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HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 898

SURFACE WATER SUPPLY *of the* UNITED STATES

1940

PART 8

WESTERN GULF OF MEXICO BASINS

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In cooperation with the States of
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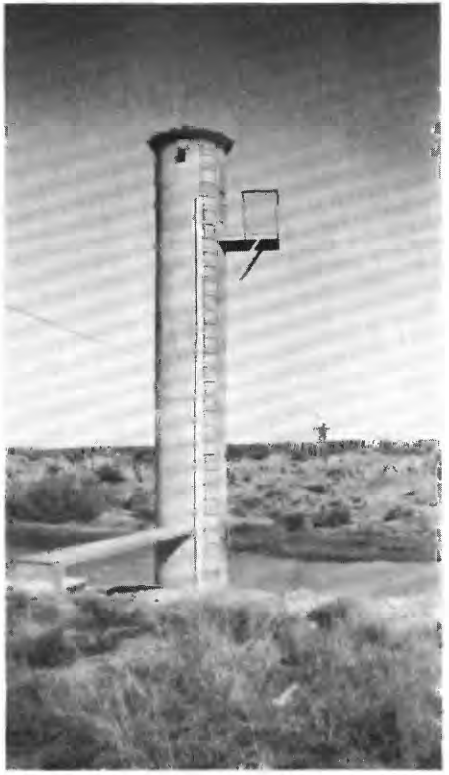

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GAGING-STATION STRUCTURES.

SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1940. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 8,800 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1940, 4,760 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

"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 draining from it in a given period were uniformly distributed on its surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

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

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons and represents a run-off of 0.0372 inch from one square mile.

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

"Control" is a term used to designate a feature below the gage that defines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the records of stage and discharge

measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording 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. Typical structures in use at gaging stations are shown on plate 1.

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

For most of the gaging stations in the area covered by this report the data presented 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. Skeleton rating tables are published except for those stations whose daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage, obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum discharge represents the lowest stage, unless otherwise qualified. The peak discharge for the year with the time of its occurrence is given below the table of monthly discharge for some stations. Selected lower peaks are also given if the peak discharge exceeded the mean discharge for that day by more than 10 percent. This supplementary information is generally not given for stations having drainage areas of less than 10 square miles or more than 10,000 square miles.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the mean daily discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the mean daily gage height. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the slope or fall in a reach of the stream as a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary

gage set at some distance from the base gage. The auxiliary gage, if one is used, is described under "Location." At some stations the stage-discharge relation is affected by changing stage, and for them the rate of change of stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of occasional winter discharge measurements and gage heights, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures for that month given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the instantaneous discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second during the month.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation and (2) 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, in general, the daily records are accurate within 5 percent; "good," within 10 percent; "fair," within 15 percent; and "poor," within 20 or a higher percent.

Yield at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-feet per square mile" and "run-off in inches" are not published unless storage or diversion records are included indicating the extent of the regulation or diversion or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and run-off in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded does not show the water supply available for further development, as prior appropriations below the station must first be satisfied.

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, and that greater degrees of refinement in computations and records may be warranted with the increase in data and the use of improved equipment.

PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 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. Pacific slope basins in Washington and upper Columbia River Basin.
13. Snake River Basin.
14. Pacific slope basins in Oregon and lower Columbia River Basin.

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

East of the Mississippi River:
Albany, N. Y., 528 Federal Building.
Asheville, N. C., 220 Post Office Building.
Atlanta, Ga., 5 North Rhodes Center.
Augusta, Maine, Statehouse.
Boston, Mass., 945 Post Office Building.
Charleston, W. Va., 408 Union Building.
Charlottesville, Va., House B, Dawson Row, University of Virginia.
Chattanooga, Tenn., 442 Post Office Building.
College Park, Md., Engineering Building, University of Maryland.
Columbia, S. C., 119 United States Courthouse.
Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
Harrisburg, Pa., 490 Education Building.
Hartford, Conn., 225 Capitol Building, 410 Asylum Street.
Indianapolis, Ind., 316 Federal Building.
Louisville, Ky., 652 Federal Building.
Madison, Wis., 666 State Office Building.
Montgomery, Ala., 507 Post Office Building.
Ocala, Fla., 302 Post Office Building.
St. Paul, Minn., 808 New Post Office Building.
Trenton, N. J., 228 Federal Building.
Urbana, Ill., 14 Post Office Annex, Elm Street.

West of the Mississippi River:
Austin, Tex., 302 West 15th Street.
Boise, Idaho, 429 Federal Building.
Denver, Colo., 230 Customhouse.
Fort Smith, Ark., 6 Post Office Building.
Helena, Mont., 408 Federal Building.
Honolulu, Hawaii, 225 Federal Building.
Idaho Falls, Idaho, 204 Federal Building.
Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
Lincoln, Nebr., 1404 Statehouse.
Los Angeles, Calif., G-31 United States Post Office and Courthouse.
Portland, Oreg., 606 Post Office Building.

Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
St. Louis, Mo., 926 New Federal Building.
Salt Lake City, Utah, 303 Federal Building.
San Francisco, Calif., 465 Federal Office Building.
Santa Fe, N. Mex., 204 United States Courthouse.
Tacoma, Wash., 1100 Washington Building.
Topeka, Kans., 305 Federal Building.
Tucson, Ariz., 210 Post Office Building.

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

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data in reports of the 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	....do.....	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871-93)..	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 of streams east of the Mississippi River and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River and Missouri River and tributaries.	
W 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years).	1898
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.- Reports containing records for years after 1901 are given in table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1940. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, 503, which contain records for the Ohio River Basin for those years.

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, the streams and points of measurement listed appearing in the same relative order as the streams and gaging stations in the body of the report. An index of the records obtained prior to 1904 has been published in Water-Supply Paper 119.

Numbers of water-supply papers containing results of stream measurements, 1899-1940

(For basins included see p. 4)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	35	b35, 36	36	36	36	c36, 37	37	37	d37, 38	38, e39	38, f39	38	38	38
1900 g...	47, h48	48	48, 149	49	49	49, j50	50	50	50	51	51	51	51	51
1901.....	65, 75	65, 75	65, 75	65, 75	k65, 66, 75	66, 75	k65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902.....	82	b82, 83	83	m82, 83	k83, 85	84	k83, 84	84	85	85	85	85	85	85
1903.....	97	b97, 98	98	97	k98, 99, n100	99	k98, 99	99	100	100	100	100	100	100
1904.....	o124, p125, q126	q126, 127	128	129	k128, 130	130, r131	k128, 131	132	133	133, s134	134	135	135	135
1905.....	o165, p166, q167	q167, 168	169	170	171	172	k169, 173	174	175, t177	176, s177	177	178	178	u177, 178
1906.....	o201, p202, q203	q203, 204	205	206	207	208	k205, 209	210	211, t213	212, s213	213	214	214	214
1907-8...	241	242	243	244	245	246	247	248	249	250, s251	251	252	252	252
1909.....	261	262	263	264	265	266	267	268	269	270, s271	271	272	272	272
1910.....	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911.....	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912.....	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913.....	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914.....	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915.....	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916.....	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917.....	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918.....	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919-20..	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921.....	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922.....	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923.....	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924.....	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925.....	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926.....	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927.....	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928.....	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929.....	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930.....	696	697	698	699	700	701	702	703	704	705	706	707	708	709
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
1933.....	741	742	743	744	745	746	747	748	749	750	751	752	753	754
1934.....	756	757	758	759	760	761	762	763	764	765	766	767	768	769
1935.....	781	782	783	784	785	786	787	788	789	790	791	792	793	794
1936.....	801	802	803	804	805	806	807	808	809	810	811	812	813	814
1937.....	821	822	823	824	825	826	827	828	829	830	831	832	833	834
1938.....	851	852	853	854	855	856	857	858	859	860	861	862	863	864
1939.....	871	872	873	874	875	876	877	878	879	880	881	882	883	884
1940.....	891	892	893	894	895	896	897	898	899	900	901	902	903	904

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in 21st Annual Report, part 4.
b James River only.
c Gallatin River.
d Green and Gunnison Rivers and Colorado River above Gunnison River.
e Mojave River only.
f Kings and Kern Rivers and south Pacific slope basins.
g Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Monthly discharge for 1900 in 22d Annual Report, part 4.
h Wissahickon and Schuylkill Rivers to James River.
i Scioto River.
j Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
k Tributaries of Mississippi River from east.
m Lake Ontario and tributaries to St. Lawrence River proper.
n Hudson Bay only.
o New England rivers only.
p Hudson River to Delaware River, inclusive.
q Susquehanna River to Yadkin River, inclusive.
r Platte and Kansas Rivers.
s The Great Basin in California, except Truckee and Carson River Basins.
t Below mouth of Gila River.
u Rogue, Umpqua, and Siletz Rivers only.

From time to time reports have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which have been revised), as well as some records not contained in the annual series of water-supply papers. The following table gives the numbers and titles of these reports, arranged in alphabetical order by States and drainage basins.

Reports containing compilation of discharge by States and drainage basins

Water-Supply Paper	Year ending	State or drainage basin and title
		STATE
107	1903	Alabama, Water powers of, with an appendix on stream measurements in Mississippi.
298	1912	California, Water resources of, part 1, Stream measurements in Sacramento River Basin.
299	1912	California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.
300	1912	California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins.
447	1918	California, southern, Surface water supply of Pacific slope of.
597-E	1927	California, Surface water supply of Sacramento River Basin.
636-D	1927	California, Surface water supply of San Joaquin River Basin.
636-E	1927	California, southern, Surface water supply of Pacific slope basins in.
637-A	1927	California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.
74	1900	Colorado, Water resources of.
197	1905	Georgia, Water resources of.
415	1915	Massachusetts, Surface waters of.
230	1906	Nebraska, Surface water supply of.
370	1910	Oregon, Surface water supply of.
860	1937	Texas, Summary of records of surface waters of.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
870	1935	Washington, Summary of records of surface waters of.
469	1921	Wyoming, Surface waters of, and their utilization.
		DRAINAGE BASIN
395	1914	Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization.
617	1927	Colorado River, upper (Colo., Utah), and its utilization.
517	1920	Great Salt Lake Basin, Water powers of.
618	1928	Green River (Utah, Wyo.) and its utilization.
198	1906	Kennebec River Basin (Maine), Water resources of.
491	1917	Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of.
279	1909	Penobscot River Basin (Maine), Water resources of.
192	1906	Potomac River Basin (D. C., Md., W. Va.)
358	1913	Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont., Canada), Water supply of.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of.

Records of discharge have been published also in State reports. Some of these are not contained in the publications of the Geological Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports.

State reports containing compilation of records of discharge

State	Year ending	Report	Issued by
Alabama.....	1915	Bull. 17, Water powers of Alabama....	Geological Survey of Alabama.
Arkansas....	1928	Stream-gaging report 1.....	Arkansas Geological Survey.
Connecticut:	1926	Bull. 44, Water resources of Connecticut.	State Geological and Natural History Survey.
Do.....	1933[a]	5th biennial report.....	Connecticut State Water Commission.
Georgia.....	1907	Bull. 16, Water powers of Georgia....	Geological Survey of Georgia.
Do.....	1920[b]	Bull. 38, Water powers of Georgia....	Do.

a Includes records of monthly discharge in second-feet per square mile for years 1912-33.
b Includes records for years 1907-18.

State reports containing compilation of records of discharge--Continued

State	Year ending	Report	Issued by
Illinois....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Do.....	1934	Stream-flow data of Illinois.....	Division of Waterways.
Indiana.....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	1930[c]	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.... ...	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.
Kansas.....	1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	1924[d]	....do.....	Do.
Do.....	1928[e]	....do.....	Kansas State Board of Agriculture.
Do.....	1935[f]	Stream-flow data of Kansas.....	Do.
Do.....	1939[g]	....do.....	Do.
Kentucky....	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota...	1912	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri....	1926	Vol. 20, 2d series, Water Resources of Missouri.	Missouri Geological Survey and Water Resources.
Do.....	1939[h]	Vol. 26, 2d series, Surface waters of Missouri.	Do.
Nebraska....	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation, and Drainage.
Do.....	1928[i]	2d hydrographic report.....	Do.
New Jersey..	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	1934[j]	Special Report 5, Surface Water Supply of New Jersey.	State Water Policy Commission.
New Mexico..	1925	Surface water supply of New Mexico...	Office of the State Engineer.
North Carolina.	1923	Bull. 34, Discharge records of North Carolina Streams.	Department of Conservation and Development.
Do.....	1936[k]	Bull. 39, Discharge records of North Carolina streams.	Do.
Ohio.....	1921[l]	Bull. 73, Ohio stream flow.....	Engineering Experiment Station, Ohio State University.
Do.....	1939[m]	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	1924[n]	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	1930[o]	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	1936[p]	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	1932[q]	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee...	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	1930[r]	Bull. 40, Surface waters of Tennessee.	Do.
Utah.....	1905	5th biennial report, State Engineer..	Office of the State Engineer.
Virginia....	1927	Bull. 31, Water resources of Virginia.	Conservation and Development Commission.
Washington..	1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin...	1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	1923[s]	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

c Includes records for years 1927-30.
d Includes records for years 1919-24.
e Includes records for years 1924-28.
f Includes records for years 1928-35.
g Includes records for years 1935-39.
h Includes records for years 1927-39.
i Includes records for years 1914-28.
j Includes records for years 1928-34.
k Includes records for years 1889-1936; records of daily and monthly discharge are not included.
l Includes all available records prior to 1921.
m Includes records for years 1902-39.
n Includes records for years 1914-24.
o Includes records for years 1924-30.
p Includes records for years 1930-36.
q Includes records for years 1928-32.
r Includes average weekly discharge for years 1920-30.
s Includes records for years 1914-23.

Note.- In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: California, Colorado, Connecticut, Idaho, Indiana, Missouri, Montana, Nebraska, New Mexico, New York (also New York City Board of Water Supply), North Dakota, Oregon, Pennsylvania, Utah, Washington, and Wyoming.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier noteworthy floods. The following list gives the numbers and titles of these reports.

Water-Supply Paper	Title
88	The Passaic flood of 1902.
92	The Passaic flood of 1903.
96	Destructive floods in the United States in 1903.
147	Destructive floods in the United States in 1904.
162	Destructive floods in the United States in 1905.
334	The Ohio Valley flood of March-April 1913.
426	Southern California floods of January 1916.
487	The Arkansas River flood of June 3-5, 1921.
488	The floods in central Texas in September 1921.
520-G	Some floods in the Rocky Mountain region.
636-C	The New England flood of November 1927.
771	Floods in the United States, magnitude and frequency.
773-E	The New York State flood of July 1935.
796-B	Flood on Republican and Kansas Rivers, May and June 1935.
796-C	Flood in La Canada Valley, California, January 1, 1934.
798	The floods of March 1936, Part 1, New England Rivers.
799	The floods of March 1936, Part 2, Hudson River to Susquehanna River region.
800	The floods of March 1936, Part 3, Potomac, James and upper Ohio Rivers.
816	Major Texas floods of 1936.
836-A	Stages and flood discharges of the Connecticut River at Hartford, Conn.
838	Floods of Ohio and Mississippi Rivers, January-February 1937.
842	Floods in Canadian and Pecos River Basins of New Mexico, May and June 1937.
843	Floods of December 1937 in northern California.
847	Maximum discharges at stream-measurement stations through September 1938.
867	Hurricane floods of September 1938.
869	Flood of August 1935 in Muskingum River Basin, Ohio.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1939 to September 1940 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey except as noted.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by	Remarks
Alamito Creek.....	Near Presidio, Tex.....	1932-40	International Boundary Commission, U. S. Section.	(a).
Arrey canal.....	Near Arrey, N. Mex.....	1918, 1920-40	Bureau of Reclamation.....	Unpublished.
Bonita ditch.....	....do.....	1938-40	....do.....	Do.
Devils River.....	Near Del Rio, Tex.....	1931-40*	International Boundary Commission, U. S. Section.	(a).
East Side canal....	Mesilla Dam, near Mesilla Park, N. Mex.	1916-18, 1920-40	Bureau of Reclamation.....	Unpublished.
Goodenough Springs.	Near Comstock, Tex.....	1931-40*	International Boundary Commission, U. S. Section.	(a).
Las Vacas Arroyo...	Near Villa Acuna, Coahuila, Mexico.	1938-40	International Boundary Commission, Mexican Section.	(a).
Leasburg canal.....	At head, at Selden, N. Mex	1917-18, 1920-40	Bureau of Reclamation.....	Unpublished.
Pecos River.....	Near Comstock, Tex.....	1931-40*	International Boundary Commission, U. S. Section.	(a).
Pinto Creek.....	Near Del Rio, Tex.....	1931-40*	....do.....	(a).
Rio Alamo.....	Mier, Tamaulipas, Mexico.	1923-40	International Boundary Commission, Mexican Section.	(a).
Rio Escondido.....	Villa Fuente, Coahuila, Mexico.	1922-40	....do.....	(b).

* Records for earlier years published in Geological Survey water-supply papers.
a Published in water bulletins of International Boundary Commission.
b Records for 1923-24 and 1928 published in report of International Water Commission, United States and Mexico, U. S. Section (H. Doc. 359, 71st Cong., 2d sess.) as Rio San Antonio above Fuente; records for 1932-40 published in water bulletins of International Boundary Commission.

Records of discharge collected by agencies other than the Geological Survey--Continued

Stream	Location	Period	Collected by	Remarks
Rio Grande.....	Below American Dam, near El Paso, Tex.	1938-40	International Boundary Commission, U. S. Section.	(a).
Do.....	Below Brownsville, Tex..	1934-40	....do.....	(a).
Do.....	County line station near El Paso, Tex.	1938-40	....do.....	(a).
Do.....	Near Del Rio, Tex.....	1931-40*	....do.....	(a).
Do.....	Eagle Pass, Tex.....	1931-40*	....do.....	(a).
Do.....	Near El Paso, Tex.....	1931-40*	....do.....	(a).
Do.....	Below old Fort Quitman, Tex.	1931-40*	....do.....	(a).
Do.....	Hidalgo, Tex.....	1931-40*	....do.....	(a).
Do.....	Johnson Ranch, Tex.....	1936-40	....do.....	(a).
Do.....	Island station near El Paso, Tex.	1938-40	....do.....	(a).
Do.....	Juarez, Chihuahua, Mexico.	1938-40	International Boundary Commission, Mexican Section.	(a).
Do.....	Langtry, Tex.....	1931-40*	International Boundary Commission, U. S. Section.	(a).
Do.....	La Nutria, 9.5 miles above Candelaria, Tex.	1935-40	....do.....	(a).
Do.....	Laredo, Tex.....	1926-40*	International Boundary Commission, Mexican Section.	(a).
Do.....	Leasburg Dam, at Selden, N. Mex.	1919-40	Bureau of Reclamation.....	Unpublished.
Do.....	Matamoras, Tamaulipas, Mexico.	1926-40†	International Boundary Commission, Mexican Section.	(a).
Do.....	Mercedes Bridge station, Tex.	1932-40 (fragmentary)	International Boundary Commission, U. S. Section.	(a).
Do.....	Percha Dam, near Arrey, N. Mex.	1922-40	Bureau of Reclamation.....	Unpublished.
Do.....	Above Presidio, Tex.....	1926-40*	International Boundary Commission, U. S. Section.	(a).
Do.....	Below Presidio, Tex.....	1926-40*	....do.....	(a).
Do.....	Rio Grande City, Tex....	1932-40	....do.....	(a).
Do.....	Roma, Tex.....	1925-28,* 1931-40	....do.....	(a).
Do.....	Zapata, Tex.....	1932-40	....do.....	(a).
Rio Salado.....	Near Guerrero, Tamaulipas, Mexico.	1923-40	International Boundary Commission, Mexican Section.	(a).
Rio San Diego.....	Jimenez, Coahuila, Mexico	1924-40	....do.....	(c).
Rio San Juan.....	Santa Rosalia, Tamaulipas, Mexico.	1923-40	....do.....	(a).
Rio San Rodrigo....	Near El Moral, Coahuila, Mexico.	1922-40	....do.....	(d).
San Felipe Creek...	Near Del Rio, Tex.....	1931-40	International Boundary Commission, U. S. Section.	(a).
Terlingua Creek....	Near Terlingua, Tex.....	1932-4C	....do.....	(a).
West Side canal....	Mesilla Dam, near Mesilla Park, N. Mex.	1916-1S, 1920-40	Bureau of Reclamation.....	Unpublished.

* Records for earlier years published in Geological Survey water-supply papers.

† Records for earlier years published in Geological Survey water-supply papers as Rio Grande near Brownsville, Tex.

a Published in water bulletins of International Boundary Commission.

c Records for 1924-28 published in report of International Water Commission, United States and Mexico, U. S. Section; records for 1932-40 published in water bulletins of International Boundary Commission.

d Records for 1923-24 and 1927-28 published in report of International Water Commission, United States and Mexico, U. S. Section (H. Doc. 359, 71st Cong., 2d sess.); records for 1932-40 published in water bulletins of International Boundary Commission.

Note.- The Soil Conservation Service made studies of run-off from 6 areas of less than 100 acres each near Garland, Tex.; 20 areas, of which 12 were less than 80 acres and 8 were between 50 and 6,000 acres, near Waco, Tex., (formerly published as near Reisel); 3 areas of less than 10 acres each near Tyler, Tex.; 3 areas of less than 800 acres each near Santa Fe, N. Mex.; and 3 areas of less than 210 acres each near Albuquerque, N. Mex. The records are in the files of that organization.

COOPERATION

The work in the several States was done under cooperative agreements as follows:

Colorado: Office of the State engineer, M. C. Hinderlider.

Louisiana: Department of Conservation, E. S. Clements and B. A. Hardey, directors.

New Mexico: Office of the State engineer, T. M. McClure; Interstate Stream Commission, T. M. McClure, secretary.

Texas: Board of Water Engineers, consisting of C. S. Clark, chairman, A. H. Dunlap, and J. W. Pritchett.

Funds for the construction and operation of gaging stations in the Pecos River Basin in New Mexico and Texas were allocated by the Public Works Administration and the Bureau of Reclamation to the Pecos River Joint Investigation, sponsored by the National Resources Planning Board.

Funds for the maintenance and operation of gaging stations on the Indian Pueblo lands in New Mexico were allocated by the Office of Indian Affairs.

Funds were allocated by the Corps of Engineers, United States Army, for the construction and maintenance of 4 gaging stations in Louisiana, 1 in New Mexico, and 55 in Texas.

Acknowledgments are due the International Boundary Commission (U. S. Section), the Bureau of Reclamation, and the Weather Bureau for assistance in collecting the records published herein.

Assistance in collecting records was rendered also by the following organizations:

New Mexico: Agua Pura Co., Alamogordo Community Ditch, town of Alamogordo, and New Mexico Power Co.

Texas: Dallas County, city of Corpus Christi, city of Houston, San Antonio Public Service Co., Tarrant County Water Control and Improvement District No. 1, West Texas Utilities Co., Lower Colorado River Authority, Brazos River Conservation and Reclamation District, and Red Bluff Water Power Control District.

DIVISION OF WORK

The stream-gaging work was conducted by the water resources branch of the Geological Survey, Glenn L. Parker, chief hydraulic engineer, Carl G. Paulsen, assistant chief hydraulic engineer, and Rudolph G. Kasel, chief of the division of surface waters. The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In Colorado, Robert Follansbee, the work being done in collaboration with M. C. Hinderlider, State engineer, and L. T. Burgess, State chief hydrographer; in Louisiana, D. H. Barber until Oct. 31, 1940 (when he entered upon military duty), succeeded by H. C. Bolon; in New Mexico, Berkeley Johnson; and in Texas, C. E. Ellsworth.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and M. C. Boyer, associate engineer, section of reports.

MERMENTAU RIVER BASIN

Bayou Nezpique near Basile, La.

Location.- Wire-weight gage, lat. 30°28'50", long. 92°37'55", in NE¼NW¼ sec. 1, T. 7 S., R. 3 W., Louisiana meridian, at bridge on U. S. Highway 190, a quarter of a mile downstream from Missouri Pacific R. R. bridge and 2 miles west of Basile. Datum of gage is 3.60 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 22,900 second-feet Aug. 11 (gage height, 31.08 feet); minimum observed, 0.5 second-foot June 6 (gage height, 1.16 feet).
1938-40: Maximum discharge, that of Aug. 11, 1940; minimum observed, 0.4 second-foot May 15, 16, 1939; minimum gage height, that of June 6, 1940.

Remarks.- Records fair. Gage read twice daily. Diversions above station for irrigation.

Rating tables, water year 1939-40, except period of backwater (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Aug. 11						Aug. 12 to Sept. 30					
1.2	0.5	1.7	5.7	3.1	53	2.5	22	10.2	628	22.6	5,950
1.3	1.2	1.8	7.5	4.1	101	3.4	58	15.2	1,380	25.4	10,700
1.4	2.0	1.9	9.6	5.5	189	4.4	106	16.4	1,670	29.4	19,000
1.5	3.0	2.1	15	6.9	297	5.4	170	18.4	2,320	31.0	22,700
1.6	4.2	2.4	24	8.2	414	6.8	282	20.2	3,240		
						8.2	414	21.2	4,170		

Note.- same as following table above 8.2 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	1,670	13	460	175	131	4,880	5,920	2.0	287	468	156
2	38	1,670	12	238	175	101	5,130	6,550	1.7	131	616	118
3	38	1,550	12	131	131	81	5,000	6,400	1.1	168	680	101
4	35	1,110	11	91	96	66	4,510	5,390	.8	454	943	106
5	30	500	11	71	203	55	3,950	4,590	.6	568	1,150	101
6	24	181	9.6	62	988	46	3,470	3,650	.5	778	1,360	86
7	18	60	9.2	66	1,420	38	3,240	3,110	2.8	943	2,360	81
8	16	40	7.9	71	1,610	32	2,890	2,270	192	1,060	7,980	81
9	15	31	7.3	81	1,910	26	2,490	1,550	208	1,140	15,300	76
10	17	24	6.8	86	2,000	21	2,140	922	546	1,230	20,900	72
11	28	20	6.4	107	1,970	19	1,880	407	750	1,260	22,700	63
12	66	18	6.1	101	1,880	16	1,700	196	1,030	1,290	21,600	58
13	76	14	5.4	81	1,730	15	1,460	76	1,090	1,550	15,100	48
14	58	11	5.7	66	1,150	13	1,040	51	1,110	2,170	14,000	46
15	38	11	6.6	62	634	12	586	40	1,380	2,760	9,950	44
16	26	27	5.9	53	396	11	324	27	1,940	2,740	5,770	38
17	18	62	5.2	49	842	8.3	210	14	3,430	2,690	4,380	34
18	13	91	4.2	46	1,390	7.1	1,070	10	4,960	2,590	3,340	30
19	10	131	11	42	1,610	6.6	1,740	7.9	6,880	2,360	2,710	28
20	7.9	131	10	38	1,910	5.7	2,340	6.8	8,030	2,100	2,110	28
21	6.2	91	19	40	2,040	5.7	2,490	5.4	8,710	1,640	o1,510	26
22	5.1	66	20	66	2,000	5.6	2,790	4.4	7,860	1,110	e768	22
23	4.6	51	20	71	1,880	5.4	2,840	3.6	6,250	636	e343	38
24	4.0	37	33	62	1,760	5.2	2,640	4.0	5,000	381	e199	1,800
25	4.1	28	49	58	1,330	4.5	2,400	3.7	4,390	240	e130	2,830
26	188	22	172	66	804	3.7	1,830	3.0	3,560	168	106	3,900
27	870	18	626	71	445	3.4	1,290	2.9	2,660	119	96	4,170
28	1,270	15	853	76	306	430	775	2.6	1,890	96	142	3,950
29	1,400	13	943	81	189	1,420	1,910	5.2	1,260	96	149	3,580
30	1,580	12	898	107	-	2,460	4,130	3.6	636	101	184	3,170
31	1,640	-	793	137	-	3,380	-	2.2	-	196	199	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,579.9	1,640	4.0	245	15,030
November	7,705	1,670	11	257	15,280
December	4,592.5	943	4.2	148	9,110
Calendar year 1939	133,565.5	2,460	.4	366	264,900
January	2,837	460	38	91.5	5,630
February	32,974	2,040	96	1,137	65,400
March	8,434.2	3,380	3.4	272	16,730
April	73,144	5,130	210	2,438	145,100
May	41,028.3	6,550	2.2	1,323	81,380
June	73,771.5	8,710	.5	2,459	146,300
July	33,052	2,760	96	1,066	65,560
August	160,243	22,700	96	5,169	317,800
September	24,861	4,170	22	829	49,310
Water year 1939-40	470,222.4	22,700	.5	1,285	932,600

e Backwater present; discharge computed on basis of estimated effective gage height.
Note.- Discharge for periods of changing stage computed by using rate of change of stage as a factor.

Bayou Des Cannes near Eunice, La.

Location.- Water-stage recorder, lat. 30°29'00", long. 92°29'25", in SW¼SE¼ sec. 32, T. 6 S., R. 1 W., Louisiana meridian, at bridge on U. S. Highway 190, 3 miles downstream from Missouri Pacific R. R. bridge and 4 miles west of Eunice, La. Datum of gage is 14.84 feet above mean sea level (general adjustment of 1929, Louisiana Geodetic Survey bench mark; levels by Corps of Engineers, U. S. Army). Prior to Jan. 17, 1940, wire-weight gage at same site and datum.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 9,520 second-feet Aug. 10 (gage height, 21.13 feet); minimum, 0.2 second-foot June 3-7 (gage height, 1.13 feet).
1938-40: Maximum discharge, that of Aug. 10, 1940; no flow May 7, 10-18, and July 10, 1939.

Remarks.- Records fair. Wire-weight gage read twice daily Oct. 1 to Jan. 16. Diversions above station for irrigation. Some regulation May to October by small diversion dams for irrigation.

Rating tables, water year 1939-40, except periods of backwater (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 28

1.3	0.9	2.7	29	1.1	0.1	2.1	6.3	4.8	109	14.2	1,360
1.4	1.3	3.5	54	1.5	.9	2.2	7.8	5.6	158	15.1	1,700
1.5	2.0	4.1	80	1.6	1.3	2.3	9.5	6.3	211	15.6	2,040
1.6	3.5	4.9	123	1.7	1.9	2.4	11.8	8.1	366	16.8	3,230
2.0	11.7	6.3	211	1.8	2.8	2.6	17.2	10.1	556	18.4	5,270
2.4	20.8			1.9	3.8	3.0	30.2	11.3	626	21.1	9,520
				2.0	5.0	4.0	70	11.8	690		

Note.- Same as following table above 6.3 feet.

Dec. 29 to Sept. 30

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	135	2.5	54	123	27	2,400	5,270	0.4	40	137	56
2	153	70	2.2	23	91	16	1,500	3,340	.3	28	321	56
3	111	39	1.9	12	55	9.8	1,100	1,760	.3	34	357	66
4	58	23	2.0	5.9	29	6.3	562	1,210	.2	116	386	81
5	31	15	1.6	4.6	67	4.5	160	678	.2	386	424	65
6	16	10	1.5	3.3	344	3.4	54	198	.2	443	512	50
7	10	7.5	1.5	3.2	540	2.6	159	51	.4	366	723	38
8	7.7	5.1	1.6	3.2	586	2.2	216	20	206	294	4,900	29
9	4.9	3.3	1.5	5.8	603	2.0	225	13	177	357	8,670	18
10	7.3	2.5	1.5	17	544	1.8	199	9.8	312	512	9,350	14
11	29	2.5	1.6	19	285	1.5	170	7.5	556	576	7,710	12
12	38	4.3	1.8	15	94	1.4	412	6.2	566	682	4,860	12
13	33	2.3	1.7	12	43	2.1	530	5.8	556	986	2,480	10
14	25	1.4	1.8	16	26	2.0	500	4.9	574	1,790	1,480	9.6
15	18	2.0	1.4	13	20	1.5	275	3.4	690	1,610	1,030	7.5
16	11	2.4	1.3	17	33	1.4	99	14	656	1,460	729	6.6
17	8.1	5.1	1.2	16	404	1.2	34	6.4	1,830	1,180	339	6.2
18	5.9	50	1.1	13	705	1.1	635	2.4	4,190	756	102	5.5
19	3.5	90	1.3	11	1,010	1.0	821	1.2	5,550	272	49	7.9
20	2.1	80	1.5	7.8	1,330	.9	1,160	.8	3,420	90	43	13.0
21	1.4	62	1.6	5.1	1,240	.8	1,300	9.2	1,840	120	31	12
22	1.1	42	1.4	3.8	930	.8	1,100	13	1,180	132	23	11
23	.8	29	3.4	3.2	429	.7	614	7.8	842	128	18	321
24	.7	18	15	3.3	124	.7	186	3.2	590	92	12	3,820
25	.8	12	38	4.0	179	.6	49	4.6	476	58	12	5,490
26	4.6	8.6	85	5.9	305	.5	22	2.3	314	38	16	5,480
27	183	6.3	232	11	251	.6	13	1.0	120	29	71	3,570
28	367	4.9	366	15	117	73	7.5	.7	58	21	83	1,980
29	376	3.7	376	16	51	551	763	.6	43	14	79	1,380
30	321	2.8	303	41	-	1,670	3,760	.5	37	9.8	101	1,010
31	227	-	151	116	-	3,340	-	.4	-	7.6	78	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,074.9	376	0.7	66.9	4,180
November	739.7	135	1.4	24.7	1,470
December	1,604.9	376	1.1	51.8	3,180
Calendar year 1939	32,714.8	601	0	89.6	64,900
January	497.1	116	3.2	16.0	986
February	10,556	1,330	20	364	20,940
March	5,728.5	3,340	.6	185	11,360
April	19,027.5	3,760	7.5	634	37,740
May	12,645.7	5,270	.4	408	25,080
June	24,765	5,550	.2	825	49,160
July	12,827.4	1,810	7.6	414	25,440
August	45,126	9,350	12	1,456	89,510
September	23,615.3	5,490	5.5	787	46,840
Water year 1939-40	159,228.0	9,350	.2	435	315,800

Note.- Backwater from return of overbank storage Feb. 23-24, Apr. 4-17, 23-25, May 5-7, June 20-30, July 18-26 and Aug. 11-20; discharge determined from backwater curves defined by 17 discharge measurements.

Calcasieu River near Oberlin, La.

Location.- Water-stage recorder, lat. 30°38'25", long. 92°48'50", in NW¼NE¼ sec. 7, T. 5 S., R. 4 W., Louisiana meridian, at bridge on State Highway 52, 3 miles northwest of Oberlin and 15 miles upstream from Whiskey Chitto Creek. Datum of gage is 39.41 feet above mean sea level (general adjustment of 1929, Louisiana Geodetic Survey bench mark; levels by Corps of Engineers, U. S. Army).

Drainage area.- 753 square miles.

Records available.- August 1922 to January 1925, September 1938 to September 1940.

Extremes.- Maximum discharge during year, 19,200 second-feet Aug. 9 (gage height, 19.71 feet); minimum, 43 second-feet Oct. 17 (gage height, 3.07 feet).
1922-25, 1938-40: Maximum discharge, 34,700 second-feet Apr. 7, 1923 (gage height, 18.48 feet, datum then in use), from rating curve extended above 14,000 second-feet; minimum, 42 second-feet Aug. 16, 1924.

Remarks.- Records good. Water used by paper mill at Elizabeth is pumped from wells and later discharged into Mill Creek about 20 miles above station. This discharge, estimated to be about 5 second-feet, is continuous and fairly constant.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Temporary shift curve used Aug. 14 to Sept. 30)

3.1	45	4.8	199	9.8	1,440	15.4	5,120
3.4	64	5.2	263	11.4	2,030	16.2	6,640
3.8	94	6.0	415	13.2	2,950	16.8	8,280
4.4	149	7.2	697	14.2	3,680	19.7	19,200

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	82	62	883	354	1,580	2,210	4,840	326	1,460	354	177
2	50	79	61	1,140	364	1,190	1,400	4,100	326	1,050	723	174
3	49	74	60	1,470	394	829	697	3,340	307	938	966	163
4	49	70	60	1,780	426	621	514	2,560	280	1,190	1,270	169
5	48	66	58	1,940	805	502	469	2,030	272	1,500	3,250	163
6	47	64	67	1,980	1,820	436	480	1,860	280	1,580	4,580	168
7	47	62	57	1,980	1,860	394	802	2,080	254	1,190	5,120	167
8	47	60	57	1,860	1,780	344	856	2,300	199	910	9,440	159
9	47	58	58	1,500	1,680	316	646	2,400	f298	671	18,400	148
10	47	57	60	1,110	1,610	289	514	2,260	f883	536	17,300	137
11	47	57	59	829	1,610	272	671	1,940	f1,310	447	14,200	131
12	48	56	58	697	2,460	254	1,080	1,580	1,580	394	10,100	125
13	47	55	58	697	4,710	238	1,080	1,040	1,640	738	13,600	118
14	46	55	57	749	4,840	222	1,140	560	1,310	723	14,800	113
15	48	55	56	775	3,840	214	1,180	384	1,470	749	9,250	107
16	45	58	56	802	3,130	199	1,140	298	1,400	1,250	5,900	104
17	44	60	56	802	3,130	192	1,080	254	f1,860	1,440	4,380	101
18	44	63	56	749	3,500	185	2,340	222	f3,590	1,010	3,320	96
19	44	63	58	671	3,420	185	3,340	199	4,460	646	2,820	96
20	44	61	64	536	3,070	192	3,880	178	4,100	572	2,360	93
21	44	60	98	426	2,500	199	3,680	166	3,600	584	1,910	90
22	44	60	95	354	1,980	192	3,070	154	3,270	723	1,590	88
23	47	58	82	326	1,640	185	2,360	149	6,420	723	834	95
24	47	58	106	316	1,540	172	1,780	144	7,120	697	516	302
25	199	60	115	326	1,540	160	1,400	139	5,620	621	371	445
26	2,360	63	459	326	1,640	154	1,140	139	4,340	525	290	296
27	1,450	63	966	307	1,780	171	910	134	3,340	458	260	184
28	359	63	994	289	1,860	1,400	723	160	2,720	447	230	145
29	147	61	883	289	1,780	2,340	1,740	214	2,300	415	212	145
30	104	60	749	316	-	3,070	4,340	272	1,900	374	200	153
31	87	-	749	335	-	2,780	-	298	-	289	193	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,824	2,360	44	188	11,550
November	1,861	82	55	62.0	3,690
December	6,465	994	56	209	12,820
Calendar year 1939	257,831	9,370	44	706	511,400
January	26,560	1,980	289	857	52,680
February	51,063	4,840	354	2,106	121,100
March	19,477	3,070	154	628	38,630
April	46,642	4,340	469	1,555	92,510
May	36,394	4,840	134	1,174	72,190
June	66,676	7,120	199	2,222	132,200
July	24,850	1,580	289	802	49,290
August	148,539	18,400	193	4,792	294,600
September	4,644	445	88	155	9,210
Water year 1939-40	448,994	18,400	44	1,227	890,500

f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Calcasieu River near Kinder, La.

Location.- Water-stage recorder, lat. 30°30'10", long. 92°54'55", in NW¼SE¼ sec. 30, T. 6 S., R. 5 W., Louisiana meridian, at bridge on State Highway 7, 0.5 mile downstream from Whiskey Chitto Creek and 4 miles west of Kinder. Datum of gage is 12.02 feet above mean sea level (general adjustment of 1929, Louisiana Geodetic Survey bench mark; levels by Corps of Engineers, U. S. Army).

Drainage area.- 1,700 square miles.

Records available.- August 1922 to January 1925, October 1938 to September 1940.

Extremes.- Maximum discharge during year, 64,400 second-feet Aug. 11 (gage height, 24.70 feet); minimum, 278 second-feet Oct. 21, 22 (gage height, 2.32 feet).
1922-25, 1938-40: Maximum discharge, 68,000 second-feet Jan. 23, 1924 (gage height, 21.69 feet, datum then in use), from rating curve extended above 40,000 second-feet; minimum, 200 second-feet Aug. 9, 10, 1924 (gage height, 0.81 foot, datum then in use).

Remarks.- Records good. Water used by paper mill at Elizabeth is pumped from wells and later discharged into Mill Creek about 36 miles above station. This discharge, estimated to be about 5 second-feet, is continuous and fairly constant. Diversion from left bank of Calcasieu River 5 miles above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Temporary shift curve used Aug. 21 to Sept. 30)

2.3	272	12.4	4,740	21.0	36,100
3.5	621	14.0	6,500	23.0	50,000
5.4	1,260	14.8	8,000	24.7	64,400
9.0	2,710	16.6	13,200		
11.0	3,750	18.0	18,800		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	317	485	353	1,490	946	2,280	4,740	13,200	699	2,660	1,300	970
2	300	442	348	1,490	980	2,040	3,690	14,300	699	2,120	2,440	945
3	297	413	342	1,640	912	1,640	2,360	13,200	683	1,920	2,940	865
4	303	384	345	1,880	912	1,300	1,410	11,700	636	2,800	2,980	772
5	303	370	370	2,120	1,330	1,120	1,120	9,600	590	3,190	5,160	744
6	300	370	370	2,280	3,630	1,010	1,050	6,920	605	3,300	8,950	708
7	294	356	370	2,400	5,030	948	1,260	4,190	606	2,730	11,700	708
8	292	350	350	2,800	4,650	912	1,680	3,240	575	2,040	20,200	685
9	294	348	345	2,710	3,990	845	2,080	3,040	560	1,680	41,300	660
10	306	345	345	2,400	3,630	812	2,000	2,990	1,790	1,370	60,800	640
11	314	339	342	1,880	3,190	779	1,720	2,800	3,670	1,300	59,000	615
12	294	339	339	1,450	2,840	763	1,960	2,530	4,650	1,300	40,500	600
13	294	336	336	1,260	3,140	731	2,280	2,080	4,850	1,410	25,900	592
14	297	334	334	1,260	3,690	716	2,040	1,450	3,930	1,760	21,900	595
15	300	336	336	1,260	4,120	699	1,920	1,080	3,520	1,640	20,800	600
16	297	353	339	1,260	4,190	685	1,760	946	4,330	2,160	15,000	582
17	289	370	339	1,260	4,330	667	1,640	845	5,660	2,480	9,600	572
18	283	370	339	1,230	5,440	652	3,870	812	9,300	2,440	6,810	560
19	280	370	356	1,160	6,500	652	7,340	779	16,000	1,880	5,400	556
20	280	384	370	1,050	6,500	636	9,300	731	18,800	1,450	4,260	552
21	278	413	384	912	5,880	636	7,550	683	17,900	1,410	3,500	540
22	278	427	413	845	4,830	652	5,880	652	14,600	1,370	2,800	542
23	283	427	427	828	3,570	636	4,830	636	12,000	1,370	2,110	548
24	283	398	456	795	2,760	621	3,810	605	10,800	1,190	1,520	570
25	417	384	515	795	2,360	605	2,760	605	9,00	1,120	1,180	1,220
26	3,500	370	1,120	812	2,240	590	2,120	683	7,150	980	980	1,360
27	5,440	356	2,890	812	2,280	605	1,720	828	5,770	878	892	1,460
28	3,620	350	3,040	812	2,360	1,120	1,490	747	4,560	878	864	1,450
29	1,280	345	2,480	812	2,360	2,440	2,960	667	3,750	845	945	1,050
30	715	345	2,120	845	-	3,870	8,320	652	3,140	912	950	784
31	560	-	1,680	878	-	5,030	-	667	-	946	915	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	22,388	5,440	278	722	44,410
November	11,209	485	334	374	22,230
December	22,493	3,040	334	726	44,610
Calendar year 1939	544,785	16,600	278	1,493	1,080,000
January	43,426	2,800	795	1,401	86,130
February	98,590	6,500	912	3,400	195,600
March	36,687	5,030	590	1,183	72,770
April	96,660	9,300	1,050	3,222	191,700
May	103,858	14,300	605	3,350	206,000
June	170,702	18,800	560	5,690	338,600
July	53,629	3,300	845	1,727	106,200
August	383,596	60,800	864	12,370	760,900
September	23,345	1,460	540	778	46,300
Water year 1939-40	1,066,483	60,800	278	2,914	2,118,000

Whiskey Chitto Creek near Oberlin, La.

Location.- Wire-weight gage, lat. 30°41'55", long. 92°53'35", in NE¼NE¼ sec. 20, T. 4 S., R. 5 W., Louisiana meridian, at bridge on State Highway 52, 1 mile downstream from Tenmile Creek, 8 miles upstream from Bundick Creek, and 10 miles northwest of Oberlin.

Drainage area.- 510 square miles.

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge during year, 35,000 second-feet Aug. 9 (gage height, 23.42 feet); minimum, 123 second-feet Oct. 1-4, 6-10, 17-21; minimum gage height, 3.84 feet Oct. 4.

1939-40: Maximum discharge, that of Aug. 9, 1940; minimum observed, 102 second-feet Sept. 19, 1939 (gage height, 3.72 feet).

Maximum stage known, approximately 25.7 feet in June 1886, from floodmarks preserved by local residents (discharge not determined).

Remarks.- Records fair. Gage read twice daily.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 4				May 5 to Sept. 30					
3.9	131	10.9	2,040	4.6	194	13.6	3,020	20.8	14,100
5.9	471	13.5	3,150	6.0	425	15.4	4,060	21.6	17,900
6.9	698	15.5	4,340	7.2	662	17.0	5,410	22.4	23,400
8.7	1,230	16.9	5,470	8.6	1,050	18.0	6,730	23.1	30,200
				10.6	1,760	19.2	9,030		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	162	170	433	452	380	1,070	4,790	290	390	443	461
2	123	154	170	363	597	380	639	5,380	258	390	316	407
3	123	154	162	312	346	380	452	5,030	226	536	1,020	355
4	131	146	195	296	329	346	380	4,200	210	710	2,520	339
5	138	146	212	296	397	346	346	2,770	210	990	3,990	322
6	131	146	195	296	1,510	329	329	930	226	662	6,340	322
7	123	146	178	a416	1,650	312	452	597	202	461	7,050	306
8	123	146	170	a805	1,580	312	980	498	194	443	13,300	290
9	123	146	170	a833	1,510	296	1,190	443	194	407	24,000	290
10	131	146	170	647	1,260	296	1,070	407	306	407	30,200	274
11	138	146	162	452	920	296	672	373	816	390	14,700	274
12	138	146	162	380	751	279	611	339	990	425	7,770	274
13	138	146	162	346	554	279	491	339	710	451	5,510	258
14	146	146	162	346	452	279	564	322	556	576	4,060	258
15	138	162	16°	346	433	279	532	306	835	686	2,080	242
16	138	170	162	329	433	279	397	290	1,640	736	1,080	242
17	123	170	162	329	576	279	380	274	2,320	736	789	242
18	123	178	162	296	672	279	2,180	274	3,270	686	662	242
19	123	186	170	279	1,920	262	3,100	274	7,150	479	597	242
20	123	229	186	262	1,840	262	2,360	258	8,350	498	556	242
21	123	245	195	262	1,610	262	1,800	242	6,270	498	536	226
22	131	262	195	279	950	262	1,470	242	4,430	407	498	226
23	131	245	229	279	623	262	1,100	242	3,070	356	461	242
24	131	203	229	279	532	262	576	242	1,190	306	426	355
25	167	186	312	279	491	245	471	258	710	290	407	517
26	463	178	942	346	452	245	452	373	618	274	390	789
27	279	162	1,160	397	433	245	433	407	556	258	373	960
28	229	162	1,160	346	415	415	433	290	498	258	373	662
29	279	162	1,010	329	397	415	1,820	290	425	242	373	373
30	220	162	778	346	-	1,130	3,870	274	407	242	373	339
31	186	-	471	397	-	1,130	-	258	-	242	479	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October	4,936	463	123	159	0.312	0.36	9,790
November	5,138	262	146	171	.335	.37	10,190
December	10,125	1,160	162	327	.641	.74	20,080
Calendar year	-	-	-	-	-	-	-
January	11,600	833	262	374	.733	.85	23,010
February	25,885	1,920	329	824	1.62	1.74	47,360
March	11,023	1,130	245	356	.698	.80	21,860
April	30,610	3,870	329	1,017	1.99	2.22	60,520
May	31,212	5,380	242	1,007	1.97	2.28	61,910
June	47,127	8,350	194	1,571	3.08	3.44	93,480
July	14,442	990	242	466	.914	1.05	28,650
August	132,171	30,200	373	4,264	8.36	9.64	262,200
September	10,573	960	226	352	.690	.77	20,970
Water year 1939-40	332,742	30,200	123	909	1.78	24.26	660,000

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

Bundick Creek near Dry Creek, La.

Location.- Wire-weight gage, lat. 30°40'55", long. 93°02'15", in sec. 25, T. 4 S., R. 7 W., Louisiana meridian, at bridge on State Highway 251, 1 mile northeast of town of Dry Creek and 8 miles upstream from confluence with Whiskey Chitto Creek.

Drainage area.- 238 square miles.

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge during year, 22,000 second-feet Aug. 10 (gage height, 26.28 feet, from high-water mark); minimum observed, 49 second-feet Oct. 20-24; minimum gage height observed, 9.70 feet Oct. 21.
1939-40: Maximum discharge, that of Aug. 10, 1940; minimum observed, 49 second-feet on many days in September and October 1939; minimum gage height observed, 9.69 feet Sept. 24, 25, 1939.

Remarks.- Records fair. Gage read twice daily.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 1				May 2 to Sept. 30							
9.7	49	12.3	276	10.1	66	12.5	312	20.0	1,680	23.0	6,750
10.3	88	12.9	355	10.7	110	13.5	443	20.5	1,990	24.0	10,000
10.7	120	16.0	820	11.0	135	16.0	820	21.0	2,540	25.0	14,400
11.5	209			11.2	159	18.5	1,250	21.5	3,300	26.0	20,200
				11.5	209	19.5	1,370	22.0	4,220		

Note.- Same as following table above 16.0 feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	64	64	115	125	130	266	4,220	76	195	238	201
2	a61	61	64	99	115	125	209	3,130	76	209	518	201
3	a61	61	64	95	107	120	152	2,180	73	948	533	146
4	a58	58	67	92	103	115	125	1,640	73	996	1,070	122
5	a58	68	71	99	381	111	111	936	69	788	1,560	114
6	55	58	71	95	820	107	103	257	69	300	1,310	110
7	55	58	67	227	580	107	184	193	69	238	1,460	106
8	58	58	64	218	505	103	276	146	66	209	6,100	102
9	55	58	64	176	460	99	249	130	69	187	17,700	102
10	55	58	64	164	385	95	199	122	510	146	14,900	98
11	55	61	64	152	299	95	176	110	1,400	135	5,670	98
12	52	61	64	125	249	95	460	98	1,380	257	2,820	94
13	52	58	64	107	218	92	385	98	948	257	1,990	94
14	52	58	64	103	188	92	199	94	533	189	1,490	94
15	55	61	64	99	152	92	152	94	1,170	415	638	90
16	55	64	64	95	164	92	135	94	1,330	300	324	90
17	52	64	64	95	565	92	164	90	3,200	230	278	90
18	52	64	64	92	1,040	92	1,450	87	7,650	184	238	90
19	52	77	67	92	948	88	745	87	7,650	155	221	90
20	49	84	67	88	868	88	249	83	4,440	126	201	90
21	49	84	67	88	715	88	209	80	2,680	146	175	87
22	49	81	67	88	400	88	164	80	1,840	157	167	87
23	49	77	77	95	241	84	130	80	1,350	114	159	90
24	49	71	88	92	199	84	120	90	548	106	140	199
25	342	67	99	92	176	84	111	114	415	102	135	238
26	805	67	610	95	152	84	125	126	278	98	130	300
27	179	64	430	103	152	81	111	122	238	94	122	300
28	88	64	287	107	141	84	107	110	221	90	122	230
29	81	61	241	107	130	256	1,420	98	193	94	140	135
30	77	61	218	120	-	868	3,120	87	175	201	216	110
31	67	-	176	120	-	520	-	80	-	175	193	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October	2,941	805	49	94.9	0.399	0.46	5,830
November	1,941	84	58	64.7	.272	.30	3,850
December	3,666	610	64	118	.496	.57	7,270
Calendar year	-	-	-	-	-	-	-
January	3,535	227	88	114	.479	.55	7,010
February	10,578	1,040	103	365	1.53	1.65	20,980
March	4,351	868	81	140	.588	.68	8,630
April	11,606	3,120	103	387	1.63	1.81	23,020
May	14,956	4,220	80	482	2.03	2.34	29,660
June	38,789	7,650	66	1,293	5.43	6.06	76,940
July	7,799	996	90	252	1.06	1.22	15,470
August	60,958	17,700	122	1,966	8.26	9.53	120,900
September	3,998	300	87	133	.559	.62	7,930
Water year 1939-40	165,118	17,700	49	451	1.89	25.79	327,500

a No gage-height record; discharge interpolated.

Sabine River near Mineola, Tex.

Location.- Water-stage recorder, lat. 32°36'45", long. 95°29'10", at bridge on U. S. Highway 69, 3.2 miles south of Mineola, Wood County, 4.5 miles upstream from International-Great Northern R. R. bridge, and 16.5 miles upstream from Lake Fork of Sabine River. Datum of gage is 304.2 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,445 square miles.

Records available.- May 1939 to September 1940.

Extremes.- Maximum discharge during year, 10,100 second-feet Apr. 11 (gage height, 17.75 feet); no flow Oct. 1-27, Aug. 25, 26.
1939-40: Maximum discharge, that of Apr. 11, 1940; no flow at times.
Maximum stage since about 1919, 20.6 feet on Jan. 25, 1938, according to information furnished by local resident.

Remarks.- Records good except those for days of changing stage, which are fair. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	21	7.5	14	30	1,320	699	2,940	1,250	3.6	1,900
2	0	.1	18	7.1	15	27	1,470	1,070	3,120	1,720	2.5	2,000
3	0	.1	8.8	6.8	16	23	1,090	1,350	4,030	1,680	2.2	1,750
4	0	.1	8.0	6.3	19	19	469	1,640	4,260	1,470	1.7	1,030
5	0	.2	10	6.8	21	17	148	2,000	3,540	1,350	1.4	324
6	0	.3	80	6.5	44	15	293	2,000	2,170	1,440	1.2	63
7	0	.4	29	12	36	15	1,040	1,360	988	1,900	1.0	21
8	0	.5	42	13	35	11	1,640	536	254	2,940	.9	11
9	0	.6	45	12	33	10	2,420	148	60	3,720	.9	9.5
10	0	.8	37	13	34	9.8	5,330	166	11	3,240	.8	7.5
11	0	3.2	28	13	130	9.8	9,300	310	146	1,880	.9	5.0
12	0	10	22	14	166	44	6,310	360	280	761	1.0	3.2
13	0	7.8	17	14	114	380	4,650	414	148	159	.7	2.5
14	0	3.2	12	14	76	624	3,240	360	74	42	.6	3.0
15	0	2.6	10	13	58	638	2,110	186	64	56	.5	2.6
16	0	5.7	8.5	12	55	624	1,190	67	345	396	.4	2.1
17	0	5.9	7.5	11	93	597	560	50	749	652	.3	1.7
18	0	6.1	7.1	10	99	358	210	60	1,020	642	.3	1.5
19	0	7.8	6.5	9.8	205	138	105	55	1,270	256	.3	1.3
20	0	5.7	5.7	9.8	403	71	70	216	1,320	89	.2	1.1
21	0	4.0	5.2	9.2	584	46	52	545	1,320	42	.2	1.0
22	0	3.2	28	9.2	728	34	41	778	1,470	25	.1	1.0
23	0	3.0	71	9.0	680	26	33	960	1,950	16	.1	1.7
24	0	2.6	43	9.0	383	21	27	1,110	2,490	10	.1	535
25	0	2.5	29	9.0	146	16	22	1,160	2,630	7.3	0	1,030
26	0	2.3	26	9.0	76	13	19	1,160	2,020	34	0	424
27	0	2.1	21	9.2	56	18	16	1,440	1,020	43	.2	84
28	.4	2.0	15	9.2	44	47	17	2,170	285	23	248	24
29	.4	2.0	11	11.0	36	67	84	3,120	120	12	853	11
30	.3	5.5	9.2	15.0	-	251	266	3,630	531	7.5	1,160	6.7
31	.2	-	8.2	15.0	-	875	-	3,380	-	5.3	1,500	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.3	0.4	0	.04	2.6
November	90.4	10	.1	3.01	179
December	635.7	71	5.2	20.5	1,260
Calendar year	-	-	-	-	-
January	324.6	15	6.3	10.5	644
February	4,398	728	14	152	8,720
March	5,072.6	875	9.8	164	10,060
April	43,642	9,300	16	1,451	86,560
May	32,680	3,630	50	1,049	64,800
June	40,626	4,260	11	1,354	80,580
July	25,866.1	3,720	5.3	834	51,310
August	3,785.1	1,500	0	122	7,500
September	9,258.4	2,000	1.0	309	18,360
Water year 1939-40	166,120.2	9,300	0	454	329,800

Sabine River near Gladewater, Tex.

Location.- Water-stage recorder, lat. 32°32', long. 94°57', at bridge on U. S. Highway 271, half a mile downstream from Glade Creek and 1 mile southwest of Gladewater, Gregg County. Datum of gage is 243.85 feet above mean sea level (Texas Reclamation Department bench mark based on Geological Survey datum).

Drainage area.- 2,846 square miles.

Records available.- October 1932 to September 1940.

Extremes.- Maximum discharge during year, 6,450 second-feet Apr. 18 (gage height, 26.21 feet); minimum, 6.8 second-feet Oct. 1, 2.
1932-40: Maximum discharge, 40,600 second-feet Jan. 28, 1938 (gage height, 38.34 feet); minimum, 5.6 second-feet Aug. 16, 1939.
Maximum discharge known, 48,500 second-feet in January 1932 (gage height, 39.4 feet, from floodmarks), from rating curve extended above 40,000 second-feet.

