.3	−4.5	−55.7
25	Gas well 5 miles northeast of La Pryor	39.6	4.5	−3.8	−59.5

FRIO RIVER AT CONCAN, TEX.

LOCATION.—Water-stage recorder half a mile below Concan post office, Uvalde County.

DRAINAGE AREA.—485 square miles.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method) 162,000 second-feet July 1 (gage height, 34.44 feet); minimum, 52 second-feet Oct. 8–13, 16, 21, 22.

1924–32: Maximum discharge, that of July 1, 1932; minimum, 8.1 second-feet Aug. 2, 3, 1928.

REMARKS.—Records good except those for medium and high-water periods, which are poor. Discharge estimated July 17–23.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	86	69	64	81	109	98	152	95	41,200	217	6,420
2	58	84	69	64	81	118	95	141	95	8,140	209	1,630
3	56	81	69	67	79	132	98	132	98	2,320	204	948
4	56	79	67	74	76	132	98	128	95	1,470	204	785
5	56	76	64	74	74	170	98	128	109	1,140	204	688
6	54	76	69	67	74	166	95	135	98	1,010	200	1,110
7	54	76	92	67	72	163	95	138	92	980	196	1,110
8	52	76	86	67	72	155	92	145	89	818	192	818
9	52	74	81	67	69	148	89	145	86	733	188	720
10	52	72	79	67	69	145	86	138	84	668	184	662
11	52	69	76	64	67	141	86	132	81	622	184	610
12	52	67	74	64	67	141	86	141	79	584	180	577
13	52	67	76	64	67	138	86	138	79	551	177	544
14	54	72	74	64	67	135	84	132	76	518	173	512
15	54	69	76	64	72	135	84	145	74	492	177	486
16	52	69	76	102	86	128	84	135	72	466	173	460
17	54	72	76	103	98	125	84	135	69		166	440
18	54	67	76	89	128	125	81	128	67		166	421
19	54	69	76	86	122	122	79	122	64		177	408
20	54	67	79	84	118	118	79	118	62	378	170	388
21	52	67	76	84	122	115	79	118	62		162	460
22	52	69	74	89	122	109	81	112	62		159	454
23	1,300	69	74	95	118	109	81	112	62		155	824
24	374	67	72	92	118	109	81	109	60	301	152	818
25	185	69	72	92	118	109	79	106	60	284	148	804
26	135	67	69	89	118	106	76	115	58	267	148	688
27	112	67	69	86	115	103	86	112	56	258	148	668
28	103	67	69	86	115	103	141	122	54	244	148	681
29	98	67	69	84	109	100	260	109	54	234	145	642
30	89	69	67	84	-------	100	181	103	62	230	142	603
31	89	-------	64	84	-------	98	-------	100	-------	221	643	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,300	52	118	7,260
November	86	67	71.5	4,250
December	92	64	73.5	4,520
January	103	64	78.3	4,810
February	128	67	92.9	5,340
March	170	98	126	7,750
April	260	76	97.4	5,800
May	152	100	127	7,810
June	109	54	75.1	4,470
July	41,200	221	2,140	132,000
August	643	142	190	11,700
September	6,420	388	879	52,300
The year	41,200	52	341	248,000

FRIO RIVER NEAR DERBY, TEX.

LOCATION.—Water-stage recorder at International-Great Northern Railroad bridge 900 feet below mouth of Leona River and 4 miles south of Derby, Frio County. Zero of gage is 449.3 feet above mean sea level.

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

RECORDS AVAILABLE.—August 1915 to September 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), 230,000 second-feet July 4 (gage height, 29.45 feet); no flow at times.

1915–32: Maximum discharge, that of July 4, 1932; no flow at times.

REMARKS.—Records below 10 and above 18,000 second-feet poor, others good. Discharge partly estimated July 2–19. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0	0.1	0.2	0.4	0.4	0.2	6.8	0	48	220
2	0	.2	0	.1	.2	.5	.4	.1	1.9	2,190	38	3,370
3	0	.2	.1	.1	.2	.4	.4	.1	.5	75,700	31	8,760
4	0	.1	.1	.2	.2	.5	.2	.1	.3	135,000	26	6,560
5	0	.1	.1	.2	.2	.4	.2	.2	.2	36,500	22	4,160
6	0	0	.2	.1	.1	.4	.2	.2	.1	9,420	17	3,530
7	0	0	.4	.2	.2	.4	.2	.2	.1	4,260	14	2,350
8	0	0	.1	.2	.1	.3	.2	.1	0	3,170	10	3,510
9	0	0	.1	.2	.1	.3	.2	.1	0	2,270	8.5	3,440
10	0	0	.1	.2	.1	.3	.2	.1	0	1,530	6.8	1,520
11	0	0	.1	.2	.1	.3	.2	.2	0	1,030	5.2	1,000
12	0	0	.1	.2	.2	.4	.2	123	0	805	4.5	855
13	0	0	.1	.2	.2	.4	.4	161	0	730	3.9	755
14	0	0	.1	.2	.2	.4	.4	34	0	635	3.3	670
15	0	0	.1	.2	.2	.5	.4	9.5	0	550	2.3	605
16	0	0	.1	.2	.2	.4	.4	3.9	0	480	1.9	530
17	0	0	.1	.2	.2	.3	.3	28	0	420	1.6	468
18		0	.2	.2	.1	.2	.2	10	0	376	1.6	424
19	0	0	.1	.2	1.7	.3	.2	2.8	0	328	288	380
20	0	0	.1	.2	.2	.3	.2	.7	0	290	574	348
21	0	0	.1	.2	.2	.3	.3	.6	0	254	98	320
22	0	0	.1	.2	.2	.3	.2	.4	0	224	30	299
23	0	0	.1	.2	7.1	.4	.2	.2	0	198	12	311
24	0	0	.1	.2	2.3	.4	.2	.2	0	175	5.2	890
25	0	0	.1	.2	1.9	.3	.2	.1	0	155	3.3	1,790
26	11	0	.1	.2	.4	.3	.2	.1	0	132	2.8	2,340
27	64	0	.2	.2	.4	.3	.2	.4	0	112	4.5	2,450
28	27	0	.2	.2	.4	.3	.2	1.6	0	95	3.3	1,630
29	10	0	.2	.2	.4	.4	.2	64	0	81	2.8	1,360
30	2.8	0	.2	.1	-------	.4	.2	164	0	68	2.8	1,280
31	.7	-------	.1	.1	-------	.4	-------	38	-------	57	6.0	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	64	0	3.73	229
November	.4	0	.03	1.8
December	.4	0	.12	7.4
January	.2	.1	.18	11
February	7.1	.1	.63	36
March	.5	.2	.36	22
April	.4	.2	.25	15
May	164	.1	20.8	1,280
June	6.8	0	.33	20
July	135,000	0	8,940	* 550,000
August	574	1.6	41.2	2,530
September	8,760	220	1,870	111,000
The year	135,000	0	917	665,000

* During flood period about 60,000 acres was overflowed between this station and that at Calliham. Since rainfall was negligible over this area, a great loss of flow occurred between stations.

FRIO RIVER AT CALLIHAM, TEX.

LOCATION.—Water-stage recorder at Calliham-Whitsett highway bridge half a mile below mouth of San Miguel Creek and 1 mile north of Calliham, McMullen County. Gage datum same as that for staff gage used prior to Apr. 30, 1926. Zero of gage is 153.47 feet above mean sea level.

DRAINAGE AREA.—5,450 square miles, a large part of which is noncontributing at low stages, owing to water entering fault near Uvalde.

RECORDS AVAILABLE.—October 1924 to April 1926; April to September 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), 109,000 second-feet July 6 (gage height, 39.2 feet); no flow at times.

1924–26, 1932: Maximum discharge, that of July 6, 1932; no flow at times.

REMARKS.—Records good below 10,000 second-feet, poor for high discharges and estimated periods. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	------	[a] 26		0	103		16	------	4.5		830		[a] 770
2	------	[a] 9.7		0	88		17	------	42				[a] 664
3	------	[a] 3.0		0	76	[a]2,400	18	------	52				[a] 601
4	------	[a] 2.2		[a] 555	69		19	------	33	[b]5.3			[a] 536
5	------	[a] 1.9		2,620	61		20	------	19		[a] 478		[a] 497
6	------	1.6		[a]39,800	53	[a] 2,570	21	------	12				[a] 454
7	------	1.3		[a]73,100	46	[a] 5,210	22	------	9.0	0			[a] 424
8	------		[b]5.3	[a]37,800	40	6,720	23	------	14	0			[a] 403
9	------	[c]1.0		23,800	35	4,670	24	------	10	0		[d]215	[a] 457
10	------			12,900	31	2,690	25	------	6.2	0	262		[a] 663
11	------	[a] .7		5,440	28	2,030	26	------	4.2	0	222		[a] 1,190
12	------	.7		2,550	25	2,370	27	------	2.8	0	190		[a] 898
13	------	.6		[a] 1,870	23	2,210	28	------	1.9	0	166		[a] 1,030
14	------	.6		[a] 1,400	[d]215	1,390	29	[a] 303	1.4	0	149		[a] 1,370
15	------	.6		1,070		950	30	[a] 114	1.0	0	131		[a] 1,570
							31	------	3.0	------	116		-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April 29–30	303	114	208	827
May	52	.6	8.64	531
June			3.71	221
July	73,100	0	6,740	[a] 414,000
August			147	9,040
September	6,720		1,810	108,000
The period				533,000

[a] Partly estimated.
[b] Estimated mean discharge June 1-21.
[c] Estimated.
[d] Estimated mean discharge Aug. 14-31.

NOTE.—[a] During flood period about 20,000 acres was overflowed between this station and that at Nueces River near Three Rivers. Since rainfall was negligible over this area, a great loss of flow occurred between stations.

ATASCOSA RIVER AT WHITSETT, TEX.

LOCATION.—Water-stage recorder 0.9 mile west of Whitsett, Live Oak County, and 4 miles below mouth of La Parita Creek. Gage is 0.3 mile upstream from site used prior to May 8, 1926, and its datum is 1.43 feet lower than that of the former gage.

DRAINAGE AREA.—1,170 square miles.

RECORDS AVAILABLE.—September 1924 to May 1926; May to September 1932.

EXTREMES.—Maximum discharge during period, 1,430 second-feet Sept. 3 (gage height, 13.86 feet); minimum not determined.

1924–26, 1932: Maximum discharge, about 2,780 second-feet July 12, 1925 (gage height, 17.3 feet, old gage datum); no flow for several periods.

Flood of Apr. 29, 30, 1932, reached a stage of 20 feet, present gage datum (discharge, 2,850 second-feet).

Maximum stage known, 32.1 feet (present datum) in April 1922.

REMARKS.—Records good except those estimated, June 2–24, 27–29, July 29 to Aug. 13, Aug. 16–18, which are fair.

Discharge, in second-feet, 1932

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1		0.6	2.5		792	16			2.9		4.6
2			1.7		489	17			1.5	1.0	4.2
3			95		747	18			.8		25
4			119		758	19			.2	287	8.3
5			38		468	20			163	551	4.6
6			12		258	21		0.5	240	200	3.3
7			5.0	0.1	205	22	7.6		50	105	2.8
8		.5	292		68	23	6.3		15	68	2.6
9			99		31	24	5.0		66	20	116
10			26		17	25	4.1	1.3	17	72	481
11			12		11	26	3.5	1.4	5.7	71	164
12			8.6		12	27	3.3		3.0	19	54
13			9.8		11	28	2.5	.2	1.7	7.1	33
14			6.8	29	6.8	29	1.7			7.9	36
15			5.7	2.0	5.2	30	1.5	1.3	.5	202	15
						31	1.3			297	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May 22–31	7.6	1.3	3.68	73
June	1.4		.56	33
July	292		42.0	2,580
August	551		62.7	3,860
September	792	2.6	161	9,580
The period				16,100

RIO GRANDE BASIN

RIO GRANDE AT TAOS JUNCTION BRIDGE, NEAR TAOS, N.MEX.

LOCATION.—Water-stage recorder in Gijosa Grant, at Taos-Taos Junction highway bridge 800 feet below mouth of Rio Taos and about 10 miles southwest of Taos, Taos County.

DRAINAGE AREA.—9,150 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1925–30 published by State engineeer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 1,020 second-feet Mar. 19 (gage height, 2.53 feet); minimum, estimated, 140 second-feet Aug. 21.

Maximum discharge during year ending Sept. 30, 1932, 6,950 second-feet May 25 (gage height, 8.56 feet); minimum, 240 second-feet Nov. 24.

REMARKS.—Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	368	392	552	416	380	588	673	404	372	240	198	226
2	368	380	574	408	392	516	664	408	368	243	e 210	236
3	368	392	552	400	396	619	650	416	360	246	e 210	236
4	368	384	529	408	396	637	610	412	352	246	e 200	240
5	376	376	520	404	396	632	570	412	348	243	e 210	236
6	392	420	524	440	412	655	538	412	336	243	e 190	232
7	400	424	508	432	472	565	520	408	328	236	e 185	229
8	400	420	524	420	480	496	520	408	324	240	e 185	222
9	396	416	552	416	512	646	520	420	316	236	e 220	215
10	400	408	556	428	538	637	516	428	313	232	e 205	212
11	412	396	552	404	538	624	500	464	310	229	e 195	201
12	420	396	552	400	529	668	496	468	302	226	e 185	e 195
13	416	392	542	404	547	678	496	460	299	218	e 175	190
14	412	392	547	392	524	720	496	448	285	215	e 170	187
15	408	392	529	396	529	775	e 490	428	278	215	e 165	264
16	400	368	516	388	565	800	e 490	428	274	215	e 160	254
17	400	328	529	392	552	825	e 490	460	260	218	e 155	313
18	396	392	500	388	542	850	e 480	504	243	229	e 150	282
19	408	448	476	384	538	950	e 480	524	246	e 255	e 150	332
20	412	420	448	380	560	950	476	516	243	e 260	e 145	456
21	412	288	460	372	592	875	472	504	246	218	e 140	408
22	396	388	436	364	588	825	472	500	246	218	e 160	404
23	392	424	448	356	583	775	488	476	246	212	e 170	404
24	400	436	412	352	574	775	484	468	236	212	e 160	632
25	416	440	416	348	570	800	456	456	240	208	e 155	578
26	416	456	400	336	588	800	424	440	236	215	e 175	547
27	416	468	432	348	588	775	416	432	236	208	194	524
28	404	488	420	352	614	750	412	404	232	e 200	194	565
29	408	534	420	352	-------	725	408	384	236	e 195	201	560
30	396	556	412	360	-------	730	404	384	236	190	212	529
31	396	-------	412	368	-------	700	-------	380	-------	194	212	-------

Discharge, in second-feet, of Rio Grande at Taos Junction Bridge, near Taos, N. Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	512	a 330	416	508	488	a 920	691	1,000	4,650	4,890	a 400	686
2	524	a 330	432	516	488	1,080	691	1,000	4,070	4,410	a 380	646
3	542	a 340	460	524	496	1,050	a 740	1,000	3,540	3,960	a 360	560
4	a 460	a 340	452	524	472	1,020	a 800	1,080	3,340	3,540	a 360	529
5	a 400	a 330	472	524	480	950	a 860	1,340	3,240	3,440	a 350	529
6	348	a 330	496	516	496	950	a 900	1,720	3,060	3,340	a 340	524
7	352	302	500	504	516	950	a 960	2,070	2,880	2,970	a 340	508
8	352	306	496	500	529	1,000	a 920	2,070	2,460	2,380	a 340	496
9	360	316	480	508	624	875	a 880	1,900	2,220	1,930	a 340	520
10	400	320	508	512	642	825	a 860	2,070	2,220	1,550	a 340	468
11	368	336	488	504	574	825	a 840	2,460	2,220	1,340	a 340	a 420
12	a 350	336	500	504	534	850	800	2,620	2,220	1,280	a 330	a 380
13	a 340	336	480	508	578	735	900	2,460	2,380	1,340	a 320	a 360
14	324	332	452	500	628	775	1,000	2,540	2,540	1,520	a 310	a 340
15	324	328	500	496	642	800	1,020	2,880	2,880	1,860	a 300	a 330
16	332	324	484	504	646	750	1,020	3,240	3,440	1,720	a 300	a 320
17	340	320	468	488	632	745	1,220	3,440	3,850	1,550	a 300	a 310
18	a 350	320	464	504	642	735	1,340	3,850	3,960	1,400	a 300	a 300
19	a 360	320	468	496	a 640	725	1,460	4,650	3,740	1,250	a 310	a 300
20	a 370	313	484	504	a 650	735	1,490	5,530	3,340	1,130	a 320	a 300
21	a 380	316	500	496	a 660	775	1,520	6,220	3,150	1,020	a 500	a 300
22	a 370	306	512	512	a 660	775	1,620	6,080	2,970	925	a 440	a 300
23	a 370	328	524	488	a 660	775	1,650	5,800	2,700	875	a 410	a 310
24	a 370	257	529	484	a 660	800	1,580	6,500	2,790	750	a 380	a 340
25	a 360	250	520	488	a 660	750	1,520	6,650	3,540	664	a 350	a 400
26	a 360	282	534	480	a 680	715	1,460	6,360	4,410	508	a 360	476
27	a 350	296	538	484	a 720	710	1,490	5,940	5,140	680	364	456
28	a 340	356	542	512	a 740	705	1,280	5,270	5,400	a 520	408	a 410
29	a 340	364	542	476	a 760	705	1,130	4,770	5,530	a 440	440	a 360
30	a 330	368	524	484	-------	700	1,050	4,650	5,270	a 410	452	324
31	a 330	-------	520	488	-------	700	-------	4,650	-------	a 390	496	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	420	368	399	24,500
November	556	288	414	24,600
December	574	400	492	30,200
January	440	336	387	23,800
February	614	380	518	28,800
March	950	496	721	44,400
April	673	404	504	30,000
May	524	380	441	27,100
June	372	232	285	17,000
July	260	190	224	13,800
August	220	140	182	11,200
September	632	187	337	20,100
The year	950	140	408	296,000
1931–32				
October	542	324	374	23,000
November	368	250	321	19,100
December	542	416	493	30,300
January	524	476	501	30,800
February	760	472	607	34,900
March	1,080	700	820	50,400
April	1,650	691	1,120	66,800
May	6,650	1,000	3,610	222,000
June	5,530	2,220	3,440	205,000
July	4,890	390	1,740	107,000
August	500	300	364	22,400
September	686	300	417	24,800
The year	6,650	250	1,150	836,000

a Estimated.

RIO GRANDE AT EMBUDO, N.MEX.

LOCATION.—Water-stage recorder in SW¼ sec. 23, T. 23 N., R. 9 E., a quarter of a mile below depot at Embudo and about 2¼ miles below Embudo Creek.
DRAINAGE AREA.—10,000 square miles.
RECORDS AVAILABLE.—January 1889 to December 1903; September 1912 to September 1916; October 1930 to September 1932. Records 1916–30 published by State engineer.
EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 1,740 second-feet Sept. 24 (gage height, 4.72 feet); minimum, 166 second-feet Aug. 22.
Maximum discharge during year ending Sept. 30, 1932, 8,360 second-feet May 25 (gage height, 9.35 feet); minimum, 190 second-feet Nov. 25.
REMARKS.—Records good. Discharge estimated for periods of ice effect, Dec. 26, 1930, to Jan. 3, 1931; interpolated May 29, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	436	388	576	460	444	730	758	576	705	312	252	235
2	500	388	590	450	444	680	758	576	680	346	312	245
3	456	385	567	500	440	680	730	608	680	315	309	242
4	440	396	544	512	432	758	705	630	655	371	294	242
5	436	402	524	488	436	758	680	655	655	343	374	245
6	440	413	532	492	448	758	655	655	630	315	285	252
7	440	452	516	496	488	730	626	655	598	285	264	258
8	436	468	524	496	508	590	608	680	585	264	248	258
9	432	476	528	496	528	705	612	730	562	261	312	264
10	428	484	544	500	558	758	608	730	544	258	282	285
11	436	492	532	492	572	758	603	730	532	250	258	300
12	456	500	528	512	576	785	598	730	500	242	235	300
13	448	508	528	488	608	785	590	730	468	240	218	303
14	436	516	536	488	603	812	594	730	444	232	205	322
15	432	520	520	488	590	840	598	758	413	228	202	460
16	420	520	504	472	655	870	603	785	378	230	195	420
17	413	508	520	492	630	900	608	840	354	232	192	468
18	410	500	504	472	630	930	612	930	329	250	190	456
19	413	585	488	456	626	990	616	960	309	267	188	524
20	413	585	456	468	630	1,020	655	960	294	303	182	554
21	410	504	432	452	655	1,020	655	900	282	264	174	528
22	406	432	444	448	680	990	655	840	279	250	202	488
23	399	532	413	448	680	930	655	812	276	230	230	464
24	396	540	424	413	680	930	680	785	276	222	188	1,150
25	396	520	416	416	680	900	680	785	267	228	182	630
26	396	528	420	413	705	900	630	785	264	261	185	567
27	396	536	460	420	730	870	603	812	261	261	190	536
28	396	544	450	432	730	870	572	812	258	242	202	562
29	396	580	450	432	------	840	567	758	273	232	202	540
30	396	585	440	436	------	812	572	730	297	230	212	508
31	388	------	450	444	------	812	------	705	------	228	222	------

Discharge, in second-feet, of Rio Grande at Embudo, N.Mex. 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	488	378	448	560	440	978	706	1,120	5,150	4,860	450	730
2	500	382	496	550	436	1,120	718	1,120	4,580	4,440	384	742
3	516	392	520	555	445	1,120	814	1,190	3,890	4,020	376	623
4	484	402	496	565	400	1,080	880	1,260	3,630	3,630	384	570
5	464	396	484	560	400	1,040	978	1,460	3,500	3,500	376	520
6	460	392	488	530	445	1,010	1,040	1,760	3,240	3,370	360	500
7	452	385	488	481	476	978	1,120	2,050	3,000	3,060	356	454
8	444	346	536	486	510	1,010	1,040	2,050	2,580	2,420	368	436
9	532	374	536	510	634	978	1,040	1,900	2,310	1,950	368	414
10	524	392	558	525	754	912	1,040	2,000	2,260	1,580	364	388
11	476	410	524	486	606	874	1,010	2,420	2,260	1,460	356	368
12	444	399	528	500	510	880	1,040	2,640	2,310	1,380	344	352
13	424	396	532	510	515	880	1,120	2,580	2,360	1,420	340	344
14	420	392	484	510	565	832	1,220	2,760	2,420	1,500	336	340
15	406	382	504	472	606	856	1,300	3,180	2,760	1,860	328	332
16	396	382	572	515	650	868	1,300	3,630	3,240	1,760	324	328
17	385	388	554	476	606	844	1,420	3,890	3,630	1,460	344	332
18	388	385	576	472	585	832	1,580	4,300	3,890	1,340	328	328
19	392	396	558	458	618	826	1,720	5,150	3,760	1,150	364	320
20	420	374	558	490	634	832	1,810	6,210	3,630	1,080	306	310
21	432	399	562	481	650	862	1,860	7,340	3,370	978	555	310
22	406	388	576	490	645	874	1,900	7,170	3,060	880	540	310
23	413	416	585	450	645	868	1,900	6,850	2,880	802	486	324
24	406	291	590	436	662	880	1,810	7,680	3,000	772	422	360
25	402	261	585	418	672	880	1,720	8,020	3,500	712	409	368
26	399	364	590	445	724	862	1,580	7,680	4,300	596	414	414
27	392	410	590	440	760	790	1,680	7,170	5,000	763	440	372
28	382	436	612	450	814	748	1,460	6,690	5,450	634	520	364
29	382	428	612	422	868	724	1,260	6,000	5,450	490	560	364
30	371	406	572	418	-------	712	1,150	5,300	5,300	440	560	352
31	371	-------	558	436	-------	706	-------	5,150	-------	422	555	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	500	388	422	26,000
November	585	385	493	29,300
December	590	413	495	30,500
January	512	413	467	28,700
February	730	432	585	32,500
March	1,020	590	829	51,000
April	758	567	636	37,900
May	960	576	754	46,400
June	705	258	435	25,900
July	371	222	264	16,200
August	374	174	232	14,300
September	1,150	235	420	25,000
The year	1,150	174	502	364,000
1931–32				
October	532	371	431	26,500
November	436	261	385	22,900
December	612	448	544	33,500
January	565	418	487	29,900
February	868	400	596	34,300
March	1,120	706	892	54,900
April	1,900	706	1,310	77,800
May	8,020	1,120	4,120	253,000
June	5,450	2,260	3,520	210,000
July	4,860	422	1,770	109,000
August	560	306	407	25,000
September	742	310	409	24,300
The year	8,020	261	1,240	901,000

RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, N.MEX.[1]

LOCATION.—Water-stage recorder in San Ildefonso Pueblo Grant, at Denver & Rio Grande Western Railroad bridge 2 miles southwest of San Ildefonso and 3 miles below Tesuque Creek.

DRAINAGE AREA.—13,800 square miles.

RECORDS AVAILABLE.—February 1895 to December 1905; June 1909 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 12,400 second-feet Sept. 24 (gage height, 8.80 feet); minimum, 151 second-feet Aug. 21.

Maximum discharge during year ending Sept. 30, 1932, 14,500 second-feet May 20 (gage height, 9.84 feet); minimum, 340 second-feet Aug. 17.

REMARKS.—Records good except those estimated, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	1,020	550	832	594	660	988	935	1,500	1,220	540	490	e 250
2	642	534	825	606	624	898	912	1,660	1,130	584	501	e 260
3	619	518	804	618	612	920	912	1,830	1,130	584	455	e 280
4	586	567	764	618	624	1,010	935	1,890	1,090	686	405	e 260
5	575	562	718	589	636	995	853	2,200	1,090	636	475	e 250
6	580	572	712	578	692	1,050	811	2,010	965	540	624	e 250
7	575	612	686	606	680	965	790	2,010	950	415	567	e 240
8	558	642	712	594	758	718	898	2,640	920	372	518	227
9	548	654	712	594	777	920	980	2,800	853	327	793	215
10	1,080	673	732	618	825	988	980	2,270	825	304	e 670	191
11	1,090	680	718	594	818	965	928	2,080	839	296	e 540	203
12	654	686	718	584	868	958	965	1,890	770	282	425	264
13	666	712	718	600	898	942	1,090	1,950	732	286	345	286
14	718	718	718	612	890	995	1,130	2,340	e 700	243	300	724
15	680	738	692	618	860	1,050	1,170	2,640	660	243	e 280	e 850
16	654	699	654	618	980	1,050	1,300	2,800	e 600	264	e 270	e 800
17	624	673	654	618	928	1,090	1,350	2,800	e 560	255	e 250	e 1,200
18	660	725	660	636	928	1,130	1,300	3,050	e 520	247	219	e 1,700
19	654	868	e 620	589	868	1,300	1,350	2,880	e 470	309	179	1,970
20	666	839	e 600	589	905	1,300	1,500	2,340	e 430	386	203	1,860
21	660	770	e 600	572	950	1,220	1,720	1,890	e 390	475	171	1,550
22	648	584	e 560	589	935	1,170	1,720	1,600	e 340	400	171	e 1,400
23	630	738	e 560	594	950	1,130	1,720	1,660	e 300	e 240	425	1,930
24	618	718	e 540	578	942	1,130	1,720	1,660	273	e 230	450	4,600
25	630	738	e 520	578	935	1,090	1,450	1,550	215	e 250	255	1,400
26	630	744	e 520	562	935	1,130	1,300	1,600	243	e 270	239	e 1,300
27	600	751	e 530	567	950	1,130	1,130	1,500	231	e 270	207	e 1,100
28	578	758	e 550	567	980	1,050	1,130	1,450	211	e 250	203	e 1,100
29	562	846	e 540	578	-------	1,000	1,400	1,350	304	e 240	203	e 1,200
30	567	853	e 530	589	-------	1,050	1,550	1,300	470	e 240	268	e 1,400
31	534	-------	523	624	-------	988	-------	1,260	-------	e 250	304	-------

e Estimated.

[1] In previous reports this station was designated as "near Rio Grande," "at Watertank," and "near Buckman."

Discharge, in second-feet, of Rio Grande at Otowi Bridge, near San Ildefonso, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	a1,000	636	540	a 720	a 590	2,050	2,960	a3,400	7,750	5,570	934	882
2	a1,200	618	a 720	665	a 600	2,290	3,900	3,820	7,290	5,170	735	974
3	a1,450	618	a 750	a 670	a 580	2,110	4,790	4,240	7,060	4,980	652	812
4	1,600	612	a 720	a 680	a 500	1,940	5,370	5,170	5,980	4,330	598	749
5	928	584	a 690	a 680	a 600	1,830	5,570	6,400	a 5,400	3,980	544	670
6	920	584	a 690	a 660	a 700	1,670	5,980	6,840	a 5,100	3,820	482	628
7	832	584	a 720	a 640	a 850	1,620	5,570	6,620	4,790	3,570	509	574
8	790	562	770	a 640	1,010	1,830	5,170	6,190	a 4,400	3,040	509	532
9	1,560	600	764	a 650	1,240	1,880	5,370	6,620	a 4,100	2,550	526	492
10	2,610	624	811	a 660	1,470	1,830	4,880	7,060	a 3,800	2,110	465	454
11	1,010	818	718	a 650	1,380	1,720	4,790	7,750	a 3,700	2,110	421	438
12	1,000	1,010	751	a 640	1,150	1,780	5,170	8,230	a 3,600	2,420	421	426
13	972	839	751	a 660	1,050	1,670	5,770	8,230	a 3,700	2,290	404	399
14	890	804	a 640	a 640	1,110	a1,640	6,400	8,470	3,900	2,110	394	382
15	875	751	a 680	a 660	1,150	1,620	6,620	8,970	a4,100	2,420	372	372
16	804	699	a 820	a 670	1,280	1,780	6,840	9,750	a 4,400	2,360	394	377
17	784	654	a 790	a 660	1,050	1,880	7,750	10,300	4,980	2,050	372	366
18	797	618	804	a 650	1,060	2,000	7,750	10,800	5,170	1,880	568	355
19	790	600	825	a 640	1,110	2,230	7,520	11,400	4,980	1,670	498	382
20	1,050	589	770	a 640	1,200	2,960	7,520	13,500	4,600	1,520	819	377
21	1,500	562	770	a 620	1,200	3,180	7,290	13,200	4,160	1,470	974	360
22	1,130	550	784	a 620	1,150	2,680	7,060	12,600	3,980	1,240	1,570	360
23	a 970	a 600	797	a 610	1,150	2,290	6,840	12,000	3,900	1,200	847	377
24	a 930	a 420	784	a 600	1,200	2,170	5,170	12,000	4,070	1,150	735	470
25	a 890	a 400	790	580	1,200	2,360	4,600	11,700	4,510	1,200	707	622
26	a 860	a 460	811	a 600	1,280	2,680	4,160	10,800	5,370	1,050	742	664
27	a 820	a 520	811	a 610	1,380	2,360	4,070	10,000	5,980	1,020	694	610
28	a 760	562	790	a 600	1,520	2,290	a3,700	9,490	6,400	1,110	926	592
29	712	a 550	804	a 580	1,780	2,420	a3,300	8,970	6,190	812	1,280	574
30	a 680	a 480	a 790	a 590	-------	2,550	2,960	8,470	5,980	903	958	532
31	660	-------	a 780	a 590	-------	2,480	-------	7,990	--------	982	896	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	1,090	534	661	40,700
November	868	518	691	41,100
December	832	520	652	40,100
January	636	562	596	36,600
February	980	612	836	46,400
March	1,300	718	1,040	64,100
April	1,720	790	1,200	71,300
May	3,050	1,260	2,010	124,000
June	1,220	211	648	38,500
July	686	230	352	21,600
August	793	171	368	22,600
September	4,600	191	975	58,000
The year	4,600	171	836	605,000
1931–32				
October	2,610	660	1,020	63,000
November	1,010	400	617	36,700
December	825	540	756	46,500
January	720	580	638	39,200
February	1,780	500	1,090	62,600
March	3,180	1,620	2,120	130,000
April	7,750	2,960	5,490	327,000
May	13,500	3,400	8,740	537,000
June	7,750	3,600	4,980	296,000
July	5,570	812	2,330	143,000
August	1,570	372	676	41,500
September	974	355	527	31,300
The year	13,500	355	2,420	1,750,000

a Estimated

RIO GRANDE AT COCHITI, N.MEX.

LOCATION.—Water-stage recorder at highway bridge 1 mile northeast of Cochiti, Sandoval County, 4 miles north of Pena Blanca, and 8 miles above mouth of Galisteo Creek.

DRAINAGE AREA.—14,300 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1925–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, estimated, 13,000 second-feet Sept. 24; minimum discharge, estimated, 130 second-feet July 15–17.

Maximum discharge during year ending Sept. 30, 1932, 13,000 second-feet May 22 (gage height, 8.9 feet); minimum, 270 second-feet Aug. 16.

REMARKS.—Records good except those estimated, which are fair. Stage-discharge relation affected by ice Nov. 19, 1931, to Feb. 16, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	770	396	593	e 490	688	825	874	1,540	1,210	718	e 460	236
2	710	396	607	e 560	635	748	841	1,650	1,130	718	e 520	203
3	586	390	614	e 580	621	725	849	1,840	1,110	695	e 520	182
4	546	407	688	e 600	600	890	849	1,970	1,050	672	e 480	175
5	494	424	725	583	586	e 880	849	2,270	1,090	849	e 520	145
6	470	446	725	e 580	614	e 920	770	2,120	1,080	e 650	672	e 145
7	470	488	725	e 600	621	e 780	725	1,970	1,100	e 500	470	e 145
8	464	513	710	e 590	650	e 680	785	2,270	1,100	e 375	494	e 145
9	452	526	680	e 590	672	e 800	899	2,780	1,030	e 250	840	e 145
10	488	552	710	e 610	680	e 870	942	2,440	1,050	e 200	748	e 145
11	1,430	579	702	e 590	688	e 860	916	2,270	1,030	e 180	424	e 145
12	572	579	e 660	e 580	725	e 860	857	2,120	968	e 160	282	143
13	532	579	e 660	e 600	785	857	986	e 2,180	890	e 150	194	160
14	546	558	e 640	e 620	755	857	1,080	e 2,490	833	e 140	e 190	369
15	520	593	e 620	e 620	740	959	1,080	e 2,770	755	e 130	e 190	1,810
16	500	579	e 550	e 620	785	977	1,200	e 2,850	642	e 130	e 180	1,100
17	464	552	533	e 620	793	986	1,250	e 2,900	565	e 130	e 180	857
18	458	532	e 520	e 640	793	1,050	1,260	e 3,140	470	132	e 180	1,030
19	458	665	e 510	615	755	1,180	1,240	e 3,000	370	145	e 170	1,900
20	458	732	e 500	e 600	725	1,260	1,410	e 2,500	312	203	e 170	1,770
21	458	665	e 490	e 590	817	1,190	1,600	e 2,020	282	262	e 170	1,540
22	464	658	e 480	e 600	801	1,070	1,600	1,650	294	317	e 200	977
23	440	539	e 470	e 610	825	986	1,630	1,610	236	191	e 480	841
24	424	429	e 460	e 590	801	995	1,620	1,530	209	150	513	e 5,000
25	452	526	e 460	e 590	770	1,030	1,480	1,550	212	356	218	1,570
26	458	579	e 460	e 580	801	1,050	1,350	1,540	194	e 170	180	1,200
27	452	558	e 460	e 580	809	1,040	1,200	1,480	185	e 160	152	1,080
28	452	600	e 470	e 590	809	1,010	1,140	1,380	168	e 150	137	986
29	412	593	e 490	e 600	-------	908	1,420	1,270	197	e 150	134	1,070
30	418	565	e 480	e 600	-------	986	1,620	1,160	380	e 140	147	1,080
31	402	-------	e 480	e 640	-------	924	-------	1,120	-------	e 140	229	-------

e Estimated.