Remarks.- Records good except those above 500 second-feet, which are fair. Small diversions above station for oil field operations and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	14	80	158	134	279	597	654	3,300	2,650	70	1,820
2	6.8	14	67	146	137	261	690	692	3,760	2,140	65	1,950
3	7.0	14	88	137	149	256	1,170	870	4,180	2,030	63	2,030
4	7.6	12	89	134	176	214	1,460	1,170	4,620	2,310	58	2,060
5	7.6	12	88	139	218	202	1,660	1,550	6,000	2,590	55	2,000
6	7.9	13	89	142	398	190	1,950	1,670	5,300	2,680	47	1,870
7	9.1	13	84	154	483	182	2,120	2,200	5,480	2,660	43	1,390
8	9.1	14	78	164	502	173	2,030	2,450	5,570	2,650	44	705
9	9.4	18	73	173	535	166	2,000	2,610	6,390	2,760	48	263
10	16	18	72	180	536	163	2,090	2,230	4,910	2,960	50	149
11	14	32	76	188	559	159	2,280	1,400	3,870	3,200	51	108
12	14	36	84	188	483	261	2,660	704	2,390	3,420	50	89
13	12	34	89	185	416	398	3,170	521	1,220	3,590	49	78
14	12	36	86	183	407	398	4,110	569	616	3,690	50	69
15	12	62	81	176	388	416	6,040	578	597	3,170	46	62
16	14	62	75	158	369	730	5,790	559	540	1,890	43	58
17	12	67	73	161	540	830	6,270	454	445	708	41	56
18	12	78	70	156	616	890	6,450	369	502	436	44	53
19	14	61	69	146	578	f890	6,360	360	610	397	39	49
20	12	82	58	136	540	f790	5,830	342	1,190	711	33	46
21	12	70	66	124	502	559	4,580	342	1,610	635	31	45
22	11	66	184	120	521	369	2,880	512	1,980	396	29	44
23	13	84	492	112	616	279	1,280	1,060	2,280	238	27	50
24	12	58	521	114	730	232	454	1,580	f2,540	171	25	62
25	11	55	426	116	810	207	113	1,920	2,650	137	24	104
26	13	50	407	118	790	182	252	2,170	2,390	112	24	390
27	16	46	351	114	616	180	229	2,400	2,540	92	55	830
28	14	43	270	118	426	211	221	f2,620	2,540	79	430	994
29	13	41	225	120	324	239	398	3,200	2,840	78	1,020	750
30	13	39	195	124	-	351	559	3,260	2,870	82	1,150	369
31	14	-	173	132	-	416	-	3,080	-	80	1,530	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	367.3	16	6.8	11.6	709
November	1,264	82	12	42.1	2,510
December	4,908	621	66	158	9,730
Calendar year 1939	260,070.2	7,790	5.6	713	515,900
January	4,526	188	112	146	8,980
February	13,698	810	134	472	27,170
March	11,065	890	159	357	21,920
April	74,793	6,450	113	2,493	148,300
May	44,166	3,260	342	1,425	87,600
June	84,130	6,870	445	2,804	166,900
July	48,934	3,690	78	1,579	97,060
August	6,334	1,530	24	172	10,580
September	18,543	2,060	44	618	36,780
Water year 1939-40	311,706.3	6,450	6.8	852	618,200

f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Sabine River near Tatum, Tex.

Location.- Wire-weight gage, lat. 32°22', long. 94°28', on bridge on State Highway 43, 5 miles upstream from Potter Creek, 5.2 miles northeast of Tatum, Rusk County, and 7 miles downstream from Cherokee Bayou. Datum of gage is 204.2 feet above mean sea level (general adjustment of 1929), based on data furnished by Corps of Engineers, U. S. Army.

Drainage area.- 3,586 square miles.

Records available.- January 1939 to September 1940.

Extremes.- Maximum discharge observed during year, 5,240 second-feet Apr. 22 (gage height, 16.72 feet); minimum observed, 9.1 sedond-feet Oct. 9.
1939-40: Maximum discharge, 7,200 second-feet Mar. 12, 1939 (gage height, 20.2 feet, from graph based on gage readings); minimum observed, that of Oct. 9, 1939.
Maximum stage known, about 32 feet in May 1884, according to information furnished by local residents.

Remarks.- Records good. Gage read twice daily, oftener during high water. Several small diversions above station for oil field operations and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	15	110	345	225	594	1,130	1,380	3,120	3,070	137	2,310
2	11	15	180	302	232	511	984	1,510	3,120	3,120	145	2,100
3	10	15	218	274	246	434	1,070	1,350	3,220	2,970	144	2,050
4	10	15	177	267	258	386	1,310	1,130	3,370	2,540	139	2,010
5	9.e	15	161	260	338	368	1,480	1,280	3,530	2,490	119	2,010
6	9.8	16	142	267	534	345	1,690	1,440	3,730	2,540	118	1,930
7	9.8	20	139	281	742	323	2,050	1,660	3,890	2,630	111	1,770
8	9.3	21	142	288	900	309	2,360	1,930	4,100	2,680	100	1,690
9	9.3	19	145	316	872	302	2,360	2,140	4,310	2,680	98	1,100
10	10	18	139	323	846	295	2,220	2,270	4,640	2,730	96	666
11	11	21	131	323	928	288	2,180	2,270	5,020	2,870	100	360
12	11	37	122	316	900	323	2,270	1,890	5,130	2,970	107	239
13	11	57	114	323	794	794	2,490	1,280	4,960	3,120	82	197
14	11	97	119	323	666	1,010	2,680	820	4,260	3,270	82	172
15	12	96	123	323	606	872	2,920	666	2,540	3,420	88	153
16	14	105	128	323	618	716	3,320	642	1,350	3,470	84	135
17	14	170	127	309	820	820	3,730	618	984	3,120	82	122
18	14	204	122	281	1,070	928	4,150	666	820	1,930	94	111
19	13	158	119	267	1,160	1,010	4,640	666	690	1,010	141	98
20	12	133	113	253	1,040	1,040	4,910	478	872	768	176	88
21	13	120	109	239	900	1,010	5,070	434	1,220	872	197	83
22	13	122	144	225	820	928	5,180	394	1,550	956	184	78
23	14	110	397	218	642	690	5,130	434	1,850	716	170	71
24	14	94	794	211	794	546	4,420	768	2,100	456	158	107
25	14	83	1,010	204	872	404	2,400	1,160	2,400	338	120	119
26	16	77	846	211	956	352	1,070	1,510	2,580	281	85	145
27	18	72	690	204	984	345	582	1,890	2,580	253	879	246
28	18	69	642	204	900	445	479	2,180	2,630	197	1,730	467
29	18	65	558	211	742	642	522	2,450	2,680	169	1,970	846
30	18	79	456	218	-	1,220	716	2,730	2,870	142	2,580	872
31	16	-	386	225	-	1,318	-	3,020	-	133	2,630	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	395.0	18	9.3	12.7	783
November	2,138	204	15	71.3	4,240
December	8,803	1,010	109	284	17,460
Calendar year	-	-	-	-	-
January	8,334	345	204	269	16,530
February	21,435	1,160	225	739	42,520
March	19,560	1,310	288	631	38,800
April	75,513	5,180	479	2,517	149,800
May	43,056	3,020	394	1,389	85,400
June	86,116	5,130	690	2,871	170,800
July	57,911	3,470	133	1,868	114,900
August	12,946	2,630	82	418	25,680
September	22,345	2,310	71	745	44,320
Water year 1939-40	358,552.0	5,180	9.3	980	711,200

Sabine River at Logansport, La.

Location.- Chain gage, lat. 31°58', long. 94°00', on bridge on Houston East & West Texas (Southern Pacific) Ry., at Logansport, De Soto Parish, and 3 miles upstream from Bayou Castor. Datum of gage is 147.72 feet above mean sea level (general adjustment of 1929).

Drainage area.- 4,858 square miles.

Records available.- July 1903 to September 1940 (January 1907 to September 1923, monthly records only, published in Water-Supply Paper 850). Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 34 years (1903-19, 1922-40), 2,766 second-feet.

Extremes.- Maximum discharge during year, 8,060 second-feet Feb. 7; maximum gage height observed, 23.28 feet Feb. 11 (affected by backwater from Bayou Castor); minimum observed, 16 second-feet Oct. 3, 4.

1903-40: Maximum discharge observed, 47,000 second-feet May 5, 1915 (gage height, 36.9 feet); minimum observed during periods of daily records, 1903-6, 1923-40, 16 second-feet Sept. 26-28, Oct. 3, 4, 1939.

Maximum stage known, 39.4 feet, present datum, sometime in May 1884.

Remarks.- Records fair except those for periods of backwater effect, which are poor. Gage read once daily Oct. 1 to Feb. 21; twice daily thereafter. Small diversions above station.

Cooperation.- Gage-height record collected in cooperation with Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	20	164	1,270	314	1,350	1,870	c4,800	4,050	4,200	220	3,800
2	17	20	184	938	314	1,190	2,100	c6,000	3,950	4,410	196	4,680
3	16	21	208	700	344	1,030	1,870	c6,620	3,800	4,300	184	3,950
4	16	21	232	914	671	916	1,600	6,390	3,800	4,000	174	3,300
5	17	21	258	1,510	2,560	806	1,450	5,340	3,400	3,450	174	2,650
6	18	21	272	1,660	6,660	740	c1,570	3,800	3,400	2,980	164	2,290
7	18	22	256	1,690	7,940	680	c2,130	2,690	3,550	2,690	164	2,130
8	18	22	232	1,810	7,520	620	c3,160	2,100	3,600	2,570	174	1,990
9	19	24	208	1,750	c7,460	580	c4,100	1,960	3,850	2,670	174	1,870
10	20	24	184	1,400	c7,640	540	c4,460	2,020	4,740	2,530	164	1,600
11	19	29	184	1,170	c7,520	520	4,520	2,130	5,620	2,530	164	1,240
12	19	48	174	1,000	c7,220	600	4,300	2,210	6,340	2,530	154	916
13	18	61	164	872	c6,860	560	3,750	2,210	c7,040	2,610	144	660
14	17	87	154	762	c6,220	817	3,300	1,870	c7,460	2,770	135	520
15	17	70	154	700	c5,510	1,630	3,160	1,420	c7,760	3,080	135	410
16	17	80	144	660	c4,630	1,750	3,210	1,050	c7,700	3,400	164	328
17	17	101	144	620	c4,410	1,510	3,400	828	c7,460	3,600	174	286
18	17	126	144	580	c4,900	1,290	3,660	740	c6,800	3,500	174	244
19	17	144	144	540	c5,120	1,140	4,050	740	c5,340	3,080	528	220
20	18	164	154	500	c5,070	1,140	4,520	700	c3,210	2,210	894	196
21	18	196	154	428	c4,740	1,140	4,900	640	c2,330	1,510	1,000	184
22	18	196	327	392	c4,150	1,170	5,180	620	c2,100	1,220	1,030	174
23	19	184	3,490	376	c3,260	1,120	5,340	700	1,990	1,120	894	164
24	20	164	6,220	360	2,410	1,030	5,460	828	1,990	1,030	720	164
25	24	154	7,160	328	1,780	894	5,460	960	2,020	894	520	154
26	35	135	7,400	314	1,640	762	5,240	1,140	2,170	700	314	144
27	29	135	7,160	314	1,480	660	3,930	1,420	2,370	540	220	154
28	24	117	6,390	314	1,450	580	c2,130	1,840	2,490	428	196	154
29	24	109	4,900	300	1,420	540	c2,130	2,900	2,900	344	451	164
30	21	126	3,120	314	-	660	c3,210	3,750	3,750	286	1,380	272
31	20	-	1,900	314	-	1,120	-	4,050	-	244	2,850	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	604	35	16	19.5	1,200
November	2,622	196	20	87.4	5,200
December	51,961	7,400	144	1,677	103,100
Calendar year 1939	695,727	13,600	16	1,906	1,380,000
January	24,600	1,810	300	800	49,190
February	121,113	7,940	314	4,176	240,200
March	28,965	1,750	500	935	57,490
April	105,150	5,460	1,450	3,505	208,600
May	74,466	6,620	620	2,402	147,700
June	126,780	7,760	1,990	4,226	251,500
July	71,326	4,410	244	2,301	141,500
August	14,029	2,850	135	453	27,830
September	35,028	4,680	144	1,168	69,480
Water year 1939-40	656,984	7,940	16	1,795	1,303,000

c Backwater from Bayou Castor; discharge computed on basis of discharge measurements, observer's notes, and weather records.

Sabine River near Milam, Tex.

Location.- Wire-weight gage, lat. 31°28', long. 93°45', on bridge on State Highway 21, 6.5 miles northeast of Milam, Sabine County, and 7.2 miles upstream from Palo Gaucho Bayou. Datum of gage is 97.96 feet above mean sea level (general adjustment of 1929).

Drainage area.- 6,543 square miles.

Records available.- January 1939 to September 1940. Records October 1923 to August 1925, at Sabinetown, 7.4 miles downstream, equivalent except those for periods of extreme low flow and intense local run-off in drainage of Palo Gaucho Bayou.

Extremes.- Maximum discharge during year, 20,300 second-feet Feb. 12 (gage height, 34.55 feet, from graph based on gage readings); minimum observed, 32 second-feet Oct. 15, 22.

1939-40: Maximum discharge, that of Feb. 12, 1940; minimum observed, that of Oct. 15, 22, 1939.

Maximum stage known, 48 feet about July 28, 1933, according to information furnished by observer.

Remarks.- Records fair. Gage read twice daily, oftener during high water. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	264	94	277	9,500	742	2,400	2,050	49,670	5,340	f3,640	778	f2,820
2	140	80	468	5,130	742	2,250	f2,500	d10,900	d5,270	4,160	886	3,900
3	77	87	468	2,960	886	2,050	2,400	11,400	4,990	4,500	742	4,360
4	58	59	376	2,100	f2,690	1,820	f2,100	f11,500	4,710	4,710	636	4,500
5	48	50	346	2,350	f7,210	1,600	f1,820	f11,000	d4,430	4,500	602	4,220
6	43	49	346	3,200	11,500	1,430	1,920	10,400	4,030	4,100	534	3,590
7	41	48	346	4,100	14,300	1,510	2,900	8,670	f3,840	3,580	468	2,980
8	39	47	346	4,570	f16,200	1,190	5,200	6,480	3,840	3,200	500	2,560
9	40	46	318	4,500	f17,500	1,110	6,080	f3,900	3,900	2,980	2,610	2,350
10	41	46	304	4,220	f19,200	1,040	6,810	f3,080	4,160	2,900	f3,080	2,300
11	39	67	277	3,840	20,100	998	7,950	2,670	4,860	2,960	f2,840	2,050
12	37	83	251	3,260	20,200	960	10,200	2,670	f5,710	2,900	1,960	1,820
13	38	113	226	2,720	f20,000	1,150	10,900	2,720	6,480	2,900	1,740	1,470
14	86	164	226	2,250	19,400	2,050	f9,240	2,720	7,070	2,960	1,470	1,040
15	53	176	213	1,960	18,700	f2,670	7,890	2,560	8,030	3,200	1,110	814
16	36	162	200	1,690	17,900	3,020	f6,160	2,200	9,500	f3,700	960	670
17	36	152	200	1,470	17,800	3,140	5,060	f1,820	f11,900	f4,160	636	534
18	36	152	200	d1,310	17,400	2,900	4,640	1,470	13,800	4,360	568	468
19	34	150	200	1,190	16,200	f2,500	4,990	1,230	14,900	f4,220	534	376
20	34	140	168	1,150	14,400	2,100	5,150	1,190	f14,900	4,100	534	346
21	34	126	188	1,040	12,700	1,960	5,270	1,110	12,700	3,510	886	318
22	32	124	823	960	f11,400	1,640	5,270	1,070	f8,750	2,450	1,430	290
23	34	145	11,400	922	f9,840	1,560	5,270	d1,310	6,080	1,870	1,640	277
24	34	188	16,300	850	7,710	1,430	5,270	2,620	6,160	1,640	1,800	264
25	45	200	f17,600	814	6,710	1,350	5,340	3,200	f2,760	1,600	1,510	264
26	1,190	188	17,800	814	4,030	1,310	5,340	3,140	f2,250	1,470	d1,270	251
27	1,230	176	18,100	742	3,080	1,110	5,270	3,020	2,400	1,230	960	238
28	752	176	18,000	742	2,670	1,040	f4,710	2,960	2,720	f998	814	264
29	346	176	17,000	706	2,500	1,110	4,710	3,510	2,780	814	814	264
30	200	176	15,700	742	-	1,270	f7,630	4,500	3,080	778	814	251
31	128	-	13,800	742	-	f1,510	-	5,060	-	742	1,060	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,174	1,230	32	167	10,260
November	3,620	200	46	121	7,180
December	152,487	18,100	188	4,919	302,500
Calendar year	-	-	-	-	-
January	72,544	9,500	706	2,340	143,900
February	333,010	20,200	742	11,480	660,500
March	52,978	3,140	960	1,709	105,100
April	159,020	10,900	1,820	5,301	315,400
May	138,750	11,500	1,070	4,476	275,200
June	191,330	14,900	2,250	6,378	379,500
July	90,812	4,710	742	2,929	180,100
August	35,986	3,080	468	1,161	71,380
September	45,519	4,500	238	1,517	90,290
Water year 1939-40	1,281,230	20,200	32	3,501	2,541,000

d Doubtful gage-height record; discharge computed from graph based on gage-height record for adjoining days.

f Fragmentary gage-height record; discharge computed on basis of partly estimated gage heights.

Sabine River near Bon Wier, Tex.

Location.- Chain gage, lat. 30°44', long. 93°37', on bridge on U. S. Highway 190, 1¼ miles east of Bon Wier, Newton County, and 2.4 miles upstream from Caney Creek. Datum of gage is 46.4 feet above mean sea level (general adjustment of 1929).

Drainage area.- 8,323 square miles.

Records available.- October 1923 to September 1934, January 1939 to September 1940. Weather Bureau has collected gage-height records in this vicinity since 1913.

Average discharge.- 12 years (1923-34, 1939-40), 6,984 second-feet.

Extremes.- Maximum discharge during year, 28,700 second-feet Aug. 11 (gage height, 20.00 feet, from graph based on gage readings); minimum observed, 240 second-feet Oct. 1, 19, 20.

1923-34, 1939-40: Maximum discharge observed, 63,000 second-feet Aug. 1, 2, 1933; maximum gage height, 23.04 feet Aug. 2, 1933; minimum observed, 185 second-feet Sept. 11, 22 and 24, 1925.

Maximum stage known, 26 feet (present site and datum) in May 1884 based on information furnished by local resident.

Remarks.- Records good. Gage read twice daily, oftener during high water. No large diversions above station.

Cooperation.- Gage-height record collected in cooperation with Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	850	533	22,300	2,030	4,690	3,000	17,400	5,530	5,090	2,280	2,180
2	245	692	605	19,600	2,030	4,640	2,890	17,200	5,750	4,870	3,000	2,120
3	245	533	715	15,800	1,940	4,430	2,780	17,000	5,970	5,970	3,550	3,440
4	248	448	828	11,900	2,450	4,320	3,110	16,000	5,860	6,980	3,770	4,540
5	272	395	1,000	6,610	4,390	3,880	3,440	14,400	5,640	6,640	4,540	5,090
6	299	365	970	5,970	12,000	3,660	3,550	13,500	5,420	6,080	4,980	5,200
7	293	344	850	5,420	16,000	3,330	3,990	12,900	5,090	5,750	3,330	4,870
8	269	323	828	5,190	17,800	3,000	5,310	12,100	4,760	5,310	7,070	4,430
9	245	320	782	6,870	18,900	2,780	7,220	10,300	4,650	5,090	23,000	3,880
10	272	320	782	6,980	19,800	2,620	7,790	7,790	4,760	4,760	25,800	3,440
11	293	335	738	6,640	19,800	2,500	8,020	5,970	5,420	4,430	28,300	3,220
12	359	371	692	6,190	20,100	2,340	9,180	4,650	5,970	4,210	25,600	2,890
13	350	489	670	5,750	20,300	2,280	12,300	4,210	6,190	4,320	18,600	2,670
14	296	541	648	5,310	21,000	2,280	14,400	3,990	6,760	4,320	11,100	2,340
15	276	506	625	4,650	21,300	2,280	14,500	3,990	7,560	4,320	6,200	2,030
16	251	509	625	4,100	21,600	2,890	12,700	3,880	8,850	4,320	4,210	1,780
17	246	553	625	3,660	22,300	3,770	10,500	3,660	10,500	4,870	3,330	1,560
18	245	605	626	3,440	23,400	4,320	9,080	3,220	13,000	5,530	2,780	1,370
19	242	605	605	3,110	24,000	4,760	8,020	2,890	15,600	5,640	2,340	1,160
20	240	626	585	2,620	24,600	4,210	8,020	2,500	17,000	5,420	2,120	1,070
21	242	625	585	2,400	24,000	3,770	7,790	2,180	18,300	5,420	1,900	970
22	248	585	738	2,560	22,300	3,220	7,330	2,030	18,500	5,530	1,720	905
23	257	565	1,720	2,340	20,300	2,780	6,980	1,980	16,400	5,090	1,720	905
24	263	485	7,870	2,280	17,000	2,620	6,760	2,450	12,500	3,880	2,120	1,040
25	284	465	15,300	2,230	13,800	2,500	6,640	3,550	8,750	3,000	2,400	1,560
26	426	481	19,200	2,120	10,600	2,400	5,640	5,090	6,980	2,560	2,400	1,330
27	797	485	21,800	2,080	6,490	2,400	6,640	5,090	6,410	2,180	2,230	1,130
28	2,370	485	22,800	2,030	7,100	2,280	6,640	4,430	5,750	2,120	2,030	970
29	2,490	485	23,700	1,980	6,410	2,280	10,500	4,100	5,200	2,030	1,940	850
30	1,650	493	24,000	1,980	-	2,620	16,900	4,100	5,860	1,850	2,400	805
31	1,100	-	25,700	1,980	-	2,890	-	4,760	-	1,940	2,030	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	15,531	2,490	240	501	30,810
November	14,862	850	320	495	29,480
December	175,744	24,000	533	5,669	348,600
Calendar year	-	-	-	-	-
January	177,090	22,300	1,980	5,713	351,300
February	446,440	24,600	1,940	15,390	885,500
March	98,640	4,760	2,280	3,162	195,600
April	232,620	16,900	2,780	7,754	461,400
May	217,310	17,400	1,980	7,010	431,000
June	254,910	18,500	4,650	8,497	506,600
July	139,520	6,980	1,850	4,501	276,700
August	208,690	28,300	1,720	6,732	413,900
September	69,685	5,200	805	2,323	138,200
Water year 1939-40	2,051,042	28,300	240	5,604	4,068,000

Sabine River near Ruliff, Tex.

Location.- Staff gage, lat. 30°17', long. 93°42', on Kansas City Southern Ry. bridge, 1¼ miles east of Ruliff, Newton County, and 8.7 miles downstream from Cypress Creek. Datum of gage is 1.92 feet above mean sea level (general adjustment of 1929).

Drainage area.- 9,448 square miles.

Records available.- October 1924 to September 1940.

Average discharge.- 16 years, 7,488 second-feet.

Extremes.- Maximum discharge observed during year, 52,000 second-feet Aug. 12 (gage height, 14.40 feet); minimum observed, 338 second-feet Oct. 2, 3, 22-24.
1924-40: Maximum discharge observed, 76,600 second-feet May 24, 25, 1935 (gage height, 16.10 feet); minimum observed, 338 second-feet Sept. 25-27, Oct. 2, 3, 22-24, 1939.
Higher stages are known to have occurred in the past.

Remarks.- Records good. No large diversion above station. Gage read twice daily, oftener during high water.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 25, Aug. 13-22, Sept. 11-30)

1.7	338	8.0	5,390	11.0	12,800
2.0	470	9.0	6,810	12.0	21,000
3.0	1,030	9.5	7,770	13.0	33,800
4.0	1,710	10.0	8,950	14.0	46,800
6.0	3,340	10.5	10,600	15.0	59,800

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	359	2,010	674	23,400	2,570	11,300	4,680	9,250	4,570	6,660	2,570	3,250
2	359	1,640	674	27,300	2,570	8,700	4,790	11,700	4,900	6,360	3,340	3,340
3	338	1,280	674	28,600	2,570	6,810	4,370	17,000	5,140	6,360	4,270	3,080
4	389	1,030	730	27,300	2,570	5,660	3,980	22,200	5,390	6,360	4,680	3,160
5	359	848	848	26,000	2,650	5,140	3,700	23,400	5,650	6,970	4,900	3,780
6	380	730	1,030	23,400	3,600	4,680	3,880	22,200	5,790	7,770	4,900	4,470
7	380	620	1,150	17,900	5,650	4,370	4,270	18,800	5,650	8,000	5,840	4,790
8	424	543	1,150	11,700	7,340	3,980	4,570	17,000	5,520	7,550	13,600	5,020
9	447	518	1,030	8,220	9,860	3,700	4,900	16,200	5,390	6,970	26,000	5,020
10	424	494	968	7,140	12,200	3,520	5,790	14,700	5,790	6,210	36,400	4,680
11	424	494	908	6,970	14,700	3,340	6,510	12,800	6,660	5,790	44,200	4,370
12	470	470	908	6,970	17,000	3,160	6,970	11,700	7,340	5,520	52,000	3,980
13	447	494	848	6,970	19,800	2,990	7,550	9,250	7,140	5,260	46,800	3,700
14	470	494	848	6,510	22,200	2,910	8,220	7,140	6,970	4,900	39,000	3,520
15	518	543	788	6,210	23,400	2,820	9,250	5,650	6,810	5,020	31,200	3,250
16	494	702	788	5,650	24,700	2,740	10,600	4,900	6,660	5,650	23,400	2,990
17	447	730	730	5,020	26,000	2,990	12,200	4,470	6,810	6,070	17,000	2,650
18	402	648	730	4,570	27,300	3,520	13,400	4,270	7,550	6,210	11,700	2,400
19	380	848	730	4,170	28,600	3,880	13,400	4,070	8,220	6,510	7,550	2,090
20	359	908	788	3,780	29,900	4,270	12,200	3,780	9,550	6,660	5,650	1,930
21	359	968	788	3,430	29,900	4,570	10,600	3,430	10,900	6,510	4,470	1,780
22	338	968	730	3,340	29,900	4,470	9,250	3,160	12,200	6,210	3,780	1,710
23	359	908	788	3,160	29,600	4,170	8,460	2,820	14,700	5,930	3,340	1,640
24	338	908	848	2,990	28,600	3,700	8,000	2,650	17,000	5,790	2,910	1,640
25	380	788	2,400	2,820	27,300	3,340	7,550	2,740	18,800	5,390	2,820	1,570
26	447	730	5,470	2,740	24,700	3,160	7,140	3,160	17,900	4,570	2,990	1,860
27	568	702	7,140	2,740	23,400	3,080	6,970	3,980	16,200	3,780	3,080	2,240
28	788	674	8,950	2,650	18,800	2,990	6,810	4,680	12,200	3,250	3,080	2,170
29	650	647	11,300	2,570	15,400	2,990	7,550	5,020	9,850	2,990	2,990	1,950
30	2,490	647	14,000	2,570	-	3,600	8,460	4,900	7,770	2,740	2,910	1,640
31	2,320	-	17,900	2,570	-	4,270	-	4,570	-	2,490	2,990	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17,277	2,490	338	557	34,270
November	24,184	2,010	470	806	47,970
December	87,308	17,900	674	2,816	173,200
Calendar year 1939	2,138,979	31,200	338	5,860	4,243,000
January	289,360	28,600	2,570	9,334	573,900
February	511,770	29,900	2,570	17,650	1,015,000
March	130,810	11,300	2,740	4,220	259,500
April	226,020	13,400	3,700	7,534	448,300
May	281,590	23,400	2,650	9,084	558,500
June	265,020	18,800	4,570	8,834	525,700
July	176,450	8,000	2,490	5,692	350,000
August	420,360	52,000	2,570	13,560	833,800
September	89,850	5,020	1,570	2,988	177,800
Water year 1939-40	2,519,799	52,000	338	6,885	4,998,000

Lake Fork of Sabine River near Quitman, Tex.

Location.- Wire-weight gage, lat. 32°46', long. 95°28', on bridge on State Highway 37, half a mile downstream from Dry Creek and 2.5 miles south of Quitman, Wood County. Datum of gage is 317.42 feet above mean sea level (general adjustment of 1929).

Drainage area.- 586 square miles.

Records available.- June 1924 to April 1926, February 1939 to September 1940.

Extremes.- Maximum discharge observed during year, 6,030 second-feet May 30 (gage height, 17.42 feet); no flow at times.
1924-26, 1939-40: Maximum discharge observed, that of May 30, 1940; no flow at times.
Maximum stage known, 22.4 feet, during latter part of January 1938, according to information furnished by local resident.

Remarks.- Records poor. Gage read twice daily. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.2	0.4	4.7	558	639	2,330	439	0.9	126
2		0	.2	.2	.4	4.2	544	1,780	1,460	489	.7	38
3		0	.2	.1	.6	3.6	337	1,460	563	560	.9	22
4		0	.2	.1	1.4	3.2	96	688	138	3,130	.6	15
5		0	.2	.1	1.7	3.0	56	146	47	2,900	.3	11
6		0	.2	.2	4.4	2.8	246	34	35	1,830	.3	8.8
7		0	.2	.2	4.7	2.5	744	25	30	927	.3	6.2
8		0	.2	.2	6.4	2.1	3,100	21	28	230	.2	5.6
9		0	.2	.2	5.2	2.0	4,240	50	22	44	.2	5.2
10		0	.2	.3	5.9	1.9	2,330	51	22	26	.2	4.9
11		0	.2	.3	6.8	2.1	1,460	66	21	21	.2	3.8
12		0	.2	.3	6.8	33	750	56	27	19	.2	2.6
13		0	.2	.3	5.8	26	368	43	29	15	.2	2.0
14		0	.2	.3	4.7	144	192	28	25	14	.1	1.3
15		0	.2	.2	3.9	199	168	22	39	14	.1	.8
16		0	.2	.2	4.2	157	96	17	294	13	0	.6
17		0	.2	.2	8.0	82	59	15	1,280	19	0	.5
18		0	.2	.2	9.5	40	45	15	1,830	19	0	.4
19		.1	.2	.2	9.5	23	38	285	1,250	14	0	.3
20		0	.2	.1	14	19	35	1,400	631	12	0	.2
21		0	.2	.1	34	17	33	2,330	382	9.4	0	.2
22		0	3.7	.3	33	16	31	2,060	302	7.8	0	.2
23		0	3.8	.6	23	13	29	1,270	134	6.2	0	6.3
24		0	1.0	.6	16	12	26	435	44	6.4	0	256
25		0	.5	.5	11	11	22	251	29	9.0	0	516
26		0	.4	.5	8.9	10	21	158	23	5.9	0	239
27		0	.3	.4	7.4	14	20	66	20	4.0	.6	41
28		0	.2	.4	6.2	19	20	316	17	2.8	635	23
29		0	.2	.5	5.2	36	43	2,460	142	2.4	924	16
30		0	.2	.5	-	192	146	5,270	451	2.0	457	14
31		-	.2	.5	-	544	-	4,060	-	1.1	267	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	.1	.1	0	.003	.2
December	14.5	3.8	0	.47	29
Calendar year	-	-	-	-	-
January	9.0	.6	.1	.29	18
February	248.0	34	.4	8.55	492
March	1,638.1	544	1.9	52.8	3,250
April	15,853	4,240	20	528	31,440
May	25,515	6,270	15	823	50,610
June	11,643	2,330	17	388	23,090
July	10,782.0	3,130	1.1	348	21,390
August	2,289.0	924	0	73.8	4,540
September	1,366.9	516	.2	45.6	2,710
Water year 1939-40	69,358.6	5,270	0	190	137,600

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Big Sandy Creek near Big Sandy, Tex.

Location.- Wire-weight gage, lat. 32°37', long. 95°06', on county highway bridge, 2.2 miles northeast of Big Sandy, Upshur County, and 7.8 miles upstream from mouth. Datum of gage is 281.6 feet above mean sea level.

Drainage area.- 235 square miles.

Records available.- February 1939 to September 1940.

Extremes.- Maximum discharge during year, 1,400 second-feet May 31 (gage height, 14.75 feet, from graph based on gage readings); minimum observed, 7.9 second-feet Oct. 2. 1939-40: Maximum discharge, that of May 31, 1940; minimum observed, 7.7 second-feet Sept. 30, 1939.
Maximum stage known, 20.4 feet (probably affected by backwater from Sabine River) in January 1938, according to information furnished by observer.

Remarks.- Records good. Gage read twice daily, oftener during high water. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	11	40	40	32	49	131	113	1,080	119	12	380
2	8.0	11	47	36	34	47	131	96	700	244	12	319
3	8.4	11	44	34	38	44	125	84	461	691	15	208
4	8.6	11	34	34	49	44	119	73	328	600	15	101
5	8.7	11	29	34	58	42	113	58	230	391	12	49
6	8.8	12	26	34	119	42	150	54	157	278	12	31
7	8.8	12	26	40	113	40	200	44	95	200	11	24
8	8.8	13	25	42	107	38	215	38	58	150	12	20
9	8.8	13	25	42	107	38	270	36	42	107	13	17
10	8.8	14	25	42	107	38	246	36	49	73	16	15
11	10	17	25	44	107	40	208	36	78	51	16	15
12	11	24	25	44	95	116	185	36	73	40	16	14
13	11	27	25	42	90	125	178	36	78	38	14	13
14	10	27	21	42	73	131	164	32	90	40	13	13
15	10	26	21	40	68	131	144	31	107	32	12	12
16	10	34	21	36	73	125	119	29	95	27	11	12
17	10	32	21	36	125	119	113	27	73	24	11	11
18	10	38	23	34	113	101	113	40	54	23	12	11
19	10	38	23	36	101	84	119	54	58	21	11	11
20	10	34	21	31	84	73	101	58	78	21	10	11
21	10	32	21	29	78	63	84	69	101	21	9.9	11
22	11	34	48	29	73	58	68	286	125	20	9.7	11
23	11	23	144	40	73	54	63	576	131	19	9.5	12
24	11	21	125	31	68	51	54	460	157	17	9.5	23
25	11	21	107	31	63	49	51	319	192	16	9.5	31
26	11	20	84	38	56	47	47	254	157	15	9.5	29
27	11	20	68	32	56	51	44	178	96	14	10	21
28	12	20	58	31	51	73	42	198	44	13	99	17
29	12	20	51	31	51	73	147	319	124	13	185	15
30	12	24	47	32	-	107	119	270	96	12	254	15
31	11	-	42	32	-	119	-	925	-	12	369	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	310.6	12	8.0	10.0	615
November	651	38	11	21.7	1,290
December	1,330	144	21	42.9	2,640
Calendar year	-	-	-	-	-
January	1,119	44	29	36.1	2,220
February	2,262	125	32	78.0	4,490
March	2,211	131	38	71.3	4,390
April	3,863	270	42	129	7,660
May	4,863	925	27	157	9,650
June	5,205	1,080	42	174	10,320
July	3,342	691	12	108	6,630
August	1,230.6	369	9.5	39.7	2,440
September	1,472	380	11	49.1	2,920
Water year 1939-40	27,859.2	1,080	8.0	76.1	55,270

Cherokee Bayou near Elderville, Tex.

Location.- Water-stage recorder, lat. 32°20', long. 94°42', at bridge on county highway, 3.8 miles southeast of Elderville, Gregg County, 4.5 miles upstream from bridge on State Highway 149, and 19.3 miles upstream from mouth. Datum of gage is 266.8 feet above mean sea level (general adjustment of 1929; Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 110 square miles.

Records available.- August 1939 to September 1940.

Extremes.- Maximum discharge during year, 1,370 second-feet Aug. 28 (gage height, 6.60 feet); no flow Oct. 1 to Nov. 16.
1939-40: Maximum discharge, that of Aug. 28, 1940; no flow at times.
Maximum stage known, about 14.0 feet in September 1913, according to information furnished by local resident.

Remarks.- Records poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	22	31	23	31	208	75	77	142	0.8	88
2		0	20	26	25	30	96	68	36	77	31	28
3		0	21	24	25	28	52	79	20	32	16	16
4		0	22	32	49	26	37	55	16	24	4.1	12
5		0	18	39	61	26	30	37	13	20	1.6	10
6		0	13	39	123	25	32	16	12	16	.9	34
7		0	10	61	134	24	46	11	9.1	13	.5	37
8		0	8.9	55	149	24	46	9.3	7.3	9.6	.5	15
9		0	8.0	55	109	24	55	8.7	8.2	8.2	1.2	7.8
10		0	7.8	54	83	24	42	8.5	56	6.5	1.1	5.3
11		0	7.5	44	68	25	34	7.1	131	5.1	.8	3.8
12		0	7.1	38	63	28	29	6.4	225	4.6	.7	2.7
13		0	6.7	35	54	46	26	5.8	165	10	.5	1.9
14		0	6.2	34	39	43	28	4.8	55	27	.4	1.3
15		0	6.4	29	36	40	26	4.0	29	14	.4	1.0
16		.5	6.8	25	44	32	22	3.2	26	56	.4	.8
17		3.1	6.8	24	96	29	45	2.8	63	30	.4	.7
18		6.2	6.8	23	140	27	56	7.6	63	16	31	.5
19		9.6	6.7	18	170	24	58	6.8	50	13	212	.4
20		8.0	6.5	17	107	24	54	5.7	96	41	103	.2
21		6.4	6.5	17	66	23	40	6.1	84	28	61	.2
22		5.7	26	17	49	22	30	8.3	138	16	21	.2
23		5.2	190	17	41	22	24	18	58	8.9	8.7	1.3
24		4.6	202	17	41	21	18	24	27	6.7	4.7	19
25		4.0	235	17	39	19	16	22	19	4.7	3.2	22
26		3.3	202	16	36	18	13	32	12	3.2	2.6	16
27		3.0	114	16	36	28	11	37	9.6	2.2	21	10
28		2.8	73	18	34	58	14	74	9.3	1.3	1,180	6.8
29		2.9	61	23	32	94	30	175	88	.8	970	5.1
30		6.0	44	26	-	182	31	278	114	.5	720	3.9
31		-	35	25	-	208	-	198	-	.5	296	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	71.3	9.6	0	2.38	141
December	1,406.7	235	6.2	45.4	2,790
Calendar year	-	-	-	-	-
January	912	61	16	29.4	1,810
February	1,972	170	23	68.0	3,910
March	1,255	208	18	40.5	2,490
April	1,249	208	11	41.6	2,480
May	1,294.1	278	2.8	41.7	2,570
June	1,716.5	225	7.3	57.2	3,400
July	637.8	142	.5	20.6	1,270
August	3,695.5	1,180	.4	119	7,330
September	350.9	88	.2	11.7	696
Water year 1939-40	14,550.8	1,180	0	39.8	28,890

Neches River near Neches, Tex.

Location.- Wire-weight gage, lat. 31°54', long. 95°26', at bridge on U. S. Highway 79, half a mile downstream from International-Great Northern R. R. bridge, 1 mile downstream from Walnut Creek, and 4.4 miles northeast of Neches, Anderson County. Datum of gage is 263.9 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,129 square miles.

Records available.- February 1939 to September 1940.

Extremes.- Maximum discharge observed during year, 834 second-feet Apr. 13 (gage height, 10.81 feet); no flow Oct. 3-5.
1939-40: Maximum discharge observed, 2,220 second-feet Mar. 4, 1939 (gage height, 14.51 feet); no flow Oct. 3-5, 1939.
Maximum stage known, 24.3 feet in May 1908, according to information furnished by local resident. Flood of May 1884 probably reached a higher stage.

Remarks.- Records good except those below 100 second-feet, which are fair. Gage read twice daily, oftener during high water. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	5.2	36	129	106	199	162	300	284	320	26	88
2	.2	5.6	43	120	108	192	162	456	260	372	32	78
3	.1	6.2	45	108	126	180	162	554	220	470	29	108
4	0	7.6	43	100	168	174	186	568	199	526	25	162
5	.2	9.1	38	108	213	162	206	540	174	540	23	192
6	1.9	9.6	39	114	213	156	228	512	156	584	20	206
7	2.0	9.4	48	117	236	150	300	512	123	600	19	186
8	2.0	9.6	52	126	236	147	360	420	106	632	19	144
9	2.0	9.3	52	126	236	123	526	350	96	632	22	96
10	1.6	9.3	50	126	236	126	648	252	98	616	23	68
11	1.5	10	48	126	244	123	744	199	186	584	24	52
12	1.2	13	47	132	252	126	816	150	192	512	32	40
13	.9	15	43	135	260	120	834	129	156	432	28	34
14	.8	17	41	135	260	117	798	123	144	456	25	27
15	.6	18	39	129	260	117	712	117	132	350	20	23
16	.6	21	39	120	260	117	616	98	138	220	17	22
17	.6	22	39	117	320	135	512	86	132	156	16	20
18	.5	26	40	111	360	147	420	96	301	132	25	18
19	.5	30	41	106	360	150	350	150	420	126	35	16
20	.5	32	42	98	330	141	310	144	350	111	68	15
21	1.9	30	41	93	300	132	260	126	256	98	46	14
22	2.6	32	45	90	292	120	220	144	186	83	34	14
23	3.1	32	86	86	300	114	192	186	147	76	26	17
24	3.1	34	138	88	292	117	186	206	135	63	21	28
25	3.1	34	141	90	284	132	186	206	156	61	19	38
26	3.6	34	132	90	268	98	168	174	135	48	17	36
27	4.5	32	132	88	252	100	174	174	117	40	16	32
28	6.2	31	135	88	236	100	162	199	100	34	99	30
29	8.4	28	141	96	213	106	228	360	218	30	350	55
30	7.3	30	144	100	-	138	292	300	268	29	295	76
31	5.9	-	138	103	-	168	-	292	-	26	133	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	67.7	8.4	0	2.18	134
November	601.9	34	5.2	20.1	1,190
December	2,138	144	36	69.0	4,240
Calendar year	-	-	-	-	-
January	3,395	135	86	110	6,730
February	7,221	360	106	249	14,320
March	4,227	199	98	136	8,380
April	11,120	834	162	371	22,060
May	8,123	568	86	262	16,110
June	5,565	420	96	186	11,040
July	8,959	632	26	289	17,770
August	1,584	350	16	51.1	3,140
September	1,935	206	14	64.5	3,840
Water year 1939-40	54,936.6	834	0	150	109,000

Neches River near Diboll, Tex.

Location.- Wire-weight gage, lat. 31°08', long. 94°48', on bridge on State Highway 35, 130 feet downstream from Texas & New Orleans R. R. bridge, 2.8 miles downstream from Alabama Creek, and 3.8 miles south of Diboll, Angelina County. Datum of gage is 134.46 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,670 square miles.

Records available.- November 1923 to August 1925, March 1939 to September 1940.

Extremes.- Maximum discharge during year, 12,100 second-feet Dec. 23 (gage height, 15.10 feet, from graph based on gage readings); minimum observed, 0.9 second-foot Oct. 17, 18.

1923-25, 1939-40: Maximum discharge, 14,800 second-feet Dec. 23, 1923 (gage height, 15.4 feet, from floodmarks), from rating curve extended above 7,000 second-feet; no flow Aug. 15-22, 1925.

Maximum stage known, 21.5 feet in May 1884, according to information furnished by local residents.

Remarks.- Records good. Gage read twice daily, oftener during high stages. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	29	64	1,260	224	900	474	3,310	2,980	550	162	438
2	6.0	22	68	695	224	852	492	3,730	2,450	670	152	492
3	6.3	15	65	456	230	804	474	3,660	2,070	1,050	144	438
4	5.1	11	68	384	1,490	756	447	3,380	1,780	1,350	143	376
5	4.5	8.0	78	352	3,340	692	429	2,860	1,530	1,290	125	328
6	4.0	6.6	88	384	4,960	630	644	2,300	1,200	1,290	115	272
7	2.0	6.0	92	492	5,740	610	1,720	1,740	924	1,380	109	230
8	1.9	6.0	89	610	6,000	550	1,740	1,320	692	1,530	112	180
9	1.6	6.9	83	780	6,400	530	2,140	948	550	1,660	109	148
10	1.3	7.6	78	828	6,130	492	2,000	758	697	1,830	102	142
11	1.3	12	75	714	5,740	456	1,660	692	1,350	2,070	93	155
12	1.3	14	74	570	5,060	447	2,000	650	1,570	2,220	87	162
13	1.1	14	71	474	4,440	438	1,940	630	1,880	2,500	83	162
14	1.0	16	69	411	3,660	670	1,690	590	2,070	2,620	85	148
15	1.0	21	66	376	2,920	852	1,200	530	2,220	2,560	95	128
16	1.0	33	69	344	2,300	828	852	456	2,860	2,450	142	110
17	.9	46	70	328	2,980	610	714	384	3,170	2,070	186	95
18	.9	56	72	312	3,450	492	670	312	2,740	1,740	174	82
19	1.0	78	73	288	3,310	429	670	320	2,300	1,560	135	74
20	1.2	85	71	272	2,980	393	692	312	1,830	1,470	100	70
21	1.4	75	71	251	2,620	376	714	304	1,500	1,410	95	65
22	1.3	68	126	244	2,300	368	714	470	1,350	1,290	108	60
23	1.2	65	6,520	230	2,000	360	692	1,190	1,260	996	121	73
24	1.2	64	8,900	217	1,830	360	650	1,520	1,200	670	115	108
25	1.3	63	7,000	217	1,660	352	590	2,140	1,150	456	100	114
26	2.2	62	5,280	210	1,470	352	510	2,800	1,100	368	90	97
27	2.2	60	4,600	210	1,260	344	429	3,100	1,020	296	85	85
28	3.1	59	4,120	217	1,120	328	368	2,800	852	251	85	104
29	29	57	3,520	210	996	320	1,200	2,220	630	217	93	108
30	39	60	2,740	210	-	336	2,140	2,140	510	192	135	93
31	35	-	1,880	210	-	384	-	2,850	-	174	280	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	186.6	39	0.9	5.37	330
November	1,126.1	85	6.0	37.5	2,230
December	46,240	8,900	64	1,492	91,720
Calendar year	-	-	-	-	-
January	12,756	1,260	210	411	25,300
February	86,854	6,400	224	2,994	172,200
March	16,291	900	320	526	32,310
April	30,655	2,140	368	1,022	60,800
May	50,426	3,730	304	1,627	100,000
June	47,435	3,170	510	1,581	94,090
July	40,180	2,620	174	1,296	79,700
August	3,760	280	83	121	7,460
September	5,135	492	60	171	10,190
Water year 1939-40	341,004.7	8,900	.9	932	676,300

Neches River near Rockland, Tex.

Location.- Staff gage, lat. 31°01'45", long. 94°23'50", half a mile upstream from Texas & New Orleans R. R. bridge, 1 mile north of Rockland, Tyler County, and 3½ miles downstream from Billams Creek. Datum of gage is 91.4 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,539 square miles.

Records available.- July 1903 to September 1940. (July 1903 to September 1923, monthly records only, in Water-Supply Paper 850). Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 34 years (1903-10, 1913-40), 2,270 second-feet.

Extremes.- Maximum discharge observed during year, 9,670 second-feet Dec. 29 (gage height, 17.30 feet); minimum observed, 5.4 second-feet Oct. 18, 19.

1903-40: Maximum discharge observed, 48,500 second-feet May 22, 1935 (gage height, 28.90 feet), from rating curve extended above 36,000 second-feet; minimum observed during period 1923-40, 3.0 second-feet Oct. 15, 1931.

Maximum stage known, 34.9 feet in May 1884, according to information furnished by local resident.

Remarks.- Records good. Gage read twice daily, oftener during high water. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	11	180	7,270	418	1,370	622	3,330	3,280	1,140	a352	288
2	12	9.6	211	5,960	418	1,230	622	3,330	3,220	894	330	373
3	12	26	200	4,960	418	1,140	660	3,330	3,060	854	317	516
4	11	31	140	3,220	727	1,060	622	3,440	3,060	1,230	304	550
5	9.6	25	127	1,460	2,160	1,020	586	3,660	3,060	1,610	292	516
6	9.2	22	119	854	4,680	934	987	3,940	2,900	1,810	268	482
7	9.2	20	114	1,100	5,080	894	2,930	4,110	2,480	2,060	266	418
8	9.2	17	114	1,020	5,720	774	3,550	4,160	1,910	2,060	324	358
9	11	15	128	1,020	6,870	736	3,660	3,880	1,420	1,960	356	317
10	12	16	130	1,060	7,680	698	3,500	3,060	1,950	1,860	256	256
11	12	42	125	1,100	8,630	660	3,930	1,960	2,790	1,760	222	222
12	10	60	117	1,100	9,440	622	5,080	1,190	2,420	1,710	190	211
13	8.8	54	111	1,100	9,440	586	4,790	774	2,160	1,860	180	211
14	8.0	42	106	894	9,140	586	4,680	854	2,110	1,960	159	222
15	7.2	43	103	814	8,400	622	4,330	814	2,270	2,110	149	222
16	6.4	52	103	698	7,750	774	3,880	774	2,420	2,270	140	222
17	5.8	58	101	622	7,820	814	3,220	698	2,580	2,420	140	190
18	5.4	54	100	586	7,820	854	2,580	660	2,900	2,480	190	169
19	5.6	72	101	550	7,550	736	2,060	622	3,600	2,420	244	149
20	6.0	93	108	516	7,070	622	1,560	550	4,000	2,320	244	124
21	6.4	101	114	482	6,340	550	1,280	516	4,110	2,060	211	119
22	6.8	114	468	450	5,540	516	1,190	482	3,940	1,710	200	120
23	7.2	111	1,960	450	4,900	482	1,100	832	3,600	1,560	180	111
24	9.2	101	3,110	450	4,450	482	1,060	1,960	3,000	1,420	180	92
25	15	88	4,110	450	4,000	450	1,020	2,270	2,320	1,100	190	92
26	64	85	5,480	418	3,550	450	974	2,110	1,760	854	190	130
27	78	82	7,490	418	3,110	450	894	2,060	1,460	660	169	149
28	64	79	9,370	418	2,480	418	1,010	2,220	1,280	516	159	140
29	36	78	9,520	418	1,960	516	1,760	2,580	1,320	418	211	140
30	19	84	9,070	450	-	974	2,580	2,900	1,280	a396	200	140
31	14	-	8,260	418	-	814	-	3,110	-	a374	211	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	503.0	78	5.4	16.2	998
November	1,685.6	114	9.6	56.2	3,340
December	61,490	9,520	100	1,984	122,000
Calendar year 1939	480,810.6	9,680	5.4	1,317	953,700
January	40,726	7,270	418	1,314	80,780
February	153,461	9,440	418	5,292	304,400
March	22,834	1,370	418	737	45,290
April	66,717	5,080	586	2,224	132,300
May	66,176	4,160	482	2,135	131,300
June	77,660	4,110	1,280	2,589	154,000
July	47,856	2,480	374	1,544	94,920
August	7,016	358	140	226	13,920
September	7,229	550	92	241	14,340
Water year 1939-40	553,353.6	9,520	5.4	1,512	1,098,000

a No gage-height record; discharge interpolated.

Neches River at Evadale, Tex.

Location.- Staff gage, lat. 30°21', long. 94°05', at bridge on U. S. Highway 59, 200 feet upstream from Gulf, Colorado & Santa Fe Ry. bridge at Evadale, Jasper County, and 15 miles upstream from Village Creek. Datum of gage is 8.3 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Drainage area.- 7,908 square miles.

Records available.- July 1904 to December 1906, October 1923 to September 1940.

Average discharge.- 17 years (1923-40), 5,888 second-feet.

Extremes.- Maximum discharge observed during year, 22,600 second-feet Feb. 20-23 (gage height, 16.38 feet); minimum observed, 159 second-feet Oct. 1, 2.
1904-6, 1923-40: Maximum discharge, 83,800 second-feet June 1, 1929 (gage height, 22.20 feet, observed at crest); minimum observed, about 148 second-feet Sept. 10, 1925.
Maximum stage known, 26.2 feet in 1884 (discharge about 175,000 second-feet), from rating curve extended above 72,000 second-feet by logarithmic plotting, from records of Gulf, Colorado & Santa Fe Ry. Co.

Remarks.- Records good. No diversion above station. Gage read twice daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	340	420	16,200	1,900	12,800	3,110	5,360	7,220	6,660	1,500	1,320
2	159	300	420	17,600	1,900	11,400	2,930	7,800	7,400	7,220	1,430	1,460
3	169	282	464	18,600	1,900	9,320	2,700	9,560	7,600	5,860	1,540	1,600
4	169	282	608	19,700	1,860	7,600	2,800	10,300	7,800	4,420	1,540	1,710
5	169	282	716	20,800	1,900	6,500	2,350	10,300	7,600	4,260	1,400	1,740
6	169	248	744	20,800	2,810	5,560	2,400	9,820	7,400	3,940	1,260	1,780
7	169	248	744	20,800	5,160	4,800	2,650	9,080	7,040	3,630	1,340	1,860
8	169	232	772	18,100	7,800	4,180	3,820	8,620	6,180	3,560	3,590	1,860
9	169	232	716	14,100	10,600	3,700	5,700	8,400	5,560	3,560	4,590	1,860
10	180	232	660	10,600	12,200	3,230	7,400	8,400	5,420	3,630	6,340	1,780
11	180	248	634	8,200	13,400	2,930	8,200	8,200	5,700	3,630	7,800	1,680
12	180	264	608	6,500	14,500	2,700	8,400	8,200	6,500	3,490	6,700	1,600
13	192	264	582	5,660	14,900	2,550	8,620	7,220	7,400	3,420	4,390	1,600
14	192	320	558	4,920	15,700	2,450	9,820	5,860	7,600	3,420	2,700	1,600
15	180	400	534	4,500	16,600	2,300	11,100	4,500	7,040	3,560	1,740	1,640
16	180	420	510	4,260	18,100	2,250	11,900	3,420	6,340	3,700	1,360	1,640
17	169	442	510	3,940	20,800	2,550	12,200	2,810	6,180	3,860	1,120	1,600
18	169	442	510	3,700	21,400	3,050	11,400	2,450	6,020	3,940	1,020	1,430
19	169	510	510	3,420	22,000	3,490	10,100	2,250	6,020	3,940	924	1,220
20	169	558	534	3,170	22,600	3,700	8,840	2,160	6,680	3,860	924	968
21	169	558	510	2,870	22,600	3,700	8,000	2,160	7,800	3,860	956	830
22	169	582	534	2,700	22,600	3,420	7,040	2,060	8,620	3,780	956	716
23	169	558	558	2,500	22,600	3,290	5,860	1,900	9,080	3,630	956	688
24	180	558	1,030	2,350	22,000	3,050	4,600	1,820	9,320	3,290	924	830
25	192	510	3,240	2,250	21,400	2,810	3,860	2,700	8,840	2,930	860	892
26	218	486	5,700	2,110	19,700	2,400	3,290	4,260	8,200	2,750	830	892
27	218	486	7,400	2,060	18,600	2,060	2,990	5,860	7,220	2,550	830	800
28	232	464	9,320	2,020	16,600	1,940	2,750	6,680	6,180	2,350	892	660
29	248	442	11,100	1,980	14,900	2,020	2,810	7,040	4,500	2,020	956	608
30	300	442	12,800	1,940	-	2,550	3,290	7,220	4,920	1,780	1,020	634
31	320	-	14,500	1,940	-	2,990	-	7,220	-	1,600	1,190	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,876	320	159	190	11,650
November	11,632	582	232	388	23,070
December	78,446	14,500	420	2,531	155,600
Calendar year 1939	1,400,763	21,400	159	3,838	2,778,000
January	250,190	20,800	1,940	8,071	496,200
February	409,030	22,600	1,860	14,100	811,300
March	127,290	12,800	1,940	4,106	252,500
April	180,650	12,200	2,350	6,021	358,300
May	183,630	10,300	1,820	5,924	364,200
June	209,380	9,320	4,600	6,979	415,300
July	114,300	7,220	1,600	3,687	226,700
August	63,578	7,800	830	2,051	126,100
September	39,518	1,860	608	1,317	78,380
Water year 1939-40	1,673,500	22,600	159	4,572	3,319,000

Mud Creek near Jacksonville, Tex.

Location.- Water-stage recorder, lat. 31°58'40", long. 95°09'40", at bridge on U. S. Highway 79, about 5 miles downstream from International-Great Northern R. R. bridge, and 6.9 miles east of Jacksonville, Cherokee County. Datum of gage is 271.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 382 square miles.

Records available.- May 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period May to September, 1,680 second-feet May 18 (gage height, 7.88 feet); no flow at times.
1939-40: Maximum discharge during year, 2,240 second-feet Aug. 29 (gage height, 8.20 feet); no flow at times.
Maximum stage known occurred in May 1884, according to information furnished by local residents.

Remarks.- Records good except those below 100 second-feet, which are poor. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	May	June	July	Day	May	June	July	Day	May	June	July
1	-	107	8.6	11	45	52	10	21	1,200	37	0
2	-	74	8.8	12	38	43	11	22	854	43	0
3	-	74	8.3	13	32	38	7.6	23	584	42	0
4	-	86	11	14	28	34	4.0	24	323	33	0
5	-	137	8.1	15	27	31	2.6	25	131	26	0
6	38	140	4.9	16	27	28	1.9	26	81	22	0
7	37	140	2.4	17	494	25	1.0	27	64	18	0
8	72	156	.9	18	1,420	23	.6	28	98	f15	0
9	60	116	.2	19	682	26	0	29	153	f12	0
10	47	70	.1	20	898	35	0	30	188	f10	0
								31	148	-	0

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	3.2	40	43	65	98	107	98	266	0	876
2		0	12	36	44	63	98	101	63	248	2.2	708
3		0	9.8	33	47	59	78	71	47	266	4.0	480
4		0	11	34	60	56	62	60	34	226	2.3	190
5		0	14	37	86	54	50	45	26	168	11	70
6		0	15	38	144	50	49	36	21	117	0	48
7		0	13	41	128	48	72	30	17	68	0	39
8		0	12	47	128	47	95	26	14	49	0	32
9		0	10	49	128	45	117	22	14	40	0	26
10		0	10	52	124	45	140	81	48	34	0	23
11		0	9.6	54	114	44	148	20	101	29	0	20
12		0	9.6	58	98	44	140	20	101	26	20	16
13		0	9.5	59	89	45	101	20	110	25	28	13
14		0	9.0	47	82	44	95	18	81	86	10	12
15		0	9.0	45	73	45	84	16	58	242	12	9.6
16		0	9.0	43	81	58	66	13	86	226	16	7.8
17		0	9.6	41	176	58	60	11	78	85	9.0	6.7
18		0	9.2	39	156	52	60	27	81	38	34	5.6
19		0	9.8	f37	152	48	56	34	63	29	98	4.7
20		0	10	f35	156	45	60	23	81	25	70	3.6
21		.8	10	f32	156	44	58	27	54	20	66	2.8
22		1.7	15	34	136	43	54	91	48	18	46	2.8
23		1.4	28	35	104	41	51	179	37	20	26	19
24		1.0	41	34	86	39	46	86	27	15	16	86
25		.6	48	33	78	39	39	41	23	11	9.6	35
26		.3	60	33	73	38	35	38	20	7.4	5.3	30
27		.2	73	33	72	37	31	39	17	4.9	3.4	42
28		.1	68	33	70	40	31	47	18	2.8	1,170	41
29		0	59	35	67	45	130	132	204	1.1	1,770	29
30		.3	52	41	-	63	110	101	221	.3	1,330	21
31		-	45	42	-	81	-	101	-	0	1,170	-

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Monthly discharge, in second-feet, of Mud Creek near Jacksonville, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 6-31, 1939	7,789	1,420	27	299	15,410
June	1,693	158	10	56.4	3,360
July	92	11	0	2.97	182
August	0	0	0	0	0
September	0	0	0	0	0
The period	-	-	-	-	18,950
October 1939	0	0	0	0	0
November	6.4	1.7	0	.21	13
December	701.7	73	3.2	22.6	1,390
Calendar year	-	-	-	-	-
January 1940	1,233	54	32	39.8	2,450
February	2,951	176	45	102	5,850
March	1,525	81	37	49.2	3,020
April	2,292	148	31	76.4	4,550
May	1,603	179	11	51.7	3,180
June	1,885	221	14	62.8	3,740
July	2,388.5	266	0	77.0	4,740
August	5,828.8	1,770	0	188	11,560
September	2,869.6	876	2.8	95.7	5,690
Water year 1939-40	25,284.0	1,770	0	69.6	46,180

Angelina River near Lufkin, Tex.