Discharge, in second-feet, of Rio Grande at Cochiti, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	916	520	600	760	630	2,270	2,040	3,240	6,180	6,320	916	801
2	874	526	700	740	640	2,690	2,960	3,340	5,770	6,460	695	899
3	1,200	506	730	740	620	2,520	3,850	3,960	5,250	6,180	593	817
4	1,420	520	720	750	600	2,190	4,520	4,760	5,000	5,120	520	[a] 750
5	1,070	546	710	740	620	2,040	4,640	5,900	4,880	4,640	494	[a] 680
6	857	558	700	720	850	1,970	5,000	6,460	4,760	4,400	429	614
7	801	565	750	700	1,100	1,900	4,880	6,460	4,400	4,290	390	565
8	732	579	800	680	1,300	1,900	4,290	5,640	4,070	3,850	464	506
9	748	614	800	690	1,600	1,900	4,400	6,180	3,740	3,540	440	470
10	[a] 1,800	628	800	700	1,700	1,840	4,290	6,460	3,540	3,050	380	440
11	1,030	695	780	690	1,800	1,770	3,960	6,760	3,540	2,870	345	412
12	841	1,050	780	680	1,600	1,650	4,290	7,200	3,440	3,140	326	412
13	825	778	786	700	1,400	1,570	4,760	7,360	3,540	2,870	326	396
14	732	695	720	680	1,400	1,370	5,380	7,360	3,540	2,600	308	380
15	688	621	750	700	1,500	1,450	5,770	7,670	3,540	2,690	286	365
16	621	572	850	710	1,500	1,550	5,900	8,150	3,640	2,780	278	360
17	600	593	830	700	1,560	1,650	6,610	[a] 8,700	3,740	2,440	278	360
18	607	572	820	695	1,500	1,770	6,900	[a] 9,200	4,070	2,120	340	360
19	635	560	809	680	1,560	1,900	6,610	9,520	4,400	1,840	513	355
20	849	540		690	1,520	2,520	6,900	11,400	4,400	1,650	635	355
21	1,220	510		660	1,640	3,050	7,050	11,800	4,180	1,480	762	350
22	968	520		660	1,610	2,600	7,360	12,700	3,960	1,360	1,190	345
23	748	520		650	1,570	2,120	7,830	12,200	3,850	1,230	833	350
24	710	410		660	1,530	1,770	6,320	11,400	3,640	1,180	762	407
25	688	390	800	660	1,600	1,900	5,380	11,000	3,640	1,140	688	500
26	650	460		660	1,650	2,190	4,880	[a] 10,300	3,740	995	688	628
27	607	500		660	1,770	2,040	4,760	[a] 9,600	4,290	809	607	628
28	600	550		660	1,900	1,600	4,290	[a] 8,800	4,760	924	748	586
29	546	580		640	2,040	1,710	3,540	7,990	5,770	725	1,130	565
30	539	571		620	------	1,970	3,340	7,670	5,900	658	908	579
31	520	------		620	------	1,650	------	6,760	------	995	874	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	1,430	402	523	32,200
November	732	390	540	32,100
December	725	460	577	35,400
January	640	490	595	36,600
February	825	586	727	40,400
March	1,260	680	940	57,800
April	1,630	725	1,140	68,100
May	3,140	1,120	2,040	126,000
June	1,210	168	671	40,000
July	849	130	300	18,500
August	840	134	337	20,700
September	5,000	143	875	52,100
The year	5,000	130	773	560,000
1931–32				
October	1,800	520	827	50,900
November	1,050	390	575	34,200
December	------	600	775	47,700
January	760	620	687	42,200
February	2,040	600	1,390	80,000
March	3,050	1,370	1,970	121,000
April	7,830	2,040	5,090	303,000
May	12,700	3,240	7,930	488,000
June	6,180	3,440	4,310	256,000
July	6,460	658	2,720	167,000
August	1,190	278	585	36,000
September	899	345	508	30,200
The year	12,700	278	2,280	1,660,000

[a] Estimated.

RIO GRANDE AT SAN FELIPE, N. MEX.

LOCATION.—Water-stage recorder in San Felipe Grant at steel highway bridge 2,000 feet below mouth of Tonque Arroyo, half a mile above San Felipe, Sandoval County, and about 12 miles northeast of Bernalillo.

DRAINAGE AREA.—15,600 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1925-30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 9,190 second-feet Sept. 24 (gage height, 7.50 feet); minimum, 164 second-feet June 28.

Maximum discharge during year ending Sept. 30, 1932, 18,200 second-feet May 21; maximum gage height, 8.35 feet Jan. 26, during ice jam; minimum discharge, 290 second-feet Aug. 17.

REMARKS.—Records fair except those estimated, which are poor. Stage-discharge relation affected by ice Jan. 2–31, 1931, Jan. 21 to Feb. 8, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	a 800	a 460	a 600	a 500	a 620	1,010	a 900	2,970	1,340	385	630	290
2	a 720	a 460	a 620	510	623	960	a 890	2,660	1,190	512	488	294
3	a 620	a 460	a 630	540	646	880	a 870	2,100	1,240	860	536	286
4	a 580	a 480	a 700	570	702	920	a 860	2,190	1,200	1,090	548	286
5	a 550	a 500	a 730	570	662	940	a 840	2,280	1,070	662	488	270
6	a 540	a 520	a 730	580	670	950	a 800	2,190	1,000	602	a 750	250
7	a 540	a 560	a 730	580	678	790	a 750	2,020	990	476	588	243
8	536	a 580	a 710	580	638	a 700	718	2,190	960	452	581	243
9	506	a 600	a 690	580	694	a 760	750	3,080	844	370	646	246
10	512	a 620	a 720	580	734	a 830	790	2,660	782	412	630	246
11	940	a 620	a 700	580	742	a 840	766	2,460	817	299	488	250
12	a 1,550	a 620	a 680	580	774	a 840	734	2,460	782	274	434	250
13	a 700	a 620	a 670	600	862	844	782	2,370	718	246	375	270
14	a 620	a 600	a 660	600	890	910	817	2,460	670	229	294	304
15	616	a 620	a 630	600	910	1,000	844	2,760	623	203	258	1,080
16	609	a 600	a 600	600	930	1,000	990	2,860	536	184	246	2,410
17	646	a 580	a 550	600	980	a 1,040	1,100	2,970	476	200	232	1,000
18	646	a 540	a 530	610	990	a 1,110	1,060	3,080	418	206	229	970
19	602	a 680	a 530	590	1,000	a 1,200	1,180	3,080	350	212	232	2,020
20	542	a 740	a 520	580	990	a 1,270	1,230	2,460	290	218	429	2,400
21	536	a 670	a 510	580	980	a 1,200	1,320	1,970	266	266	226	1,990
22	602	a 660	a 500	580	1,010	a 1,140	1,440	1,780	262	299	190	1,400
23	602	a 540	a 490	580	1,010	1,110	1,200	2,020	262	308	212	1,570
24	609	a 450	a 480	570	980	1,090	1,210	1,910	236	294	380	6,250
25	630	a 550	a 470	560	980	1,070	1,300	1,940	226	266	322	1,670
26	588	a 590	a 470	560	990	1,120	1,560	1,800	212	862	246	1,150
27	548	a 560	a 480	560	1,010	1,040	1,600	1,670	196	536	226	890
28	506	a 600	a 480	560	1,030	a 1,020	1,940	1,540	178	380	209	742
29	494	a 600	a 480	580	-------	a 960	2,020	1,360	178	330	206	799
30	a 480	a 580	a 480	580	-------	a 990	2,020	1,310	243	308	222	774
31	a 470	-------	a 490	600	-------	a 960	-------	1,260	-------	365	246	-------

a Estimated.

Discharge, in second-feet, of Rio Grande at San Felipe, N.Mex., 1930–32—Contd.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	602	500	774	662	610	1,800	2,760	a 2,800	8,100	5,620	1,140	a 780
2	567	494	799	a 670	620	1,970	3,780	a 3,300	7,900	5,620	970	a 820
3	662	500	a 800	a 680	600	2,020	5,010	3,910	6,780	5,460	871	a 750
4	880	530	a 780	a 690	580	2,100	5,780	4,580	6,610	5,010	844	a 650
5	766	542	a 750	a 690	600	2,100	6,100	5,460	5,940	4,720	790	a 600
6	616	554	a 750	a 650	750	1,920	6,270	6,440	5,460	4,720	686	581
7	542	560	a 800	a 640	900	1,820	5,940	6,440	4,860	4,580	646	567
8	470	581	a 810	a 650	1,100	1,820	4,440	5,460	4,170	4,170	853	536
9	452	595	a 800	a 660	1,390	1,890	4,860	5,780	3,660	2,760	766	470
10	1,510	638	a 850	a 670	1,500	1,960	4,720	6,610	3,540	a 2,370	718	440
11	1,600	646	a 780	a 640	1,580	1,890	4,170	7,320	3,660	a 2,400	574	402
12	1,310	853	a 800	a 660	1,400	1,830	4,440	8,310	3,660	2,760	512	390
13	1,060	950	a 800	a 670	1,230	1,820	4,860	7,900	4,040	a 2,600	488	385
14	862	862	a 730	a 650	1,190	1,740	5,310	8,310	4,300	a 2,400	a 410	a 370
15	726	734	a 780	a 670	1,240	1,710	6,100	8,520	4,720	a 2,500	a 360	a 355
16	638	662	a 860	a 700	1,380	1,470	6,100	9,660	5,780	a 2,500	a 320	a 345
17	609	602	a 830	a 680	1,340	1,480	6,960	10,200	5,620	a 2,300	322	330
18	581	554	a 840	670	1,200	1,490	7,140	10,700	5,620	a 2,000	375	335
19	560	536	853	654	1,150	1,650	6,270	11,900	5,160	a 1,700	638	326
20	554	512	853	662	1,190	1,880	6,440	14,700	5,460	a 1,500	630	322
21	560	a 490	844	640	1,170	2,760	6,440	15,900	5,010	a 1,400	782	322
22	574	a 500	844	640	1,150	2,280	6,100	14,300	4,170	a 1,300	853	317
23	548	a 500	835	630	1,120	1,890	6,270	13,900	a 4,000	a 1,200	835	322
24	500	a 400	826	620	1,090	1,740	4,720	13,500	a 3,800	a 1,150	670	340
25	476	a 380	826	630	1,110	1,770	3,540	12,800	a 3,600	1,270	a 630	375
26	500	a 440	808	640	1,140	1,920	3,540	13,200	3,780	1,030	a 600	554
27	506	a 550	799	640	1,190	2,100	a 3,400	12,500	3,910	1,140	a 580	512
28	518	a 670	799	620	1,320	1,860	a 3,200	11,600	3,910	1,140	a 700	a 450
29	506	a 750	799	600	1,520	1,960	a 3,000	10,400	5,160	1,110	a 1,200	a 400
30	512	782	734	610	-------	2,370	a 2,900	a 9,500	4,440	1,180	a 950	a 350
31	506	-------	718	610	-------	2,370	-------	8,520	-------	1,180	a 800	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	1,550	470	627	38,600
November	740	450	575	34,200
December	730	470	589	36,200
January	610	500	575	35,400
February	1,030	620	847	47,100
March	1,270	700	984	60,500
April	2,020	718	1,110	66,000
May	3,080	1,260	2,250	139,000
June	1,340	178	618	36,800
July	1,090	184	397	24,400
August	750	190	380	23,400
September	6,250	243	1,030	61,200
The year	6,250	178	832	603,000
1931–32				
October	1,600	452	686	42,200
November	950	380	596	35,400
December	860	718	802	49,300
January	700	600	652	40,100
February	1,580	580	1,120	64,200
March	2,760	1,470	1,920	118,000
April	7,140	2,760	5,020	299,000
May	15,900	2,800	9,170	564,000
June	8,100	3,540	4,890	291,000
July	5,620	1,030	2,610	160,000
August	1,200	320	694	42,700
September	820	317	457	27,200
The year	15,900	317	2,390	1,730,000

a Estimated.

RIO GRANDE AT SAN MARCIAL, N.MEX.

LOCATION.—Water-stage recorder in Pedro Armendaris Grant 34, at Atchison, Topeka & Santa Fe Railway bridge 1.1 miles below San Marcial, Socorro County.

DRAINAGE AREA.—28,400 square miles (revised).

RECORDS AVAILABLE.—January 1895 to September 1932. Records prior to January 1922 about 0.3 mile above present site; January 1922 to Feb. 26, 1932, at highway bridge half a mile northeast of San Marcial and 1.8 miles above present site.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 6,470 second-feet Sept. 19 (gage height, 4.25 feet); no flow at times.

Maximum discharge during year ending Sept 30, 1932, 12,800 second-feet May 23 (gage height, 7.31 feet); no flow Aug. 17, Sept. 20–25.

1895–1932: Maximum mean daily discharge, 33,000 second-feet Oct. 11, 1904; maximum discharge on Sept. 24, 1929, probably reached about same discharge as flood of 1904; no flow at times.

REMARKS.—Records good except those estimated, which are fair. Diversions for irrigation above station. Beginning July 1, 1931, complete records, except for occasional discharge measurements by the United States Geological Survey, were furnished by the United States Boundary Commission.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	0	185	604	[b] 540	685	768	768	1,360	445	0	0	0
2	0	161	619		715	745	705	1,460	406	146	0	26
3	0	136	700		685	922	665	1,730	331	360	[a]370	55
4	0	152	803	[a]809	863	906	555	1,900	257	1,250	636	25
5	0	168	750	[a]715	809	782	531	2,080	220	1,290	[a]133	16
6	[a]116	152	709	[a]725	755	641	585	1,950	176	559	110	19
7	[a] 73	130	663	796	735	620	583	1,780	156	240	83	15
8	[a] 32	124	682	695	655	809	498	2,110	153	83	27	[a]1.4
9	[a] 16	124	682	675	648	876	406	1,750	126	61	[a]415	0
10	[a] 9.7	136	672	[a]579	695	922	406	1,820	88	39	[a]862	0
11	[a] 6.7	149	627	655	735	745	425	2,110	81	6	386	0
12	[a] 5.7	165	636	[a]627	836	561	503	1,900	64	2	132	0
13		199	619	585	906	675	508	1,640	56	0	88	0
14		272	654	655	938	705	486	1,750	5.5	0	68	0
15		322	645	599	954	705	492	1,290	0	0	36	0
16	[b] 45	294	691	585	1,140	685	498	1,120	0	0	18	0
17		287	718	599	986	695	715	1,580	0	0	6.8	675
18		330	729	627	863	715	1,360	2,000	0	0	.4	1,420
19		372	691	648	822	768	2,140	2,080	0	0	0	1,670
20	[a]196	448	[a]654	655	850	745	1,440	2,220	0	0	0	2,740
21	[a]136	486	[a]550	579	768	755	1,020	2,160	0	0	0	2,160
22	[a]101	537	[a]475	641	745	822	890	1,710	0	0	0	1,440
23	[a] 94	524	[a]399	613	822	938	1,150	[a]1,420	0	0	0	1,200
24	[a] 94	486	[a]314	573	906	986	1,200	[a]1,140	0	0	56	[a]1,280
25	[a]117	475		555	922	876	1,710	[a] 890	0	0	26	4,020
26	[a]146	390		520	906	705	1,500	768	0		29	[a]5,930
27	[a]165	381	[b] 417	585	863	768	1,260	695	0	0	18	[a]1,860
28	[a]161	486		627	863	1,080	1,000	627	0	0	0	[a]1,730
29	[a]158	524		768	-------	1,150	1,420	599	0	0	0	2,360
30	[a]124	475		705	-------	986	1,290	561	0	0	0	1,080
31	[a]111	-------		725	-------	922	-------	503	-------	0	0	-------

[a] Partly estimated. [b] Estimated.

Discharge, in second-feet, of Rio Grande at San Marcial, N.Mex., 1930–32—Contd.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	756	448	580	918	618	1,430	1,510	2,870	6,350	5,040	1,660	1,260
2	769	506	566	836	730	1,580	1,540	2,780	6,150	6,080	1,310	783
3	796	463	558	857	816	1,640	1,560	2,660	5,200	6,350	778	593
4	967	382	630	808	656	2,170	2,130	2,660	4,600	5,910	476	518
5	1,220	325	674	767	1,400	2,140	3,440	3,000	4,010	4,570	365	480
6	1,130	282	603	848	955	1,800	3,630	3,760	4,100	3,590	270	499
7	1,050	247	693	860	858	1,580	4,640	4,680	3,960	3,530	209	410
8	785	234	675	912	501	1,410	4,500	5,460	3,640	3,140	208	305
9	473	233	653	860	879	[b]1,240	4,060	5,450	3,240	2,810	239	247
10	528	295	790	831	974	1,370	3,600	5,080	3,030	2,460	278	224
11	1,640	272	717	630	1,310	1,660	3,590	5,460	2,720	2,290	92	165
12	2,680	298	1,020	559	1,100	1,940	3,260	6,480	2,420	1,900	91	129
13	934	251	996	577	1,700	2,010	3,160	6,540	2,470	3,910	46	77
14	685	252	746	588	1,610	1,700	3,610	6,930	2,450	2,720	35	54
15	583	652	697	300	1,220	1,530	3,970	6,920	2,350	2,350	29	52
16	487	593	882	661	1,140	1,260	4,490	6,830	2,180	1,900	2.6	21
17	423	473	888	1,100	1,430	1,220	4,670	6,960	2,340	1,550	0	11
18	414	471	664	700	1,260	1,210	4,600	7,390	2,580	1,830	16	[b]5
19	510	439	413	524	1,500	1,260	5,580	7,930	3,260	1,660	1,660	[b]2
20	618	422	437	587	1,410	1,230	5,730	8,860	3,880	1,320	1,250	0
21	1,290	480	677	652	970	1,410	4,840	9,480	3,680	1,020	2,740	0
22	3,010	407	812	709	1,140	1,820	5,370	10,500	3,460	900	2,400	0
23	1,860	430	1,330	592	1,180	2,660	6,300	12,400	3,320	795	1,160	0
24	1,150	671	1,000	244	1,590	1,920	5,780	11,800	3,170	1,350	842	0
25	778	650	875	922	1,470	1,580	5,420	11,200	3,170	1,990	1,290	0
26	480	1,060	886	1,030	1,210	1,460	4,000	10,800	3,100	1,670	732	17
27	441	864	998	856	690	1,480	3,370	10,600	3,190	1,810	654	74
28	427	467	996	778	1,190	1,680	3,370	9,410	3,620	1,740	304	55
29	364	491	961	649	786	1,210	3,560	7,780	4,350	1,370	4,340	67
30	352	456	901	426	-------	1,520	3,070	7,850	4,920	888	5,070	104
31	428	-------	833	455	-------	1,410	-------	6,800	-------	782	2,660	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	196	0	70.2	4,320
November	537	124	302	18,000
December	803	----------	587	36,100
January	----------	----------	637	39,200
February	1,140	648	824	45,800
March	1,150	561	806	49,600
April	2,140	406	893	53,100
May	2,220	503	1,510	92,800
June	445	0	85.5	5,090
July	1,290	0	130	8,010
August	862	0	113	6,940
September	5,930	0	991	59,000
The year	5,930	0	577	418,000
1931–32				
October	3,010	352	904	55,600
November	1,060	233	450	26,800
December	1,330	413	779	47,900
January	1,100	244	711	43,700
February	1,700	501	1,110	64,100
March	2,660	1,210	1,600	98,200
April	6,300	1,510	3,940	235,000
May	12,400	2,660	7,010	431,000
June	6,350	2,180	3,560	212,000
July	6,350	782	2,560	157,000
August	5,070	0	987	60,700
September	1,260	0	205	12,200
The year	12,400	0	1,990	1,440,000

[a] Partly estimated. [b] Estimated.

NOTE.—Discharges Oct. 1, 1930, to June 30, 1931, previously published in Water-Supply Paper 718, were republished in order to complete yearly tables.

RIO GRANDE BELOW ELEPHANT BUTTE DAM, N.MEX.

LOCATION.—Water-stage recorder in Pedro Armendaris Grant, 300 feet below Elephant Butte Dam, in sec. 25, T. 13 S., R. 4 W., surveys by United States Bureau of Reclamation.

RECORDS AVAILABLE.—October 1916 to September 1932.

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.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	690	141	158	3	3	430	1,730	827	2,170	2,020	2,240	1,980
2	690	695	825	3	3	430	1,730	827	2,160	1,520	1,860	1,740
3	709	695	825	3	3	460	1,770	827	2,160	1,400	1,110	1,550
4	800	578	748	3	160	526	1,940	831	2,150	1,650	897	1,540
5	790	7	18	3	341	550	1,940	906	2,160	1,650	897	1,470
6	650	3	3	3	333	624	1,940	911	2,150	1,660	916	1,470
7	18	3	3	3	321	780	1,960	1,020	2,030	1,780	1,140	1,430
8	3	3	3	3	363	871	1,980	1,290	2,040	1,660	1,300	1,360
9	3	3	3	3	363	930	1,960	1,570	1,990	1,680	1,280	1,500
10	3	3	3	3	368	970	1,950	1,830	1,890	1,790	1,020	1,510
11	3	3	3	3	372	1,060	1,940	2,080	1,900	2,030	926	1,600
12	3	3	3	3	388	1,080	1,990	2,080	1,890	1,990	926	1,600
13	3	3	3	3	380	1,250	1,940	2,080	1,960	1,930	950	1,600
14	3	3	3	3	358	1,360	2,000	2,080	1,950	1,970	1,370	1,600
15	64	3	179	3	344	1,350	1,820	2,020	1,900	2,070	1,750	1,590
16	652	365	600	3	345	1,270	1,810	1,880	1,900	2,310	1,880	1,410
17	672	825	600	3	316	1,210	1,770	1,870	2,040	2,410	1,910	1,020
18	840	825	682	3	246	1,210	1,470	1,680	2,110	2,410	2,000	868
19	840	825	409	3	276	1,090	1,440	1,680	2,410	2,410	2,120	754
20	795	394	3	3	324	1,040	1,450	1,540	2,060	2,390	2,280	623
21	540	4	3	3	372	1,310	1,420	1,430	2,130	2,210	2,280	632
22	10	3	3	3	368	1,340	1,270	1,530	2,280	2,210	2,480	644
23	3	3	3	3	368	1,360	1,200	1,540	2,250	2,220	2,400	699
24	3	3	3	3	410	1,650	956	1,740	2,140	2,370	2,320	699
25	3	3	3	3	470	1,720	981	1,860	2,020	2,240	2,060	699
26	3	3	3	3	436	1,580	1,160	1,980	2,020	2,250	1,930	699
27	3	3	3	93	398	1,710	1,150	1,980	2,270	2,330	1,820	699
28	3	3	3	16	426	1,910	1,080	2,100	2,340	2,330	1,850	703
29	3	3	3	3	-------	1,910	790	2,090	2,120	2,420	2,050	695
30	3	3	3	3	-------	1,910	804	2,090	2,140	2,520	2,050	634
31	3	-------	3	3	-------	1,910	-------	2,140	-------	2,490	2,050	-------

Discharge, in second-feet, of Rio Grande below Elephant Butte Dam, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	644	1,050	3	2.8	489	681	1,910	1,510	2,040	1,700	2,280	1,950
2	644	1,040	3	2.8	590	811	1,910	1,510	1,950	978	2,280	1,900
3	644	1,040	3	2.8	594	771	1,960	1,520	2,000	1,630	2,140	1,790
4	644	1,040	3	2.8	598	669	1,970	1,680	2,030	2,020	2,140	1,790
5	570	918	3	2.8	673	685	1,910	1,730	2,030	2,140	2,150	1,790
6	3	174	3	2.8	673	705	1,980	1,680	1,980	2,310	2,230	1,770
7	3	3	3	2.8	661	685	2,100	1,680	1,930	2,290	2,230	1,680
8	3	3	3	2.8	431	862	1,850	1,640	1,920	2,310	2,230	1,780
9	3	3	3	2.8	304	968	2,040	1,640	1,870	2,370	2,230	1,790
10	3	3	3	2.8	255	862	2,060	1,530	1,860	2,410	2,230	1,840
11	3	3	3	2.8	101	753	2,040	1,370	1,960	2,480	2,200	1,880
12	3	3	3	2.8	103	830	2,040	1,340	2,080	2,350	2,030	1,940
13	3	3	3	2.8	103	798	1,910	1,470	2,060	2,110	2,130	1,940
14	3	3	79	2.8	103	793	1,770	1,640	2,090	2,110	2,130	1,860
15	77	395	584	2.8	141	983	1,760	1,640	2,500	1,950	2,110	1,830
16	783	754	584	2.8	500	983	1,930	1,640	2,270	2,080	2,110	1,590
17	783	754	580	2.8	503	915	2,010	1,630	2,180	2,110	2,110	1,720
18	825	724	513	2.8	503	929	2,060	1,510	2,240	2,140	2,190	1,720
19	825	473	3	2.4	503	1,140	2,050	1,540	2,240	2,290	2,180	1,720
20	816	3	3	2.8	503	1,080	1,960	1,540	2,280	2,170	2,140	1,740
21	812	3	3	3.2	503	1,080	1,930	1,770	2,390	2,110	2,100	1,440
22	808	3	3	6.4	503	1,060	1,810	1,830	2,470	2,140	2,110	983
23	731	3	3	4.2	503	958	1,810	1,840	2,430	2,470	2,110	983
24	347	3	3	2.8	503	954	1,770	1,840	2,270	2,480	2,140	983
25	3	3	3	2.8	503	1,030	1,830	1,920	2,150	2,470	1,990	833
26	3	3	3	2.9	503	1,630	1,800	2,060	2,090	2,470	1,930	762
27	3	3	3	2.7	552	1,630	1,740	2,230	2,120	2,520	2,140	728
28	3	3	3	2.6	594	1,670	1,690	2,030	2,110	2,410	2,140	507
29	3	3	3	3.9	594	1,740	1,640	2,030	1,990	2,250	2,170	437
30	3	3	3	3.8	-------	1,740	1,510	2,040	1,980	2,270	2,140	243
31	41	-------	3	60	-------	1,910	-------	2,040	-------	2,270	2,010	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	840	3	284	17,500
November	825	3	180	10,700
December	825	3	165	10,100
January	93	3	6.3	389
February	470	3	316	17,600
March	1,910	430	1,190	73,000
April	2,000	790	1,580	93,900
May	2,140	827	1,620	99,800
June	2,410	1,890	2,090	124,000
July	2,520	1,400	2,070	128,000
August	2,480	897	1,680	103,000
September	1,980	623	1,170	69,500
The year	2,520	3	1,030	747,000
1931–32				
October	825	3	324	19,900
November	1,050	3	281	16,700
December	584	3	78.0	4,800
January	60	2.4	4.87	299
February	673	101	451	26,000
March	1,910	669	1,040	64,100
April	2,100	1,510	1,890	113,000
May	2,230	1,340	1,710	105,000
June	2,500	1,860	2,120	126,000
July	2,520	978	2,190	134,000
August	2,280	1,930	2,140	132,000
September	1,950	243	1,460	87,100
The year	2,520	2.4	1,140	829,000

ALAMOSA CREEK AT JASPER, COLO.

LOCATION.—Staff gage in NW¼ sec. 29, T. 37 N., R. 5 E., half a mile west of Jasper.
DRAINAGE AREA.—64 square miles.
RECORDS AVAILABLE.—October 1931 to September 1932.
EXTREMES.—Maximum discharge for year, 1,050 second-feet June 11 (gage height, 3.15 feet); minimum probably occurred during winter.
REMARKS.—Records good. Discharge estimated Dec. 21–31. No records Oct. 1–11 and Jan. 1 to Apr. 30. No diversions above station. Several discharge measurements furnished by Colorado State engineer.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	May	June	July	Aug.	Sept.
1		24	28	98	837	528	112	56
2		25	30	128	828	507	115	53
3		25	30	154	900	488	95	48
4		27	30	185	738	476	85	43
5		25	28	220	704	440	84	42
6		22	28	210	556	400	84	41
7		23	26	188	556	390	82	41
8		24	24	202	626	395	78	35
9		25	23	248	704	340	71	32
10		21	23	241	765	355	64	31
11		25	23	213	900	340	64	28
12	106	25	23	227	920	336	60	26
13	90	25	23	255	864	326	59	23
14	79	24	22	287	855	313	54	22
15	75	26	22	360	920	300	64	22
16	69	31	22	395	950	295	81	21
17	66	22	22	514	846	291	81	21
18	66	21	22	664	747	263	81	20
19	63	20	22	598	648	255	112	20
20	58	21	22	430	672	234	108	19
21	56	27		458	656	192	81	20
22	51	22		656	688	170	75	19
23	48	21	24	828	664	160	82	21
24	45	23		792	680	157	78	22
25	40	25		720	626	151	64	21
26	40	30		626	672	154	59	21
27	30	27		619	656	144	86	20
28	30	27		864	591	138	81	18
29	30	27	23	891	577	124	70	17
30	24	26		873	528	128	64	17
31	22	------		774	------	116	59	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 12–31	106	22	54.4	2,160
November	31	20	24.5	1,460
December	30	----------	24.2	1,490
May	891	98	449	27,600
June	950	528	729	43,400
July	528	116	287	17,600
August	115	54	78.5	4,830
September	56	17	28.0	1,670

RIO COLORADO[2] NEAR QUESTA, N.MEX.

LOCATION.—Water-stage recorder in sec. 33, T. 29 N., R. 13 E., 1¾ miles above mouth of Cabresto Creek and 2 miles east of Questa.

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—October 1912 to August 1915; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 173 second-feet May 18 (gage height, 2.77 feet); minimum, 13 second-feet Mar. 28. Maximum discharge during year ending Sept. 30, 1932, 827 second-feet May 24 (gage height, 4.37 feet); minimum, 6.3 second-feet Nov. 24 and 25.

REMARKS.—Records good except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	54	29	21	25	20	23	18	44	133	62	39	a 21
2	47	28	24	26	24	22	21	45	133	64	a 25	a 21
3	43	29	24	24	23	23	22	54	126	66	a 22	a 20
4	43	29	24	23	23	23	23	59	129	72	a 21	a 20
5	41	29	25	23	23	22	24	59	129	62	a 20	a 20
6	40	29	24	24	22	21	26	61	133	54	a 20	a 20
7	40	28	21	23	23	21	27	65	119	52	a 20	a 20
8	38	28	20	23	23	22	30	74	123	50	a 20	a 20
9	38	28	21	23	23	a 21	30	79	119	48	a 20	a 20
10	38	28	21	23	23	a 20	31	81	109	41	a 20	a 20
11	40	28	22	21	23	a 20	34	77	100	37	a 20	a 20
12	41	28	23	22	23	a 19	35	78	88	35	a 20	a 20
13	39	28	23	23	23	18	38	78	85	35	a 20	a 20
14	39	28	21	23	23	19	41	87	82	32	a 20	a 20
15	39	27	22	23	23	18	43	94	79	35	a 20	a 30
16	37	26	23	23	23	18	42	97	76	35	a 20	35
17	36	26	23	24	22	20	40	119	74	32	a 20	41
18	35	26	24	23	21	23	43	157	72	56	a 20	46
19	35	25	24	23	22	23	46	150	69	41	a 20	66
20	34	24	24	24	21	21	44	126	64	39	a 20	100
21	34	24	24	25	21	21	44	103	64	35	a 20	76
22	34	20	24	25	21	20	43	91	62	33	a 22	64
23	34	a 20	24	23	21	18	44	91	62	33	a 25	59
24	34	20	24	21	20	16	43	100	59	32	a 23	85
25	34	18	26	20	21	16	41	116	62	28	a 22	79
26	34	18	26	21	21	16	38	136	66	30	22	72
27	34	17	26	23	21	14	39	140	69	28	a 21	66
28	34	16	26	22	22	14	39	136	69	26	a 21	56
29	34	16	25	22	-------	14	41	136	66	24	a 21	52
30	34	18	25	21	-------	16	43	136	62	26	a 21	48
31	34	-------	25	21	-------	16	-------	136	-------	32	a 21	-------

a Estimated.

[2] Also known as Red River.

Discharge, in second-feet, of Rio Colorado near Questa, N.Mex., 1930–32—Con.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	46	30	11	20	27	e 33	35	121	312	168	53	45
2	48	e 31	11	22	26	e 35	45	132	290	162	50	44
3	56	e 32	11	22	22	32	54	152	281	149	48	44
4	50	e 32	11	24	17	30	63	171	281	135	46	41
5	48	33	11	e 24	26	26	70	198	263	127	48	40
6	48	33	10	e 25	26	28	87	209	241	119	48	37
7	48	33	10	e 25	26	28	82	198	245	114	46	37
8	48	33	11	e 26	26	30	94	178	245	107	50	36
9	54	35	15	e 26	28	28	114	184	245	104	44	35
10	79	35	18	e 26	27	28	e 130	202	e 210	102	42	34
11	62	35	20	e 27	22	28	e 140	213	e 170	102	43	32
12	62	32	20	e 27	21	26	e 150	195	e 130	100	42	32
13	64	30	17	e 27	24	20	e 160	198	e 130	100	42	32
14	62	28	16	e 28	27	26	e 170	213	e 140	91	43	32
15	59	24	16	e 28	26	28	174	217	e 160	87	48	32
16	56	27	17	e 28	24	28	174	233	e 220	85	43	31
17	54	26	17	e 29	17	28	184	277	e 240	84	44	31
18	52	24	17	e 29	24	28	209	322	e 250	78	42	31
19	52	26	17	e 30	22	32	206	328	e 230	74	50	31
20	52	16	18	30	24	33	221	431	e 200	72	63	31
21	52	24	22	28	22	33	221	452	e 180	78	61	30
22	50	22	30	30	20	32	249	512	e 160	78	54	30
23	50	17	30	15	21	26	217	772	e 140	71	50	32
24	48	6.3	28	12	22	32	202	720	e 140	69	49	32
25	46	6.3	26	16	24	32	184	452	e 150	68	48	32
26	41	8.1	27	21	e 26	30	162	368	e 150	64	46	32
27	39	9.2	26	22	e 28	27	138	334	e 160	60	45	30
28	35	10	28	22	e 30	28	124	334	e 160	58	68	30
29	33	11	27	18	e 31	32	116	344	168	55	63	30
30	30	11	22	22	------	32	116	356	168	57	52	30
31	30	------	17	27	------	32	------	328	------	54	46	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	54	34	37.8	2,320
November	29	16	24.6	1,460
December	26	20	23.5	1,450
January	26	20	22.9	1,410
February	24	20	22.1	1,230
March	23	14	19.3	1,190
April	46	18	35.8	2,130
May	157	44	96.9	5,960
June	133	59	89.4	5,320
July	72	24	41.1	2,530
August	39	20	21.5	1,320
September	100	20	41.9	2,490
The year	157	14	39.8	28,800
1931–32				
October	79	30	50.1	3,080
November	35	6.3	24.0	1,430
December	30	10	18.6	1,140
January	30	12	24.4	1,500
February	31	17	24.3	1,400
March	35	20	29.4	1,810
April	249	35	143	8,510
May	772	121	301	18,500
June	312	130	202	12,000
July	168	54	92.6	5,700
August	68	42	48.9	3,010
September	45	30	33.9	2,020
The year	772	6.3	82.8	60,100

e Estimated.

RIO HONDO AT VALDEZ, N.MEX.

LOCATION.—Chain gage in Antoine Leroux Grant, half a mile below old toll gate and 1 mile east of Valdez, Taos County.

DRAINAGE AREA.—38 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records for 1915–30 collected and published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 64 second-feet Sept. 24, 25; maximum gage height, 3.5 feet (backwater from ice) Dec. 23; no flow July 29–31.

Maximum discharge during year ending Sept. 30, 1932, 296 second-feet May 20 (gage height, 3.20 feet); minimum, 3 second-feet Aug. 8–10, Sept. 17, 18, 22, 23, 27–30.

REMARKS.—Records good except those for periods of ice effect, Nov. 23, Dec. 17–25, 31, 1930, Jan. 1, 2, 11–14, 20–23, Mar. 2, 3, 6–11, Nov. 19–30, Dec. 1–12, 30, 31, 1931, Jan. 1, 11–13, 15–18, 23–31, Feb. 1–5, 17, 1932, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	9	6	17	9	4	7	7	12	29	5	31	3
2	9	5	17	10	8	7	7	18	29	5	12	3
3	8	6	18	8	8	8	7	18	29	8	8	3
4	7	6	19	8	10	9	8	22	29	11	6	2
5	7	6	17	8	10	9	8	25	28	10	4	2
6	7	6	17	8	9	9	8	25	26	10	4	2
7	10	6	18	8	9	9	8	22	24	8	4	2
8	10	6	17	8	10	9	9	18	24	7	4	2
9	10	5	17	8	12	9	10	15	24	5	3	2
10	10	5	17	8	12	9	14	11	20	2	2	2
11	10	5	17	7	12	9	14	8	16	1	2	2
12	10	5	17	9	12	9	14	8	16	1	2	2
13	10	5	15	11	12	9	16	8	16	1	2	2
14	10	5	17	10	12	9	16	10	16	2	2	2
15	8	5	17	8	12	9	16	16	12	6	2	18
16	8	5	17	12	12	9	16	19	10	2	1	6
17	8	5	15	13	12	7	16	20	8	2	1	10
18	8	10	15	12	12	8	16	24	7	2	1	14
19	8	15	15	13	13	7	16	31	8	2	1	31
20	8	15	15	14	13	7	16	28	8	2	1	51
21	8	16	15	15	12	7	14	23	7	2	1	49
22	8	15	15	14	12	8	10	23	5	2	4	49
23	8	15	15	10	9	9	10	18	6	2	10	49
24	8	15	15	7	7	9	10	18	9	3	10	64
25	8	15	15	9	7	9	9	21	10	3	6	64
26	7	15	14	9	7	10	9	30	8	2	3	59
27	7	17	13	8	7	10	8	31	8	1	3	59
28	7	17	12	8	7	8	8	31	8	1	3	59
29	7	15	9	8	-------	7	8	30	8	1	3	54
30	6	17	9	5	-------	7	8	30	7	0	3	49
31	6	-------	9	6	-------	7	-------	30	-------	1	3	-------

Discharge, in second-feet, of Rio Hondo at Valdez, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	49	22		18		24	33	62	177	53	16	19
2	49	22		20		24	38	67	177	56	13	17
3	47	22		20	15	24	54	81	163	53	12	16
4	45	22		20		21	62	92	150	54	8	16
5	45	22	5	20		21	71	95	150	49	6	16
6	45	21		19	16	21	78	95	150	46	5	16
7	40	22		19	16	21	58	95	140	40	5	15
8	40	22		19	16	21	43	86	138	34	3	14
9	40	22	10	19	16	21	48	92	126	29	3	14
10	40	17		19	16	21	53	99	120	28	3	14
11	40	17			16	21	68	115	115	27	4	14
12	40	17	18	19	16	21	72	138	105	24	5	12
13	40	17	18		13	21	80	143	105	22	5	12
14	31	17	18	19	13	21	88	169	105	22	5	10
15	31	17	18		13	21	93	163	105	22	7	8
16	31	17	18	19	14	21	107	150	105	20	7	5
17	31	17	18		12	21	120	143	105	19	6	3
18	31	17	18		14	21	109	150	105	17	6	3
19	31		17	19	14	21	111	206	95	16	22	4
20	31	15	21	19	14	23	103	296	86	15	31	4
21	31		21	19	14	25	101	257	78	13	25	4
22	31		21	19	14	25	105	257	78	13	23	3
23	30		21		14	25	103	257	78	20	21	3
24	30		21		16	25	86	257	78	24	18	6
25	30		21		17	25	83	240	71	20	16	6
26	26	5	21	15	17	25	68	191	71	21	16	5
27	26		20		20	25	60	177	71	19	16	3
28	26		17		24	25	58	185	64	17	16	3
29	26		17		24	25	58	191	63	17	18	3
30	26		15		-------	25	58	191	58	17	19	3
31	26	-------	15		-------	33	-------	177	-------	17	18	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	10	6	8.2	506
November	17	5	9.6	573
December	19	9	15.3	942
January	15	5	9.4	577
February	13	4	10.1	559
March	10	7	8.4	514
April	16	7	11.2	666
May	31	8	20.7	1,280
June	29	5	15.2	902
July	11	0	3.5	218
August	31	1	4.6	282
September	64	2	23.9	1,420
The year	64	0	11.7	8,440
1931–32				
October	49	26	35.0	2,150
November	22	----------	15.0	893
December	21	----------	14.7	906
January	----------	----------	17.9	1,100
February	24	----------	15.7	900
March	33	21	23.0	1,420
April	120	33	75.6	4,500
May	296	62	159	9,750
June	177	58	108	6,410
July	56	13	27.2	1,670
August	31	3	12.2	750
September	19	3	9.0	538
The year	296	3	42.7	31,000

RIO HONDO AT ARROYO HONDO, N.MEX.

LOCATION.—Staff gage on Antoine Leroux Grant 1 mile west of Arroyo Hondo, Taos County, and 1 mile above confluence with Rio Grande.

RECORDS AVAILABLE.—January to September 1932. Comparable record 200 yards above confluence with Rio Grande April 1910 to August 1915 (previously published "near Arroyo Hondo"). Records 1915–28 published by State engineer.

EXTREMES.—Maximum discharge during period, about 1,800 second-feet Sept. 1 (gage height, 5.0 feet); minimum, 6 second-feet Aug. 6–12, 14–16, 18.

REMARKS.—Records good below 180 second-feet, fair above. Discharge estimated Sept. 1, 2. Diversions for irrigation above station.

Discharge, in second-feet, 1932

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	22	66	34	58	204	54	13	125
2	------	23	66	43	70	151	52	13	50
3	------	23	28	53	88	151	51	11	29
4	------	23	28	64	99	149	50	9	28
5	------	23	28	82	121	147	42	8	26
6	------	23	28	88	121	106	35	6	28
7	------	23	26	82	113	104	35	6	14
8	------	23	26	70	88	104	30	6	14
9	------	23	23	69	95	104	25	6	13
10	------	29	20	58	117	102	23	6	13
11	------	20	26	59	121	102	27	6	11
12	------	20	24	68	136	102	20	6	9
13	------	23	27	104	121	102	19	7	9
14	------	23	24	115	160	102	17	6	9
15	------	23	25	112	125	102	18	6	8
16	------	23	28	106	125	100	17	6	10
17	------	22	25	121	144	100	17	7	10
18	------	22	28	121	190	100	17	6	12
19	------	22	29	121	190	100	15	7	12
20	------	22	32	121	279	94	14	36	11
21	22	22	36	117	279	82	13	28	11
22	24	25	36	119	279	70	12	20	10
23	27	22	26	119	350	70	12	21	10
24	18	22	34	99	350	78	12	20	10
25	19	46	34	85	279	82	14	15	13
26	18	46	30	72	244	74	14	9	13
27	23	28	29	68	212	66	16	12	14
28	23	43	29	58	209	66	13	18	14
29	23	66	35	56	209	58	11	23	14
30	22	------	35	58	206	57	12	22	14
31	23	------	32	------	206	------	13	19	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 21–31	27	18	22.0	480
February	66	20	26.7	1,540
March	66	20	31.1	1,910
April	121	34	84.7	5,040
May	350	58	174	10,700
June	204	57	101	6,010
July	54	11	23.2	1,430
August	36	6	12.4	762
September	125	8	18.8	1,120
The period				29,000

RIO TAOS AT LOS CORDOVAS, N.MEX.

LOCATION.—Water-stage recorder in Martinez Grant about 50 feet below mouths of Rio Ranchos de Taos and Arroyo Seco, half a mile northeast of Los Cordovas, and 4 miles west of Taos, Taos County.

DRAINAGE AREA.—395 square miles.

RECORDS AVAILABLE.—April 1910 to August 1915; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 725 second-feet Sept. 24 (gage height, 4.65 feet); minimum, 3.2 second-feet July 29.

Maximum discharge during year ending Sept. 30, 1932, 665 second-feet May 21; maximum gage height, 4.18 feet July 23; minimum discharge, 10 second-feet Sept. 20, 21.

REMARKS.—Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	24	30	24	29	31	44	38	32	25	6.0	9.9	8.7
2	24	31	27	33	40	50	37	36	22	5.8	9.9	7.9
3	22	30	27	e 29	35	62	35	40	23	6.0	10	7.1
4	22	29	30	25	32	41	32	41	21	6.3	9.1	6.3
5	21	29	32	37	37	38	30	44	21	5.6	7.5	6.3
6	21	30	e 30	27	35	41	29	44	19	4.6	6.3	7.5
7	21	32	29	31	e 35	44	30	45	15	4.6	5.0	8.3
8	21	30	32	30	35	47	38	52	15	4.8	6.0	7.5
9	21	29	35	32	35	64	41	54	13	5.0	7.5	6.3
10	24	27	32	e 30	33	56	41	51	12	4.8	7.5	5.3
11	30	25	29	27	33	44	50	44	11	4.6	7.9	5.6
12	27	30	36	30	36	41	48	37	9.9	4.6	7.5	5.8
13	26	35	e 34	30	36	43	43	35	8.3	4.0	7.1	6.3
14	25	40	33	27	e 38	e 40	44	37	7.1	4.0	6.7	9.9
15	25	48	36	25	41	38	47	38	6.7	5.8	6.7	19
16	23	47	30	27	44	41	44	47	6.7	5.0	7.1	11
17	23	47	29	37	43	43	44	52	5.6	6.7	7.1	13
18	24	e 41	33	27	44	37	38	48	4.8	6.0	6.7	24
19	24	35	31	30	40	43	38	45	4.8	12	6.0	31
20	27	35	e 31	27	40	41	45	e 37	5.3	11	6.0	30
21	29	36	31	25	e 38	40	43	e 28	5.3	5.8	6.7	31
22	26	31	29	27	37	41	36	e 20	7.9	5.8	12	30
23	25	30	32	27	38	38	37	e 12	9.1	5.0	9.5	24
24	26	26	30	e 26	41	36	32	15	5.8	4.8	7.9	254
25	27	25	32	26	43	27	27	22	5.0	5.6	7.1	145
26	30	26	35	25	41	35	26	25	4.6	5.8	6.7	108
27	31	27	25	26	40	47	23	29	4.3	5.3	6.0	89
28	32	26	25	26	41	40	21	26	4.6	4.3	5.8	76
29	36	27	31	27	-------	47	25	23	5.8	3.8	5.8	68
30	32	29	30	27	-------	51	30	22	5.8	4.6	6.0	64
31	29	-------	29	e 29	-------	41	-------	22	-------	5.6	8.3	-------

e Estimated.

Discharge, in second-feet, of Rio Taos at Los Cordovas, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	62	e 30	37	e 42	35	89	97	136	244	71	31	47
2	60	e 27	33	e 40	32	72	134	158	220	61	26	42
3	77	24	41	38	32	71	183	198	202	52	23	32
4	63	25	37	41	37	79	211	228	194	46	21	29
5	56	e 26	e 36	33	40	72	232	268	190	39	16	27
6	48	e 27	36	31	e 45	71	244	279	173	37	17	24
7	44	e 28	33	33	50	69	244	255	151	36	16	25
8	45	e 28	30	37	64	69	233	228	137	35	15	25
9	41	e 30	37	e 36	89	69	237	218	114	32	16	20
10	64	33	33	35	158	74	234	228	105	34	20	18
11	40	e 40	41	37	84	84	236	270	99	39	15	18
12	36	e 33	48	36	77	76	253	275	91	43	14	18
13	36	e 30	48	33	e 81	57	270	281	84	41	13	18
14	36	29	44	36	85	69	306	306	78	36	13	18
15	32	e 30	36	38	96	79	293	342	69	35	13	18
16	30	e 30	51	e 38	72	74	279	356	65	34	12	18
17	29	e 31	43	37	63	68	308	376	59	30	16	16
18	27	e 33	31	40	69	66	311	400	52	25	18	15
19	21	38	e 32	40	72	76	286	460	47	21	24	14
20	25	e 28	32	43	e 67	96	291	625	45	20	42	13
21	31	e 29	35	40	62	99	296	645	41	22	48	12
22	33	e 33	35	43	74	99	319	625	39	20	44	13
23	36	40	40	e 40	80	96	316	625	35	98	34	16
24	36	33	32	38	84	102	279	565	36	35	30	22
25	36	62	32	36	87	99	249	510	38	20	28	25
26	32	40	38	41	94	97	204	460	39	14	27	24
27	35	36	36	36	97	84	181	400	39	28	34	22
28	35	38	38	38	89	82	169	345	39	22	64	21
29	33	e 39	41	38	82	94	147	340	30	24	60	21
30	e 32	40	40	e 35	------	90	135	326	32	25	56	21
31	e 31	------	45	35	------	89	------	289	------	31	51	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	36	21	25.7	1,580
November	48	25	32.1	1,910
December	36	24	30 6	1,880
January	37	25	28.4	1,750
February	44	31	37.9	2,110
March	64	27	43.3	2,660
April	50	21	36.4	2,170
May	54	12	35.6	2,190
June	25	4.3	10.5	624
July	12	3.8	5.60	344
August	12	5.0	7.40	455
September	254	5.3	37.2	2,210
The year	254	3.8	27.5	19,900
1931-32				
October	77	21	40.1	2,460
November	62	24	33.0	1,960
December	51	30	37.8	2,320
January	43	31	37.5	2,310
February	158	32	72.3	4,160
March	102	57	81.0	4,980
April	319	97	239	14,200
May	645	136	355	21,900
June	244	30	92.9	5,530
July	98	14	35.7	2,190
August	64	12	27.6	1,700
September	47	12	21.7	1,290
The year	645	12	89.5	65,000

e Estimated.

EMBUDO CREEK AT DIXON, N.MEX.

LOCATION.—Water-stage recorder in sec. 29, T. 23 N., R. 10 E., 1 mile northwest of Dixon and 1½ miles above confluence with Rio Grande.

DRAINAGE AREA.—305 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1923–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 2,570 second-feet Aug. 5 (gage height, 6.44 feet); minimum, 6.0 second-feet Sept. 5, 6. Maximum discharge during year ending Sept. 30, 1932, 1,640 second-feet May 23 (gage height, 5.54 feet); minimum, 1 second-foot July 23.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	40	29	22	22	27	19	43	172	280	106	54	10
2	35	29	22	23	26	20	49	200	274	103	50	8.9
3	35	29	22	24	26	25	53	206	267	76	60	7.2
4	33	30	24	26	26	28	51	229	302	110	59	6.8
5	31	30	22	24	27	30	51	233	291	74	e200	6.2
6	31	29	20	25	27	22	59	226	256	54	e 60	6.5
7	33	30	20	25	23	21	62	253	253	40	e 50	6.2
8	28	24	32	25	23	38	78	302	226	35	e 50	6.2
9	28	21	38	26	23	28	86	298	213	40	e 60	6.2
10	29	21	41	27	22	32	82	277	203	35	e 50	6.2
11	41	22	35	28	20	34	86	256	194	31	40	7.2
12	42	20	36	27	22	42	96	239	155	e 20	27	8.2
13	38	20	36	27	22	43	94	253	133	e 18	e 15	8.6
14	35	22	39	28	22	42	108	288	120	e 15	e 14	19
15	36	26	30	29	22	36	112	336	86	13	e 13	101
16	33	21	28	29	22	36	101	376	64	12	e 12	101
17	32	21	31	15	22	34	99	440	57	19	11	e 125
18	32	33	29	16	20	34	101	460	46	24	11	e 150
19	33	31	25	16	21	38	130	420	39	e 26	11	175
20	33	26	23	17	23	30	181	352	34	e 29	10	e 250
21	33	29	22	19	25	33	175	e 320	33	31	9.2	e 220
22	33	27	24	22	22	36	160	e 285	34	25	11	e 220
23	33	25	24	24	22	40	178	e 250	30	17	12	e 300
24	33	29	25	28	21	34	160	260	28	19	14	e 170
25	32	32	26	27	22	38	158	336	26	21	13	e 165
26	31	31	25	24	21	34	152	360	28	30	12	163
27	35	30	23	26	23	35	e 151	368	28	28	12	e 135
28	31	32	22	26	26	32	e 150	e 325	43	e 23	11	e 125
29	31	34	22	27	-------	39	e 150	e 285	60	e 17	10	e 115
30	30	25	22	27	-------	39	149	e 260	78	12	8.9	e 110
31	31	-------	22	28	-------	32	-------	284	-------	16	8.9	-------

e Estimated.

Discharge, in second-feet, of Embudo Creek at Dixon, N. Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	e 120	64	33	32	41	88	191	239	340	57	64	53
2	e 135	60	36	38	42	86	250	270	312	82	69	49
3	149	57	38	36	43	82	316	316	291	115	72	40
4	133	e 60	28	39	40	86	336	333	294	74	78	40
5	117	e 65	28	38	46	69	356	364	274	42	86	44
6	110	e 55	43	38	53	71	356	372	239	22	96	49
7	103	50	e 44	38	60	74	360	305	197	14	e 90	40
8	99	49	e 46	36	71	78	368	308	181	8	e 90	41
9	e 180	54	e 48	38	99	78	372	305	181	7	86	40
10	e 150	53	e 50	39	146	82	368	319	178	16	88	38
11	e 140	62	e 49	35	94	84	376	340	184	152	86	38
12	e 135	53	e 47	35	76	82	389	e 380	e 170	178	84	36
13	e 130	51	46	38	84	67	416	e 410	160		92	34
14	e 125	44	e 40	38	82	82	460	445	127		99	34
15	e 120	40	e 45	29	82	90	450	480	112	e 100	96	38
16	e 120	42	e 45	30	80	92	455	514	122		42	40
17	115	42	e 46	40	69	92	470	524	143	5	20	42
18	110	36	e 46	36	74	96	475	524	135	4	14	41
19	108	40	e 47	35	69	108	460	566	158	3	36	44
20	138	33	47	38	74	135	460	e 565	140	2	80	42
21	127	44	43	35	67	138	470	560	115	2	88	46
22	108	44	46	39	66	133	475	572	149	2	84	46
23	106	44	49	34	67	130	384	560	233	1	99	74
24	94	31	44	33	76	143	352	519	319	1	84	106
25	88	e 15	42	32	82	163	330	508	e 270	e 10	80	106
26	82	e 30	50	33	88	172	319	480	e 210	22	80	106
27	78	e 45	47	34	72	152	291	e 460	e 160	44	96	e 90
28	72	e 50	56	36	80	155	263	e 450	106	69	120	e 70
29	71	44	53	38	86	166	233	445	94	71	86	e 55
30	67	30	29	38	-------	163	226	420	72	62	62	51
31	67	-------	31	39	-------	163	-------	376	-------	59	59	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	42	28	33.3	2,040
November	34	20	26.9	1,600
December	41	20	26.8	1,650
January	29	15	24.4	1,500
February	27	20	23.1	1,290
March	43	19	33.0	2,030
April	181	43	110	6,560
May	460	172	295	18,100
June	302	26	129	7,700
July	110	12	36.1	2,220
August	200	8.9	31.6	1,940
September	300	6.2	91.3	5,430
The year	460	6.2	72.0	52,100
1931–32				
October	180	67	113	6,940
November	65	15	46.2	2,750
December	56	28	43.3	2,660
January	40	29	36.0	2,220
February	146	40	72.7	4,180
March	172	67	110	6,740
April	475	191	368	21,900
May	572	239	427	26,200
June	340	72	189	11,200
July	178	1	49.2	3,020
August	120	14	77.6	4,770
September	106	34	52.4	3,120
The year	572	1	132	95,700

e Estimated.

RIO CHAMA AT PARK VIEW, N. MEX.

LOCATION.—Water-stage recorder in Tierra Amarilla Grant at highway bridge 800 feet below mouth of Rio Brazos and half a mile northwest of Parkview, Rio Arriba County.

DRAINAGE AREA.—405 square miles.

RECORDS AVAILABLE.—November 1912 to September 1916; October 1930 to September 1932. Records 1924–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 2,010 second-feet May 17 (gage height, 5.45 feet); minimum, 4.0 second-feet July 30.

Maximum discharge during year ending Sept. 30, 1932, 5,770 second-feet May 22 (gage height, 6.68 feet); minimum, 32 second-feet Sept. 22.

REMARKS.—Records good except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	100	68					72	537	551	e 44	59	21
2	76	68		e 40			87	597	516	e 46	28	17
3	70	59				e 60	85	597	494	e 55	20	14
4	70	56	e 45				74	762	454	e 68	15	12
5	76	50					78	736	391	e 56	15	13
6	76	48					105	788	367	e 50	124	14
7	74	44	59			e 70	142	1,090	339	e 47	61	18
8	67	39		e 35	e 60		148	1,310	339	e 43	56	20
9	e 72	39					158	1,050	328	e 40	61	14
10	78	40				76	e 200	950	282	34	42	11
11	107	40	e 50				e 240	844	268	35	35	22
12	89	38		40			282	900	242	32	32	37
13	76	35					312	1,140	217	28	93	24
14	70	39					355	1,280	206	24	19	100
15	67	44		e 40			385	1,330	188	20	15	89
16	59		e 35			e 75	361	1,270	164	18	16	72
17	56	e 45					317	1,350	139	29	22	50
18	52						379	1,330	117	51	22	89
19	52			e 25			467	1,060	100	37	39	148
20	54						644	806	89	22	40	362
21	58	e 30	e 25				613	710	78	22	28	199
22	59				e 50		544	710	70	20	23	125
23	58	27					501	727	67	16	24	98
24	59			e 30			428	788	56	13	20	222
25	59						339	816	48	16	17	184
26	68	e 40	e 30	32		e 70	317	782	45	17	15	120
27	74						328	719	39	14	14	100
28	61						397	653	50	8.8	11	87
29	65		34	e 40			428	620	46	5.3	9.2	76
30	68		e 35				434	605	e 43	5.6	11	70
31	68							574		14	17	

e Estimated.

Discharge, in second-feet, of Rio Chama at Park View, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	65	74				161	448	1,250	2,360	a 900	155	93
2	169	70				158	622	1,890	2,180	a 800	134	82
3	448	65	a 70	a 90	a 110	151	730	2,730	1,950	a 700	115	78
4	213	63				142	770	3,370	1,770	a 600	103	72
5	151	63				137	900	3,650	1,610	a 500	95	68
6	128	61				137	900	3,100	a1,310	a 450	91	65
7	112	59				137	820	2,570	a1,310	a 400	82	61
8	100	56	a 80		a 170	142	890	3,100	1,280	a 350	74	63
9	93	91				155	920	3,680	1,230	a 300	68	61
10	142	103		a 110		155	890	3,630	1,190	a 300	67	58
11	107	117	a 90			139	975	3,860	1,160	a 320	95	52
12	93	103				139	1,100	4,140	1,150	a 350	80	51
13	82	115			a 150	145	1,420	4,840	1,230	a 300	67	51
14	78	100	a 70			145	1,530	4,840	1,240	a 400	56	a 50
15	74	85				155	1,480	5,140	1,270	a 300	58	a 45
16	70	98				167	2,280	4,840	1,270	278	61	a 45
17	67	87				177	2,840	4,550	1,140	282	98	a 40
18	67	82	a 100			206	2,750	4,550	1,040	259	100	a 40
19	74	89				263	2,660	4,990	964	254	100	a 35
20	82	68		a 120	a 140	350	2,960	4,550	910	246	107	35
21	112	85				292	2,620	4,550	910	246	131	33
22	115	63				234	2,660	5,140	931	225	145	32
23	123			70		217	1,770	4,990	1,220	229	171	35
24	128	a 45				209	1,360	4,700	1,090	234	125	46
25	120		a 110	a 60		238	1,240	4,270	1,080	213	98	59
26	112					242	1,250	3,700	a1,010	225	80	72
27	93				a 150	209	1,110	3,340	a 942	a 200	100	58
28	80	a 60				229	964	3,420	a 900	181	191	50
29	85			a 90	158	246	942	3,300	a 800	161	229	45
30	72		a 90			242	986	3,030	a 800	161	148	44
31	72					296		2,530		155	110	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	107	52	69.0	4,240
November	68		42.3	2,520
December			38.0	2,340
January			34.6	2,130
February			55.7	3,090
March			70.4	4,330
April	644	72	307	18,300
May	1,350	537	885	54,400
June	551	39	211	12,600
July	68	5.3	30.0	1,850
August	124	9.2	32.4	1,990
September	362	11	80.9	4,820
The year	1,350	5.3	155	113,000
1931–32				
October	448	65	114	7,000
November	117		74.4	4,430
December			90.6	5,570
January			99.7	6,130
February			143	8,250
March	350	137	194	11,900
April	2,960	448	1,430	84,900
May	5,140	1,250	3,810	235,000
June	2,360	800	1,240	73,900
July	900	155	339	20,900
August	229	56	108	6,610
September	93	32	54.0	3,210
The year	5,140	32	644	468,000

a Estimated.

RIO CHAMA AT CHAMITA, N.MEX.[1]

LOCATION.—Water-stage recorder in San Juan Pueblo Grant at Denver & Rio Grande Western Railroad bridge 1,000 feet above confluence with Rio Grande and half a mile south of Chamita railroad station, Rio Arriba County.

DRAINAGE AREA.—3,320 square miles.

RECORDS AVAILABLE.—October 1912 to June 1915; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 3,810 second-feet Sept. 20 (gage height, 5.42 feet); no flow at times.

Maximum discharge during year ending Sept. 30, 1932, 7,700 second-feet May 20 (gage height, 6.40 feet); minimum, 7.8 second-feet Sept. 23.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	e425	62	62			120	270	1,380	510	324	386	12
2	e0	49	47		e75	100	270	1,380	510	282	147	11
3	e0	37	44			100	318	1,490	518	185	81	44
4	e0	44	52		e150	138	369	1,280	437	264	71	11
5	e50	44	25			152	369	1,490	e410	160	100	3
6	e0	47	37	e50	180	205	356	1,510	e390	100	97	2
7	e0	42	42		152	160	369	1,430	376	62	e70	12
8	e0	55	62		147	142	416	2,030	369	35	e50	37
9	e0	62	100		124	165	480	1,850	356	23	e90	35
10	e500	52	75		124	160	495	1,500	382	17	62	15
11	e500	47	44		81	116	548	1,340	300	17	23	27
12	e50	27	30		89	156	620	1,150	264	9	0	68
13	100	30	19		134	134	700	1,250	259	9	0	89
14	65	35	20	e60	124	160	708	1,600	232	9	0	138
15	59	55	11		134	190	812	1,750	195	7	0	200
16	59	71			116	152	794	1,720	170	2	0	376
17	52	93			97	190	821	1,720	160	1	0	445
18	59	97		71	120	232	776	1,860	142	1	0	465
19	59	68			100	318	794	1,660	124	3	0	821
20	59	71			93	350	942	1,260	134	30	0	1,300
21	55	78			93	336	1,090	894	124	138	0	857
22	68	81			120	312	1,150	830	85	78	45	588
23	71	71	e10		116	306	1,030	785	65	1	116	604
24	75	68			104	312	1,020	857	52	1	147	596
25	78	49		e60	85	288	1,070	942	37	1	0	652
26	68	59			89	282	1,010	794	23	1	0	628
27	71	75			100	294	1,010	751	14	1	0	488
28	71	75			100	270	1,070	652	23	0	0	430
29	75	75			-------	270	1,330	548	147	0	0	510
30	62	52			-------	288	1,260	525	156	0	0	734
31	59	-------	55		-------	282	-------	572	-------	0	49	-------

e Estimated.

[1] Previously published as "near Chamita."

Discharge, in second-feet, of Rio Chama at Chamita, N.Mex., 1930–32—Contd.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	604	336	e90	e130		911	2,390	2,380	3,020	557	322	167
2	580	276	e110			948	3,620	2,830	2,670	640	255	125
3	1,240	210	e110		e130	735	4,430	3,960	2,430	680	211	106
4	1,180	180	e100	e150		546	4,310	4,790	2,280	664	158	98
5	717	175	e90			496	4,550	5,280	2,260	557	102	76
6	652	152	e90			416	4,790	5,160	1,960	451	81	59
7	660	129	e100		e200	511	4,190	4,670	1,820	396	74	52
8	692	116	e110		264	605	4,310	4,670	1,700	336	183	40
9	1,070	120	e110		e300	728	4,310	4,910	1,660	295	118	36
10	324	120	e120		e350	740	3,960	4,790	1,550	271	62	31
11	e400	367	e120	e140	e320	735	4,190	5,160	1,450	263	53	31
12	480	147	e110		e300	568	4,550	5,160	1,360	469	74	27
13	488	120	e100		e310	519	5,040	5,280	1,300	326	54	22
14	495	112	e90		e320	508	5,160	5,410	1,340	308	53	19
15	518	147	e100		324	621	5,040	5,540	1,310	271	47	18
16	518	134	e120		343	836	5,670	5,930	1,260	255	80	16
17	518	120	e140		369	925	5,670	6,060	1,210	275	78	13
18	525	124	155	e130	488	1,140	5,280	6,190	1,080	248	153	14
19	596	124	e150		495	1,480	5,410	6,460	1,000	259	198	14
20	1,010	93	e150		540	2,700	5,540	7,000	900	208	481	16
21	913	104	e150		510	2,210	5,040	5,930	827	204	331	11
22	628	93	e150		465	1,470	4,910	5,930	752	204	915	10
23	652	138	e160	e120	510	1,060	4,430	6,190	744	211	267	10
24	717	e80	e160		620	953	3,060	5,410	940	e200	283	24
25	708	35	e160		502	1,260	2,670	4,910	809	255	287	89
26	660	e80	e170		416	1,680	2,380	4,670	818	241	248	181
27	620	e90	e170		502	1,210	2,410	4,190	728	183	220	158
28	588	e100	e180	e110	400	1,080	2,140	4,080	688	167	618	158
29	556	e90	e180		856	1,500	2,170	4,080	584	234	370	112
30	488	e70	e160		-------	1,550	2,260	3,960	518	292	275	92
31	395	-------	e140		-------	1,680	-------	3,510	-------	534	248	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	500	0	90.0	5,530
November	97	27	59.0	3,510
December	100	----------	28.2	1,740
January	----------	----------	57.1	3,510
February	----------	----------	112	6,240
March	350	100	215	13,200
April	1,330	270	742	44,200
May	2,030	525	1,250	77,000
June	518	14	232	13,800
July	324	0	56.8	3,490
August	386	0	49.5	3,040
September	1,300	2	340	20,200
The year	2,030	0	270	195,000
1931–32				
October	1,240	324	651	40,100
November	367	35	139	8,290
December	180	90	130	8,020
January	----------	----------	130	7,970
February	856	----------	364	20,900
March	2,700	416	1,040	63,900
April	5,670	2,140	4,130	246,000
May	7,000	2,380	4,980	306,000
June	3,020	518	1,370	81,300
July	680	167	337	20,700
August	915	47	223	13,700
September	181	10	60.8	3,620
The year	7,000	10	1,130	820,000

e Estimated.

EL RITO CREEK NEAR EL RITO, N.MEX.

LOCATION.—Water-stage recorder in J. J. Lobato Grant 3 miles northwest of El Rito, Rio Arriba County.

RECORDS AVAILABLE.—May 1931 to September 1932.

EXTREMES.—Maximum discharge during period ending Sept. 30, 1931, 169 second-feet Aug. 8; maximum gage height, 2.29 feet May 17; minimum discharge, 0.4 second-foot Aug. 30, 31.

Maximum discharge for year ending Sept. 30, 1932, 398 second-feet May 19 (gage height, 4.16 feet); minimum, 0.6 second-foot Sept. 17, 18.

REMARKS.—Records good except those estimated, May 23, June 6, 8–11, 13–17, Nov. 22 to Dec. 31, 1931, Jan. 1 to Mar. 6, June 25, 26, 1932, which are poor. Stage-discharge relation affected by ice Nov. 22, 1931, to Mar. 6, 1932. One small diversion for irrigation above station.

Discharge, in second-feet, 1931–32

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1931						1931					
1	-------	7.8	2.2	2.4	0.5	16	72	4	1.8	1.2	2.8
2	-------	7.5	2.2	2.2	.5	17	86	3	1.8	1.2	2.6
3	-------	7.0	2.4	3.8	.7	18	66	2.4	1.5	1.1	14
4	-------	6.5	2.7	2.8	.7	19	32	2.1	2.2	1.1	15
5	-------	6.0	2.0	3.0	.7	20	22	2.2	1.6	1.0	11
6	-------	6.	1.4	2.8	.7	21	18	2.4	1.4	.8	4.3
7	-------	6.0	1.2	6.5	1.2	22	16	2.2	1.3	.6	2.7
8	-------	6	1.1	22	3.8	23	16	2.1	1.1	.6	2.1
9	-------	6	1.2	8.6	1.8	24	15	2.0	1.2	.7	2.0
10	-------	6	1.1	3.6	1.2	25	14	2.6	1.4	.7	2.1
11	-------	6	1.0	2.4	1.4	26	12	2.1	1.2	.8	2.0
12	-------	6.0	1.0	1.6	1.8	27	12	1.8	1.1	.7	1.6
13	-------	5	1.1	1.5	1.4	28	10	2.0	1.1	.6	1.6
14	-------	5	1.0	1.3	1.2	29	9.7	2.0	1.4	.5	2.0
15	87	4	1.1	1.3	2.1	30	9.2	2.1	1.2	.4	2.4
						31	8.6	-------	1.6	.4	-------

Discharge, in second-feet, of El Rito Creek near El Rito, N. Mex., 1931–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	2.1	3.9					53	108	40	4.8	5.5	1.5
2	2.8	3.2					87	130	36	5.8	2.8	1.4
3	7.2	3.4					105	158	33	7.0	2.0	1.3
4	6.0	3.6				15	112	164	31	5.5	2.2	1.2
5	4.3	3.6					120	152	36	5.1	2.0	1.4
6	3.2	3.6					116	120	30	4.8	2.3	1.4
7	2.2	3.6				16	108	100	26	4.8	2.2	1.1
8	2.1	3.6	2		1	16	119	120	22	4.6	2.2	1.6
9	2.6	4.0				16	112	122	22	4.8	2.2	1.2
10	3.0	4.7				16	109	126	22	4.8	2.3	1.0
11	2.8	5.4				16	124	164	20	4.6	2.3	.9
12	2.7	5.8				16	147	152	18	5.8	2.3	.9
13	2.4	6.0				16	177	158	18	4.4	2.3	.8
14	2.4	5.8				16	170	158	16	4.2	2.3	.8
15	2.2	5.6				16	184	184	15	3.7	2.3	.8
16	2.1	5.6		1		16	210	177	15	3.7	2.2	.7
17	2.1	5.4				16	210	170	14	3.5	2.2	.6
18	2.0	5.4				16	196	164	13	3.3	5.1	.6
19	1.8	5.4				22	190	210	12	3.3	10	.9
20	3.2	5.1				36	190	184	11	3.1	4.4	.7
21	4.3	4.1				57	177	164	9.2	3.7	3.3	.7
22	4.9				5	41	158	164	8.8	3.1	3.3	.7
23	5.1		1			42	97	133	9.2	9.6	3.1	1.2
24	5.1					43	103	108	9.2	5.1	2.8	2.3
25	4.9					42	94	95	10	3.5	2.7	3.3
26	4.7	3				37	96	87	15	2.0	2.5	3.7
27	4.3					35	82	72	7.0	1.7	2.3	2.5
28	4.0					37	75	67	6.1	4.8	3.0	2.2
29	3.4					41	80	65	5.5	3.3	2.8	1.6
30	3.2					34	93	58	5.1	2.8	1.7	1.6
31	3.0					33		48		3.1	1.7	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931				
May 15–31	87	8.6	29.7	1,000
June	7.8	1.8	4.19	250
July	2.7	1.0	1.47	90
August	22	.4	2.52	155
September	15	.5	2.93	174
The period				1,670
1931-32				
October	7.2	1.8	3.42	210
November	6.0		4.10	244
December			1.5	91
January			1.0	61
February			2.9	169
March	57		25.2	1,550
April	210	53	130	7,720
May	210	48	132	8,110
June	40	5.1	17.8	1,060
July	9.6	1.7	4.33	266
August	10	1.7	2.91	179
September	3.7	.6	1.35	81
The year	210	.6	27.2	19,700

RIO OJO CALIENTE AT LA MADERA, N.MEX.