Location.- Water-stage recorder, lat. 31°27'40", long. 94°43'35", at bridge on State Highway 35, 400 feet upstream from Procella Creek, half a mile downstream from Little Loco Bayou, 1.5 miles upstream from Texas and New Orleans R. R. bridge, and 8 miles north of Lufkin, Angelina County. Datum of gage is 164.72 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,575 square miles.

Records available.- October 1923 to September 1934, July 1939 to September 1940.

Average discharge.- 12 years, 1,186 second-feet.

Extremes.- Maximum discharge during year, 3,960 second-feet Feb. 19 (gage height, 11.06 feet); minimum, 2.3 second-feet Oct. 12.

1923-34, 1939-40: Maximum discharge, 38,200 second-feet Feb. 24, 1932 (gage height, 17.9 feet, present site and datum, adjusted from observed peak at site then in use); minimum, that of Oct. 12, 1939.

Maximum stage known, about 26.5 feet in May 1884, according to information furnished by local residents.

Remarks.- Records good. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	8.2	77	1,340	333	1,310	668	1,910	1,110	615	87	720
2	2.9	7.6	92	1,240	308	1,040	668	1,660	1,110	685	101	755
3	2.9	7.0	84	1,060	308	878	720	1,260	1,190	720	117	860
4	2.8	6.8	77	930	1,160	790	772	1,110	1,210	790	240	1,010
5	2.8	7.0	77	825	2,400	758	825	1,140	1,180	790	324	1,210
6	2.9	9.5	95	702	3,480	668	1,010	1,160	1,140	778	256	1,400
7	2.9	11	117	738	3,340	632	1,550	1,160	912	755	181	1,550
8	2.9	12	120	808	3,060	585	1,760	1,060	615	720	136	1,660
9	2.9	11	117	808	3,060	555	1,510	842	451	668	107	1,690
10	2.8	11	107	790	2,920	530	950	555	740	600	95	1,550
11	2.7	13	101	755	2,540	519	970	420	1,190	519	84	1,140
12	2.4	16	92	720	2,440	543	1,010	342	1,580	442	80	637
13	2.8	23	87	702	2,200	1,170	912	284	1,690	369	84	316
14	3.5	31	80	650	2,030	1,140	825	255	1,620	351	117	206
15	3.6	35	75	585	1,990	860	755	226	1,520	351	204	162
16	3.8	36	70	519	2,320	772	755	211	1,620	409	342	136
17	3.6	39	68	486	3,340	720	755	191	1,690	519	369	117
18	3.2	57	66	453	3,800	685	772	172	1,800	555	262	104
19	3.2	68	64	409	3,800	632	738	162	1,910	486	226	92
20	3.2	66	61	378	3,340	555	632	154	1,910	464	269	84
21	3.2	66	64	351	2,920	508	555	162	1,760	497	324	80
22	3.4	75	219	333	2,440	475	508	201	1,430	519	409	75
23	3.2	82	2,220	316	2,300	442	486	1,220	1,080	475	464	108
24	2.9	82	3,060	300	2,250	420	453	2,070	842	351	453	324
25	6.4	82	3,340	292	2,200	388	420	2,250	685	249	333	221
26	15	80	2,920	292	2,200	360	388	1,870	555	196	256	149
27	22	75	2,160	292	2,120	351	360	1,240	475	162	237	156
28	19	68	1,720	284	1,910	342	342	1,410	420	136	237	156
29	14	61	1,550	292	1,620	378	724	1,580	398	117	497	140
30	11	64	1,460	324	-	530	1,500	1,340	486	101	685	136
31	9.2	-	1,400	351	-	668	-	1,180	-	90	772	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	170.5	22	2.4	5.50	338
November	1,210.1	82	6.8	40.3	2,400
December	21,840	3,340	61	705	43,320
Calendar year 1939	-	-	-	-	-
January	18,325	1,340	284	591	36,350
February	68,129	3,800	308	2,349	135,100
March	20,184	1,310	342	651	40,030
April	24,093	1,760	342	803	47,790
May	28,798	2,250	154	929	57,120
June	34,289	1,910	398	1,143	68,010
July	14,475	790	90	467	28,710
August	8,348	772	80	269	16,550
September	16,904	1,690	75	563	33,530
Water year 1939-40	256,763.6	3,800	2.4	702	509,300

Angelina River at Horger, Tex.

Location.- Chain gage, lat. 31°00', long. 94°10', at bridge on State Highway 63, a quarter of a mile east of Horger, Jasper County, 7 miles upstream from Indian Creek, and 20 miles upstream from mouth. Datum of gage is 68.4 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Drainage area.- 3,435 square miles.

Records available.- March 1928 to September 1940.

Average discharge.- 12 years, 2,676 second-feet.

Extremes.- Maximum discharge observed during year, 13,800 second-feet Feb. 14 (gage height, 23.28 feet); minimum observed, 30 second-feet Oct. 15.

1928-40: Maximum discharge, 48,800 second-feet Feb. 24, 1932 (gage height, 36.35 feet, from graph based on gage readings); minimum observed, 13 second-feet Sept. 22, 1937.

Maximum discharge known, 82,000 second-feet August 1915 (gage height, 39.5 feet, according to information furnished by local residents), from rating curve extended above 47,000 second-feet by logarithmic plotting.

Remarks.- Records good except those above 5,000 second-feet, which are fair. Gage read twice daily. Occasional backwater from Neches River. No diversion above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-10, Jan. 1-10)

0.8	28	4	806	16	8,030
1.0	49	5	1,200	20	11,100
1.5	127	6	1,640	24	14,400
2	232	8	2,670		
3	502	12	5,130		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	144	270	12,700	960	4,680	1,280	6,380	3,660	860	379	1,280
2	52	111	275	11,300	960	4,090	1,420	5,530	3,540	823	418	1,280
3	52	94	312	9,900	940	3,660	1,420	4,740	3,420	880	460	1,240
4	50	84	360	8,180	1,680	3,180	1,370	4,350	3,120	960	385	1,240
5	53	77	460	5,810	5,780	2,780	1,380	4,220	2,560	1,000	374	1,200
6	50	73	418	4,020	8,030	2,400	1,660	3,780	1,920	1,000	404	1,200
7	50	67	363	3,720	8,930	2,020	3,800	3,660	1,660	960	387	1,240
8	55	64	317	3,600	9,080	1,730	5,000	3,780	1,550	980	834	1,120
9	50	59	296	3,500	9,000	1,600	4,540	3,660	1,500	960	1,240	1,040
10	53	62	262	3,000	9,680	1,460	4,480	3,500	1,780	920	1,550	1,080
11	48	139	250	2,780	10,900	1,420	5,350	2,940	2,560	920	884	1,160
12	47	123	240	2,450	12,500	1,320	7,130	2,450	2,780	940	545	1,200
13	45	133	237	2,400	13,500	1,280	7,280	1,780	2,840	980	488	1,240
14	37	122	225	2,280	13,700	1,320	6,090	1,280	2,890	980	432	1,240
15	32	135	222	2,120	13,300	2,070	5,260	1,040	2,890	980	390	1,120
16	33	193	225	2,070	12,700	2,780	4,740	900	2,890	860	366	823
17	33	270	215	1,920	12,500	2,940	4,160	806	2,840	823	328	560
18	37	250	208	1,730	12,500	2,840	4,280	880	3,000	840	312	418
19	38	260	204	1,500	12,400	2,560	4,350	960	3,560	774	328	333
20	38	270	199	1,370	12,000	2,450	3,600	860	3,780	758	390	299
21	48	254	195	1,240	11,300	2,340	2,670	728	3,600	774	416	265
22	66	234	378	1,160	10,400	2,120	2,070	665	3,480	774	416	244
23	64	220	3,720	1,120	9,380	1,730	1,730	1,250	3,120	790	390	234
24	48	206	6,380	1,040	8,480	1,420	1,550	3,480	2,670	774	404	230
25	53	199	8,330	1,040	7,660	1,280	1,420	4,160	2,720	806	474	215
26	104	190	11,000	1,000	7,060	1,200	1,250	4,020	2,230	790	516	225
27	111	176	11,600	980	6,480	1,120	1,240	4,350	1,730	680	502	220
28	176	176	12,200	960	5,950	1,080	1,120	4,220	1,320	560	530	172
29	136	176	13,000	980	5,320	1,080	2,960	3,660	1,200	474	620	474
30	122	176	13,500	960	-	1,120	5,600	3,480	980	446	680	397
31	166	-	13,400	980	-	1,160	-	3,600	-	404	1,060	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,000	176	32	64.5	3,970
November	4,725	270	59	158	9,370
December	99,261	13,500	195	3,202	196,900
Calendar year 1939	699,648	13,500	32	1,917	1,388,000
January	97,650	12,700	960	3,147	193,500
February	253,050	13,700	940	8,726	501,900
March	64,230	4,680	1,080	2,072	127,400
April	100,170	7,280	1,120	3,339	198,700
May	90,907	6,380	665	2,932	180,300
June	77,610	3,780	980	2,587	153,900
July	25,470	1,000	404	822	50,520
August	16,906	1,550	312	545	33,530
September	22,979	1,280	172	766	45,580
Water year 1939-40	854,858	13,700	32	2,336	1,696,000

Attoyac Bayou near Chireno, Tex.

Location.- Water-stage recorder, lat. 31°30'15", long. 94°18'15", at bridge on State Highway 21, 3 miles northeast of Chireno, Nacogdoches County, and 7 miles downstream from Arenoso Creek. Datum of gage is 169.9 feet above mean sea level (general adjustment of 1929).

Drainage area.- 502 square miles.

Records available.- January 1924 to August 1925, July 1939 to September 1940.

Extremes.- Maximum discharge during year, 9,870 second-feet Dec. 25 (gage height, 19.74 feet); minimum, 15 second-feet Oct. 18-21.

1924-25, 1939-40: Maximum discharge, that of Dec. 25, 1939; minimum observed, 7.0 second-feet Aug. 27, 1925.

Maximum stage known, 29.9 feet in June 1912 (result of local storm), according to information furnished by local residents.

Remarks.- Records good. No diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 19 to Jan. 3, Feb. 25 to Apr. 28)

2.6	15	6	164	15	1,420
3.0	23	8	314	16	2,030
3.5	37	10	488	17	3,160
4	56	12	725	18	5,000
5	104	14	1,100		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	29	178	1,070	192	362	298	1,150	516	256	54	631
2	32	27	282	907	184	346	274	1,330	322	258	81	644
3	22	27	192	525	194	322	244	2,790	298	214	86	644
4	f19	26	152	443	843	306	198	2,280	184	158	71	507
5	f18	26	140	595	1,350	282	178	1,800	155	140	73	200
6	f17	26	116	573	5,110	274	247	1,460	137	125	71	113
7	16	27	91	644	8,630	266	670	1,200	122	110	58	91
8	16	28	78	683	4,800	251	868	728	110	99	53	78
9	16	28	71	670	3,650	244	1,000	302	113	94	75	69
10	18	30	69	683	3,320	236	980	228	274	88	107	62
11	24	37	66	697	3,560	236	1,180	206	590	96	99	58
12	24	78	64	697	3,160	236	1,460	184	697	133	107	52
13	20	134	62	603	2,380	450	1,570	171	828	167	96	48
14	17	113	60	422	1,950	945	1,270	152	1,870	193	91	46
15	17	99	58	330	1,680	1,740	868	140	1,990	214	96	44
16	16	110	58	282	1,590	1,570	468	131	1,620	206	71	45
17	20	134	60	258	1,800	1,070	314	122	1,340	206	56	42
18	15	113	62	244	1,680	488	306	116	1,020	156	66	42
19	15	104	64	221	1,570	358	314	116	528	102	86	41
20	15	96	69	198	1,420	274	298	113	362	178	86	40
21	15	88	71	192	1,620	244	314	116	338	189	130	39
22	16	73	577	192	1,620	228	298	122	290	274	178	39
23	17	62	3,960	192	1,460	214	244	670	221	258	124	49
24	17	56	6,130	192	1,290	198	198	818	178	151	71	88
25	21	50	8,320	192	1,040	184	178	786	141	94	55	272
26	78	47	4,580	198	695	178	171	770	131	73	48	270
27	104	45	3,080	192	478	171	161	921	116	62	44	133
28	56	44	2,150	184	422	171	168	1,180	104	56	195	84
29	37	43	1,680	198	386	192	572	1,340	107	51	551	66
30	32	54	1,380	206	-	266	818	1,200	141	48	644	58
31	32	-	1,180	198	-	350	-	858	-	56	651	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	814	104	15	26.3	1,610
November	1,854	134	26	61.8	3,680
December	34,900	8,320	58	1,126	69,220
Calendar year	-	-	-	-	-
January	12,881	1,070	184	416	25,550
February	58,074	8,630	184	2,003	115,200
March	12,590	1,740	171	406	24,970
April	16,127	1,570	161	538	31,990
May	23,500	2,790	113	758	46,610
June	14,773	1,990	104	492	29,300
July	4,486	274	48	145	8,900
August	4,234	644	44	137	8,400
September	4,593	644	39	153	9,110
Water year 1939-40	188,825	8,630	15	516	374,500

Peak discharge.- Dec. 25 (1:30 a.m.) 9,870 sec.-ft.; Feb. 7 (5 a.m.) 9,560 sec.-ft.

f Gage-height record incomplete; discharge computed on basis of partly estimated gage-height record.

Arenoso Creek near San Augustine, Tex.

Location.- Staff gage, lat. 31°36', long. 94°17', half a mile downstream from Nacogdoches & Southeastern R. R. bridge, 4½ miles upstream from Attoyac Bayou, and 11 miles northwest of San Augustine, San Augustine County.

Drainage area.- 76 square miles.

Records available.- May 1938 to September 1940 (discontinued).

Extremes.- Maximum gage height, 12.12 feet Dec. 23, from floodmark (discharge not determined); minimum discharge observed, 6.3 second-feet Oct. 17, 21-24.
1938-40: Maximum gage height, that of Dec. 23, 1939; minimum discharge observed, 3.3 second-feet Sept. 14, 15, 1939.

Remarks.- Records good except those for periods of no gage-height record and those above 700 second-feet, all of which are poor. Gage read twice daily. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a9.8	10	158	70	46	70	54	248	51	32	28	26
2	a10	10	103	64	51	a67	51	125	44	29	44	22
3	a10	9.7	a72	58	a257	a64	51	85	38	28	22	20
4	a10	9.7	41	156	604	61	48	73	34	27	17	25
5	a10	a11	32	153	806	58	46	61	32	24	17	19
6	a11	12	28	a115	806	58	46	56	32	24	16	19
7	a11	12	26	a109	319	56	437	54	31	24	14	17
8	a11	11	26	97	178	54	140	51	29	23	22	16
9	11	11	a26	85	567	a54	85	48	31	23	61	15
10	15	13	a25	76	488	a54	70	54	176	22	38	14
11	14	51	25	73	203	54	355	48	156	30	38	13
12	10	a58	25	70	147	56	576	41	56	29	36	12
13	8.0	44	24	a66	127	509	151	38	44	48	23	12
14	7.4	28	23	a62	109	161	a103	36	38	30	19	11
15	a7.2	24	24	58	103	91	91	38	44	28	18	11
16	6.9	32	a26	54	194	a85	79	34	38	28	16	12
17	6.7	34	a28	51	490	a79	76	34	36	55	20	12
18	6.7	31	30	46	253	73	97	34	41	28	46	12
19	6.7	a27	30	44	140	67	91	34	104	38	44	11
20	6.7	23	29	a44	121	64	70	32	44	36	22	11
21	6.5	21	27	a44	109	56	61	31	34	30	16	11
22	a6.4	19	263	44	97	56	58	38	32	26	14	13
23	6.3	21	1,220	44	91	54	56	370	48	23	14	18
24	6.3	22	a880	41	a87	a52	54	194	30	20	13	67
25	29	20	a617	41	a83	51	56	61	29	19	13	25
26	73	a20	458	41	79	51	54	48	27	18	13	18
27	28	19	294	a45	79	51	48	48	25	17	14	16
28	18	19	140	a50	76	54	71	77	25	15	189	15
29	a15	21	97	54	73	64	494	170	38	14	161	14
30	12	37	85	51	-	109	415	67	38	26	71	13
31	10	-	76	48	-	a67	-	48	-	21	36	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	399.6	73	6.3	12.9	793
November	680.4	58	9.7	22.7	1,350
December	4,958	1,220	23	160	9,830
Calendar year 1939	23,998.2	1,220	3.3	65.7	47,590
January	2,054	156	41	66.3	4,070
February	6,783	806	46	234	13,450
March	2,500	509	51	80.6	4,960
April	4,084	576	46	136	8,100
May	2,376	370	31	76.6	4,710
June	1,425	176	25	47.5	2,830
July	835	55	14	26.9	1,660
August	1,115	189	13	36.0	2,210
September	520	67	11	17.3	1,030
Water year 1939-40	27,730.0	1,220	6.3	75.8	54,990

a No gage-height record; discharge interpolated or computed from graph based on gage heights and weather records.

Village Creek near Kountze, Tex.

Location.- Water-stage recorder, lat. 30°24', long. 94°16', on bridge on Kountze-Silsbee county highway, 1.2 miles upstream from Gulf, Colorado & Santa Fe Ry. bridge, 3.2 miles northeast of Kountze, Hardin County, and 4½ miles downstream from Beech Creek. Datum of gage is 25.1 feet above mean sea level (general adjustment of 1929).

Drainage area.- 837 square miles.

Records available.- May 1924 to November 1929 and April 1939 to September 1940 (October 1927 to November 1929, discharge measurements only).

Extremes.- Maximum discharge during year, 4,300 second-feet July 4 (gage height, 15.15 feet); minimum, 36 second-feet Oct. 1.

1924-27, 1939-40: Maximum discharge, 14,300 second-feet June 2, 1924 (gage height, 20.0 feet, present site and datum, based on observed peak at site and datum then in use, 1.2 miles downstream), from rating curve extended above 9,000 second-feet on basis of discharge measurements in 1929; minimum, 32 second-feet Sept. 28, 1939.

Maximum stage known, 34 feet, present site and datum, August 1915. Flood of May 27, 1929, reached a stage of about 32 feet, present site and datum. Above stages based on information furnished by engineers of Gulf, Colorado & Santa Fe Ry., for former site and datum, 1.2 miles downstream. These stages were probably slightly affected by backwater from Neches River.

Remarks.- Records good. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	70	81	514	228	330		1,570	361	1,570	132	165
2	41	63	84	365	228	310		1,910	514	2,060	132	160
3	47	56	94	310	222	298		2,130	466	3,600	200	136
4	56	52	141	279	222	279	a245	1,830	434	4,200	261	121
5	59	50	180	267	244	261		1,300	402	3,680	244	110
6	55	48	155	267	413	244		739	279	3,100	228	102
7	51	48	132	330	666	233	a482	450	211	2,680	190	95
8	47	49	118	365	904	222	a1,060	351	180	2,000	978	92
9	45	50	108	394	970	211	1,400	298	160	1,440	2,300	90
10	44	52	102	418	838	206	1,480	261	233	858	2,680	86
11	42	62	96	365	686	195	1,300	238	742	514	2,530	82
12	44	63	92	310	606	190	904	216	926	418	2,180	78
13	47	68	90	279	586	190	772	200	948	344	1,580	75
14	50	82	99	261	532	185	970	190	1,040	304	928	73
15	48	122	99	250	418	185	1,250	175	970	279	430	71
16	47	155	91	238	386	180	1,400	165	666	344	291	70
17	44	150	87	228	674	175	998	155	372	710	244	68
18	41	146	86	216	1,200	170	550	190	298	772	279	68
19	41	155	93	211	1,540	165	482	233	324	686	279	67
20	39	146	109	200	1,630	165	482	351	466	750	238	68
21	39	141	141	195	1,570	165	482	379	606	706	273	70
22	38	141	146	190	1,270	165	418	330	666	466	291	69
23	38	123	165	190	926	160	351	273	750	337	273	75
24	38	111	228	190	606	155	304	250	528	279	206	100
25	41	102	486	195	482	150	273	344	372	238	165	160
26	44	93	772	216	434	146	250	637	304	206	146	170
27	48	87	992	238	394	141	233	656	238	185	136	175
28	47	83	1,130	238	365	141	233	466	250	170	132	165
29	54	79	1,220	228	344		316	317	380	165	132	136
30	64	79	1,150	222	-	a260	936	285	1,190	146	150	110
31	75	-	838	222	-		-	285	-	136	146	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,452	75	38	46.8	2,880
November	2,726	155	48	90.9	5,410
December	9,385	1,220	81	303	18,610
Calendar year	-	-	-	-	-
January	8,391	514	190	271	16,640
February	19,584	1,630	222	675	38,840
March	6,397	330	141	206	12,690
April	18,796	1,480	-	627	37,280
May	17,174	2,130	155	554	34,060
June	15,276	1,190	160	509	30,300
July	33,343	4,200	136	1,076	66,130
August	18,374	2,680	132	593	36,440
September	3,107	175	67	104	6,160
Water year 1939-40	154,005	4,200	38	421	305,400

a No gage-height record; discharge based on recorded range in stage and weather records.

West Fork of Trinity River at Fort Worth, Tex.

Location.- Water-stage recorder above from spillway of Fort Worth Power & Light Co. concrete dam, lat. 32°46', long. 97°20', in old pump house of Fort Worth Power & Light Co.'s plant in Fort Worth, Tarrant County, 150 feet upstream from Paddock viaduct, and a quarter of a mile downstream from Clear Fork of Trinity River. Datum of gage is 519.2 feet above mean sea level (Texas Reclamation Department bench mark based on Coast & Geodetic Survey datum).

Drainage area.- 2,431 square miles.

Records available.- October 1920 to September 1940. Weather Bureau has collected gage-height records in this vicinity since 1910.

Average discharge.- 20 years, 366 second-feet.

Extremes.- Maximum discharge during year, 8,500 second-feet July 12 (gage height, 9.03 feet); no flow Oct. 1-10, 15, Oct. 22 to Nov. 11.
1920-40: Maximum discharge, 85,000 second-feet, Apr. 25, 1922 (gage height, 23.95 feet), by slope-area method, data furnished by city engineer of Fort Worth; no flow at times.

Remarks.- Records good except those below 25 second-feet, which are fair. Considerable diversion above station for municipal supply. Flow partly regulated by Bridgeport, Eagle Mountain and Lake Worth Reservoirs (combined capacity, 527,000 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	14	8.0	2.9	5.8	2.9	9.2	14	89	12	9.2
2	0	0	8.0	8.0	15	4.6	1.5	6.9	10	202	9.2	9.2
3	0	0	6.9	9.2	25	6.9	1.5	5.8	6.9	1,110	6.9	5.8
4	0	0	6.9	10	6.9	5.8	1.1	5.8	6.9	1,360	6.9	5.8
5	0	0	4.8	12	2.9	5.8	11	4.8	4.8	1,190	6.9	2.1
6	0	0	5.8	22	2.1	6.9	150	2.1	3.8	1,210	5.8	1.1
7	0	0	8.0	12	2.1	4.8	92	1.1	3.8	1,260	4.8	
8	0	0	6.9	9.2	g.1	3.8	56	37	5.8	1,220	3.8	
9	0	0	8.0	9.2	g.1	4.8	27	12	383	1,190	3.8	
10	.7	0	8.0	6.9	g.7	5.8	16	5.8	554	1,040	2.9	
11	.9	2.2	5.8	5.8	g4.8	8.0	16	2.9	136	785	4.8	
12	.3	5.8	4.8	3.8	g5.8	15	8.0	4.8	80	3,790	6.9	
13	.1	3.8	3.8	6.9	g2.1	8.0	6.9	3.8	83	1,540	6.9	a.1
14	.1	2.9	3.8	5.8	g.3	4.8	6.9	1.5	172	821	5.8	
15	0	1.5	3.8	5.8	g.1	3.8	4.8	1.5	230	698	9.2	
16	.1	2.1	6.9	4.8	g2.9	3.8	2.9	1.5	186	656	122	
17	.9	4.8	9.2	3.8	g18	4.8	22	26	395	620	149	
18	.3	6.9	8.0	4.8	g15	4.8	6.9	533	286	600	296	
19	.1	5.8	3.8	2.9	g4.8	4.8	5.8	150	172	627	58	
20	.1	4.8	2.1	3.8	g4.8	a4.5	5.8	27	185	620	451	
21	.1	3.8	2.9	4.8	g4.8	a4.2	4.8	9.2	132	613	866	1.6
22	0	2.1	9.2	5.8	g4.8	a3.8	8.0	122	89	627	1,030	12
23	0	6.9	14	6.9	4.8	a3.5	3.8	998	29	613	932	4.8
24	0	6.9	6.9	4.8	4.8	a3.2	2.9	307	45	593	514	2.1
25	0	6.9	9.2	3.8	4.8	a2.8	2.9	44	16	613	202	1.1
26	0	5.8	10	4.8	5.8	a2.5	2.1	20	25	494	85	.9
27	0	5.8	4.8	3.8	5.8	2.1	1.5	10	168	211	35	.9
28	0	5.8	3.8	6.9	4.8	1.5	229	683	314	92	22	.9
29	0	18	5.8	5.8	4.8	1.5	161	454	278	37	12	2.1
30	0	29	6.9	2.9	-	1.5	27	53	124	22	6.9	2.1
31	0	-	8.0	2.9	-	2.1	-	25	-	16	5.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.7	0.9	0	0.12	7.3
November	131.6	29	0	4.39	261
December	210.8	14	2.1	6.80	418
Calendar year 1939	23,106.1	1,610	0	63.3	45,820
January	207.9	22	2.9	6.71	412
February	161.6	25	.1	5.57	321
March	146.2	15	1.5	4.72	290
April	888.0	229	1.1	29.6	1,760
May	3,467.7	898	1.1	112	6,880
June	4,138.0	554	3.8	138	8,210
July	24,559	3,790	16	792	48,710
August	4,863.3	1,030	2.9	157	9,650
September	61.1	12	.1	2.04	121
Water year 1939-40	38,838.9	3,790	0	106	77,040

Peak discharge.- July 5 (8 p.m.) 2,840 sec.-ft.; July 12 (1 p.m.) 8,500 sec.-ft.
a No gage-height record; discharge computed on basis of weather records and discharge measurements.
g Computed from graph based on gage readings furnished by Weather Bureau.

West Fork of Trinity River at Grand Prairie, Tex.

Location.- Water-stage recorder, lat. 32°46', long. 96°59', 440 feet downstream from bridge on Grand Prairie-Sowers-Irving highway, 1 mile northeast of Grand Prairie, Dallas County, and 6 miles upstream from Mountain Creek. Datum of gage is 412.98 feet above mean sea level (general adjustment of 1929)..

Drainage area.- 2,886 square miles.

Records available.- March 1925 to September 1940.

Average discharge.- 15 years, 435 second-feet.

Extremes.- Maximum discharge during year, 6,860 second-feet June 10 (gage height, 22.08 feet); minimum, 9.0 second-feet Oct. 4.
1925-40: Maximum discharge observed, 15,400 second-feet Jan. 23, 1932 (gage height, 25.96 feet, former site); minimum observed, 3.2 second-feet June 6, 1925. Maximum stage known, about 29 feet in April 1922.

Remarks.- Records good. Many small diversions above gage; largest of which is for municipal supply of Fort Worth. Regulation same as that for West Fork of Trinity River at Fort Worth.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	10	98	20	21	25	18	111	92	1,380	55	27
2	12	11	53	19	22	24	15	57	68	2,620	52	25
3	12	12	32	18	34	23	14	37	51	3,070	37	24
4	9.5	13	24	20	97	23	18	31	40	2,580	34	25
5	12	14	16	21	59	20	20	27	35	1,500	30	23
6	14	15	18	23	32	20	440	25	33	1,290	25	23
7	14	14	20	38	26	20	935	20	31	1,290	26	19
8	13	12	20	64	23	20	201	59	194	1,260	27	18
9	14	13	19	30	23	20	141	300	2,200	1,260	27	19
10	15	17	20	23	23	21	78	133	5,660	1,210	26	15
11	14	20	20	24	21	20	70	54	2,250	1,010	23	16
12	23	31	18	24	21	23	113	35	380	1,410	24	16
13	18	29	18	23	18	48	66	27	410	3,920	20	16
14	15	29	19	20	18	55	39	20	1,200	1,580	21	18
15	15	23	20	18	20	30	33	20	3,600	836	24	18
16	15	21	19	17	26	24	25	21	4,470	708	29	18
17	13	23	19	17	71	22	278	213	1,170	684	113	15
18	12	22	19	18	90	21	392	1,580	1,090	636	202	15
19	13	23	19	19	45	18	77	811	1,410	612	229	18
20	14	24	20	18	28	16	40	216	447	612	87	17
21	15	20	21	18	26	18	31	87	440	588	411	17
22	15	18	21	18	25	20	27	667	1,900	588	880	20
23	14	18	23	18	24	20	22	1,730	356	576	1,030	24
24	12	18	29	17	23	20	23	1,880	180	576	819	34
25	9.5	17	34	20	23	19	27	375	192	565	430	25
26	12	18	23	a21	23	17	24	138	122	542	211	23
27	13	20	21	a21	20	15	23	82	102	430	118	20
28	14	18	28	a21	21	18	69	731	211	233	72	19
29	14	18	23	20	24	19	1,050	1,650	1,890	a141	55	18
30	13	26	21	18	-	20	298	457	546	a87	37	17
31	12	-	19	18	-	19	-	144	-	65	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	423	23	9.5	13.6	839
November	567	31	10	18.9	1,120
December	776	98	18	25.0	1,540
Calendar year 1939	33,655	-	9.5	92.2	66,760
January	684	64	17	22.1	1,360
February	927	97	18	32.0	1,840
March	698	55	15	22.5	1,380
April	4,605	1,050	14	154	9,130
May	11,718	1,880	20	378	23,240
June	30,770	5,660	31	1,026	61,030
July	33,859	3,920	65	1,092	67,160
August	5,205	1,030	20	168	10,320
September	600	34	15	20.0	1,190
Water year 1939-40	90,832	5,660	9.5	248	180,100

Peak discharge.- June 10 (6:30 p.m.) 6,860 sec.-ft.
a No gage-height record; discharge computed on basis of known range in stage, engineer's notes, and weather records.

Trinity River at Dallas, Tex.

Location.- Water-stage recorder, lat. 32°47', long. 96°48', at Commerce Street viaduct in Dallas, Dallas County, 5¼ miles downstream from confluence of West and Elm Forks. Datum of gage is 368.14 feet above mean sea level (general adjustment of 1929).

Drainage area.- 6,001 square miles.

Records available.- July 1903 to July 1930 and October 1932 to September 1940 (January 1907 to September 1920, monthly records only, in Water-Supply Paper 850). October 1898 to December 1899 (gage heights only), at site 2 miles upstream. July 1930 to September 1932, at site 6 miles downstream. Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 37 years (1903-40), 1,362 second-feet.

Extremes.- Maximum discharge during year, 18,100 second-feet June 16 (gage height, 33.85 feet); minimum, 31 second-feet Jan. 24.
1903-40: Maximum discharge, 184,000 second-feet May 26, 1908 (gage height, 52.6 feet), from rating curve extended above 76,000 second-feet by logarithmic plotting; minimum discharge observed for periods 1903-6, 1920-40, 6.8 second-feet Sept. 11, 1924.

Remarks.- Records good except those for periods of rapidly changing stage in May and June, which are poor. Discharge for periods of backwater that occurs at times of falling stages after floods of more than about 10,000 second-feet computed from backwater curve based on discharge measurements. Only known diversions are for municipal supply. Flow partly regulated by storage in Bridgeport, Eagle Mountain, Lake Worth, Mountain Creek, and Lake Dallas Reservoirs (combined capacity, 777,000 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	81	111	61	53	64	55	1,210	410	4,190	188	162
2	79	82	110	60	73	64	49	468	194	e,050	178	156
3	77	84	71	59	88	64	50	178	166	12,900	172	151
4	78	86	64	59	106	64	46	126	a150	13,800	164	153
5	84	130	60	60	118	60	55	108	134	11,200	158	160
6	77	217	66	73	84	59	1,500	113	118	c8,070	158	160
7	76	230	55	73	74	59	6,000	105	108	c3,910	168	149
8	77	227	55	88	71	58	4,210	146	103	2,626	151	145
9	112	230	54	78	68	56	1,110	990	2,360	3,980	154	140
10	113	288	54	67	68	55	360	1,070	7,370	4,200	154	140
11	95	312	54	65	66	248	368	246	7,520	2,180	149	138
12	95	331	55	65	65	310	890	127	2,240	3,440	144	111
13	98	320	55	65	64	130	421	142	1,480	8,250	140	91
14	94	302	55	64	62	126	158	122	1,530	4,540	134	142
15	91	302	55	60	62	92	140	95	6,670	1,660	134	140
16	91	302	55	59	96	78	132	78	15,900	1,230	154	158
17	91	303	56	59	106	79	559	204	14,900	1,070	g550	118
18	89	120	58	59	142	74	781	4,220	10,800	910	g1,270	122
19	88	65	58	97	102	48	196	5,440	c5,450	810	g950	119
20	86	74	56	74	74	44	127	995	c2,950	770	g550	127
21	89	79	55	67	70	50	78	266	c2,110	730	g570	130
22	84	78	61	54	67	49	71	1,890	3,820	710	g1,010	151
23	100	78	65	52	65	47	81	5,680	2,420	1,710	g1,070	145
24	85	77	62	38	66	47	78	4,850	1,570	1,880	g930	154
25	79	78	71	65	66	47	79	1,090	1,390	1,700	g590	145
26	89	78	72	47	66	46	77	450	1,350	1,310	g350	145
27	86	78	65	44	65	58	77	323	1,310	910	g248	140
28	82	78	62	53	62	61	157	2,300	1,350	690	269	138
29	85	85	62	62	62	64	5,370	8,100	3,400	510	335	137
30	86	108	62	61	-	98	4,500	5,850	1,760	274	232	140
31	84	-	61	47	-	67	-	821	-	164	170	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,716	113	76	87.6	5,390
November	4,903	331	65	163	9,720
December	1,945	111	54	62.7	3,860
Calendar year 1939	97,131	9,770	40	266	192,600
January	1,935	97	38	62.4	3,840
February	2,231	142	83	76.9	4,430
March	2,466	310	44	79.5	4,890
April	27,775	6,000	46	926	55,090
May	47,803	8,100	78	1,542	94,820
June	101,033	15,900	103	3,368	200,400
July	108,368	13,800	164	3,496	214,900
August	11,594	1,270	134	374	23,000
September	4,207	162	91	140	8,340
Water year 1939-40	316,976	15,900	38	866	628,700

Peak discharge.- June 11 (5 a.m.) 9,480 sec.-ft.; June 16 (3:30 p.m.) 18,100 sec.-ft.; July 4 (1 a.m.) 14,300 sec.-ft.; July 13 (3 p.m.) 9,080 sec.-ft.

a No gage-height record, discharge interpolated.
c Stage-discharge relation affected by backwater from return flow below station.
g Computed from graph based on gage readings furnished by Weather Bureau.

Trinity River near Rosser, Tex.

Location.- Water-stage recorder, lat. 32°25'40", long. 96°27'50", at bridge on State Highway 34, 1.4 miles downstream from Texas & New Orleans R. R. bridge, 1.9 miles downstream from East Fork of Trinity River, and 2.5 miles south of Rosser, Kaufman County. Datum of gage is 302.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 8,057 square miles.

Records available.- November 1938 to September 1940. July to September 1924 and October 1924 to September 1925 (gage heights only), at site 1.7 miles upstream.

Extremes.- Maximum discharge during year, 13,600 second-feet July 8 (gage height, 30.24 feet); minimum, 60 second-feet Jan. 27.

1924, 1938-40: Maximum discharge, that of July 8, 1940; minimum, 34 second-feet Sept. 8-11, 1924.

Maximum discharge known occurred in May 1908 (gage height, about 33.0 feet, present site and datum), according to information furnished by Corps of Engineers, U. S. Army (discharge not determined).

Maximum gage height known, about 42.0 feet, present site and datum, Feb. 21, 1938 (discharge not determined), according to information furnished by Texas & New Orleans R. R. engineers (flood was confined within levee system constructed in 1916).

Remarks.- Records good. No diversions above station except for municipal supply. Flow partly regulated by reservoirs above Dallas.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	107	270	90	94	122	206	5,920	5,230	3,430	337	352
2	101	108	186	86	81	126	151	3,500	3,580	5,490	322	270
3	104	103	186	87	112	123	112	2,580	3,200	8,670	314	227
4	112	107	132	90	192	117	104	4,450	3,240	10,200	292	f206
5	112	107	106	88	199	112	106	4,830	2,630	11,100	270	f199
6	120	119	98	92	206	110	2,080	3,550	1,460	11,500	256	199
7	118	227	91	103	166	106	8,980	2,150	647	12,400	255	206
8	110	241	89	153	141	103	8,440	968	427	13,600	270	192
9	112	248	88	126	131	101	7,790	905	396	12,600	254	179
10	157	262	87	139	134	100	9,860	1,720	2,890	10,600	234	175
11	307	352	85	114	171	100	11,300	1,830	5,440	8,180	241	161
12	158	427	85	104	149	259	10,600	1,080	6,400	5,410	255	160
13	148	412	79	102	123	830	8,510	880	4,800	6,120	262	160
14	213	367	80	100	118	552	5,910	860	2,600	7,480	213	122
15	176	352	82	97	110	472	3,120	550	2,890	6,740	199	153
16	144	344	83	91	118	310	1,970	382	2,770	3,710	192	170
17	134	360	83	89	307	220	1,520	337	8,530	2,520	213	186
18	127	503	84	89	343	179	1,660	7,740	9,450	2,340	733	169
19	126	315	83	86	270	169	1,900	8,890	11,000	1,760	1,410	146
20	120	158	83	84	277	139	1,120	7,790	12,600	1,430	1,100	148
21	114	108	82	94	314	109	880	4,550	12,600	1,210	660	152
22	115	120	88	94	241	101	740	3,500	11,500	1,140	683	161
23	114	115	95	86	186	104	487	6,410	9,750	1,230	1,100	179
24	115	115	130	74	163	98	412	8,440	8,100	2,390	1,210	186
25	123	110	101	69	145	91	352	8,890	5,350	2,660	1,100	186
26	109	110	92	64	140	87	300	6,780	3,110	2,400	760	186
27	108	114	117	64	132	95	270	4,650	2,160	1,860	487	186
28	114	114	104	69	131	97	262	3,760	2,130	1,280	367	178
29	112	120	92	68	126	119	1,410	4,990	5,460	968	367	186
30	104	141	92	81	-	139	4,670	7,360	5,670	740	427	199
31	108	-	94	98	-	206	-	7,720	-	488	412	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,032	307	97	130	8,000
November	6,366	503	103	212	12,630
December	3,247	270	79	105	6,440
Calendar year 1939	227,801	11,300	79	624	451,800
January	2,869	153	64	92.5	5,690
February	5,020	343	81	173	9,960
March	5,596	830	87	181	11,100
April	95,202	11,300	104	3,173	188,800
May	127,952	8,890	337	4,127	253,800
June	155,910	12,600	396	5,197	309,200
July	161,646	13,600	488	5,214	320,600
August	15,174	1,410	192	489	30,100
September	6,679	352	122	186	11,070
Water year 1939-40	588,593	13,600	64	1,608	1,167,000

f Gage-height record incomplete; discharge computed on basis of partly estimated gage-height record.

Trinity River near Oakwood, Tex.

Location.- Water-stage recorder, lat. 31°39', long. 95°47', at bridge on U. S. Highways 79 and 84, 1½ miles upstream from International-Great Northern R. R. bridge, and 6 miles northeast of Oakwood, Leon County. Datum of gage is 175.03 feet above mean sea level (general adjustment of 1929).

Drainage area.- 12,840 square miles.

Records available.- July 1932 to September 1940. January 1905 to December 1918 and February 1920 to July 1932 at site 1½ miles downstream (January 1905 to September 1923, monthly records only, in Water-Supply Paper 850). Weather Bureau has collected gage-height records in this vicinity since 1904.

Average discharge.- 28 years (1905-6, 1907-13, 1915-17, 1921-40), 3,927 second-feet.

Extremes.- Maximum discharge during year, 17,900 second-feet July 10 (gage height, 38.49 feet); minimum, 82 second-feet Oct. 1.
1905-18, 1920-40: Maximum gage height, about 52.2 feet, present site and datum, June 4, 1908 (discharge not determined); discharge of flood of May 23, 1930, 84,400 second-feet (gage height, 46.8 feet, present site and datum); minimum discharge observed (revised) for period 1923-40, 7.8 second-feet July 16, 1924.

Remarks.- Records good. No diversions above station except for municipal supply. Flow partly regulated by reservoirs above Dallas.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	124	124	182	141	278	1,130	3,420	8,380	11,400	1,100	750
2	96	124	149	173	149	255	908	5,720	6,020	12,600	908	884
3	102	120	161	161	223	285	772	6,920	7,720	15,500	662	739
4	102	120	173	157	414	272	596	6,870	6,430	16,100	460	530
5	102	120	245	161	350	266	490	5,320	4,760	16,200	390	390
6	102	120	230	161	358	266	337	4,290	3,800	16,500	374	316
7	106	120	196	165	520	254	1,560	4,710	3,300	16,800	344	266
8	110	120	173	169	500	248	6,010	4,570	2,520	17,400	318	242
9	113	120	153	169	414	236	9,690	3,590	1,440	17,700	298	230
10	113	124	141	169	366	224	12,300	2,450	884	17,900	285	196
11	116	142	138	173	337	218	14,100	1,940	640	17,600	286	182
12	116	226	138	156	324	213	15,600	2,200	1,360	16,700	318	169
13	120	272	134	196	318	202	16,600	2,740	3,720	15,500	330	157
14	124	298	130	196	311	191	17,100	2,180	5,320	14,600	554	157
15	157	374	130	191	318	191	16,800	1,440	6,020	14,100	772	173
16	153	430	127	182	391	682	15,800	1,100	5,320	14,100	552	178
17	124	414	127	173	552	908	14,500	1,030	4,760	14,000	318	178
18	127	374	127	169	789	750	12,600	750	6,220	14,000	236	161
19	145	337	130	169	1,980	552	8,440	2,860	7,780	12,800	202	169
20	149	330	127	169	1,940	398	3,930	7,420	8,820	8,600	186	186
21	141	406	127	165	1,490	318	2,350	9,970	9,550	4,250	743	196
22	138	406	130	161	1,030	278	1,890	11,700	10,300	2,250	1,360	186
23	134	272	153	157	728	260	1,440	12,900	10,700	1,740	1,130	271
24	130	196	161	153	618	360	1,180	13,700	11,000	1,490	858	280
25	127	141	161	153	574	574	980	14,100	11,300	1,460	838	230
26	130	120	173	153	490	324	1,200	14,300	11,800	1,860	1,180	236
27	130	116	191	153	414	242	1,410	14,000	12,500	2,550	1,310	248
28	130	113	208	149	366	218	1,100	13,500	12,900	2,630	f1,200	242
29	130	110	230	145	324	323	932	12,900	12,500	2,350	f980	236
30	130	110	208	145	-	430	1,100	12,100	11,200	1,860	750	230
31	127	-	186	145	-	848	-	9,970	-	1,410	640	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,807	157	83	123	7,550
November	6,399	430	110	213	12,690
December	4,981	245	124	161	9,680
Calendar year 1939	549,245	16,200	83	1,505	1,089,000
January	5,150	196	145	166	10,210
February	16,729	1,980	141	577	33,180
March	11,094	908	191	358	22,000
April	182,745	17,100	337	6,092	362,500
May	210,660	14,300	750	6,795	417,800
June	210,964	12,900	640	7,032	418,400
July	323,950	17,900	1,410	10,450	642,500
August	19,861	1,360	186	641	39,390
September	8,610	884	157	287	17,080
Water year 1939-40	1,004,950	17,900	83	2,746	1,993,000

f Computed on basis of partly estimated gage-height record.

Trinity River near Midway, Tex.

Location.- Wire-weight gage, lat. 31°04'40", long. 95°42'00", on bridge on State Highway 21, 5 miles northeast of Midway, Madison County, and 8 miles downstream from Boggy Creek. Datum of gage is 117.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 14,390 square miles.

Records available.- April 1939 to September 1940.

Extremes.- Maximum discharge during year, 19,000 second-feet May 23 (gage height, 30.10 feet, from graph based on gage readings); minimum observed, 100 second-feet Oct. 4. 1939-40: Maximum discharge, that of May 23, 1940; minimum observed, that of Oct. 4, 1939.

Maximum discharge known occurred in May 1890 (gage height, about 45.0 feet, discharge not determined), according to information furnished by local residents.

Maximum stage known, 46.7 feet May 27, 1930, from floodmarks (flood was confined within levee system constructed in 1916). Flood of June 9, 1908, reached a stage of 44.3 feet, from floodmarks and information furnished by local residents.

Remarks.- Records good. Gage read twice daily, oftener during high water. Flow partly regulated by reservoirs above Dallas.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	171	192	362	271	553	685	7,020	12,100	17,500	1,910	685
2	136	169	195	315	276	502	1,090	5,190	10,400	17,000	1,520	606
3	125	165	202	289	646	454	1,200	6,040	9,000	16,000	1,250	665
4	115	163	240	328	6,070	440	1,020	7,140	8,370	17,200	985	705
5	136	157	244	360	5,710	440	905	7,810	7,600	18,200	765	588
6	130	159	261	425	5,340	410	905	6,820	6,230	18,200	645	486
7	130	161	328	685	3,230	410	985	5,450	4,830	17,800	553	440
8	125	159	328	685	1,860	396	931	5,010	4,110	17,300	518	396
9	120	159	247	588	1,430	385	3,950	5,070	3,430	17,000	470	357
10	145	164	234	410	1,340	383	7,010	4,590	2,940	16,800	440	318
11	153	206	219	360	1,250	383	9,210	3,540	3,210	16,800	440	259
12	153	213	200	354	945	385	11,000	2,660	2,720	16,900	454	247
13	149	256	200	354	785	370	12,300	2,550	1,860	16,800	396	242
14	154	349	200	349	665	357	13,400	2,990	3,320	16,600	425	221
15	147	382	192	354	625	336	14,400	2,990	5,010	16,300	410	206
16	163	396	188	349	1,290	315	15,100	2,220	6,300	15,700	588	206
17	194	470	188	339	3,760	357	15,800	1,610	6,820	15,100	665	206
18	194	518	192	352	2,770	785	15,800	1,880	6,360	14,400	502	215
19	165	502	182	297	1,960	965	15,500	2,200	6,360	14,000	365	213
20	163	470	179	276	1,810	825	13,800	2,030	7,400	13,600	261	206
21	185	410	187	276	2,440	685	9,700	5,430	8,370	12,000	227	210
22	188	410	793	282	2,160	553	4,570	10,200	9,000	8,020	217	247
23	182	454	7,110	264	1,610	486	2,940	17,600	9,560	4,350	745	297
24	174	454	6,730	264	1,200	425	2,160	18,000	9,920	2,880	1,070	470
25	188	383	2,910	264	945	425	1,760	16,200	10,200	2,330	825	645
26	178	284	1,140	264	805	486	1,480	15,000	10,600	2,110	645	486
27	174	217	825	266	745	625	1,380	14,400	10,800	2,160	765	382
28	174	190	685	256	665	486	3,220	14,200	11,200	2,770	1,070	310
29	174	182	518	264	606	410	12,600	13,900	12,100	3,040	1,090	297
30	171	179	425	271	-	383	9,790	13,700	13,000	2,880	1,060	297
31	171	-	383	266	-	502	-	13,100	-	2,440	945	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,899	194	113	158	9,720
November	8,522	518	157	284	16,900
December	26,117	7,110	179	842	51,800
Calendar year	-	-	-	-	-
January	10,768	685	256	347	21,360
February	53,209	6,070	271	1,835	105,500
March	14,913	965	315	481	29,580
April	204,891	15,800	685	6,820	406,800
May	256,340	18,000	1,610	7,624	468,800
June	223,120	15,000	1,860	7,437	442,600
July	374,180	18,200	2,110	12,070	742,200
August	22,211	1,910	217	716	44,050
September	11,088	705	206	370	21,990
Water year 1939-40	1,189,958	18,200	113	3,251	2,360,000

Trinity River at Riverside, Tex.

Location.- Chain gage, lat. 30°52', long. 95°24', on International-Great Northern R. R. bridge at Riverside, Walker County, 1 mile downstream from Harmon Creek. Datum of gage is 89.86 feet above mean sea level (general adjustment of 1929).

Drainage area.- 15,510 square miles.

Records available.- January 1903 to December 1906, October 1923 to September 1940. Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 20 years (1903-6, 1923-40), 6,181 second-feet.

Extremes.- Maximum discharge during year, 35,200 second-feet Dec. 23 (gage height, 29.65 feet, from graph based on gage readings); minimum observed, 137 second-feet Oct. 3.
1903-6, 1923-40: Maximum discharge observed, 76,100 second-feet June 1, 1929 (gage height, 46.10 feet); minimum observed, 70 second-feet Aug. 20-26, Sept. 8-13, 1925, Sept. 29 to Oct. 4, 1931.
Maximum discharge known, 86,600 second-feet June 11, 1908 (gage height, 49.7 feet, present datum), from rating curve extended above 78,000 second-feet.

Remarks.- Records good except those for period of doubtful gage-height record, which are poor. No diversions except for municipal supply. Flow partly regulated by reservoirs above Dallas. Gage read once daily Oct. 1, 1939, to Feb. 17, 1940; twice daily thereafter.

Cooperation.- Gage readings Oct. 1, 1939, to Feb. 17, 1940, furnished by Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	155	189	255	700	374	850	561	16,800	13,700	15,000	2,410	1,220
2	150	187	250	678	387	750	775	11,200	12,400	18,700	1,990	880
3	137	187	230	596	1,060	700	1,180	7,860	10,600	19,800	1,570	775
4	142	187	232	525	5,770	632	1,290	7,410	9,350	20,200	1,290	825
5	143	187	235	525	15,400	606	1,850	7,860	8,550	20,400	1,060	850
6	142	187	235	601	18,100	583	1,290	7,770	7,590	20,200	850	725
7	140	187	238	1,060	12,600	561	2,410	6,870	6,060	19,800	678	592
8	142	187	258	1,430	6,850	529	2,690	5,620	4,750	19,300	588	497
9	143	187	341	1,460	4,370	509	2,690	5,300	4,220	18,800	565	432
10	144	191	314	1,120	4,000	601	5,410	6,220	15,700	18,600	537	387
11	144	225	293	775	3,070	493	8,150	4,520	12,700	18,400	517	359
12	150	262	288	632	2,290	482	10,500	3,480	7,230	18,400	478	308
13	169	278	270	557	1,710	464	12,100	2,900	4,460	18,700	457	262
14	163	296	268	525	1,290	450	13,400	2,900	2,830	18,400	457	258
15	148	382	242	517	1,090	443	14,400	3,180	4,720	18,200	460	248
16	149	387	222	513	1,440	429	15,400	2,900	8,450	18,100	493	238
17	150	418	248	482	6,730	415	16,200	2,270	7,590	17,600	655	250
18	175	506	242	450	7,950	440	16,600	1,710	7,500	16,600	800	280
19	193	655	245	446	7,800	835	16,800	3,000	7,140	15,700	700	255
20	207	700	235	436	5,140	1,030	16,000	3,280	7,230	15,100	509	240
21	207	485	222	412	3,400	910	13,200	3,860	8,250	13,800	398	240
22	211	443	2,300	408	3,040	750	8,540		9,150	11,800	344	240
23	228	415	30,700	380	2,620	655	4,560	d13,500	9,850	7,300	320	299
24	230	412	29,900	377	2,060	570	3,040		10,300	3,780	354	348
25	235	377	19,200	377	1,640	553	2,410		10,600	3,550	1,240	500
26	255	350	9,180	377	1,290	493	1,920	20,200	10,900	2,270	1,060	656
27	252	320	4,240	368	1,120	549	1,570	17,400	11,300	2,060	850	513
28	228	299	2,500	347	1,030	700	1,430	16,000	11,600	2,130	970	387
29	207	275	1,600	347	940	610	8,690	15,400	12,800	2,970	1,430	329
30	207	228	1,000	350	-	626	19,200	15,000	13,600	3,180	1,460	308
31	203	-	775	374	-	478	-	14,400	-	3,040	1,430	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,549	255	137	179	11,010
November	9,568	700	187	319	18,980
December	106,758	30,700	222	3,444	211,800
Calendar year 1939	993,573	30,700	137	2,722	1,971,000
January	18,145	1,460	347	585	35,990
February	124,561	18,100	374	4,295	247,100
March	18,495	1,030	415	597	36,680
April	224,256	19,200	561	7,475	444,800
May	268,510	-	1,710	8,655	532,800
June	271,120	15,700	2,830	9,037	537,800
July	421,880	20,400	2,060	13,610	836,800
August	26,920	2,410	320	868	53,400
September	13,650	1,220	230	455	27,070
Water year 1939-40	1,509,212	30,700	137	4,124	2,994,000

d Doubtful gage-height record; discharge computed on basis of records for stations at Romayor, near Midway, and near Oakwood.

Trinity River at Romayor, Tex.

Location.- Chain gage, lat. 30°27', long. 94°51', on Gulf, Colorado & Santa Fe Ry. bridge, a quarter of a mile west of Romayor, Liberty County, and 2⅛ miles downstream from Big Creek. Gage readings indicate distance from base of rail to water surface. Datum of gage (base of rail) is 89.62 feet above mean sea level (general adjustment of 1929).

Drainage area.- 17,190 square miles.

Records available.- May 1924 to September 1940.

Average discharge.- 16 years, 6,508 second-feet.

Extremes.- Maximum discharge during year, 27,400 second-feet Dec. 25 (gage height, -29.10 feet, from graph based on gage readings); minimum observed, 210 second-feet Oct. 11-15, Nov. 7, 8.

1924-40: Maximum discharge observed, 81,100 second-feet May 31, 1929 (gage height, -16.3 feet), from rating curve extended above 60,000 second-feet; minimum observed, 132 second-feet Aug. 21, 22, 1925 (gage height, -53.46 feet).

Remarks.- Records fair except those for periods of no or doubtful gage-height records, which are poor. No large diversions except for municipal supply. Regulation same as that for Trinity River at Dallas. Gage read twice daily.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	250	240	400	1,390	545	1,240	685	21,400	14,300	14,900	2,790	1,290
2	250	240	400	1,140	545	1,140	626	19,600	13,400		2,580	1,290
3	250	220	400	1,050	626	1,050	598	14,000	12,400		2,210	1,240
4	250	220	400	960	840	915	685	9,100	10,800		1,790	1,000
5	250	220	400	915	9,430	870	915	8,240	9,120		1,550	830
6	240	220	400	830	19,600	870	1,100	6,920	8,130		1,290	830
7	240	210	376	830	21,600	755	2,090	6,920	7,580		1,140	830
8	240	210	353	870	16,800	755	4,660	6,300	6,300		1,050	790
9	220	220	353	1,340	11,200	720	3,550	5,300	4,930		915	685
10	220	220	376	1,670	9,960	685		4,660	4,390	d19,000	830	598
11	210	230	376	1,550	7,910	655		4,570	16,600		790	571
12	210	290	400	1,190	5,600	655		4,300	19,000		720	520
13	210	290	400	960	4,030	626		3,710	13,000		685	496
14	210	310	376	870	2,650	626		2,790	7,380		655	472
15	210	330	353	790	1,970	626		2,390	4,570		655	472
							d13,000					
16	d215	353	353	755	1,550	598		2,450	8,350		626	472
17	d220	376	353	720	2,560	598		2,720	16,000	16,800	626	448
18	d225	400	330	720	10,700	571		2,390	11,900	16,600	626	424
19	d230	448	330	685	10,300	571		1,970	9,720	15,800	685	400
20	d235	472	330	626	8,240	571		1,790	9,360	15,000	830	400
21	240	571	310	598	6,700	655		2,790	7,800	14,300	915	400
22	240	571	310	598	4,390	960	12,900	2,450	7,580	13,700	755	400
23	240	520	4,270	598	3,310	915	9,600	5,400	8,020	12,500	598	400
24	230	520	24,500	571	2,790	830	5,700	14,000	8,900	8,900	545	472
25	230	520	a27,400	571	2,390	720	3,390	22,300	9,360	5,500	520	496
26	230	448	a24,600	571	1,970	655	2,510	23,000	9,600	3,230	755	571
27	270	448	16,600	545	1,610	598	2,030	20,800	9,960	2,510	1,100	598
28	290	472	8,660	545	1,440	598	1,670	17,600	10,100	2,210	1,050	655
29	310	424	4,620	545	1,240	571	1,610	16,400	11,300	1,970	1,050	655
30	270	424	2,930	545	-	720	11,900	15,200	16,800	2,150	1,050	598
31	250	-	2,030	545	-	755	-	14,900	-	2,650	1,290	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,385	310	210	238	14,650
November	10,637	571	210	355	21,100
December	123,689	27,400	310	3,990	245,300
Calendar year 1939	1,173,799	30,400	210	3,216	2,328,000
January	26,093	1,670	545	842	51,750
February	172,716	21,600	545	5,956	342,600
March	23,074	1,240	571	744	45,770
April	222,219	-	598	7,407	440,800
May	286,360	23,000	1,790	9,237	568,000
June	308,650	19,000	4,390	10,290	612,200
July	433,720	-	1,970	13,990	860,300
August	32,671	2,790	520	1,054	64,800
September	19,303	1,290	400	643	38,290
Water year 1939-40	1,666,517	27,400	210	4,553	3,306,000

a No gage-height record; discharge computed from graph based on records for nearby stations.
d Doubtful gage-height record; discharge interpolated or computed on basis of records for stations at Riverside, near Oakwood, and near Midway.

Trinity River at Liberty, Tex.

Location.- Staff gage, lat. 30°03'25", long. 94°49'05", on bridge on U. S. Highway 90 in Liberty, Liberty County, 450 feet downstream from Texas & New Orleans R. R. bridge. Datum of gage is 2.22 feet below mean sea level (general adjustment of 1929).

Drainage area.- 17,500 square miles.

Records available.- October 1938 to September 1940 (gage heights, discharge measurements and some records of daily discharge). U. S. Weather Bureau has collected gage-height records in this vicinity since 1903.

Extremes.- Maximum discharge observed during year, 30,100 second-feet June 12 (gage height, 25.5 feet); minimum not determined (affected by tides); minimum gage height observed, 2.5 feet Nov. 4.

1938-40: Maximum discharge observed, that of June 12, 1940; minimum discharge not determined (affected by tides); minimum gage height observed, that of Nov. 4, 1939.

Maximum stage since 1903, 28.6 feet May 8-11, 1922, according to information furnished by U. S. Weather Bureau.

Remarks.- Records fair. Discharge not computed below 4,200 second-feet because of tides affecting stage-discharge relation. Gage read once daily.

Cooperation.- Gage-height record furnished by U. S. Weather Bureau.

Discharge measurements, in second-feet, water year October 1939 to September 1940

Date	Width (feet)	Area of section (sq. ft.)	Mean velocity (ft.per sec.)	Gage height (feet)	Discharge (sec.-ft.)
Oct. 7	235	412	0.55	3.86	225
Nov. 8	210	255	1.15	2.90	292
Dec. 6	223	347	1.38	2.90	478
25	459	9,620	2.27	22.92	21,800
26	705	10,600	2.24	24.16	25,900
28	458	9,330	2.24	22.82	20,900
29	430	7,580	1.64	18.50	12,600
30	405	5,920	1.22	14.25	7,200
Jan. 9	230	2,430	.49	4.60	1,200
Feb. 10	432	7,710	1.97	18.80	15,200
Mar. 13	211	2,180	.37	3.78	809
Apr. 23	433	7,890	1.94	19.20	15,300
May 7	397	6,020	1.46	14.89	8,820
28	454	9,340	2.14	22.92	20,000
July 30	272	3,180	.74	7.32	2,340
Aug. 19	238	2,040	.35	3.74	715

Gage height, in feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.90	3.06	4.05	8.94	3.55	5.73	4.40	18.20	20.90	20.77	5.67	4.88
2	3.08	3.14	3.93	7.17	3.33	5.58	4.66	22.32	20.51	20.39	8.40	4.60
3	3.42	2.82	3.92	5.92	3.28	5.23	4.50	22.12	19.81	20.70	7.98	4.41
4	3.76	2.53	3.54	5.64	3.87	5.00	4.30	20.82	19.08	21.67	7.34	5.00
5	3.70	2.85	3.23	5.18	5.96	4.86	4.03	17.78	17.82	22.33	6.65	4.76
6	3.74	3.08	2.96	4.90	16.25	4.68	4.80	15.76	16.67	22.69	6.10	4.73
7	3.95	3.30	3.27	5.05	21.48	4.46	6.86	14.90	15.68	22.48	5.80	4.80
8	4.08	2.99	3.36	5.04	22.20	4.16	7.60	14.68	14.80	22.88	5.78	4.74
9	3.95	3.35	3.23	4.87	21.42	3.94	10.70	14.01	13.27	22.79	5.48	4.44
10	3.84	3.80	3.23	5.23	19.68	4.17	9.73	12.75	12.88	22.54	4.95	4.18
11	3.96	3.00	3.11	6.08	17.63	3.93	9.10	11.80	16.64	22.41	4.80	4.11
12	3.77	2.97	3.38	5.90	15.67	3.78	10.57	11.37	25.02	22.38	4.64	3.71
13	3.64	2.87	2.88	5.47	13.12	3.63	14.61	10.80	21.91	22.22	4.37	3.80
14	3.35	3.48	3.00	5.20	10.99	3.38	17.03	9.80	19.79	22.18	4.21	3.65
15	3.15	4.28	3.28	4.80	9.20	3.33	17.93	8.72	16.10	22.17	4.31	3.50
16	3.04	4.22	3.15	4.69	8.08	3.87	18.42	8.01	12.70	22.00	4.15	3.63
17	3.40	4.38	2.98	4.10	9.18	3.99	18.94	8.18	14.88	21.98	4.05	3.71
18	3.86	4.55	3.06	4.34	14.40	3.68	19.58	8.51	20.04	21.80	4.20	3.70
19	4.00	4.24	3.18	3.98	17.67	3.43	20.00	7.90	18.42	21.74	4.00	3.72
20	4.03	4.06	3.05	4.17	17.30	3.67	20.35	7.28	17.10	21.48	3.75	3.78
21	4.03	3.78	2.95	3.87	16.28	3.75	20.50	7.07	16.48	21.02	4.20	3.95
22	3.78	3.74	3.25	3.48	14.20	3.95	20.28	8.12	15.30	20.74	4.55	4.60
23	3.66	3.93	5.33	3.33	11.86	4.30	19.32	8.82	14.70	20.10	4.41	4.75
24	3.48	3.95	15.12	3.15	10.18	4.50	17.30	13.02	14.64	18.79	3.97	4.30
25	3.53	3.60	22.94	3.08	9.02	4.20	13.80	19.80	15.87	16.20	3.85	3.63
26	3.78	3.18	24.17	2.99	8.37	4.14	10.90	22.66	16.26	13.10	4.00	3.00
27	3.92	3.08	24.09	3.06	7.78	4.39	8.94	23.23	16.51	10.33	4.15	3.12
28	3.50	3.10	22.47	3.20	6.74	3.94	7.98	23.01	16.86	8.76	4.93	3.65
29	3.08	3.66	18.85	3.22	6.27	4.32	8.16	22.57	16.87	7.87	4.96	3.80
30	3.00	3.95	14.88	3.33	-	4.97	10.19	22.10	18.01	7.42	4.78	3.62
31	3.00	-	11.30	3.52	-	4.40	-	21.57	-	6.57	4.84	-

Discharge, in second-feet, of Trinity River at Liberty, Tex., water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-		-		-	13,200	17,700	17,500		
2			-		-		-	20,200	17,000	16,800		
3			-		-		-	19,800	15,800	17,300		
4			-		-		-	17,100	14,600	19,100		
5			-		-		-	12,500	12,500	20,200		
6			-		10,500		-	9,590	10,800	21,000		
7			-		18,800		-	8,490	9,460	20,600		
8			-		20,000		-	8,270	8,380	21,500		
9			-		18,600		4,690	7,550	6,850	21,300		
10			-		15,600		-	6,380	6,470	20,600		
11			-		12,200		-	5,500	11,700	20,400		
12			-		9,460		4,620	5,180	27,600	20,400		
13			-		6,650		8,160	4,760	19,500	20,000		
14			-		4,900		11,300	-	15,800	20,000		
15			-		-		12,700	-	9,990	22,000		
16			-		-		13,500	-	6,290	19,600		
17			-		-		14,300	-	8,660	19,600		
18			-		7,950		15,400	-	16,100	19,300		
19			-		12,400		16,100	-	13,500	19,100		
20			-		11,800		16,800	-	11,400	18,800		
21			-		10,300		17,000	-	10,600	17,800		
22			-		7,750		16,600	-	8,960	17,300		
23			-		5,580		14,900	-	8,270	16,300		
24			9,140		4,340		11,800	6,560	8,160	14,100		
25			20,600		-		7,350	15,800	9,720	10,100		
26			25,000		-		4,830	21,000	10,300	6,650		
27			24,700		-		-	22,200	10,600	4,410		
28			20,600		-		-	21,700	11,200	-		
29			14,100		-		-	20,800	11,200	-		
30			8,490		-		4,340	19,800	12,800	-		
31			5,110		-		-	18,900	-	-		

Note.- Stage-discharge relationship affected by tides on days when discharge was not determined.

Big Sandy Creek near Bridgeport, Tex.

Location.- Water-stage recorder, lat. 33°13', long. 97°41', at bridge on State Highway 24, 1.9 miles upstream from Turkey Creek, 4.4 miles upstream from mouth, and 5 miles east of Bridgeport, Wise County. Datum of gage is 727.44 feet above mean sea level (general adjustment of 1929).

Drainage area.- 276 square miles.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 4,340 second-feet Aug. 17 (gage height, 9.84 feet); no flow at times.
1936-40: Maximum discharge, 7,000 second-feet Mar. 28, 1938 (gage height, 10.70 feet); no flow at times.
Maximum stage known in recent years, about 12.0 feet in September 1932, according to information furnished by local residents.

Remarks.- Records fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0				0		0	a18	12	46	0	3.8
2	0				0		0	a8.1	f8.7	803	0	3.2
3	0				11		0	a3.9	8.1	2,760	0	2.8
4	0				2.0		0	a1.7	7.8	1,470	0	2.6
5	0				0		0	a.6	7.7	f398	0	2.1
6	10				0		f160	a.1	7.3	84	0	1.9
7	17				0		384	a0	7.2	43	0	1.8
8	4.0				0		104	a12	6.9	31	0	1.2
9	37				0		19	2.1	43	20	0	1.1
10	113				0		4.8	4.0	659	16	0	.7
11	14				0		14	0	1,740	f13	0	.4
12	5.0				0		45	0	431	359	0	.2
13	3.6				0		21	0	114	412	0	0
14	3.1				0		5.8	0	106	103	0	0
15	2.7				0		1.0	0	44	31	171	0
16	2.2				0		.6	0	304	14	723	0
17	2.0				0		.2	0	701	9.4	2,790	0
18	1.6				0		.2		622	7.0	1,210	0
19	1.3				0		0		267	5.7	160	0
20	1.0				0		0	a22	113	4.9	56	0
21	.8				0		0		40	224	32	0
22	.6				0		0	a80	251	387	22	0
23	0.				0		0	186	186	69	16	0
24	0				0		0	172	398	20	13	9.2
25	0				0		0		842	7.6	10	7.7
26	0				0		0	a51	492	3.9	f7.6	3.7
27	0				0		0		109	2.8	f14 .	2.0
28	0				0		0	596	133	1.6	f6.5	1.1
29	0				0		a105	455	417	.4	5.4	.3
30	0				-		a75	97	111	0	4.8	0
31	0				-		-	27	-	0	4.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	218.9	113	0	7.06	434
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	2,625.1	447	0	7.19	5,210
January	0	0	0	0	0
February	13.0	11	0	.45	26
March	0	0	0	0	0
April	939.6	384	0	31.3	1,860
May	1,904.5	596	0	61.4	3,780
June	8,188.7	1,740	6.9	273	15,240
July	7,345.1	2,760	0	237	14,570
August	5,245.4	2,790	0	169	10,400
September	45.5	9.2	0	1.52	90
Water year 1939-40	23,900.7	2,790	0	65.3	47,400

Peak discharge.- June 10 (12 p.m.) 2,520 sec.-ft.; July 3 (11 a.m.) 3,640 sec.-ft.; Aug. 17 (1 p.m.) 4,340 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage and weather records.

f Fragmentary gage-height record; discharge computed on basis of partly estimated gage heights.

Note.- Discharge June 2 to July 2, July 6-10, computed from graph based on gage readings.

Clear Fork of Trinity River at Fort Worth, Tex.

Location.- Water-stage recorder and concrete control, lat. 32°44', long. 97°21', at bridge on Stove Foundry road, 388 feet downstream from Texas & Pacific Ry. bridge at Fort Worth, Tarrant County, and 3 miles upstream from West Fork of Trinity River. Datum of gage is 532.91 feet above mean sea level (general adjustment of 1929).

Drainage area.- 522 square miles.

Records available.- March 1924 to September 1940.

Average discharge.- 16 years, 73.2 second-feet.

Extremes.- Maximum discharge during year, 9,000 second-feet July 12 (gage height, 13.12 feet); no flow at times.
1924-40: Maximum discharge, 17,800 second-feet Sept. 5, 1932 (gage height, 20.08 feet); no flow at times.
Maximum discharge known, 74,300 second-feet Apr. 25, 1922 (gage height, 27.5 feet, present datum), by slope-area method, based on data furnished by city engineer of Fort Worth.

Remarks.- Records good except those below 25 second-feet, which are poor. Texas & Pacific Ry. Co. diverts small amount of water from pool in which gage is located.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0				0	4.4	7.4	7.4	0	0
2			0				0	2.7	3.5	25	0	0
3			0				0	2.7	2.1	637	0	0
4			0				0	2.7	1.6	344	0	0
5			0				0	2.1	.5	56	0	0
6			0				11	2.1	0	25	0	0
7			0				103	.8	.8	16	0	0
8			0				40	1.6	0	11	0	1.2
9			0				21	1.2	412	7.4	0	.8
10			0				4.6	1.6	285	6.3	1.0	.4
11			0				0	1.2	124	5.3	.8	.5
12			0				0	1.6	67	2,920	.1	a.2
13			0				0	1.6	39	453	.1	0
14			.1				0	1.2	110	89	0	0
15			.3				0	.3	134	45	0	0
16			.3				0	0	167	32	121	0
17			.3				0	0	306	23	172	0
18			.5				0	533	267	16	150	0
19			.5				0	87	124	11	17	0
20			.5				0	14	176	8.5	12	0
21			.8				0	7.4	110	7.4	3.5	0
22			1.6				0	63	69	6.3	1.6	0
23			1.2				0	886	21	5.3	1.2	0
24			0				0	210	19	3.5	.5	0
25			0				0	23	14	2.7	.5	0
26			0				0	11	17	2.1	.3	0
27			0				0	6.3	8.5	.5	.1	0
28			0				91	450	e.5	0	0	0
29			0				89	359	6.3	0	0	0
30			0				14	37	7.4	0	0	0
31			0				-	16	-	0	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	6.1	1.6	0	.20	12
Calendar year 1939	6,664.3	-	0	18.3	13,210
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	373.6	103	0	12.5	741
May	2,530.5	686	0	81.6	5,020
June	2,527.6	412	0	84.3	5,010
July	4,765.7	2,920	0	154	9,450
August	481.7	172	0	15.5	955
September	3.1	1.2	0	.10	6.1
Water year 1939-40	10,688.3	2,920	0	29.2	21,190

Peak discharge.- May 18 (3:30 a.m.) 1,640 sec.-ft.; May 23 (7 a.m.) 1,510 sec.-ft.; June 9 (11 p.m.) 2,430 sec.-ft.; July 3 (6 p.m.) 2,630 sec.-ft.; July 12 (11:30 a.m.) 9,000 sec.-ft.
a No gage-height record; discharge interpolated.
Note.- Stage-discharge relation affected by drift on control for discharges below 25 second-feet.

Elm Fork of Trinity River near Carrollton, Tex.

Location.- Water-stage recorder above spillway of California concrete dam, lat. 32°52'25", long. 96°55'50", at bridge on State Highway 114, 100 feet downstream from Hackberry Creek and 5.5 miles southwest of Carrollton, Dallas County. Datum of gage is 410.46 feet above mean sea level (general adjustment of 1929). Prior to Apr. 16, 1939, staff gage 0.8 mile downstream, same control and at same datum.

Drainage area.- 2,612 square miles.

Records available.- July 1938 to September 1940. January 1907 to December 1928, at station near Dallas, 7 miles downstream (January 1907 to September 1920, monthly records only, published in Water-Supply Paper 850). November 1923 to July 1938, at site 8.5 miles upstream at Carrollton Dam. Records equivalent except during periods of intense local rains and during low flows at station near Dallas caused by municipal pumping betwsen sites.

Average discharge.- 32 years (1907-22, 1923-40) 749 second-feet.

Extremes.- 1938-39: Maximum discharge during water year, 10,700 second-feet Apr. 18 (gage height, 12.78 feet); minimum observed, 36 second-feet Feb. 13 (regulated).
1939-40: Maximum discharge during water year, 8,980 second-feet June 17 (gage height, 12.33 feet); minimum, 34 second-feet Mar. 14 (regulated).
1907-40: Maximum gage height, about 27.5 feet, present site and datum, affected by backwater from West Fork of Trinity River, May 26, 1908, from floodmarks according to information furnished by State Reclamation Department (discharge not determined but probably maximum for period of record). Flood of May 19, 1935, 82,100 second-feet (gage height, 13.00 feet, site and datum then in use); no flow at times.

Remarks.- Records good except those between 3,000 and 8,000 second-feet which are fair. No diversion above station. Flow regulated by Lake Dallas Reservoir (capacity, 214,000 second-feet).

Rating table, water years 1938-39 and 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Apr. 15, Apr. 19, 1939, and June 18, July 5, 6, Sept. 21-30, 1940)

1.0	29	2.6	810	6.0	3,870	11.8	7,970
1.2	68	3.0	1,130	7.0	4,440	12.2	8,740
1.4	127	4.0	2,080	10.0	6,150	12.6	9,940
1.8	313	5.0	3,120	11.0	6,960		
2.2	539	5.5	3,520	11.4	7,360		

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	55	46	41	38	76	178	76	81	120	135	124
2	101	46	50	41	38	76	110	76	76	201	138	124
3	101	55	55	41	38	76	104	71	71	539	138	110
4	101	59	50	41	38	76	104	61	110	343	196	110
5	101	59	50	41	38	76	111	64	110	154	183	114
6	154	59	50	41	38	76	368	64	500	146	135	117
7	127	59	50	41	38	76	770	64	555	142	142	120
8	97	59	50	38	38	66	338	68	256	138	146	117
9	86	59	50	39	38	61	236	68	53	138	146	117
10	84	57	50	43	48	46	165	71	50	146	146	117
11	84	57	50	48	43	41	135	68	81	150	146	117
12	84	57	50	48	a40	41	110	59	131	150	142	110
13	78	57	50	44	36	41	76	61	131	150	142	114
14	78	57	50	44	a38	41	66	57	135	135	146	114
15	84	57	50	41	41	41	f66	57	146	127	146	107
16	84	55	48	41	41	43	2,560	66	117	127	146	114
17	84	55	46	41	44	50	7,740	995	114	131	146	120
18	84	55	43	41	44	61	9,790	1,060	120	127	146	131
19	84	55	43	41	48	61	c2,870	464	196	135	146	124
20	84	55	43	41	61	61	318	271	174	135	146	104
21	84	53	39	41	61	57	246	104	196	131	146	107
22	84	53	39	41	53	57	220	104	157	135	142	107
23	84	53	39	48	48	57	188	81	127	135	138	110
24	84	55	43	50	48	57	117	73	127	146	138	114
25	84	57	43	53	48	268	101	71	124	146	131	117
26	84	55	43	41	64	}	91	73	124	146	131	117
27	84	46	46	36	135	}	86	86	120	142	131	117
28	86	43	46	38	110	} d830	86	210	117	135	127	117
29	97	43	48	38		}	78	175	117	138	120	101
30	104	43	41	38		}	73	86	117	135	114	101
31	101	-	41	38	-	362	-	73	-	135	120	-

Peak discharge.- Apr. 18 (11 a.m.) 10,700 sec.-ft.
a No gage-height record; discharge interpolated.
c Stage-discharge relation affected by backwater from return flow downstream; discharge computed from backwater curve based on discharge measurements.
d Doubtful gage-height record; discharge computed on basis of records for stations on West Fork of Trinity at Grandprairie and on Trinity River at Dallas.
f Computed on basis of partly estimated gage-height record.

Discharge, in second-feet, of Elm Fork of Trinity River near Carrollton, Tex., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	97	76	64	68	68	59	810	357	1,480	170	165
2	107	97	66	64	73	61	59	251	138	2,680	165	161
3	114	94	59	64	78	61	59	84	142	7,190	165	161
4	110	94	64	64	76	61	59	60	120	8,740	165	161
5	94	174	64	64	73	61	64	78	110	c7,310	157	157
6	101	236	64	68	71	64	1,550	114	101	c3,820	154	157
7	101	246	64	66	71	61	4,600	94	94	1,480	154	150
8	101	246	64	64	71	61	2,100	101	89	1,670	154	146
9	107	266	57	66	71	61	654	1,030	188	3,120	150	146
10	110	308	59	64	68	64	127	718	2,210	2,770	150	150
11	110	318	59	61	68	535	599	73	2,460	653	150	142
12	110	330	59	61	64	314	792	81	1,820	1,340	146	89
13	110	330	61	66	61	161	241	110	1,110	970	146	150
14	101	318	66	66	61	68	94	81	742	679	146	165
15	101	335	66	68	61	66	73	76	2,070	551	146	178
16	101	340	64	68	71	59	57	68	7,810	475	165	170
17	104	256	59	68	97	68	423	101	8,340	435	846	127
18	94	64	59	68	84	68	241	2,980	c4,060	256	1,250	150
19	94	73	59	68	71	71	110	1,890	1,520	196	721	150
20	101	97	59	68	71	71	97	435	1,010	161	464	154
21	101	104	59	71	71	64	101	86	1,770	154	418	150
22	101	104	61	71	68	64	101	1,450	2,020	258	313	154
23	104	107	64	61	61	64	107	2,720	1,670	1,970	210	157
24	107	97	64	76	64	64	114	866	1,530	1,670	192	157
25	104	107	66	73	61	64	114	498	1,580	1,530	183	154
26	101	110	68	71	61	64	107	230	1,580	906	178	154
27	94	110	68	71	64	68	86	225	1,530	551	174	154
28	91	110	68	71	68	66	634	2,780	1,580	527	313	150
29	94	104	66	68	68	75	5,390	6,430	1,430	407	340	146
30	94	89	61	68	-	125	2,570	2,310	938	138	201	150
31	94	-	61	68	-	61	-	551	-	135	170	-

c Stage-discharge relation affected by backwater from return flow downstream; discharge computed from backwater curve based on discharge measurements.

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1938	2,857	154	78	92.2	5,670
November	1,628	59	43	54.3	3,230
December	1,442	50	39	46.5	2,860
Calendar year 1939	442,692	49,400	39	1,213	878,100
January 1939	1,301	53	38	42.0	2,580
February	1,393	135	36	49.8	2,760
March	6,194	-	41	200	12,290
April	27,501	9,790	66	917	54,550
May	4,977	1,080	57	161	9,870
June	4,533	555	50	151	8,990
July	4,958	539	120	160	9,830
August	4,395	196	114	142	8,720
September	3,433	131	101	114	6,810
Water year 1938-39	64,612	9,790	36	177	128,200
October 1939	3,157	114	91	102	6,260
November	5,361	340	64	179	10,630
December	1,954	76	57	63.0	3,880
Calendar year 1939	69,157	9,790	36	189	137,200
January 1940	2,079	76	61	67.1	4,120
February	2,015	97	61	69.5	4,000
March	2,883	535	61	93.0	5,720
April	21,382	5,390	57	713	42,410
May	27,371	6,430	50	883	54,290
June	50,119	8,340	89	1,671	99,410
July	54,222	8,740	135	1,749	107,500
August	8,456	1,250	146	273	16,770
September	4,555	178	89	152	9,030
Water year 1939-40	183,554	8,740	50	502	364,000

Denton Creek near Roanoke, Tex.

Location.- Water-stage recorder, lat. 33°02', long. 97°12', 340 feet upstream from bridge on U. S. Highway 377, a quarter of a mile downstream from Texas & Pacific Ry. bridge, and 2.2 miles northeast of Roanoke, Denton County. Datum of gage is 523.6 feet above mean sea level (general adjustment of 1929). Former gage 340 feet downstream at same datum.

Drainage area.- 704 square miles.

Records available.- October 1923 to December 1927, March 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period, 8,000 second-feet Apr. 16 (gage height, 18.58 feet); no flow at times.
1939-40: Maximum discharge during year, 10,500 second-feet July 3 (gage height, 21.85 feet); no flow at times.
1923-27, 1939-40: Maximum discharge, that of July 3, 1940. The maximum discharge of 14,300 second-feet Dec. 12, 1923 (gage height, 21.0 feet, present site) published in Water-Supply Papers 628 and 648 was based on extension of rating curve above 3,500 second-feet and is considered in error; the discharge for that flood was probably slightly less than that of July 3, 1940; no flow at times.
Maximum stage known, about 31 feet in May 1908, according to information from local residents.

Remarks.- Records good except those for periods of no gage-height record, which are poor. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						f5.1		5.1		2.2		
2						3.7		3.1		157		
3						2.3				29		
4						2.2			a25	2.6		
5						2.1				1.4		
6						2.0				.6		
7						2.0				.2		
8						2.0	a5.0		2.2	0		
9						2.0			2.3	0		
10						2.0		a2.0	2.2	0		
11						1.9			1.7	0		
12						1.7			1.2	0		
13						1.5			.9	0		
14						1.5			.7	0		
15						1.5			.5	0		
16						1.5	4,000		.4	0		
17						1.5	1,240	216	.4	0		
18						1.3	144	403	.5	0		
19						1.1	105		5.5	0		
20						.9	79		7.8	0		
21						.7	59		2.1	0		
22						.8	44		1.5	0		
23						.8	34		1.1	0		
24						.9	27		.7	0		
25						f238	22	a15	.5	0		
26						f648	19		.3	0		
27							15		.7	0		
28							12		.6	0		
29						a110	9.0		2.2	0		
30							7.2		3.1	0		
31							-		-	0		

Peak discharge.- Apr. 16 (2 p.m.) 8,000 sec.-ft.
a No gage-height record; discharge computed on basis of floodmarks and weather records.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage-height record.

Discharge, in second-feet, of Denton Creek near Roanoke, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0	25	64	67	f1.7	f1.1
2						0	0	7.2	44	3,370	f1.4	f.6
3						0	0	2.2	30	6,280	f1.1	f.3
4						0	0	1.5	19	3,020	f.8	.3
5						0	0	1.1	13	2,560	f.5	.2
6						0	407	.7	7.8	1,170	.2	0
7						0	323	.3	4.2	393	0	0
8						0	112	.8	2.2	217	0	0
9						0	52	1.7	2.2	136	0	0
10						a4.0	41	1.7	452	99	0	0
11						83	57	2.3	744	75	0	0
12						1.1	20	2.0	998	256	0	0
13						0	18	1.2	412	332	0	0
14						0	3.7	.9	158	250	0	0
15						0	4.2	.5	186	117	0	0
16						0	3.1	.3	1,240	86	894	0
17						0	2.0	45	1,370	65	1,110	0
18						0	1.5	520	1,180	54	548	0
19						0	.7	19	618	50	256	0
20						0	0.2	3.7	319	46	109	0
21						0	0	1.7	201	44	66	0
22						0	0	594	144	507	40	0
23						0	0	218	95	259	28	0
24						0	0	79	82	108	18	0
25						0	0	41	133	75	12	0
26						0	0	30	108	49	7.2	0
27						0	0	10	167	f30	11	0
28						0	332	2,410	117	f17	33	0
29						0	168	432	226	f8.4	3.7	0
30						0	73	259	68	f3.7	3.4	0
31						0	-	105	-	f2.2	2.0	-

Peak discharge.- July 2 (3 p.m.) 6,310 sec.-ft.; July 3 (4 p.m.) 10,500 sec.-ft.

a No gage-height record; discharge computed on basis of known change in stage, engineer's notes and weather records.

f Gage-height record incomplete; discharge computed on basis of partly estimated gage-height record.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
March 1939	1,479	648	0.7	47.7	2,930
April	5,891.2	4,000	-	196	11,690
May	850.2	403	-	27.4	1,690
June	214.1	-	.3	7.14	425
July	193.0	157	0	6.23	383
August	0	0	0	0	0
September	0	0	0	0	0
The period	-	-	-	-	17,120
October 1939	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January 1940	0	0	0	0	0
February	0	0	0	0	0
March	88.1	83	0	2.84	175
April	1,618.4	407	0	53.9	3,210
May	4,816.8	2,410	.3	155	9,550
June	9,204.4	1,370	2.2	307	18,260
July	19,746.3	6,280	2.2	637	39,170
August	3,147.0	1,110	0	102	6,240
September	2.5	1.1	0	.08	5.0
Water year 1939-40	38,623.5	6,280	0	106	76,610

East Fork of Trinity River near Rockwall, Tex.

Location.- Chain gage, lat. 32°55'25", long. 96°30"20", on bridge on U. S. Highway 67, 3 miles southwest of Rockwall, Rockwall County, and 8 miles upstream from Muddy Creek. Datum of gage is 404.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 831 square miles.

Records available.- November 1923 to September 1940.

Average discharge.- 17 years, 404 second-feet.

Extremes.- Maximum discharge during year, 31,800 second-feet Apr. 7 (gage height, 19.6 feet, from graph based on gage readings); no flow at times.
1923-40: Maximum discharge, 64,800 second-feet, June 16, 1935 (gage height, 23.39 feet, from floodmarks), by slope-area method; no flow at times.
Maximum stage known, about 25 feet in spring of 1922.

Remarks.- Records good. Gage read twice daily. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	3.1	0	1.7	6.2	5.8	5,750	758	212	43	22
2	0	0	.7	0	2.6	5.9	4.6	2,260	262	1,270	42	17
3	0	0	.4	1.8	3.0	5.3	3.9	403	208	4,590	38	14
4	0	0	3.0	1.7	3.8	5.0	3.6	181	168	7,700	36	11
5	0	0	2.5	1.6	3.8	4.5	3.9	146	142	4,500	33	10
6	0	0	2.2	1.6	3.3	8.4	934	114	122	1,220	30	9.3
7	0	0	1.9	1.5	52	5.0	15,400	96	107	298	28	8.6
8	0	0	1.7	1.4	78	3.2	12,400	93	100	217	26	7.8
9	0	0	1.5	1.1	39	3.1	4,750	391	93	176	24	7
10	0	0	1.2	1.6	16	3.1	1,670	920	158	154	23	6.4
11	80	0	.9	1.8	6.8	3.1	549	684	838	138	23	5.3
12	54	0	.6	1.9	4.6	99	1,040	231	1,100	430	23	4.0
13	21	0	.5	2.0	3.6	104	1,360	138	1,790	1,020	23	2.9
14	7.4	0	.5	2.0	2.9	59	1,430	110	1,260	1,600	22	1.8
15	3.8	0	.4	1.7	2.6	34	436	96	721	768	20	.9
16	2.2	0	.2	1.6	2.7	19	181	87	1,230	217	18	.2
17	1.4	0	.1	2.0	4.0	11	146	81	2,560	146	18	0
18	.5	0	.1	2.1	135	6.5	527	553	4,020	114	18	0
19	0	0	.1	2.2	154	5.0	544	1,290	5,250	104	20	0
20	0	0	0	2.1	81	4.3	288	3,400	2,720	181	23	0
21	0	0	0	1.9	51	4.0	138	1,300	804	456	22	0
22	0	0	0	1.8	37	3.7	110	969	330	363	19	0
23	0	0	0	1.7	27	3.2	100	2,720	271	425	17	0
24	0	0	0	1.6	18	3.2	90	3,590	181	163	15	0
25	0	0	.1	1.6	12	3.0	84	2,150	154	104	14	0
26	0	0	.3	1.6	10	3.0	76	456	146	87	13	0
27	0	0	.1	1.6	8.2	3.0	76	480	126	74	12	0
28	0	0	0	1.5	7.8	2.8	123	1,360	107	64	15	0
29	0	0	0	1.4	6.8	2.8	1,360	2,720	633	57	118	0
30	0	.2	0	1.4	-	3.9	7,020	4,750	330	49	101	0
31	0	-	0	1.5	-	8.9	-	4,020	-	46	36	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	170.3	80	0	5.49	338
November	.2	.2	0	.01	.4
December	22.1	3.1	0	.71	44
Calendar year 1939	81,636.1	16,300	0	224	161,900
January	49.3	2.2	0	1.59	98
February	778.2	154	1.7	26.8	1,540
March	436.1	104	2.8	14.1	865
April	50,853.8	15,400	3.6	1,695	100,900
May	41,539	5,750	81	1,340	82,390
June	26,689	5,250	93	890	52,940
July	26,943	7,700	46	869	53,440
August	913	118	12	29.5	1,810
September	128.2	22	0	4.27	254
Water year 1939-40	148,522.2	15,400	0	406	294,600

Cedar Creek near Mabank, Tex.

Location.- Water-stage recorder, lat. 32°19'45", long. 96°10'05", at bridge on County highway, 2 miles downstream from Lacys Fork and 5½ miles southwest of Mabank, Kaufman County. Datum of gage is 285.39 feet above mean sea level.

Drainage area.- 741 square miles.

Records available.- December 1938 to September 1940.

Extremes.- 1938-39: Maximum discharge during period, 3,720 second-feet Feb. 27 (gage height, 14.31 feet); no flow at times.
1939-40: Maximum discharge during year, 9,000 second-feet Apr. 8 (gage height, 16.67 feet), from rating curve extended above 3,000 second-feet; no flow at times.
Maximum stage known, about 23.5 feet, Sept. 29, 1936, according to information furnished by local residents (discharge not determined); peak discharge of this flood as determined about 12 miles below station, 35,400 second-feet, by slope-area method (drainage area, 910 square miles).

Remarks.- Records poor. No large diversion above station.

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	0	9.0	522	415		188	332		
2			-	0	7.6	114	107		145	645		
3			-	0	6.2	72	52		f44	986		
4			-	0	5.3	49	34		f216	1,430		
5			-	0	4.3	32	22		422	1,180		
6			-	0	13	24	15		990	144		
7			-	0	13	18	287		1,300	60		
8			-	0	10	15	211		905	36		
9			-	0	7.9	12	73		f172	24		
10			-	0	6.2	10	34		f28	272		
11			-	0	5.0	9.4	18		f18	228		
12			0	15	4.6	8.6	11	a450	12	62		
13			0	160	4.3	13	8.3		11	32		
14			0	175	30	16	6.2		10	19		
15			0	102	197	14	f4.6		9.7	12		
16			0	52	539	13			9.7	7.2		
17			0	25	531	12			13	5.0		
18			0	13	682	12			19	3.4		
19			0	8.6	1,220	11			187	2.5		
20			0	6.2	2,470	11			1,550	1.9		
21			0	4.3	3,080	10			2,710	.9		
22			0	3.1	2,710	10			1,960	.3		
23			0	6.0	904	9.7	a100		f505	0		
24			0	272	92	9.7		41	f86	0		
25			0	402	745	10		22	f57	0		
26			0	223	2,880	100		14	f42	0		
27			0	102	3,640	747		11	f21	0		
28			0	50	2,580	462		f24	13	0		
29			0	27	-	603		256	22	0		
30			0	16	-	1,140		257	51	0		
31			0	11	-	973		386	-	0		

a No gage-height record; discharge computed on basis of weather records.
f Computed on basis of partly estimated gage-height record.

Discharge, in second-feet, of Cedar Creek near Mabank, Tex., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	36	2.3	0	1.9	114	1,500	80	2,780	0	33
2		0	71	1.9	.1	1.5	29	483	39	1,570	0	13
3		0	58	1.3	.6	1.5	16	72	24	917	0	7.2
4		0	34	1.3	18	1.3	11	37	16	2,020	0	4.6
5		0	21	1.3	15	1.2	7.6	22	12	1,880	0	3.1
6		0	11	1.7	9.7	1.0	575	15	9.7	243	0	2.1
7		0	6.9	2.3	12	.7	2,460	11	8.3	49	0	1.5
8		0	4.3	4.0	12	.6	7,110	12	7.2	26	0	1.0
9		0	3.4	5.3	8.6	.5	6,920	41	6.6	17	0	.7
10		0	2.5	4.0	7.9	.3	2,440	329	7.9	12	0	.3
11		0	1.9	2.8	6.2	.3	360	353	85	10	0	.1
12		0	1.5	1.9	10	.2	262	104	176	140	0	.1
13		0	1.0	1.5	9.4	78	333	47	42	530	0	0
14		0	.9	1.2	5.9	194	157	25	93	301	0	0
15		0	.7	1.2	5.0	77	62	16	161	183	0	0
16		0	.5	1.3	24	34	32	11	276	54	0	0
17		0	.3	1.3	508	19	21	11	132	43	0	0
18		0	.3	1.0	489	12	14	2,540	77	14	0	0
19		0	.1	f1.0	238	8.3	10	5,460	239	6.6	0	0
20		4.0	.1	f.7	81	6.2	7.2	3,310	739	4.3	0	0
21		1.0	.1	f.5	46	5.0	5.9	1,330	596	2.5	0	0
22		.1	1.2	f.5	32	3.7	5.0	739	200	1.5	0	0
23		0	30	.2	18	3.4	314	1,340	60	1.2	0	0
24		0	47	.1	12	2.8	738	1,950	29	.7	0	0
25		0	16	.1	7.2	2.3	348	4,410	16	.5	0	0
26		0	9.0	f0	5.3	1.9	61	2,450	10	.1	0	0
27		0	5.3	f0	4.0	1.7	27	286	6.6	.1	0	0
28		.1	4.6	0	2.8	2.3	18	72	27	0	26	0
29		.2	5.0	0	2.3	4.0	760	629	783	0	221	0
30		.7	4.3	0	-	12	1,480	928	2,020	0	339	0
31		-	3.1	0	-	204	-	381	-	0	106	-

f Computed on basis of partly estimated gage-height record.

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
December 12-31, 1938	0	0	0	0	0
Calendar year	-	-	-	-	-
January 1939	1,673.2	402	0	54.0	3,320
February	22,396.4	3,640	4.3	800	44,420
March	5,062.4	1,140	8.6	163	10,040
April	2,798.1	-	-	93.3	5,550
May	11,361	-	-	366	22,530
June	11,716.4	2,710	9.7	391	23,240
July	5,483.2	1,430	0	177	10,880
August	0	0	0	0	0
September	0	0	0	0	0
The period	-	-	-	-	120,000
October 1939	0	0	0	0	0
November	6.1	4.0	0	.20	12
December	381.0	71	.1	12.3	756
Calendar year 1939	60,877.8	-	0	167	120,700
January 1940	40.7	5.3	0	1.31	81
February	1,590.0	508	0	54.8	3,150
March	682.6	204	.2	22.0	1,350
April	24,697.7	7,110	5.0	823	48,990
May	28,914	5,460	11	933	57,350
June	5,978.3	2,020	6.6	199	11,860
July	10,806.5	2,780	0	349	21,430
August	692	339	0	22.3	1,370
September	66.7	33	0	2.22	132
Water year 1939-40	73,855.6	7,110	0	202	146,500

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Chambers Creek near Corsicana, Tex.

Location.- Water-stage recorder, lat. 32°06'30", long. 96°22'15", at bridge on State Highway 31, 500 feet upstream from St. Louis, Southwestern Ry. bridge, 6 miles east of Corsicana, Navarro County, and 17 miles upstream from Richland Creek. Datum of gage is 294.26 feet above mean sea level (general adjustment of 1929).

Drainage area.- 958 square miles.

Records available.- March 1939 to September 1940.

Extremes.- Maximum discharge during year, 18,400 second-feet Apr. 7 (gage height, 23.20 feet); no flow at times.
1939-40: Maximum discharge, that of Apr. 7, 1940; maximum gage height, 23.26 feet June 20, 1939; no flow at times.
Maximum stage known, 27½ feet December 1913, according to information furnished by local residents.

Remarks.- Records fair except those for periods of no gage-height record and those below 3 second-feet, which are poor. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0.4	18	12	266	84	2,580	39	3.0
2		0	0	0	.6	16	11	105	72	2,160	34	1.7
3		0	0	0	17	14	8.8	82	65	10,000	30	1.2
4		.1	0	0	157	14	6.5	69	71	6,450	27	.8
5		.1	.1	.1	142	12	81	62	54	4,920	24	.6
6		.1	.1	.1	106	11	3,100	56	46	2,670	23	.2
7		.1	.1	0	41	10	16,100	52	42	746	21	.1
8		.1	.1	0	28	9.6	9,390	48	38	411	18	.1
9		.1	.1	0	20	10	2,580	344	35	323	17	0
10		.1	.1	0	17	9.2	446	631	34	263	15	0
11		.1	.1	.9	15	8.2	394	380	38	218	13	0
12		.1	.1	3.9	15	8.5	960	111	70	522	43	0
13		.1	.1	2.0	16	9.5	318	84	96	2,220	174	0
14		.1	.1	.9	12	8.0	174	74	56	4,450	35	0
15		.1	.1	.8	10	7.3	82	67	101	3,010	21	0
16		.1	.1	.6	37	7.3	123	64	882	569	16	0
17		.1	.1	.3	1,030	6.1	108	60	1,860	313	14	0
18		.1	.1	.1	347	5.5	96	1,660	2,730	263	13	0
19		.1	.1	.1	112	5.5	87	4,710	2,180	222	12	0
20		.1	.1	.1	60	5.3	79	1,710	1,560	198	12	0
21		.1	.1	.1	40	5.5	73	194	805	182	11	0
22		.1	.1	.1	31	18	67	727	1,430	160	10	0
23		.1	0	.1	27	10	63	2,600	985	147	9.8	.1
24		.1	0	.1	25	6.1	59	2,060	1,440	132	9.0	0
25		.1	0	.1	22	4.7	56	918	944	120	8.2	0
26		.1	0	.1	22	4.5	54	190	218	105	7.5	0
27		.1	0	0	21	11	53	129	164	90	6.7	0
28		.1	0	0	18	8.2	64	111	220	76	5.9	0
29		.1	0	.1	19	62	1,380	144	3,940	64	5.3	0
30		.1	0	.1	-	32	1,250	303	8,250	53	4.1	0
31		-	0	.3	-	18	-	138	-	45	3.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	2.7	.1	0	.09	5.4
December	1.8	.1	0	.06	3.6
Calendar year	-	-	-	-	-
January	11.0	3.9	0	.35	22
February	2,408.0	1,030	.4	83.0	4,780
March	395.2	82	4.5	12.7	784
April	37,275.3	16,100	6.5	1,243	73,930
May	18,151	4,710	46	586	36,000
June	28,510	8,250	34	950	56,550
July	43,682	10,000	45	1,409	86,640
August	682.2	174	3.7	22.0	1,350
September	7.8	3.0	0	.26	15
Water year 1939-40	131,127.0	16,100	0	358	260,100

Peak discharge.- Apr. 7 (11 a.m.) 18,400 sec.-ft.; May 19 (5 a.m.) 5,950 sec.-ft.; June 30 (8 a.m.) 9,320 sec.-ft.; July 3 (12 m.) 11,300 sec.-ft.

Note.- Partial or no gage-height record Apr. 17-28, May 2-9, 12-17, 26, July 9-11, July 26 to Aug. 29; discharge computed on basis of available gage heights, weather records, and records for Richland Creek near Richland.

Richland Creek near Richland, Tex.

Location.- Water-stage recorder, lat. 31°57', long. 96°25', at bridge on U. S. Highway 75, 750 feet downstream from Texas & New Orleans R. R. bridge, 1 mile north of Richland, Navarro County, and 3½ miles downstream from Pinoak Creek. Datum of gage is 299.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 760 square miles.

Records available.- December 1924 to February 1925 (discharge measurements only), March 1939 to September 1940.

Extremes.- Maximum discharge during year, 10,600 second-feet Apr. 7 (gage height, 20.64 feet); no flow Oct. 1 to Feb. 3, Aug. 23 to Sept. 3.

1939-40: Maximum discharge, 33,500 second-feet June 20, 1939 (gage height, 22.54 feet); no flow at times.

Maximum stage known, 25.5 feet, December 1913, according to information furnished by engineers of Texas & New Orleans R. R.

Remarks.- Records fair. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	1.2	3.2	142	10	1,230	9.6	
2					0	1.0	1.6	50	7.8	2,250	7.8	
3					12	1.0	2.2	36	4.9	3,850	7.0	
4					144	1.0	3.7	29	3.0	3,300	6.2	
5					37	1.0	3.0	25	2.4	2,480	4.2	
6					13	1.0	2,020	21	2.0	a512	3.2	
7					5.7	1.0	6,370	18	1.6	a104	2.2	
8					3.7	.9	7,790	19	1.0	a82	1.4	
9					2.6	.9	2,790	110	.8	a74	1.2	
10					1.6	.9	193	61	.9	a66	1.2	
11					.9	.8	72	47	.6	55	1.0	
12					.6	.7	72	22	.7	73	1.2	
13					.5	.6	87	14	.9	658	1.4	
14					.3	.5	50	11	3.2	641	1.2	
15					.2	.4	42	9.0	7.6	107	1.6	
16					36	.4	38	7.6	37	77	1.6	
17					427	.3	34	6.2	100	66	.9	
18					107	.3	31	260	336	56	.6	
19					38	.3	28	379	124	47	.4	
20					19	.3	28	73	38	41	.3	
21					10	.3	25	28	24	37	.2	
22					5.4	.3	23	238	32	34	.1	
23					3.2	.3	21	421	14	30	0	
24					2.6	.3	19	166	406	28	0	
25					2.2	.2	18	44	511	24	0	
26					1.6	.2	17	25	178	21	0	
27					1.6	.4	15	16	38	18	0	
28					1.6	.6	15	28	40	15	0	
29					1.4	.6	540	84	1,280	13	0	
30					-	18	1,090	35	1,700	11	0	
31					-	10	-	15	-	11	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	-	-	-	-	-
January	0	0	0	0	0
February	878.7	427	0	30.3	1,740
March	45.7	18	.2	1.47	91
April	21,441.7	7,790	1.6	715	42,530
May	2,439.8	421	6.2	78.7	4,840
June	4,905.4	1,700	.6	164	9,730
July	16,011	3,850	11	516	31,760
August	54.5	9.6	0	1.76	108
September	0	0	0	0	0
Water year 1939-40	45,776.8	7,790	0	125	90,800

Peak discharge.- Apr. 7 (10 p.m.) 10,600 sec.-ft.; July 1 (1 a.m.) 1,810 sec.-ft.; July 3 (4 p.m.) 3,950 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage and weather records.

West Fork of San Jacinto River near Conroe, Tex.

Location.- Water-stage recorder, lat. 30°15', long. 95°28', at bridge on U. S. Highway 75, 285 feet upstream from International-Great Northern R.R. bridge, 3½ miles downstream from Lake Creek, and 4¼ miles south of Conroe, Montgomery County. Datum of gage is 100.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 832 square miles.

Records available.- May 1924 to September 1927, July 1939 to September 1940.

Extremes.- Maximum discharge during year, 13,100 second-feet June 12 (gage height, 16.11 feet); minimum, 9.3 second-feet Oct. 1, 2.

1924-27, 1939-40: Maximum discharge, 88,100 second-feet Apr. 22, 1926 (gage height, 24.2 feet, present site and datum), from 1940 rating curve extended above 43,000 second-feet on basis of velocity-area studies; minimum, that of Oct. 1, 2, 1939.

Maximum stage known, 25.2 feet, present site and datum, in December 1913, according to information furnished by Missouri Pacific R.R. engineers, at railroad bridge 285 feet downstream (discharge, 101,000 second-feet, from 1940 rating curve extended above 43,000 second-feet on basis of velocity-area studies). Flood of May 2 or 3, 1922 (revised) reached same stage as flood of Apr. 22, 1926.

Remarks.- Records good except those for period of no gage-height record, which are fair. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	33	104	46	111	100	702	323	1,750	a31	18
2	10	11	26	85	53	97	88	952	142	1,950	a29	18
3	10	11	24	73	154	92	77	1,050	92	1,560	a27	16
4	10	11	22	71	233	88	67	1,180	69	770	a26	15
5	10	11	22	69	534	83	61	867	60	400	a24	14
6	10	12	22	65	1,280	79	78	322	51	262	a23	14
7	10	12	24	68	1,560	74	271	166	45	271	a22	14
8	10	13	24	71	1,430	68	230	121	39	206	a24	13
9	17	14	23	70	1,180	63	187	99	43	152	a22	13
10	23	18	22	83	920	62	342	86	1,750	122	a22	13
11	18	59	22	84	830	62	376	76	5,820	104	a21	12
12	15	55	22	75	670	61	490	68	12,200	94	a21	12
13	14	33	22	68	425	59	215	63	8,850	103	a21	12
14	13	24	22	61	364	57	142	60	3,970	194	f22	12
15	13	22	22	57	194	56	180	55	1,800	238	21	12
16	12	22	22	53	240	54	156	48	f662	530	21	12
17	12	24	22	51	1,070	53	113	45	f388	310	20	12
18	12	25	24	50	1,340	53	92	44	271	152	20	12
19	12	24	46	46	1,370	52	79	51	173	106	20	12
20	12	23	56	44	1,530	55	69	54	132	f90	18	12
21	13	22	42	42	1,040	56	62	75	113	a83	18	14
22	13	21	62	44	366	55	57	115	97	a80	17	16
23	13	21	248	44	206	55	52	121	85	a69	16	18
24	13	20	342	44	166	55	48	194	74	a61	16	19
25	14	20	262	45	143	55	45	290	65	a56	16	15
26	14	20	552	45	129	59	43	353	58	a54	15	14
27	12	20	952	45	120	61	40	376	52	a48	14	13
28	11	20	726	46	111	61	54	245	48	a42	14	13
29	11	20	270	47	111	68	286	194	340	a39	19	13
30	11	24	187	48	-	116	425	f474	1,180	a35	35	14
31	11	-	138	47	-	136	-	f607	-	a32	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	389	23	10	12.5	772
November	643	59	11	21.4	1,280
December	4,303	952	22	139	8,530
Calendar year	-	-	-	-	-
January	1,845	104	42	59.5	3,660
February	17,817	1,560	46	614	35,340
March	2,156	136	52	69.5	4,280
April	4,525	490	40	151	8,980
May	9,153	1,180	44	295	18,150
June	38,992	12,200	39	1,300	77,340
July	9,965	1,950	32	321	19,770
August	656	35	14	21.2	1,300
September	417	19	12	13.9	827
Water year 1939-40	90,861	12,200	10	248	180,200

a No gage-height record; discharge computed from graph based on known range in stage, weather records, and records for station near Humble, Tex.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

West Fork of San Jacinto River near Humble, Tex.

Location.- Water-stage recorder, lat. 30°01'35", long. 95°15'30", at bridge on U. S. Highway 59 (revised), 1,160 feet upstream from Texas & New Orleans R. R. bridge, about half a mile downstream from Spring Creek, and 2½ miles north of Humble, Harris County. Datum of gage is 30.53 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,811 square miles.

Records available.- October 1928 to September 1940.

Average discharge.- 11 years (1929-40), 833 second-feet.

Extremes.- Maximum discharge observed during year, 15,600 second-feet June 13 (gage height, 13.87 feet); minimum, 25 second-feet Oct. 30.
1928-40: Maximum discharge, 187,000 second-feet (revised) May 31, 1929 (gage height, 32.7 feet (revised), present site and datum; probably affected by backwater from East Fork of San Jacinto River), from 1940 rating curve extended above 153,000 second-feet; minimum observed, 14 second-feet Sept. 8-10, 1931.

Remarks.- Records fair. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	31	56	240	78	235	178	826	854	1,800	64	53
2	31	31	62	191	80	220	136	1,300	485	2,400	61	45
3	31	31	61	164	86	207	120	1,300	250	2,500	58	41
4	30	29	53	195	199	195	102	1,340	160	1,800	56	41
5	30	30	50	265	408	178	93	1,430	120	1,080	56	40
6	29	31	49	212	1,140	171	107	890	102	854	53	37
7	29	31	48	182	1,900	160	280	420	f89	569	53	36
8	31	29	48	171	2,200	142	557	250	g83	455	53	35
9	32	29	49	156	1,850	134	497	186	g78	335	50	35
10	35	35	49	139	1,430	125	350	149	g142	240	49	34
11	50	66	48	139	1,140	120	533	128	g5,540	186	50	32
12	43	83	48	136	1,050	117	690	117	f9,380	171	49	31
13	36	85	46	125	791	114	683	107	14,900	186	46	31
14	34	74	45	109	551	109	370	100	10,800	191	45	31
15	31	61	45	100	414	102	265	96	4,990	431	45	31
16	30	53	45	93	502	98	g320	87	2,140	670	43	31
17	29	52	45	89	1,370	98	g182	82	1,010	935	42	31
18	29	50	45	89	2,620	93	g134	80	735	716	42	31
19	29	49	50	89	2,680	89	g112	85	587	473	42	31
20	30	46	89	82	2,450	87	g105	82	479	350	41	31
21	30	45	98	80	2,200	87	g98	78	398	260	41	41
22	30	45	93	80	1,260	87	g96	87	335	182	40	50
23	30	43	208	82	650	83	g96	125	295	142	38	52
24	30	42	443	82	479	82	g96	136	260	120	37	76
25	30	41	455	80	386	80	93	225	230	105	37	78
26	30	40	709	80	340	80	87	355	195	102	37	53
27	30	40	784	78	315	177	82	467	171	87	36	45
28	30	42	1,050	78	295	371	206	473	153	82	36	41
29	28	46	735	78	275	128	414	386	160	74	37	40
30	27	53	386	78	-	109	950	345	700	72	43	36
31	27	-	285	78	-	146	-	770	-	67	62	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	973	50	27	31.4	1,930
November	1,363	85	29	45.4	2,700
December	6,307	1,050	45	203	12,510
Calendar year 1939	161,693	9,340	18	443	320,700
January	3,840	265	78	124	7,620
February	29,138	2,660	78	1,005	57,790
March	4,224	371	80	136	8,380
April	8,032	950	82	268	15,930
May	12,502	1,430	78	403	24,800
June	55,821	14,900	78	1,861	110,700
July	17,665	2,500	67	570	35,040
August	1,442	64	36	46.5	2,860
September	1,220	78	31	40.7	2,420
Water year 1939-40	142,527	14,900	27	389	282,700

f Computed on basis of partly estimated gage-height record.
g Computed from graph based on gage readings and records for station near Conroe.

San Jacinto River near Huffman, Tex.

Location.- Wire-weight gage, lat. 29°59'40", long. 95°08'00", at bridge of Beaumont, Sour Lake & Western Ry., 0.4 mile downstream from confluence of East and West Forks of San Jacinto River and 3.4 miles southwest of Huffman, Harris County. Datum of gage is 1.93 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,791 square miles.

Records available.- October 1936 to September 1940.

Extremes.- Maximum and minimum discharges for water years 1937 to 1940 are contained in the following table:

Water year	Maximum			Minimum (observed)		
	Date	Discharge (sec.-ft.)	Gage height (feet)	Date	Discharge (sec.-ft.)	Gage height (feet)
1936-37	Mar. 15	15,300	23.3	Sept.20	76	-
1937-38	May 20	12,600	21.9	Sept.30	57	-
1938-39	Mar. 1	16,800	23.7	Sept. 1	49	-
1939-40	June 14	18,500	25.0	Sept.13,14	49	-

Note.- Maximum gage heights are from graph based on gage readings.

1936-40: Maximum discharge, 18,500 second-feet June 14, 1940 (gage height, 25.0 feet, from graph based on gage readings); minimum observed, 49 second-feet Sept. 1, 1939, and Sept. 13, 14, 1940.

Maximum stage known, 50.3 feet May 31, 1929, from information by Beaumont, Sour Lake & Western Ry. Co. (discharge, 237,000 second-feet). Flood of April 1876 reached a stage about 1½ feet lower, according to information furnished by local resident.

Remarks.- Records for water years 1936-37 and 1937-38, poor; for 1938-39 and 1939-40, fair. Gage is read once daily and oftener during high water. No large diversions above station.