LOCATION.—Water-stage recorder in SE¼ sec. 25, T. 25 N., R. 8 E., just below confluence of Rio Vallecitos and Rio Tusas about half a mile southeast of La Madera.

RECORDS AVAILABLE.—April to September 1932.

EXTREMES.—Maximum discharge during period, about 1,700 second-feet Aug. 28 (gage height, 7.27 feet); minimum discharge, 2 second-feet Aug. 17, Sept. 20–22; minimum gage height, 1.02 feet Sept. 20.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1932

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		426	144	19	50	e 8	16	758	667	e 45	12	3	e 3
2		564	133	23	31	e 7	17	758	637	e 45	14	2	e 3
3		682	124	32	19	e 7	18	712	622	e 40	17	4	e 3
4		789	136	26	12	e 6	19	742	727	e 35	15	10	e 2
5		789	173	19	9	e 6	20	758	697	e 30	6	34	2
	e400												
6		652	e 140	18	5	e 6	21	727	594	e 25	6	50	2
7		536	e 120	12	19	e 5	22	727	579	e 25	6	25	2
8		594	e 90	10	17	e 5	23	522	508	e 20	6	20	4
9		637	74	7	7	e 5	24	452	426	e 15	7	15	7
10		652	e 70	4	4	e 4	25	426	378	e 20	8	12	12
11	452	697	e 65	5	4	e 4	26	452	325	e 30	11	7	12
12	494	637	e 60	50	11	e 4	27	439	274	e 25	14	7	12
13	579	667	e 60	35	7	e 4	28	355	272	18	17	100	8
14	637	608	e 55	17	4	e 3	29	363	261	e 16	24	122	7
15	667	682	e 50	13	3	e 3	30	381	220	e 15	23	e 50	7
							31	------	165	------	40	e 9	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April	758	355	513	30,500
May	789	165	547	33,600
June	173	15	63.3	3,760
July	50	4	16.6	1,020
August	122	2	21.7	1,330
September	12	2	5.4	323
The period				70,500

e Estimated.

RIO SANTA CRUZ AT CUNDIYO, N.MEX.

LOCATION.—Water-stage recorder in SE¼NW¼ sec. 17, T. 20 N., R. 10 E., 100 feet below highway bridge at junction of Rio Medio and Rio Frijoles to form Rio Santa Cruz and a quarter of a mile northwest of Cundiyo. Prior to Aug. 13, 1932, station was located 1½ miles downstream.

RECORDS AVAILABLE.—September 1931 to September 1932. Records 1915–27 at present site and 1928–31 at station 1½ miles downstream, called "near Chimayo", published by State engineer.

EXTREMES.—Maximum discharge during period Sept. 11, 1931, to Sept. 30, 1932, about 2,610 second-feet Sept. 24, 1931 (gage height, 8.20 feet); minimum, 3 second-feet Feb. 3, 1932.

REMARKS.—Records good Sept. 11–30, 1931, August and September 1932; others fair except those for period of ice effect, Nov. 16 to Jan. 31, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	64	20			11	47	60	88	150	49	32	31
2	------	80	16	15		11	38	88	98	140	54	28	30
3	------	85	18			13	42	114	113	129	58	30	27
4	------	64	16			3	38	120	125	132	38	32	25
5	------	53	15	10		4	29	129	147	112	24	31	28
6	------	42	14			10	31	142	147	103	22	33	25
7	------	41	14			12	30	121	140	99	20	35	22
8	------	36	17			11	35	114	132	91	24	26	22
9	------	37	22			13	31	121	138	88	22	22	22
10	------	43	24			14	37	108	138	91	24	24	22
11	13	37	24			13	36	116	150	79	32	29	21
12	14	38	20			15	28	124	146	68	46	28	21
13	12	34	18		20	13	20	142	138	72	34	18	20
14	38	30	19			10	28	171	138	67	26	24	19
15	171	28	20			9	31	173	141	67	26	19	19
16	83	28				14	35	176	161	69	22	18	19
17	43	27				10	33	192	168	61	20	19	19
18	157	26				14	35	181	188	57	24	41	18
19	189	29		25		14	48	144	241	56	21	28	18
20	127	39	20			14	64	153	231	56	22	28	18
21	76	31				14	64	164	230	50	32	79	17
22	74	26				14	54	171	249	59	34	37	17
23	83	28				14	42	148	257	63	48	27	19
24	515	26				16	42	124	230	84	51	31	21
25	226	24			14	22	53	117	220	78	42	32	21
26	181	24	10			24	59	106	210	67	32	29	21
27	108	22				31	49	129	185	43	33	28	20
28	105	21	29			38	42	87	190	36	37	68	19
29	114	21	15		10	47	54	87	173	37	37	53	18
30	83	22				------	51	88	176	41	54	39	18
31	------	18	------			------	51	------	164	------	42	36	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931				
September 11–30	515	12	121	4,780
1931–32				
October	85	18	36.3	2,230
November	----------	----------	17.9	1,060
December	----------	----------	23.1	1,420
January	----------	----------	17.9	1,100
February	47	3	15.4	889
March	64	20	41.2	2,530
April	192	60	130	7,760
May	257	88	169	10,400
June	150	36	78.2	4,650
July	58	20	33.9	2,080
August	79	18	32.4	1,990
September	31	17	21.2	1,260
The year	257	3	51.5	37,400

SANTA FE CREEK NEAR SANTA FE, N.MEX.[1]

LOCATION.—Water-stage recorder in SW¼SW¼ sec. 24, T. 17 N., R. 10 E., about 300 feet below upper storage reservoir of New Mexico Power Co. and 6 miles east of Santa Fe. Prior to Apr. 11, 1931, this station was located about 2 miles downstream.

DRAINAGE AREA.—22 square miles.

RECORDS AVAILABLE.—April 1913 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 139 second-feet Sept. 19 (gage height, 2.35 feet); minimum, 0.5 second-foot Sept. 13.

Maximum discharge during year ending Sept. 30, 1932, 47 second-feet May 19 (gage height, 1.42 feet); minimum, 1.1 second-feet Nov. 30 to Dec. 28.

REMARKS.—Records fair except those estimated, Nov. 4, 1930, to Mar. 31, 1931, Dec. 30, 31, 1931, which are poor. Flow regulated at dam immediately above station. No diversions above gage.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	4.4	2.2					7.0	31	37	6.6	4.1	3.6
2	4.0	2.1					7.0	32	37	7.3	4.1	3.6
3	3.4	2.1					7.0	34	37	6.6	4.1	3.6
4	3.2						7.0	40	37	7.0	4.1	3.6
5	3.6		2				7.0	41	34	5.9	3.8	3.6
6	4.0						7.0	35	31	5.6	3.8	3.6
7	3.4						7.0	32	29	4.9	4.1	3.6
8	2.8						7.0	33	27	4.9	3.8	3.8
9	2.7						7.0	31	25	4.4	3.8	2.5
10	3.4						7.0	26	22	4.9	3.8	1.7
11	4.6		2.2				7.0	23	19	4.7	3.8	1.7
12	4.0						7.0	21	16	4.7	3.8	1.7
13	4.0						7.3	20	14	4.4	4.1	1.6
14	4.6						7.3	22	13	4.4	4.1	1.7
15	4.8				3		7.6	26	12	4.4	4.1	6.4
16	4.2	2		3		4	7.6	31	10	4.4	4.1	36
17	3.8						8.0	37	9.6	4.4	3.8	24
18	3.8						14	44	8.7	4.4	3.8	34
19	3.8						17	45	8.7	4.4	3.8	113
20	3.8						19	40	9.1	4.4	3.8	63
21	3.6		2				18	34	7.3	4.4	3.8	46
22	3.6						16	32	4.4	4.4	3.8	38
23	3.4						16	32	4.7	4.4	3.8	36
24	3.2						16	35	4.4	4.4	3.8	77
25	3.2						16	41	3.3	4.4	4.1	87
26	3.0						14	43	3.6	4.4	3.8	72
27	2.7						14	42	3.8	6.2	3.8	61
28	2.7						14	38	4.1	9.6	3.8	51
29	2.6						23	39	4.4	9.1	3.8	43
30	2.2						29	38	5.6	9.6	3.6	38
31	2.2							36		6.2	3.6	

[1] Published in previous reports as Santa Fe Creek above reservoir near Santa Fe, N.Mex.

Discharge, in second-feet, of Santa Fe Creek near Santa Fe, N.Mex., 1930–32—Con.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	32	8.4	1.1	2.5	6.6	5.9	12	17	23	9.8	4.4	13
2	29	8.4	1.1	2.5	6.6	24	12	18	22	9.8	4.8	12
3	28	7.6	1.1	1.7	6.6	23	13	20	20	9.8	5.3	11
4	24	6.2	1.1	1.7	6.6	23	14	25	20	9.8	6.0	11
5	22	5.9	1.1	1.7	6.2	9.1	14	28	19	9.8	7.4	10
6	19	5.6	1.1	1.7	6.2	8.7	16	29	17	9.8	7.4	9.8
7	18	5.6	1.1	1.7	6.2	8.7	16	29	16	9.4	5.8	9.4
8	15	5.2	1.1	1.4	6.2	8.4	16	29	16	9.8	1.6	12
9	14	5.2	1.1	1.7	6.2	8.4	16	28	15	9.1	1.6	10
10	14	6.2	1.1	1.7	6.2	8.7	15	31	15	9.1	4.4	9.8
11	12	7.0	1.1	1.7	5.9	8.7	16	37	14	9.1	8.2	9.1
12	10	7.0	1.1	1.7	5.9	8.7	16	37	13	7.1	8.2	9.1
13	9.6	7.0	1.1	1.7	5.9	8.4	22	35	14	5.1	4.0	9.1
14	13	7.0	1.1	1.7	5.9	8.4	26	33	12	5.3	1.9	9.1
15	14	7.0	1.1	1.7	5.9	8.0	29	32	10	5.1	2.0	9.1
16	12	3.3	1.1	1.7	5.6	8.0	31	32	9.4	5.1	2.0	9.1
17	12	1.7	1.1	1.7	5.6	8.0	32	33	9.4	4.6	2.0	9.1
18	11	1.9	1.1	1.7	5.6	8.4	32	35	9.4	4.6	2.0	9.1
19	11	1.9	1.1	1.7	5.6	8.7	31	42	9.4	4.4	2.0	9.1
20	11	1.9	1.1	1.7	5.6	8.7	31	44	9.4	4.4	2.2	9.1
21	11	1.4	1.1	1.7	5.6	9.1	33	44	9.4	4.4	2.3	9.1
22	11	1.3	1.1	1.9	5.2	10	34	44	9.4	3.3	2.7	9.1
23	11	1.3	1.1	1.7	5.2	10	32	44	9.4	2.8	7.4	9.1
24	11	1.3	1.1	1.7	5.2	11	28	41	9.4	2.5	10	9.1
25	10	1.3	1.1	1.7	5.2	11	26	38	9.4	2.7	11	9.1
26	9.6	1.3	1.1	1.7	5.2	11	19	34	9.8	2.7	9.8	9.4
27	9.6	1.4	1.1	2.1	5.2	11	16	32	10	2.7	9.8	5.5
28	9.1	1.4	1.1	8.0	4.9	11	16	30	10	2.8	14	2.0
29	9.1	1.4	5.9	7.0	4.9	11	19	29	9.8	2.8	15	2.0
30	9.1	1.1	4.8	6.6	-------	11	19	27	9.8	3.0	14	2.0
31	8.7	-------	3.6	6.6	-------	12	-------	25	-------	3.5	13	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	4.8	2.2	3.49	216
November	----------	----------	2.01	120
December	----------	----------	2.01	123
January	----------	----------	3	184
February	----------	----------	3	167
March	----------	----------	4	246
April	29	7.0	11.6	690
May	45	20	34.0	2,090
June	37	3.3	16.1	955
July	9.6	4.4	5.48	337
August	4.1	3.6	3.88	239
September	113	1.6	28.8	1,720
The year	113	----------	9.78	7,090
1931–32				
October	32	8.7	14.2	872
November	8.4	1.1	4.11	244
December	5.9	1.1	1.45	89
January	8.0	1.4	2.45	151
February	6.6	4.9	5.78	333
March	24	5.9	10.6	655
April	34	12	21.7	1,290
May	44	17	32.3	1,990
June	23	9.4	13.0	772
July	9.8	2.5	5.94	365
August	15	1.6	6.20	381
September	13	2.0	8.85	526
The year	44	1.1	10.6	7,670

BLUEWATER CREEK NEAR BLUEWATER, N.MEX.

LOCATION.—Water-stage recorder in SW¼ sec. 5, T. 12 N., R. 11 W., about 2½ miles northwest of Bluewater, 8 miles below storage reservoir of Bluewater-Toltec Irrigation District.

DRAINAGE AREA.—235 square miles.

RECORDS AVAILABLE.—May 1912 to December 1914; October 1930 to September 1932. Records 1915–19, 1921–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 124 second-feet Aug. 9 (gage height, 3.51 feet); no flow Mar. 9.

Maximum discharge during year ending Sept. 30, 1932, 96 second-feet Aug. 21 (gage height, 3.18 feet); minimum recorded, 0.1 second-foot Oct. 12.

REMARKS.—Records fair except those estimated, which are poor. Stage-discharge relation affected by ice at times during winter. Flow regulated by storage in Bluewater Reservoir for irrigation.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	2.4	1.6	e3			0.8	0.8	16	32	7.7	12	8.7
2	1.9	1.4				.4	.7	14	32	4.1	4.7	8.4
3	1.6	1.2	3.9			.6	.6	4.6	31	4.7	2.4	8.2
4	3.0	1.4	3.0		e0.5	.7	.5	4.1	31	3.8	1.2	7.2
5	2.8	1.2	2.2			1.0	.7	3.9	37	1.4	.8	6.3
6	2.8	1.4	3.0			1.4	.7	3.7	33	.8	1.0	6.3
7	2.8	1.4			.4	.1	1.0	4.0	33	.7	3.4	6.2
8	3.2	1.6				.3	3.8	4.1	31	1.1	3.9	6.3
9	3.5	1.6				0	4.5	3.9	30	1.9	9.4	6.5
10	3.5	1.9			e.4	.4	4.6	3.7	28	.8	3.4	6.7
11	3.4	1.9				.3	4.8	3.8	27	3.4	.5	6.7
12	2.2	2.2		e2.0	.5	.4	5.1	4.0	26	11	.6	6.3
13	1.4	2.4			e.4	.6	5.1	4.2	25	14	.7	6.0
14	1.4	2.8			.3	.7	5.3	4.5	22	14	.7	6.2
15	1.1	3.4			.3	.6	5.3	4.8	20	16	.8	7.0
16	.7	3.5			.3	.7	6.5	4.8	23	16	.5	8.0
17	.6	3.2			.1	.8	9.5	4.5	22	16	.6	7.7
18	.7	3.0			0	1.0	8.2	3.9	21	16	1.0	7.7
29	.7	3.4	e2.5		.1	1.6	3.9	3.6	19	16	.8	7.7
20	.7				.2	1.9	3.5	15	18	14	.6	6.2
11	.8				.2	1.0	4.3	20	16	14	.6	4.8
22	1.0				.3	.4	5.6	21	15	11	.8	4.4
23	1.0			1.6	.3	.4	5.6	21	14	10	1.0	4.2
24	1.2	e2.5			.4	.4	5.4	19	15	9.0	5.4	4.5
25	1.4				.5	1.6	5.4	19	16	7.0	6.0	4.5
26	1.4				.6	2.4	e9	19	16	6.7	7.0	4.5
27	1.4			e1.5	.8	1.1	13	34	17	6.2	7.2	3.5
28	1.4				1.0	1.4	15	36	9.8	5.4	7.2	3.4
29	1.2	1.6			-------	1.2	20	36	11	5.4	7.0	3.0
30	1.4	e2			-------	1.1	17	28	12	e8	7.2	1.9
31	1.4	-------			-------	1.1	-------	31	-------	e10	8.0	-------

e Estimated.

Discharge, in second-feet, of Bluewater Creek near Bluewater, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	1.1	0.8	0.6	[a]0.5		4.1	9.8	18	79	30	13	14
2	.8	.8	[a].7			4.5	11	18	77	30	9.2	14
3	.5	.8		.3		4.9	13	18	74	25	9.0	14
4	.6	.8	[a].8			5.8	13	18	68	23	9.5	9.8
5	.7	.8		[a].3	[a]0.5	5.6	14	18	60	30	9.5	10
6	.5	.8				6.2	15	19	59	41	10	
7	.2	.7				6.0	15	18	58	50	9.8	
8	.2	.3				6.0	15	17	58	55	12	[a]9
9	.2	.2		.3		6.0	16	18	57	55	18	
10	.3	.3				6.5	14	18	57	53	21	
11	.2	.2				6.2	14	27	57	54	26	8.2
12	.1	.2				5.8	14	28	56	53	31	8.2
13	.2	.2			.8		14	36	56		31	8.2
14	.2	.2			[a].8		15	37	56	[a]40	37	8.2
15	.2	.2				[a]6	16	36	56		43	8.0
16	.2	.2		[a].2	.8		16	26	56	27	46	7.7
17	.3	.2			1.1	6.5	16	26	56	26	45	11
18	.3	.2			[a].6	6.5	16	30	56	28	44	13
19	.4	1.0	[a].5			7.0	17	32	56	30	47	13
20	.6	.8			.2	8.0	17	32	56	28	50	13
21	.7	.7			.2	8.0	17	32	55	27	38	14
22	.4	.6			.3	8.0	18	32	56	27	29	16
23	.4			.2	.7	8.0	18	32	54	26	28	19
24	.3				1.0	7.7	18	32	37	25	24	18
25	.4	[a].5			1.4	8.0	18	38	36	23	16	14
26	.5			[a].2	1.9	8.2	18	40	31	20	16	13
27	.5				2.8	8.7	20	40	29	18	16	12
28	.6	.3			3.4	9.0	19	48	28	21	16	13
29	.6	.4			3.8	9.2	19	59	29	22	13	12
30	.7	.5		.2	-------	9.5	19	74	30	20	13	12
31	.8	-------		[a].2	-------	9.8	-------	79	-------	14	13	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	3.5	0.6	1.74	107
November	3.5	1.2	2.22	132
December	-------	-------	2.60	160
January	-------	-------	1.86	114
February	1.0	.0	.40	22
March	2.4	.0	.85	52
April	20	.5	5.85	348
May	36	3.6	12.9	792
June	37	9.8	22.8	1,350
July	16	.7	8.26	508
August	12	.5	3.43	211
September	8.7	1.9	5.97	355
The year	37	0	5.74	4,150
1931–32				
October	1.1	0.1	0.44	27
November	1.0	.2	.49	29
December	-------	-------	.53	33
January	-------	-------	.25	15
February	3.8	-------	.94	54
March	9.8	4.1	6.89	424
April	20	9.8	15.8	942
May	79	17	32.1	1,980
June	79	28	53.1	3,160
July	55	14	32.3	1,990
August	50	9.0	24.0	1,470
September	19	7.7	11.6	691
The year	79	-------	14.9	10,800

[a] Estimated.

LA JARA CREEK NEAR LA JARA, N.MEX.

LOCATION.—Water-stage recorder in SE¼ NW¼ NE¼ sec. 23, T. 22 N., R. 1 W., 1,600 feet above first diversion 4 miles northeast of La Jara.
RECORDS AVAILABLE.—June to September 1932.
EXTREMES.—Maximum discharge during period, 19 second-feet June 5 (gage height, 1.59 feet); minimum, 0.4 second-foot Sept. 11–23, 29, 30.
REMARKS.—Records good except those estimated, June 29, July 12–16, 26, 29, 30, which are fair.

Discharge, in second-feet, 1932

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-------	5.1	1.0	1.0	16	14	3.1	1.0	0.4
2	-------	5.8	.8	.9	17	12	2.8	.9	.4
3	-------	4.8	.7	.8	18	9.9	2.5	1.3	.4
4	-------	4.3	.6	.7	19	7.9	2.1	2.4	.4
5	19	3.6	.6	.6	20	7.1	1.8	2.8	.4
6	18	3.2	.5	.7	21	6.7	1.6	1.7	.4
7	18	2.9	.5	.6	22	6.6	2.2	1.5	.4
8	17	2.6	.6	.5	23	6.0	2.3	1.0	.4
9	17	3.6	.6	.5	24	5.8	2.4	.9	.5
10	16	3.9	.6	.5	25	6.0	2.6	.9	.6
11	16	3.5	.8	.4	26	6.9	2.6	.9	.5
12	16	4.5	.6	.4	27	6.6	2.6	3.3	.5
13	15	4.2	.5	.4	28	3.9	1.9	2.8	.5
14	15	3.8	4.8	.4	29	3.8	1.6	1.8	.4
15	15	3.5	1.8	.4	30	3.6	1.4	1.3	.4
					31	-------	1.1	1.1	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June 5–30	19	3.6	11.1	573
July	5.8	1.1	3.03	186
August	4.8	.5	1.31	81
September	1.0	.4	.51	31
The period				871

ALAMOSA RIVER NEAR MONTICELLO, N.MEX.

LOCATION.—Water-stage recorder in SW¼ sec. 31, T. 8 S., R. 7 W., just below mouth of Wildhorse Creek, Alamosa dam site, and Old Fort Quitman and 15 miles northwest of Monticello.

DRAINAGE AREA.—470 square miles.

RECORDS AVAILABLE.—May 1931 to September 1932. Records October to December 1929 published by State engineer.

EXTREMES.—Maximum discharge during period ending Sept. 30, 1931, about 4,500 second-feet Aug. 5 (gage height, 6.30 feet); minimum, 6.4 second-feet May 10.

Maximum discharge during year ending Sept. 30, 1932, about 1,380 second-feet Aug. 28 (gage height, 4.78 feet); minimum, 5.2 second-feet Jan. 9.

REMARKS.—Records good below 15 second-feet, poor above. Discharge estimated Aug. 20–24, Nov. 3–5, 1931, Jan. 15, 16, 1932. No diversions above station; entire normal flow diverted below for irrigation.

Discharge, in second-feet, 1931–32

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1931						1931					
1	7.2	8.0	15	23	9.6	16	7.4	7.8	9.4	12	15
2	7.1	8.0	7.6	10	9.2	17	7.4	7.6	10	11	8.7
3	7.1	8.0	7.6	32	9.2	18	7.2	7.4	11	11	28
4	6.9	8.0	10	252	9.2	19	7.1	7.1	12	13	14
5	6.9	8.1	7.8	180	8.9	20	7.1	7.1	17	12	8.0
6	6.7	8.1	7.8	32	9.2	21	6.9	7.2	11	12	8.3
7	6.7	8.5	7.8	8.0	58	22	7.1	7.2	11	11	8.7
8	6.7	8.5	8.0	7.1	9.2	23	7.2	7.2	11	11	11
9	6.7	8.7	8.3	61	11	24	7.2	7.2	11	10	9.4
10	6.6	8.7	8.1	45	10	25	7.2	7.2	11	9.8	8.0
11	6.7	8.5	8.3	15	10	26	7.4	7.2	11	9.8	8.5
12	6.6	8.0	8.5	11	9.4	27	7.6	7.2	11	10	9.2
13	6.6	8.0	8.7	11	8.9	28	7.4	7.2	11	9.8	32
14	6.7	7.6	8.7	11	10	29	7.6	7.2	12	9.6	14
15	6.9	7.6	9.2	11	64	30	7.6	31	12	9.6	14
						31	7.8	-------	30	9.6	-------

Discharge, in second-feet, of Alamosa River near Monticello, N.Mex. 1931–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	21	9.8	8.5	7.4	9.4	9.2	7.8	8.3	8.7	8.7	9.6	8.1
2	14	9.8	8.5	7.2	9.4	9.2	7.8	8.5	8.7	8.5	8.5	8.1
3	13	9.7	8.3	7.2	9.6	8.9	7.6	8.7	8.7	8.9	8.7	8.0
4	13	9.7	8.3	7.4	9.6	9.2	7.6	8.7	8.7	9.2	8.9	8.0
5	13	9.7	8.3	7.4	9.6	8.9	7.6	8.9	8.7	9.4	8.9	8.0
6	13	9.6	8.3	7.1	9.6	8.9	7.4	9.4	8.7	9.4	9.2	8.0
7	13	9.6	8.3	7.1	9.6	8.9	7.6	9.4	8.7	10	9.4	8.1
8	13	9.6	8.3	6.0	9.8	8.9	7.6	9.6	8.5	10	9.6	8.5
9	13	9.6	8.3	5.6	9.8	8.9	7.6	9.8	8.7	10	8.9	8.5
10	13	9.4	8.5	7.1	9.8	8.9	7.4	9.8	8.7	10	10	8.5
11	12	9.4	8.3	7.4	9.4	8.7	7.4	9.8	8.7	11	9.8	8.3
12	12	9.4	8.3	7.2	9.4	8.7	7.4	10	8.7	11	9.6	8.5
13	12	9.2	8.1	7.4	9.4	8.5	7.4	11	8.5	10	9.8	8.3
14	12	9.2	8.1	7.2	9.4	8.7	7.4	10	8.7	10	9.6	8.3
15	12	9.2	8.0	7.3	9.4	8.7	7.4	10	8.7	9.8	9.4	8.1
16	12	9.2	8.0	7.3	9.4	8.7	7.2	10	8.7	9.8	8.9	8.0
17	12	9.2	8.0	7.4	9.4	8.5	7.2	10	8.7	9.2	9.4	8.1
18	12	9.2	8.0	7.6	9.4	8.5	7.2	10	8.7	8.9	8.3	8.0
19	12	8.9	7.8	7.6	9.8	8.5	7.4	10	8.9	8.7	8.5	8.0
20	11	9.2	7.8	7.6	9.4	8.3	7.8	10	8.9	8.7	11	8.0
21	11	9.2	8.0	7.8	9.4	8.1	7.8	9.8	8.9	8.7	10	8.0
22	11	8.9	7.6	7.8	9.4	8.0	7.6	9.6	9.4	8.1	10	11
23	11	8.9	7.6	8.0	9.2	8.0	7.8	9.4	9.6	8.0	13	13
24	11	8.9	7.6	8.0	9.2	8.1	7.8	9.2	9.6	14	9.6	13
25	11	9.2	7.6	8.1	9.4	8.1	8.1	8.9	9.6	8.3	8.5	12
26	11	8.9	7.6	8.3	9.2	8.1	8.1	8.9	9.6	7.8	8.5	12
27	11	8.9	7.6	8.5	9.2	8.1	8.3	8.9	9.8	7.8	8.9	11
28	11	8.7	7.8	8.3	9.2	8.0	8.3	8.7	8.9	7.4	48	11
29	10	8.5	7.6	8.5	9.2	8.0	8.5	8.7	8.9	6.1	10	12
30	10	8.3	7.4	8.9	------	7.8	8.5	8.7	8.7	25	8.5	16
31	10	------	7.2	9.4	------	7.6	------	8.7	------	28	8.1	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May	7.8	6.6	7.07	435
June	31	7.1	8.50	506
July	30	7.6	10.7	660
August	252	7.1	28.4	1,750
September	64	8.0	14.8	878
The period				4,230
1931–32				
October	21	10	12.1	746
November	9.8	8.3	9.23	549
December	8.5	7.2	7.99	491
January	9.4	5.6	7.58	466
February	9.8	9.2	9.45	543
March	9.2	7.6	8.50	523
April	8.5	7.2	7.69	457
May	11	8.3	9.40	578
June	9.8	8.5	8.90	530
July	28	6.1	10.3	636
August	48	8.1	10.6	653
September	16	8.0	9.41	560
The year	48	5.6	9.27	6,730

PECOS RIVER AT IRVIN RANCH, NEAR PECOS, N.MEX.

LOCATION.—Water-stage recorder in NE¼NE¼ sec. 17, T. 17 N., R. 12 E., at private road bridge on Irvin Ranch 600 feet above mouth of Indian Creek, 2 miles below Canyon Espiritu Santo, and 11 miles north of Pecos.

DRAINAGE AREA.—175 square miles.

RECORDS AVAILABLE.—March 1910 to December 1914 published as "Pecos River near Cowles"; October 1930 to September 1932. Records 1919–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 1,390 second-feet Sept. 24 (gage height, 3.70 feet); minimum, estimated, 10 second-feet Dec. 21, 22.

Maximum discharge during year ending Sept. 30, 1932, 967 second-feet May 22 (gage height, 3.37 feet); minimum not determined.

REMARKS.—Records good except those estimated, which are poor. Stage-discharge relation affected by ice at times during winter. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	170	51	a 41	a 18	a 35	a 36	41	250	376	130	76	60
2	137	a 49	a 38	a 18	a 31	a 36	56	250	365	a 125	74	58
3	92	a 47	a 38	a 19	a 28	a 35	70	262	365	a 120	73	56
4	78	a 45	38	a 20	a 21	a 37	72	315	350	a 115	74	57
5	70	a 43	a 35	a 22	a 20	a 38	76	297	345	a 110	73	58
6	64	a 43	a 33	26	a 22	a 39	87	279	325	106	62	61
7	64	a 43	a 28	a 28	a 23	39	106	306	292	102	52	54
8	64	a 42	a 33	a 27	a 23	a 40	123	345	297	100	56	47
9	61	a 42	a 30	a 36	a 24	a 41	116	306	270	106	90	46
10	70	a 42	a 28	a 32	26	a 42	119	279	262	100	87	45
11	68	a 40	28	a 30	a 24	a 42	135	262	238	a 95	73	52
12	67	a 38	a 30	a 23	a 23	a 42	153	258	212	a 90	70	46
13	67	a 36	a 30	a 23	a 27	a 43	153	284	192	a 85	a 65	44
14	67	a 35	a 33	a 24	a 27	a 46	173	320	183	83	a 62	87
15	66	a 37	a 30	a 23	a 26	a 53	183	392	173	85	a 60	458
16	62	41	a 27	a 23	a 25	a 51	183	462	170	96	a 70	330
17	58	42	a 20	a 22	a 25	a 49	189	578	164	87	a 65	310
18	57	40	a 18	a 21	a 28	a 48	206	628	145	142	a 68	426
19	52	38	a 15	a 20	a 29	a 47	234	522	119	119	a 63	840
20	51	36	a 12	a 26	a 30	a 48	262	382	126	121	a 62	578
21	49	38	a 10	a 30	a 32	a 52	234	325	121	114	a 60	426
22	48	39	a 10	32	a 33	49	216	325	114	100	a 58	345
23	46	39	a 12	a 31	a 34	48	230	382	106	94	57	320
24	46	a 40	a 18	a 30	a 34	46	226	456	100	89	56	1,000
25	49	a 38	a 20	a 30	a 33	46	220	474	92	78	60	745
26	52	a 38	a 20	a 28	a 33	42	202	474	98	67	64	557
27	52	a 39	a 19	a 25	a 34	39	192	450	89	62	76	438
28	52	a 38	a 19	a 27	a 35	34	192	420	90	58	76	360
29	52	a 37	a 19	a 30	-------	32	212	398	112	54	62	325
30	52	a 39	a 20	a 33	-------	32	226	376	140	64	66	297
31	52	-------	a 20	a 37	-------	32	-------	360	-------	74	68	-------

a Estimated.

Discharge, in second-feet, of Pecos River at Irvin Ranch, near Pecos, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	270	81	65			a 50	142	206	450	121	74	102
2	250	80					170	238	404	140	67	102
3	250	76		a 45			206	258	382	126	61	92
4	212	73				a 55	246	258	365	100	60	87
5	195	72			a 35		279	306	330	94	56	81
6	180	68				62	279	345	315	106	54	80
7	164	68				58	279	335	292	100	60	73
8	153	67				62	279	315	284	90	61	73
9	150	76		a 30		70	279	320	274	112	54	67
10	170	76				61	258	355	266	106	54	64
11	142	78				a 55	274	370	258	116	58	58
12	140	70		42		a 50	325	398	230	123	58	54
13	126	67				68	335	438	234	110	54	51
14	119	60		a 40		60	288	468	223	102	52	47
15	110	56			a 40	60	302	508	216	96	57	47
16	106	57	a 55			57	335	592	206	89	64	41
17	102	56				57	392	628	192	83	64	40
18	98	52		a 35		64	382	636	186	80	80	41
19	104	51				76	376	709	173	78	90	46
20	142	51				94	387	800	164	76	85	44
21	126					87	404	800	161	74	189	44
22	116					76	392	840	167	76	130	49
23	114	a 45		a 30	a 45	68	330	790	170	87	104	64
24	108					70	302	745	161	92	106	81
25	100				49	76	270	700	159	104	106	68
26	98					76	250	660	142	102	106	67
27	94					73	230	620	159	104	98	60
28	87	a 65		a 35	a 50	96	212	628	130	94	161	57
29	85					114	195	585	123	87	142	56
30	81					114	195	515	119	85	123	58
31	81					114		494		89	110	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	170	46	65.6	4,040
November	51	35	40.5	2,410
December	41	10	24.9	1,530
January	37	18	26.3	1,610
February	35	20	28.0	1,560
March	53	32	42.1	2,590
April	262	41	163	9,690
May	628	250	368	22,600
June	376	89	201	12,000
July	142	54	95.8	5,890
August	90	52	67.0	4,120
September	1,000	44	284	16,900
The year	1,000	10	117	84,900
1931-32				
October	270	81	138	8,480
November	81		62.8	3,740
December			55.3	3,400
January			35.5	2,190
February			40.7	2,340
March	114		70.3	4,320
April	404	142	286	17,000
May	840	206	512	31,500
June	450	119	231	13,800
July	140	74	98.1	6,030
August	189	52	85.1	5,230
September	102	40	63.1	3,760
The year	840		140	102,000

a Estimated.

PECOS RIVER NEAR ANTON CHICO, N.MEX.

LOCATION.—Water-stage recorder in Anton Chico Grant, 1¼ miles southeast of Anton Chico and 4 miles below mouth of Tecolote Creek.

DRAINAGE AREA.—1,080 square miles.

RECORDS AVAILABLE.—April 1910 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer. Prior to Jan. 11, 1929, station was located at four sites situated from 3½ miles above to 1½ miles below present location. Records believed to be comparable.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 5,520 second-feet Aug. 4 (gage height, 5.85 feet); minimum, 4 second-feet July 31. Maximum discharge during year ending Sept. 30, 1932, 2,830 second-feet Aug. 24 (gage height, 4.55 feet); minimum, 4 second-feet Aug. 4–6.