Cooperation.- Gage readings Oct. 1, 1936, to May 3, 1939, furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1936-40

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	179	270	1,520	2,940	434	4,490	278	135	133	115	146
2	215	164	298	2,080	1,940	406	3,460	255	130	131	113	123
3	186	128	341	2,220	1,520	371	2,860	246	124	130	112	146
4	175	175	500	2,150	1,240	367	2,080	226	150	126	113	237
5	162	337	654	1,520	1,080	416	2,720	224	284	113	112	226
6	189	267	920	1,240	980	481	3,460	210	292	107	108	234
7	802	237	1,590	1,010	890	510	3,850	184	284	99	97	249
8	1,520	210	1,940	980	830	534	3,690	221	278	107	94	267
9	1,730	184	1,760	1,080	800	519	2,440	196	252	110	93	274
10	1,310	186	3,460	1,520	711	490	1,110	206	224	113	94	234
11	1,040	175	3,850	2,150	626	471	830	210	196	126	94	215
12	626	175	3,320	3,160	500	434	758	205	175	166	93	210
13	325	188	2,790	4,580	476	703	610	205	162	162	93	175
14	224	188	2,060	6,820	452	5,260	559	182	150	144	93	160
15	200	184	1,040	7,570	424	14,000	519	158	150	123	91	144
16	203	177	746	7,700	429	12,800	500	158	146	110	91	126
17	193	182	574	4,410	429	7,980	476	182	142	108	110	116
18	184	177	476	3,650	406	5,210	388	177	142	107	182	105
19	168	173	420	2,430	416	3,860	362	166	140	105	168	83
20	158	171	388	3,020	549	2,790	384	166	139	107	164	76
21	152	171	375	3,620	524	1,870	388	191	139	110	154	86
22	146	182	345	4,250	500	1,380	388	184	142	112	133	93
23	118	186	318	4,560	471	1,140	380	191	146	123	126	107
24	91	186	252	4,170	476	1,080	362	182	144	126	128	116
25	81	191	237	3,650	476	1,520	329	158	126	191	263	124
26	102	224	255	3,690	476	1,380	310	148	124	232	705	137
27	140	237	284	2,940	457	1,180	298	142	128	205	358	137
28	164	218	322	3,020	452	1,240	298	140	133	164	234	128
29	164	226	375	3,540	-	2,490	288	158	128	144	200	120
30	142	255	429	4,010	-	5,280	284	160	128	126	193	120
31	156	-	695	3,540	-	6,710	-	154	-	118	177	-

Discharge, in second-feet, of San Jacinto River near Huffman, Tex., 1936-40--Continued

1937-38

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	152	402	2,360	1,140	800	830	1,560	306	306	255	88
2	112	131	302	2,860	1,080	711	794	1,590	337	292	258	96
3	110	108	270	2,430	980	660	746	950	434	255	261	91
4	115	104	237	2,150	920	616	699	800	333	188	261	87
5	123	112	226	1,660	860	569	595	626	264	182	267	87
6	121	116	215	1,210	800	519	495	746	191	193	258	99
7	113	113	200	1,180	788	471	411	4,150	164	210	198	113
8	107	116	193	1,140	758	519	384	7,060	177	188	171	104
9	96	154	179	1,080	758	788	358	4,840	481	177	160	99
10	93	249	173	1,450	746	860	345	3,200	860	182	160	100
11	96	605	160	2,080	728	1,080	358	2,290	740	182	166	216
12	94	544	156	2,360	688	1,180	362	2,010	595	184	156	705
13	93	371	160	2,640	688	980	354	2,290	500	184	154	1,210
14	93	325	173	3,240	694	734	333	1,760	500	208	154	584
15	91	314	184	2,940	699	595	322	2,500	549	243	135	388
16	107	284	750	2,720	770	514	318	4,050	539	210	121	281
17	818	191	1,870	1,740	920	457	354	6,390	510	188	94	240
18	2,860	142	1,170	920	2,930	429	495	8,230	590	179	96	186
19	3,690	116	325	800	7,800	393	621	11,400	728	164	99	162
20	3,090	102	288	758	5,860	358	998	11,200	529	284	100	148
21	2,010	100	302	728	5,210	367	2,530	6,400	495	782	94	146
22	1,110	107	1,190	699	5,860	1,560	3,850	3,740	574	800	97	135
23	682	140	3,820	1,480	4,250	3,540	3,090	2,500	481	950	91	130
24	616	196	5,300	4,580	3,160	2,610	1,760	1,940	605	800	97	121
25	416	318	5,300	4,850	1,940	1,280	920	1,520	740	705	102	105
26	310	574	5,210	4,170	1,310	1,480	682	1,240	579	569	102	97
27	261	648	4,760	3,770	1,140	1,040	660	800	514	490	104	93
28	218	626	3,820	3,020	980	1,080	1,360	694	452	322	102	78
29	188	610	2,260	1,800	-	830	2,360	648	406	224	90	66
30	182	574	1,520	1,040	-	740	1,940	632	358	177	83	58
31	168	-	1,450	1,180	-	740	-	544	-	193	80	-

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	91	131	457	1,080	15,900	610	177	208	107	139	52
2	68	93	139	354	920	10,000	554	168	1,860	93	152	51
3	83	110	140	284	1,640	4,520	486	160	2,860	84	156	53
4	84	146	131	255	3,460	2,290	434	156	2,150	75	140	61
5	81	179	124	252	3,240	1,940	406	152	2,010	75	130	62
6	84	186	124	424	2,570	1,620	380	152	2,080	83	120	63
7	86	188	123	595	1,870	1,450	360	152	2,150	81	115	62
8	87	184	126	584	1,730	1,290	329	152	2,430	76	108	62
9	88	186	137	398	1,700	1,110	329	152	2,430	74	100	62
10	90	191	152	252	1,760	1,040	325	150	2,150	86	96	61
11	91	193	146	2,790	1,800	980	322	139	1,380	108	93	61
12	91	193	137	8,290	1,140	920	314	131	660	2,350	90	62
13	91	186	135	10,700	950	860	306	128	452	5,630	87	63
14	90	175	135	10,200	699	800	288	123	341	3,130	88	68
15	88	164	131	8,650	626	752	267	123	278	2,010	87	78
16	93	158	126	7,060	574	699	249	123	226	1,140	86	78
17	99	144	128	6,190	564	643	229	133	205	600	88	74
18	102	135	130	4,070	830	574	224	206	184	371	96	74
19	100	123	130	3,460	1,180	559	213	329	173	261	116	74
20	99	120	130	2,640	1,870	534	205	411	154	208	123	73
21	99	118	126	1,940	2,940	524	203	665	135	177	128	75
22	99	118	131	2,010	3,240	514	203	830	173	156	123	75
23	97	112	144	1,380	3,090	486	184	554	318	148	120	74
24	94	108	177	1,240	2,570	467	168	380	452	140	112	73
25	94	107	452	1,310	4,000	481	166	284	393	128	96	72
26	94	110	626	1,420	7,790	920	164	249	281	123	87	70
27	94	112	890	1,180	11,200	1,620	160	213	184	121	81	69
28	94	112	950	980	12,000	1,730	158	177	160	108	87	67
29	94	115	860	788	-	1,210	160	171	121	100	80	68
30	96	121	671	699	-	920	175	166	115	99	76	67
31	91	-	554	800	-	830	-	184	-	120	57	-

Discharge, in second-feet, of San Jacinto River near Huffman, Tex., 1936-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	56	99	302	160	375	393	2,010	920	3,220	140	158
2	64	56	121	284	160	345	329	2,290	621	3,020	133	128
3	63	57	133	270	166	314	267	2,360	362	4,170	128	108
4	63	58	133	270	215	284	252	2,290	258	3,420	124	97
5	64	58	121	362	469	270	213	1,940	208	1,630	121	90
6	64	57	115	318	1,440	267	218	1,350	179	1,110	115	81
7	66	60	105	306	2,220	255	393	700	156	830	121	72
8	74	66	100	295	2,500	240	840	438	139	632	128	70
9	96	64	99	278	2,570	234	1,380	302	139	519	118	68
10	94	67	100	261	2,150	229	1,010	255	599	402	113	66
11	87	131	102	246	1,590	224	770	224	3,810	337	112	58
12	83	144	102	226	1,560	215	958	196	9,790	314	113	52
13	81	160	100	208	1,590	208	1,930	184	15,700	318	116	50
14	70	184	97	193	1,280	210	1,760	171	15,900	306	112	52
15	63	150	99	182	752	210	985	158	7,810	429	105	58
16	61	135	99	168	1,010	203	643	150	3,000	734	100	68
17	62	118	100	166	2,020	203	544	146	1,730	1,040	102	68
18	62	108	100	166	3,660	196	443	146	1,210	920	100	66
19	62	104	107	162	3,690	193	341	150	1,040	584	96	60
20	61	105	121	156	3,540	193	274	140	770	481	91	61
21	60	105	150	152	2,790	193	267	140	584	424	90	69
22	58	110	171	150	1,740	193	255	140	486	306	88	102
23	60	107	186	156	1,060	191	237	152	420	255	86	104
24	61	105	305	160	800	191	218	205	384	218	79	120
25	62	88	827	164	637	191	221	322	388	205	75	137
26	63	81	1,210	166	529	191	213	481	310	191	74	128
27	61	88	1,140	162	476	191	198	549	274	179	76	93
28	61	88	1,340	160	429	229	357	549	246	166	83	83
29	60	88	1,120	160	393	306	1,400	438	232	150	121	79
30	58	90	620	160	-	288	1,560	438	975	146	243	76
31	58	-	371	160	-	270	-	788	-	144	188	-

Monthly discharge, in second-feet, 1936-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1936	11,326	1,730	81	365	22,460
November	5,933	337	128	198	11,770
December	31,304	3,850	237	1,010	62,090
Calendar year	-	-	-	-	-
January 1937	102,050	7,700	980	3,292	202,400
February	21,470	2,940	406	767	42,590
March	83,306	14,000	367	2,687	165,200
April	38,871	4,490	284	1,296	77,100
May	5,885	278	140	190	11,670
June	5,035	292	124	168	9,990
July	4,080	232	99	132	8,090
August	4,901	705	91	158	9,720
September	4,714	274	76	157	9,350
Water year 1936-37	318,875	14,000	76	874	632,400
October 1937	18,303	3,690	91	590	36,300
November	8,241	648	100	275	16,350
December	42,365	5,300	156	1,367	84,030
Calendar year 1937	339,221	14,000	76	929	672,800
January 1938	65,035	4,850	699	2,098	129,000
February	54,457	7,800	688	1,945	108,000
March	28,500	3,540	358	919	56,530
April	29,324	3,850	318	977	58,160
May	98,300	11,400	544	3,171	195,000
June	14,531	860	164	484	28,820
July	10,211	950	164	329	20,250
August	4,566	267	80	147	9,060
September	6,113	1,210	58	204	12,120
Water year 1937-38	379,946	11,400	58	1,041	753,600

Monthly discharge, in second-feet, of San Jacinto River near Huffman, Tex., 1936-40--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1938	2,798	102	57	90.3	5,550
November	4,278	193	91	143	8,490
December	8,236	950	123	266	16,340
Calendar year 1938	326,349	11,400	57	894	647,300
January 1939	81,662	10,700	252	2,634	162,000
February	77,033	12,000	564	2,751	152,800
March	58,173	15,900	467	1,877	115,400
April	8,561	610	158	285	16,980
May	7,289	830	123	235	14,460
June	26,713	2,860	115	890	52,980
July	18,062	5,630	74	583	35,830
August	3,257	156	57	105	6,460
September	2,004	78	51	66.8	3,970
Water year 1938-39	298,056	15,900	51	817	591,300
October 1939	2,068	96	58	66.7	4,100
November	2,888	184	56	96.3	5,730
December	9,593	1,340	97	309	19,030
Calendar year 1939	297,293	15,900	51	815	589,700
January 1940	6,569	362	150	212	13,030
February	41,596	3,690	160	1,434	82,500
March	7,302	375	191	236	14,480
April	18,869	1,930	198	629	37,430
May	19,802	2,360	140	639	39,280
June	68,640	15,900	139	2,288	136,100
July	26,800	4,170	144	865	53,160
August	3,491	243	74	113	6,920
September	2,522	158	50	84.1	5,000
Water year 1939-40	210,140	15,900	50	574	416,800

Spring Creek near Spring, Tex.

Location.- Wire-weight gage, lat. 30°06'35", long. 95°26'10", at bridge on U. S. Highway 75, 4,500 feet upstream from International-Great Northern R. R. bridge, 2.4 miles northwest of Spring, Harris County, and 4 miles downstream from Willow Creek. Datum of gage is 78.12 feet above mean sea level.

Drainage area.- 400 square miles.

Records available.- April 1939 to September 1940.

Extremes.- 1939: Maximum discharge observed during period April to September, 838 second-feet June 3 (gage height, 8.75 feet); minimum observed, 9.7 second-feet Sept. 30.

1939-40: Maximum discharge observed during year, 3,420 second-feet June 12 (gage height, 16.42 feet); minimum observed, 7.7 second-feet Sept. 13.

Maximum stage known, 29.3 feet May 30, 1929, from floodmarks identified by local resident (discharge, 48,300 second-feet, based on 1940 rating curve).

Remarks.- Records good. Gage read twice daily, oftener during highwater. No diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	19	87	18	20	16
2							-	18	400	18	21	15
3							-	18	802	17	23	14
4							-	18	730	17	20	14
5							-	17	504	16	18	14
6							35	17	186	17	17	13
7							34	16	129	14	17	13
8							34	17	108	14	16	13
9							32	17	91	14	15	13
10							30	17	61	16	15	17
11							30	17	44	18	15	15
12							30	17	40	94	15	14
13							29	17	36	481	15	14
14							27	17	34	526	15	14
15							26	16	31	223	15	14
16							27	17	28	72	15	14
17							30	18	27	46	14	13
18							23	30	26	35	14	13
19							22	81	25	29	19	13
20							21	71	25	25	31	13
21							20	73	73	23	19	13
22							20	66	106	22	14	12
23							18	54	48	20	14	12
24							18	48	35	20	14	12
25							20	33	28	19	14	11
26							21	29	19	18	15	10
27							21	28	17	18	16	10
28							21	24	18	18	19	10
29							21	24	18	17	29	10
30							21	26	18	17	23	9.7
31							-	34		17	18	-

Note.- Discharge for periods of no or doubtful gage heights, Apr. 16, 20-22, May 31 to June 2, July 4, 9-13, computed from graph based on weather records and records for West Fork of San Jacinto River near Humble.

Discharge, in second-feet, of Spring Creek near Spring, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	9.3	15	18	17	26	29	52	44	242	17	14
2	9.7	9.3	15	18	18	26	25	53	33	316	17	11
3	9.5	8.6	15	17	20	25	21	40	25	187	16	12
4	9.5	9.0	14	69	22	24	20	33	21	177	16	11
5	9.5	9.0	13	66	46	22	18	26	19	328	15	10
6	9.5	9.7	13	46	192	22	25	21	18	187	15	9.7
7	9.5	9.7	13	44	268	22	64	19	17	76	15	8.8
8	9.5	9.7	13	34	224	21	158	18	16	53	15	9.0
9	11	10	13	27	91	20	81	18	18	41	15	8.8
10	12	10	13	25	59	20	43	17	546	35	15	8.4
11	13	17	13	23	44	20	34	16	1,880	31	14	8.4
12	12	24	13	21	39	21	36	16	2,640	28	14	7.9
13	12	27	12	20	36	20	31	15	1,910	36	14	7.7
14	12	21	12	18	31	20	50	15	584	62	13	7.9
15	11	18	12	18	29	19	33	15	172	200	13	8.1
16	11	15	13	17	49	18	27	15	101	298	13	8.4
17	10	14	13	16	201	18	24	15	78	274	13	8.4
18	10	14	13	17	464	19	22	15	68	91	a13	8.4
19	10	14	15	17	494	20	22	17	57	55	a13	8.4
20	10	14	16	16	184	19	20	17	50	51	a13	8.4
21	11	14	15	16	81	19	20	19	46	36	a12	11
22	10	14	30	16	54	19	19	21	42	31	a12	11
23	10	14	54	17	43	19	18	19	39	27	a12	11
24	10	13	39	18	39	18	18	17	37	24	a12	11
25	11	13	41	17	34	18	19	15	34	31	a11	11
26	10	12	62	18	32	18	19	31	33	25	a11	10
27	10	12	52	17	30	18	19	22	30	22	a11	14
28	9.7	12	46	16	29	22	20	24	30	21	11	12
29	9.7	12	32	18	27	21	27	81	30	18	15	11
30	9.3	12	26	17	-	20	36	104	208	18	21	9.7
31	9.3	-	22	16	-	20	-	76	-	17	15	-

a No gage-height record; discharge computed from graphs based on weather records and records for West Fork of San Jacinto River near Humble.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 6-30, 1939	631	35	18	25.2	1,250
May	914	81	16	29.5	1,810
June	3,794	802	17	126	7,530
July	1,921	526	14	62.0	3,810
August	545	31	14	17.6	1,080
September	388.7	17	9.7	13.0	771
The period	-	-	-	-	16,250
October 1939	320.2	13	9.3	10.3	635
November	400.3	27	8.6	13.3	794
December	688	62	12	22.2	1,360
Calendar year	-	-	-	-	-
January 1940	733	69	16	23.6	1,450
February	2,697	494	17	99.9	5,750
March	634	26	18	20.5	1,260
April	1,048	158	18	34.9	2,080
May	882	104	15	28.5	1,750
June	8,826	2,640	16	294	17,510
July	3,037	328	17	98.0	6,020
August	432	21	11	13.9	857
September	296.4	14	7.7	9.88	588
Water year 1939-40	20,193.9	2,640	7.7	55.2	40,050

East Fork of San Jacinto River near Cleveland, Tex.

Location.- Water-stage recorder, lat. 30°20', long. 95°07', at bridge on State Highway 105, 83 feet downstream from Gulf, Colorado & Santa Fe Ry. bridge, 1½ miles west of Cleveland, Liberty County, and 4 miles downstream from Nebblets Creek. Datum of gage is 113.1 feet above mean sea level.

Drainage area.- 330 square miles.

Records available.- April 1939 to September 1940.

Extremes.- Maximum discharge during year, 3,630 second-feet June 12 (gage height, 10.70 feet); minimum, 7.6 second-feet Sept. 14.
1939-40: Maximum discharge, that of June 12, 1940; minimum, 7.2 second-feet Sept. 6, 1939.
Maximum stage known, 19.9 feet May 5, 1935, according to information furnished by local resident (discharge, 69,500 second-feet, from 1940 rating curve extended above 14,000 second-feet by logarithmic plotting).

Remarks.- Records good except those for period of no gage-height record, which are poor. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	27	47	30	53	43		62	1,520	20	14
2	11	11	48	41	31	50	38		65	1,940	17	12
3	9.5	11	31	37	66	48	34		43	918	22	11
4	9.5	11	24	37	164	45	32	a168	33	166	19	10
5	9.5	12	20	47	216	43	30		27	106	15	11
6	9.5	12	20	44	426	42	33		24	90	13	11
7	9.5	13	19	45	645	40	230		23	73	13	9.9
e	9.5	14	18	53	662	38	448	f53	24	62	17	9.9
9	11	14	18	42	301	37	164	48	34	54	22	9.5
10	11	16	17	37	194	36	90	43	287	49	24	8.9
11	11	38	17	35	612	36	138	39	1,060	44	19	8.6
12	12	94	18	36	826	37	897	36	2,690	39	16	8.3
13	11	49	17	36	362	37	729	33	2,090	37	14	8.0
14	9.5	29	17	34	135	35	170	29	844	52	14	8.0
15	9.2	24	17	30	104	33	104	28	168	140	13	8.0
16	8.9	26	17	28	128	32	85	25	124	82	12	8.0
17	8.6	27	18	27	435	31	70	24	162	59	12	8.3
18	8.6	24	20	27	834	32	63	24	119	49	11	8.3
19	8.6	26	20	26	846	33	60	24	80	49	10	8.0
20	9.2	27	21	25	502	32	53	26	67	50	10	8.0
21	9.5	22	21	24	166	30	48	26	60	39	10	9.2
22	9.9	19	24	26	115	29	45	26	49	33	9.9	12
23	9.9	18	114	29	92	28	42	35	44	42	9.5	18
24	9.5	17	226	31	76	28	40	71	42	36	9.5	29
25	9.5	17	167	34	70	28	38	88	37	29	9.5	24
26	9.5	17	219	34	65	28	37	73	34	24	9.2	16
27	9.5	16	173	31	60	26	37	50	30	21	9.5	12
28	9.5	16	117	29	59	29	43	41	29	18	15	10
29	10	16	95	30	53	33	139	88	38	17	22	9.5
30	13	18	75	33	-	53	f508	103	276	16	32	8.9
31	12	-	57	32	-	57	-	56	-	17	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	308.4	13	e.6	9.95	612
November	665	94	11	22.2	1,320
December	1,712	226	17	55.2	3,400
Calendar year	-	-	-	-	-
January	1,067	53	24	34.4	2,120
February	8,275	846	30	285	16,410
March	1,139	57	26	36.7	2,260
April	4,488	897	30	150	8,900
May	2,265	-	24	73.1	4,490
June	8,665	2,690	23	289	17,190
July	5,871	1,940	16	189	11,640
August	467.1	32	9.2	15.1	926
September	337.3	29	8.0	11.2	669
Water year 1939-40	35,259.8	2,690	8.0	96.3	69,940

Peak discharge.- Apr. 13 (3 p.m.) 1,000 sec.-ft.; June 12 (2 p.m.) 3,630 sec.-ft.; July 1 (11 p.m.) 2,200 sec.-ft.
a No gage-height record; discharge computed on basis of known range in stage and weather records.
f Computed on basis of partial gage-height record.

Buffalo Bayou at Houston, Tex.

Location.- Water-stage recorder, lat. 29°45'42", long. 95°23'52", at Waugh Drive Bridge in Houston, Harris County, half a mile upstream from Texas & New Orleans R. R. bridge and 3½ miles upstream from Whiteoak Bayou. Datum of gage is 4.08 feet below mean sea level (general adjustment of 1929).

Drainage area.- 326 square miles.

Records available.- May 1936 to September 1940.

Extremes.- Maximum discharge during year, 1,390 second-feet June 18 (gage height, 17.80 feet); minimum not determined.

1936-40: Maximum discharge, 9,500 second-feet May 27, 1936 (gage height, 32.5 feet, from graph based on gage readings); minimum not determined.

Maximum stage known, 54.4 feet, present site and datum, Dec. 9, 1935 (discharge, 40,000 second-feet, furnished by M. J. McCall, engineer for Harris County). Flood of May 31, 1929, reached a stage of 48.9 feet, present site and datum (discharge, 19,000 second-feet, at bridge on Capitol Avenue, 2 miles downstream, from rating curve extended above 15,300 second-feet, stage-discharge relation materially affected by interference of bridge; furnished by W. E. White, assistant engineer, city of Houston).

Remarks.- Records fair except those below 100 second-feet and those for periods of no gage-height record, which are poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13		4.3	19	5.2	12	4.5	34	25	393	6.6	19
2	11		4.2	14	11	9.4	4.5	21	17	218	5.9	9.4
3	10		4.1	11	5.2	9.4	4.4	15	11	128	4.5	5.2
4	g10		4.1	33	5.2	9.4	4.5	11	11	149	4.4	5.9
5	g11	a7.0	4.1	11	16	7.3	4.4	6.6	34	350	4.3	4.4
6	g10		4.1	23	12	8.0	50	5.9	7.3	365	4.3	4.3
7	g9.8		4.1	12	50	5.9	12	5.9	6.6	257	4.3	4.3
8	g9.8		4.1	11	119	5.9	12	5.2	8.0	128	4.2	4.2
9	g10		4.1	12	71	5.9	12	5.9	11	59	4.2	4.2
10	g11		4.1	14	32	5.9	32	6.6	310	34	4.1	4.3
11	g10		4.0	12	19	5.9	a102	6.6	435	19	4.3	4.3
12	g9.5	a25	4.1	14	12	7.3	39	6.6	393	14	4.3	4.2
13	g9.5		4.1	12	11	6.6	15	5.9	341	50	6.6	4.2
14	g9.5		4.1	7.3	11	5.9	12	5.9	134	126	4.3	4.2
15	g9.5	19	4.4	7.3	12	6.6	14	6.6	59	131	4.4	4.1
16	g9.5	12	4.3	11	290	9.4	19	7.3	36	134	4.4	4.0
17	g9.5	11	4.4	8.0	511	7.3	19	8.0	42	170	5.2	4.1
18	g9.5	7.3	4.3	16	666	7.3	21	15	303	164	4.3	4.2
19	a9.5	4.5	7.3	5.9	783	9.4	19	8.0	110	131	4.2	4.3
20	a131	4.5	4.3	5.9	817	8.0	19	4.4	203	89	4.3	4.3
21	a26	4.4	4.3	5.9	594	6.6	17	5.9	116	44	4.2	80
22	a21	4.4	18	11	367	5.9	9.4	7.3	50	32	4.1	9.4
23	a18	4.3	5.9	12	134	5.9	6.6	8.0	29	21	4.1	88
24	a16	4.3	7.3	9.4	59	6.6	17	9.4	29	14	4.1	25
25	g13	4.3	96	8.0	36	a5.9	11	5.2	21	12	4.0	47
26	g10	4.2	175	5.9	25	a5.9	8.0	4.5	15	9.4	4.0	39
27	g8.9	4.1	140	5.9	19	5.9	7.3	33	17	7.3	4.2	36
28	g8.6	4.4	218	5.2	14	4.4	72	12	14	5.9	4.3	32
29	g8.6	4.4	140	5.9	14	6.6	107	11	138	5.9	4.4	32
30	g8.6	17	65	5.9	-	4.5	53	15	176	5.9	4.3	25
31	g8.9	-	29	5.9	-	4.4	-	11	-	5.9	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	470.2	131	8.6	15.2	933
November	284.1	-	-	9.47	564
December	985.1	218	4.0	31.8	1,950
Calendar year 1939	34,259.5	2,450	-	93.9	67,950
January	340.4	33	5.2	11.0	675
February	4,720.6	817	5.2	163	9,360
March	215.4	12	4.4	6.95	427
April	727.6	107	4.4	24.3	1,440
May	313.7	34	4.4	10.1	622
June	3,101.9	435	6.6	103	6,150
July	3,272.3	393	5.9	106	6,490
August	140.0	6.6	4.0	4.52	278
September	520.5	88	4.0	17.4	1,030
Water year 1939-40	15,091.8	817	-	41.2	29,920

Peak discharge.- Feb. 16 (12 m.) 945 sec.-ft.; June 18 (5 p.m.) 1,390 sec.-ft.; June 29 (3:30 p.m.) 741 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage, records for nearby stations, and weather records.

g Computed from graph based on gage readings.

Whiteoak Bayou at Houston, Tex.

Location.- Water-stage recorder, lat. 29°46'31", long. 95°23'54", at Yale Street bridge, in Houston, Harris County, just downstream from Texas & New Orleans R. R. bridge and 2 miles upstream from Little Whiteoak Bayou. Datum of gage is 4.08 feet below mean sea level (general adjustment of 1929).

Drainage area.- 87.0 square miles.

Records available.- May 1936 to September 1940.

Extremes.- Maximum discharge during year, 632 second-feet June 11 (gage height, 27.20 feet); minimum, 0.2 second-foot Aug. 7, 8.

1936-40: Maximum discharge, 3,570 second-feet May 7, 1938 (gage height, 37.98 feet); minimum, that of Aug. 7, 8, 1940.

Maximum stage known, 51.5 feet, present datum, Dec. 9, 1935 (discharge, 14,750 second-feet, furnished by M. J. McCall, engineer for Harris County).

Discharge for flood of May 31, 1929, 9,360 second-feet (gage height, 47.0 ±0.5 foot, present site and datum), computed on basis of current-meter measurement, at stage 1 foot below crest, made at bridge 1 block below gage; furnished by W. E. White, assistant engineer, city of Houston.

Remarks.- Records good. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	0.4	2.8	1.5	0.9	1.8	0.7	43	0.7	38	1.2	0.9
2	.7	.4	1.1	1.3	.9	1.6	.7	31	.6	22	.6	.7
3	.7	.4	.8	1.2	1.0	1.4	.7	11	.6	13	.5	.6
4	.6	.4	.6	5.8	1.1	1.3	.7	4.1	.5	6.3	.4	1.0
5	.9	.4	.6	3.9	3.2	1.2	.7	2.2	2.2	3.6	.4	1.6
6	1.2	.4	.6	3.8	12	1.2	6.8	1.2	1.3	2.4	.3	1.5
7	.8	.3	.6	6.0	7.7	1.2	2.7	.9	.6	1.6	.2	1.6
8	.9	.4	.6	6.0	3.0	1.2	1.6	.8	.5	1.3	.2	1.3
9	1.5	a.4	.7	3.0	2.0	1.3	1.3	.8	.6	1.0	.3	1.1
10	3.6	a.6	.6	1.6	2.3	1.4	1.0	.7	102	.8	.3	.9
11	1.5	a6.5	.7	1.2	2.0	1.2	5.8	.6	538	.8	.3	.7
12	1.1	a2.2	.6	1.0	1.5	1.2	3.0	.6	557	.8	.3	.6
13	.9	a1.4	.6	.7	1.2	1.2	1.2	.6	240	8.8	.5	.6
14	.9	a1.2	.7	.6	1.2	1.2	.9	.7	51	71	.4	.6
15	1.0	1.1	.7	.6	1.2	1.2	.7	.6	25	44	.4	.5
16	.9	.8	.7	.6	97	1.2	.6	.6	16	8.4	.4	.4
17	.9	g.8	.8	.7	330	1.2	.7	.6	10	3.4	.4	.4
18	.9	g.8	.7	1.7	368	.9	.6	.7	42	1.8	.4	.4
19	.9	g.7	1.2	.9	220	.9	.6	1.2	12	1.8	.4	.4
20	39	a.6	.9	.7	68	1.0	.6	.7	3.4	5.0	.4	.4
21	6.3	g.6	.8	.7	32	.9	.6	.6	3.0	2.8	.4	8.7
22	3.2	g.6	2.3	.9	18	.9	.6	.7	3.4	1.3	.9	9.4
23	1.1	g.6	2.5	1.2	10	.8	.6	.6	2.3	.9	1.4	6.0
24	.6	.5	1.4	1.2	6.6	.8	.8	.6	1.9	.7	1.4	8.1
25	.5	.6	16	1.0	4.5	.7	.8	.6	1.5	.7	1.3	10
26	.4	.6	170	.9	3.6	.7	.8	.6	1.2	.6	1.0	6.3
27	.4	.6	122	.8	2.7	.8	.6	1.0	1.3	.5	1.4	3.0
28	.4	.6	32	.9	2.3	.8	13	1.4	1.3	.6	1.0	1.9
29	.4	.6	9.8	.8	2.0	1.0	156	1.2	11	.5	.7	1.2
30	.4	2.5	4.1	.8	-	1.0	44	1.4	7.4	2.3	.4	.9
31	.4	-	2.4	.8	-	.8	-	.9	-	2.0	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	75.2	39	0.4	2.43	149
November	28.0	6.5	.3	.93	56
December	379.9	170	.6	12.3	754
Calendar year 1939	9,756.1	1,730	.3	26.7	19,350
January	52.8	6.0	.6	1.70	105
February	1,205.9	368	.9	41.6	2,390
March	34.0	1.8	.7	1.10	67
April	249.4	156	.6	8.31	495
May	112.2	45	.6	3.62	223
June	1,618.3	538	.5	53.9	3,210
July	248.7	71	.5	8.02	493
August	18.8	1.4	.2	.61	37
September	71.7	10	.4	2.39	142
Water year 1939-40	4,094.9	538	.2	11.2	8,120

Peak discharge.- June 11 (11 p.m.) 632 sec.-ft.; June 18 (5:30 p.m.) 243 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage and weather records.

g Computed from graph based on gage readings.

Brays Bayou at Houston, Tex.

Location.- Water-stage recorder, lat. 29°42'06", long. 95°24'06", at Old Main Street Bridge, in southwest section of Houston, Harris County, three-quarters of a mile upstream from Harris Gully and 15 miles upstream from Buffalo Bayou. Datum of gage is 3.90 feet below mean sea level (general adjustment of 1929).
Drainage area.- 98.2 square miles.
Records available.- May 1936 to September 1940.
Extremes.- Maximum discharge during year, 1,340 second-feet Feb. 17 (gage height, 36.73 feet); minimum, 0.4 second-foot Oct. 3.
1936-40: Maximum discharge, 6,800 second-feet July 12, 1939 (gage height, 48.02 feet); minimum, 0.1 second-foot Oct. 10-13, 1937.
Maximum stage known, 50.4 feet, present site and datum, May 31, 1929 (discharge, 11,095 second-feet, from current-meter measurement at Lawndale Avenue bridge, 12 miles below gage, furnished by W. E. White, assistant engineer, city of Houston).
Remarks.- Records fair except those for periods of no gage-height record, which are poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.7	2.6	a1.7	1.1	1.8	1.2	9.0	3.0	196	0.8	1.4
2	.6	.7	1.0	a1.6	1.9	1.6	1.4	13	1.8	41	.7	.8
3	.6	.7	1.0	a1.6	a1.4	1.6	1.2	4.3	1.4	22	.7	.8
4	.7	.6	1.0	a3.4	a1.3	1.4	1.2	1.9	1.2	51	.7	.7
5	.8	.7	.8	a1.7	a1.5	1.4	1.2	1.4	5.5	23	.7	.8
6	.7	.7	.9	5.3	1.4	1.5	8.1	1.5	2.2	8.0	.7	.7
7	.7	.7	1.0	7.2	1.2	1.3	2.1	1.0	1.0	3.4	.7	.7
8	.9	.7	.9	4.6	1.1	1.2	1.2	1.0	1.0	2.0	.8	.8
9	1.2	.8	1.0	f2.6	a1.0	1.3	1.2	1.0	1.4	1.4	.7	.7
10	1.2	.8	.7	f1.8	a.9	1.3	1.0	.9	234	1.2	.7	.7
11	.8	14	.8	1.6	a.8	1.2	1.4	.8	441	1.1	.8	.7
12	.7	4.6	.8	1.5	a.8	1.4	1.2	.8	78	1.0	.7	.7
13	.7	1.9	.8	1.4	a.7	1.4	1.0	.8	18	34	.7	.7
14	.7	1.2	.9	1.2	a.6	1.4	1.0	.8	5.6	76	.7	.7
15	.6	1.2	1.0	f1.2	a.7	1.2	1.0	.8	2.5	46	.8	.7
16	.6	1.0	.8	f1.2	f210	1.2	1.1	.8	1.5	26	.7	.7
17	.6	1.0	.8	f1.2	f905	1.2	1.1	.8	1.2	13	.7	.8
18	.6	1.2	1.0	f1.3	f667	1.2	1.1	1.2	150	5.3	.7	.9
19	.7	1.0	1.9	a1.4	162	1.2	1.0	2.5	71	4.1	.7	.8
20	14	1.0	1.2	a1.2	46	1.2	1.0	1.1	10	4.2	.7	.8
21	13	1.0	1.1	a1.2	22	1.3	1.0	1.0	3.1	2.8	.7	11
22	4.8	1.4	2.7	a1.2	12	1.2	1.0	1.1	1.9	6.5	.7	7.1
23	1.6	.8	1.5	a1.4	6.5	1.2	1.0	1.0	1.7	2.3	.7	23
24	1.2	.9	1.0	1.5	4.6	1.3	1.8	.9	5.5	1.2	.7	6.8
25	1.1	1.5	22	1.8	3.6	1.2	3.2	.8	2.6	1.0	.8	1.1
26	1.0	1.2	310	1.4	2.9	1.3	1.2	.8	1.2	.8	.7	.7
27	.9	1.0	74	1.3	2.5	1.4	1.2	7.0	1.2	.8	.7	.7
28	.8	1.9	a23	1.2	2.1	1.6	11	128	1.2	.9	.8	.8
29	.7	1.2	a9.8	1.2	2.0	1.6	40	197	84	.9	.9	.7
30	.7	4.6	a3.8	1.2	-	1.6	18	26	464	1.4	.8	.7
31	.7	-	a3.2	1.1	-	1.4	-	7.4	-	.8	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	54.7	14	0.6	1.76	108
November	50.7	14	.6	1.69	101
December	473.0	310	.7	15.3	938
Calendar year 1939	16,170.8	4,880	.5	44.3	32,070
January	59.0	7.2	1.1	1.90	117
February	2,064.6	905	.6	71.2	4,100
March	42.1	1.8	1.2	1.36	84
April	110.1	40	1.0	3.67	218
May	413.4	197	.8	13.3	820
June	1,597.7	464	1.0	53.3	3,170
July	579.1	196	.8	18.7	1,150
August	22.9	1.0	.7	.74	45
September	68.2	23	.7	2.27	135
Water year 1939-40	5,535.5	905	.6	15.1	10,990

Peak discharge.- Feb. 17 (5:30 p.m.) 1,340 sec.-ft.; June 10 (10:30 p.m.) 714 sec.-ft.; June 18 (4 p.m.) 608 sec.-ft.
a No gage-height record; discharge computed on basis of known range in stage, records for nearby stations, and weather records.
f Fragmentary gage-height record; discharge computed on basis of partly estimated gage heights.

BRAZOS RIVER BASIN

Double Mountain Fork of Brazos River at Lubbock, Tex.

Location.- Water-stage recorder and masonry control, lat. 33°35'05", long. 101°49'40", in MacKenzie State Park at Lubbock, Lubbock County, and 1.9 miles downstream from Yellowhouse Creek. Datum of gage is 3,132.7 feet above mean sea level (general adjustment of 1929).
Records available.- September 1939 to September 1940.
Remarks.- No flow September 1939 to September 1940. Several small pools above station formed by small dams affect low flow.

Double Mountain Fork of Brazos River near Aspermont, Tex.

Location.- Water-stage recorder, lat. 33°00', long. 100°11', at bridge on U. S. Highway 83, 8 miles downstream from Mountain Creek and 10 miles south of Aspermont, Stonewall County. Gage is 90 feet upstream from, and at same datum as gage discontinued Sept. 30, 1934.
Drainage area.- 7,979 square miles (revised), of which about 6,470 square miles is probably non-contributing.
Records available.- December 1923 to September 1934, June 1939 to September 1940.
Average discharge.- 11 years (1924-34, 1939-40), 172 second-feet.
Extremes.- 1939: Maximum discharge during period June to September, 17,900 second-feet June 20 (gage height, 10.65 feet), from rating curve extended above 5,000 second-feet on basis of 3 slope-area determinations at gage heights, 10.0, 12.4 and 18.14 feet.
1939-40: Maximum discharge during water year, 16,900 second-feet Aug. 16 (gage height, 10.25 feet), from curve mentioned above; no flow at times.
1924-34, 1939-40: Maximum discharge, 52,000 second-feet Oct. 15, 1926 (gage height, 18.14 feet, from floodmark), by slope-area method; no flow at times.
Remarks.- Records poor. No diversions above station.

Discharge, in second-feet, 1939-40

1939

Day	June	July	Aug.	Day	June	July	Aug.	Day	June	July	Aug.
1	-	172	120	11	0.4	a.7	139	21	2,940	0.6	73
2	-	119	189	12	.3	.5	193	22	1,120	.4	a52
3	-	179	131	13	.2	0	195	23	1,890	0	67
4	-	97	102	14	0	0	1,160	24	721	0	123
5	-	44	669	15	0	0	524	25	300	0	a35
6	-	24	331	16	0	0	251	26	284	0	a9.6
7	-	a11	172	17	0	0	316	27	1,660	0	a2.5
8	f11	a6.0	2,000	18	.1	0	231	28	f2,210	0	a.7
9	f3.0	a3.0	489	19	305	0	155	29	1,330	0	a.2
10	.6	a1.0	210	20	10,300	0	105	30	259	5.4	0
								31	-	.1	.1

a No gage-height record; discharge computed on basis of range of stage and weather records.
f Gage-height record incomplete; discharge computed on basis of partial gage heights.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.5	3.0	0	0.4		0	0.3	1,030		0	144
2	0	0	2.5	0	1.5		0	.2	174		0	a73
3	0	0	2.5	0	56		0	.3	60		0	1,640
4	0	0	2.0	0	12		0	0	15		0	3,010
5	0	.3	1.5	0	1.5		9.3	0	.7		0	1,320
6	0	.5	.9	.4	.8		319	0	0	a10	a1,860	370
7	0	.4	.8	0	.6		111	.6	96		661	202
8	0	.3	.8	.2	.3		117	.5	1,100		117	148
9	13	.3	.8	.4	0		127	.4	1,610		28	a107
10	1,020	0	.8	.2	0		93	.3	222		18	a82
11	228	0	.6	.1	0		56	.3	119		1.0	a62
12	137	.8	.5	.1	0		23	0			0	a45
13	82	.5	.5	.1	0		9.0	0		0	.8	a30
14	29	.5	.5	0	0		4.0	.3		0	667	a18
15	a4.0	.5	.5	.1	0		1.0	0		0	1,810	a9.6
16	a.1	.8	.3	.2	101		0	0		0	9,580	a3.0
17	a0	.8	.3	.2	109		0	0	a17	0	1,190	.4
18	a0	.7	.3	.2	29		0	0		0	372	.3
19	a0	.6	.2	.7	23		0	0		0	231	.3
20	a0	.2	.2	.8	16		0	0		0	162	.3
21	a0	.2	0	1.5	14		0	64		0	111	.3
22	a0	.1	.1	1.5	11		0	1,060		0	71	.3
23	a0	.1	.7	1.5	7.8		0	74	24	0	42	.3
24	a.1	.1	.2	1.5	4.5		0	a12	227	0	21	.4
25	.1	.1	.7	1.5	3.0		0	a3.5	149	0	89	.3
26	.8	0	.4	2.0	2.0		0	a.6	129	0	790	.3
27	.5	0	.3	2.0	.9		0	a.4	62	0	111	.3
28	5.0	.8	.2	1.0	.4		18	89	38	0	60	.2
29	23	9.6	.2	.6	.1		.8	a12		0	73	.2
30	9.6	6.0	.2	.5	-		.5	1.0	a650	0	112	.1
31	1.0	-	.1	.4	-		-	1,840	-	0	76	-

Peak discharge.- May 31 (4 p.m.) 9,530 sec.-ft.; Aug. 16 (5 a.m.) 16,900 sec.-ft.; Sept. 3 (7:30 p.m.) 7,920 sec.-ft.
a No gage-height record; discharge computed on basis of floodmarks and records for Salt Fork of Brazos River near Aspermont and Brazos River near Seymour, Tex.

Monthly discharge, in second-feet, of Double Mountain Fork of Brazos River near Aspermont, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 8-30, 1939	23,334.6	10,300	0	1,015	46,280
July	663.7	179	0	21.4	1,320
August	8,045.1	2,000	0	260	15,960
September	0	0	0	0	0
The period	-	-	-	-	63,560
October 1939	1,553.2	1,020	0	50.1	3,080
November	24.7	9.6	0	.82	49
December	22.6	3.0	0	.73	45
Calendar year	-	-	-	-	-
January 1940	17.7	2.0	0	.57	35
February	394.8	109	0	13.6	783
March	0	0	0	0	0
April	888.6	319	0	29.6	1,760
May	3,159.7	1,840	0	102	6,270
June	6,542.7	1,610	0	218	12,980
July	120	-	0	3.87	238
August	18,253.8	9,580	0	589	36,210
September	7,267.6	3,010	.1	242	14,420
Water year 1939-40	38,245.4	9,580	0	104	75,870

Brazos River at Seymour, Tex.

Location.- Water-stage recorder, lat. 33°34', long. 99°16', at bridge on U. S. Highways 277 and 283, three-quarters of a mile upstream from Wichita Valley Ry. bridge, and 1 mile southwest of courthouse in Seymour, Baylor County. Datum of gage is 1,258.7 feet above mean sea level (Texas State Highway bench mark).

Drainage area.- 14,490 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- November 1923 to September 1940.

Average discharge.- 16 years (1924-40), 459 second-feet.

Extremes.- Maximum discharge during year, 32,100 second-feet Aug. 17 (gage height, 8.80 feet); no flow at times.
1923-40: Maximum discharge, 95,400 second-feet Oct. 16, 1926 (gage height, 15.16 feet, from floodmarks), by slope-area method; no flow at times.
Maximum stage known, about 21.0 feet, sometime prior to 1916.

Remarks.- Records fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	2.5	0	0	1.1	0	272	558	892	0	f952
2	0	0	1.6	0	0	0	0	120	1,890	1,530	0	f575
3	0	0	.9	0	2.3	0	0	45	f730	662	0	f636
4	0	0	.4	0	5.6	0	0	26	f429	292	0	3,050
5	0	0	0	0	6.4	0	2.6	10	f260	100	0	2,940
6	0	0	0	0	5.2	0	67	6.0	120	42	0	1,750
7	0	0	0	0	5.4	0	132	4.2	58	25	69	1,060
8	0	0	0	0	4.0	0	116	118	31	12	769	f760
9	0	0	0	.4	3.0	0	128	28	1,580	7.0	393	f388
10	0	0	0	0	2.1	0	54	12	2,660	4.2	202	f229
11	1,320	0	0	0	2.0	0	25	5.2	f820	2.4	76	f154
12	625	0	0	0	1.3	0	12	2.8	f520	5.7	33	100
13	411	0	0	0	.7	0	6.2	1.1	f279	1.3	21	62
14	224	0	0	0	0	0	4.4	.6	f149	.5	116	42
15	112	0	0	0	0	0	3.2	.7	f279	0	1,220	32
16	52	0	0	0	3.2	0	2.3	0	1,080	0	5,870	24
17	27	0	0	0	173	0	1.8	0	f132	0	17,800	18
18	14	0	0	0	70	0	1.7	0	f47	0	5,790	14
19	7.6	0	0	0	32	0	0	0	f31	0	2,340	11
20	4.6	0	0	0	35	0	0	0	f25	0	1,480	e.5
21	2.7	0	0	0	34	0	0	55	f18	0	f775	7.0
22	1.6	0	0	0	18	0	0	78	f12	0	f402	11
23	.7	0	0	0	11	0	0	1,520	f28	0	f253	8.8
24	.1	0	0	0	7.3	0	0	715	1,230	0	f144	6.6
25	0	0	0	0	5.4	0	0	340	340	0	f94	4.2
26	0	0	1.2	0	4.6	0	0	158	319	0	f73	2.8
27	0	0	0	0	3.4	0	0	64	186	0	f1,020	3.0
28	1.3	0	0	0	2.5	0	1.0	128	64	0	f820	5.2
29	.9	.6	0	0	2.0	0	1,630	340	66	0	f476	2.8
30	.6	1.4	0	0	-	0	487	195	56	0	f902	3.8
31	.1	-	0	0	-	0	-	44	-	0	2,300	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,805.2	1,320	0	90.5	5,560
November	2.0	1.4	0	.07	4.0
December	6.6	2.5	0	.21	13
Calendar year 1939	90,694.5	14,200	0	248	179,900
January	.4	.4	0	.01	.8
February	439.4	173	0	15.2	872
March	1.1	1.1	0	.04	2.2
April	2,674.2	1,630	0	89.1	5,300
May	4,288.6	1,520	0	138	8,510
June	13,996	2,660	12	467	27,760
July	3,576.1	1,530	0	115	7,090
August	43,438	17,800	0	1,401	86,160
September	12,840.7	3,050	2.8	428	25,470
Water year 1939-40	84,068.5	17,800	0	230	166,700

Peak discharge.- Aug. 17 (8 a.m.) 32,100 sec.-ft.; Aug. 31 (12:30 a.m.) 5,610 sec.-ft.; Sept. 4 (7 p.m.) 5,090 sec.-ft.
f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Brazos River near South Bend, Tex.

Location.- Water-stage recorder, lat. 33°01'30", long. 98°38'50", at bridge on State Highway 67, 0.3 mile upstream from Wichita Falls & Southern R. R. bridge, 1.6 miles downstream from Clear Fork of Brazos River, and 2.0 miles northeast of South Bend, Young County. Datum of gage is 1,003.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 21,600 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- September 1938 to September 1940.

Extremes.- Maximum discharge during year, 42,400 second-feet Aug. 18 (gage height, 16.55 feet); no flow at times.
1938-40: Maximum discharge, that of Aug. 18, 1940; no flow at times.
Maximum stage known, 36.2 feet in 1876, according to information furnished by Texas Highway Department and Corps of Engineers, U. S. Army.

Remarks.- Records fair. No large diversion above station. Flow partly regulated by several reservoirs above Nugent on Clear Fork of Brazos River, which have a combined capacity of 106,000 acre-feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	214	7.0	0.6	0.6	4.2	0	559	528	372	1.0	3,610
2	0	134	5.2	.6	.6	2.6	0	255	219	1,440	1.0	864
3	0	66	3.2	.6	123	2.2	0	237	1,240	2,690	.8	851
4	0	40	3.0	.6	420	1.9	0	166	480	1,550	.7	826
5	0	27	2.6	.6	224	1.8	0	60	280	616	.6	5,000
6	0	18	1.9	.7	89	1.5	1,010	55	152	322	.5	3,660
7	0	15	1.8	.8	44	1.0	3,660	28	112	265	.5	3,180
8	0	11	1.7	.7	24	.8	858	5,530	146	232	.4	2,020
9	0	8.5	1.5	.7	15	.7	366	10,300	2,040	194	.4	1,100
10	5.2	6.3	1.4	.7	9.0	.6	194	1,240	5,190	138	.4	730
11	39	4.6	1.1	.7	31	.6	200	487	4,030	86	51	522
12	27	4.2	1.0	.6	13	.5	295	246	2,860	2,330	190	408
13	242	3.4	.7	.5	8.0	.3	109	92	1,180	3,220	246	344
14	202	2.9	.7	.5	8.0	.3	71	49	2,680	559	150	285
15	186	2.2	.6	.5	7.5	.2	53	485	3,960	194	2,590	242
16	174	1.8	.6	.5	7.0	.2	34	230	15,900	116	e,530	202
17	134	2.2	.6	.5	184	.1	26	45	4,370	80	22,900	170
18	102	2.4	.7	.5	1,120	.1	13	471	2,610	63	31,400	134
19	80	2.0	.8	.4	741	.1	9.5	390	2,260	49	13,700	98
20	61	1.6	.8	.4	402	0	6.6	116	2,590	34	9,300	68
21	44	1.3	.8	.4	260	0	5.2	30	725	19	7,460	45
22	32	1.1	.7	.4	166	0	4.2	1,150	360	13	2,630	199
23	23	1.0	.7	.4	109	0	3.5	4,940	210	10	1,010	190
24	8.0	.8	.6	.4	83	0	3.0	7,500	11,200	8.5	592	123
25	6.6	.7	.6	.4	55	0	2.8	2,340	17,100	6.3	402	77
26	943	.7	1.0	.4	32	0	2.3	820	7,310	5.6	280	53
27	3,880	.7	.8	.4	20	0	2.0	1,470	2,660	3.4	210	45
28	2,680	.6	.7	.4	12	0	1.8	6,270	1,170	2.2	162	38
29	879	1.0	.6	.5	8.5	0	5.6	3,920	2,580	1.8	948	30
30	494	3.8	.6	.6	-	0	364	2,780	1,110	1.5	515	28
31	332	-	.6	.6	-	0	-	2,300	-	1.2	332	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,573.8	3,880	0	341	20,970
November	580.8	214	.6	19.4	1,150
December	44.6	7.0	.6	1.44	88
Calendar year 1939	250,139.5	23,900	0	685	496,100
January	16.6	.8	.4	.54	33
February	4,216.2	1,120	.6	145	8,360
March	19.9	4.2	0	.64	39
April	7,299.5	3,660	0	243	14,480
May	54,581	10,300	28	1,761	108,300
June	97,284	17,100	112	3,243	193,000
July	14,622.5	3,220	1.2	472	29,000
August	103,604.3	31,400	.4	3,342	205,500
September	25,140	5,000	26	838	49,860
Water year 1939-40	317,983.2	31,400	0	869	630,800

Peak discharge.- June 16 (2:30 p.m.) 20,600 sec.-ft.; June 24 (10 p.m.) 19,200 sec.-ft.; Aug. 18 (9:45 a.m.) 42,400 sec.-ft.

Note.- Gage-height record incomplete; discharge Oct. 23-24, Feb. 9-21, Apr. 21 to May 1, May 8,9, 15-28, June 5-8, 13, 15, July 7-23, Sept. 1-5, 13-20, computed on basis of partial gage-height record.

Brazos River near Palo Pinto, Tex.

Location.- Water-stage recorder, lat. 32°51'45", long. 98°18'10", at bridge on Palo Pinto-Graford highway, 300 feet downstream from Dark Valley Creek and 6½ miles north of Palo Pinto, Palo Pinto County. Datum of gage is 831.23 feet above mean sea level (general adjustment of 1929).

Drainage area.- 22,760 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- November 1933 to September 1940. January 1924 to November 1933 at station near Mineral Wells; records equivalent.

Extremes.- Maximum discharge during year, 50,800 second-feet Aug. 18 (gage height, 14.46 feet, from floodmark), from rating curve extended above 32,000 second-feet; no flow at times.

1933-40: Maximum discharge, 64,900 second-feet May 20, 1935 (gage height, 15.60 feet, from floodmarks), from rating curve extended above 32,000 second-feet; no flow at times.

Maximum stage known was reached by flood of 1876, according to Corps of Engineers, U. S. Army. Stage was several feet higher than any subsequent flood. A stage of about 24.0 feet, was reached in June 1930, according to information furnished by local residents.

Remarks.- Records good except those for periods of faulty or no gage-height record and those above 25,000 second-feet, all of which are poor. No large diversion above station. Flow partly regulated by several reservoirs above Nugent on Clear Fork of Brazos River which have a combined capacity of 106,000 acre-feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	374	20	3.0	1.0	91	1.2	19	2,950	2,840		730
2	0	260	26	3.0	1.6	68	.8	34	2,070	f1,800		892
3	0	176	30	3.0	8.1	56	.4	31	847	f872		1,500
4	0	133	34	2.6	9.1	46	0	164	497	1,820		936
5	0	98	32	2.4	128	40	.2	217	978	2,750		832
6	0	80	26	2.8	121	34	263	207	677	1,840		1,680
7	0	72	23	3.0	220	20	298	170	487	a996		3,320
8	0	54	20	3.0	176	11	2,710	165	362	a640	a35	2,720
9	0	48	15	3.0	121	7.0	2,190	4,180	362	a589		2,460
10	0	42	14	3.0	107	5.4	922	8,150	9,770	a487		1,560
11	0	38	13	2.8	78	16	445	3,030	7,530	a416		960
12	0	40	9.1	15	60	2.6	299	1,270	4,970	a350		699
13	0	36	7.7	16	50	2.2	257	562	3,510	a315		507
14	0	32	7.0	10	40	2.2	a222	344	2,680	a150		392
15	0	30	6.6	6.6	34	1.4	a193	272	2,860	2,130		104
16	0	26	6.2	5.4	40	.9	a156	212	13,300	a816	a17,700	82
17	122	25	5.8	4.2	56	.8	a126	161	16,800	a398		61
18	220	24	4.6	2.9	50	.3	a97	203	5,900	a257		46
19	200	21	3.0	4.9	544	0	a42	217	4,260	a193	31,400	36
20	157	18	3.0	2.6	724	.2	18	231	4,060	a147	11,700	27
21	125	16	3.0	2.4	618	.4	11	310	3,100	a126	7,850	23
22	95	17	3.0	2.2	462	0	5.6	868	2,410	89	6,570	2,980
23	72	15	3.8	2.0	368	0	3.8	876	f1,370	65	3,530	2,380
24	54	13	2.6	1.8	298	0	3.1	4,030	4,000	54	2,090	794
25	42	8.4	3.4	1.8	230	0	2.8	7,020	17,300	44	1,220	368
26	32	7.0	5.0	1.8	186	0	2.2	3,750	16,000	f32	840	267
27	24	5.8	5.0	1.8	153	.7	1.9	1,940	7,600	f26	554	272
28	2,390	5.4	4.6	1.8	129	4.6	2.5	4,070	4,290	f21	500	251
29	2,950	6.6	4.6	1.6	107	3.4	3.8	7,100	2,670	f17	416	241
30	1,680	17	4.2	1.2	-	3.0	6.8	4,810	2,200	f15	350	231
31	689	-	3.8	1.0	-	2.8	-	3,020	-	f13	718	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,852	2,950	0	286	17,560
November	1,738.2	374	5.4	57.9	3,450
December	349.0	34	2.6	11.3	692
Calendar year 1939	274,734.9	29,100	0	753	544,900
January	118.6	16	1.0	3.83	235
February	5,119.8	724	1.0	177	10,150
March	419.7	91	0	13.5	832
April	8,284.1	2,710	0	276	16,430
May	57,633	8,150	19	1,859	114,300
June	145,610	17,300	362	4,854	288,800
July	23,008	3,150	13	742	45,640
August	121,363	-	-	3,915	240,700
September	27,351	3,320	23	912	54,250
Water year 1939-40	399,846.4	-	0	1,092	793,000

Peak discharge.- June 17 (5 a.m.) 21,400 sec.-ft.; June 25 (9 p.m.) 20,800 sec.-ft.; Aug. 18 (11 p. m.) 50,800 sec.-ft. (from floodmarks).

a No gage-height record; discharge computed on basis of known range in stage, floodmarks, weather records, and records for station near South Bend.

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Brazos River near Glen Rose, Tex.

Location.- Water-stage recorder, lat. 32°15'40", long. 97°41'50", a quarter of a mile upstream from bridge on U. S. Highway 67, 2 miles upstream from Paluxy Creek, and 4 miles northeast of Glen Rose, Somervell County. Datum of gage is 566.66 feet above mean sea level (general adjustment of 1929).

Drainage area.- 24,840 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- October 1923 to September 1940.

Average discharge.- 17 years, 1,579 second-feet.

Extremes.- Maximum discharge during year, 38,300 second-feet Aug. 19 (gage height, 13.62 feet); no flow Oct. 7-10, 15-28.
1923-40: Maximum discharge, 97,600 second-feet May 18, 1935 (gage height, 23.68 feet), from rating curve extended above 68,000 second-feet; no flow at times.
Maximum stage known, about 30.0 feet, May 8 or 9, 1922, according to information furnished by local residents.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Many small diversions above station for municipal and oil field uses.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	2,030	81	21	18	205	4.0	272	3,840	f3,730	68	600
2	.8	1,660	68	18	31	170	3.0	107	2,900	f2,540	58	544
3	.5	1,030	72	16	39	146	3.0	62	2,460	f2,380	50	527
4	.5	679	72	18	36	122	3.0	44	2,290	f2,630	44	934
5	.5	493	68	18	36	107	3.0	31	1,610	f1,490	39	874
6	.1	387	58	21	39	96	116	21	1,020	f1,120	31	1,660
7	0	302	52	26	36	78	639	16	730	f1,460	26	1,490
8	0	235	47	23	31	78	2,290	28	1,320	f2,630	23	1,250
9	0	199	42	23	23	65	1,180	39	1,230	f1,820	18	2,070
10	1.0	187	39	26	23	58	610	44	1,070	1,270	16	3,000
11	.8	199	31	23	18	58	1,870	3,900	8,150	898	18	2,630
12	.6	193	28	23	16	55	2,070	4,170	7,090	1,660	16	2,290
13	.5	165	26	21	10	50	1,250	3,100	5,000	1,100	10	1,560
14	.1	150	26	18	99	42	784	2,210	5,000	679	8.0	1,120
15	.1	126	26	16	103	42	544	1,370	3,620	562	8.0	840
16	0	111	26	16	103	39	419	874	3,820	648	42	658
17	0	103	26	14	107	33	364	600	15,000	2,180	461	f536
18	0	103	23	10	99	31	302	3,330	15,100	2,110	24,900	f451
19	0	92	21	6.0	88	23	288	1,740	7,980	1,240	37,000	f379
20	0	78	18	10	75	21	265	828	7,820	750	28,300	f348
21	0	72	16	10	72	21	235	427	8,390	519	13,000	318
22	0	65	18	14	72	18	223	1,000	4,640	443	9,020	295
23	0	62	26	12	62	14	199	2,450	f3,520	341	8,240	325
24	0	55	21	14	349	12	155	3,100	f3,100	235	f6,440	3,610
25	0	50	23	14	493	12	122	2,160	f3,170	181	f4,520	2,730
26	0	44	31	16	443	12	99	3,610	15,800	155	f3,000	2,290
27	0	44	26	16	372	10	81	5,120	13,100	131	f1,940	1,540
28	10	42	26	18	295	10	121	3,200	7,460	115	f1,350	934
29	44	47	26	21	235	8.0	111	4,170	5,960	103	f982	582
30	39	81	23	21	-	8.0	461	6,440	4,520	88	f772	411
31	224	-	23	18	-	5.0	-	6,080	-	78	638	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	323.3	224	0	10.4	641
November	9,084	2,030	42	303	18,020
December	1,109	81	16	35.8	2,200
Calendar year 1939	285,882.3	20,400	0	783	567,000
January	541	26	6.0	17.5	1,070
February	3,423	493	10	118	6,790
March	1,649.0	205	5.0	53.2	3,270
April	14,814	2,290	3.0	494	29,380
May	60,543	6,440	16	1,953	120,100
June	166,710	15,800	730	5,557	330,700
July	35,286	3,730	78	1,138	69,990
August	141,038	37,000	8.0	4,550	279,700
September	36,796	3,610	295	1,227	72,980
Water year 1939-40	471,316.3	37,000	0	1,288	934,800

Peak discharge.- June 11 (5 p.m.) 14,600 sec.-ft.; June 18 (3:30 p.m.) 19,300 sec.-ft.; June 26 (6:30 p.m.) 17,600 sec.-ft.; Aug. 19 (5 p.m.) 38,300 sec.-ft.
f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Brazos River near Whitney, Tex.

Location.- Wire-weight gage, lat. 31°54'10", long. 97°23'05", on bridge on State Highway 22, 1.8 miles upstream from Towash Creek and 5 miles southwest of Whitney, Hill County. Datum of gage is 432.06 feet above mean sea level (general adjustment of 1929; Brazos River Conservation and Reclamation District bench mark).

Drainage area.- 26,090 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 36,500 second-feet Aug. 20 (gage height, 19.92 feet, from floodmark); minimum observed, 2.0 second-feet Oct. 31, Nov. 1.
1938-40: Maximum discharge observed, 39,800 second-feet June 19, 1939, by slope-area method; maximum gage height, that of Aug. 20, 1940; minimum observed, that of Oct. 31, Nov. 1, 1939.
Maximum stage known, about 46 feet May 9, 1922, according to information furnished by local residents.

Remarks.- Records good except those for June, which are fair. Gage read twice daily, oftener during highwater. Many small diversions above station for municipal and oil field uses.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	2.8	89	49	30	293	10	309	5,520	4,400	104	725
2	6.5	1,370	101	48	46	238	8.0	502	4,080	4,580	96	605
3	5.5	1,590	107	43	87	177	9.6	219	3,140	4,400	76	515
4	4.5	1,090	101	43	83	177	9.6	112	2,830	4,860	72	476
5	3.0	774	89	44	78	140	19	59	2,710	2,650	65	665
6	2.8	590	80	61	74	126	817	44	1,860	1,740	56	791
7	2.8	463	80	63	61	112	2,650	35	1,200	1,340	52	1,240
8	2.4	363	74	70	56	83	1,340	28	868	1,800	43	1,240
9	2.6	298	66	63	57	83	2,300	30	1,640	2,590	37	938
10	15	277	63	49	44	72	1,390	98	1,800	1,960	30	1,860
11	17	309	59	43	37	70	800	80	1,290	1,490	27	2,770
12	16	286	54	46	37	63	1,660	4,590	8,400	4,440	27	2,350
13	13	252	48	43	32	63	2,130	3,400	4,850	2,300	23	2,080
14	13	211	43	46	27	46	1,540	2,890	6,180	1,340	20	1,590
15	10	185	43	40	19	49	948	1,960	4,240	774	16	1,200
16	8.8	173	43	37	27	56	695	1,690	4,160	628	31	958
17	7.0	154	42	42	99	48	560	1,050	10,200	695	37	740
18	5.5	143	44	31	117	49	612	825	17,100	1,490	9,760	605
19	4.5	129	42	22	114	43	424	3,410	12,800	2,080	31,000	508
20	4.5	112	40	26	104	40	363	1,800	7,280	1,440	33,600	398
21	4.0	101	40	37	96	38	325	1,100	11,000	893	16,600	352
22	4.0	96	48	32	94	31	282	2,420	5,120	582	9,500	330
23	2.8	83	59	40	83	32	252	2,830	4,490	496	8,500	309
24	2.4	78	48	23	85	29	233	3,280	3,400	424	7,060	387
25	2.6	74	46	26	83	25	215	3,470	3,340	314	4,670	3,360
26	3.0	66	52	27	446	26	173	2,300	8,860	215	3,540	2,530
27	2.6	65	54	26	530	25	137	5,590	16,800	194	2,530	2,020
28	2.6	61	46	36	404	29	104	4,580	9,500	166	1,910	1,240
29	2.6	65	52	37	341	23	243	3,760	7,060	134	1,440	825
30	2.2	87	50	38	-	23	358	6,500	5,210	129	1,170	575
31	2.2	-	49	33	-	18	-	7,060	-	112	859	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	181.9	17	2.2	5.87	361
November	9,551.8	1,590	2.8	318	18,950
December	1,852	107	40	59.7	3,670
Calendar year 1939	349,254.3	20,500	2.2	957	692,800
January	1,264	70	22	40.8	2,510
February	3,391	530	19	117	6,730
March	2,327	293	18	75.1	4,620
April	20,607.2	2,650	9.6	687	40,870
May	65,817	7,060	26	2,123	130,500
June	176,928	17,100	868	5,898	350,900
July	50,656	4,860	112	1,634	100,500
August	132,951	33,600	16	4,289	263,700
September	34,182	3,360	309	1,139	67,800
Water year 1939-40	499,708.9	33,600	2.2	1,365	991,100

Brazos River at Waco, Tex.

Location.- Water-stage recorder, lat. 31°33'40", long. 97°07'45", at Washington Avenue Bridge in Waco, McLennan County, and 2½ miles downstream from Boeque River. Datum of gage is 357.1 feet above mean sea level (general adjustment of 1929).

Drainage area.- 28,500 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- September 1898 to September 1940. January 1912 to September 1914 (monthly records only), published in Water-Supply Paper 850.

Average discharge.- 42 years, 2,602 second-feet.

Extremes.- Maximum discharge during year, 38,500 second-feet June 29 (gage height, 20.78 feet); minimum, 13 second-feet Oct. 30, 31.

1898-1940: Maximum discharge, 246,000 second-feet Sept. 27, 1936 (gage height, 40.90 feet, when levee on left bank was overtopped and broken by flood); minimum discharge for periods of daily record, no flow Aug. 20, 21, 1918, and probably for several days in August 1923.

A stage of 39.7 feet was reached Dec. 3, 1913, when levee on left bank was broken by flood, according to information furnished by Weather Bureau.

Remarks.- Records good except those for periods of no or faulty gage-height record, which are fair. Many small diversions above station for irrigation and oil field uses do not appreciably effect flow, except during low etages. Flow partly regulated by Lake Waco, on Bosque River, near Waco (capacity, 39,000 acre-feet).

Cooperation.- Weather Bureau furnished gage heights for many periods of faulty recorder operation. Soil Conservation Service furnished reeults of 44 discharge measurements.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	15	a82	73	95	338	35	500	6,500	7,400	158	1,040
2	34	16	a89	68	77	280	35	490	4,120	5,720	139	890
3	27	685	a95	61	133	235	35	792	3,340	11,600	126	778
4	24	1,280	a101	56	104	194	31	548	2,780	9,480	108	674
5	24	896	a108	56	e7	175	136	305	2,560	4,190	99	602
6	23	646	115	56	113	160	13,600	230	2,450	2,820	90	736
7	27	498	111	56	133	158	8,210	184	1,780	2,240	84	883
8	29	360	104	58	128	138	3,340	161	1,090	2,090	80	1,160
9	32	265	102	58	136	123	1,520	184	968	2,110	74	1,280
10	68	228	95	58	128	113	2,450	171	968	2,540	71	1,020
11	50	250	87	61	128	104	1,780	171	1,200	1,940	71	2,030
12	44	236	81	73	118	81	1,200	1,030	7,940	7,420	71	2,780
13	41	214	75	73	104	81	1,690	4,070	6,260	6,130	63	2,450
14	39	185	68	64	93	91	1,690	3,000	6,130	3,200	61	2,100
15	34	178	64	61	87	91	1,280	2,450	10,400	1,910	56	1,560
16	28	166	59	61	118	81	984	1,870	6,960	1,480	52	1,240
17	28	160	70	61	115	83	757	1,360	10,700	939	81	1,020
18	27	163	66	61	133	81	548	1,020	21,300	953	1,050	841
19	26	136	66	59	197	79	395	1,560	15,700	2,030	23,400	687
20	26	128	61	46	197	66	325	2,740	9,640	1,670	32,200	564
21	25	115	59	48	181	68	360	1,690	12,800	1,360	21,600	512
22	25	111	63	52	163	63	360	1,240	8,400	976	10,300	470
23	28	102	66	54	149	58	320	2,920	4,770	736	8,320	420
24	29	99	70	46	138	56	305	2,650	7,280	590	7,710	365
25	26	89	73	63	125	48	272	3,000	4,700	512	5,520	399
26	28	85	77	79	125	43	272	2,890	4,700	405	4,060	3,040
27	35	a81	79	73	252	48	330	2,460	19,600	320	3,110	2,430
28	27	a79	75	66	448	46	1,960	5,810	13,500	248	2,450	1,920
29	18	a77	77	87	395	47	4,600	4,070	19,400	218	2,000	1,320
30	16	a75	75	93	-	46	945	3,790	7,960	197	1,480	918
31	15	-	75	91	-	39	-	7,340	-	169	1,240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	941	68	15	30.4	1,870
November	7,620	1,280	15	254	15,110
December	2,488	115	59	80.3	4,930
Calendar year 1939	455,681	24,200	15	1,248	903,900
January	1,972	93	46	63.6	3,910
February	4,400	448	77	152	8,730
March	3,314	338	39	107	6,570
April	49,765	13,600	31	1,659	98,710
May	60,696	7,340	161	1,958	120,400
June	225,796	21,300	968	7,527	447,900
July	83,793	11,600	169	2,703	166,200
August	125,924	32,200	52	4,062	249,800
September	36,149	3,040	365	1,205	71,700
Water year 1939-40	602,858	32,200	15	1,647	1,196,000

Peak discharge.- Apr. 6 (7 p.m.) 31,000 sec.-ft. (floodmark); June 18 (8 p.m.) 22,600 sec.-ft.; June 27 (3 p.m.) 21,300 sec.-ft.; June 29 (4:30 a.m.) 38,500 sec.-ft.; Aug. 20 (2:30 p.m.) 34,000 sec.-ft.

a No gage-height record; discharge computed on basis of known range in stage and weather records.

Note.- Gage-height record incomplete Dec. 17 to Jan. 20, Jan. 22-24, Feb. 1, 20-27, Mar. 5-13, Apr. 6 to May 7, May 29 to June 5, Aug. 10-15; discharge computed on basis of partial gage-height record.

Brazos River near Marlin, Tex.

Location.- Wire-weight gage, lat. 31°17'20", long. 96°58'10", on bridge on State Highway 139, 1 mile upstream from Deer Creek and 4.5 miles southwest of Marlin, Falls County. Datum of gage is 312.15 feet above mean sea level (general adjustment of 1929).

Drainage area.- 29,150 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 32,300 second-feet Aug. 21 (gage height, 16.50 feet, from floodmark); minimum not determined.

1938-40: Maximum discharge, 49,400 second-feet May 20, 1939 (gage-height, 20.6 feet, from graph based on gage readings), from rating curve extended above 25,000 second-feet; minimum not determined.

Maximum stage known, 35.8 feet Dec. 3 or 4, 1913, according to information furnished by local residents. Flood of Sept. 28, 1936, reached a stage of 35.2 feet (discharge not determined).

Remarks.- Records poor. Gage read twice daily, oftener during highwater. Many small diversions above gage which do not appreciably affect flow except during low stages. Flow partly regulated by Lake Waco, on Bosque River near Waco and about 50 miles above station (capacity, 39,000 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	23	105	79	85	398	48	545		7,900	424	1,010
2	55	26	103	79	105	352	42	352		6,000	352	915
3	46	28	89	59	162	314	51	333		9,700	264	825
4	44	63	87	79	213	297	48	580	5,100	10,400	157	735
5	44	547	93	85	120	297	345	333		6,300	133	618
6	40	735	124	83	103	221	3,180	280		3,750	116	
7	32	1,060	114	83	112	264	18,900	249	2,310	2,600	103	
8	36		93	79		221	7,980	249	1,630	2,310	97	1,000
9	37		87	89		152	3,410	221	1,240	2,750	91	
10	36		87	103			1,760	194	1,630	2,600	85	
11			87	73			3,140	190	1,760	2,310	75	1,280
12			83	67				190	2,400	2,770	142	2,450
13			83	87			1,930	3,890	5,180	3,980	131	2,900
14			93					3,410	5,920	3,240	112	
15			93					2,030	9,160	2,900	85	
16		435	83		155	110	1,560	1,240	9,440	2,450	73	
17			77	b70			1,060	825	7,110	2,310	53	
18			63				962	962	18,000	2,310	70	
19	40		63				1,010	1,240	19,400	2,310	12,800	
20			63				915	2,030	14,600	2,310	28,600	1,250
21			59				780	2,600	11,200	1,440	26,500	
22			53	b60		69	695	2,310	8,880	915	13,200	
23				59		65	618	2,450	6,420	915	8,880	
24				59		61	545	2,750	5,880	780	7,760	
25		140		65	183	55	375	2,900	6,600	695	6,940	
26		127	80	65	249	61	333	2,600	6,200	655	5,020	
27	28	112		63	280	55	314	2,450	13,500	580	3,700	1,760
28	36	122		79	333		4,220		20,200	545	2,750	2,450
29	37	127		95	375	51	3,980	4,600	23,300	510	2,450	1,440
30	28	116		83	-		1,960		11,000	480	1,760	1,240
31	25	-		85	-		-		-	450	1,500	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,227	63	-	39.6	2,430
November	10,621	-	23	354	21,070
December	2,602	124	-	83.9	5,160
Calendar year 1939	570,753	41,500	-	1,564	1,132,000
January	2,318	103	-	74.8	4,600
February	4,955	375	-	171	9,830
March	4,406	398	-	142	8,740
April	65,951	18,900	42	2,198	130,800
May	55,803	-	190	1,800	110,700
June	243,560	23,300	1,240	8,119	483,100
July	89,165	10,400	450	2,876	176,900
August	124,423	28,600	53	4,014	246,800
September	38,873	2,900	-	1,296	77,100
Water year 1939-40	643,904	28,600	-	1,759	1,277,000

Peak discharge.- Apr. 7 (9 a.m.) 31,100 sec.-ft.; June 29 (12 m.) 30,000 sec.-ft.; Aug. 21 (5 a.m.) 32,300 sec.-ft. (All peak gage heights are by levels to floodmarks; time subject to some error).

b Stage-discharge relation probably affected by ice.

Note.- Discharge for periods of no or doubtful gage-height records, Oct. 11-26, Nov. 8-24, Dec. 23-31, Feb. 8-24, Mar. 10-21, 28-31, Apr. 12-15, May 10-13, May 28 to June 6, Sept. 6-10, 14-26, computed on basis of weather records and records for stations at Waco and near Bryan.

Brazos River near Bryan, Tex.

Location.- Water-stage recorder, lat. 30°37', long. 96°29', 2.4 miles downstream from Little Brazos River and 9 miles southwest of Bryan, Brazos County. Datum of gage is 192.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 38,430 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- September 1925 to September 1940. February 1918 to September 1925 at site near College Station, 7½ miles downstream.

Average discharge.- 21 years (1918-25, 1926-40), 5,603 second-feet.

Extremes.- Maximum discharge during year, 57,900 second-feet July 2 (gage height, 26.80 feet); minimum, 100 second-feet about Jan. 20.
1925-40: Maximum stage observed, 46.1 feet, present site and datum, May 20, 1930 (discharge not determined); minimum discharge, 87 second-feet Aug. 24, 1934.
Maximum stage known, about 54.0 feet, present datum, in December 1913.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Many small diversions above gage which do not appreciably affect flow except during low stages.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	247	176	295	247	139	346	445	9,330	6,590	44,300	1,240	2,470
2	192	162	285	234	136	494	445	4,760	7,550	f55,400	1,160	2,180
3	162	148	275	224	133	565	306	2,840	6,230	f49,000	1,080	1,800
4	148	139	265	220		538	252	1,900	5,210	40,400	1,000	1,550
5	142	136	255	220		510	216	1,460	4,430	35,500	918	1,460
6	142	427	245	242	1,930	482	517	1,280	3,850	19,200	855	1,320
7	139	1,000	f234	265		445	11,400	1,040	3,570	9,200	800	1,280
8	133	904	229	260		410	19,800	876	3,360	6,600	762	1,040
9	133	794	238	252	504	390	12,600	876	2,770	5,400	729	1,120
10	166	670	242	242	445	365	6,240	911	2,590	f4,250	690	1,200
11	170	613	234	252	420	350	3,990	762	3,160	f4,000	658	1,500
12	906	565	224	247	380	332	4,320	696	5,880	f4,110	625	1,370
13	2,210	554	216	247	346	306	4,100	632	f5,890	f6,610	607	1,860
14	1,250	521	208	224	324	292	2,770	791	7,750	11,200	583	2,710
15	607	494	204	212	310	283	2,770	3,220	f6,570	7,780	560	2,530
16	450	477	196	208	646	270	3,100	3,030	f12,300	5,710	532	2,290
17	365	460	192	204	914	270	2,590	2,530	f11,900	5,710	510	1,960
18	310	435	192	184	538	256	1,900	2,180	f14,000	f4,150	510	1,700
19	278	420	188		1,120	242	1,460	1,800	22,000	f2,960	482	1,460
20	256	f405	180		460	234	1,200	1,830	23,300	f2,590	14,500	1,320
21	234	395	176		788	234	1,040	2,710	f19,100	f2,960	24,000	1,160
22	216	385	371		684	229	946	3,840	f16,300	3,160	21,000	1,080
23	204	375	1,170		583	224	827	9,710	f12,300	2,710	11,400	1,080
24	192	365	450		538	212	736	15,600	8,790	2,470	8,790	1,080
25	270	355	306	160	472	212	690	18,700	8,940	2,240	8,370	897
26	260	345	324		440	220	644	9,200	10,100	2,020	7,160	807
27	224	335	328		410	220	620	5,210	9,700	1,850	5,620	827
28	229	325	310		385	220	4,070	3,990	f16,900	1,750	4,730	2,230
29	234	315	283		360	276	11,400	5,550	f23,100	1,650	3,850	2,470
30	238	305	270		-	420	15,000	10,100	f40,600	1,500	3,220	2,070
31	200	-	265		-	292	-	7,890	-	1,370	2,840	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,907	2,210	133	352	21,630
November	13,000	1,000	136	433	25,790
December	8,850	1,170	176	285	17,550
Calendar year 1939	807,904	49,200	133	2,213	1,602,000
January	6,264	-	-	202	12,420
February	21,125	-	133	728	41,900
March	10,139	565	212	327	20,110
April	116,394	19,800	216	3,880	230,900
May	135,244	18,700	632	4,363	268,300
June	324,730	40,600	2,590	10,820	644,100
July	347,750	55,400	1,370	11,220	689,800
August	129,761	24,000	482	4,186	257,400
September	47,821	2,710	807	1,594	94,850
Water year 1939-40	1,172,005	55,400	-	3,202	2,325,000

Peak discharge.- July 2 (6 p.m.) 57,900 sec.-ft.
f Gage-height record incomplete; discharge computed on basis of partial gage-height record.
Note.- Discharge for periods of no gage-height record, Nov. 21 to Dec. 6, Jan. 19 to Feb. 8, computed from known range in stage, floodmarks, weather records, and records for Little River at Cameron and Brazos River near Marlin.

Brazos River near Hempstead, Tex.

Location.- Chain gage, lat. 30°07'05", long. 96°11'30", on Texas & New Orleans R. R. bridge, 4,500 feet downstream from bridge on U. S. Highway 290, 6.5 miles northwest of Hempstead, Waller County, and 7 miles upstream from Caney Creek. Datum of gage is 112.10 feet above mean sea level (general adjustment of 1929).

Drainage area.- 42,670 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- October 1938 to September 1940. Weather Bureau has collected gage-height records in this vicinity at intermittent periods since 1903.

Extremes.- Maximum discharge observed during year, 83,100 second-feet July 3 (gage height, 42.8 feet); minimum observed, 254 second-feet Nov. 8.
1938-40: Maximum discharge, that of July 3, 1940; minimum, that of Nov. 8, 1939.
Maximum stage known, 61.1 feet on Dec. 9, 1913, according to information furnished by Texas & New Orleans R. R. engineers.

Remarks.- Records fair. Gage read twice daily, oftener during highwater. Many small diversions above gage which do not appreciably affect flow except during low stages.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	310	310	343	890	321	665	410	13,400	9,640	53,000	1,420	3,230
2	299	310	354	600	321	665	455	9,920	8,330	72,000	1,320	2,780
3	343	288	354	488	354	620	425	6,710	8,850	82,000	1,230	2,520
4	332	282	343	505	488	620	560	5,090	7,940	79,100	1,170	2,280
5	310	272	332	410	2,080	710	488	4,210	6,590	66,800	1,120	2,040
6	299	262	321	354	5,200	755	470	3,410	5,420	51,600	1,060	1,840
7	286	260	310	395	5,090	710	731	2,780	4,430	31,600	1,040	1,700
8	284	264	299	395	4,210	665	8,970	2,600	3,800	17,000	965	1,640
9	276	738	299	367	3,600	580	14,900	2,440	3,500	13,000	915	1,500
10	272	940	321	367	3,500	540	10,300	2,280	6,600	11,100	845	1,390
11	266	890	310	410	3,600	522	6,350	2,120	8,720	9,500	822	1,390
12	264	822	310	395	3,230	505	4,760	1,700	6,590	8,600	800	1,500
13	260	710	299	395	2,440	488	4,540	1,290	7,940	8,100	755	1,670
14	759	665	288	395	1,740	455	4,870	1,020	7,550	9,400	755	1,530
15	1,420	710	292	367	1,170	440	3,800	940	8,590	12,600	732	2,140
16	990	642	299	367	1,300	425	3,140	1,660	7,810	9,640	688	2,600
17	665	600	288	367	3,500	410	3,140	3,140	10,900	7,440	665	2,440
18	522	580	284	354	4,320	395	2,960	11,000	11,000	6,710	665	2,200
19	455	580	284	343	4,650	380	2,440	2,780	14,100	5,870	642	1,840
20	425	560	310	332	4,210	367	2,000	2,360	20,600	4,430	642	1,670
21	367	505	299	321	4,430	354	1,670	2,120	22,400	3,700	13,400	1,530
22	354	488	288	321	4,100	354	1,420	2,280	19,300	3,500	26,700	1,390
23	332	470	429	310	3,320	343	1,260	3,900	16,800	3,900	19,000	1,320
24	310	455	2,430	321	2,520	332	1,140	11,400	13,100	3,500	11,200	1,230
25	288	395	3,900	321	1,840	332	1,040	19,000	10,300	2,960	9,640	1,230
26	282	395	4,320	321	1,420	332	965	19,000	10,600	2,600	8,850	1,170
27	321	380	3,700	310	1,140	354	868	11,900	11,100	2,280	7,680	1,090
28	332	354	3,140	321	940	332	822	10,200	11,600	2,040	6,110	1,040
29	310	354	2,600	321	778	343	2,670	10,200	20,000	1,840	5,090	1,120
30	299	332	1,960	310	-	354	10,800	9,110	30,400	1,640	4,430	2,150
31	299	-	1,290	299	-	343	-	11,800	-	1,500	3,800	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	12,531	1,420	260	404	24,850
November	14,813	940	260	494	29,380
December	30,596	4,320	284	987	60,690
Calendar year 1939	1,020,535	50,500	260	2,796	2,024,000
January	11,972	890	299	386	23,750
February	75,812	5,200	321	2,614	150,400
March	14,690	755	332	474	29,140
April	98,364	14,900	410	3,279	195,100
May	183,720	19,000	940	5,926	364,400
June	334,700	30,400	3,500	11,160	663,900
July	588,950	82,000	1,500	19,000	1,168,000
August	134,151	26,700	642	4,327	266,100
September	53,170	3,230	1,040	1,772	105,500
Water year 1939-40	1,553,469	82,000	260	4,244	3,081,000

Brazos River near San Felipe, Tex.

Location.- Water-stage recorder, lat. 29°46'20", long. 96°02'10", on bridge on State Highway 73, 200 feet downstream from Missouri-Kansas-Texas R.R. bridge, 1.3 miles downstream from Irons Creek, and 5.0 miles southeast of San Felipe post office, Austin County. Datum of gage is 79.32 feet above mean sea level (general adjustment of 1929). Prior to Apr. 17, chain gage 200 feet upstream at same datum.

Drainage area.- 43,690 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- December 1938 to September 1940.

Extremes.- Maximum discharge during year, 80,200 second-feet July 4 (gage height, 33.44 feet); minimum observed, 278 second-feet Oct. 9, 13.

1938-40: Maximum discharge, that of July 4, 1940; minimum, that of Oct. 9, 13, 1939.

Maximum stage known, 49.0 feet on Dec. 13, 14, 1913, according to information furnished by local resident.

Remarks.- Records fair. Gage read twice daily, more often during high water Oct. 1 to Apr. 16. Many small diversions above station which do not appreciably affect flow except during low stages.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	394	310	394	d854	394	640	462	13,000	11,500	50,000	1,660	3,560
2	386	314	390	798	398	777	495	11,900	8,700	66,800	1,560	3,030
3	382	314	382	777	366	714	547	7,900	8,700	76,000	1,410	2,610
4	378	362	386	763	422	664	525	5,760	8,700	80,100	1,320	2,340
5	370	366	378	777	530	652	586	4,360	7,300	72,200	1,230	2,100
6	366	318	354	805	3,060	735	646	3,720	5,940	60,000	1,180	1,880
7	362	298	354	586	5,040	714	917	3,030	5,040	42,200	1,080	1,660
8	322	298	354	552	4,680	728	1,560	2,610	4,200	26,700	1,040	1,510
9	290	290	354	536	3,880	700	15,300	2,400	3,560	16,500	988	1,410
10	330	290	342	530	3,480	682	13,400	2,280	5,760	12,000	952	1,280
11	374	718	342	530	3,560	658	9,120	2,220	11,300	10,200	924	1,180
12	358	1,050	334	525	3,400	634	5,940	2,100	7,800	8,900	889	1,140
13	290	1,010	338	525	2,960	552	4,680	1,760	6,900	9,000	854	1,230
14	330	749	338	510	2,280	569	4,680	1,410	7,700	8,600	819	1,410
15	558	728	338	505	1,710	558	4,680	1,130	8,300	12,100	784	1,410
16	1,230	721	350	500	1,460	542	3,880	1,010	8,100	11,900	756	1,930
17	1,010	688	346	470	2,820	520	3,480	1,780	9,780	9,180	721	2,470
18	742	664	334	378	3,800	515	3,480	3,170	12,000	7,700	694	2,340
19	664	664	330	402	4,360	505	3,100	3,100	13,100	7,300	682	2,160
20	536	658	326	439	4,200	505	2,680	2,820	21,400	5,760	658	1,820
21	452	622	334	414	3,960	485	2,280	2,400	24,200	4,680	1,630	1,660
22	434	598	370	366	3,960	480	1,930	2,160	22,500	4,040	20,600	1,510
23	422	586	495	354	3,560	475	1,710	2,470	19,800	3,960	22,800	1,410
24	366	564	d1,250	374	2,820	462	1,560	5,620	16,200	4,200	14,600	1,280
25	350	542	d2,960	362	2,160	452	1,460	14,500	11,500	3,720	9,780	1,230
26	358	490	d3,960	378	1,710	452	1,320	19,200	9,940	3,240	9,120	1,140
27	362	448	d3,880	366	1,320	466	1,230	14,100	11,000	2,820	8,300	1,120
28	354	430	d3,240	390	1,080	480	1,180	9,780	11,000	2,470	6,900	1,040
29	362	418	d2,540	402	910	485	1,140	10,700	18,800	2,220	5,760	980
30	366	414	d1,930	398	-	475	5,200	9,120	30,000	2,040	4,860	1,030
31	358	-	d1,280	394	-	466	-	11,200	-	1,880	4,200	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	13,856	1,230	290	447	27,480
November	15,922	1,050	290	531	31,580
December	29,303	3,960	326	945	58,120
Calendar year 1939	1,070,745	54,200	290	2,934	2,124,000
January	15,960	854	354	515	31,660
February	74,280	5,040	366	2,561	147,300
March	17,942	840	452	579	35,590
April	99,168	15,300	462	3,306	196,700
May	178,710	19,200	1,010	5,765	354,500
June	350,720	30,000	3,560	11,690	695,600
July	628,410	80,100	1,880	20,270	1,246,000
August	128,751	22,800	658	4,153	255,400
September	50,870	3,560	980	1,696	100,900
Water year 1939-40	1,603,892	80,100	290	4,382	3,181,000

d Doubtful gage-height record; discharge computed on basis of partial gage heights and records for stations at Richmond and near Hempstead.

Brazos River at Richmond, Tex.

Location.- Water-stage recorder, lat. 29°35', long. 95°45', on bridge on U. S. Highway 90 in Richmond, Fort Bend County, about 1,500 feet downstream from bridge of Texas & New Orleans R. R. (formerly Galveston, Harrisburg & San Antonio Ry.). Datum of gage is 40.8 feet above mean sea level (general adjustment of 1929).

Drainage area.- 44,050 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- January 1903 to June 1906, June 1931 to September 1940. October 1922 to September 1931, at site at Rosenberg, 7.6 miles upstream; records equivalent except for diversion by Richmond Irrigation Co.'s canal. Weather Bureau has collected gage-height records in this vicinity since 1914.

Average discharge.- 20 years (1903-5, 1922-40), 7,207 second-feet.

Extremes.- Maximum discharge during year, 82,100 second-feet July 5 (gage height, 31.22 feet); minimum, 362 second-feet Nov. 9, 10.
1903-6; 1931-40: Maximum discharge, 90,900 second-feet May 27, 1935 (gage height, 36.12 feet); minimum, 33 second-feet Aug. 23, 24, 1934.
Flood of June 6, 1929, reached a stage of 40.6 feet, present datum, from floodmarks (discharge, 120,000 second-feet). Flood of December 1913 reached a stage of 45.4 feet, present datum, from floodmark (discharge not determined).

Remarks.- Records fair. Considerable water diverted above station for irrigation and municipal supply. See records of Brazoe Valley Irrigation Co.'s canal near Fulshear and Richmond Irrigation Co.'s canal near Richmond.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	530	414	510	2,080	460	1,190	490	6,460	10,300	41,800	1,640	3,980
2	480	406	485	1,680	460	1,060	475	11,600	9,030	61,000	1,520	3,460
3	455	406	480	1,300	475	970	625	8,850	7,300	74,000	1,360	2,960
4	446	406	475	1,060	480	880	565	5,800	7,480	81,200	1,260	2,490
5	450	406	475	910	530	820	495	4,540	6,940	80,000	1,190	2,180
6	470	394	475	910	671	790	555	3,670	5,920	70,200	1,120	2,000
7	475	382	470	820	2,980	850	706	3,360	5,180	54,500	1,060	1,800
8	460	378	465	724	3,980	850	850	2,960	4,540	34,600	1,000	1,680
9	442	370	455	680	3,760	850	8,290	2,580	3,980	20,500	940	1,560
10	434	374	455	650	3,360	808	17,900	2,400	3,760	14,000	880	1,480
11	438	570	460	620	3,260	778	12,200	2,260	7,990	11,200	850	1,360
12	422	970	465	615	3,260	748	8,120	2,180	9,310	9,400	796	1,330
13	402	940	455	610	3,160	718	5,180	2,040	6,240	8,900	754	1,260
14	398	880	455	615	2,760	690	4,200	1,800	6,580	8,400	718	1,330
15	394	802	455	610	2,400	665	4,200	1,440	6,940	9,110	680	1,400
16	406	784	455	600	2,000	650	3,980	1,160	7,540	12,200	640	1,330
17	910	772	450	585	2,330	630	3,460	1,060	7,480	9,700	615	1,680
18	1,190	760	450	575	3,720	605	3,160	1,650	10,400	7,840	605	2,080
19	940	712	455	555	4,310	610	3,060	2,860	11,200	6,940	585	2,040
20	808	675	455	530	4,900	585	2,860	2,960	15,700	6,400	560	1,960
21	754	650	460	515	4,660	565	2,490	2,670	22,200	5,180	530	1,880
22	645	635	475	515	4,200	550	2,130	2,400	22,600	4,540	8,210	1,840
23	585	620	500	510	3,980	560	1,880	2,310	20,000	3,980	23,800	1,680
24	520	595	520	495	3,360	550	1,680	2,580	18,200	3,980	17,700	1,600
25	485	570	620	480	2,960	530	1,520	7,740	14,100	4,090	11,600	1,480
26	460	560	2,020	480	2,400	490	1,330	15,300	10,200	3,660	9,200	1,440
27	438	540	3,460	480	1,960	465	1,220	15,300	10,200	3,060	8,900	1,330
28	430	525	3,460	465	1,640	515	1,120	9,680	11,500	2,580	7,840	1,260
29	418	515	3,160	465	1,360	480	1,090	8,200	13,500	2,260	6,580	1,160
30	426	520	2,760	460	-	530	1,090	8,600	27,000	2,040	5,600	1,120
31	434	-	2,400	465	-	490	-	7,840	-	1,840	4,660	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,545	1,190	394	534	32,820
November	17,531	970	370	584	34,770
December	29,135	3,460	450	940	57,790
Calendar year 1939	990,748	41,600	370	2,714	1,965,000
January	22,059	2,080	460	712	43,750
February	75,676	4,900	460	2,610	150,100
March	21,472	1,190	465	693	42,590
April	96,921	17,900	475	3,231	192,200
May	154,450	15,300	1,060	4,982	306,300
June	323,610	27,000	3,760	10,790	641,900
July	659,100	81,200	1,840	21,260	1,307,000
August	123,293	23,800	530	3,977	244,500
September	54,150	3,980	1,120	1,805	107,400
Water year 1939-40	1,593,942	81,200	370	4,355	3,161,000

Note.- Discharge for periods of partial or no gage-height record, Mar. 17 to Apr. 9, Apr. 25-30, May 15-16, July 22-27, Sept. 7-17, 22-24, 26-30, computed from graph based on once-daily gage reading furnished by Weather Bureau.

Brazos River at East Columbia, Tex.

Location.- Wire-weight gage, lat. 29°09', long. 95°37', on bridge on State Highway 35 at East Columbia, Brazoria County, 1 mile downstream from Yarners Creek. Datum of gage is 2.95 feet below mean sea level (general adjustment of 1929).

Drainage area.- 44,540 square miles, of which about 9,240 square miles is probably non-contributing.

Records available.- October 1938 to September 1939 (gage heights only), October 1939 to September 1940 (gage heights, discharge measurements, and daily discharge above 8,000 second-feet).

Extremes.- Maximum discharge during year, 65,000 second-feet July 5; maximum gage height, 32.14 feet July 6, from graph based on gage readings; minimum gage height observed, 1.56 feet Mar. 8 (discharge not determined, affected by tides).

1938-40: Maximum discharge, that of July 5, 1940; minimum gage height, 1.54 feet Aug. 22, 1939 (discharge not determined, affected by tides).

Maximum stage known, 35.3 feet on Dec. 21 or 22, 1913; flood of 1899 reached a stage 0.3 foot lower, based on information furnished by local resident.

Remarks.- Records fair. Discharge for periods below 8,000 second-feet not published owing to effect from tides. Gage read twice daily and oftener during high water. Considerable water diverted above station for irrigation and municipal uses.

Cooperation.- Results of eight discharge measurements furnished by Corps of Engineers, U. S. Army.

Gage height, in feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.08	3.86	3.59	3.60	3.29	2.86	2.94	3.38	9.03	17.92	4.18	4.20
2	4.19	3.80	3.67	3.58	3.54	2.28	3.12	5.84	9.68	24.89	4.08	4.27
3	4.14	3.58	3.62	3.60	3.26	2.92	3.13	10.15	8.91	29.23	3.94	4.44
4	4.08	3.76	3.59	3.76	3.86	2.84	3.10	8.14	8.10	31.10	3.81	4.45
5	3.74	3.86	2.80	3.74	5.68	2.53	3.04	6.10	7.36	31.90	3.75	4.34
6	3.42	3.92	2.66	3.65	3.40	2.46	3.06	5.52	7.12	32.04	3.75	4.40
7	3.44	3.53	2.65	3.29	3.44	1.95	3.04	5.44	6.59	31.15	2.72	4.38
8	4.04	3.44	2.64	2.80	3.44	1.75	3.00	4.90	5.40	27.72	2.64	4.24
9	4.20	3.16	2.58	3.14	4.48	2.64	3.10	3.98	6.00	20.78	2.60	4.14
10	4.15	3.41	2.59	3.08	5.39	2.04	8.76	4.00	6.26	15.45	2.68	4.05
11	4.02	3.40	3.02	2.87	5.26	2.91	11.14	4.08	7.03	12.75	2.62	3.90
12	4.43	3.26	2.99	2.64	5.40	3.32	9.62	4.04	8.74	10.89	2.60	3.58
13	4.34	3.46	2.62	2.57	5.24	3.12	7.15	3.57	9.22	9.66	2.54	3.50
14	4.28	3.44	2.60	2.98	5.20	2.94	5.08	3.66	7.48	9.38	2.70	3.40
15	4.34	3.47	2.72	2.44	5.42	2.90	4.44	3.74	8.29	9.20	2.59	3.22
16	3.70	3.24	2.96	2.38	6.05	2.91	4.72	3.04	7.65	11.02	2.60	3.25
17	4.21	4.30	2.70	2.68	4.76	2.62	5.10	2.85	6.79	12.61	2.72	3.99
18	3.72	4.21	2.76	2.58	5.50	2.92	3.74	2.87	7.07	12.74	2.82	4.16
19	3.62	4.19	2.40	2.34	4.54	2.80	3.52	2.94	8.52	10.92	2.90	4.02
20	3.98	3.68	2.60	2.30	4.31	3.02	3.52	3.06	10.78	8.80	3.24	4.19
21	3.98	3.64	3.15	2.44	4.46	2.91	3.46	3.06	14.74	7.52	3.50	3.68
22	4.00	3.68	3.10	2.88	4.70	3.00	4.28	2.98	15.46	6.28	4.20	4.23
23	4.05	3.73	3.16	2.88	4.92	3.16	3.42	3.07	14.92	5.34	9.11	4.66
24	4.48	3.72	3.18	2.82	5.15	2.76	3.65	3.08	13.76	5.08	15.18	4.50
25	4.54	3.76	3.26	2.85	5.16	2.76	3.61	4.04	11.60	5.12	15.01	4.00
26	4.33	3.50	3.10	2.78	4.34	2.74	3.51	8.74	9.67	5.00	13.92	3.17
27	4.41	3.51	3.15	2.98	4.23	2.57	3.58	12.64	7.70	4.90	12.30	3.66
28	3.94	3.62	3.86	2.74	3.60	3.49	3.61	11.64	7.06	4.64	9.51	3.70
29	4.26	3.66	3.92	2.86	3.14	2.86	3.30	9.63	10.12	4.32	7.56	3.72
30	3.90	4.04	3.88	2.88	-	2.98	3.36	8.82	13.57	4.26	5.88	3.70
31	4.00	-	3.70	2.97	-	2.88	-	8.63	-	4.24	4.95	-

Discharge measurements, in second-feet, water year October 1939 to September 1940

Date	Width (feet)	Area (square feet)	Mean velocity (feet per second)	Gage height (feet)	Discharge (second-feet)
Dec. 12	224	2,920	0.43	3.32	*-1,250
Feb. 21	245	3,230	1.62	4.50	5,220
Apr. 20	216	2,860	1.01	2.96	2,900
May 23	230	3,060	.86	4.14	2,630
July 4	411	12,500	5.01	31.04	62,600
4	411	12,200	5.23	31.28	63,800
5	412	12,800	4.98	31.63	63,300
5	416	12,800	5.16	32.01	66,100
6	412	12,900	4.63	32.10	59,700
6	412	12,900	4.85	32.00	62,600
7	421	12,500	4.58	31.36	57,300
7	409	12,400	4.52	31.06	56,000
10	298	6,330	3.00	14.96	19,000
12	288	5,020	2.27	10.93	11,400
Aug. 24	298	5,190	3.47	15.07	18,000
Sept. 5	250	3,000	.91	3.82	2,720

* Discharge measurement made during maximum effect of tide. Entire measured flow is negative.

Discharge, in second-feet, of Brazos River at East Columbia, Tex., water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	-	8,600	27,100	-	
2							-	-	9,580	45,500	-	
3							-	10,300	8,470	57,600	-	
4							-	-	-	63,000	-	
5							-	-	-	64,100	-	
6							-	-	-	61,100	-	
7							-	-	-	56,700	-	
8							-	-	-	48,500	-	
9							-	-	-	32,100	-	
10							8,340	-	-	20,100	-	
11							11,800	-	-	14,700	-	
12							9,440	-	8,210	11,500	-	
13							-	-	8,880	9,500	-	
14							-	-	-	9,160	-	
15							-	-	-	8,950	-	
16							-	-	-	11,400	-	
17							-	-	-	14,300	-	
18							-	-	-	14,600	-	
19							-	-	-	11,400	-	
20							-	-	11,300	8,340	-	
21							-	-	18,500	-	-	
22							-	-	20,300	-	-	
23							-	-	19,000	-	8,740	
24							-	-	16,700	-	19,600	
25							-	-	12,600	-	19,200	
26							-	8,210	9,580	-	16,900	
27							-	14,400	-	-	13,800	
28							-	12,600	-	-	9,300	
29							-	9,440	10,500	-	-	
30							-	8,340	16,800	-	-	
31							-	8,080	-	-	-	

Salt Fork of Brazos River near Aspermont, Tex.

Location.- Water-stage recorder, lat. 33°20', long. 100°14', at bridge on U. S. Highway 83, 5¢ miles downstream from Dove Creek and 13.2 miles northwest of Aspermont, Stonewall County. Datum of gage is 1,588.7 feet above mean sea level (general adjustment of 1929). Gage is 6.8 miles upstream and at different datum from that discontinued Aug. 29, 1925.

Drainage area.- 4,834 square miles, of which about 2,770 square miles is probably noncontributing.

Records available.- December 1923 to August 1925, June 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period June to September, 24,300 second-feet June 19 (gage height, 10.44 feet); no flow at times.
1939-40: Maximum discharge during water year, 26,600 second-feet Aug. 16 (gage height, 11.05 feet), from rating curve extended above 20,000 second-feet; no flow at times.
1923-25, 1939-40: Maximum discharge, that of Aug. 16, 1940; no flow at times.
Maximum stage known, 14.4 feet, present site and datum, December 1913; flood of November 1934 reached a stage of 13.7 feet, according to information furnished by local residents.

Remarks.- Records poor. Daily discharge published only to show distribution of flood run-off. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	117	0	0.3
2									-	100	0	.3
3									-	66	0	.3
4									-	7.0	.1	.2
5									-	1.2	.1	.2
6									-	.6	.1	.2
7									-	.2	.1	.2
8									-	0	4,720	.2
9									-	0	230	.2
10									-	0	78	.2
11									-	0	514	.2
12									-	.2	144	.2
13									-	.3	82	.2
14									-	.4	177	.1
15									c.2	.3	190	.1
16									.4	.2	140	.1
17									.4	.2	170	0
18									474	.1	152	0
19									3,050	0	36	0
20									6,750	0	17	0
21									782	0	9.5	0
22									a223	0	7.0	0
23									a190	0	4.2	0
24									a136	0	2.6	0
25									a85	0	2.8	0
26									a47	0	1.2	0
27									38	0	.6	0
28									72	0	.4	0
29									423	0	.3	0
30									305	0	.3	0
31									-	0	.3	-

Peak discharge.- June 18 (11 p.m.) 7,600 sec.-ft.; June 19 (10:30 p.m.) 24,300 sec.-ft.; Aug. 8 (5:30 a.m.) 16,300 sec.-ft.

a No gage-height record; discharge computed on basis of range in stage and records for stations on Double Mountain Fork of Brazos River near Aspermont and Brazos River near Seymour.

c Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Discharge, in second-feet, of Salt Fork of Brazos River near Aspermont, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0.5	0	a61	753	46	1.2	216
2	0	0				.4	0	a49	156	14	4.2	c80
3	0	0				.4	0	a40	a51	8.0	1.0	49
4	0	0				.4	0	a28	a16	5.8	7.0	c129
5	0	0		a.3		.4	0	a20	a6.0	3.4	9.5	197
6	0	0				.3	263	a10	a1.4	2.2	141	117
7	0	0				.2	a14	a7.5	450	1.4	99	c61
8	0	0				.2	3.8	a4.2	1,770	1.2	14	c36
9	1,980	0			a.1	0	2.2	a2.4	c492	.8	5.8	c18
10	1,160	0				0	2.0	a2.0	c170	.7	2.6	c12
11	180	0				0	2.6	a.8	c75	.8	1.6	8.0
12	a132	0				0	5.4	a.6	c36	1.2	3.4	6.2
13	a88	0				0	5.4	a.5	17	0	4.2	3.8
14	a58	0				0	4.2	a.4	10	0	45	3.0
15	a35	0	a.2	a.2		0	1.8	0	14	0	1,610	2.4
16	13	0				0	0	0	9.0	0	9,240	1.8
17	6.6	0			1.4	0	0	0	3.4	0	3,740	1.6
18	4.2	0			3.0	0	0	0	1.8	0	1,220	1.0
19	2.2	0			3.0	0	0	0	.9	0	c320	.9
20	1.2	0			2.6	0	0	0	.7	0	c128	.9
21	.7	0			2.2	0	0	0	.4	0	58	1.2
22	.4	0			2.0	0	0	2.3	0	0	40	2.0
23	.2	0			1.8	0	0	3.0	.6	0	12	12
24	0	0			1.6	0	0	2.2	22.0	0	6.6	44
25	0	0		a.1	.9	0	0	0	108.0	0	207	13
26	0	0			.8	0	0	0	111	0	1,580	5.0
27	48	0			.8	0	0	0	28	0	290	2.2
28	a.3	a.1			.8	0	1,860	0	7.5	0	88	.9
29	0				.7	0	216	0	459	0	1,310	.6
30	0				-	0	93	0	148	0	1,720	.5
31	0	-			-	0	-	1,580	-	0	623	-

Peak discharge.- Apr. 28 (10 a.m.) 16,000 sec.-ft.; Aug. 16 (12:15 p.m.) 26,600 sec.-ft.; Aug. 29 (10 p.m.) 13,700 sec.-ft.

a No gage-height record; discharge computed on basis of known range of stage and records for station on Double Mountain Fork of Brazos River near Aspermont and Brazos River near Seymour.

c Gage-height record incomplete; discharge based on partial gage-height record.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 15-30, 1939	12,576.0	6,750	0.2	786	24,940
July	293.7	117	0	9.47	583
August	6,679.6	4,720	0	215	13,250
September	3.2	.3	0	.11	6.3
The period	-	-	-	-	38,780
October 1939	3,709.8	1,980	0	120	7,360
November	.3	-	0	.01	.6
December	6.2	-	-	.20	12
Calendar year	-	-	-	-	-
January 1940	6.1	-	-	.20	12
February	23.2	3.0	-	.80	46
March	2.8	.5	0	.09	5.6
April	2,473.4	1,860	0	82.4	4,910
May	1,813.9	1,580	0	58.5	3,600
June	4,916.7	1,770	0	164	9,750
July	85.5	46	0	2.76	170
August	22,532.1	9,240	1.0	727	44,690
September	1,026.0	216	.5	34.2	2,040
Water year 1939-40	36,596.0	9,240	0	100	72,600

White River at Plainview, Tex.

Location.- Water-stage recorder, lat. 34°11', long. 101°41', at bridge on Broadway Street at Plainview, Hale County, 0.7 mile upstream from bridge of Atchison, Topeka, & Santa Fe Ry. Datum of gage is 3,341.1 feet above mean sea level (general adjustment of 1929).

Records available.- June 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period June to September, 334 second-feet June 22 (gage height, 4.75 feet); no flow at times.
1939-40: Maximum discharge during water year, 13 second-feet Feb. 18 (gage height, 2.05 feet); no flow at times.
Maximum stage known, about 6.5 feet in May 1927, according to information furnished by local resident.

Remarks.- Records fair. No diversion above station.

Rating table, period June to September 1940 (gage height, in feet, and discharge, in second-feet)

0.9	0	1.4	2.2	2.0	12	3.0	64
1.0	.2	1.5	3.1	2.2	18	3.4	105
1.1	.5	1.6	4.3	2.4	26	3.8	157
1.2	1.0	1.7	5.8	2.6	36	4.2	220
1.3	1.5	1.8	7.5	2.8	48		

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-		0	
2									-		0	
3									-		0	
4									-		0	
5									-		0	
6									-		0	
7									-		0	
8									-		0	
9									-		0	
10									-		0	
11									-		2.8	
12									-		0	
13									-		3.0	
14									-		0	
15									-		0	
16									-		0	
17									-		0	
18									-		0	
19									-		0	
20									-		0	
21									19		0	
22									165		0	
23									31		0	
24									11		0	
25									4.1		0	
26									1.1		0	
27									1.1		0	
28									0		0	
29									0		0	
30									0		0	
31									-		0	

Discharge, in second-feet, of White River at Plainview, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0		0	0.1	0		0	0			0	
2	0		0	0	.6		0	0			0	
3	0		0	0	.9		0	0			0	
4	0		0	0	0		0	0			0	
5	0		0	0	0		.6	0			0	
6	0		0	0	0		.7	0			0	
7	0		0	0	0		0	0			0	
8	.1		0	0	0		0	0			0	
9	0		0	.2	0		0	0			0	
10	0		0	0	0		0	0			0	
11	0		0	0	0		0	0			0	
12	0		0	0	0		0	0			.1	
13	0		0	0	0		0	0			0	
14	0		0	0	0		0	0			0	
15	0		0	0	0		0	0			0	
16	0		0	0	0		0	0			0	
17	0		0	0	0		0	0			0	
18	0		0	0	2.2		0	0			0	
19	0		0	0	.4		0	0			0	
20	0		0	0	.1		0	0			0	
21	0		0	0	0		0	.1			0	
22	0		0	0	0		0	2.0			0	
23	0		0	0	.1		0	0			0	
24	0		0	0	0		0	0			0	
25	0		0	0	0		0	.1			0	
26	0		0	0	0		0	0			0	
27	0		0	0	0		0	.3			0	
28	0		0	0	0		0	0			0	
29	0		0	0	0		0	0			0	
30	0		0	0	-		0	0			0	
31	0		.3	0	-		-	0			0	

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 21-30, 1939	232.3	165	0	23.2	461
July	0	0	0	0	0
August	5.8	3.0	0	.19	12
September	0	0	0	0	0
The period	-	-	-	-	473
October 1939	.1	.1	0	.003	.2
November	0	0	0	0	0
December	.3	.3	0	.01	.6
Calendar year 1939	-	-	-	-	-
January 1940	.3	.2	0	.01	.6
February	4.3	2.2	0	.15	8.5
March	0	0	0	0	0
April	1.3	.7	0	.04	2.6
May	2.5	2.0	0	.08	5.0
June	0	0	0	0	0
July	0	0	0	0	0
August	.1	.1	0	.003	.2
September	0	0	0	0	0
Water year 1939-40	8.9	2.2	0	.02	18

Clear Fork of Brazos River at Nugent, Tex.

Location.- Water-stage recorder, lat. 32°41', long. 99°40', at highway bridge in Nugent, Jones County, 4 miles upstream from Deadman Creek.

Drainage area.- 2,220 square miles.

Records available.- February 1924 to September 1940.

Average discharge.- 16 years, 175 second-feet.

Extremes.- Maximum discharge during year, 6,960 second-feet Aug. 18 (gage height, 14.15 feet); minimum, 0.7 second-foot July 30, 31.
1924-40: Maximum discharge observed, 47,000 second-feet Sept. 8, 1932 (gage height, 27.05 feet, at site then in use), from rating curve extended above 25,000 second-feet; no flow at times.
Maximum stage known, about 30.0 feet in 1876, according to information furnished by local residents.

Remarks.- Records good. Flow regulated by Fort Phantom Hill Reservoir (see p. 94), and five smaller reservoirs having a combined capacity of 106,000 acre-feet. Small diversions above station for municipal supply and oil field uses.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.8	6.2	5.2	5.6	4.1	4.8	2.6	4.8	1,280	2.6	19
2	1.7	1.7	6.9	5.6	6.9	3.3	4.5	2.6	4.8	514	1.0	34
3	1.6	2.6	6.2	4.8	26	3.3	3.7	2.2	5.6	46	.8	32
4	11	2.9	6.2	4.8	32	3.3	2.9	2.2	4.1	23	1.0	251
5	2.9	2.6	6.2	4.8	27	3.7	4.1	1.8	3.3	17	1.0	1,150
6	1.7	2.2	5.2	5.2	16	3.3	7.5	1.8	2.2	15	.8	429
7	1.4	2.2	5.2	5.2	10	3.3	101	1.8	3.3	12	211	125
8	1.4	2.2	5.2	5.2	7.5	3.7	54	17	22	11	720	34
9	122	2.2	5.2	5.2	6.9	3.7	48	6.2	488	9.4	341	25
10	102	2.2	4.8	5.2	5.6	3.7	23	6.2	1,420	8.2	23	20
11	56	2.2	4.5	5.2	5.2	3.7	11	4.5	630	6.9	8.8	17
12	15	2.6	4.5	5.2	5.2	3.3	7.5	3.7	483	6.2	11	16
13	7.5	2.6	4.5	4.8	5.2	3.3	5.2	2.9	44	6.2	4.8	14
14	4.5	2.6	4.1	4.8	5.2	2.9	4.8	2.6	22	5.6	43	12
15	3.7	2.6	4.1	4.8	4.8	3.7	4.5	2.2	51	5.6	422	11
16	3.3	2.9	4.1	4.8	165	3.3	4.1	1.8	54	5.6	1,390	11
17	2.9	2.9	4.1	4.8	148	3.7	4.1	1.8	80	5.6	3,520	11
18	2.9	2.9	4.1	4.8	86	3.3	3.7	1.7	19	5.2	5,150	11
19	2.6	2.9	4.1	4.8	20	3.7	3.7	1.7	23	8.8	2,190	11
20	2.6	2.9	4.1	4.5	12	3.7	3.3	1.7	15	4.1	896	10
21	2.6	2.9	4.1	4.5	9.4	3.7	3.3	200	11	2.9	76	9.4
22	2.2	3.3	4.1	4.5	7.5	3.3	2.2	778	106	2.6	51	10
23	1.8	3.3	3.7	4.6	6.9	3.3	4.1	156	25	1.7	39	15
24	1.7	3.7	3.7	4.8	6.9	2.9	3.3	37	203	1.8	32	16
25	1.7	3.7	4.5	4.8	4.8	127	3.3	11	692	1.8	29	11
26	1,200	3.7	5.2	4.8	5.2	163	3.3	6.9	335	1.4	31	12
27	413	4.1	5.2	4.8	4.5	26	3.3	4.5	182	1.2	70	11
28	20	4.1	5.2	4.8	4.5	19	3.3	124	3.	1.1	46	9.4
29	7.5	5.6	5.2	4.8	4.8	10	3.3	296	304	.8	31	8.2
30	4.1	6.9	5.2	4.8	-	6.9	3.3	13	1,890	.7	23	12
31	2.6	-	4.8	5.2	-	6.2	-	6.2	-	1.4	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,005.7	1,200	1.4	64.7	3,980
November	91.0	6.9	1.7	3.03	180
December	150.4	6.9	3.7	4.85	298
Calendar year 1939	38,789.0	6,190	1.4	106	76,930
January	152.0	5.6	4.5	4.90	301
February	654.6	165	4.5	22.6	1,300
March	441.3	163	2.9	14.2	875
April	338.1	101	2.2	11.3	671
May	1,701.6	778	1.7	54.9	3,380
June	7,135.1	1,890	2.2	238	14,150
July	2,012.8	1,280	.7	64.9	3,990
August	15,384.8	5,150	.8	496	30,520
September	2,357.0	1,150	8.2	78.6	4,680
Water year 1939-40	32,424.4	5,150	.7	88.6	64,320

Peak discharge.- May 22 (1 a.m.) 2,930 sec.-ft.; June 30 (4:30 p.m.) 2,400 sec.-ft.; Aug. 18 (3:30 a.m.) 6,960 sec.-ft.

Clear Fork of Brazos River at Fort Griffin, Tex.

Location.- Water-stage recorder, lat. 32°56', long. 99°13', on bridge on old Fort Griffin-Throckmorton highway, half a mile east of Fort Griffin, Shackelford County, and 1.3 miles upstream from Mill Creek. Datum of gage is 1,174.53 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,974 square miles.

Records available.- December 1923 to September 1940.

Average discharge.- 16 years (1924-40), 293 second-feet.

Extremes.- Maximum discharge during year, 8,640 second-feet Aug. 19 (gage height, 21.06 feet); no flow at times.
1923-40: Maximum discharge, 33,600 second-feet Sept. 10, 1932 (gage height, 35.09 feet); no flow at times.
Maximum stage known, about 38.0 feet in 1900, according to information furnished by local residents.