REMARKS.—Records good except those estimated, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	136	34	41	a 20	31	29	87	974	460	136	280	42
2	219	32	36	a 20	26	28	121	892	430	136	550	32
3	183	32	37	19	21	26	153	848	414	351	319	22
4	150	32	38	a 20	12	27	189	740	397	227	1,970	16
5	109	32	37	a 20	12	27	195	700	392	234	584	12
6	123	32	31	19	15	32	186	611	386	111	302	17
7	131	31	25	23	14	35	186	548	380	91	219	24
8	36	29	32	22	14	a 38	208	522	386	123	113	15
9	26	31	29	34	17	37	244	522	335	91	1,120	16
10	117	31	26	28	18	37	240	478	307	161	494	15
11	96	28	34	27	19	36	233	436	280	100	161	16
12	a 250	26	27	16	17	37	240	380	276	a 65	126	37
13	a 500	25	32	16	22	36	268	360	226	a 35	a 100	33
14	a 200	23	34	17	22	38	284	365	202	a 30	84	24
15	a 100	23	32	15	20	50	284	392	179	a 25	74	328
16	69	26	29	14	20	47	294	448	158	a 45	58	611
17	61	27	20	14	19	40	414	542	199	a 35	124	448
18	56	36	22	14	22	38	408	640	141	26	82	503
19	52	53	14	11	22	47	419	678	113	38	60	874
20	48	53	a 12	22	25	58	466	625	89	280	63	883
21	42	34	a 13	24	26	65	454	548	74	168	47	632
22	40	31	a 17	22	28	58	414	460	74	80	53	490
23	36	36	a 18	25	28	60	419	442	54	48	200	676
24	34	38	a 17	18	28	67	448	490	44	86	183	597
25	33	33	a 17	21	27	78	424	555	46	56	118	806
26	a 34	36	a 18	15	27	84	392	583	41	40	87	662
27	36	38	a 19	13	27	80	350	583	34	36	61	555
28	38	37	a 19	16	28	72	345	555	34	14	46	503
29	38	34	a 22	21	------	78	a 600	536	34	6	56	472
30	38	38	a 21	24	------	100	955	516	84	5	53	436
31	38	------	20	32	------	97	------	490	------	33	50	------

a Estimated.

Discharge, in second-feet, of Pecos River near Anton Chico, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	730	109	65	47	72	136	208	272	472	174	38	176
2	375	104	69	46	56	144	226	268	448	364	12	158
3	325	100	67	60	56	141	276	276	424	335	5	139
4	325	95	63	72	31	134	330	316	424	192	4	128
5	260	91	56	76	32	136	375	350	448	136	4	116
6	212	89	80	54	46	118	402	392	355	97	4	89
7	205	87	58	32	50	118	402	380	307	87	6	70
8	195	84	76	a 35	53	116	402	365	294	95	134	60
9	192	82	72	a 40	44	113	402	355	272	113	136	53
10	189	80	69	a 35	41	116	386	691	260	109	61	54
11	173	89	60	a 30	48	126	360	1,080	365	111	46	50
12	170	93	41	a 50	60	116	340	716	264	141	66	27
13	a 160	91	48	72	48	106	365	648	233	176	67	20
14	a 150	87	41	67	46	136	402	648	212	189	47	101
15	a 140	82	40	47	52	134	424	632	195	100	37	21
16	a 130	78	58	54	48	141	424	670	189	78	47	20
17	131	72	60	34	47	141	430	716	170	60	10	21
18	a 130	70	72	44	47	136	460	740	161	42	100	19
19	141	72	74	48	48	139	442	764	150	36	104	12
20	344	65	72	60	60	147	442	865	150	29	121	12
21	316	65	69	58	58	a 186	460	840	123	33	186	10
22	219	60	74	52	58	216	472	831	147	42	280	12
23	195	69	65	28	53	189	490	831	161	37	202	29
24	189	50	53		52	167	424	788	212	162	a 450	85
25	179	56	58		54	176	397	740	170	139	186	139
26	164	60	54		58	189	355	700	199	184	176	167
27	147	69	54	a 45	69	202	340	632	173	84	170	220
28	134	95	52		82	192	330	618	441	82	212	89
29	126	84	61		102	202	298	625	199	72	294	84
30	121	72	44		-------	216	280	590	150	53	236	80
31	113	-------	19		-------	216	-------	516	-------	41	199	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	500	26	99.0	6,090
November	53	23	33.0	1,970
December	41	12	25.5	1,560
January	34	11	20.1	1,230
February	31	12	21.7	1,200
March	100	26	51.0	3,140
April	955	87	331	19,700
May	974	360	563	34,600
June	460	34	209	12,400
July	351	5	92.3	5,680
August	1,970	46	253	15,500
September	883	12	326	19,400
The year	1,970	5	169	122,000
1931–32				
October	730	113	212	13,100
November	109	50	80.0	4,760
December	80	19	59.5	3,660
January	-------	-------	48.4	2,980
February	102	31	54.2	3,120
March	216	106	153	9,410
April	490	208	378	22,500
May	1,080	268	608	37,400
June	472	123	259	15,400
July	364	29	116	7,130
August	450	4	117	7,220
September	220	10	75.4	4,480
The year	1,080	4	181	131,000

a Estimated.

PECOS RIVER AT SANTA ROSA, N.MEX.

LOCATION.—Water-stage recorder in sec. 3, T. 8 N., R. 21 E., at Santa Rosa, a quarter of a mile above highway bridge (former location of station), 1¼ miles above mouth of Rio Agua Negra Chiquita, and near site of station maintained by Bureau of Reclamation 1903–6.

DRAINAGE AREA.—2,880 square miles.

RECORDS AVAILABLE.—May 1903 to December 1906; February 1910 to July 1911; September 1912 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 5,350 second-feet Aug. 4 (gage height, 5.72 feet); minimum, 10 second-feet Jan. 21.

Maximum discharge during year ending Sept. 30, 1932, 6,910 second-feet July 6 (gage height, 7.00 feet); minimum, 15 second-feet Jan 11.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	255	16	21	17	16	22	64	1,470	268	25	490	26
2	233	16	20	18	16	21	52	1,370	229	92	826	26
3	206	16	21	20	18	18	42	1,320	210	339	691	25
4	180	17	22	e 20	18	17	40	1,130	202	458	2,380	25
5	143	17	22	e 19	16	17	76	930	190	880	e 700	23
6	102	18	26	e 18	16	17	97	754	186	402	e 325	22
7	74	18	26	18	16	20	83	579	180	334	e 125	21
8	169	18	25	19	16	18	64	505	206	e 260	e 250	21
9	90	19	25	20	16	16	72	487	470	e 190	e 750	20
10	145	19	23	18	16	16	100	e 425	272	e 150	e 700	20
11	2,170	20	22	18	17	16	102	e 375	206	108	e 375	20
12	914	19	22	22	18	16	81	e 340	166	130	e 225	20
13	458	20	24	20	22	16	83	300	158	72	e 125	20
14	339	20	24	14	21	16	83	272	130	48	e 75	21
15	468	20	21	18	20	16	81	296	100	33	59	22
16	64	19	21	16	18	15	e 83	305	102	28	42	309
17	46	19	20	14	19	14	238	329	74	46	32	554
18	38	20	17	14	18	14	339	381	108	35	25	464
19	33	22	20	14	18	15	339	493	88	27	46	719
20	30	20	17	13	18	16	334	529	55	25	46	1,180
21	25	20	e 17	14	18	15	310	464	34	242	52	914
22	21	20	e 17	13	18	14	324	397	25	146	25	591
23	20	21	e 16	15	18	13	296	339	22	92	26	470
24	18	20	e 16	15	18	14	300	324	21	38	411	1,030
25	18	21	e 15	14	18	14	324	344	20	26	206	1,180
26	17	21	e 15	14	18	18	300	370	20	22	108	1,180
27	16	20	15	15	18	16	268	344	20	21	63	882
28	16	20	16	15	18	15	246	350	20	21	42	691
29	16	21	20	16	------	15	272	324	19	21	30	579
30	16	21	19	16	------	16	1,280	319	20	22	28	675
31	16	------	17	17	------	17	------	263	------	30	26	------

e Estimated.

Discharge, in second-feet, of Pecos River at Santa Rosa, N.Mex., 1930–32—Contd.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	1,470	a 80	42	48	33	21	119	221	350	119	125	206
2	747	a 75	38	33	25	24	116	210	329	504	33	169
3	560	a 65	34	27	20	55	113	190	319	866	29	143
4	430	a 60	28	29	22	70	152	180	277	541	30	121
5	375	a 55	28	30	24	68	198	210	281	a 300	33	92
6	324	a 45	29	25	23	72	221	255	221	a 700	33	76
7	272	39	32	25	22	70	210	268	206	180		63
8	242	38	32	23	22	59	238	272	180	88		48
9	221	34	35	28	23	54	213	250	180	63		39
10	198	33	44	26	22	46	206	635	169	63	a 60	34
11	183	32	39	20	22	36	198	2,110	166	88		34
12	190	34	34	28	22	42	194	1,320	242	88		34
13	180	42	34	35	22	55	213	818	186	86	90	34
14	155	48	39	29	24	79	250	617	149	90	68	33
15	136	46	39	24	24	79	291	535	121	92	64	32
16	119	35	42	27	23	72	305	487	92	76	63	a 25
17	92	30	48	23	22	66	286	529	81	a 50	61	26
18	76	27	43	25	23	70	291	604	70	a 40	72	26
19	76	26	40	27	26	72	296	604	63	a 30	76	26
20	268	24	40	28	29	66	281	670	57	a 25	186	26
21	375	26	44	28	27	61	268	775	52	a 30	176	26
22	233	25	44	26	25	79	259	754	48	34	180	33
23	158	28	43	24	25	113	286	684	113	26	305	40
24	152	26	43	25	23	110	286	684	143	25	572	107
25	149	34	40	26	23	86	255	604	169	40	511	408
26	130	33	38	23	24	88	255	535	130	388	305	a 300
27	108	32	38	26	24	92	263	487	116	127	225	210
28	100	32	38	30	23	100	229	447	124	70	217	238
29	95	29	38	22	22	95	225	424	701	48	242	169
30	90	46	39	20	------	102	233	419	233	39	360	140
31	88	------	46	38	------	119	------	386	------	42	286	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	2,170	16	205	12,600
November	22	16	19.3	1,150
December	26	15	20.1	1,230
January	22	13	16.6	1,020
February	22	16	17.8	986
March	22	13	16.2	998
April	1,280	40	212	12,600
May	1,470	263	530	32,600
June	470	19	127	7,580
July	880	21	141	8,650
August	2,380	25	300	18,500
September	1,180	20	392	23,300
The year	2,380	13	167	121,000
1931–32				
October	1,470	76	258	15,900
November	80	24	39.3	2,340
December	48	28	38.4	2,360
January	48	20	27.4	1,680
February	33	20	23.8	1,370
March	119	21	71.6	4,410
April	305	113	232	13,800
May	2,110	180	554	34,100
June	701	48	186	11,000
July	866	25	160	9,830
August	572	29	152	9,330
September	408	25	98.6	5,870
The year	2,110	20	154	112,000

a Estimated.

PECOS RIVER NEAR GUADALUPE, N.MEX.

LOCATION.—Water-stage recorder in sec. 34, T. 5 N., R. 24 E., 500 feet below mouth of Alamogordo Creek, half a mile above Alamogordo dam site, and 4 miles north of Gudalupe.

DRAINAGE AREA.—4,470 square miles.

RECORDS AVAILABLE.—October 1912 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 27,000 second-feet Oct. 11 (gage height, 12.8 feet); minimum, 38 second-feet June 29.

Maximum discharge during year ending Sept. 30, 1932, 3,970 second-feet July 6 (gage height, 5.17 feet); minimum, 41 second-feet May 2.

REMARKS.—Records good except those estimated, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	224	85	92	90	95	92	98	1,220	335	99	490	90
2	843	80	92	90	92	95	132	1,300	320	62	1,150	110
3	e 650	78	95	92	90	101	122	1,230	e 280	312	1,300	101
4	e 500	75	95	104	92	92	119	1,150	255	689	1,410	98
5	300	78	90	104	90	85	119	1,000	715	1,050	2,970	90
6	156	80	90	95	92	88	160	912	e 670	545	e 1,000	82
7	128	82	e 95	95	90	92	164	761	e 630	372	e 300	90
8	125	80	95	90	92	88	142	653	584	285	e 250	88
9	146	80	101	88	88	85	139	640	762	172	e 1,000	88
10	115	82	98	98	90	82	139	634	416	139	1,450	82
11	10,100	82	90	95	90	85	172	614	320	153	775	72
12	1,530	88	92	e 92	e 92	88	188	533	245	142	406	70
13	485	88	92	e 90	e 95	90	188	433	192	192	250	68
14	2,000	85	98	e 90	e 100	90	188	367	180	139	192	70
15	e 1,300	90	101	e 90	110	92	196	345	172	95	150	e 75
16	e 600	98	98	92	101	92	196	345	142	82	125	78
17	e 300	116	101	95	101	85	222	356	139	70	110	e 800
18	172	122	104	90	95	82	325	467	128	285	e 100	e 600
19	110	139	98	92	92	85	384	614	132	119	e 90	e 1,000
20	122	156	98	88	88	88	362	634	132	82	119	e 1,400
21	113	119	95	90	88	85	356	575	104	110	153	1,120
22	107	104	101	92	88	85	378	485	88	325	139	912
23	101	113	107	95	90	80	378	356	68	196	159	640
24	98	110	107	95	92	82	345	310	62	150	e 1,200	864
25	95	110	104	88	95	80	367	295	54	92	e 400	1,010
26	95	101	e 100	88	90	104	394	330	58	72	200	1,220
27	92	95	e 100	88	90	110	367	394	52	68	150	960
28	92	98	101	92	82	101	340	394	54	64	113	796
29	90	107	e 100	92	-------	101	428	389	46	58	104	666
30	82	98	e 95	88	-------	98	806	406	50	54	e 100	601
31	88	-------	92	90	-------	101	-------	400	-------	50	e 95	-------

e Estimated.

Discharge, in second-feet, of Pecos River near Guadalupe, N.Mex., 1930–32— Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	1,120	153	107	101	107	98	132	82	509	573	116	608
2	928	150	119	98	113	95	139	56	461	444	164	479
3	533	139	116	98	110	95	132	58	422	1,260	98	411
4	428	142	110	113	98	128	119	58	411	634	151	384
5	394	142	98	119	101	156	156	50	389	406	146	356
6	356	142	98	150	98	150	245	62	350	1,300		330
7	320	136	104	107	104	153	240	92	325	a 500		
8	295	128	116	113	95	153	222	90	295	209		a 200
9	265	128	119	110	101	132	250	92	255	150		
10	250	122	113	113	101	119	255	184	250	110		
11	240	119	107	119	107	104	236	a 2,500	232	191	a 100	
12	227	119	113	101	95	a 106	236	a 1,600	275	290		
13	227	132	113	110	90	107	214	a 1,000	270	214		
14	218	128	98	122	92	116	188	747	196	160		a 100
15	204	125	101	107	101	142	222	726	184	168		
16	184	128	107	101	104	128	255	712	156	168		
17	160	119	110	98	95	128	260	712	150	125		85
18	164	110	110	95	98	116	280	782	136	98		82
19	164	110	113	101	107	116	285	810	119	158	a 130	88
20	424	110	110	101	116	110	192	824	110	125		
21	692	95	104	107	107	104	168	920	104	132	180	a 100
22	509	98	104	110	101	104	150	920	107	a 100	180	
23	389	98	107	101	95	113	176	882	113	a 90	180	
24	290	98	101	104	95	146	188	875	214	a 80	265	
25	250	95	104	104	92	146	146	838	232	a 70	521	
26	227	119	107	110	92	136	128	761	227	a 500	315	a 500
27	214	113	101	101	92	119	176	705	372	265	280	
28	188	107	101	104	95	119	136	672	566	209	444	
29	176	101	107	101	98	128	110	646	630	153	1,700	a 250
30	172	101	101	113	-------	136	98	620	444	119	890	
31	168	-------	95	98	-------	132	-------	588	-------	122	712	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	10,100	82	676	41,600
November	156	75	97.3	5,790
December	107	90	97.3	5,980
January	104	88	92.2	5,670
February	110	82	92.5	5,140
March	110	80	90.5	5,560
April	806	98	264	15,700
May	1,300	295	598	36,800
June	762	46	246	14,600
July	1,050	50	204	12,500
August	2,970	90	531	32,600
September	1,400	68	465	27,700
The year	10,100	46	290	210,000
1931–32				
October	1,120	160	335	20,600
November	153	95	120	7,150
December	119	95	107	6,570
January	150	95	107	6,600
February	116	90	100	5,750
March	156	95	124	7,610
April	285	98	191	11,400
May	2,500	50	634	39,000
June	630	104	283	16,900
July	1,300	70	294	18,100
August	1,700	-------	256	15,700
September	-------	-------	246	14,600
The year	2,500	50	234	170,000

a Estimated.

PECOS RIVER NEAR ANGELES, TEX.

LOCATION.—Water-stage recorder in T. 26 S., R. 29 E., half a mile below mouth of Delaware Creek, 2 miles north of Texas-New Mexico State line, and 8½ miles northwest of Angeles, Reeves County.

RECORDS AVAILABLE.—May 1914 to September 1932.

EXTREMES.—Maximum discharge during year, 14,400 second-feet Sept. 30 (gage height, 11.85 feet); minimum, about 60 second-feet Apr. 10.

1914–32: Maximum stage, 21.5 feet Aug. 8, 1916 (discharge not determined); minimum discharge, 45 second-feet July 4, 5, 1925.

REMARKS.—Records good. 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 the Carlsbad project.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	206	276	307	317	317	298	160	98	857	214	95	360
2	167	268	350	317	321	289	117	105	688	324	98	340
3	140	276	317	330	317	259	134	108	491	210	98	326
4	154	298	307	326	307	202	120	105	1,360	234	100	935
5	167	298	298	355	298	163	125	120	1,450	195	139	530
6	160	242	303	335	312	192	[a] 114	125	680	170	98	413
7	154	234	307	335	312	218	[a] 111	117	371	289	95	431
8	140	242	326	330	312	246	[a] 100	122	214	451	103	693
9	150	234	317	340	307	268	[a] 98	117	[a] 163	539	117	435
10	157	210	312	340	307	272	[a] 78	218	[a] 147	496	120	391
11	144	202	307	335	312	272	98	246	[a] 144	215	206	381
12	134	238	303	335	298	276	105	188	[a] 160	147	192	381
13	140	246	312	355	303	285	128	137	147	134	163	371
14	150	276	298	335	307	268	117	154	161	120	188	366
15	163	317	307	340	321	285	108	188	160	117	181	360
16	160	312	312	335	345	298	[a] 87	181	147	114	154	360
17	214	298	321	340	312	285	95	167	147	108	131	360
18	285	303	321	326	298	285	100	157	147	120	105	360
19	289	321	326	330	307	289	114	209	137	111	108	366
20	294	321	321	335	335	272	105	457	134	95	90	371
21	312	321	317	335	345	259	90	521	128	117	104	371
22	307	272	326	330	366	268	108	515	415	98	125	371
23	298	250	326	357	303	230	147	491	227	98	111	438
24	259	250	317	354	276	188	163	451	157	122	100	1,740
25	226	307	321	298	272	210	177	457	131	120	100	1,800
26	218	335	317	312	276	192	181	446	140	117	105	2,640
27	289	326	326	312	303	174	157	413	601	114	90	969
28	280	326	317	312	307	177	163	1,740	439	111	148	2,050
29	280	280	330	326	303	122	184	3,970	234	120	219	6,500
30	272	255	330	317	------	168	131	2,150	195	120	1,010	10,500
31	276	------	317	326	------	150	------	820	------	100	440	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	312	134	212	13,000
November	335	202	278	16,500
December	350	298	317	19,500
January	357	298	331	20,400
February	366	272	310	17,800
March	298	122	237	14,600
April	184	78	124	7,380
May	3,970	98	493	30,300
June	1,450	128	352	20,900
July	539	95	182	11,200
August	1,010	90	166	10,200
September	10,500	326	1,200	71,400
The year	10,500	78	349	253,000

[a] Partly estimated.

GALLINAS RIVER NEAR MONTEZUMA, N.MEX.

LOCATION.—Water-stage recorder in Las Vegas Grant, 2 miles west of Montezuma, San Miguel County.

DRAINAGE AREA.—86 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 520 second-feet Oct. 1 (gage height, 4.25 feet); minimum, 2.3 second-feet Feb. 11. Maximum discharge during year ending Sept. 30, 1932, 202 second-feet May 16 (gage height, 2.65 feet); minimum, 2.2 second-feet Sept. 21.

REMARKS.—Records for 1931 fair; 1932 good except those estimated, which are poor. Stage-discharge relation affected by ice during winter. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	74	7.4	a 6			4.9	48	248	53	11	16	8.5
2	27	6.8	a 5			4.9	55	256	50	14	40	7.4
3	19	6.8	a 5			5.7	54	275	48	13	26	7.1
4	15	6.6	a 5			5.4	46	250	45	14	22	6.3
5	a 15	6.8	a 6		a 5	6.3	41	217	42	12	19	5.7
6	a 16	6.8	a 6			6.8	44	194	38	9.9	18	8.1
7	18	6.6				2.5	51	188	36	9.2	15	8.1
8	14	6.6		a 5		a 5	58	188	34	14	14	7.4
9	12	6.3				7.8	66	162	31	12	24	6.6
10	16	6.3			4.9	7.8	56	137	29	12	48	7.4
11	58	6.0	a 6		4.6	8.8	54	121	28	12	28	14
12	32	6.0			4.4	12	57	103	23	10	21	9.9
13	24	5.7			4.2	12	58	100	20	9.6	16	8.1
14	20	6.0			4.6	11	57	99	21	9.2	15	8.8
15	18	6.0			4.6	15	66	114	20	11	13	89
16	15	4.9			4.4	22	99	135	20	23	11	108
17	13	5.4			4.4	23	200	151	16	20	12	81
18	12	5.7			4.4	23	162	147	13	23	15	86
19	11	7.8			4.4	23	154	135	11	28	27	135
20	11	6.0			4.4	19	138	114	11	22	23	105
21	9.9	6.6			4.4	19	117	103	11	21	23	77
22	9.2	6.8			4.4	21	91	a 80	12	16	23	57
23	8.8	7.8	a 5	a 6	4.9	23	103	80	11	14	22	52
24	8.5	6.8			4.9	20	102	90	11	12	25	159
25	7.8	6.6			4.4	20	94	98	11	10	19	141
26	7.4	6.6			4.4	20	90	91	11	8.1	15	105
27	7.8	7.4			4.6	17	83	80	9.6	7.8	13	80
28	7.8	7.8			4.9	18	100	75	9.2	7.1	12	65
29	8.1	6.8			-------	33	284	70	8.8	6.6	11	54
30	8.1	6.0			-------	32	233	64	8.5	7.1	9.9	71
31	7.8	-------			-------	32	-------	57	-------	18	9.2	-------

a Estimated.

Discharge, in second-feet, of Gallinas River near Montezuma, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	49	12	9.6			24	24	30	50	18		10
2	40	12				24	29	33	43	23	e8	8.8
3	36	11				22	34	36	40	24		7.8
4	30	11				21	38	36	41	18		7.8
5	26	11			e10	16	42	44	40	15	e3	7.1
6	24	11				18	45	40	34	13		5.7
7	23	10				18	46	36	30	13	2.7	5.2
8	21	11				17	42	34	28	11	3.1	5.4
9	21	10	e10	e 9	e15		42	30	27	11	3.3	4.6
10	19	9.9					40	53	32	12	3.1	4.6
11	18	12			e25	e 16	40	128	31	17	3.6	4.2
12	18	11					42	118	26	15	4.2	3.6
13	16	11					42	126	24	11	5.4	7.5
14	15	10			e15	e 22	46	146	20	11	4.0	5.2
15	14	9.6				13	50	158	18	9.6	3.8	4.0
16	13	9.6			e20	13	48	194	15	9.6	4.9	4.2
17	13	9.2				13	51	186	15		5.2	4.2
18	13	8.1			e15	14	53	169	14		7.4	4.0
19	14	7.8				16	50	154	13		14	3.3
20	32	8.1				21	50	179	12	e7	17	2.8
21	26	9.6		e 10	e10	20	50	162	12		34	2.4
22	21	9.6				15	52	146	14		20	3.6
23	20	9.6	e9			17	49	129	18		18	11
24	18					18	46	115	16	e12	22	40
25	18				9.6	21	42	99	18	7.8	15	26
26	17				e 12	24	38	90	18		13	18
27	16	e10		10	15	21	42	78	21		12	14
28	15				18	22	38	73	20	e5	17	12
29	15			e 10	21	23	38	66	15		16	11
30	15					23	36	61	12		13	16
31	13					22		56			11	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	74	7.4	17.1	1,050
November	7.8	4.9	6.52	388
December			5.4	331
January			5.5	339
February			4.69	260
March	33	2.5	15.5	954
April	284	41	95.4	5,670
May	275	57	136	8,370
June	53	8.5	23.1	1,370
July	28	6.6	13.4	826
August	48	9.2	19.5	1,200
September	159	5.7	52.6	3,130
The year	284		33.0	23,900
1931–32				
October	49	13	20.9	1,290
November			10.1	603
December			9.47	582
January			9.5	585
February			14.2	814
March			18.8	1,160
April	53	24	42.8	2,550
May	194	30	96.9	5,960
June	50	12	23.9	1,420
July	24		10.8	664
August	34		9.86	606
September	40	2.3	8.78	523
The year	194		23.1	16,800

e Estimated.

GALLINAS RIVER AT MONTEZUMA, N.MEX.[1]

LOCATION.—Water-stage recorder in Las Vegas Grant, at highway bridge half a mile below Montezuma College, Montezuma, San Miguel County.

DRAINAGE AREA.—89 square miles.

RECORDS AVAILABLE.—August 1903 to December 1914; October 1930 to September 1932. Records 1914–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 720 second-feet Oct. 1 (gage height, 4.81 feet); minimum, 0.9 second-foot Feb. 8. Maximum discharge during year ending Sept. 30, 1932, 214 second-feet May 16 (gage height, 3.51 feet); minimum, 1.1 second-feet Sept. 17.

REMARKS.—Records good except those estimated, July 23, 24, 1931, June 29 to July 1, July 14, 15, 1932, which are fair. Flow regulated by reservoirs owned by Aqua Pura Co. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	71	1.4	4.0	3.0	2.1	3.5	47	283	38	7.2	18	4.2
2	26	1.9	3.5	3.0	1.9	3.8	57	271	37	12	41	4.0
3	22	2.6	3.2	3.0	1.7	3.8	53	280	37	8.1	20	4.2
4	18	2.8	3.2	2.8	1.4	4.2	45	251	35	11	13	4.0
5	18	2.3	3.5	2.6	1.2	4.8	44	212	32	11	10	3.8
6	23	2.1	3.5	2.6	1.2	4.0	43	175	28	7.5	11	5.8
7	33	1.9	3.8	3.0	1.2	4.8	41	168	26	6.8	8.1	7.8
8	30	1.7	4.2	3.0	1.0	4.8	47	175	24	12	6.8	4.8
9	22	1.9	4.2	3.0	1.0	5.2	53	147	22	14	14	3.5
10	16	1.9	4.5	2.6	1.1	5.8	51	118	21	12	42	3.8
11	63	2.1	4.5	3.0	1.6	6.2	47	104	19	8.5	22	6.2
12	39	2.1	4.8	2.5	1.7	6.8	50	86	16	6.8	13	5.0
13	23	2.3	4.8	2.6	1.9	10	51	80	14	6.5	9.7	4.2
14	16	2.6	4.5	2.5	1.9	19	50	86	14	6.5	8.1	4.8
15	15	3.5	3.8	2.6	1.7	17	54	99	11	7.8	7.2	66
16	9.2	4.0	3.2	2.6	2.5	27	68	124	11	23	8.1	94
17	3.8	4.2	3.2	2.8	2.3	28	209	135	12	21	9.2	70
18	5.2	3.2	3.2	2.5	2.5	26	171	137	8.1	22	12	70
19	3.5	4.2	3.0	2.5	2.5	35	149	122	6.8	23	25	127
20	2.8	4.5	2.6	2.3	2.6	28	145	99	6.2	22	20	100
21	2.1	3.8	2.5	2.5	2.6	21	109	77	6.2	22	19	67
22	1.6	4.8	2.6	2.6	2.5	17	84	64	6.2	16	16	47
23	1.2	5.0	2.6	2.6	2.5	18	107	67	6.2	12	14	41
24	1.1	4.2	3.0	2.6	2.6	18	116	74	6.2	8.8	21	143
25	1.4	4.5	3.0	2.6	3.0	15	106	84	7.2	5.2	13	147
26	1.4	4.8	3.2	2.6	3.0	13	71	81	6.8	5.0	9.7	99
27	1.4	4.5	2.6	2.8	3.2	17	68	71	6.2	4.5	8.5	70
28	1.6	4.5	3.2	2.8	3.5	19	70	66	5.5	4.8	7.2	50
29	1.2	4.5	3.0	2.8	-------	27	345	59	5.2	4.8	7.2	39
30	1.2	4.5	3.0	2.6	-------	34	257	54	5.2	5.5	6.5	68
31	1.2	-------	3.0	2.3	-------	29	-------	46	-------	19	4.8	-------

[1] Previously published as Gallinas River near Las Vegas, N.Mex.

Discharge, in second-feet, of Gallinas River at Montezuma, N.Mex, 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	44	2.3	5.2	3.2	4.5	24	16	20	39	22	5.2	6.8
2	28	2.5	5.5	4.2	4.5	17	21	28	36	25	5.2	6.8
3	24	2.6	5.0	4.2	4.0	13	25	28	40	23	3.8	6.2
4	19	2.5	4.5	4.0	4.5	12	31	25	32	14	2.1	5.5
5	16	2.6	4.5	3.8	4.0	8.5	34	32	31	8.5	2.1	7.2
6	14	4.0	4.5	3.2	5.2	11	35	31	27	7.5	2.3	4.8
7	12	4.5	4.5	2.8	6.2	11	34	30	28	7.5	2.1	2.3
8	11	4.0	5.5	3.0	6.2	9.7	32	27	18	8.1	2.1	2.6
9	11	4.0	5.8	3.5	11	8.5	31	23	17	6.5	3.2	3.2
10	12	3.5	5.5	4.5	17	8.5	26	37	26	6.8	5.0	3.2
11	11	3.8	5.2	4.5	20	8.5	28	116	28	9.2	2.8	3.2
12	9.2	4.2	4.5	4.5	19	10	29	109	18	13	2.6	2.8
13	9.7	4.5	4.2	4.8	12	17	29	124	14	10	3.0	5.9
14	9.2	4.8	3.8	5.0	5.0	14	35	137	12	7	3.2	5.2
15	8.5	4.5	4.0	4.5	11	11	37	153	11		3.0	4.2
16	5.5	4.5	4.5	5.2	16	7.8	34	204	10	4.2	3.5	2.6
17	6.5	4.2	4.8	4.8	7.5	10	40	197	9.7	4.0	5.8	1.2
18	12	4.2	4.8	4.8	7.8	11	41	168	9.2	3.5	3.8	1.4
19	9.2	3.5	4.8	5.0	4.2	14	39	153	10	3.2	11	1.2
20	18	3.5	5.0	5.5	3.5	12	36	189	8.5	3.2	28	1.2
21	32	2.8	5.0	4.8	3.5	12	38	168	7.8	3.0	35	1.6
22	10	2.6	5.0	4.5	3.2	8.8	39	135	13	3.2	17	1.6
23	2.3	4.0	4.8	3.8	5.5	8.8	35	116	15	6.2	22	5.1
24	2.3	4.0	4.2	3.5	10	11	29	99	9.7	7.5	25	26
25	2.5	3.2	4.5	4.5	13	14	28	83	10	4.2	11	12
26	2.5	4.5	4.5	4.0	12	16	25	73	9.7	2.3	8.8	6.8
27	2.1	5.5	4.2	4.5	13	14	24	60	10	2.3	7.2	5.0
28	1.7	6.2	4.5	4.5	16	15	21	55	11	2.6	9.2	4.5
29	1.6	5.2	4.8	3.5	19	15	23	53	16	2.6	9.2	4.0
30	1.6	4.5	3.5	3.8	-------	13	21	51		2.5	7.8	6.2
31	1.7	-------	2.8	4.5	-------	16	-------	46	-------	3.2	6.2	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	71	1.1	15.3	942
November	5.0	1.4	3.28	195
December	4.8	2.5	3.45	212
January	3.0	2.3	2.69	165
February	3.5	1.0	2.07	115
March	35	3.5	15.3	944
April	345	41	93.6	5,570
May	283	46	126	7,730
June	38	5.2	16.0	950
July	23	4.5	11.5	707
August	42	4.8	14.4	883
September	147	3.5	45.5	2,710
The year	345	1.0	29.2	21,100
1931–32				
October	44	1.6	11.3	694
November	6.2	2.3	3.89	231
December	5.8	2.8	4.64	285
January	5.5	2.8	4.22	260
February	20	3.2	9.25	532
March	24	7.8	12.3	758
April	41	16	30.5	1,820
May	204	20	89.4	5,490
June	40	7.8	18.1	1,080
July	25	2.3	7.51	462
August	35	2.1	8.33	512
September	26	1.2	5.01	298
The year	204	1.2	17.1	12,400

RIO RUIDOSO AT HONDO, N.MEX.

LOCATION.—Water-stage recorder in NW¼SW¼ sec. 4, T. 11 S., R. 17 E., a quarter of a mile above confluence with Rio Bonito to form Rio Hondo and half a mile southwest of Hondo.

RECORDS AVAILABLE.—October 1930 to September 1932. Records August to September 1930 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 716 second-feet Oct. 11 (gage height, 5.06 feet); minimum, 0.6 second-foot June 29.

Maximum discharge during year ending Sept. 30, 1932, about 1,040 second-feet June 22 (gage height, 7.1 feet); minimum, 0.4 second-foot Aug. 11.

REMARKS.—Records good below 100 second-feet, poor above. Discharge estimated Feb. 5–7, May 10–15, Sept. 17, 19, 22–27, Oct. 5–7, 1931, June 22–24, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	1.8	11	13	8.1	3.8	12	12	147	29	2.0	63	15
2	1.6	10	13	9.0	5.9	13	12	171	24	3.0	38	9.0
3	1.8	9.4	12	9.0	5.4	14	21	202	21	1.8	51	6.8
4	1.8	9.0	12	9.0	4.4	13	32	187	21	2.0	68	7.2
5	17	9.4	12	7.2	5	13	44	194	20	3.3	116	6.3
6	13	7.6	11	4.1	5	19	44	187	19	2.1	131	4.7
7	11	5.0	12	4.7	5	19	48	176	20	1.0	84	4.7
8	10	5.4	11	5.0	4.7	20	66	187	19	1.2	76	4.4
9	9.0	5.9	11	5.4	4.7	21	88	171	17	1.4	141	4.1
10	31	5.9	11	6.8	7.2	23	77	140	15	3.6	157	3.6
11	83	5.4	12	5.9	9.0	24	59	145	13	1.4	128	2.0
12	16	4.4	12	5.9	9.0	23	50	115	7.6	1.2	120	1.2
13	17	5.0	12	6.3	7.2	22	50	105	3.8	1.5	88	1.2
14	15	5.4	13	4.7	7.2	16	59	95	2.4	1.2	67	28
15	15	8.1	13	2.7	7.2	12	73	90	2.0	1.0	56	24
16	15	11	13	4.7	6.3	15	144	96	1.8	1.0	49	18
17	15	11	11	5.0	5.9	20	154	100	1.5	1.0	42	35
18	14	12	11	5.0	6.3	21	139	90	1.5	1.0	34	54
19	13	12	11	5.0	7.2	27	142	83	1.6	1.0	34	40
20	12	12	11	5.4	7.2	34	159	76	1.5	15	39	47
21	12	12	10	5.9	4.4	27	174	60	1.6	14	30	45
22	12	12	9.0	5.9	4.4	25	162	48	1.6	5.4	30	44
23	12	13	9.4	4.7	5.4	21	157	37	1.0	3.6	37	42
24	12	14	9.4	4.7	5.4	24	156	42	.8	2.1	35	45
25	13	15	9.0	5.0	5.4	30	142	39	.8	1.8	28	40
26	13	14	9.0	5.0	6.3	30	128	41	.8	1.6	26	31
27	13	14	11	5.0	7.6	22	120	32	.8	1.5	24	30
28	13	13	9.4	4.4	11	21	120	28	.8	1.4	22	54
29	13	12	9.4	3.8	-------	17	123	28	.8	1.2	21	101
30	13	13	9.0	3.3	-------	15	120	29	1.4	.9	22	144
31	12	-------	8.5	3.0	-------	15	-------	32	-------	32	17	-------

Discharge, in second-feet, of Rio Ruidoso at Hondo, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	215	14	13	13	17	25	52	17	7.2	6.8	0.9	22
2	171	13	12	13	19	29	57	17	6.8	4.4	.9	18
3	114	13	13	13	21	27	72	17	5.0	4.4	.9	15
4	85	12	13	14	22	28	84	18	4.1	3.8	.9	12
5	65	11	14	14	23	24	89	18	3.3	3.3	1.0	11
6	45	6.8	14	13	22	24	96	21	2.7	3.6	.9	8.5
7	40	8.5	14	13	23	21	85	18	2.1	3.3	.6	6.8
8	37	11	16	14	24	19	79	18	1.8	3.3	.5	9.0
9	34	11	16	16	26	18	71	18	1.5	44	.5	3.6
10	29	11	16	16	38	22	67	21	.9	14	.5	2.4
11	27	11	16	16	60	28	58	43	.6	12	.4	2.1
12	27	10	15	16	47	28	47	48	.8	11	40	2.0
13	25	9.4	15	17	38	27	42	51	.6	8.5	3.8	2.0
14	25	10	13	17	33	29	39	53	.6	7.2	3.8	2.0
15	23	9.4	13	18	30	28	41	51	.6	3.6	9.4	2.0
16	21	9.0	14	17	29	24	41	45	.6	2.1	3.6	1.4
17	20	9.4	15	17	28	24	41	38	.6	2.1	3.3	.8
18	20	9.4	15	17	27	24	45	47	.6	1.8	3.3	.9
19	20	11	15	16	24	24	47	42	.6	1.8	3.0	.9
20	36	10	14	18	23	23	44	34	.6	1.8	3.3	1.2
21	24	9.4	14	20	22	29	41	29	2.7	1.6	3.0	1.4
22	22	9.4	14	19	21	34	42	27	70	1.4	3.0	1.5
23	26	9.4	15	16	20	31	46	24	20	1.5	3.0	1.5
24	18	9.4	13	15	21	34	46	23	10	1.5	2.7	1.6
25	17	10	13	16	17	28	34	21	9.0	1.5	2.7	1.5
26	21	11	13	16	14	29	27	19	8.5	1.0	3.0	1.5
27	20	10	13	17	15	40	23	16	8.5	.8	18	1.5
28	18	11	13	18	19	43	22	15	8.1	.6	75	1.4
29	16	11	13	16	21	52	21	13	7.6	.8	46	1.4
30	15	11	14	16	------	62	19	12	6.3	.8	45	23
31	15	------	13	17	------	59	------	9.4	------	.8	33	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	83	1.6	14.5	895
November	15	4.4	9.90	589
December	13	8.5	11.0	675
January	9.0	2.7	5.47	336
February	11	3.8	6.20	344
March	34	12	20.3	1,250
April	174	12	95.8	5,700
May	202	28	102	6,296
June	29	.8	8.40	500
July	32	.9	3.62	223
August	157	17	60.5	3,720
September	144	1.2	29.7	1,770
The year	202	.8	30.8	22,300
1931–32				
October	215	15	41.6	2,560
November	14	6.8	10.4	618
December	16	12	14.0	861
January	20	13	15.9	980
February	60	14	25.7	1,480
March	62	18	30.2	1,860
April	96	19	50.6	3,010
May	53	9.4	27.2	1,670
June	70	.6	6.41	381
July	44	.6	5.00	308
August	75	.4	10.2	627
September	23	.8	5.33	317
The year	215	.4	20.2	14,700

RIO HONDO AT HONDO, N.MEX.

LOCATION.—Water-stage recorder in SE¼SE¼ sec. 4, T. 11 S., R. 17 E., half a mile southeast of Hondo, Lincoln County, and a quarter of a mile below confluence of Rio Bonito and Rio Ruidoso to form Rio Hondo.

RECORDS AVAILABLE.—October 1930 to July 1931 (discontinued). Records August and September 1930 published by State engineer.

EXTREMES.—Maximum discharge during period October 1930 to July 1931, about 2,650 second-feet Oct. 11 (gage height, 6.37 feet); minimum, 1.2 second-feet July 31 (gage height, 0.59 foot).

REMARKS.—Records good except those estimated, Oct. 11, 12, June 12, 13, July 3–5, 10, 11, 19, 22–24, 26–31, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	3.3	17	16	9.5	4.8	9.0	14	198	34	104
2	3.3	15	16	9.5	5.4	12	15	258	30	88
3	3.6	14	15	9.0	5.1	12	27	276	26	57
4	3.3	13	15	8.5	4.5	12	36	246	25	37
5	40	13	15	7.5	4.8	13	49	249	24	26
6	30	12	14	5.1	4.8	18	46	255	23	11
7	15	10	15	5.4	4.8	19	50	208	24	4.2
8	13	10	14	5.7	4.8	19	67	202	23	3.9
9	12	10	14	5.7	4.8	20	90	240	21	19
10	138	10	13	6.5	5.4	23	80	195	19	25
11	213	9.5	12	7.0	7.5	23	64	180	17	15
12	26	10	12	7.0	7.0	21	55	148	12	4.2
13	25	10	12	7.5	5.7	22	60	160	7	4.5
14	23	10	12	6.0	5.7	16	94	127	7.5	7.5
15	22	14	13	3.9	6.0	13	88	118	2.8	5.4
16	21	16	12	6.0	6.0	17	150	131	4.5	6.0
17	20	17	10	6.5	5.4	20	168	144	3.6	6.5
18	20	18	10	6.0	5.1	23	172	137	3.6	10
19	19	17	9.5	6.0	6.5	28	180	120	3.6	8
20	18	17	9.0	6.5	6.0	39	202	99	3.3	22
21	18	17	9.0	7.5	4.5	29	255	78	3.0	21
22	18	16	8.5	7.0	3.9	26	261	63	3.0	8
23	18	17	9.5	5.7	4.2	23	215	47	2.8	5
24	18	19	10	5.4	3.9	33	205	49	2.8	4
25	18	19	9.5	5.7	4.2	36	200	47	2.0	7.5
26	19	17	9.0	5.7	4.5	35	174	47	2.0	5
27	18	16	10	5.4	5.7	26	148	36	2.0	3
28	18	16	10	5.1	8.5	23	146	31	2.5	3
29	18	15	10	4.8	------	20	148	32	2.0	3
30	18	16	9.5	5.1	------	19	156	35	3.9	2
31	18	------	9.5	4.8	------	18	------	37	------	3.5

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	213	3.3	28.0	1,720
November	19	9.5	14.4	854
December	16	8.5	11.7	720
January	9.5	3.9	6.35	391
February	8.5	3.9	5.34	297
March	39	9.0	21.5	1,320
April	261	14	120	7,170
May	276	31	135	8,320
June	34	2.0	11.3	674
July	104	2	16.9	1,040
The period				22,500

RIO BONITO AT ANGUS, N.MEX.

LOCATION.—Water-stage recorder in N½ sec. 15, T. 10 S., R. 13 E., 200 feet east of Capitan-Ruidoso highway in Angus.
RECORDS AVAILABLE.—October 1930 to October 1931 (discontinued). Other records published by State engineer.
EXTREMES.—Maximum discharge during year, 121 second-feet Apr. 22 (gage height, 2.30 feet); no flow at times.
REMARKS.—Records good except those estimated, Nov. 21, 22, 24, Dec. 15 to Jan. 10, Jan. 12–31, Feb. 1, 2, 4–7, 9–14, 16, May 8–16, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	0.5	0.1	0.9		0.3	2.6	22	77	16	2.6	4.4	2.6	42
2	.3	.1	1.0		.2	3.1	28	81	13	4.8	3.3	2.0	28
3	.3	.1	1.0		0	3.3	33	89	14	5.1	10	2.0	21
4	.3	.1	1.1	0.5	0	4.6	22	86	12	3.1	7.7	2.2	12
5	.9	.1	1.1		.1	6.5	3.4	78	9.6	2.3	5.8	2.0	8.8
6	.1	.1	1.2		.1	8.8	3.3	75	8.4	2.2	4.8	1.9	6.5
7	.1	.1	1.2		0	10	8.0	44	9.2	1.6	4.1	3.0	6.1
8	.1	.1	1.0		0	8.4	31	55	9.2	2.0	4.4	2.5	5.6
9	0	0	1.0	.8	0	6.1	43	70	9.6	5.2	7.7	2.2	------
10	.2	.1	.9		0	5.4	46	55	8.4	2.6	11	1.8	------
11	.1	.1	1.0	.9	.1	5.6	51	45	7.3	2.0	8.4	1.7	------
12	.1	.1	1.2		.1	6.5	51	60	6.9	1.8	9.6	1.7	------
13	.1	.1	1.4		.2	8.4	61	35	6.1	2.0	6.9	1.6	------
14	.1	.2	1.4		.2	10	54	40	8.0	2.3	5.8	1.6	------
15	.1	.4			.2	11	18	45	8.4	1.7	5.4	1.6	------
16	.1	.4			.2	10	12	45	4.8	1.5	4.8	2.3	------
17	.1	.3	1		.3	12	20	47	4.4	14	4.8	2.8	------
18	.1	.5			.7	14	64	47	4.1	3.3	5.1	12	------
19	0	.8			1.1	17	51	29	3.8	2.8	4.1	12	------
20	.1	.8			1.8	17	69	33	3.3	3.3	4.1	8.4	------
21	.1	.8		.3	1.9	12	78	28	2.3	2.5	5.4	7.7	------
22	0	.7			1.8	17	75	19	2.0	1.8	5.1	7.7	------
23	0	.7			2.0	20	53	25	1.9	1.5	4.4	9.6	------
24	.1	.7			3.0	21	55	32	1.7	1.3	4.4	12	------
25	.1	.8			2.3	23	57	31	1.7	1.1	3.1	13	------
26	.1	.8	.5		2.2	21	51	30	1.6	.9	2.6	9.6	------
27	.1	.8			2.3	17	57	22	1.4	.8	2.0	10	------
28	.1	.9			2.5	16	55	11	1.3	.8	1.7	12	------
29	.1	.9			------	16	61	9.6	1.6	1.1	12	10	------
30	.1	.8			------	16	81	17	1.1	1.5	4.8	14	------
31	.1	------			------	17	------	12	------	1.0	3.6	------	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	0.9	0	0.15	9.1
November	.9	0	.42	25
December	----------	----------	.87	53
January	----------	----------	.42	26
February	3.0	0	.84	47
March	23	2.6	11.8	727
April	81	3.3	43.8	2,610
May	89	9.6	44.3	2,720
June	16	1.1	6.10	363
July	14	.8	2.60	160
August	12	1.7	5.53	340
September	14	1.6	5.78	344
The year	89	0	10.3	7,420
1931				
October 1–8	42	5.6	16.2	258

RIO BONITO NEAR LINCOLN, N.MEX.

LOCATION.—Water-stage recorder in SE¼ sec. 15, T. 9 S., R. 15 E., 150 feet below mouth of Salado Creek and 5 miles northwest of Lincoln.

RECORDS AVAILABLE.—October 1930 to October 1931 (discontinued). Other records published by State engineer.

EXTREMES.—Maximum discharge during year, about 7,960 second-feet Sept. 17 (gage height, 7.65 feet); minimum discharge, estimated, 2 second-feet July 14–16, 22, 23, Sept. 20–22, 24, 26; minimum gage height, 0.06 foot Sept. 20.

REMARKS.—Records fair except those estimated, Oct. 6–10, 1930, July 6–8, 14–18, 22, 23, Aug. 20, 22, 24–29, 31, Sept. 1, 3–5, 15, 16, 18–30, Oct. 1–3, 1931, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	2.8	2.8	2.8	2.6	2.1	2.4	15	91	11	42	12	3	6
2	3.0	2.6	2.8	2.6	2.1	2.4	21	101	9.8	34	22	2.8	6
3	2.8	2.6	2.8	2.6	2.1	2.2	26	99	7.5	24	23	3	5
4	2.8	2.6	2.8	2.6	2.1	2.2	27	106	9.8	20	5.6	3	5.6
5	25	2.6	2.8	2.4	2.1	2.2	4.7	95	12	15	37	5	5.6
6	15	2.6	2.8	2.4	2.1	2.2	3.0	105	9.2	5	5.6	3.3	6.1
7	10	2.6	2.8	2.6	2.1	2.2	3.3	62	11	4	4.7	3.8	6.1
8	8	2.6	2.8	2.8	2.1	2.2	13	68	8.0	28	85	5.6	6.1
9	8	2.6	2.8	2.8	2.1	2.6	32	104	5.2	18	82	5.2	------
10	50	2.8	2.6	2.8	2.1	3.0	34	83	4.2	3.8	41	4.7	------
11	18	3.8	2.4	2.8	2.1	2.8	42	75	3.8	2.1	11	4.2	------
12	2.6	2.8	2.4	2.4	2.1	2.6	42	44	3.8	2.1	10	4.2	------
13	2.6	2.8	2.4	2.4	2.1	2.6	56	87	3.8	4.2	8.6	4.2	------
14	2.6	2.8	2.4	2.1	2.1	2.6	64	32	5.2	2	7.1	12	------
15	2.6	2.6	2.4	2.1	2.2	2.4	32	48	9.2	2	5.6	7	------
16	2.4	2.8	2.4	2.1	2.2	2.4	26	76	9.8	2	4.2	22	------
17	2.2	2.8	2.4	2.2	2.2	2.6	24	78	12	5	4.2	148	------
18	2.2	2.8	2.4	2.2	2.2	3.0	92	75	8.0	9	4.7	12	------
19	2.4	2.8	2.6	2.2	2.2	6.1	102	53	6.6	9.8	15	4	------
20	2.4	3.0	2.6	2.2	2.2	8.6	122	48	6.1	12	12	2	------
21	2.4	3.0	2.6	2.1	2.2	6.6	119	37	5.6	5.6	26	2	------
22	2.4	3.0	2.8	2.1	2.2	7.5	129	18	5.2	2	7	2	------
23	2.4	3.0	2.6	2.1	2.2	8.6	98	22	5.2	2	84	25	------
24	2.6	3.0	2.6	2.1	2.2	12	88	35	5.2	2.8	9	2	------
25	2.6	3.0	2.6	2.1	2.2	14	98	38	5.2	2.8	9	5	------
26	2.8	3.0	2.4	2.1	2.2	14	87	35	5.6	2.8	7	2	------
27	3.0	2.8	2.4	2.1	2.2	15	74	33	5.6	3.3	6	11	------
28	2.8	3.0	2.6	2.1	2.2	15	71	19	5.6	3.8	9	15	------
29	2.8	3.0	2.6	2.1	------	9.2	67	9.2	9.8	4.2	14	3	------
30	2.8	2.8	2.6	2.1	------	12	82	13	8.6	4.2	8.0	38	------
31	2.8	------	2.6	2.1	------	12	------	13	------	5.6	3	------	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	50	2.2	6.35	390
November	3.8	2.6	2.83	169
December	2.8	2.4	2.60	160
January	2.8	2.1	2.32	143
February	2.2	2.1	2.15	119
March	15	2.2	5.97	367
April	129	3.0	56.5	3,360
May	106	9.2	58.1	3,570
June	12	3.8	7.25	432
July	42	2	9.13	562
August	85	3	18.8	1,150
September	148	2	12.1	722
The year	148	2	15.4	11,100
1931				
October 1–8	6.1	5	5.82	92

RIO BONITO AT HONDO, N.MEX.

LOCATION.—Water-stage recorder in SW¼SW¼ sec. 33, T. 10 S., R. 17 E., a quarter of a mile northwest of Hondo and three quarters of a mile above confluence with Rio Ruidoso.

RECORDS AVAILABLE.—October 1930 to September 1932. Records August to September 1930 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 5,000 second-feet Sept. 17 (gage height, about 16.0 feet); no flow at times.

Maximum discharge during year ending Sept. 30, 1932, about 3,200 second-feet June 22 (gage height, about 10.7 feet); no flow at times.

REMARKS.—Records good except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Apr.	May	July	Aug.	Sept.
1930–31								
1	0	5.4	3.5	0	43	96	15	a 3
2	0	5.2	3.1	0	53	80	41	a 2
3	0	5.0	2.9	0	54	a 55	51	1.8
4	0	5.0	2.9	0	53	a 35	25	a 2
5	21	4.7	2.6	0	50	16	a 76	a 1
6	12	5.0	2.0	0	59	9.2	a 25	0
7	3.5	5.0	2.0	0	37	a 3	18	0
8	2.4	4.4	1.7	0	34	a 3	100	0
9	2.2	4.0	1.8	0	68	a 15	a 40	0
10	111	3.7	1.2	0	51	21	a 32	0
11	151	4.0	0	3.9	50	a 10	22	0
12	9.5	4.4	0	3.7	30	a 3	21	0
13	9.9	4.2	0	9.2	50	a 3	20	0
14	8.2	4.0	0	33	28	a 6	18	0
15	7.8	6.0	0	8.2	25	a 4	15	0
16	7.5	6.9	0	3.1	31	a 4	14	a 20
17	6.5	7.8	0	2.9	39	a 5	12	a 225
18	6.5	7.2	0	31	36	a 8	12	a 75
19	6.0	7.5	0	36	29	4.8	10	12
20	5.7	6.5	0	37	18	10	9.5	11
21	5.7	7.8	0	71	11	a 6	a 9	10
22	5.7	7.5	0	99	7.8	0	a 9	8.2
23	5.7	7.5	0	96	1.7	0	a 70	19
24	5.7	5.0	0	a 70	0	0	a 16	13
25	5.7	2.8	0	a 80	0	0	8.2	9.9
26	5.7	2.4	0	46	0	0	7.2	a 7
27	6.0	2.4	0	30	0	0	6.0	a 5
28	5.7	2.4	0	28	0	0	5.7	24
29	6.0	3.5	0	26	0	0	5.7	18
30	5.7	3.3	0	33	0	0	8.8	a 40
31	5.4	-------	0	-------	0	2.4	5.0	-------

a Estimated.

Discharge, in second-feet, of Rio Bonito at Hondo, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	e 50	3.7	3.7	5.7	0.7	2.8	23	15	5.7	e 25	e 6	e 10
2	e 40	4.0	4.4	2.2	.8	6.0	23	14	.2	28	0	
3	18	4.0	4.7	2.0	2.2	6.9	29	16	0		0	6.2
4	15	3.7	5.0	2.0	5.2	7.5	34	18	0		0	5.0
5	11	3.7	4.7	.8	2.9	8.5	34	19	0		0	4.3
6	8.2	3.5	4.4	.8	2.0	7.2		17	0	e 5	0	3.5
7	7.2	3.5	4.0		2.9	6.2	e 50	16	0		0	2.8
8	6.0	3.1	3.5	e .6	2.9	4.4		18	0		0	2.1
9	5.7	3.3	3.1		2.8	5.4	40	16	0	14	0	1.8
10	5.4	2.8	3.3	.4	2.4	6.2	36	18	0		0	1.4
11	5.7	3.3	4.0	.2	2.4	7.5	34	e 20	0		0	1.3
12	5.7	3.7	4.0	.1	2.8	8.5	31	e 25	0	e 5	e 4	1.2
13	10	3.3	3.5		4.2	8.8	27	e 30	0		0	18
14	12	3.5	e 2		4.4	8.8	24	31	0			e 10
15	8.2	3.7	e 2	e .2	5.2	9.9	27	37	0			4.8
16	5.7	4.4	e 3		6.9	12	27	36	0	0	e 1	e 2
17	5.4	4.0	e 3	.4	6.5	14	30	36	0			0
18	5.2	3.5	e 3	.3	4.4	15		36	0			0
19	5.9	3.1	e 3	.2	3.7	16		32	0			0
20	15	2.8	2.8	.2	3.7	18	e 30	31	0	e .2	2.8	0
21	8.8	2.0	2.6	.2	2.8	18		28	2.7		2.8	0
22	6.0	1.4	2.6	.3	2.4	20		24				0
23	5.2	1.4	2.6	.4	1.8	24	28	18	e 20	.4		12
24	5.2	1.7	2.2	.3	1.8	23	28	12		e 1	e 1	154
25	4.7	1.8	2.2	.2	1.5	22	21	8.8	14			
26	5.0	2.0	2.4	.5	1.4	23	15	7.5	16	3.3		
27	4.4	2.0	2.4	.7	1.5	21	13	6.5		1.7	0	40
28	4.2	2.6	2.6	1.0	2.0	22	14	5.7	e 10	.7	2.2	
29	4.0	2.8	2.4	e .8	2.6	24	13	5.4		.5	4.5	
30	3.5	3.3	2.6			27	14	5.7		.3	e 20	
31	3.7		6.2	.7		26		5.7		1.7		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	151	0	14.0	860
November	7.8	2.4	5.02	299
December	3.5	0	.76	47
April	99	0	24.9	1,480
May	68	0	27.7	1,700
July	96	0	12.9	792
August	100	5.0	23.5	1,440
September	225	0	16.9	1,010
The year	225	0	10.5	7,630
1931–32				
October	50	3.5	9.68	595
November	4.4	1.4	3.05	182
December	5.0	2	3.29	202
January	5.7	.1	.77	47
February	6.9	.7	2.99	172
March	27	2.8	13.9	852
April		13	28.8	1,720
May	37	5.4	19.6	1,210
June		0	4.62	275
July		0	4.48	275
August		0	2.36	145
September	154	0	16.3	973
The year	154	0	9.15	6,650

e Estimated.

NOTE.—No flow during months omitted.

RIO FELIX NEAR HAGERMAN, N.MEX.

LOCATION.—Water-stage recorder in sec. 3, T. 14 S., R. 26 E., a quarter of a mile below State highway 2, 1.5 miles north of Hagerman, and 1.6 miles above mouth.

RECORDS AVAILABLE.—March to September 1932.

EXTREMES.—Maximum discharge during period, about 20,000 second-feet Sept. 24 (gage height, 19.5 feet); minimum, 6.4 second-feet Aug. 17.

REMARKS.—Records fair below 60 second-feet, poor above. Diversions for irrigation above station.

Discharge, in second-feet, 1932

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		8.6	9.5	19	11	11	11
2		8.6	9.0	14	94	11	8.1
3	9	8.1	9.0	13	247	11	8.1
4		8.1	9.0	13	33	11	8.6
5		8.1	9.0	13	13	11	8.6
6	9.5	8.1	9.5	13	12	11	
7	8.6	8.1	9.5	15	13	11	9
8	8.1	9.0	9.0	17	12	11	
9	9.0	9.0	250	14	12	10	10
10	11	9.0	1,040	14	12	9.5	11
11	29	9.0	243	14	13	7.8	11
12	40	9.5	19	14	13	8.1	11
13	52	9.5	12	14	12	8.1	11
14	34	9.5	12	14	13	7.8	11
15	15	8.6	11	11	12	7.4	11
16	11	9.0	11	11	13	7.4	11
17	9.5	9.0	11	11	12	7.0	11
18	7.8	9.5	11	11	13	7.4	11
19	7.4	9.5	10	11	13	7.8	11
20	7.4	9.5	10	11	13	7.8	12
21	7.8	8.6	9.9	11	11	7.8	12
22	18	9.9	9.5	11	11	8.1	13
23	19	9.5	9.5	10	12	8.1	22
24	12	9.0	9.9	10	11	7.8	
25	11	9.0	11	11	12	7.8	
26	11	9.5	9.5	11	12	7.8	
27	10	9.0	9.9	10	11	7.4	2.500
28	11	9.0	253	9.9	11	204	
29	9.0	9.5	130	11	10	2,110	
30	8.1	9.5	22	9.9	11	1,510	
31	8.1	------	19	------	11	62	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March	52	------	13.8	852
April	9.9	8.1	8.99	535
May	1,040	9.0	71.2	4,380
June	19	9.9	12.4	737
July	247	10	22.9	1,410
August	2,110	7.0	133	8,180
September	------	8.1	592	35,200
The year	------	------	------	51,300

COTTONWOOD CREEK NEAR LAKE ARTHUR, N.MEX.

LOCATION.—Water-stage recorder in NE¼NW¼NE¼ sec. 22, T. 16 S., R. 26 E., 1⅝ miles above mouth and 3½ miles south of Lake Arthur.
RECORDS AVAILABLE.—March to September 1932.
EXTREMES.—Maximum discharge during year, about 1,070 second-feet Sept. 28 (gage height, 10.32 feet); minimum, 0.5 second-foot July 24.
REMARKS.—Records good below 50 second-feet, poor above. Discharge estimated May 4–6, Sept. 17–22,27–30.

Discharge, in second-feet, 1932

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		12	6.8	7.5	1.6	0.9	6.4
2		12	6.6	8.8	7.8	1.0	6.5
3		13	6.0	8.7	7.6	1.0	6.5
4		13		8.6	6.9	1.2	6.6
5		12	4.6	8.5	6.9	2.5	6.8
6		10		8.3	6.8	2.8	6.7
7	11	9.7	5.0	7.1	6.8	1.6	5.9
8	11	9.5	7.3	5.6	6.8	3.1	7.0
9	11	9.0	7.8	5.6	6.1	3.7	7.2
10	11	8.4	9.5	5.0	6.4	3.5	6.8
11	12	8.3	41	6.6	6.8	2.2	6.9
12	13	8.4	68	5.6	6.0	3.0	7.2
13	13	7.7	26	4.5	5.6	2.5	7.3
14	14	6.7	20	4.8	5.6	4.2	7.3
15	14	6.0	17	3.4	5.6	4.4	7.1
16	14	6.0	16	3.2	4.8	4.4	7.0
17	14	5.9	15	3.7	4.6	4.2	
18	13	6.0	14	1.6	4.4	4.4	
19	14	6.3	14	1.6	4.4	4.4	
20	13	6.4	13	2.2	4.1	4.3	7
21	11	6.4	13	3.2	2.7	4.3	
22	12	5.9	12	2.8	2.2	4.3	8
23	12	5.8	11	1.7	.6	4.3	10
24	12	6.3	11	3.6	.6	4.4	24
25	12	6.2	11	1.5	.6	4.4	46
26	12	5.8	10	3.4	.9	4.2	70
27	12	6.4	7.4	5.3	1.7	4.2	20
28	12	6.9	7.0	6.4	1.9	4.8	190
29	12	6.8	7.7	3.8	1.4	5.8	100
30	12	6.9	7.8	1.5	3.2	6.9	90
31	12	-------	7.2	-------	.9	6.7	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 7–31	14	11	12.4	613
April	13	5.8	7.99	475
May	68	-------	13.3	817
June	8.8	1.5	4.80	286
July	7.8	.6	4.27	262
August	6.9	.9	3.66	225
September	190	5.9	23.4	1,390
The period	-------	-------	-------	4,070

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 southeast of Balmorhea.
DRAINAGE AREA.—272 square miles.
RECORDS AVAILABLE.—February 1925 to August 1932 (discontinued).
EXTREMES.—Maximum discharge during year (determined by slope-area method), 14,200 second-feet Aug. 30 (gage height, 10.42 feet); no flow at times.
1925–32: Maximum discharge, that of Aug. 30, 1932; no flow at times.
REMARKS.—Records good. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	0	0	1.8	0.3	0.2	0.1	0.4	7.4
2	0	0	.8	.3	.2	.1	14	2.0
3	0	0	.6	.3	.3	.1	12	.1
4	0	0	.4	.3	.2	0	.3	.1
5	0	0	.6	.3	.2	0	.2	2.6
6	0	0	.4	.3	.2	0	.2	.4
7	0	0	.4	.3	.2	0	12	.1
8	0	0	.4	.3	.2	0	6.1	.1
9	0	0	.3	.2	.2	0	8.1	2.5
10	0	0	.3	.2	23	0	3.2	.1
11	0	0	.2	.2	3.3	0	.4	.1
12	0	0	.2	.3	.2	0	.2	.1
13	.7	0	.2	.3	.2	0	.2	1.6
14	0	0	.2	.3	.2	0	.2	.1
15	0	0	.2	.3	.1	0	.2	.1
16	0	0	.2	.3	.2	0	.2	.1
17	0	0	.2	.3	.2	0	.2	.1
18	0	0	.2	.3	.1	0	.2	.1
19	0	0	.2	.3	.1	0	.2	.1
20	0	0	.2	.3	.1	0	.2	.1
21	0	1.1	.2	.3	.1	0	.1	.1
22	0	40	.3	.3	.1	0	.1	0
23	0	42	.3	.2	.1	90	.1	0
24	0	49	.3	.2	.2	5.3	.1	0
25	0	59	.3	.2	.1	30	.1	0
26	0	37	.3	.2	.1	4.4	.4	235
27	0	17	.3	.2	.1	2.1	.1	280
28	0	9.0	.3	.2	.1	75	.1	-------
29	0	4.7	.3	.2	.1	155	.1	-------
30	0	-------	.3	.2	2.8	12	4.6	-------
31	0	-------	.3	-------	.1	-------	20	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0	0.02	1.2
February	59	0	8.92	513
March	1.8	.2	.36	22
April	.3	.2	.26	15
May	23	.1	1.08	66
June	155	0	12.5	744
July	20	.1	2.73	168
August 1–28	280	0	19.0	1,060
The period				2,590

NOTE.—No flow November to January.

BARRILLA CREEK NEAR SARAGOSA, TEX.

LOCATION.—Water-stage recorder at Old Spanish Trail highway bridge 2.8 miles from Reeves-Pecos County line and 15.5 miles by road southeast of Saragosa, Reeves County.

RECORDS AVAILABLE.—December 1924 to July 1926; June to September 1932 (discontinued).

EXTREMES.—Maximum discharge during period, about 15,500 second-feet Aug. 30 (gage height, 10.45 feet); no flow at times.

1925–26, 1932: Maximum discharge, that of Aug. 30, 1932; no flow at times.

REMARKS.—Records poor. Small diversions for irrigation above station.

Discharge, in second-feet, 1932

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1		0.4	0	99	16		0	0	
2		0	0	8.4	17		0	0	
3		0	0	1.1	18		0	0	
4		0	0	0	19		0	0	
5		0	0	242	20		0	0	
6		0	0	418	21		0	0	
7		3.2	0	1,270	22		0	0	
8		.5	0	2,330	23		0	0	
9		7.3	0		24		0	0	
10		42	18		25		0	0	
11		0	7.2		26	0	0	0	
12		0	0		27	0	0	34	
13		0	0		28	0	0	245	
14		0	0		29	0	0	13	
15		0	0		30	31	0	4,010	
					31		0	2,130	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June 26–30	31	0	6.20	61
July	42	0	1.72	106
August	4,010	0	208	12,800
September 1–8	2,330	0	547	8,660
The period				21,600

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 1932.

EXTREMES.—Maximum discharge during year (determined by slope-area method), about 370,000 second-feet Sept. 1 (gage height, 31.3 feet); minimum discharge, 72 second-feet Aug. 28, 29.

1925–32: Maximum discharge, that of Sept. 1, 1932; minimum, 48 second-feet June 4, 6, 1930.

REMARKS.—Records good except those for medium and high-water periods, which are fair. No diversions above station. No record Sept. 1–14, 16–30. Discharge partly estimated Aug. 30, 31, Sept. 15.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	103	94	89	87	85	76	75	74	78	81	-------
2	109	103	92	89	87	85	76	74	74	137	82	-------
3	109	103	92	91	87	86	76	75	75	620	82	-------
4	109	103	92	92	87	86	76	76	76	132	81	-------
5	107	101	92	91	87	86	76	78	79	118	81	-------
6	107	101	91	91	86	85	76	76	75	112	79	-------
7	107	101	94	91	86	85	76	78	75	107	78	-------
8	107	101	91	89	86	85	76	76	75	104	82	-------
9	107	101	91	89	86	83	76	76	75	101	85	-------
10	107	101	91	89	86	83	75	76	75	98	92	-------
11	107	101	89	89	86	83	75	79	75	96	86	-------
12	107	101	89	89	86	83	74	81	74	95	83	-------
13	107	101	89	89	86	81	74	76	73	94	82	-------
14	107	103	89	89	87	81	74	76	73	92	82	-------
15	107	99	89	89	87	81	74	78	73	90	79	• 286
16	107	101	89	89	87	81	74	81	73	89	79	-------
17	107	109	89	89	87	79	74	78	74	89	78	-------
18	105	101	89	89	91	79	74	78	73	88	76	-------
19	105	101	91	89	89	79	74	76	73	88	76	-------
20	105	101	89	89	87	79	75	76	74	88	78	-------
21	107	99	91	89	89	78	75	75	74	88	76	-------
22	304	98	89	89	87	76	76	75	74	86	75	-------
23	117	98	89	89	87	76	81	74	74	85	73	-------
24	109	96	89	87	86	76	75	73	75	85	73	-------
25	109	96	89	87	84	75	74	73	75	85	73	-------
26	107	96	89	87	84	75	74	74	75	83	73	-------
27	107	96	89	87	84	75	74	73	76	83	73	-------
28	107	96	89	87	84	75	76	73	76	83	72	-------
29	105	94	89	87	86	76	76	74	76	83	72	-------
30	105	94	89	87	-------	76	75	74	76	82	75	-------
31	105	-------	89	87	-------	76	-------	74	-------	81	76	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	304	105	114	7,010
November	109	94	100	5,950
December	94	89	90.1	5,540
January	92	87	88.8	5,460
February	91	84	86.5	4,980
March	86	75	80.3	4,940
April	81	74	75.2	4,470
May	81	73	75.8	4,660
June	79	73	74.6	4,440
July	620	78	111	6,820
August	92	72	78.5	4,830
The period	-------	-------	-------	59,100

• Discharge measurement.

MIMBRES RIVER BASIN

MIMBRES RIVER NEAR MIMBRES, N.MEX.

LOCATION.—Water-stage recorder in SE¼NW¼ sec. 33, T. 16 S., R. 11 W., 1½ miles northwest of Mimbres.

DRAINAGE AREA.—183 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records 1921–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 485 second-feet Aug. 10 (gage height, 2.77 feet); minimum, 2.5 second-feet July 29.

Maximum discharge during year ending Sept. 30, 1932, about 568 second-feet July 26 (gage height, 2.96 feet); minimum, 2.8 second-feet Aug. 9.