Remarks.- Records good. Flow regulated by Fort Phantom Hill Reservoir (see p. 94), and several smaller reservoirs having a combined capacity of 106,000 acre-feet. Small diversions above station for municipal supply, irrigation, and oil field uses materially affect low flow.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	24	0.6	0	0.7	7.1	18	43	118	1,450	0	44
2	0	15	.5	0	.7	5.9	13	20	64	1,640	0	34
3	0	9.5	.5	0	79	5.2	8.0	10	37	920	0	32
4	0	6.7	.5	0	16	3.9	5.5	5.5	22	292	0	2,080
5	0	4.9	.5	0	7.5	3.6	4.5	3.4	13	123	0	704
6	0	3.6	.4	0	24	3.4	39	2.1	8.0	74	0	1,010
7	0	3.1	.4	0	35	2.6	14	1.7	6.7	51	0	684
8	0	2.6	.4	0	27	2.4	7.5	799	296	36	0	261
9	84	2.4	.4	0	19	2.2	4.2	25	1,640	26	0	130
10	14	2.2	.3	0	17	2.2	3.6	4.9	2,220	20	319	74
11	102	2.1	.3	0	13	3.6	47	2.1	2,160	15	174	49
12	91	2.1	.3	0	10	3.6	34	1.0	785	14	70	31
13	66	1.9	.3	0	7.1	3.1	36	.6	590	9.0	36	23
14	42	1.7	.3	0	5.2	2.4	25	.4	220	7.5	25	18
15	25	1.4	.3	0	4.2	1.9	15	.3	252	5.5	506	15
16	15	1.4	.2	0	302	1.7	11	.3	696	4.5	3,460	10
17	9.0	1.3	0	0	308	1.6	7.1	.3	860	3.4	6,660	8.5
18	6.3	1.3	0	0	450	1.4	4.5	.3	258	2.6	6,760	8.5
19	4.2	1.0	0	0	173	1.1	3.4	.3	205	1.9	8,240	8.0
20	2.9	.7	0	0	124	1.1	2.6	.3	91	1.4	4,260	6.7
21	2.4	.7	0	0	73	1.1	2.2	74	57	.9	1,260	5.9
22	2.1	.7	0	0	49	.9	2.1	1,130	65	.7	279	5.9
23	1.6	.6	0	0	34	.6	1.9	5,480	56	.4	134	5.9
24	1.1	.4	0	2.5	24	.7	1.6	937	4,360	.2	92	5.5
25	.9	.4	0	2.1	18	.4	1.4	324	4,760	.1	73	4.5
26	2,010	.3	0	1.6	14	.4	1.3	138	1,320	0	58	3.8
27	2,600	.3	0	1.4	11	.3	1.1	126	680	0	48	2.9
28	637	.3	0	1.1	9.0	.3	1.3	1,280	210	0	42	2.4
29	179	.4	0	1.0	7.5	59	19	2,090	180	0	43	2.2
30	72	.8	0	.9	-	39	110	1,810	100	0	50	2.4
31	38	-	0	.7	-	26	-	277	-	0	54	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,005.5	2,600	0	194	11,910
November	93.8	24	.3	3.13	186
December	6.2	.6	0	.20	12
Calendar year 1939	80,446.7	9,080	0	220	159,600
January	11.3	2.5	0	.36	22
February	1,861.9	450	.7	64.2	3,690
March	188.9	59	.3	6.09	375
April	444.8	110	1.1	14.8	882
May	14,586.5	5,480	.3	471	28,930
June	22,329.7	4,760	6.7	744	44,290
July	4,699.1	1,640	0	152	9,320
August	32,843	8,240	0	1,059	65,140
September	5,271.9	2,080	2.2	176	10,460
Water year 1939-40	88,342.6	8,240	0	241	175,200

Peak discharge.- May 23 (9:30 a.m.) 6,970 sec.-ft.; June 24 (8 a.m.) 5,660 sec.-ft.; June 25 (8 a.m.) 5,420 sec.-ft.; Aug. 19 (1:30 p.m.) 8,640 sec.-ft.

Clear Fork of Brazos River near Crystal Falls, Tex.

Location.- Water-stage recorder upstream from spillway of concrete dam, lat. 32°54', long. 98°50', at Texas Co.'s pumping plant, 2⅛ miles downstream from Hubbard Creek and 3¼ miles northeast of Crystal Falls, Stephens County. Datum of gage is 1,055.25 feet above mean sea level (general adjustment of 1929).

Drainage area.- 5,658 square miles.

Records available.- July 1928 to September 1940.

Average discharge.- 12 years, 479 second-feet.

Extremes.- Maximum discharge during year, 14,100 second-feet June 25 (gage height, 20.92 feet); no flow at times.

1928-40: Maximum discharge, 22,700 second-feet Sept. 8, 1932 (gage height, 28.10 feet); no flow at times.

Maximum stage known, about 34.0 feet, present datum, in 1900, according to information furnished by local residents.

Remarks.- Records good except those for period of no gage-height record and those below 40 second-feet, which were affected by occasional accumulation of drift on control, all of which are poor. A large part of ordinary flow diverted above station for municipal supply and oil field uses. Flow regulated by several reservoirs above Nugent which have a combined capacity of 106,000 acre-feet.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 9-17, May 11-14, July 15-24, and Sept. 25-30)

2.22	0	2.40	22.0	3.5	482	8.0	4,040	18.0	11,600
2.25	1.5	2.5	46.0	4.0	810	10.0	5,580	22.0	15,000
2.30	5.5	2.6	74.0	5.0	1,590	12.0	7,010		
2.35	12.5	3.0	230	6.0	2,400	14.0	8,460		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	54	11		0	12	6.7	23	257	343	0	54
2	0	41	8.3		0	8.3	27	57	128	1,740	0	49
3	0	27	5.5		242	6.9	18	32	71	1,470	0	41
4	0	18	4.7		67	5.5	14	18	46	740	0	539
5	0	14	3.9		29	5.5	12	9.7	32	257	0	1,700
6	0	12	3.9		29	5.5	2,110	3.9	20	136	0	535
7	0	11	3.1		14	3.9	2,320	3.0	16	95	0	1,200
8	0	9.7	2.3		24	3.1	306	6,550	415	71	0	431
9	0	5.5	1.5		41	1.5	109	4,680	1,550	54	0	25
10	0	4.7	1.5		32	1.5	60	252	2,570	44	0	128
11	0	4.7	1.0		27	1.5	39	88	2,150	36	137	71
12	0	4.7	.5		24	1.5	22	39	1,830	1,370	164	49
13	73	3.9	0		22	.5	41	20	1,160	360	243	36
14	78	3.1	0		14	0	44	170	2,070	84	95	32
15	66	1.5	0		12	0	44	108	3,170	34	322	29
16	41	1.0	0		72	0	34	27	4,980	20	7,060	22
17	24	1.0	0		790	0	29	73	1,630	14	9,300	18
18	16	1.0	0		438	0	18	84	1,350	8.3	10,600	16
19	11	1.0	0		400	0	12	18	1,340	4.7	6,440	9.7
20	6.9	.5	0		188	0	9.7	6.9	1,730	2.3	6,590	6.9
21	4.7	.5	0		136	0	6.9	4.7	280	1.0	3,820	6.9
22	2.3	.5	0		88	0	5.5	2,000	156	.5	870	29
23	1.5	.5	0		57	0	3.9	4,200	102	.5	275	34
24	.5	0	0		41	0	1.5	4,350	9,980	0	160	22
25	0	0	0		32	0	1.5	748	11,000	0	109	16
26	230	0	0		24	0	1.0	323	4,100	0	88	6.9
27	2,460	0	0		20	0	.5	164	1,280	0	68	3.1
28	1,650	0	0		14	0	.5	3,670	667	0	54	3.1
29	447	0	0		12	0	0	1,590	2,320	0	46	2.3
30	164	14	0		-	0	0	1,990	531	0	41	1.5
31	84	-	0		-	0	-	1,250	-	0	46	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,359.9	2,460	0	173	10,630
November	234.8	54	0	7.83	466
December	47.2	11	0	1.52	94
Calendar year 1939	117,935.1	9,230	0	323	233,900
January	0	0	0	0	0
February	2,889	790	0	99.6	5,730
March	57.2	12	0	1.85	113
April	5,296.7	2,320	0	177	10,510
May	32,552.2	6,550	3.0	1,050	64,570
June	56,931	11,000	16	1,898	112,900
July	6,885.3	1,740	0	222	13,660
August	46,528	10,600	0	1,501	92,290
September	5,116.4	1,700	1.5	171	10,150
Water year 1939-40	161,897	11,000	0	442	321,100

Peak discharge.- May 8 (11 p.m.) 9,580 sec.-ft.; May 24 (8 a.m.) 5,500 sec.-ft.; June 16 (3 a.m.) 8,010 sec.-ft.; June 25 (2:30 a.m.) 14,100 sec.-ft.; Aug. 18 (1 a.m.) 11,500 sec.-ft.

Note.- Discharge for period of no gage-height record, Nov. 17 to Dec. 18, computed on basis of known range in stage and records for station at Fort Griffin.

Fort Phantom Hill Reservoir near Nugent, Tex.

Location.- Staff gage, lat. 32°37', long. 99°40', on outlet tower at dam on Elm Creek, 4 miles upstream from Clear Fork of Brazos River and 5 miles south of Nugent, Jones County. Datum of gage is 1,580.0 feet above mean sea level.

Drainage area.- 478 square miles.

Records available.- July 1940 to September 1940.

Extremes.- Maximum contents during period July to September, 23,000 acre-feet Aug. 18-21 (gage height, 36.2 feet); minimum, 20,290 acre-feet Aug. 12-15 (gage height, 34.7 feet).

Remarks.- Reservoir is formed by earthfill dam with rock riprap face; dam completed and storage began in October 1938. Capacity, 69,550 acre-feet between gage heights 1.6 feet (sill of lowest outlet gate) and 54.0 feet (crest of spillway). Dead storage, 450 acre-feet. Records given herein represent total contents. Water is used for municipal supply and flood control. Gage read once daily at 6 a.m. Lake Abilene on Elm Creek, Lake Kirby on Cedar Creek, and Lytle Lake on Lytle Creek (combined capacity, 19,300 acre-feet) are smaller reservoirs above station in Elm Creek Basin.

Cooperation.- Capacity table furnished by city of Abilene.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Prepared by city of Abilene from a survey by the city)

0	310	20	4,910	30	13,300
5	780	22	6,010	35	20,800
10	1,580	24	7,450	40	30,600
15	2,780	26	9,100	50	55,700
18	3,890	28	11,000	54	70,000

Gage height, in feet, 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	35.2	35.9
2										-	35.2	35.9
3										-	35.2	35.9
4										-	35.1	35.9
5										-	35.1	35.9
6										-	35.0	35.8
7										-	35.0	35.8
8										-	34.9	35.8
9										-	34.8	35.8
10										-	34.8	35.7
11										-	34.8	35.7
12										-	34.7	35.7
13										-	34.7	35.7
14										-	34.7	35.7
15										-	34.7	35.7
16										-	35.6	35.7
17										-	35.9	35.7
18										35.6	36.2	35.7
19										35.6	36.2	35.7
20										35.6	36.2	35.7
21										35.6	36.2	35.7
22										35.6	36.1	35.7
23										35.6	36.1	35.6
24										35.6	36.0	35.6
25										35.6	36.0	35.6
26										35.6	36.0	35.6
27										35.6	36.0	35.6
28										35.5	36.0	35.6
29										35.5	36.0	35.5
30										35.5	35.9	35.5
31										35.5	35.9	-

Monthly gage height and contents, 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
July 31.....	35.5	21,700	-
Aug. 31.....	35.9	22,420	+720
Sept.30.....	35.5	21,700	-720

Aquilla Creek near Aquilla, Tex.

Location.- Water-stage recorder, lat. 31°51', long. 97°12', at bridge on Abbott-Aquilla county road, three-quarters of a mile upstream from Palls Branch, and 1 mile southeast of Aquilla, Hill County.

Drainage area.- 309 square miles.

Records available.- December 1924 to August 1925, December 1938 to September 1940.

Extremes.- Maximum discharge during year, 8,690 second-feet Apr. 6 (gage height, 27.30 feet), from rating curve extended above 6,500 second-feet; no flow at times.
1924-25, 1938-40: Maximum discharge, 9,860 second-feet June 19, 1939 (gage height, 28.16 feet), from rating curve extended above 6,500 second-feet; no flow at times.
Maximum stage known, about 34 feet on Aug. 31, 1887, based on information furnished by local resident. Flood of Sept. 27, 1936, reached a stage of about 33 feet, from floodmark (discharge not determined); peak discharge of this flood as determined about 9 miles below station, 84,500 second-feet, by slope-area method (drainage area, 372 square miles).

Remarks.- Records good except those below 5 second-feet, which are poor. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.9	0.7	1.1	0.7	0.8	20	0.3	264	0	
2	0	.1	1.2	.7	1.2	.7	.8	8.1	.2	257	0	
3	0	.1	.7	.7	3.3	.7	.7	4.0	.2	2,280	0	
4	0	.1	.4	.7	9.6	.7	.6	2.7	.1	1,050	0	
5	0	.1	.4	.7	3.7	.7	239	1.8	0	86	0	
6	0	.1	.3	.8	1.8	.7	5,770	1.1	0	42	0	
7	0	.1	.2	1.2	1.3	.6	3,320	.8	0	29	0	
8	0	.1	.2	3.1	1.1	.6	119	.6	0	21	0	
9	.1	.1	.2	1.7	1.0	a.6	90	.6	0	15	0	
10	.2	.2	.2	1.2	1.1	.6	35	1.6	0	11	0	
11	.1	.2	.2	1.0	1.3	.6	29	1.8	0	7.5	1.6	
12	.1	.1	.2	1.0	1.6	.7	25	1.1	0	1,160	2.6	
13	.1	.1	.3	1.0	1.1	.7	19	.9	0	1,560	0	
14	.1	.1	.2	1.0	1.0	.7	15	.7	74	104	0	
15	.1	.1	.2	.8	.9	.7	12	.4	1,040	42	0	
16	.1	.1	.2	.8	6.3	.6	11	.2	173	28	0	
17	.1	.1	.2	.8	22	.6	9.5	.2	237	19	0	
18	.1	.1	.2	.7	8.3	.7	7.8	.1	448	13	6.1	
19	.1	.1	.3	.7	5.0	.7	7.8	.1	229	9.5	.4	
20	.1	.1	.3	.7	2.7	.7	6.5	.1	1,050	7.5	0	
21	.1	.4	.3	.8	1.8	.8	5.0	0	98	5.6	0	
22	.1	.3	.6	.8	1.2	.8	4.0	157	62	3.8	0	
23	.1	.2	5.3	.8	1.1	.9	3.5	334	26	2.8	0	
24	.1	.2	3.5	.9	1.0	1.0	3.1	25	1,000	1.8	0	
25	.1	.2	1.6	.9	1.0	1.0	2.7	9.1	386	1.1	0	
26	.1	.2	1.1	.9	1.0	1.0	2.4	3.7	29	.7	0	
27	.1	.2	.9	.9	1.0	1.1	2.2	1.8	11	.4	0	
28	.1	.2	1.0	.9	.7	1.2	7.9	1.1	76	.2	0	
29	.1	.2	1.0	1.0	.7	1.4	571	.8	3,150	.1	0	
30	.1	.5	.8	1.0	-	1.2	66	.6	427	0	0	
31	.1	-	.7	1.0	-	1.0	-	.4	-	0	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.4	0.2	0	0.08	4.8
November	4.8	.5	.1	.16	9.5
December	23.8	5.3	.2	.77	47
Calendar year 1939	27,364.5	5,360	0	75.0	54,280
January	29.9	3.1	.7	.96	59
February	84.9	22	.7	2.93	168
March	24.7	1.4	.6	.80	49
April	10,388.3	5,770	.6	346	20,600
May	580.4	334	0	18.7	1,150
June	8,516.8	3,150	0	284	16,890
July	7,002.0	2,280	0	226	13,890
August	10.7	6.1	0	.35	21
September	0	0	0	0	0
Water year 1939-40	26,668.7	5,770	0	72.9	52,890

Peak discharge.- Apr. 6 (11 p.m.) 8,690 sec.-ft.; June 29 (4 a.m.) 4,220 sec.-ft.; July 3 (9 p.m.) 2,660 sec.-ft.
a No gage-height record; discharge interpolated.
Note.- Discharge for period of faulty intake operation, July 20 to Aug. 29, computed from graph based on available gage heights and weather records.

North Bosque River near Clifton, Tex.

Location.- Staff gage upstream from spillway of masonry dam, lat. 31°48', long. 97°35', a quarter of a mile upstream from Gulf, Colorado & Santa Fe Ry. bridge and 1.4 miles northwest of Clifton, Bosque County. Datum of gage is 622.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 974 square miles.

Records available.- November 1923 to September 1940.

Average discharge.- 17 years, 177 second-feet.

Extremes.- Maximum discharge during year, 4,970 second-feet Apr. 7 (gage height, 4.68 feet, from floodmark); no flow Aug. 8-17, Sept. 8-24.

1923-40: Maximum discharge, 38,500 second-feet Jan. 23, 1938 (gage height, 21.82 feet, from floodmarks); no flow at times.

Flood of May 9, 1922, reached a stage of about 25 feet, according to information furnished by local resident.

Remarks.- Records good except those below 5 second-feet, which are poor. Railway company pumps about 100,000 gallons a day from pool formed by control dam a third of a mile below gage. Gage read twice daily, more often during high stages.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.6	7.6	3.1	2.0	3.1	1.4	2.0	2.0	23	0.3	0.7
2	.2	.6	6.6	2.6	3.1	2.6	1.4	2.0	2.0	140	.2	.6
3	.2	.6	6.6	2.6	6.6	2.6	1.4	1.7	1.8	138	.2	.4
4	.2	.6	5.7	2.0	5.7	2.6	1.4	1.7	1.7	53	.2	.3
5	.2	.6	5.7	2.0	4.8	2.6	1.7	1.5	1.4	25	.1	.2
6	.2	.6	5.7	2.0	3.7	2.0	698	1.5	1.4	20	.1	.1
7	.2	.6	5.7	5.4	3.7	1.8	2,030	1.4	1.2	14	.1	.1
8	.2	.6	4.8	4.2	3.1	1.7	192	1.4	16	13	0	0
9	.8	.6	4.2	3.1	2.6	1.5	70	1.4	378	11	0	0
10	1.7	1.0	4.2	3.1	2.6	1.5	48	1.1	81	9.4	0	0
11	1.1	21	3.7	3.1	2.6	1.5	33	1.1	29	8.5	0	0
12	1.0	13	3.1	3.1	2.6	1.4	20	1.1	23	7.6	0	0
13	.8	5.7	3.1	3.1	2.6	1.4	13	1.0	810	5.7	0	0
14	.7	2.0	3.1	3.1	2.0	1.4	9.4	1.0	935	4.2	0	0
15	.7	2.0	2.6	2.9	2.0	1.4	9.4	1.0	1,650	3.1	0	0
16	.7	5.7	2.0	2.7	5.1	1.4	9.4	1.0	2,570	2.0	0	0
17	.7	7.6	1.8	2.5	5.1	1.4	8.5	.9	906	1.8	126	0
18	.7	7.6	1.8	2.2	2.6	1.2	75	.9	318	1.7	363	0
19	.7	6.6	1.8	2.0	2.6	1.1	34	.9	726	1.4	116	0
20	.7	5.7	1.7	2.0	2.6	1.1	17	.9	2,130	1.4	39	0
21	.7	5.7	1.7	2.0	2.6	1.1	8.5	.8	602	1.2	13	0
22	.7	4.2	1.8	2.0	2.0	1.1	5.7	19	102	1.1	7.6	0
23	.7	4.2	3.7	2.0	2.0	1.1	5.7	471	59	1.0	4.8	0
24	.7	3.7	3.7	2.0	1.8	1.1	4.2	121	460	.9	3.7	0
25	.7	3.1	5.7	2.0	1.8	1.2	3.7	53	146	.8	2.0	36
26	.7	3.1	4.8	2.0	2.0	1.2	3.1	27	120	.7	1.8	31
27	.7	6.1	4.2	2.0	2.6	1.4	3.1	14	53	.6	1.7	27
28	.7	3.1	3.1	2.0	3.1	1.2	3.7	12	27	.6	1.4	21
29	.7	3.1	3.1	2.0	3.1	1.4	4.2	9.4	163	.5	1.1	14
30	.6	7.6	3.1	2.0	-	1.4	3.1	6.6	98	.4	1.0	7.6
31	.6	-	3.1	2.0	-	1.4	-	4.2	-	.3	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	19.4	1.7	0.2	0.63	38
November	124.2	21	.6	4.14	246
December	119.5	7.6	1.7	3.85	237
Calendar year 1939	30,213.4	7,330	.2	82.8	59,940
January	78.8	5.4	2.0	2.54	156
February	84.7	6.6	1.8	2.92	168
March	48.9	3.1	1.1	1.58	97
April	3,319.0	2,030	1.4	111	6,580
May	763.5	471	.8	24.6	1,510
June	12,413.5	2,570	1.2	414	24,620
July	491.9	140	.3	15.9	976
August	684.3	363	0	22.1	1,360
September	139.0	36	0	4.63	276
Water year 1939-40	18,286.7	2,570	0	50.0	36,280

Note.- No gage-height record Jan. 15-19, 21-29, Aug. 8-16, and Sept. 16-24; discharge computed on basis of field notes and weather records.

Leon River near Hasse, Tex.

Location.- Water-stage recorder and concrete control, lat. 31°57', long. 98°28', at bridge on U. S. Highway 67, 1,000 feet upstream from Gulf, Colorado & Santa Fe Ry. bridge, 0.4 mile upstream from Walnut Creek and 2.1 miles northeast of Hasse, Comanche County. Datum of gage is 1,115.1 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,276 square miles.

Records available.- January 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period January to September, 15,900 second-feet June 20 (gage height, 17.04 feet); no flow Sept. 6-30.
1939-40: Maximum discharge during water year, 3,500 second-feet June 16 (gage height, 13.75 feet); no flow at times.
Maximum stage known, about 25.0 feet in May 1908, according to information furnished by State Highway Department.

Remarks.- Records poor except those above 1,500 second-feet, which are fair. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				a4.7	12	13	19	8.2	128	76	2.4	1.4
2				a4.7	17	12	15	27	82	160	2.1	1.0
3				4.7	12	12	13	88	50	52	1.4	.6
4				5.1	9.8	12	12	36	32	35	3.5	.4
5				4.4	9.2	12	12	35	28	28	1.2	.2
6				4.4	9.2	12	12	141	30	23	1.5	0
7				4.4	9.2	12	9.8	33	29	19	11	0
8				16	9.2	11	9.8	23	21	16	59	0
9				168	9.2	12	9.8	43	12	14	72	0
10				56	8.2	12	9.2	43	9.2	12	252	0
11				100	7.2	13	8.2	19	7.2	10	168	0
12				177	7.2	11	7.7	10	6.8	8.7	29	0
13				70	7.2	9.8	7.7	131	5.8	8.2	12	0
14				44	9.8	10	8.2	171	4.4	8.7	6.3	0
15				36	49	10	8.2	268	3.8	9.2	3.8	0
16				22	36	9.2	123	c278	3.0	8.2	2.5	0
17				18	32	9.2	266	c1,070	2.5	5.8	1.8	0
18				15	26	9.2	120	c995	2.2	5.1	1.7	0
19				14	27	9.2	35	945	284	4.0	1.8	0
20				12	26	9.2	24	944	11,400	3.6	2.0	0
21				12	21	10	17	578	11,000	3.3	1.3	0
22				12	19	11	12	285	4,140	2.8	8.0	0
23				14	16	11	11	145	1,810	2.7	40	0
24				15	16	14	10	54	1,100	2.4	121	0
25				16	16	22	9.2	30	953	1.8	125	0
26				17	16	28	78	19	562	1.5	32	0
27				26	16	30	43	13	281	1.3	12	0
28				20	14	175	22	213	205	1.2	16	0
29				17	-	104	24	252	141	2.1	23	0
30				14	-	36	11	271	91	3.8	6.8	0
31				12	-	25	-	255	-	3.3	2.5	-

Peak discharge.- May 18 (3 a.m.) 1,180 sec.-ft.; June 20 (2 p.m.) 15,900 sec.-ft.
a No gage-height record; discharge computed on basis of engineer's notes and weather records.
c Backwater from Walnut Creek; discharge computed on basis of gage heights and results of four discharge measurements.

Discharge, in second-feet, of Leon River near Hasse, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	1.1	2.2	2.8	2.7	15	8.2	389	1.1	1.7
2			0	1.0	2.5	2.7	2.7	12	7.2	236	.9	1.3
3			0	1.1	4.0	2.5	2.4	11	5.8	154	.7	1.2
4			0	1.1	5.4	2.4	2.4	9.2	5.1	88	.5	1.0
5			0	1.1	16	2.2	2.7	7.2	3.0	148	.3	.8
6			0	1.2	8.2	2.2	345	5.8	2.2	123	.2	.7
7			0	1.3	4.0	2.1	894	5.1	1.8	47	.2	.6
8			0	1.3	3.0	2.1	798	8.2	1.4	36	0	.5
9			0	1.4	2.5	2.1	965	43	1.3	30	0	.5
10			0	1.4	2.2	2.1	560	200	20	27	0	.3
11			0	1.4	2.1	2.4	242	118	265	23	0	0
12			0	1.4	2.1	9.1	134	35	96	21	0	0
13			0	1.4	2.0	14	76	23	346	19	0	0
14			0	1.3	2.0	5.8	54	18	766	16	0	0
15			0	1.3	2.1	3.5	39	15	d1,100	13	0	0
16			0	1.4	2.9	2.7	32	13	d2,780	10	344	0
17			0	1.5	4.4	2.5	26	12	1,780	8.7	678	0
18			0	1.5	17	2.5	22	12	1,160	7.7	306	0
19			0	1.4	12	2.5	19	11	782	6.8	305	0
20			.2	1.3	7.2	2.8	16	11	1,180	5.4	226	0
21			.6	1.5	4.7	2.8	15	9.8	936	5.1	92	0
22			1.2	1.7	3.8	2.8	14	11	782	4.4	42	32
23			1.5	1.7	3.3	2.8	13	121	421	3.8	23	231
24			1.3	1.7	3.0	2.8	12	261	a374	3.3	14	22
25			1.5	1.7	3.0	2.5	12	157	1,050	2.7	9.8	4.4
26			1.5	1.7	3.0	2.5	12	56	a650	2.5	7.2	2.1
27			1.5	1.7	3.0	2.4	12	31	a965	2.1	5.1	1.4
28			1.4	2.0	3.0	2.7	14	17	704	2.0	3.8	1.1
29			1.2	2.2	3.0	2.8	19	16	359	1.7	2.8	.7
30			1.2	2.1	-	2.8	22	12	322	1.5	2.2	.5
31			1.1	2.1	-	3.0	-	9.8	-	1.3	1.8	-

Peak discharge.- Apr. 7 (4:30 a.m.) 1,280 sec.-ft.; June 16 (8 a.m.) 3,500 sec.-ft.; June 20 (1:30 p.m.) 1,430 sec.-ft.

a No gage-height record; discharge computed on basis of available gage heights, known range in stage, engineer's notes, and weather records.

d Backwater from Walnut Creek; discharge computed on basis of gage heights and results of discharge measurement.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January 1939	955.4	177	4.4	30.8	1,900
February	466.4	49	7.2	16.7	925
March	685.8	175	9.2	22.1	1,360
April	956.8	256	7.7	31.9	1,900
May	7,423.2	1,070	8.2	239	14,720
June	32,423.9	11,400	2.2	1,081	64,310
July	532.6	160	1.2	17.2	1,060
August	1,022.6	252	1.2	33.0	2,030
September	3.6	1.4	0	.12	7.1
The period	-	-	-	-	88,210
October 1939	0	0	0	0	0
November	0	0	0	0	0
December	14.2	1.5	0	.46	28
Calendar year 1939	44,484.5	11,400	0	122	88,240
January 1940	46.0	2.2	1.0	1.48	91
February	133.6	17	2.0	4.61	265
March	100.9	14	2.1	3.25	200
April	4,379.9	965	2.4	146	8,690
May	1,286.1	261	5.1	41.5	2,550
June	16,874.0	2,780	1.3	562	33,470
July	1,439.0	389	1.3	46.4	2,850
August	2,066.6	678	0	66.7	4,100
September	303.8	231	0	10.1	603
Water year 1939-40	26,644.1	2,780	0	72.8	52,850

Leon River near Belton, Tex.

Location.- Water-stage recorder upstream from spillway of concrete dam, lat. 31°04'15", long. 97°26'30", 1,400 feet upstream from bridge on U. S. Highway 81 and 2 miles east of Belton, Bell County. Datum of gage is 476.9 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,547 square miles.

Records available.- October 1923 to September 1940.

Average discharge.- 17 years, 561 second-feet.

Extremes.- Maximum discharge during year, 10,200 second-feet June 29 (gage height, 9.03 feet); minimum, 3.3 second-feet Oct. 21.

1923-40: Maximum discharge, 51,100 second-feet Sept. 28, 1936 (gage height, 20.0 feet), by slope-area method; no flow at times.

Maximum stages known, about 25 feet sometime in December 1913, and 21.0 feet sometime in September 1921, according to information furnished by local residents.

Remarks.- Records fair. Several small pumping plants divert water above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	4.6	35	20	9.5	44	11	430	96	6,210	56	101
2	6.0	4.6	12	22	11	44	11	183	68	3,830	53	207
3	6.0	4.3	16	22	24	44	11	134	50	3,020	50	96
4	6.0	4.9	16	24	35	32	11	101	38	1,980	47	53
5	7.0	5.4	16	26	32	32	11	76	26	1,260	44	44
6	6.0	5.2	16	35	29	29	1,710	60	22	904	41	35
7	6.0	5.4	16	35	35	24	2,190	53	16	691	38	26
8	5.7	4.9	14	35	32	24	1,500	50	16	563	35	24
9	8.0	4.6	14	32	38	24	727	50	18	463	29	24
10	863	4.1	14	26	41	22	913	50	20	406	29	20
11	101	8.0	16	26	38	12	760	44	20	414	29	14
12	12	16	20	26	18	12	823	44	24	1,200	26	14
13	5.4	12	16	26	20	11	778	38	183	504	24	12
14	5.2	12	18	18	22	11	814	32	1,510	367	22	11
15	11	12	20	16	24	11	529	32	2,940	313	22	9.5
16	16	18	22	14	29	11	305	38	3,620	267	22	8.0
17	8.0	24	18	12	32	11	240	110	3,080	254	20	7.0
18	5.2	29	14	12	32	9.5	183	80	3,240	200	22	7.0
19	4.3	32	14	11	47	9.5	149	60	4,860	172	360	6.0
20	3.6	35	12	11	41	11	124	41	2,720	154	510	5.4
21	3.5	41	12	11	41	11	110	32	2,860	143	356	5.2
22	3.5	38	29	12	35	11	92	122	2,240	134	605	9.5
23	3.8	24	35	12	29	11	84	105	1,980	120	390	9.5
24	3.6	22	26	11	32	9.5	76	88	3,250	110	335	20
25	4.1	26	26	9.5	32	9.5	72	56	2,550	96	254	35
26	4.1	29	26	9.5	32	11	68	164	2,440	92	160	22
27	3.8	32	26	9.5	35	14	56	398	1,760	84	120	14
28	3.8	35	26	9.5	35	14	565	200	751	80	147	14
29	3.6	35	26	8.0	35	14	1,300	297	5,560	72	160	53
30	3.5	44	26	9.5	-	14	921	227	4,220	68	252	96
31	4.1	-	24	11	-	12	-	149	-	64	124	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,132.8	863	3.5	36.5	2,250
November	572.0	44	4.1	19.1	1,130
December	621	35	12	20.0	1,230
Calendar year 1939	102,183.3	7,660	3.5	280	202,700
January	561.5	35	8.0	18.1	1,110
February	895.5	47	9.5	30.9	1,780
March	559.0	44	9.5	18.0	1,110
April	15,144	2,190	11	505	30,040
May	3,564	430	32	115	7,070
June	50,178	5,560	16	1,673	99,530
July	24,225	6,210	64	781	48,050
August	4,382	605	20	141	8,690
September	1,002.1	207	5.2	33.4	1,990
Water year 1939-40	102,836.9	6,210	3.5	281	204,000

Peak discharge.- June 19 (2 a.m.) 8,900 sec.-ft.; June 29 (1 p.m.) 10,200 sec.-ft.; July 1 (7 a.m.) 9,400 sec.-ft.

Little River at Cameron, Tex.

Location.- Water-stage recorder, lat. 30°50', long. 96°57', at site of old McCowan bridge, 2,100 feet upstream from bridge on U. S. Highway 77 and 2 miles southeast of Cameron, Milam County. Datum of gage is 281.9 feet above mean sea level (general adjustment of 1929).

Drainage area.- 7,034 square miles.

Records available.- November 1916 to September 1940.

Average discharge.- 23 years (1917-40), 1,799 second-feet.

Extremes.- Maximum discharge during year, 75,400 second-feet July 1 (gage height, 36.65 feet); minimum, 29 second-feet Oct. 3-5, 8.

1916-40: Maximum discharge, 647,000 second-feet, Sept. 10, 1921 (gage height, about 53.2 feet, present datum, from floodmarks), by slope-area method; minimum, 2.6 second-feet, Sept. 3, 5, 7, 1918.

The flood of 1852 reached a stage of about 52.4 feet, according to information furnished by State Highway Department.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Many small diversions for irrigation and municipal supply affect flow during extremely low stages. Slight regulation caused by pumping above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

2.8	26	4.0	174	20.0	6,700	32.8	16,800
3.0	35	4.5	314	25.0	9,150	34.0	27,700
3.2	47	5.0	498	31.0	12,700	35.0	41,700
3.4	67	10.0	2,410	32.0	13,600	36.0	61,000
3.6	94	15.0	4,470	32.4	14,400	37.0	86,000

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	44	56	77	70	125		2,790	764	66,000	377	445
2	31	40	54	74	79	121		1,030	555	35,500	355	298
3	30	38	60	70	154	113	74	612	414	22,000	331	248
4	29	36	55	68	2,620	109		414	308	25,000	311	298
5	29	36	65	68	1,640	106		308	246	11,800	292	230
6	30	36	63	71	356	102		246	214	4,900	276	176
7	30	35	59	72	208	97		201	186	3,000	270	148
8	29	34	59	71	154	91	3,500	186	156	2,490	244	127
9	30	34	60	77	133	90		273	150	2,100	238	115
10	30	36	62	e7	121	86		252	617	1,830	227	106
11	1,410	42	60	84	115	84	f1,140	181	4,770	1,600	219	97
12	1,920	48	59	81	111	86	1,560	163	1,230	1,640	211	91
13	595	49	55	79	108	83	1,300	137	348	2,450	206	87
14	308	70	53	77	97	79	992	135	258	f3,620	201	83
15	193	79	55	74	94	76	954	131	1,700	2,570	191	79
16	135	74	57	70	113	76	859	121	4,090	f3,900	181	77
17	108	70	56	70	202		612	115	6,340	f2,340	170	76
18	97	66	56	70	1,220		475	115	5,350	1,300	167	74
19	83	65	55	66	1,070		384	627	5,440	1,110	170	74
20	72	62	57	64	479		331	1,030	8,450	992	200	71
21	63	60	59	64	377		308	354	8,050	878	555	72
22	57	57	64	64	282		258	839	5,150	783	574	72
23	53	53	72	63	227		235	9,100	f3,750	f707	612	77
24	48	50	70	62	191		214	18,400	3,010	669	650	87
25	68	51	88	64	165	79	201	6,990	f3,920	612	517	188
26	97	59	106	66	152		188	878	5,940	574	452	174
27	133	51	94	68	144		244	517	5,000	536	373	127
28	115	48	93	68	137		7,010	1,040	f3,500	490	298	121
29	80	48	91	68	131		11,300	5,550	f6,500	452	252	99
30	60	52	91	67	-		7,480	5,880	38,000	430	230	88
31	50	-	84	67	-		-	f1,340	-	399	392	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,045	1,920	29	195	11,990
November	1,523	79	34	50.8	3,020
December	2,068	106	53	66.7	4,100
Calendar year 1939	170,341	11,800	29	467	337,900
January	2,191	87	62	70.7	4,350
February	10,950	2,620	70	378	21,720
March	2,709	125	-	87.4	5,370
April	53,915	11,300	-	1,797	106,900
May	59,955	18,400	115	1,934	118,900
June	124,406	38,000	150	4,147	246,800
July	202,672	66,000	399	6,538	402,000
August	9,742	650	167	314	19,320
September	4,105	445	71	137	8,140
Water year 1939-40	480,281	66,000	29	1,312	952,600

Peak discharge.- May 24 (7 a.m.) 23,200 sec.-ft.; July 1 (11 a.m.) 75,400 sec.-ft.; July 4 (6 a.m.) 30,000 sec.-ft.

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Note.- No gage-height record Mar. 17 to Apr. 10, June 1-3 and July 11-13, 18-22; discharge computed from known range in stage, field notes, weather records, and records for tributary stations upstream.

Lampasas River at Youngsport, Tex.

Location.- Water-stage recorder, lat. 30°57', long. 97°43', 300 feet upstream from bridge on county highway and half a mile southeast of Youngsport, Bell County.

Drainage area.- 1,242 square miles.

Records available.- February 1924 to September 1940.

Average discharge.- 16 years, 256 second-feet.

Extremes.- Maximum discharge during year, 13,000 second-feet July 1 (gage height, 12.32 feet); minimum, 3.0 second-feet Oct. 1-3.

1924-40: Maximum discharge, 53,200 second-feet Sept. 28, 1936 (gage height, 33.5 feet, from floodmarks), from rating curve extended above 40,000 second-feet; no flow July 17 to Aug. 18, 1925, July 22, 23, and Aug. 9 to Sept. 8, 1934.

Flood of September 1873 reached a stage of about 44.2 feet, and that of Dec. 2, 1913, reached a stage of 33.6 feet, present datum, according to information furnished by local residents.

Remarks.- Records good. Small diversion above station for municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	8.4	a13	20	14	25	19	83	28	5,400	42	42
2	3.0	7.7	a13	17	16	23	16	57	25	1,190	40	30
3	3.4	7.7	a13	16	20	23	15	45	21	870	32	25
4	3.4	7.7	a13	16	23	21	15	37	20	652	30	23
5	3.8	8.4	13	16	26	21	16	32	17	529	28	20
6	4.2	8.4	13	16	25	20	700	28	16	462	26	19
7	4.2	8.4	13	17	20	19	1,230	26	15	423	25	17
8	5.0	9.0	13	17	19	19	274	30	15	373	23	16
9	5.5	9.7	13	16	20	19	138	32	15	331	23	16
10	2,210	10	13	16	20	19	94	35	35	290	23	15
11	155	15	15	16	20	19	97	32	25	254	23	14
12	40	19	15	16	20	19	94	28	20	730	23	13
13	21	19	15	16	20	19	66	25	509	548	21	13
14	15	17	15	15	17	17	57	21	1,340	319	20	13
15	13	15	15	15	16	17	54	20	588	248	19	13
16	12	13	16	15	19	17	51	19	441	218	17	13
17	10	13	16	14	247	17	51	16	264	199	17	13
18	9.7	13	16	14	214	17	76	19	436	172	37	12
19	9.7	13	15	13	116	17	60	19	1,470	155	138	12
20	9.7	13	15	13	69	17	48	25	862	142	94	11
21	9.7	13	15	13	54	17	42	21	313	131	60	12
22	9.7	13	19	13	45	17	40	93	163	123	40	20
23	9.7	a13	21	14	40	17	37	523	112	112	30	32
24	9.7	a13	21	14	37	17	37	116	1,310	101	25	30
25	11	a13	28	14	30	16	37	79	1,380	86	21	19
26	10	a13	25	14	30	16	37	51	313	76	20	15
27	10	a13	20	14	28	17	37	37	176	69	19	13
28	10	a13	20	14	28	17	498	911	152	63	121	13
29	9.7	a13	20	14	26	21	104	218	5,190	57	116	13
30	8.4	a13	20	14	-	20	127	72	3,620	51	63	12
31	8.4	-	20	14	-	20	-	37	-	45	40	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,646.9	2,210	3.0	85.4	5,250
November	365.4	19	7.7	12.2	725
December	512	28	13	16.5	1,020
Calendar year 1939	26,853.6	-	3.0	73.6	53,270
January	466	20	13	15.0	924
February	1,279	247	14	44.1	2,540
March	580	25	16	18.7	1,150
April	4,167	1,230	15	139	8,270
May	2,787	911	16	89.9	5,530
June	13,891	5,190	15	630	37,470
July	14,419	5,400	45	465	28,600
August	1,256	138	17	40.5	2,490
September	529	42	11	17.6	1,050
Water year 1939-40	47,898.3	5,400	3.0	131	95,020

Peak discharge.- June 29 (4 a.m.) 8,220 sec.-ft.; June 29 (2 p.m.) 9,850 sec.-ft.; July 1 (2:30 a.m.) 13,000 sec.-ft.

a No gage-height record; discharge computed on basis of known range in stage and weather records.

San Gabriel River at Georgetown, Tex.

Location.- Water-stage recorder and concrete control, lat. 30°39'10", long. 97°39'20", 100 feet downstream from Missouri-Kansas-Texas R. R. bridge, 1¼ miles downstream from confluence of North and South Forks, and 1¾ miles northeast of Georgetown, Williamson County. Datum of gage is 643.34 feet above mean sea level (general adjustment of 1929).

Drainage area.- 415 square miles.

Records available.- July 1934 to September 1940. February 1924 to August 1925 at site 1 mile upstream; records equivalent except those for extremely low flow.

Extremes.- Maximum discharge during year, 34,500 second-feet June 30 (gage height, 18.46 feet, from rating curve extended above 24,000 second-feet); minimum, 0.3 second-foot, (regulated) Oct. 28, 29.

1924-25, 1934-40: Maximum discharge, that of June 30, 1940; minimum, 0.3 second-foot, (regulated) June 9-12, Oct. 28, 29, 1939.

Maximum stage known, 39.36 feet, present datum, September 1921 (discharge, 160,000 second-feet by slope-area method), according to information furnished by Missouri-Kansas-Texas R. R. Co.

Remarks.- Records good. Several small diversions have some effect on low flow, which is also regulated at times by gates in recreation dam 3,000 feet above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	5.5	7.0	4.4	4.7	19	14	35	35	4,870	64	28
2	3.3	5.5	5.5	4.7	7.4	18	12	30	32	1,030	60	25
3	3.0	5.9	5.1	4.7	43	16	12	28	29	1,540	56	21
4	3.0	5.9	5.1	4.7	36	16	11	16	26	564	52	19
5	2.7	5.9	5.1	4.7	20	15	11	21	18	420	56	18
6	2.7	5.9	4.7	5.5	14	15	1,720	25	22	361	38	18
7	3.0	5.9	4.7	6.3	12	14	275	24	9.4	316	48	16
8	3.0	5.9	4.7	5.5	11	14	84	37	22	280	44	16
9	4.0	5.9	4.7	5.1	12	14	53	34	25	234	44	15
10	1,800	5.9	4.7	5.1	13	13	46	15	85	218	41	16
11	93	12	4.7	4.7	12	14	180	23	63	200	40	15
12	31	13	4.7	4.4	10	15	136	20	21	331	38	15
13	16	9.5	4.4	4.4	9.5	14	61	18	44	448	36	14
14	8.6	7.4	4.4	4.0	9.0	13	45	18	14	288	34	13
15	.4	6.7	4.4	3.7	8.6	12	38	30	635	206	32	12
16	.5	5.9	4.4	3.7	15	12	33	17	265	653	30	12
17	1.0	5.9	4.4	3.7	442	12	32	15	143	197	28	12
18	2.7	5.9	4.4	3.7	152	12	29	16	432	154	33	12
19	3.0	5.5	4.0	3.3	66	6.4	16	21	608	152	48	11
20	3.0	5.1	3.7	3.7	46	21	15	18	289	145	47	11
21	3.0	4.7	f3.7	4.0	36	14	19	16	97	136	37	11
22	3.0	4.4	4.4	4.7	31	6.6	21	1,540	66	129	35	32
23	3.0	4.4	4.7	4.7	26	2.1	20	1,460	54	122	32	75
24	3.0	4.4	4.0	4.7	26	10	21	132	52	113	30	37
25	113	4.4	4.7	4.4	25	12	24	64	43	102	30	22
26	39	4.0	5.9	4.4	24	12	25	46	54	92	30	16
27	17	4.0	5.1	4.4	22	14	339	40	43	87	28	13
28	5.5	4.0	4.7	4.4	22	13	192	167	37	80	28	12
29	.3	4.7	4.7	4.4	20	26	57	147	6,700	76	30	11
30	.6	7.4	4.7	4.0	-	7.0	44	55	10,100	71	31	10
31	3.7	-	4.4	4.0	-	11	-	41	-	67	31	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,178.3	1,800	0.3	70.3	4,320
November	181.5	13	4.0	6.05	360
December	145.8	7.0	3.7	4.70	289
Calendar year 1939	5,595.7	1,800	.3	15.3	11,100
January	138.1	6.3	3.3	4.45	274
February	1,177.2	442	4.7	40.6	2,330
March	413.1	26	2.1	13.3	819
April	3,585	1,720	11	120	7,110
May	4,169	1,540	15	134	8,270
June	20,063.4	10,100	9.4	669	39,800
July	13,702	4,870	67	442	27,180
August	1,211	64	28	39.1	2,400
September	558	75	10	18.6	1,110
Water year 1939-40	47,522.4	10,100	.3	130	94,260

Peak discharge.- June 29 (4:30 a.m.) 14,300 sec.-ft.; June 30 (8 a.m.) 34,500 sec.-ft.; July 1 (7:30 a.m.) 19,400 sec.-ft.

f Discharge computed from graph based on twice-daily gage readings.

Yegua Creek near Somerville, Tex.

Location.- Water-stage recorder, lat. 30°19', long. 96°30', at bridge on State Highway 36, 750 feet downstream from Gulf, Colorado & Santa Fe Ry. bridge, 2 miles south of Somerville, Burleson County, and 5 miles upstream from Davidson Creek. Datum of gage is 199.29 feet above mean sea level (general adjustment of 1929).

Drainage area.- 990 square miles.

Records available.- May 1924 to September 1940.

Average discharge.- 16 years, 313 second-feet.

Extremes.- Maximum discharge during year, 56,800 second-feet July 1 (gage height, 19.27 feet); no flow at times.
1924-40: Maximum discharge, that of July 1, 1940; no flow at times.
Maximum stage known, about 22.0 feet (revised), present site and datum, Dec. 5, 1913 (discharge not determined), according to information furnished by Chief Engineer, Gulf, Colorado & Santa Fe Ry. Co.

Remarks.- Records good except those for periods of no gage-height record, which are poor. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0		0		0	2.8	0	132	625	49,900	4.0	8.2
2	0		0		0	2.2	0	277	473	27,300	3.2	2.7
3	4.9		0		.1	1.8	25	440	454	12,800	2.7	1.2
4	7.8		0	a1.2	.2	1.4	49	414	226	5,700	2.3	.5
5	3.8		0		5.2	1.1	26	145	89	3,150	1.9	.3
6	2.0		0		26	.8	29	49	42	1,940	1.5	.2
7	.9		0	.7	79	.5	95	24	26	1,180	1.1	.1
8	.4		0	.5	111	.4	44	16	18	636	.8	.1
9	.2		0	.4	116	.3	58	11	13	378	.6	0
10	.2		0	.3	60	.2	109	8.4	192	174	.4	0
11	.2		0	.7	28	.2	176	5.8	532	103	.4	0
12	.1		0	2.5	17	.2	152	4.6	394	67	.3	0
13	0		0	1.9	14	.1	100	12	120	52	.2	0
14	0		0	1.1	11	.1	53	21	72	43	.2	0
15	0		0	.7	8.0	.1	27	15	46	39	.1	0
16	0		0	.5	66	0	18	8.0	32	35	.1	0
17	0		0	.4	575	0	16	4.9	31	43	.1	0
18	0		0	.3	465	0	12	3.3	52	106	3.6	0
19	0		0	.2	140	0	e.4	3.0	842	162	2.9	0
20	0		0	.1	62	0	6.0	4.4	1,670	164	.7	0
21	0		0	.1	50	0	4.5	4.4	1,120	118	.4	0
22	0			.1	29	0	3.4	3.9	538	64	.2	0
23	0			.1	16	0	2.7	76	281	37	.2	17
24	0			.1	9.6	0	2.5	447	389	26	.1	20
25	0			.1	7.0	0	2.0	337	389	18	a.1	56
26	0		a48	0	6.8	0	1.7	281	137	14	a0	30
27	0		0	0	5.6	0	1.3	285	56	11	0	6.3
28	0		0	0	4.6	0	1.2	810	37	8.8	0	2.1
29	0		0	0	3.7	0	3.9	1,160	585	6.8	0	.8
30	0		0	0	-	0	27	1,050	19,500	5.5	0	.3
31	0		0	0	-	0	-	904	-	4.6	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	20.5	7.8	0	0.66	41
November	0	0	0	0	0
December	480	-	0	15.5	952
Calendar year 1939	17,963.7	1,250	0	49.2	35,620
January	18.0	-	0	.58	36
February	1,915.8	575	0	66.1	3,800
March	12.2	2.8	0	.39	24
April	1,053.6	176	0	35.1	2,090
May	6,956.7	1,160	3.0	224	13,800
June	28,981	19,500	13	966	57,480
July	104,285.7	49,900	4.6	3,364	206,800
August	39.1	11	0	1.26	78
September	145.8	56	0	4.86	289
Water year 1939-40	143,908.4	49,900	0	393	285,400

Peak discharge.- May 28 (8 p.m.) 1,250 sec.-ft.; June 19 (9 p.m.) 2,160 sec.-ft.; July 1 (5 a.m.) 56,800 sec.-ft.
a No gage-height record; discharge computed on basis of known range in stage and weather records.

Navasota River near Easterly, Tex.

Location.- Water-stage recorder, lat. 31°10'10", long. 96°17'55", at bridge on U. S. Highway 79, 1 mile upstream from Missouri Pacific R. R. bridge, and 6 miles northeast of Easterly, Robertson County. Datum of gage is 276.42 feet above mean sea level (general adjustment of 1929).

Drainage area.- 949 square miles.

Records available.- March 1924 to September 1940.

Average discharge.- 16 years, 414 second-feet (average discharge figures previously published in Water-Supply Papers 763, 788, 808, 828, 858 and 878, are in error due to revisions as published herein).

Extremes.- Maximum discharge during year, 1,880 second-feet May 25, July 1; maximum gage height, 12.83 feet July 1; minimum discharge, 0.3 second-foot Oct. 22-25, Dec. 14-16.

1924-40: Maximum discharge, 53,200 second-feet (revised) Sept. 5, 1932 (gage height, 21.9 feet, from floodmark), from rating curve extended above 35,000 second-feet; no flow at times.

Maximum stage known, about 24.0 feet in 1900, according to information furnished by local residents (discharge, about 71,000 second-feet (revised), from rating curve extended above 35,000 second-feet).

Revisions.- The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede those published in the Water-Supply Papers indicated.

Water-Supply Paper	Water year	Date	Gage height (feet)‡	Discharge (second-feet)
588.....	1924	June 2	† -10.2	9,500
628.....	1926	Nov. 7, Apr. 23	*† -9.1	17,800
648.....	1927	Jan. 22	† -9.4	15,200
668.....	1928	Oct. 4	* -9.2	16,800
688.....	1929	May 30	† -5.5	49,400
703.....	1930	May 12	† -7.6	30,100
718.....	1931	Jan. 21	† -10.4	8,100

‡ Distance below base of rail (elevation, 301.24 feet above mean sea level).
* Observed.
† From graph based on gage readings.

Remarks.- Records good except those for period of no gage-height record and those below 20 second-feet, all of which are poor.

Revisions.- Revised figures of discharge for high-water periods in the water years 1924, 1926, 1927, 1929, and 1930 are given herein. They supersede those published in Water-Supply Papers 588, 628, 648, 688 and 703.

Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)	Day (water year)	Discharge (second-feet)
1923-24		1925-26		1928-29		1929-30	
June 1.....	5,900	Apr. 24.....	9,500	May 14.....	5,500	May 11.....	21,800
2.....	9,500	25.....	9,500	15.....	5,900	12.....	25,800
3.....	5,500	26.....	4,920	29.....	31,000	13.....	18,400
1925-26		1926-27		30.....	45,600	14.....	20,000
Nov. 6.....	6,900	Jan. 22.....	12,300	31.....	33,700	15.....	12,300
7.....	15,200	23.....	14,500	June 1.....	23,300	16.....	7,500
8.....	10,900	24.....	10,900	2.....	18,400	18.....	5,650
9.....	5,100	1928-29		3.....	16,000	19.....	7,500
Mar. 22.....	10,900	Dec. 17.....	7,500	4.....	6,400	20.....	5,900
23.....	5,500	18.....	6,400	1929-30			
Apr. 23.....	11,600			May 10.....	4,180		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.4	0.8	3.6	3.9	5.9	6.7	1,430	48	1,790	3.8	2.6
2	.7	.4	.8	3.7	4.3	5.2	5.9	892	37	1,750	3.6	2.4
3	.6	.4	.8	3.6	9.2	4.5	5.0	286	30	1,400	3.3	2.2
4	.6	.4	2.3	5.2	29	4.3	4.5	164	24	706	3.1	2.0
5	.6	.4	1.4	5.2	29	4.2	4.4	80	18	510	2.9	1.9
6	.5	.4	.9	5.2	26	4.0	16	44	14	319	2.7	1.8
7	.5	.4	.6	6.7	14	3.9	41	29	11	137	2.6	1.7
8	.5	.5	.5	6.6	12	3.8	214	23	8.7	75	2.6	1.6
9	.5	.6	.5	7.2	28	3.7	394	157	7.6	50	2.5	1.5
10	.5	.7	.5	5.6	22	3.7	125	434	9.1	37	2.4	1.4
11	.5	.8	.5	4.7	15	3.8	79	406	7.8	28	2.4	1.4
12	.5	1.0	.5	4.3	12	3.9	54	200	6.6	25	2.4	1.4
13	.4	.9	.4	4.2	9.6	3.9	34	66	7.4	58	2.4	1.3
14	.4	.8	.4	4.0	7.6	3.7	22	41	19	188	2.3	1.3
15	.4	.8	.3	3.9	6.7	3.7	16	30	26	420	2.2	1.3
16	.4	.7	.4	4.1	34	3.6	12	20	46	456	2.2	1.3
17	.4	.7	.4	4.7	92	3.6	11	15	144	332	2.2	1.2
18	.4	.7	.4	4.4	77	3.6	11	79	404	170	8.3	1.2
19	.4	1.0	.4	4.2	141	3.6	8.7	741	600	96	3.0	1.2
20	.4	.9	.4	3.9	122	3.6	7.4	720	528	53	4.4	1.2
21	.4	.9	.4	3.8	66	3.6	6.4	912	438	37	3.7	1.1
22	.4	.8	2.2	3.9	40	3.6	5.6	420	180	27	14	1.1
23	.3	.7	8.0	3.9	28	3.6	5.2	825	79	20	15	11
24	.3	.8	6.4	3.9	21	3.6	4.8	1,430	56	15	7.6	22
25	.4	.8	6.2	3.9	15	3.4	4.6	1,790	42	11	5.0	11
26	.4	.8	6.6	3.9	11	3.4	4.9	1,440	31	9.3	3.9	9.8
27	.4	.8	5.0	3.9	9.1	4.0	4.9	1,010	50	7.2	3.3	17
28	.4	.8	4.4	3.9	7.8	4.4	35	218	46	6.2	2.7	9.8
29	.5	.8	4.2	3.9	6.9	12	1,290	217	216	5.3	2.6	7.0
30	.4	.8	4.2	3.9	-	23	1,630	349	933	4.5	2.5	5.0
31	.4	-	3.9	3.9	-	7.0	-	89	-	4.2	2.8	-

Note.- No gage-height record Nov. 28 to Dec. 6, June 18-20, Sept. 12-22; discharge computed on basis of known range in stage, engineer's notes, and weather records.

Monthly discharge, in second-feet, of Navasota River near Easterly, Tex., 1924, 1925-30, 1931-32, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
March 27-31, 1924	802	206	138	160	1,590
April	5,665	1,190	32	189	11,200
May	7,736	3,550	23	250	15,300
June	27,488	9,500	11	916	54,500
July	190	23	0	6.13	377
August	0	0	0	0	0
September	1,601	214	0	53.4	3,180
The period	-	-	-	-	86,100
October 1925	13,331	2,560	9.0	430	26,400
November	49,972	15,200	26	1,670	99,100
December	707	26	13	22.8	1,400
Calendar year 1925	71,746	15,200	0	197	142,000
January 1926	14,301	2,400	29	461	28,400
February	1,557	178	29	55.6	3,090
March	43,939	10,900	29	1,420	87,200
April	55,818	11,600	97	1,860	111,000
May	16,363	1,660	82	528	32,500
June	20,592	2,130	29	686	40,800
July	7,039	2,000	15	227	14,000
August	610.0	87	5.0	19.7	1,210
September	98.0	5.0	2.0	3.27	194
Water year 1925-26	224,327.0	15,200	2.0	615	445,000
October 1926	4,334.0	381	2.0	140	8,600
November	3,826.4	522	9.6	128	7,590
December	20,306.0	3,390	9.6	655	40,300
Calendar year 1926	188,783.4	11,600	2.0	517	375,000
January 1927	47,349	14,500	32	1,530	93,900
February	23,810	3,400	64	850	47,200
March	15,008	1,460	112	484	29,800
April	16,935	2,700	79	564	33,600
May	10,967	1,840	54	354	21,800
June	25,212	3,600	22	840	50,000
July	1,012.0	106	6.4	32.6	2,010
August	84.8	6.4	2.0	2.74	168
September	81.4	9.6	.7	2.71	161
Water year 1926-27	168,925.6	14,500	.7	463	335,000
October 1927	49,138	16,000	12	1,590	97,500
November	766.6	59	9.6	25.6	1,520
December	1,831	136	14	59.1	3,630
Calendar year 1927	192,194.8	16,000	.7	527	381,000
January 1928	1,056	118	16	34.1	2,100
February	25,862	6,400	16	892	51,300
March	3,750	359	44	121	7,440
April	5,518	1,190	44	184	10,900
May	1,281	191	13	41.3	2,540
June	26,207	4,200	28	874	52,000
July	4,400.2	1,028	8.0	142	8,730
August	486.2	94	2.0	15.7	965
September	75.2	5.0	2.0	2.51	149
Water year 1927-28	120,371.2	16,000	2.0	329	239,000
October 1928	133.6	33	2.8	4.31	265
November	1,378.8	239	8.0	46.0	2,740
December	29,635	7,500	14	956	58,800
Calendar year 1928	99,783.0	7,500	2.0	273	198,000
January 1929	12,873	2,160	44	415	25,500
February	4,771	582	52	170	9,440
March	7,449	1,130	59	240	14,800
April	14,182	2,700	54	473	28,100
May	156,520	45,600	44	5,050	310,000
June	70,919	23,300	49	2,360	141,000
July	1,642	163	11	53.0	3,260
August	187.3	-	-	6.04	371
September	37.6	5.0	.3	1.25	74
Water year 1928-29	299,728.3	45,600	.3	821	594,000

Monthly discharge, in second-feet, of Navasota River near Easterly, Tex., 1924, 1925-30, 1931-32, 1939-40--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1929	397.9	325	0.3	12.8	787
November	13,130.6	2,010	8.0	438	26,100
December	949	44	19	30.6	1,880
Calendar year 1929	283,058.4	45,600	.3	776	561,000
January 1930	3,811	312	22	123	7,560
February	6,217	895	36	222	12,300
March	9,109	704	32	294	18,100
April	1,775	237	25	59.2	3,520
May	148,738	25,800	54	4,800	295,000
June	847	74	12	28.2	1,680
July	126.3	12	1.0	4.07	250
August	17.9	1.0	.1	.58	36
September	69.6	5.8	.7	2.32	138
Water year 1929-30	185,188.3	25,800	.1	507	367,000
October 1931	9.7	.7	.3	.31	19
November	71.1	14	.3	2.37	141
December	4,525	502	19	146	8,980
Calendar year 1931	106,227.1	4,000	.3	291	210,000
January 1932	125,431	30,100	12	4,050	249,000
February	75,798	18,400	94	2,610	150,000
March	16,955	2,610	49	547	33,600
April	2,071	221	25	69	4,110
May	14,720	2,320	25	475	29,200
June	5,127	1,340	13	171	10,200
July	193.1	39	.8	6.23	383
August	17.6	-	-	.57	35
September	102,166.8	40,200	-	3,410	203,000
Water year 1931-32	347,085.3	40,200	.3	948	689,000
October 1939	14.3	.8	.3	.46	28
November	20.9	1.0	.4	.70	41
December	64.7	8.0	.3	2.09	128
Calendar year 1939	27,198.3	1,620	.2	74.5	53,950
January 1940	138.0	7.2	3.6	4.45	274
February	899.1	141	3.9	31.0	1,780
March	151.8	23	3.4	4.90	301
April	4,063.0	1,630	4.4	135	8,060
May	14,549	1,790	15	469	28,860
June	4,067.2	933	6.6	136	8,070
July	8,748.7	1,790	4.2	282	17,350
August	122.4	15	2.2	3.96	243
September	126.7	22	1.1	4.22	251
Water year 1939-40	32,965.8	1,790	.3	90.1	65,390

Summary of yearly discharge, in second-feet, for Navasota River near Easterly, Tex.