REMARKS.—Records good except those estimated, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	10	7.6	7.1	5.9	5.2	11	23	232	e22	7.1	4.8	7.1
2	10	7.6	7.1	5.9	5.5	11	32	e196	e21	6.3	4.4	6.3
3	11	8.2	7.1	5.9	5.5	12	40	e160	e20	9.8	5.9	6.3
4	11	8.2	7.1	5.9	5.5	15	e40	124	e19	10	8.8	6.3
5	11	7.6	7.1	5.2	5.5	18	41	102	e18	10	6.7	23
6	10	7.6	7.1	4.8	5.5	18	40	90	e17	9.8	13	13
7	12	7.6	6.7	4.8	5.5	16	36	74	e17	7.6	8.8	13
8	12	7.6	6.7	4.8	5.5	16	34	64	e16	e7	15	12
9	12	7.6	6.7	4.4	5.2	15	34	54	e15	6.7	27	8.8
10	11	8.2	7.1	4.0	5.2	15	33	45	15	6.3	e130	7.6
11	11	8.2	7.1	4.0	5.2	14	31	38	16	4.8	e30	8.2
12	12	8.2	7.1	4.8	21	e12	31	31	13	4.8	15	6.3
13	12	8.2	7.1	5.9	27	e12	31	30	13	5.9	13	5.5
14	12	8.2	7.1	5.5	84	e12	30	27	12	5.9	11	5.9
15	11	e10	7.1	5.9	44	e12	28	26	12	9.8	9.8	7.1
16	10	e9	6.3	5.2	33	e13	36	27	9.8	16	9.3	9.3
17	9.8	8.2	6.3	5.2	18	e13	45	27	6.3	16	8.8	e10
18	9.8	8.8	5.9	4.8	16	e13	46	25	6.7	13	6.7	11
19	9.8	8.2	5.9	4.4	13	13	42	26	5.9	12	6.3	e11
20	e9.7	8.2	5.9	4.4	13	18	40	24	6.7	12	6.3	e11
21	e9.6	8.2	6.3	4.8	12	18	40	24	5.9	11	7.1	e11
22	e9.5	8.2	6.3	5.2	12	17	37	23	5.9	10	7.1	e10
23	e9.4	8.2	6.3	5.2	10	18	48	25	5.5	e9	5.9	e10
24	9.3	7.6	6.3	5.2	8.2	17	51	21	6.7	e8	5.2	e10
25	8.8	7.6	6.3	5.2	7.1	17	51	20	6.7	e10	5.2	10
26	8.8	7.6	6.3	4.8	8.2	18	50	19	6.3	e8	12	10
27	8.2	7.6	5.9	4.8	9.8	18	51	e23	5.9	e7	14	10
28	8.2	8.2	5.9	4.8	10	18	139	e26	7.1	e5	12	13
29	8.2	8.2	5.5	5.2	-------	19	119	e25	7.1	3.2	12	13
30	8.2	7.1	5.5	5.2	-------	18	183	e24	7.6	4.0	9.8	12
31	7.6	-------	5.5	5.2	-------	17	-------	e23	-------	4.0	8.2	-------

e Estimated.

Discharge, in second-feet, of Mimbres River near Mimbres, N.Mex., 1930–32—Con.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	9.8	8.2	*7		5.9	54	37	18	12	8.8	*20	6.3
2	9.3	8.2	*7		5.9	54	37	18	11	11	6.7	5.9
3	*9.0	8.2	*7		5.9	50	38	17	10	10	6.3	5.5
4	*8.6	7.6	6.3	*7.5	5.9	50	40	18	10	8.2	4.8	5.2
5	8.2	7.6	6.3		5.9	38	41	18	10	7.1	4.0	4.4
6	8.2	7.1	5.9		5.9	44	41	18	9.3	8.8	5.9	4.0
7	8.2	7.6	5.9	7.6	5.9	46	41	18	8.2	6.3	6.7	3.2
8	8.2	7.6	6.3	*7	5.9	48	42	17	7.6	5.2	4.0	3.2
9	15	7.6	6.3		5.9	50	38	16	7.1	8.2	3.0	3.6
10	11	7.6	8.8	*6	9.8	50	36	16	6.7	9.3	3.2	4.0
11	9.8	8.2	9.3		16	46	34	16	6.3	12	4.4	3.6
12	9.8	8.8	9.3	5.9	12	44	32	16	5.5	9.8	3.2	3.6
13	9.8	8.8	9.3	5.9	9.3	38	29	15	5.2	9.3	11	3.6
14	9.3	8.2	9.3	6.3	7.6	38	29	15	4.8	9.8	12	3.2
15	9.3	8.2	8.8	6.7	7.6	37	28	16	5.2	9.8	5.5	3.2
16	9.3	8.2	8.8	6.7	7.1	36	28	16	4.8	9.3	4.8	3.6
17	9.3	8.2	8.2	6.3	7.1	36	30	14	4.8	9.3	5.2	3.6
18	9.3	8.2	8.2	6.3	6.7	34	31	13	4.4	9.3	5.9	4.4
19	9.8	8.2	8.2	6.3	8.8	37	30	13	4.4	8.8	5.2	4.8
20	10	8.2	8.2	6.3	12	41	29	12	4.8	8.2	6.3	4.8
21	9.8	8.2	8.2	6.3	12	45	31	11	5.5	8.2	6.7	4.8
22	9.3	*8	8.2	6.3	12	45	34	12	6.3	7.6	9.3	9.4
23	8.8	*8	8.2	6.3	12	40	32	11	5.9	7.6	20	10
24	8.8	*8	7.6	6.3	12	36	29	10	5.5	7.6	25	11
25	8.2	*8	7.6	6.3	12	34	25	9.8	5.5	35	24	13
26	7.6	*8	7.6	6.3	12	37	23	9.8	6.3	44	12	11
27	8.2	8.2	7.6	6.3	12	40	20	9.3	5.9	*20	11	9.3
28	8.2	*8	7.6	6.3	16	44	20	9.3	5.9	10	9.3	8.8
29	8.8	*8	7.6	6.3	26	45	19	10	8.2	18	7.1	*8
30	8.2	*7	7.6	6.3	------	44	18	10	9.8	23	6.3	*8
31	8.2	------	7.6	5.9	------	40	------	12	------	39	5.5	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	12	7.6	10.1	621
November	10	7.1	8.05	479
December	7.1	5.5	6.51	400
January	5.9	4.0	5.07	312
February	44	5.2	12.7	705
March	19	11	15.3	940
April	183	23	49.4	2,940
May	232	19	54.0	3,320
June	22	5.5	11.5	686
July	16	3.2	8.39	516
August	130	4.4	14.2	871
September	23	5.5	9.92	590
The year	232	3.2	17.1	12,400
1931–32				
October	15	7.6	9.20	566
November	8.8	7	8.00	476
December	9.3	5.9	7.74	476
January			6.55	403
February	26	5.9	9.76	562
March	54	34	42.6	2,620
April	42	18	31.4	1,870
May	18	9.3	14.0	863
June	12	4.4	6.90	410
July	44	5.2	12.9	790
August	25	3.0	8.53	524
September	13	3.2	5.90	351
The year	54	3.0	13.6	9,910

* Estimated.

MIMBRES RIVER NEAR FAYWOOD, N.MEX.

LOCATION.—Water-stage recorder in sec. 7, T. 20 S., R. 10 W., about 6 miles northeast of Faywood Hot Springs and 10 miles northeast of Faywood.

DRAINAGE AREA.—485 square miles.

RECORDS AVAILABLE.—April 1908 to December 1914; October 1930 to September 1932. Records 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 6,900 second-feet Aug. 10 (gage height, 6.62 feet); minimum, 1 second-foot Aug. 23.

Maximum discharge during year ending Sept. 30, 1932, about 2,220 second-feet Aug. 29 (gage height, 4.05 feet); practically no flow on Aug. 30.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	4	3	12	10	9	44	47	323	14	4	3	7
2	4	3	10	9	9	30	64	293	14	4	8	7
3	4	3	12	10	10	35	51	233	13	3	3	8
4	4	3	12	9	10	34	43	178	11	3	3	9
5	7	3	11	9	10	30	43	116	10	3	6	11
6	4	3	11	10	10	28	37	104	10	3	3	15
7	3	3	11	10	10	27	30	97	8	2	3	12
8	3	4	12	10	10	29	30	91	5	2	3	15
9	3	7	16	9	10	29	26	88	4	3	29	11
10	3	8	16	10	10	27	19	71	4	3	1,100	11
11	3	9	14	9	8	28	34	63	3	2	156	e 8
12	3	10	14	9	10	22	38	57	3	2	77	e 6
13	3	11	12	9	10	22	32	52	4	2	40	3
14	3	11	11	9	15	20	25	48	4	2	24	3
15	4	13	10	9	80	21	24	43	3	2	16	4
16	4	12	10	9	121	12	20	39	3	2	13	4
17	5	11	11	9	84	10	26	36	2	9	11	4
18	5	13	11	9	50	9	38	34	3	2	9	4
19	5	12	11	9	34	13	43	29	3	8	6	4
20	5	12	11	9	e 25	12	39	26	3	3	11	4
21	5	11	11	9	e 22	11	34	23	3	3	e 13	4
22	3	12	11	9	22	12	43	23	3	3	e 10	4
23	3	12	11	8	30	14	75	22	3	2	1	4
24	3	12	11	7	41	15	97	16	3	2	43	7
25	3	e 12	11	8	50	16	108	16	3	2	15	6
26	3	11	10	9	43	11	104	15	3	3	8	11
27	3	12	10	10	41	5	104	19	3	3	12	12
28	3	16	9	9	41	5	131	22	4	3	10	10
29	3	16	10	9	-------	7	245	21	5	3	8	17
30	3	14	10	10	-------	10	281	20	5	3	7	26
31	3	-------	9	10	-------	28	-------	16	-------	3	7	-------

e Estimated.

Discharge, in second-feet, of Mimbres River near Faywood, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	21	11	12	9	11	3	25	13	3	7	21	2
2	26	10	12	9	11	23	25	10	2	7	10	2
3	22	9	12	9	11	29	23	9	3	7	4	2
4	20	9	12	9	10	34	23	7	3	6	4	2
5	18	9	11	9	8	32	23	5	2	5	3	2
6	16	9	12	9	7	31	23	5	2	8	3	1
7	14	9	12	9	7	34	23	6	2	8	4	1
8	14	9	12	9	7	36	27	5	2	6	9	1
9	13	11	11	9	7	40	25	4	2	11	4	2
10	23	11	15	10	8	43	24	3	2	7	5	3
11	20	11	13	10	12	44	23	2	2	7	4	3
12	17	11	13	10	14	44	18	2	2	7	4	3
13	15	11	12	11	12	42	13	2	2	7	4	3
14	a 14	10	11	12	13	39	13	1	2	7	4	2
15	a 13	11	11	11	15	35	14	1	3	6	4	2
16	a 12	10	11	10	12	33	11	2	3	6	4	3
17	a 11	10	11	10	8	33	11	1	3	6	4	3
18	10	11	11	10	5	33	15	2	3	6	4	2
19	11	11	10	9	5	30	15	4	3	6	4	2
20	13	11	9	10	4	30	15	7	3	6	4	2
21	12	11	8	10	4	39	13	7	3	6	4	2
22	12	11	9	10	3	38	16	6	3	6	4	2
23	11	11	8	10	3	35	18	6	3	6	3	3
24	11	12	8	11	2	31	18	5	3	9		2
25	10	12	9	11	2	32	17	5	2	8	a 5	1
26	10	11	9	11	1	32	16	5	2	8		1
27	10	11	9	11	1	33	16	5	2	25		1
28	10	11	9	11	1	36	16	4	5	23	4	1
29	10	11	9	11	1	35	13	4	7	44	120	2
30	11	12	9	11	-------	31	13	4	7	13	1	
31	11	-------	9	11	-------	25	-------	3	-------	23	2	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	7	3	3.7	226
November	16	3	9.4	559
December	16	9	11.3	696
January	10	7	9.2	563
February	121	8	29.5	1,640
March	44	5	19.9	1,220
April	281	19	64.4	3,830
May	323	15	72.1	4,430
June	14	2	5.3	315
July	9	2	3.0	186
August	1,100	1	53.5	3,290
September	26	3	8.4	498
The year	1,100	1	24.1	17,500
1931-32				
October	26	10	14.2	875
November	12	9	10.6	629
December	15	8	10.6	653
January	12	9	10.1	619
February	15	1	7.1	407
March	44	3	33.4	2,050
April	27	11	18.2	1,080
May	13	1	4.7	288
June	7	2	2.9	171
July	44	5	9.9	609
August	120	1	8.5	526
September	3	1	2.0	119
The year	120	1	11.1	8,030

a Estimated.

TULAROSA VALLEY BASIN

RIO TULAROSA NEAR TULAROSA, N.MEX.

LOCATION.—Water-stage recorder in sec. 15, T. 14 S., R. 9½ E., 3½ miles northeast of Tularosa.

RECORDS AVAILABLE.—October 1931 to September 1932. Comparable record at former station about 1 mile downstream December 1912 to December 1914.

EXTREMES.—Maximum discharge during year not determined; minimum, 3.5 second-feet June 28.

REMARKS.—Records good below 18 second-feet; fair above, except for estimated periods, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	14	15	18	13	11	13	13	10	24	11	
2	-------	14	15	18	13	11	14	11	8.6	29	12	
3	-------	14	16	19	12	11	12	10	9.6	28	13	
4	-------	14	14	19	12	11	e 11	11	10	24	10	
5	-------	14	14	19	13	12	e 10	12	9.1	27	11	
6	-------	14	14	17	11	12	e 9	12	7.3	28	10	
7	-------	14	14	15	12	13	8.6	13	13	27	13	e 15
8	-------	15	15	17	12	13	14	9.6	13	24	15	
9	-------	15	15	22	11	13	14	9.1	14	23	15	
10	-------	15	18	19	12	13	15	15	14	24	16	
11	-------	14	19	19	13	13	e 15	15	13	22	15	
12	-------	14	19	19	13	13	e 14	14	13	21	15	
13	-------	14	19	18	12	13	e 13	14	11	20	e 180	
14	-------	15	17	19	12	14	13	14	8.6	20		
15	-------	15	18	15	12	15	12	13	8.6	20		12
16	-------	17	17	15	13	15	12	13	8.6	19		11
17	-------	15	17	16	12	15	12	12	9.1	19		11
18	-------	15	17	15	12	15	11	10	8.6	19		10
19	-------	15	17	15	11	14	e 10	10	7.3	19		9.6
20	-------	15	17	15	11	15	e 9	9.6	6.4	18		8.2
21	-------	15	17	15	11	14	8.2	9.1	15	19		8.2
22	-------	15	18	15	10	14	10	6.4	20	17	e 30	9.6
23	-------	15	18	14	11	13	13	7.8	15	17		9.1
24	-------	14	18	12	11	13	10	17	14	17		10
25	-------	14	19	9.6	11	13	8.2	17	13	16		8.2
26	-------	14	18	7.8	11	13	12	17	13	16		8.6
27	-------	14	19	11	11	12	13	16	9.6	16		9.6
28	-------	14	19	13	11	12	13	15	8.2	14		10
29	-------	14	20	11	11	e 12	13	14	9.6	13		9.6
30	12	15	20	11	-------	e 13	13	13	9.1	13		9.1
31	13	-------	20	12	-------	13	-------	10	-------	11		-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 30–31	13	12	12.5	50
November	17	14	14.5	865
December	20	14	17.2	1,060
January	22	7.8	15.5	953
February	13	10	11.7	674
March	15	11	13.0	801
April	15	8.2	11.8	704
May	17	6.4	12.3	759
June	20	6.4	11.0	653
July	29	11	20.1	1,240
August	180	10	28.3	1,740
September	----------	8.2	12.1	722
The period	----------	----------	----------	10,200

e Estimated.

RIO LA LUZ AT LA LUZ, N.MEX.

LOCATION.—Staff gage in sec. 28, T. 15 S., R. 10 E., 1 mile east of La Luz, at head of Alamogordo Community Ditch.

RECORDS AVAILABLE.—November 1931 to September 1932; fragmentary records August 1910 to April 1913.

EXTREMES.—Maximum discharge during year, about 3,220 second-feet Aug. 29 (gage height, 8.00 feet); minimum recorded, 1 second-foot July 25.

REMARKS.—Records fair except those estimated, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e 7	10	12	11	10	11	6	5	e 130	30	
2	7	9	12	11	10	11	6	6	22	20	
3	8	10	12	11	10	11	5	6	22	20	e 10
4	8	10	12	11	11	10	5	7	18	16	
5	8	10	12	11	10	10	6	7	15	12	
6	9	10	11	11	10	9	6	6	e 30	e 70	6
7	8	10	11	11	10	8	6	6	16	55	6
8	8	11	12	10	10	7	7	5	15	34	6
9	8	11	10	10	10	8	6	6	10	36	7
10	8	21	13	13	11	10	10	6	e 8	28	5
11	8	14	12	10	10	8	8	6	e 8	46	5
12	8	11	12	10	18	8	8	6	e 7		5
13	9	11	12	10	13	8	6	5	e 7	e 30	5
14	9	9	13	10	13	8	6	6	e 7		6
15	9	9	11	10	12	8	7	6	e 7		6
16	11	10	11	10	13	7	6	4	e 7	15	6
17	9	10	11	10	11	7	6	5	e 6	26	5
18	9	10	11	10	11	6	6	5	e 6	38	5
19	9	10	11	10	11	6	6	6	e 6	34	5
20	10	10	11	13	12	6	6	6	e 6	24	6
21	10	10	11	10	11	6	5	7	e 6	26	5
22	10	10	11	10	13	6	6	10	e 6	22	5
23	10	10	10	10	12	7	5	10	e 6	e 70	5
24	10	10	11	10	12	8	5	9	6	56	7
25	10	10	11	10	12	7	6	22	3	50	8
26	10	10	11	10	12	7	6	6	6	49	8
27	10	12	11	10	12	7	6	5	15	71	8
28	10	13	11	10	11	6	5	4	18	65	7
29	10	12	11	10	11	6	6	7	13	e 250	11
30	10	11	11	-------	11	6	5	8	13	e 40	10
31	-------	12	11	-------	11	-------	5	-------	e 50		-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	11	7	9.0	536
December	21	9	10.8	666
January	13	10	11.4	698
February	13	10	10.4	601
March	18	10	11.4	702
April	11	6	7.8	462
May	10	5	6.1	373
June	22	4	6.8	403
July	130	3	16.0	982
August	250	12	44.0	2,700
September	----------	5	6.9	413
The period	----------	----------	----------	8,540

e Estimated.

ALAMO CREEK AT WOOD RANCH, NEAR ALAMOGORDO, N.MEX.

LOCATION.—Water-stage recorder in sec. 4, T. 17 S., R. 11 E., 100 feet above road crossing at Wood ranch and 8 miles southeast of Alamogordo.
RECORDS AVAILABLE.—October 1931 to September 1932.
EXTREMES.—Maximum discharge during year, 5.5 second-feet July 8 (gage height, 1.50 feet); minimum not determined.
REMARKS.—Records good except those estimated, which are fair.

Discharge, in second-feet, 1932

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		2.2	2.3	2.3	2.1	2.1	2.2	2.4	1.9	2.2	2.3	e 2.6
2		2.2	2.3	2.3	2.0	2.1	2.2	2.4	2.0	2.2	2.3	e 2.
3		2.1	2.3	2.3	2.0	2.0	2.2	2.4	2.0	2.2	2.3	2.6
4		2.2	2.3	2.3	2.0	2.0	2.2	2.3	2.0	2.2	2.3	2.6
5		2.2	2.3	2.3	2.0	2.1	2.2	2.3	2.0	2.2	2.4	2.6
6		2.2	2.3	2.3	2.1	e 2.1	2.2	2.3	2.0	2.2	2.4	2.5
7		2.3	2.3	2.3	2.1	2.1	2.2	2.3	2.0	2.2	2.4	2.5
8		2.3	2.3	2.3	2.0	2.1	2.3	2.2	2.1	2.6	2.4	2.5
9		2.3	2.3	2.3	1.9	2.1	2.3	2.2	2.1	2.3	2.5	2.5
10		2.3	2.3	2.3	2.0	2.1	2.3	2.3	2.1	2.3	2.5	2.5
11		2.3	2.3	2.3	1.9	2.1	2.3	2.3	2.1	2.3	2.5	2.5
12		2.2	2.3	2.2	1.8	2.0	2.3	2.2	2.1	2.2	2.4	2.5
13		2.4	2.3	2.2	e 1.8	2.0	2.3	2.2	2.1	1.7	2.4	2.5
14		2.4	2.3	2.2	e 1.8	2.0	2.3	2.2	2.1	1.8	2.5	2.5
15		2.4	2.3	2.2	e 1.8	2.0	2.3	2.1	2.1	1.8	2.5	2.5
16	e 2,4	2.4	2.3	2.1	e 1.8	2.0	2.3	2.0	2.1	2.0	2.4	2.5
17		2.4	2.4	2.1	e 1.9	2.0	2.3	2.0	2.1	2.3	2.4	2.5
18		2.3	2.4	2.1	e 1.9	2.0	2.4	2.0	2.0	2.3	2.5	2.5
19		2.3	2.3	2.1	e 1.9	2.1	2.4	2.0	2.0	2.3	2.5	2.5
20		2.4	2.3	2.2	e 1.9	2.1	2.4	1.9	2.0	2 2	2.5	2.5
21		2.4	2.3	2.2	e 1.9	2.0	2.4	1.9	2.1	2.2	2.5	2.5
22		2.4	2.3	2.2	e 1.9	2.0	2.4	1.9	2.1	2.3	2.4	2.5
23		2.3	2.3	2.2	e 2.0	2.0	2.4	1.9	e 2.1	2.3	2.4	2.5
24		2.3	2.3	2.1	e 2.0	2.0	2.4	1.9	2.1	2.3	2.5	2.5
25		2.3	2.3	2.1	e 2.0	2.0	2.4	1.9	2.1	2.3	2.5	2.5
26		2.3	2.3	2.1	e 2.0	2.0	2.4	1.9	2.2	2.3	2.4	2.5
27		2.3	2.2	2.1	2.0	2.0	2.5	1.9	2.2	2.3	2.4	2.5
28		2.3	2.2	2.1	2.0	2.0	2.5	1.9	2.2	2.3	2.5	2.4
29		2.3	2.2	2.1	2.0	1.9	2.5	1.9	2.2	e 2.3	e 2.5	2.7
30		2.3	2.2	2.1	------	e 2.0	2.5	1.9	2.2	2.3	e 2.5	2.5
31	2.2	------	2.3	2.1	------	e 2.1	------	1.9	------	2.3	e 2.6	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	------	------	2.39	147
November	2.4	2.1	2.30	137
December	2.4	2.2	2.29	141
January	2.3	2.1	2.20	135
February	2.1	1.8	1.95	112
March	2.1	1.9	2.04	125
April	2.5	2.2	2.33	139
May	2.4	1.9	2.09	129
June	2.2	1.9	2.08	124
July	2.6	1.7	2.22	136
August	2.6	2.3	2.44	150
September	2.7	2.4	2.52	150
The year	------	------	2.24	1,620

e Estimated.

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 except Rio Grande Basin during the year ending Sept. 30, 1932

[See p. 177 for Rio Grande Basin]

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 19	Quicksand Creek	Sabine River	1 mile east of Bon Wier, Tex.		15.7
Dec. 11	do	do	do		57.6
July 9	do	do	do		24.4
Oct. 10	Trinity River	Gulf of Mexico	At or within 1,900 feet of Commerce Street Viaduct, Dallas, Tex.	[a] 14.71	257
14	do	do	do	[a] 12.49	59.8
19	do	do	do	[a] 16.85	573
24	do	do	do	[a] 23.11	2,630
27	do	do	do	[a] 22.17	2,220
Nov. 3	do	do	do	[a] 19.95	1,340
5	do	do	do	[a] 17.39	715
9	do	do	do	[a] 13.91	213
16	do	do	do	[a] 11.93	72.7
19	do	do	do	[a] 15.09	301
21	do	do	do	[a] 11.66	50.5
Dec. 2	do	do	do	[a] 20.22	1,490
21	do	do	do	[a] 17.08	686
Jan. 7	do	do	do	[a] 29.27	7,360
19	do	do	do	[a] 34.26	19,000
23	do	do	do	[a] 38.10	46,000
24	do	do	do	[a] 37.79	39,800
25	do	do	do	[a] 36.11	26,300
30	do	do	do	[a] 29.40	8,000
Feb. 3	do	do	do	[a] 21.97	2,780
23	do	do	do	[a] 32.80	14,300
Mar. 3	do	do	do	[a] 23.73	3,860
10	do	do	do	[a] 18.41	1,100
15	do	do	do	[a] 22.60	3,300
21	do	do	do	[a] 16.38	579
26	do	do	do	[a] 15.48	387
Apr. 1	do	do	do	[a] 19.71	1,530
9	do	do	do	[a] 15.06	334
18	do	do	do	[a] 14.31	262
20	do	do	do	[a] 18.15	897
22	do	do	do	[a] 14.87	306
25	do	do	do	[a] 16.57	546
30	do	do	do	[a] 20.05	1,880
May 3	do	do	do	[a] 15.07	334
9	do	do	do	[a] 25.39	5,600
12	do	do	do	[a] 20.62	2,260
20	do	do	do	[a] 18.74	1,250
June 18	do	do	do	[a] 14.89	319
July 23	do	do	do	[a] 19.26	1,690
Aug. 5	do	do	do	[a] 13.08	93.5
Sept. 7	do	do	do	[a] 33.67	14,800
9	do	do	do	[a] 22.92	2,420
17	do	do	do	[a] 15.37	428
Dec. 2	Irrigation canal	South Concho River	Head of Canal, Christoval, Tex.		14.3
Feb. 3	do	do	do		4.79
Apr. 1	do	do	do		8.19
July 12	do	do	do		11.1
1	East Fork of James River.	Llano River	Highway crossing near Noxville, Tex.		[b] 105,000
2	James River	do	6 miles above mouth		[b] 85,900
Apr. 8	Cypress Creek	Colorado River	1¾ miles above mouth, about 15 miles northwest of Austin, Tex.		2.15
8	do	do	1¼ miles above mouth, about 15 miles northwest of Austin, Tex.		1.15
8	do	do	¼ mile above mouth, about 15 miles northwest of Austin, Tex.		2.55

See footnotes at end of table.

Miscellaneous discharge measurements in western Gulf of Mexico basins except Rio Grande Basin during the year ending Sept. 30, 1932—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Nov. 21	Barton Creek	Colorado River	Above Barton Springs, Austin, Tex.		0
Dec. 28	do	do	do		0
Jan. 19	do	do	do		0
Apr. 7	do	do	do		0
June 8	do	do	do		0
Nov. 21	do	do	Below Barton Springs and Old Mill Spring, Austin Tex.		28.4
Dec. 28	do	do	do		24.1
Jan. 19	do	do	do		31.6
Apr. 7	do	do	do		46.0
June 8	do	do	do		34.0
July 1	North Fork of Guadalupe River.	Guadalupe River	8½ miles above Hunt, Tex.		[b]108,000
1	Guadalupe River	Gulf of Mexico	Above mouth of Johnson Creek, Ingram, Tex.		[b]206,000
1	do	do	Kerrville, Tex.		[b]196,000
1	Bear Creek	Guadalupe River	2 miles above mouth, Kerr County, Tex.		[b]17,200
1	South Fork of Guadalupe River.	do	8 miles above Hunt, Tex.		[b]84,300
2	Johnson Creek	do	½ mile below State fish hatchery, Kerr County, Tex.		[b]138,000
Feb. 16	San Marcos River	do	San Marcos-Austin highway bridge, San Marcos, Tex.		120
Mar. 22	do	do	do		159
May 4	do	do	do		136
June 25	do	do	do		132
July 19	do	do	do		135
Jan. 20	do	do	San Marcos-Luling highway bridge 1 mile below San Marcos, Tex.		119
Oct. 19	do	do	200 feet below highway bridge at Luling Country Club, Luling, Tex.		141
July 1	North Fork of Medina River.	do	½ mile below Irma school and 11 miles above mouth, Bandera County, Tex.		[b]40,200
1	Medina River	do	3 miles below Medina, Tex.		[b]47,600
1	Frio River	Nueces River	Rio Frio, Tex.		[b]128,000
2	do	do	About 5 miles above confluence with Sabinal River, Uvalde County, Tex.		[b]148,000
4 or 5	do	do	Dam site 7 miles north of Los Angeles, about 15 miles northeast of Cotulla, Tex.		[b]204,000
1	East Fork of Frio River.	Frio River	Below mouth of Bybee Creek and 7 miles north of Leakey, Tex.		[b]89,500
1	Dry Frio River	do	2.6 miles below Regan Wells, Tex.		[b]30,700
or 2	Sabinal River	do	Vanderpool, Tex.		[b]52,300
2	do	do	Sabinal, Tex.		[b]71,700
2	Hondo Creek	do	5 miles east of Hondo, Tex.		[b]74,800
2	Seco Creek	Hondo Creek	2½ miles north of D'Hanis, Tex.		[b]35,800
4	Leona River	Frio River	Former gaging station near Divot, Tex.	20.2	[b]49,300

[a] Gage height from United States Geological Survey recording gage set to same datum as United States Weather Bureau gage. Gages read slightly different, owing to location on Commerce Street Viaduct.

[b] Discharge determined by slope-area method.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1932					
Aug. 25	Rio Grande	Gulf of Mexico	On line between secs. 29 and 30, T. 40 N., R. 5 E., 6 miles west of Del Norte, Colo.	2.02	1,080
1931					
June 13	do	do	Sec. 22, T. 33 N., R. 11 E., 8 miles above Colorado-New Mexico State line, 10 miles east of Lobatos, Colo.	.78	41.4
July 9	do	do	do	.53	24.4
Aug. 1	do	do	do	.61	27.4
26	do	do	do	.52	14.0
Oct. 8	do	do	do	1.01	90.5
Nov. 6	do	do	do	.94	83.3
1932					
Apr. 15	do	do	do	1.38	248
May 13	do	do	do	2.90	1,690
Aug. 26	do	do	do	1.19	150
1931					
Aug. 31	do	do	Former gaging station near El Paso, Tex.	2.38	1,100
1932					
Jan. 11	do	do	do	1.12	170
May 25	do	do	do	2.42	984
July 29	do	do	do	2.71	1,420
1931					
Aug. 31	do	do	Former gaging station at Tornillo Bridge, near Fabens, Tex.	9.98	195
1932					
Jan. 10	do	do	do	10.18	146
May 23	do	do	do	9.46	37.3
1931					
Sept. 1	do	do	Former gaging station below old Fort Quitman, near Finlay, Tex.	1.48	100
1932					
Jan. 9	do	do	do	1.42	129
May 23	do	do	do	1.30	121
July 30	do	do	do	2.00	247
1931					
July 9	Rio Conejos	Rio Grande	Sec. 34, T. 33 N., R. 7 E., 5 miles west of Mogote, Colo.	1.77	138
1932					
Aug. 26	do	do	do	2.20	257
1931					
July 8	Cabresto Creek	Rio Colorado	Sec. 21, T. 29 N., R. 13 E., above Junior Ditch and 2 miles northeast of Questa, N.Mex.		13.4
8	do	do	Sec. 29, T. 29 N., R. 13 E., above Senior Ditch and 1½ miles northeast of Questa, N.Mex.		6.43
8	Lake Fork of Cabresto Creek.	Cabresto Creek	Sec. 13, T. 29 N., R. 13 E., above Cabresto Lake and 6 miles northeast of Questa, N.Mex.		6.75
8	do	do	Sec. 24, T. 29 N., R. 13 E., at mouth, 5 miles northeast of Questa, N.Mex.		4.56
1932					
Jan. 20	Rio Hondo	Rio Grande	Sec. 31, T. 27 N., R. 12 E., 200 yards above mouth and 2 miles west of Arroyo Hondo, N.Mex.	2.80	22.1
1930					
Oct. 30	Rio Santa Cruz	do	Sec. 17, T. 20 N., R. 10 E., at Cundiyo, N.Mex.	.22	9.63
Dec. 3	do	do	do	.40	11.6
30	do	do	do	.22	8.98
1931					
Jan. 31	do	do	do	.10	9.18

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931					
Apr. 17	Nambe Creek	Rio Grande	About 1½ miles southeast of Nambe, N.Mex.		5.07
May 6	do	do	do		19.3
23	do	do	do		29.0
June 16	do	do	do	0.40	18.6
26	do	do	do		8.94
July 1	do	do	do	.83	13.6
17	do	do	do	.47	7.03
Aug. 3	do	do	do	.33	7.44
4	do	do	do		8.15
1932					
June 11	do	do	do	1.32	32.0
21	do	do	do	1.27	20.2
July 29	do	do	do	1.24	10.4
Aug. 26	do	do	do	1.68	10.4
1931					
Apr. 17	Nambe Canal	Nambe Creek	do	.79	10.4
May 6	do	do	do	.84	.37
23	do	do	do	.65	6.41
June 26	do	do	do	.66	6.60
July 17	do	do	do	.32	.67
Aug. 3	do	do	do		0
1932					
June 11	do	do	do	.29	.49
21	do	do	do	.42	1.05
Aug. 26	do	do	do	.30	.56
1931					
June 5	Santa Fe Creek	Rio Grande	Sec. 19, T. 17 N., R. 11 E., above upper reservoir and 6½ miles east of Santa Fe, N.Mex.	.80	27.4
30	do	do	do	.39	6.61
July 2	do	do	do	.38	5.38
16	do	do	do	.25	2.93
Aug. 6	do	do	do	.32	4.72
Sept. 19	do	do	do	1.90	97.9
1932					
June 14	do	do	do	.55	10.1
Aug. 26	do	do	do	.51	9.84
1930					
Oct. 11	Rio Puerco	do	Atchison, Topeka & Santa Fe Railway bridge at Rio Puerco, N.Mex.		0
Nov. 10	do	do	do	.08	.90
Dec. 3	do	do	do	.07	.36
1931					
Jan. 6	do	do	do	.19	2.25
22	do	do	do	−.15	[a] 2.0
Feb. 12	do	do	do	.18	5.73
Mar. 5	do	do	do	.08	.69
28	do	do	do	.10	2.04
Apr. 27	do	do	do	.12	1.50
May 21	do	do	do	.21	15.7
June 8	do	do	do	−.15	0
23	do	do	do		[a] .3
July 14	do	do	do	.06	[a] .3
Aug. 5	do	do	do	.24	34.7
13	do	do	do	.18	[a] 15.
Sept. 21	do	do	do	.67	269.
Oct. 21	do	do	do	1.26	1,080.
Dec. 1	do	do	do	.07	[a] .7
27	do	do	do	.10	[a] 12.
1932					
Jan. 4	do	do	do	.03	0
Feb. 10	do	do	do	.82	458.
Mar. 17	do	do	do	.17	8.86
Apr. 9	do	do	do	.24	18.6
May 18	do	do	do	.48	77.6
June 10	do	do	do	.03	[a] .05
July 9	do	do	do	.05	[a] 1.0
Aug. 18	do	do	do	1.70	1,250.
Sept. 11	do	do	do	.02	[a] .30

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
1932				*Feet*	*Sec.-ft.*
Sept. 7	La Jara Creek	San Jose Arroyo	SE¼SE¼ sec. 28, T. 22 N., R. 1 W., opposite second venturi flume in La Jara community ditch 1, 2 miles northeast of La Jara, N.Mex.		0.05
7	do	do	SE¼SE¼ sec. 29, T. 22. N., R. 1 W., about ¾ mile above old earth dam and 1½ miles northeast of La Jara, N.Mex.		.09
July 26	do	do	NW¼NE¼ sec. 32, T. 22 N., R. 1 W., about 1,600 feet above old earth dam and 1 mile north of La Jara, N.Mex.		.20
Aug. 1	do	do	do		.19
2	do	do	do		.19
Sept. 7	do	do	do		.11
7	do	do	NE¼NW¼ sec. 32, T. 22 N., R. 1 W., about 650 feet above old earth dam and 1 mile north of La Jara, N.Mex.		.14
7	do	do	NE¼NW¼ sec. 32, T. 22 N., R. 1 W., 100 feet upstream from old earth dam and 1 mile north of La Jara, N.Mex.		.18
July 26	do	do	NE¼NW¼ sec. 32., T. 22 N., R. 1 W., at old earth dam 1 mile north of La Jara N.Mex.		.27
Aug. 1	do	do	do		.25
2	do	do	do		.16
Sept. 7	do	do	do		.20
7	do	do	NE¼NW¼ sec. 32, T. 22 N., R. 1 W., 300 feet below old earth dam and 1 mile north of La Jara, N.Mex.		.19
7	La Jara Community Ditch 1.	La Jara Creek	SW¼SW¼ sec. 28, T. 22 N., R. 1 W., about ¾ mile above old earth dam and 1½ miles northeast of La Jara, N.Mex.		0
1931					
Oct. 3	Alamosa River	Rio Grande	Sec. 35, T. 8 S., R. 7 W., 14 miles northwest of Monticello, N.Mex.		12.9
3	do	do	Sec. 3, T. 9 S., R. 7 W., 12 miles northwest of Monticello, N.Mex.		8.78
3	do	do	Sec. 23, T. 9. S., R. 7 W., 9½ miles northwest of Monticello, N.Mex.		8.44
3	do	do	Sec. 7, T. 10 S., R. 6 W., 6 miles northwest of Monticello, N.Mex.		8.58
3	do	do	Sec. 19, T. 10 S., R. 6 W., 3 miles northwest of Monticello, N.Mex.		1.73
3	Monticello Ditch	Alamosa River	Sec. 7, T. 10 S., R. 6 W., 6 miles northwest of Monticello, N.Mex.		3.11
Apr. 20	Cuchillo Negro Creek	Rio Grande	Sec. 21, T. 12 S., R. 6 W., at upper box, 5½ miles west of Cuchillo, N.Mex.		4.07
June 21	do	do	do		2.79
Apr. 20	do	do	Sec. 2, T. 12 S., R. 6 W., at second box, 5 miles west of Cuchillo, N.Mex.		3.98
June 21	do	do	do		3.20
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W., at lower end of proposed no. 2 siphon, 4½ miles west of Cuchillo, N.Mex.		3.75
June 21	do	do	do		3.01

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931 Apr. 20	Cuchillo Negro Creek	Rio Grande	Sec. 22, T. 12 S., R. 6 W., at lower end of proposed no. 3 siphon, 4 miles west of Cuchillo, N.Mex.		3.50
June 21	do	do	do		2.68
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W., at end of proposed no. 4 siphon, 4 miles west of Cuchillo, N.Mex.		2.92
June 21	do	do	do		2.69
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W., at head of proposed no. 5 siphon, 4 miles west of Cuchillo, N.Mex.		3.43
June 21	do	do	do		2.50
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W., at end of proposed no. 5 siphon, 4 miles west of Cuchillo, N.Mex.		3.04
June 21	do	do	do		2.87
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W. at head of proposed no. 6 siphon, 3½ miles west of Cuchillo, N.Mex.		3.09
June 21	do	do	do		2.86
Apr. 20	do	do	Sec. 22, T. 12 S., R. 6 W., at end of proposed no. 6 siphon, 3½ miles west of Cuchillo, N.Mex.		2.69
June 21	do	do	do		2.44
Apr. 20	do	do	Sec. 23, T. 12 S., R. 6 W., 3 miles west of Cuchillo, N.Mex.		2.56
June 21	do	do	do		2.28
Apr. 20	do	do	Sec. 24, T. 12 S., R. 6 W., 3 miles west of Cuchillo, N.Mex.		2.17
June 21	do	do	do		1.79
Apr. 20	do	do	Sec. 24, T. 12 S., R. 6 W., above head of Cuchillo Ditch and 2½ miles west of Cuchillo, N.Mex.		2.21
June 21	do	do	do		1.55
21	do	do	About sec. 25, T. 12 S., R. 6 W., 2 miles west of Cuchillo, N.Mex.		1.58
21	do	do	About sec. 25, T. 12 S., R. 6 W., 1½ miles west of Cuchillo, N.Mex.		1.36
May 1	Las Palomas Creek	do	About sec. 5, T. 13 S., R. 6 W., below springs and 15 miles northwest of Las Palomas, N.Mex.		14.0
1	do	do	About sec. 4, T. 13 S., R. 6 W., 1 mile below springs and 15 miles northwest of Las Palomas, N.Mex.		18.4
1	do	do	About sec. 23, T. 13 S., R. 6 W., 5 miles below springs and 11 miles morthwest of Las Palomas, N.Mex.		8.47
2	do	do	Sec. 31, T. 13 S., R. 5 W., 2.8 miles above dam site and 8 miles northwest of Las Palomas, N.Mex.		2.20
June 22	do	do	do		0
Oct. 4	do	do	Sec. 31, T. 13 S., R. 5 W., 2.4 miles above dam site and 8 miles northwest of Las Palomas, N.Mex.		.31
June 22	do	do	Sec. 31, T. 13 S., R. 5 W., 2 miles above dam site and 7½ miles northwest of Las Palomas, N.Mex.		.50

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931					
May 2	Las Palomas Creek	Rio Grande	Sec. 6, T. 14 S., R. 5 W., 1.8 miles above dam site and 7 miles northwest of Las Palomas, N.Mex.		4.45
June 22	do	do	do		1.74
Oct. 4	do	do	do		3.02
May 2	do	do	Sec. 5, T. 14 S., R. 5 W., 1.3 miles above dam site and 7 miles northwest of Las Palomas, N.Mex.		5.92
June 22	do	do	do		1.73
Oct. 4	do	do	do		3.46
May 2	do	do	Sec. 5, T. 14 S., R. 5 W., 1 mile above dam site and 6½ miles northwest of Las Palomas, N.Mex.		7.88
2	do	do	Sec. 8, T. 14 S., R. 5 W., 0.8 mile above dam site and 6 miles northwest of Las Palomas, N.Mex.	0.86	7.64
23	do	do	do	.76	4.19
June 9	do	do	do	.77	4.65
22	do	do	do	.76	3.20
July 19	do	do	do	.35	4.29
Aug. 26	do	do	do	.36	5.10
Sept. 16	do	do	do	.50	4.86
Oct. 4	do	do	do	.66	5.61
Nov. 5	do	do	do	.64	5.06
18	do	do	do	.64	5.28
1932					
Jan. 16	do	do	do	.66	5.35
Feb. 3	do	do	do	.64	5.12
Mar. 18	do	do	do	.64	4.90
Apr. 26	do	do	do	.61	4.40
May 29	do	do	do	.60	4.75
June 18	do	do	do	.56	4.05
Aug. 3	do	do	do	.73	4.34
Sept. 9	do	do	do	1.02	4.80
1931					
May 1	do	do	Sec. 8, T. 14 S., R. 5 W., above ditch heading, 5½ miles northwest of Las Palomas, N.Mex.		8.86
June 22	do	do	do		3.24
Oct. 4	do	do	do		4.56
May 1	do	do	Sec. 9, T. 14 S., R. 5 W., at dam site 5½ miles northwest of Las Palomas, N. Mex.		7.18
May 2	Ditch	Las Palomas Creek	Sec. 31, T. 13 S., R. 5 W., 2.4 miles above dam site and 8 miles northwest of Las Palomas, N.Mex.		2.76
June 22	do	do	do		e.01
22	do	do	Sec. 9, T. 14 S., R. 5 W., 5½ miles northwest of Las Palomas, N.Mex.		2.87
Sept. 1	Tornillo drain	Rio Grande	At mouth, ½ mile southwest of Alamo Alto, Tex.		102
1932					
Jan. 10	do	do	do	1.20	56.6
May 24	do	do	do	1.26	82.6
July 30	do	do	do	1.91	98.7
May 24	Tornillo Canal	do	Just above head of Hudspeth Canal, 2 miles southeast of Alamo Alto, Tex.		87.2
July 30	do	do	do		173
1931					
Sept. 1	do	do	At mouth, 2 miles southeast of Alamo Alto, Tex.		44.9
1932					
Jan. 10	do	do	do		0

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basin in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931 Sept. 1	Hudspeth Canal	Tornillo Canal	At head, 2 miles southeast of Alamo Alto, Tex.		128
1932 Jan. 10	do	do	do		0
May 24	do	do	do	2.56	78.8
July 30	do	do	do	3.12	129
Mar. 2	North drain of Fort Sumner irrigation district.	Pecos River	On line between secs. 10 and 15, T. 2 N., R. 26 E., at mouth, 6 miles southeast of Fort Sumner, N.Mex.		1.28
Apr. 6	do	do	do		1.50
May 12	do	do	do		5.62
June 18	do	do	do		5.34
July 9	do	do	do		4.85
27	do	do	do		6.41
Aug. 25	do	do	do		5.97
Sept. 17	do	do	do		5.46
Mar. 2	South drain of Fort Sumner irrigation district.	do	SE¼ sec. 35, T. 2 N., R. 26 E., at mouth, 10 miles southeast of Fort Sumner, N.Mex.		2.52
Apr. 6	do	do	do		2.57
May 12	do	do	do		3.84
June 18	do	do	do		2.28
July 9	do	do	do		3.22
27	do	do	do		1.94
Aug. 25	do	do	do		2.08
Sept. 17	do	do	do		1.54
1930 Nov. 11	Hondo River	do	Sec. 10, T. 11 S., R. 17 E., 0.4 mile below gaging station and 1 mile southeast of Hondo, N.Mex.		20.0
1931 May 22	do	do	do		[b] 72.8
28	do	do	do		[b] 39.6
June 22–25.[c]	do	do	do		[b] 11.1
July 31	do	do	do		[b] 10.2
1930 Nov. 11	do	do	Sec. 11, T. 11 S., R. 17 E., below pumping plant and ½ mile west of Tinnie, N.Mex.		20.2
12	do	do	do		18.7
1931 May 28–29.[c]	do	do	do		[b] 36.9
June 22–25.[c]	do	do	do		[b] 4.9
1930 Nov. 12	do	do	Sec. 12, T. 11 S., R. 17 E., 1½ miles below pumping plant and 1 mile east of Tinnie, N.Mex.		20.8
12	do	do	Sec. 16, T. 11 S., R. 18 E., at highway bridge 1 mile northwest of Picacho, N.Mex.		26.6
1931 May 28–29.[c]	do	do	do		[b] 28.0
June 22–25.[c]	do	do	do		[b] 4.1
1930 Nov. 12	do	do	Sec. 14, T. 11 S., R. 18 E., at Picacho, N.Mex.		23.7
12	do	do	Sec. 24, T. 11 S., R. 18 E., at Circle Diamond Dam, 1½ miles southeast of Picacho, N.Mex.		31.7
Dec. 5	do	do	do		33.0

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931 Apr. 24–25.[c]	Hondo River	Pecos River	Sec. 30, T. 11 S., R. 19 E., at Montano Dam, 2½ miles southeast of Picacho, N.Mex.		[b] 197
May 28–29.[c]	do	do	do		[b] 34.4
June 22–25.[c]	do	do	do		[b] 10.6
July 24	do	do	do		[b] 18.5
1930 Dec. 5	do	do	Sec. 30, T. 11 S., R. 19 E., 0.7 mile below Montano Dam and 4 miles southeast of Picacho, N.Mex.		25.8
5	do	do	SW¼ sec. 21, T. 11 S., R. 19 E., 5½ miles southeast of Picacho, N.Mex.		26.5
5	do	do	NW¼ sec. 26, T. 11 S., R. 19 E., 7 miles southeast of Picacho, M.Nex.		26.9
1931 Apr. 24–25.[c]	do	do	do		[b] 188
1930 Dec. 5	do	do	About sec. 30, T. 11 S., R. 20 E., at Border Ranch, 9 miles southeast of Picacho, N.Mex.		14.7
1931 Apr. 24	do	do	do		[b] 181
25	do	do	do		[b] 188
May 12	do	do	do		[b] 187
19	do	do	do		[b] 140
28–29 [c]	do	do	do		[b] 15.3
July 3	do	do	do		[b] 230
Aug. 9	do	do	do		[b] 208
12	do	do	do		[b] 154
21	do	do	do		[b] 45.4
1930 Dec. 5	do	do	Sec. 32, T. 11 S., R. 20 E., below head of Bar H Ditch and 10 miles southeast of Picacho, N.Mex.		16.2
5	do	do	Sec. 34, T. 11 S., R. 20 E., above head of Diamond A Ditch and 12 miles southeast of Picacho, N.Mex.		14.4
1931 May 28–29.[c]	do	do	do		[b] 14.4
1930 Dec. 5	do	do	Sec. 34, T. 11 S., R. 20 E., below head of Diamond A ditch and 12 miles southeast of Picacho, N.Mex.		[c] 1.04
1931 Apr. 24–25.[c]	do	do	do		[b] 184
May 12	do	do	do		[b] 140
19	do	do	do		[b] 81.8
Aug. 21	do	do	do		[b] 24.8
May 12	do	do	About sec. 21, T. 11 S., R. 21 E., below head of Diamond A flood ditch and 20 miles southeast of Picacho, N. Mex.		[b] 128
Aug. 5	do	do	do		[b] 81.2
9	do	do	do		[b] 151
Aug. 12	do	do	do		[b] 130
21	do	do	do		[b] 20.5

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931 Apr. 24–25.[c]	Hondo River	Pecos River	About sec. 6, T. 12 S., R. 22 E., at Break, 15 miles southwest of Roswell, N. Mex.		[b] 142
May 12	do	do	do		[b] 88.9
19	do	do	do		[b] 29.3
July 3	do	do	do		[b] 98
Aug. 5	do	do	do		[b] 65.0
9	do	do	do		[b] 141
12	do	do	do		[b] 110
21	do	do	do		[b] 0
Apr. 24–25.[c]	do	do	Sec. 4, T. 12 S., R. 22 E., 14 miles southwest of Roswell, N.Mex.		[b] 106
May 12	do	do	do		[b] 54.4
19	do	do	do		[b] 16.5
Aug. 5	do	do	do		[b] 58.5
9	do	do	do		[b] 105
12	do	do	do		[b] 51.7
Apr. 24–25.[c]	do	do	NE¼ sec. 34, T. 11 S., R. 22 E., at Hondo Reservoir inlet, 12 miles southwest of Roswell, N.Mex.		[b] 102
May 12	do	do	do		[b] 51.1
May 19	do	do	do		[b] 12.6
Apr. 24–25.[c]	do	do	About sec. 5, T. 12 S., R. 23 E., at second diversion below reservoir, 9 miles southwest of Roswell, N. Mex.		[b] 84.1
May 12	do	do	do		[b] 37.6
Apr. 24–25.[c]	do	do	About sec. 26, T. 11 S., R. 23 E., above third diversion below reservoir and 5 miles southwest of Roswell, N.Mex.		[b] 82.5
May 12	do	do	do		[b] 35.2
Apr. 24–25.[c]	do	do	About sec. 5, T. 11 S., R. 24 E., at Roswell, N.Mex.		[b] 67.6
May 12	do	do	do		[b] 12.6
1930 Nov. 10	Rio Bonito	Rio Hondo	Sec. 12, T. 10 S., R. 12 E., below forks and 4½ miles northwest of Angus, N. Mex.		.30
10	do	do	Sec. 12, T. 10 S., R. 12 E., 0.2 mile below dam and 4 miles northwest of Angus, N.Mex.		.22
1931 Apr. 11–14.[c]	do	do	do		[b] 52.2
June 8	do	do	do		[b] 6.0
18	do	do	do		[b] 5.0
22–25.[c]	do	do	do		[b] 2.8
1930 Nov. 10	do	do	Sec. 7, T. 10 S., R. 13 E., 0.7 mile below dam and 3½ miles northwest of Angus, N.Mex.		[b] .18
1931 Apr. 11–14.[c]	do	do	Sec. 7, T. 10 S., R. 13 E., 0.2 mile below small canyon and 3½ miles northwest of Angus, N.Mex.		[b] 55.5
1930 Nov. 10	do	do	Sec. 8, T. 10 S., R. 13 E., below mouth of Philadelphia Canyon, 1¾ miles west of Angus, N. Mex.		[e] .01
10	do	do	Sec. 8, T. 10 S., R. 14 E., above Granite reef and 12 miles southwest of Lincoln, N.Mex.		.03
10	do	do	Sec. 4, T. 10 S., R. 14 E., below Granite reef and 12 miles southwest of Lincoln, N.Mex.		.02

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930 Nov. 10	Rio Bonito	Rio Hondo	On Fort Stanton Marine Hospital Reservation, at head of Stanton Ditch 2, 9½ miles west of Lincoln, N.Mex.		0.07
1931 Apr. 11	do	do	do		[b] 49.3
June 18	do	do	do		[b] 4.4
22	do	do	do		[b] 2.5
1930 Nov. 10	do	do	Sec. 25, T. 9 S., R. 14 E., at Fort Stanton Bridge, 8 miles west of Lincoln, N. Mex.		0
1931 Apr. 11	do	do	do		[b] 46.2
Apr. 12	do	do	do		[b] 53.9
June 8	do	do	do		[b] 5.1
18	do	do	do		[b] 4.3
22	do	do	do		[b] 1.7
1930 Nov. 10	do	do	Sec. 20, T. 9 S., R. 15 E., at lower end of Fort Stanton, 6½ miles northwest of Lincoln, N.Mex.		0
1931 Apr. 12	do	do	do		[b] 46.7
1930 Nov. 10	do	do	Sec. 16, T 9 S., R. 15 E., above Government springs and 6 miles northwest of Lincoln, N.Mex		0
1931 Apr. 12	do	do	do		[b] 50.5
June 18	do	do	do		[b] 3.2
22	do	do	do		[b] .1
1930 Nov. 10	do	do	Sec. 15, T. 9 S., R. 15 E., above Salado Creek and 5 miles northwest of Lincoln, N.Mex.		2.42
11	do	do	do		2.42
1931 June 22–25.	do	do	do		[b] 3.9
July 24	do	do	do		[b] 1.15
1930 Nov. 12	do	do	Sec. 14, T. 9 S., R. 15 E., at Salazar Canyon, 4½ miles northwest of Lincoln N.Mex.		1.65
1931 June 22–25.[c]	do	do	do		[b] .6
Apr. 11–14.[c]	do	do	Sec. 13, T. 9 S., R. 15 E., below head of Providencia Ditch and 4 miles northwest of Lincoln, N.Mex.		[b] 66.6
1930 Nov. 13	do	do	Sec. 19, T. 9 S., R. 16 E., below head of Lincoln Ditch and 1½ miles northwest of Lincoln, N. Mex.		1.79
1931 Apr. 11–14.[c]	do	do	do		[b] 64.2
June 22–25.	do	do	Sec. 19, T. 9 S., R. 16 E., at Lincoln Canyon, 1¼ miles northwest of Lincoln N.Mex.		[b] .7

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930 Nov. 13	Rio Bonito	Rio Hondo	SE¼SW¼ sec. 28, T. 9 S., R. 16 E., at first dike below Lincoln, N.Mex.		3.52
13	do	do	NW¼ sec. 33, T. 9 S., R. 16 E., above head of Hulbert Ditch 1, at Lincoln, N.Mex.		3.64
1931 Apr. 11–14.[c]	do	do	do		[b] 53.5
May 23	do	do	do		[b] 11.0
June 22–25.[c]	do	do	do		[b] 4.1
22–25[c]	do	do	do		[b] 4.2
1930 Nov. 13	do	do	NE¼ sec. 33, T. 9 S., R. 16 E., ½ mile below head of Hulbert Ditch 1, at Lincoln, N.Mex.		3.81
Nov. 13	do	do	Sec. 2, T. 10 S., R. 16 E., 2 miles above Las Chosas Ditch and 3 miles southeast of Lincoln, N.Mex.		3.92
11	do	do	Sec. 12, T. 10 S., R. 16 E., above head of Las Chosas Ditch and 5 miles southeast of Lincoln, N.Mex.		4.94
13	do	do	do		5.00
1931 June 18	do	do	do		[b] 13.4
22–25[c]	do	do	do		[b] 3.5
22–25[c]	do	do	SE¼ sec. 12, T. 10 S., R. 16 E., below Las Chosas Dam and 4½ miles northwest of Hondo, N.Mex.		[b] .6
1930 Nov. 11	do	do	Sec. 19, T. 10 S., R. 17 E., 0.7 mile above highway bridge and 3½ miles northwest of Hondo, N.Mex.		3.43
11	do	do	Sec. 19, T. 10 S., R. 17 E., at highway bridge 3 miles northwest of Hondo, N. Mex.		3.08
1931 June 18	do	do	do		[b] 6.7
22–25[c]	do	do	do		[b] 0
1930 Nov. 10	North Fork of Rio Bonito.	Rio Bonito	Sec. 12, T. 10 S., R. 11 E., 1 mile above mouth and 6 miles northwest of Angus, N.Mex.		.27
10	Tanbark Canyon	North Fork of Rio Bonito.	Sec. 3, T. 10 S., R. 11 E., at mouth, 7 miles northwest of Angus, N.Mex.		.06
10	E.P. & S.W. pipe line.	Rio Bonito	Sec. 12, T. 10 S., R. 12 E., below dam and 4½ miles northwest of Angus, N. Mex.		.08
1931 Apr. 11–14.[c]	Small Canyon	do	Sec. 7, T. 10 S., R. 13 E., 3½ miles northwest of Angus, N.Mex.		[b] .1
11–14[c]	Mills Canyon	do	About sec. 9, T. 10 S., R. 13 E., 1 mile northwest of Angus, N.Mex.		[b] .1
June 8	do	do	do		[b] .1

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930 Nov. 10	Stanton Ditch 2	Rio Bonito	On Fort Stanton Marine Hospital Reservation, at head, 7½ miles northeast of Angus, N.Mex.		0
1931 Apr. 11	do	do	do		[b] 1.00
June 8	do	do	do		[b] 1.4
18	do	do	do		[b] 1.0
22	do	do	do		.6
1930 Nov. 11	Government Springs Ditch.	do	SW¼ sec. 15, T. 9 S., R. 15 E., at head, 5½ miles northwest of Lincoln, N.Mex.		.11
1931 Apr. 12	do	do	do		[b] 4.7
1930 Nov. 12	Salado Creek	do	SE¼ sec. 15, T. 9 S., R. 15 E., at mouth, 5 miles northwest of Lincoln, N.Mex.		.39
1931 Apr. 11–14.[c]	do	do	do		[b] .7
June 18	do	do	do		[b] .6
22–25.[c]	do	do	do		[b] .5
Apr. 11–14.[c]	Cruz de Jara Ditch	do	Sec. 14, T. 9 S., R. 15 E., at head, 4 miles northwest of Lincoln, N.Mex.		[b] 0.3
June 22–25.[c]	do	do	do		[b] 1.9
Apr. 11–14.[c]	Sedillo Ditch	do	Sec. 14, T. 9 S., R. 15 E., at head, 4 miles northwest of Lincoln, N.Mex.		[b] 1.6
June 22–25.[c]	do	do	do		[b] .3
1930 Nov. 12	Providencia Ditch	do	Sec. 14, T. 9 S., R. 15 E., at head, 4 miles northwest of Lincoln, N.Mex.		.92
1931 Apr. 11–14.[c]	do	do	do		[b] 3.2
June 22–25.[c]	do	do	do		[b] .8
Apr. 11–14.[c]	Protectora Ditch	do	Sec. 19, T. 9 S., R. 16 E., 2½ miles northwest of Lincoln, N.Mex.		[b] 2.8
June 22–25.[c]	do	do	do		[b] 2.2
Apr. 11–14.[c]	Lincoln Ditch	do	Sec. 19, T. 9 S., R. 16 E., 1½ miles northwest of Lincoln, N.Mex.		[b] 2.6
June 22–25.[c]	do	do	do		[b] 1.2
Apr. 11–14.[c]	Titsworth Ditch	do	Sec. 20, T. 9 S., R. 16 E., 1½ miles northwest of Lincoln, N.Mex.		[b] 2.5
June 22–25.[c]	do	do	do		[b] .5
Apr. 11–14.[c]	North Laws Ditch	do	Sec. 29, T. 9 S., R. 16 E., at Lincoln, N.Mex.		[b] 1.9
Apr. 11–14.[c]	South Laws Ditch	do	do		[b] 3.1
June 22–25.[c]	do	do	do		[b] 1.4
1930 Nov. 13	Hulbert Ditch 1	do	NE¼NW¼ sec. 33, T. 9 S., R. 16 E., at head, at Lincoln, N.Mex.		[b] .60
1931 May 23	do	do	do		[b] 5.0
June 22–25.	do	do	do		[b] 4.4
May 23	F. Chavez Ditch	do	Sec. 34, T. 9 S., R. 16 E., 1½ miles southeast of Lincoln, N.Mex.		[b] 3.0
June 22–25.[c]	do	do	do		[b] 2.6

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930 Nov. 13	Waste from Hulbert Ditch 1.	Rio Bonito	Sec. 2, T. 10 S., R. 16 E., 1½ miles above Las Chosas Ditch and 3 miles southeast of Lincoln, N.Mex.		[a]0.05
11	Las Chosas Ditch	do	Sec. 12, T. 10 S., R. 16 E., at head, 5 miles northwest of Hondo, N.Mex.		1.30
1931 June 18	do	do	do		[b]2.1
22–25.[c]	do	do	do		[b]2.4
1930 Nov. 11	E. Vigil Ditch	do	do		.88
1931 June 18	do	do	do		[b]1.2
22–25.[c]	do	do	do		[b].3
1930 Nov. 11	E. Fritz Spring Ditch	do	do		.44
10–13 [c]	H. Fritz Spring, waste to river.	do	SE¼ sec. 29, T. 10 S., R. 17 E., 1½ miles northeast of Hondo, N.Mex.		.4
1931 June 18	Bradstreet and Vorwerk Ditch.	do	Sec. 29, T. 10 S., R. 17 E., 1½ miles northeast of Hondo, N.Mex.		[b]6.1
22–25 [c]	do	do	do		[b]1.5
18	Kirkland Ditch	do	Sec. 32, T. 10 S., R. 17 E., at Hondo, N.Mex.		[b].6
18	Gonzales Ditch	do	do		[b].2
1930 Nov. 11	Chavez Spring, waste to river.	do	Sec. 9, T. 11 S., R. 17 E., 1 mile southeast of Hondo, N.Mex.		.8
1931 May 22	do	do	do		[b].1
1930 Nov. 10–13.[c]	P. Chavez Ditch, waste from.	do	Sec. 10, T. 11 S., R. 17 E., 1,000 feet above mouth of Bonito River and ½ mile south of Hondo, N.Mex.		1.74
1931 May 28	do	do	do		[b]1.0
29	do	do	do		[b]1.6
June 22–25.[c]	do	do	do		[b].1
May 28–29.[c]	North Analla Ditch	Rio Hondo	SW¼ sec. 11, T. 11 S., R. 17 E., 1 mile west of Tinnie, N.Mex.		[b]3.8
28–29 [c]	South Analla Ditch	do	do		[b]1.6
June 22–25.[c]	do	do	do		[b].6
22–25 [c]	Pastores Ditch	do	do		[b]4.8
1930 Nov. 10–13.[c]	Analla Spring, waste to river.	do	SW¼ sec. 12, T. 11 S., R. 17 E., ½ mile south of Tinnie, N.Mex.		1.1
1931 May 28–29.[c]	do	do	do		[b].4
June 22–25.[c]	do	do	do		[b].4
May 28–29.[c]	Serrano Ditch	do	Sec. 12, T. 11 S., R. 17 E., ½ mile southwest of Tinnie, N.Mex.		[b]4.8
June 22–25.[c]	do	do	do		[b]1.4
May 28–29.[c]	Buck Guys Ditch	do	NW¼ sec. 17, T. 11 S., R. 18 E., 2½ miles east of Tinnie, N.Mex.		[b]6.5
June 22–25.[c]	do	do	do		[b]2.7
May 28–29.[c]	Picacho Ditch	do	NE¼ sec. 16, T. 11 S., R. 18 E., 1 mile northwest of Picacho, N.Mex.		[b]7.6
June 22–25.[c]	do	do	do		[b]5.2

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930 Dec. 5	Montano Ditch	Rio Hondo	Sec. 30, T. 11 S., R. 19 E., at head, 3 miles southeast of Picacho, N.Mex.		4.23
1931 Apr. 24–25.[c]	do	do	do		[b] 5.4
May 28–29.[c]	do	do	do		[b] 4.8
June 22–25.[c]	do	do	do		[b] 4.7
Apr. 24–25.[c]	Michaelis Ditch	do	do		[b] 3.8
May 28–29.[c]	do	do	do		[b] 7.2
June 22–25.[c]	do	do	do		[b] 4.6
Apr. 24–25.[c]	Montano Ditch, waste from.	do	Sec. 21, T. 11 S., R. 19 E., 5 miles southeast of Picacho, N.Mex.		[b] 4.6
May 28–29.[c]	do	do	do		[b] 3.7
Apr. 24–25.[c]	Michaelis Ditch, waste from.	do	do		[b] 3.2
May 28–29.[c]	do	do	do		[b] 2.5
1930 Dec. 5	Border Ditch	do	Sec. 36, T. 11 S., R. 19 E., at head, 3½ miles southeast of Picacho, N.Mex.		[b] 4.6
1931 Apr. 24–25.[c]	do	do	do		[b] 7.8
May 28–29.[c]	do	do	do		[b] 7.2
1930 Dec. 5	Border Ditch, waste from.	do	Sec. 32, T. 11 S., R. 20 E., 9 miles southeast of Picacho, N.Mex.		4.5
1931 Apr. 24–25.[c]	do	do	do		[b] 6.8
May 28–29.[c]	do	do	do		[b] 1.2
1930 Dec. 5	Bar H Ditch	do	Sec. 32, T. 11 S., R. 20 E., at head, 9¼ miles southeast of Picacho, N.Mex.		[a] 2.98
1931 May 12	do	do	do		[b] .2
19	do	do	do		[b] 6.0
28–29.[c]	do	do	do		[b] 5.1
July 3	do	do	do		[b] 10
Aug. 9	do	do	do		[b] 6.5
12	do	do	do		[b] 6.3
21	do	do	do		0
1930 Dec. 5	Diamond A Ditch	do	NW¼ sec. 34, T. 11 S., R. 20 E., 10½ miles southeast of Picacho, N.Mex.		13.4
1931 Apr. 24–25.[c]	do	do	do		[b] 14.0
May 12	do	do	do		[b] 14.9
19	do	do	do		[b] 27.4
July 3	do	do	do		[b] 35.0
Aug. 9	do	do	do		[b] 25.0
12	do	do	do		0
21	do	do	do		[b] 22.7
Apr. 24–25.[c]	Diamond A Flood Ditch.	do	Sec. 21, T. 11 S., R. 21 E., 16 miles southeast of Picacho, N.Mex.		[b] 8.0
24–25.[c]	Third diversion	do	About sec. 26, T. 11 S., R. 23 E., at head, 5 miles southwest of Roswell, N.Mex.		[b] 10.0
May 12	do	do	do		[b] 7.4

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931					
Dec. 20	Cottonwood Creek	Pecos River	SE¼NW¼NE¼ sec.7, T. 16 S., R. 25 E., at Worley Farm, 10 miles southwest of Lake Arthur, N.Mex.	1.44	0.71
1932					
Jan. 5	do	do	do	1.48	.80
Feb. 11	do	do	do	1.52	.85
11	do	do	do	1.52	[b].81
27	do	do	do	1.45	.69
Mar. 8	do	do	do	1.44	.69
27	do	do	do	1.50	.87
Apr. 8	do	do	do	1.38	[b].59
May 3	do	do	do	1.72	2.56
20	do	do	do	1.76	3.29
June 18	do	do	do	1.35	[b]0.29
26	do	do	do	1.31	.23
July 27	do	do	do	1.35	.13
Aug. 7	do	do	do	1.34	[b].37
Sept. 9	do	do	do	1.66	[b]2.53
16	do	do	do	1.66	2.77
1931					
Dec. 20	do	do	E½ lot 14, sec. 4, T. 16 S., R. 25 E., at O'Bannon Farm, 7 miles southwest of Lake Arthur, N.Mex.	1.39	6.58
1932					
Jan. 5	do	do	do	1.54	10.1
27	do	do	do	1.38	[b]9.23
Feb. 11	do	do	do	1.31	[b]7.29
27	do	do	do	1.28	8.00
Mar. 8	do	do	do	1.26	7.27
27	do	do	do	1.08	3.50
Apr. 8	do	do	do	1.16	[b]4.44
May 3	do	do	do	1.19	4.89
20	do	do	do	1.25	4.32
June 26	do	do	do	1.36	3.71
July 27	do	do	do	1.40	2.57
27	do	do	do	1.40	3.22
Aug. 13	do	do	do	1.35	[b]3.07
Sept. 16	do	do	do	1.71	5.71
1931					
Dec. 21	do	do	E½ lot 15, sec. 4, T. 16 S., R. 26 E., at Manda Farm, 3½ miles south of Lake Arthur, N.Mex.	1.84	11.4
1932					
Jan. 5	do	do	do	2.00	13.5
Feb. 12	do	do	do	1.29	[b]6.45
1931					
Dec. 20	A. D. Hill Ditch	Cottonwood Creek	SE¼NW¼NE¼ sec.7, T.16 S., R. 25 E., at head, 10 miles southwest of Lake Arthur, N.Mex.	.....	2.50
1932					
Jan. 5	do	do	do	.....	2.48
Mar. 8	do	do	do	.....	2.58
27	do	do	do	.50	2.48
May 3	do	do	do	.45	2.20
20	do	do	do	.....	0
June 26	do	do	do	.37	1.43
July 27	do	do	do	.46	2.54
Mar. 8	Hersey-Norton Ditch	do	NE¼SE¼SW¼ sec. 2, T.16 S., R. 25 E., about 7 miles southwest of Lake Arthur, N.Mex.	.49	2.55
Aug. 3	Comanche Springs	Pecos River	½ mile below bath house, Fort Stockton, Tex.	.....	40.9
Aug. 24	do	do	do	.....	45.0
Sept. 14	do	do	do	.....	44.3
Sept. 1	Dry Devils River	Devils River	1 mile above mouth, Val Verde County, Tex.	.....	[d]129,000

See footnotes at end of table.

Miscellaneous discharge measurements in Rio Grande Basin and interior basins in New Mexico during the years ending Sept. 30, 1931–32—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Mar. 25	Alamo Creek	Tularosa Valley Basin	Sec. 7, T. 17 S., R. 11 E., just below mouth of Duncan's canyon, 7 miles southeast of Alamogordo, N.Mex.	0.40	2.16
May 1	do	do	do	.38	1.84
21	do	do	do	.38	2.41
June 24	do	do	do	.39	1.86
July 28	do	do	do	.03	[e].02
1930					
Nov. 26	Mimbres River	Mimbres River Basin	Sec. 23, T. 21 S., R. 11 W., at highway bridge 1½ miles northeast of Spalding, N.Mex.	----	4.52
26	Ditch	Mimbres River	Sec. 6, T. 20 S., R. 10 W., 6 miles northeast of Faywood Hot Springs, N. Mex.	----	.92

[a] Estimated.
[b] Furnished by State engineer of New Mexico.
[c] Measurement made within period given, exact date not known.
[d] Determined by slope-area method.

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