Year	W.S.P. (no. and page)	Water year ending Sept. 30				Calendar year			
		Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1925	608-106	2,540	0	24.3	17,600	*15,200	0	197	142,000
1926	628-84	*15,200	2.0	*615	*445,000	*11,600	2.0	517	375,000
1927	648-54	*14,500	.7	*463	*335,000	*16,000	.7	527	381,000
1928	668-51	*16,000	2.0	*329	*239,000	*7,500	2.0	273	198,000
1929	688-50	*45,800	.3	*821	*594,000	*45,600	.3	776	561,000
1930	703-48	*25,800	.1	*507	*367,000	*25,800	.1	583	422,000
1931	718-54	4,000	.3	394	285,000	4,000	.3	291	210,000
1932	733-47	*40,200	.3	*948	*689,000	*40,200	-	947	687,000
1933	748-47	4,070	1.4	180	130,000	4,070	1.4	170	123,000
1934	763-47	13,600	.2	281	203,000	13,600	.2	308	223,300
1935	788-56	14,900	.4	625	452,200	33,600	1.2	942	682,000
1936	808-55	33,600	2.0	588	427,000	20,800	2.0	342	248,400
1937	828-47	7,050	.3	368	266,700	7,050	.3	309	223,900
1938	858-47	12,200	.7	314	227,500	12,200	.7	275	199,000
1939	878-79	1,620	.2	75.1	54,350	1,620	.2	74.5	53,950
1940	898-106	1,790	.3	90.1	65,390	-	-	-	-

* Revised figures superseding those published in water-supply papers indicated; revised figures of daily and monthly discharge given on pages 104-106 herein.

Note.- Figures from 1925 to 1932 in above table supersede those published in Water-Supply Paper 878, page 357.

Brazos Valley Irrigation Co.'s canal near Fulshear, Tex.

Location.- Water-stage recorder, lat. 29°39', long. 95°54', 1 mile downstream from point of diversion and 3 miles south of Fulshear, Fort Bend County.

Records available.- October 1931 to September 1940.

Extremes.- Maximum daily discharge during year, 275 second-feet July 11-13, 15, 16; no flow at times.
1931-40: Maximum daily discharge, 339 second-feet May 21, 1939; no flow for several months each year.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Station above all diversions from canal. Flow controlled by pumping plant. Canal diverts water from left bank of Brazos River 18 miles above Richmond for irrigation near Sugarland. Figures of discharge represent water actually pumped from Brazos River into canal.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0	111	11	210	133
2							0	0	107	107	206	141
3							0	54	105	f28	202	168
4							0	113	168	0	198	163
5							0	190	226	0	194	168
6							0	235	226	0	190	163
7							0	230	222	f91	190	163
8							0	226	222	141	190	163
9							0	226	217	154	190	163
10							0	222	104	265	190	163
11							0	222	113	275	186	163
12							0	222	113	275	186	163
13							60	222	101	275	186	163
14							133	217	96	265	186	163
15							125	212	105	275	186	163
16							137	208	107	f275	181	163
17							137	137	113	208	172	163
18							137	99	117	133	150	163
19							137	101	117	131	150	163
20							133	99	117	129	154	0
21							133	95	125	127	154	0
22							129	56	125	125	176	0
23							121	0	125	123	181	0
24							117	55	121	121	168	0
25							113	107	117	119	158	0
26							186	112	113	159	154	0
27							226	112	113	230	150	0
28							226	96	113	226	145	0
29							173	108	56	222	141	0
30							50	108	2.0	218	137	0
31							-	107	-	214	133	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	32,089	339	0	87.9	63,660
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	2,473	226	0	82.4	4,910
May	4,191	235	0	135	8,310
June	3,817.0	226	2.0	127	7,570
July	4,922	275	0	159	9,760
August	5,394	210	133	174	10,700
September	3,055	168	0	102	6,060
Water year 1939-40	23,852	275	0	65.2	47,310

f Computed on basis of partly estimated gage-height record.
Note.- No gage-height record July 17 to Aug. 4, Sept. 7-30; discharge computed on basis of pump records furnished by American Canal Co., Houston, Tex.

Richmond Irrigation Co.'s canal near Richmond, Tex.

Location.- Water-stage recorder, lat. 29°34', long. 95°47', 600 feet downstream from crossing of U. S. Highway 90, about 1½ miles downstream from point of diversion, and 1½ miles west of Richmond, Fort Bend County.

Records available.- October 1931 to September 1940.

Extremes.- Maximum daily discharge during year, 126 second-feet July 8; no flow at times. 1931-40: Maximum daily discharge, 234 second-feet June 5, 6, 1938; no flow at times.

Remarks.- Records good except those for April, which are fair. All diversions from canal below station. Flow controlled by pumping plant. Canal diverts water from right bank of Brazos River 6 miles upstream from Richmond for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0	0	42	98	102
2							0	0	0	0	98	98
3							0	0	2.3	0	98	98
4							0	94	108	0	98	98
5							0	105	112	0	102	98
6							0	105	112	0	102	98
7							0	105	112	33	98	98
8							0	105	108	126	98	98
9							0	105	108	122	98	46
10							0	105	105	119	98	0
11							0	105	90	119	98	0
12							0	105	54	116	98	0
13							0	105	56	116	94	0
14							0	105	56	108	98	0
15							12	102	25	116	98	4.3
16							102	98	0	119	98	91
17							105	120	.7	80	98	94
18							108	98	102	50	98	98
19							108	102	102	64	94	102
20							105	105	108	64	94	100
21							105	105	112	66	98	2.0
22							102	105	108	63	105	0
23							98	66	108	82	119	0
24							77	22	108	91	119	0
25							37	0	108	102	108	0
26							35	0	105	102	105	0
27							30	0	108	102	102	0
28							18	0	108	105	102	0
29							9.2	0	74	102	102	0
30							0	0	58	102	102	0
31							-	0	-	102	102	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	12,575.2	210	0	34.5	24,940
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	1,051.2	108	0	35.0	2,090
May	2,067	120	0	66.7	4,100
June	2,358	112	0	78.6	4,680
July	2,393	126	0	77.2	4,750
August	3,120	119	94	101	6,190
September	1,325.3	102	0	44.2	2,630
Water year 1939-40	12,314.5	126	0	33.6	24,440

Colorado River at Robert Lee, Tex.

Location.- Water-stage recorder, lat. 31°53'05", long. 100°28'45", at bridge on State Highway 208 in Robert Lee, Coke County and half a mile upstream from Mountain Creek. Prior to Sept. 27, 1939, staff gage at same site and datum. Datum of gage is 1,771.7 feet above mean sea level (general adjustment of 1929; levels by Bureau of Reclamation). Station is 9 miles upstream and at different datum from site of station near Robert Lee, which was discontinued Dec. 31, 1927.

Drainage area.- 15,770 square miles, of which 11,500 square miles is probably noncontributing.

Records available.- April 1939 to September 1940. September 1915 to September 1920 (October 1918 to September 1920, gage heights only), at site near Bronte, 16 miles downstream; October 1923 to December 1927, at site near Robert Lee, 9 miles downstream. Records equivalent except during periods of local run-off between sites.

Extremes.- 1939: Maximum discharge observed during period April to September 1939, 31,700 second-feet June 22 (gage height, 21.70 feet, from graph based on gage readings), by slope-area method; minimum daily observed, 0.8 second-foot Apr. 28, June 17.
1939-40: Maximum discharge during year, 23,000 second-feet June 29 (gage height, 18.63 feet); no flow Aug. 3-6.

Remarks.- Records good. About 2,200 acres irrigated above station.

Cooperation.- Records from Apr. 18, 1939, to June 3, 1940, collected and computed by Bureau of Reclamation.

Discharge, in second-feet, 1939-40

1939

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	-	1.0	232	571	48	4.7	16	-	92	1.4	110	138	2.8
2	-	18	232	609	48	4.7	17	-	2,980	.8	100	96	3.3
3	-	874	208	951	55	4.6	18	1.7	2,650	1,080	89	90	3.3
4	-	1,910	194	660	1,920	2.5	19	1.5	850	909	73	66	2.6
5	-	2,190	160	290	402	2.5	20	1.4	390	5,200	72	54	2.4
6	-	501	139	232	352	3.3	21	1.4	496	22,600	71	52	2.8
7	-	244	117	208	1,660	2.2	22	1.4	286	19,200	64	48	3.9
8	-	154	96	182	2,240	4.2	23	1.4	184	2,390	63	48	4.6
9	-	102	77	172	471	2.6	24	1.4	163	965	50	40	4.6
10	-	86	60	240	626	2.4	25	1.2	133	402	48	39	4.0
11	-	63	45	183	1,200	2.4	26	1.0	94	307	42	29	2.8
12	-	71	32	151	872	2.4	27	1.0	109	235	41	16	2.4
13	-	810	19	160	360	2.4	28	.8	131	6,200	29	15	2.3
14	-	183	9.3	141	210	2.4	29	1.0	154	4,580	29	14	2.3
15	-	97	2.7	110	173	2.4	30	1.0	180	1,500	30	7.6	2.2
							31	-	212	-	53	5.9	-

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	40	8.6	4.9	2.2	5.8	5.8	1.7	862	f1,130	f0.9	43
2	2.3	32	6.4	5.1	2.6	2.5	4.0	1.7	717	397	.4	27
3	2.2	25	5.4	4.6	11	2.3	2.6	1.7	166	219	.1	22
4	2.3	20	5.2	5.1	10	2.3	2.3	1.6	f152	130	0	18
5	2.3	16	5.2	5.3	9.6	2.3	8.9	1.7	108	88	0	1,510
6	2.3	13	5.2	6.0	6.5	2.2	36	1.7	66	60	1,350	834
7	2.2	11	5.2	5.5	5.1	2.2	139	1.8	48	43	388	306
8	2.2	9.0	5.2	5.5	4.9	2.1	149	379	138	34	358	152
9	2.8	7.1	5.1	5.5	4.9	2.1	92	429	2,770	27	392	90
10	2.4	7.0	5.1	4.7	4.5	2.1	65	131	1,160	22	180	58
11	2.3	8.0	4.7	4.7	4.0	2.1	48	70	726	17	90	39
12	2.2	9.0	4.2	4.1	3.3	2.1	35	43	316	16	55	30
13	2.3	7.1	3.8	4.3	3.1	2.0	26	22	155	327	70	22
14	2.3	5.8	3.1	2.9	2.5	1.9	19	11	281	160	331	17
15	2.2	4.6	2.4	2.4	2.3	1.9	11	5.8	167	72	205	f14
16	2.2	4.0	2.4	2.4	7.0	1.8	9.0	3.6	101	42	1,410	f12
17	2.2	4.2	2.4	2.4	13	1.8	7.2	2.4	66	27	1,020	9.3
18	2.2	4.0	2.4	2.5	12	1.7	5.2	2.3	57	18	258	6.3
19	2.1	3.3	2.3	3.3	10	1.7	4.0	2.3	48	14	159	4.7
20	2.1	2.4	2.3	2.8	8.3	1.7	2.9	2.3	38	11	80	4.2
21	2.1	2.4	2.3	3.1	7.0	1.7	2.3	2.5	30	8.6	49	4.0
22	2.1	2.3	2.3	3.0	7.0	1.6	2.3	73	23	7.4	33	4.7
23	2.1	2.3	2.7	3.4	7.0	1.6	2.2	54	18	5.8	27	11
24	2.1	2.3	2.3	3.0	7.0	7.6	2.2	16	157	4.7	19	10
25	2.1	2.2	3.3	4.7	7.0	9.8	2.2	9.9	f1,600	4.0	14	5.2
26	2.2	2.2	4.6	2.7	6.3	42	2.1	5.8	f871	3.0	20	3.6
27	4.3	2.2	5.0	2.3	5.9	57	2.1	4.5	419	2.4	223	3.0
28	198	2.2	4.2	2.3	5.5	41	2.0	3.1	1,110	2.0	142	2.4
29	122	7.0	5.0	2.3	7.0	29	1.8	397	12,100	1.6	86	2.0
30	76	12	4.7	2.3	-	18	1.8	654	5,130	1.5	75	1.6
31	52	-	4.6	2.3	-	11	-	267	-	f1.1	79	-

Peak discharges.- June 9 (3 p.m.) 5,600 sec.-ft.; June 29 (2 a.m.) 23,000 sec.-ft.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Monthly discharge, in second-feet, of Colorado River at Robert Lee, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 18-30, 1939	16.2	1.7	0.8	1.25	32
May	16,408.0	2,980	1.0	529	32,540
June	67,193.2	22,600	.8	2,240	133,300
July	5,824	951	29	188	11,550
August	11,395.5	2,240	5.9	368	22,600
September	92.0	4.7	2.2	3.07	182
The period	-	-	-	-	200,200
October 1939	509.3	198	2.1	16.4	1,010
November	269.6	40	2.2	8.99	535
December	127.6	8.6	2.3	4.12	253
Calendar year	-	-	-	-	-
January 1940	115.4	6.0	2.3	3.72	229
February	186.5	13	2.2	6.43	370
March	264.9	57	1.6	8.55	525
April	692.9	149	1.8	23.1	1,370
May	2,602.4	654	1.6	83.9	5,160
June	29,600	12,100	18	987	58,710
July	2,896.1	1,130	1.1	93.4	5,740
August	7,114.4	1,410	0	229	14,110
September	3,266.0	1,510	1.6	109	6,480
Water year 1939-40	47,645.1	12,100	0	130	94,490

Colorado River at Ballinger, Tex.

Location.- Water-stage recorder, lat. 31°43'50", long. 99°56'25", at bridge on U. S. Highway 83 in Ballinger, Runnels County, 2,000 feet upstream from Elm Creek. Datum of gage is 1,593.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 16,840 square miles, of which about 11,500 square miles is probably non-contributing.

Records available.- June 1907 to September 1940. (June 1907 to November 1915, monthly records only, in Water-Supply Paper No. 850). U. S. Weather Bureau has collected gage-height records in this vicinity from 1903 to 1929.

Average discharge.- 33 years, 422 second-feet.

Extremes.- Maximum discharge during year, 21,800 second-feet June 30 (gage height, 18.20 feet); minimum, 1.3 second-feet Aug. 3.
1907-40: Maximum discharge, 75,400 second-feet Sept. 18, 1936 (gage height, 28.6 feet); no flow at times.
Maximum stage known, about 36.0 feet sometime in 1884, present site and datum, according to information furnished by local residents. A stage of about 32.0 feet was reached Aug. 6, 1906, present site and datum, from floodmarks (affected by backwater from Elm Creek).

Remarks.- Records good except those affected by backwater, which are fair. Small diversions above station for irrigation affect low flow.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	56	26	10	5.4	9.2	22	7.6	280	f2,620	2.6	100
2	4.2	41	16	9.2	5.4	7.6	17	5.4	579	f1,030	1.8	85
3	4.2	33	14	8.4	12	6.8	12	4.8	444	f523	1.5	540
4	3.6	26	14	8.4	18	6.8	9.2	4.2	200	325	2.0	349
5	3.0	20	13	8.4	28	6.0	53	3.6	116	211	2.2	74
6	3.0	18	12	10	19	5.4	5,430	3.0	74	150	2,070	1,740
7	3.0	17	10	10	14	5.4	350	9.3	53	116	1,450	677
8	3.0	14	10	10	12	5.4	143	24	c46	90	394	332
9	357	14	9.2	10	10	5.4	185	168	1,570	76	420	188
10	277	13	9.2	10	9.2	6.0	122	395	3,030	63	378	122
11	81	19	8.4	9.2	8.4	6.8	96	188	961	53	216	85
12	37	18	9.2	9.2	7.6	5.4	68	109	607	49	134	63
13	22	16	8.4	9.2	7.6	4.2	56	68	360	230	93	49
14	14	13	8.4	8.4	7.6	3.6	49	51	200	394	379	39
15	11	13	7.6	7.6	8.4	3.6	41	41	745	196	1,130	33
16	9.2	12	6.8	6.8	49	3.6	35	31	543	119	c1,630	26
17	7.6	12	6.8	6.0	49	3.6	30	24	160	76	c2,660	20
18	6.8	14	6.8	5.4	33	3.6	24	18	190	56	690	18
19	6.0	13	6.8	f3.6	30	3.0	20	14	303	44	322	14
20	6.0	11	6.0	f4.2	22	3.0	18	13	122	33	188	13
21	4.8	9.2	6.0	f4.2	16	3.0	17	10	63	26	119	11
22	4.2	8.4	7.6	f4.8	14	2.8	16	c2,230	39	22	82	12
23	4.2	8.4	7.6	f5.4	12	2.8	14	1,500	31	19	58	12
24	4.2	8.4	5.4	f6.0	11	2.6	13	246	56	16	44	18
25	4.2	7.6	8.4	f6.0	10	32	13	76	611	14	37	16
26	6.8	6.8	10	f6.0	11	58	12	39	1,300	12	31	10
27	63	5.4	9.2	6.0	11	28	10	26	722	10	28	9.2
28	39	6.0	9.2	5.4	11	17	11	303	395	8.4	163	10
29	93	12	10	5.4	11	21	13	178	11,800	7.6	164	8.4
30	116	42	10	5.4	-	44	9.2	243	11,700	4.8	397	6.8
31	76	-	10	5.4	-	33	-	470	-	3.6	184	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,278.8	357	3.0	41.3	2,540
November	507.2	66	5.4	16.9	1,010
December	302.0	26	5.4	9.74	599
Calendar year 1939	158,432.5	19,500	2.0	434	314,200
January	224.0	10	3.6	7.23	444
February	462.6	49	5.4	16.0	918
March	348.6	58	2.6	11.2	691
April	6,908.4	5,430	9.2	230	13,700
May	6,502.9	2,230	3.0	210	12,900
June	37,300	11,800	31	1,243	73,980
July	6,597.4	2,620	3.6	213	13,090
August	13,471.1	2,660	1.5	435	26,720
September	4,680.4	1,740	6.8	156	9,280
Water year 1939-40	78,583.4	11,800	1.5	215	155,900

Peak discharge.- Apr. 6 (7 a.m.) 9,940 sec.-ft.; June 10 (1:30 a.m.) 5,680 sec.-ft.; June 30 (12:30 a.m.) 21,800 sec.-ft.; Aug. 17 (12:15 a.m.) 4,680 sec.-ft.

c Stage-discharge relation affected by backwater from Elm Creek; discharge determined on basis of results under similar conditions previously recorded.

f Fragmentary gage-height record; discharge determined from partly estimated gage heights and discharge measurements.

Colorado River at Winchell, Tex.

Location.- Water-stage recorder, lat. 31°28'05", long. 99°09'45", on bridge on State Highway 23, 0.3 mile south of Winchell, Brown County, and 6.2 miles downstream from Home Creek. Datum of gage is 1,264.86 feet above mean sea level (general adjustment of 1929). Prior to Mar. 26, wire-weight gage at same site and datum.

Drainage area.- 24,580 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- January 1939 to September 1940. November 1923 to September 1934, at site near Milburn, 4.2 miles downstream.

Average discharge.- 11 years (1924-34, 1939-40), 812 second-feet.

Extremes.- Maximum discharge during year, 32,000 second-feet June 19 (gage height, 33.20 feet); minimum observed, 8.6 second-feet Oct. 10.

1923-34, 1939-40: Maximum gage height, 51.8 feet, present site and datum, Oct. 14, 15, 1930, from floodmark (discharge not determined); no flow Aug. 8-10, Sept. 1-5, 1929, Aug. 15-25, 1934.

Maximum stage known, 62.2 feet Sept. 19, 1936, present site and datum, according to information furnished by Gulf, Colorado & Santa Fe Ry. engineers at railway bridge 1,000 feet above present gage.

Remarks.- Records good. Gage read twice daily Oct. 1 to Mar. 25, oftener during rapidly changing stage. Many diversions above station for irrigation and municipal supply. Flow partly regulated by reservoirs on Concho River.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	16	75	62	52	43	56	41	204	15,100	23	506
2	11	76	81	56	51	42	47	38	455	3,780	21	325
3	11	105	104	52	60	a36	40	36	325	2,620	19	209
4	11	84	118	54	68	29	43	33	580	1,220	17	3,350
5	10	67	100	58	71	36	48	30	410	760	16	2,260
6	9.4	58	78	62	67	35	11,900	28	255	470	14	865
7	9.4	51	67	64	72	30	15,500	32	176	349	191	1,650
8	10	47	61	65	65	38	2,690	4,910	433	277	1,960	1,220
9	11	38	54	60	236	36	1,030	4,250	8,170	f226	810	771
10	11	44	53	60	246	a34	532	1,470	4,990	f195	440	560
11	278	76	51	56	246	32	376	580	4,400	f170	470	410
12	410	136	51	56	248	34	279	470	1,670	f148	396	281
13	248	98	48	60	195	30	213	308	1,520	128	286	195
14	155	78	46	57	135	21	176	213	1,140	113	215	150
15	113	69	43	53	93	23	146	158	2,000	110	178	119
16	78	61	40	53	155	a25	126	121	1,850	381	4,450	98
17	56	58	38	42	1,700	a27	111	96	1,650	253	3,470	82
18	43	57	41	25	1,210	29	96	78	1,750	199	5,690	71
19	35	51	41	36	480	34	84	68	14,400	148	1,220	58
20	32	46	42	44	255	33	78	64	10,900	115	580	49
21	26	42	41	a49	164	32	74	62	1,340	98	370	42
22	24	41	48	54	128	30	65	133	580	81	272	42
23	23	38	53	57	93	30	57	8,660	470	68	207	41
24	22	38	53	60	76	a29	52	3,890	1,420	60	160	37
25	19	38	58	57	65	28	52	1,130	1,160	51	128	33
26	23	37	58	62	64	27	49	440	948	43	105	28
27	52	35	58	54	56	27	47	279	1,430	38	1,040	26
28	34	34	•61	a57	53	27	47	729	1,040	34	357	23
29	33	35	57	60	53	28	43	f315	665	30	450	21
30	20	46	54	48	-	29	41	f266	20,400	28	562	20
31	17	-	58	47	-	47	-	303	-	26	365	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,846.8	410	9.4	59.6	3,660
November	1,700	136	16	56.7	3,370
December	1,831	118	38	59.1	3,630
Calendar year	-	-	-	-	-
January	1,680	65	25	54.2	3,330
February	6,457	1,700	51	223	12,810
March	981	47	21	31.6	1,950
April	34,098	15,500	40	1,137	67,630
May	29,231	8,660	28	943	57,980
June	86,731	20,400	176	2,891	172,000
July	27,319	15,100	26	881	54,190
August	24,482	5,690	14	790	48,560
September	13,562	3,350	20	452	26,900
Water year 1939-40	229,918.8	20,400	9.4	628	456,000

Peak discharge.- April 7 (1 a.m.) 24,200 sec.-ft.; June 19 (11:30 p.m.) 32,000 sec.-ft.; June 30 (8 p.m.) 28,200 sec.-ft.

a No gage-height record; discharge interpolated.

f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Colorado River near San Saba, Tex.

Location.- Water-stage recorder, lat. 31°13'05", long. 98°43'50", at bridge on State Highway 190, 5.2 miles downstream from San Saba River and 9.2 miles east of San Saba, San Saba County. Datum of gage is 1,096.22 feet above mean sea level (general adjustment of 1929). Prior to May 23, 1940, water-stage recorder at site 2,230 feet downstream at same datum.

Drainage area.- 30,600 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- August 1930 to September 1940. October 1915 to October 1922 at site near Chadwick, 1.2 miles upstream. October 1923 to December 1934 at site near Tow, 44 miles downstream.

Average discharge.- 15 years (1916-19, 1920-22, 1930-40), 1,967 second-feet.

Extremes.- Maximum discharge during year, 23,400 second-feet June 21 (gage height, 18.73 feet); minimum, 90 second-feet Oct. 1-3.
1915-22, 1930-40: Maximum discharge, 224,000 second-feet July 23, 1938 (gage height, 63.2 feet, present site, based on floodmarks at site then in use); minimum observed, 1.5 second-feet Aug. 22, 23, 1918.

Remarks.- Records excellent except those for period of incomplete recorder record, which are good. Diversions above station for irrigation and municipal use. Flow partly regulated by storage in reservoirs on Pecan Bayou and Concho River having a combined capacity of 151,000 acre-feet.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	151	190	194	178	194	133	194	540	13,800	377	870
2	90	148	194	190	181	181	127	181	461	20,300	368	890
3	93	145	204	190	211	178	122	163	595	8,340	249	886
4	93	139	208	187	218	172	136	154	752	2,820	161	686
5	93	142	208	184	229	166	154	142	778	1,870	126	2,930
6	93	190	229	187	237	163	979	136	870	1,310	113	2,780
7	93	187	233	190	233	154	14,700	125	667	930	105	1,490
8	93	181	218	190	222	151	18,400	136	654	702	100	1,910
9	100	175	204	190	214	154	4,370	7,410	1,440	575	902	2,180
10	172	181	194	194	211	151	1,360	5,600	6,930	485	1,090	1,300
11	172	208	187	194	314	154	940	1,500	7,040	419	691	1,120
12	200	225	178	194	375	154	682	880	5,400	372	487	900
13	243	278	172	190	365	151	566	736	2,690	341	565	736
14	445	296	169	181	355	148	465	560	3,590	312	442	625
15	346	274	169	178	324	148	405	405	5,760	291	381	560
16	283	245	166	178	283	148	350	324	7,410	264	1,180	510
17	283	225	166	178	283	148	306	265	3,570	277	7,310	475
18	222	218	163	169	1,300	145	270	225	2,870	741	7,810	447
19	204	211	166	169	1,400	136	253	200	4,540	645	13,600	428
20	194	197	166	178	919	130	241	178	15,500	595	5,910	409
21	181	187	163	172	544	126	229	169	21,400	540	2,870	337
22	172	181	175	175	390	126	229	169	5,030	505	1,900	287
23	166	181	184	178	332	127	208	2,200	1,650	485	1,340	303
24	160	178	187	175	278	130	200	10,100	1,840	466	995	291
25	157	172	208	172	249	122	190	6,110	4,010	442	758	256
26	154	169	204	175	225	148	190	2,320	2,670	423	615	238
27	154	169	200	175	214	148	184	1,380	2,180	409	545	180
28	151	169	208	181	204	130	187	1,060	2,110	395	1,130	158
29	148	172	200	178	197	133	184	1,020	2,840	390	972	126
30	151	184	197	178	-	139	190	1,140	3,740	386	709	121
31	163	-	194	178	-	142	-	575	-	377	1,060	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,362	445	90	173	10,640
November	5,778	296	139	193	11,460
December	5,904	233	163	190	11,710
Calendar year 1939	400,619	19,800	90	1,098	794,700
January	5,642	194	169	182	11,190
February	10,685	1,400	178	368	21,190
March	4,595	194	122	148	9,110
April	47,450	18,400	122	1,582	94,120
May	45,657	10,100	125	1,473	90,560
June	119,527	21,400	461	3,984	237,100
July	60,207	20,300	264	1,942	119,400
August	54,861	13,600	100	1,770	108,800
September	24,409	2,930	121	814	48,410
Water year 1939-40	390,077	21,400	90	1,066	773,700

Note.- Recorder record incomplete Jan. 19-31, Feb. 24-28, Mar. 18 to May 24, July 3, 4, 14-17; discharge computed from graph based on at least once-daily readings of staff gage.

Buchanan Reservoir near Burnet, Tex.

Location.- Selsyn indicator, lat. 30°45'05", long. 98°25'00", at Buchanan Dam on Colorado River, 1 mile upstream from bridge on State Highway 29 and 10 miles west of Burnet, Burnet County. Prior to July 1938, temporary staff and float gages at same site and datum. Datum of gage is at mean sea level (levels by Lower Colorado River Authority); add 0.48 foot to reduce to mean sea level datum of 1929.

Drainage area.- 31,250 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- May 1937 to September 1940.

Extremes.- Maximum and minimum contents for water years 1937-40 are contained in the following table (maximum contents based on 8 a.m. observations except as noted):

Water year	Maximum			Minimum		
	Date	Contents (acre-feet)	Elevation (feet)	Date	Contents (acre-feet)	Elevation (feet)
1937	June 17-19	194,700	969.3	-	-	-
1937-38	July 27	*1,004,000	1,020.5	-	-	-
1938-39	June 27	951,000	1,018.2	May 4-7†	761,000	1,009.3
1939-40	Aug. 23-26	992,000	1,020.0	Apr. 5	596,000	1,000.5

* Maximum contents occurred at 11:50 a.m.
† Also occurred Dec. 15-26.
Note.- Minimum not determined while reservoir was filling.

1937-40: Maximum contents, 1,004,000 acre-feet July 27, 1938 (elevation, 1,020.5 feet; several Taintor gates were open); minimum after filling of reservoir in July 1938, 596,000 acre-feet Apr. 5, 1940 (elevation, 1,000.5 feet).

Remarks.- Reservoir is formed by two reinforced concrete multiple arch sections, three banks of Taintor gates, and a 1,088-foot reinforced concrete spillway section. Dam completed and storage began May 20, 1937. Total capacity, 992,000 acre-feet below elevation 1,020.0 feet (top of spillway section). Usable capacity, 955,000 acre-feet between elevations 937.0 feet (sill of powerhouse penstock) and 1,020.0 feet. Water below elevation 937.0 feet can be withdrawn through two 5-foot emergency gates down to elevation of 890.0 feet. Records given herein represent total contents. Records of elevation as furnished are from once-daily readings at 8 a.m.; gage read hourly by power-plant operator. Water used for power development and irrigation of rice on several districts below Columbus.

Cooperation.- Records of daily elevation and capacity table furnished by Lower Colorado River Authority.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Prepared by Lower Colorado River Authority from Geological Survey topographic maps)

888	0	940	43,850	990	429,000
895	650	950	76,440	1,000	587,000
900	1,680	960	127,000	1,010	775,000
910	5,160	970	201,000	1,020	*992,000
920	11,930	980	301,000	1,022	1,039,000
930	23,970				

* Spillway crest.

Monthly elevation and contents, 1937-40

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
May 31, 1937	900.2	1,700	-
June 30	968.9	191,200	+189,500
July 31	967.5	180,000	-11,200
Aug. 31	967.6	180,800	+800
Sept.30	966.9	175,200	-5,600
The period	-	-	+173,500
Oct. 31, 1937	970.2	202,800	+27,600
Nov. 30	971.5	214,500	+11,700
Dec. 31	979.0	290,000	+75,500
Calendar year 1937	-	-	-
Jan. 31, 1938	993.0	474,000	+184,000
Feb. 28	998.9	568,300	+94,300
Mar. 31	1,000.9	603,200	+34,900
Apr. 30	*1,007.1	717,900	+114,700
May 31	*1,010.5	785,000	+67,100
June 30	*1,012.6	828,600	+43,600
July 31	1,016.0	902,000	+73,400
Aug. 31	*1,012.0	816,000	-86,000
Sept.30	*1,010.0	775,000	-41,000
Water year 1937-38	-	-	+599,800

* Elevation of first day of following month.

Monthly elevation and contents of Buchanan Reservoir near Burnet, Tex., 1937-40--Continued

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Oct. 31, 1938	1,009.9	773,000	-2,000
Nov. 30	1,009.5	765,000	-8,000
Dec. 31	1,009.4	763,000	-2,000
Calendar year 1938	-	-	+473,000
Jan. 31, 1939	1,012.5	826,500	+63,500
Feb. 28	1,011.4	803,400	-23,100
Mar. 31	1,010.7	789,000	-14,400
Apr. 30	1,009.4	763,000	-26,000
May 31	1,013.7	851,700	+88,700
June 30	1,017.4	932,800	+81,100
July 31	1,014.3	864,600	-68,200
Aug. 31	1,016.1	904,200	+39,600
Sept.30	1,014.2	862,400	-41,800
Water year 1938-39	-	-	+87,400
Oct. 31, 1939	1,011.9	813,900	-48,500
Nov. 30	1,010.1	777,000	-36,900
Dec. 31	1,008.0	735,000	-42,000
Calendar year 1939	-	-	-28,000
Jan. 31, 1940	1,005.8	693,200	-41,800
Feb. 29	1,004.2	662,800	-30,400
Mar. 31	1,000.8	601,400	-61,400
Apr. 30	1,004.6	670,400	+69,000
May 31	1,006.9	714,100	+43,700
June 30	1,016.8	919,600	+205,500
July 31	1,018.2	950,600	+31,000
Aug. 31	1,019.7	985,100	+34,500
Sept.30	1,016.1	904,200	-80,900
Water year 1939-40	-	-	+41,800

Colorado River at Austin, Tex.

Location.- Water-stage recorder, lat. 30°14'40", long. 97°41'20", at Montopolis bridge on U. S. Highway 290, at southeast edge of Austin, Travis County, 2.8 miles upstream from Walnut Creek, 3.8 miles downstream from Waller Creek, and 5 miles downstream from Barton Creek. Datum of gage is 407.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 38,160 square miles, of which about 11,800 square miles is probably noncontributing.

Records available.- February 1898 to September 1940. U. S. Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 42 years, 2,721 second-feet.

Extremes.- Maximum discharge during year, 45,700 second-feet (partly regulated) June 30 (gage height, 17.44 feet); minimum, 85 second-feet Jan. 7 (regulated); minimum daily, 248 second-feet Jan. 7.

1898-1940: Maximum discharge, 481,000 second-feet June 15, 1935 (gage height, 45.0 feet, present site and datum, from floodmark); minimum, 13 second-feet Aug. 18, 1918.

Maximum stage known, 46.0 feet (revised), present site and datum, July 7, 1869 (adjusted to present site on basis of records for flood of June 15, 1935), determined from information concerning stage at former site, furnished by Prof. T. U. Taylor.

Remarks.- Records good. Flow partly regulated by Buchanan Reservoir (see p. 114) and other smaller reservoirs having a combined capacity of 1,180,000 acre-feet (excluding Marshall Ford Reservoir now under construction). Storage commenced in Marshall Ford Reservoir, 28 miles upstream, Sept. 10, 1940 (about 53,000 acre-feet were in storage Sept. 30, the greater portion of which had been released from Buchanan Reservoir). Rehabilitation of Austin Dam completed and power plant placed in operation April 1940 (reservoir capacity, 20,000 acre-feet). About 36,000 acres irrigated above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	940	1,640	1,240	920	832	310	1,790	909	1,020	28,100	1,270	1,130
2	890	1,500	1,100	930	991	382	1,500	749	1,660	20,600	1,490	1,560
3	823	1,370	1,120	870	1,390	280	1,360	767	994	10,200	1,200	1,410
4	713	1,430	1,130	832	1,770	300	842	661	1,140	18,000	1,090	1,080
5	814	1,270	1,090	950	2,230	545	690	1,020	749	7,200	1,120	1,110
6	861	1,170	910	1,070	1,880	655	2,370	1,390	1,240	5,130	1,320	1,410
7	940	1,040	1,080	248	1,770	890	6,560	931	1,530	4,000	992	1,850
8	910	900	1,180	300	1,510	910	7,780	845	1,340	3,910	920	1,630
9	910	1,080	1,140	315	1,660	960	4,280	2,780	1,370	3,330	1,480	1,550
10	990	1,190	1,100	569	1,610	890	2,680	2,440	1,950	2,760	1,640	882
11	7,070	1,320	1,110	1,050	1,690	722	1,950	1,830	823	2,680	1,180	554
12	3,250	1,360	1,040	1,330	1,650	890	1,200	1,150	740	2,690	1,600	709
13	2,870	1,250	900	1,300	1,270	1,310	1,090	1,110	1,200	3,520	1,190	3,260
14	3,120	1,220	1,050	1,200	1,210	1,780	1,320	883	2,370	3,460	1,110	3,030
15	1,780	1,170	1,170	1,140	925	1,880	1,250	1,210	2,330	3,820	1,050	1,110
16	1,550	1,260	1,020	1,040	373	1,820	1,100	850	1,760	2,400	993	1,200
17	1,250	1,170	1,070	980	1,150	1,700	758	1,470	1,780	1,640	1,020	1,720
18	1,240	1,130	1,070	1,140	1,950	1,610	870	1,400	2,350	1,590	1,610	1,250
19	1,200	1,050	970	980	2,230	1,300	905	1,130	2,780	2,460	2,340	1,950
20	1,070	1,120	758	1,250	2,230	1,490	1,420	1,060	9,600	2,050	1,170	1,510
21	890	890	960	1,160	1,560	1,880	829	1,400	10,900	1,500	865	1,120
22	861	785	1,110	639	1,140	2,160	898	1,620	5,950	1,650	968	2,300
23	900	713	970	861	890	2,530	861	2,440	3,480	1,370	2,140	1,380
24	870	900	1,120	749	683	2,230	930	3,570	2,810	1,720	1,700	1,520
25	1,300	1,020	1,170	731	1,700	1,950	1,140	3,010	2,020	1,270	1,190	1,860
26	14,000	980	1,000	823	712	1,600	1,550	1,670	2,680	1,320	1,610	1,550
27	3,760	1,090	870	920	350	1,730	1,680	1,520	2,330	1,700	1,500	1,440
28	1,670	1,010	861	852	325	2,090	2,180	1,180	2,320	1,560	1,180	1,330
29	1,280	930	1,010	794	310	2,230	2,220	2,160	2,980	1,490	1,040	1,060
30	1,470	1,070	1,120	832	-	1,950	948	1,730	28,100	1,140	1,290	1,120
31	1,950	-	1,000	671	-	2,680	-	1,050	-	1,130	1,960	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	62,142	14,000	713	2,005	123,300
November	34,028	1,640	713	1,134	67,490
December	32,439	1,240	758	1,046	64,340
Calendar year 1939	576,420	14,000	423	1,579	1,143,000
January	27,446	1,330	248	885	54,440
February	38,291	2,230	310	1,320	75,950
March	43,654	2,680	280	1,408	86,590
April	54,951	7,780	690	1,832	109,000
May	46,135	3,570	749	1,488	91,510
June	102,296	28,100	740	3,410	202,900
July	145,390	28,100	1,130	4,690	288,400
August	41,228	2,340	865	1,330	81,770
September	44,585	3,260	554	1,486	88,430
Water year 1939-40	672,585	28,100	248	1,838	1,334,000

Peak discharge.- June 30 (11 a.m.) 45,700 sec.-ft.; July 1 (8 p.m.) 34,100 sec.-ft.; July 4 (10 a.m.) 22,300 sec.-ft.

Colorado River at Smithville, Tex.

Location.- Water-stage recorder, lat. 30°01', long. 97°10', 1,200 feet upstream from bridge on State Highway 71 at Smithville, Bastrop County, and 3.7 miles downstream from Alum Creek. Datum of gage, 270.14 feet above mean sea level (general adjustment of 1929).

Drainage area.- 39,650 square miles, of which about 11,800 square miles is probably noncontributing.

Records available.- July 1930 to September 1940. U. S. Weather Bureau has collected gage-height records in this vicinity since 1920.

Average discharge.- 10 years, 3,622 second-feet.

Extremes.- Maximum discharge during year, 70,400 second-feet July 1 (gage height, 21.24 feet); minimum, 404 second-feet Mar. 6 (regulated).

1930-40: Maximum discharge, 305,000 second-feet, June 16, 1935 (gage height, 42.5 feet, from floodmarks), by slope-area method; minimum, 76 second-feet Nov. 2, 1934.

Maximum stage known, about 47.4 feet sometime in December 1913, according to information furnished by local residents.

Remarks.- Records good. Many diversions above station for irrigation and municipal supply. Regulation same as that for station at Austin.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	920	2,030	970	1,280	842	508	2,290	2,010	1,420	46,900	1,110	1,710
2	900	1,960	1,150	1,060	797	475	2,620	1,240	1,200	25,100	1,250	1,840
3	940	1,770	1,130	1,040	980	455	1,600	1,030	1,200	17,400	1,510	1,600
4	900	1,480	1,110	1,030	1,170	480	1,610	890	1,590	12,600	1,220	1,320
5	842	1,430	1,070	980	1,840	440	1,430	860	1,230	15,600	1,460	1,460
6	779	1,430	1,080	990	2,290	418	1,220	970	1,080	8,040	960	1,130
7	824	1,260	990	1,150	2,290	620	4,730	1,080	880	6,170	1,320	1,320
8	890	1,180	930	1,010	1,900	714	6,270	1,350	1,300	4,980	1,280	1,590
9	940	1,000	1,140	496	2,030	890	6,640	980	1,520	4,500	1,020	1,900
10	940	1,060	1,130	436	1,900	930	4,580	f1,520	1,550	3,980	1,370	1,900
11	930	1,300	1,140	445	1,690	1,000	3,140	f2,680	1,770	3,390	1,680	1,240
12	5,420	1,320	1,130	706	1,770	890	2,500	2,360	1,550	3,160	1,600	940
13	3,930	1,350	1,070	1,130	1,900	842	1,900	1,690	910	3,020	1,360	698
14	2,860	1,340	1,020	1,300	1,630	910	1,350	1,060	960	3,640	1,390	2,170
15	3,400	1,240	970	1,280	1,250	1,430	1,270	1,260	2,400	3,730	1,280	3,160
16	2,450	1,230	1,180	1,160	1,410	1,840	1,510	1,220	2,480	4,070	1,190	2,080
17	1,960	1,250	1,160	1,140	1,380	1,840	1,320	1,060	2,360	3,460	1,110	1,170
18	1,720	1,220	1,120	1,090	2,280	1,770	1,140	1,210	2,010	2,420	1,170	1,690
19	1,500	1,200	1,180	1,040	2,100	1,690	890	1,480	5,600	1,900	1,630	1,680
20	1,420	1,080	1,100	1,080	2,290	1,540	1,010	1,380	7,630	2,220	2,100	1,900
21	1,370	1,060	960	1,030	2,420	1,310	1,380	1,180	10,100	2,290	1,660	1,840
22	1,160	990	940	1,370	2,100	1,720	1,160	1,330	10,300	2,220	1,300	1,730
23	1,050	824	1,170	980	1,410	1,960	1,090	3,910	6,520	1,610	1,000	2,400
24	1,060	770	1,160	779	1,220	2,480	890	2,950	4,320	1,740	1,740	1,960
25	1,070	762	1,130	880	880	2,360	930	3,390	4,410	1,550	2,030	1,690
26	1,820	910	1,320	779	1,170	2,160	1,020	3,320	2,540	1,770	1,640	1,840
27	10,800	910	1,240	762	1,520	1,900	1,260	2,160	2,660	1,180	1,290	2,160
28	4,500	990	1,080	910	746	1,650	1,730	2,570	2,880	1,540	1,630	1,520
29	2,420	1,020	990	950	585	1,960	2,480	4,030	4,370	1,960	1,420	1,560
30	1,720	1,000	1,060	880	-	2,220	3,990	2,290	44,000	1,270	1,220	1,300
31	1,430	-	1,110	860	-	2,220	-	2,360	-	1,540	1,240	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	62,865	10,800	779	2,028	124,700
November	36,366	2,030	762	1,212	72,130
December	33,930	1,320	930	1,095	67,300
Calendar year 1939	608,172	12,000	542	1,666	1,206,000
January	30,023	1,370	436	968	59,550
February	45,790	2,420	585	1,579	90,820
March	41,622	2,480	418	1,343	82,560
April	65,150	6,840	890	2,172	129,200
May	56,840	4,030	880	1,834	112,700
June	132,740	44,000	860	4,425	263,300
July../	194,950	46,900	1,180	6,289	386,700
August	43,180	2,100	960	1,393	85,650
September	50,498	3,160	698	1,683	100,200
Water year 1939-40	793,954	46,900	418	2,169	1,575,000

Peak discharge.- Oct. 27 (6:30 a.m.) 13,400 sec.-ft.; July 1 (1 a.m.) 70,400 sec.-ft.; July 5 (3 p.m.) 19,000 sec.-ft.

f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Colorado River at La Grange, Tex.

Location.- Wire-weight gage, lat. 29°53'45", long. 96°52'15", on bridge on U. S. Highway 77 in La Grange, Fayette County, and 1.2 miles downstream from Buckner Creek. Datum of gage is 211.23 feet above mean sea level (general adjustment of 1929).

Drainage area.- 40,200 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- July and August 1938 (flood, discharge measurements only), November 1938 to September 1940.

Extremes.- Maximum discharge observed during year, 182,000 second-feet June 30 (gage height, 40.18 feet); minimum observed, 430 second-feet (regulated) Mar. 7.

1938-40: Maximum discharge observed, that of June 30, 1940; minimum observed, that of Mar. 7, 1940.

Maximum stage known, about 56.7 feet probably July 9, 1869 (from marble high-water marker in La Grange). Data on other floods are as follows: Dec. 5, 1913, stage 56.4 feet, from floodmarks (discharge not determined); June 17, 1935, stage 50.84 feet, from floodmarks (discharge 255,000 second-feet, from rating curve extended as a straight line above 200,000 second-feet); July 27, 1938, stage 42.95 feet observed (discharge, 200,000 second-feet).

Remarks.- Records good except those below 1,500 second-feet, which are regulated and are fair. Discharge losses between Smithville and La Grange as revealed in records probably do not exist. Gage read twice daily, oftener during periods of rapidly changing stage. Many diversions above station for irrigation and municipal supply. Regulation same as that for station at Austin.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	890	1,410	926	1,140	866	619	2,020	3,200	2,020	109,000	1,570	1,220
2	890	1,400	935	1,140	835	541	2,500	1,760	1,210	31,900	1,240	1,890
3	858	1,640	990	1,130	843	502	2,200	1,160	1,120	24,900	1,300	1,700
4	908	1,450	1,050	1,110	1,030	498	1,560	899	1,240	14,400	1,640	1,450
5	850	1,370	1,090	1,110	1,200	515	1,420	850	1,240	17,600	1,410	1,240
6	789	1,410	1,130	1,150	1,580	473	1,450	858	1,030	10,700	1,470	1,300
7	753	1,340	1,130	1,150	2,220	457	1,580	899	926	6,550	1,110	1,070
8	775	1,290	1,030	1,170	2,020	584	4,990	1,040	890	5,370	1,450	1,210
9	804	1,300	1,060	866	1,760	647	6,020	1,220	1,240	4,640	1,280	1,510
10	944	1,340	1,080	599	1,820	782	6,080	850	1,300	4,380	1,170	1,700
11	1,080	1,280	1,060	560	1,700	850	3,710	2,020	1,310	3,570	1,510	1,580
12	1,320	1,190	1,050	523	1,640	874	2,840	1,680	1,560	3,320	1,640	1,030
13	6,100	1,200	1,070	694	1,700	733	2,090	1,250	1,180	3,080	1,520	797
14	3,540	1,170	1,060	1,130	1,700	701	1,580	1,360	827	3,470	1,300	763
15	3,320	1,180	1,080	1,240	1,570	944	1,280	1,010	926	3,950	1,400	2,710
16	2,340	1,180	1,110	1,200	2,280	1,540	1,300	1,150	2,260	4,200	1,380	2,940
17	1,960	1,050	1,080	1,170	3,380	1,700	1,480	1,140	2,220	4,730	1,240	1,640
18	1,820	1,180	1,000	1,120	1,720	1,700	1,250	1,080	1,890	3,200	1,150	1,160
19	1,640	1,170	980	1,120	1,640	1,590	1,050	1,580	6,950	2,360	1,190	1,520
20	1,520	1,130	980	1,070	1,820	1,500	890	1,410	8,200	2,090	1,570	1,630
21	1,360	1,040	1,080	1,010	2,160	1,380	1,120	1,270	8,580	2,640	2,290	1,890
22	1,250	1,020	1,140	1,050	2,220	1,500	1,450	1,170	10,800	2,940	1,530	1,890
23	1,180	971	1,150	1,240	1,760	1,640	1,090	2,100	8,750	2,160	1,270	2,290
24	1,120	899	1,120	990	1,250	1,960	1,160	3,710	5,280	1,960	1,190	2,640
25	1,100	797	1,120	882	1,040	2,360	882	2,790	4,120	1,820	2,220	1,760
26	1,090	811	1,130	850	797	2,160	971	3,390	3,160	1,890	1,960	1,630
27	7,220	890	1,140	804	1,140	2,020	990	2,860	2,500	1,820	1,480	1,890
28	7,740	899	1,130	797	990	1,700	1,310	7,200	3,470	1,480	1,420	1,960
29	3,550	882	1,140	971	701	1,570	1,820	5,100	9,120	1,960	1,560	1,510
30	2,160	935	1,130	926	-	1,820	3,400	3,530	124,000	2,020	1,310	1,390
31	1,580	-	1,140	882	-	2,160	-	2,290	-	1,540	1,210	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	62,451	7,740	753	2,015	123,900
November	34,824	1,640	797	1,161	69,070
December	33,311	1,150	926	1,075	66,070
Calendar year 1939	592,051	13,700	650	1,622	1,174,000
January	30,794	1,240	523	993	61,080
February	45,382	3,380	701	1,565	90,010
March	38,020	2,360	457	1,226	75,410
April	61,483	6,080	882	2,049	121,900
May	61,826	7,200	850	1,994	122,600
June	219,319	124,000	827	7,311	435,000
July	285,940	109,000	1,480	9,224	567,200
August	44,980	2,290	1,110	1,451	89,220
September	48,910	2,940	763	1,630	97,010
Water year 1939-40	967,240	124,000	457	2,643	1,918,000

Colorado River at Columbus, Tex.

Location.- Water-stage recorder, lat. 29°42'20", long. 96°32'05", on bridge on U. S. Highway 90 at eastern edge of Columbus, Colorado County, 340 feet downstream from Texas & New Orleans R. R. bridge and 2.6 miles downstream from Cummins Creek. Datum of gage is 155.57 feet above mean sea level (preliminary figure). Prior to Nov. 15, wire-weight gage at same site and datum.

Drainage area.- 40,840 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- January 1903 to December 1911, May 1916 to November 1930, May 1939 to September 1940. September 1930 to June 1939 at site near Eagle Lake, 23 miles downstream. U. S. Weather Bureau has collected gage-height records in this vicinity since 1903.

Average discharge.- 22 years (1904-11, 1916-30, 1939-40), 3,177 second-feet.

Extremes.- Maximum discharge during year, 152,000 second-feet July 1 (gage height, 36.2 feet); minimum, 488 second-feet Mar. 8.

1903-11, 1916-30, 1939-40: Maximum discharge, that of July 1, 1940; minimum observed, about 80 second-feet Sept. 9, 10, 1910.

Maximum stage known, 41.6 feet, present datum, in July 1869 and on Dec. 6, 1913, according to information furnished by local resident. River divided each time and left Columbus on an island. Data on other floods are as follows: June 18, 1935, observed stage, 38.5 feet, present datum, furnished by U. S. Weather Bureau (discharge 190,000 second-feet, computed on basis of records for station near Eagle Lake, 23 miles downstream); July 29, 1938, observed stage, 38.4 feet, present datum, furnished by U. S. Weather Bureau (discharge, 175,000 second-feet, computed on basis of records for station near Eagle Lake).

Remarks.- Records fair except those above 30,000 second-feet, which are poor. Gage read once daily Oct. 1 to Nov. 14. Diversions above station for irrigation and municipal supply. Regulation same as that for station at Austin.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	1,750	1,080	1,080	980	910	2,200	3,440	2,600	142,000	1,700	1,310
2	1,050	1,750	1,050	1,120	1,020	754	2,060	2,860	2,160	70,900	1,620	1,380
3	1,020	2,110	1,050	1,200	980	656	2,550	1,660	1,580	31,900	1,460	1,700
4	910	1,880	1,200	1,080	980	608	2,050	1,340	1,460	21,900	1,580	1,500
5	910	1,620	1,160	1,080	1,200	572	1,660	1,160	1,620	17,800	1,620	1,800
6	878	1,540	1,160	1,050	1,460	590	1,660	1,050	1,540	17,500	1,500	1,420
7	845	1,540	1,160	1,050	1,880	542	1,620	1,020	1,380	9,260	1,460	1,340
8	812	1,460	1,160	1,050	2,200	506	3,090	1,080	1,230	6,600	1,270	1,270
9	845	1,420	1,050	1,120	1,980	650	6,020	1,230	1,310	5,220	1,460	1,380
10	910	1,340	1,080	980	1,840	780	6,790	1,270	1,860	4,660	1,340	1,620
11	945	1,340	1,200	741	1,840	945	5,020	1,050	1,700	4,170	1,270	1,660
12	980	1,380	1,160	614	1,750	980	3,480	2,120	1,660	3,690	1,540	1,540
13	1,290	1,420	1,160	572	1,660	1,020	2,700	2,350	1,880	3,360	1,620	1,230
14	4,290	1,420	1,120	793	1,750	910	2,160	1,980	1,380	3,200	1,500	1,080
15	3,030	f1,460	1,080	1,200	1,700	890	1,660	1,540	1,230	3,810	1,500	1,020
16	2,980	1,420	1,020	1,270	1,660	1,050	1,420	1,200	1,440	3,930	1,420	2,340
17	2,700	1,380	1,020	1,270	2,730	1,540	1,420	1,230	2,550	4,410	1,340	2,450
18	2,020	1,340	1,200	1,200	2,240	1,750	1,500	1,310	2,400	4,050	1,310	1,620
19	1,880	1,380	1,160	1,200	2,190	1,750	1,340	1,270	2,930	2,920	1,270	1,340
20	1,840	1,310	1,160	1,120	2,020	1,660	1,160	1,660	8,010	2,300	1,340	1,620
21	1,500	1,270	1,120	1,160	2,110	1,620	1,050	1,500	8,010	2,200	1,620	1,660
22	1,460	1,160	1,120	1,200	2,300	1,460	1,120	1,380	10,600	2,500	1,980	e1,840
23	1,340	1,160	1,050	1,230	2,300	1,420	1,420	1,310	11,100	2,350	1,500	e1,660
24	1,230	1,050	1,430	1,340	1,800	1,750	1,120	2,680	7,210	1,980	1,310	e1,750
25	1,160	945	1,270	1,080	1,460	2,060	1,160	3,360	4,790	1,930	1,230	e2,060
26	1,230	878	1,200	980	1,270	2,300	1,020	2,920	3,690	1,800	1,840	e1,620
27	1,560	871	1,200	980	1,050	2,160	1,050	3,470	3,030	1,880	1,750	e1,580
28	8,010	980	1,270	945	1,500	2,020	1,120	3,190	2,500	1,700	1,460	e1,660
29	4,770	980	1,200	945	1,350	1,750	1,420	8,460	4,130	1,620	1,500	e1,540
30	3,030	1,060	1,080	1,050	-	1,750	1,680	4,660	64,000	1,930	1,620	e1,540
31	2,160	-	1,020	1,050	-	2,020	-	3,320	-	1,840	1,380	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	58,545	e,010	812	1,889	116,100
November	40,634	2,110	871	1,354	80,600
December	35,390	1,430	1,020	1,142	70,200
Calendar year	-	-	-	-	-
January	32,750	1,340	572	1,056	64,960
February	49,200	2,730	980	1,697	97,590
March	39,373	2,300	506	1,270	78,100
April	65,920	6,790	1,020	2,131	126,800
May	68,070	8,460	1,020	2,196	135,000
June	160,980	64,000	1,230	5,366	319,300
July	385,310	142,000	1,620	12,430	764,300
August	46,310	1,980	1,230	1,494	91,850
September	47,230	2,450	1,020	1,574	93,680
Water year 1939-40	1,027,712	142,000	506	2,808	2,038,000

e Computed from readings of wire-weight gage.
f Computed on basis of partly estimated gage height.

Colorado River at Wharton, Tex.

Location.- Wire-weight gage, lat. 29°18'30", long. 96°06'15", on bridge on U. S. Highway 96 in Wharton, Wharton County, 1,000 feet downstream from Texas & New Orleans R. R. bridge and 12 miles upstream from Jones Creek. Datum of gage is 65.42 feet above mean sea level (general adjustment of 1929).

Drainage area.- 41,150 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- July 1916 to September 1925, July and August 1938 (flood, discharge measurements only), October 1938 to September 1940. U. S. Weather Bureau has collected gage-height records in this vicinity since 1935.

Extremes.- Maximum discharge observed during year, 100,000 second-feet July 3 (gage height, 35.99 feet); minimum observed, 303 second-feet May 13 (affected by pumping).

1919-25, 1938-40: Maximum discharge, that of July 3, 1940; no flow Aug. 6, 1925 (affected by pumping).

Maximum stage known, 38.9 feet, present datum, Dec. 8, 1913, according to information furnished by local residents; below Wharton floodwater combined with floodwater of Brazos River. Flood of about July 12, 1869, reached about same height.

Flood of June 20, 1935, reached a stage of 38.2 feet, present datum (discharge, 159,000 second-feet, from rating curve extended above 145,000 second-feet), furnished by U. S. Weather Bureau. Flood of July 30, 1938, reached a stage of 37.4 feet, present datum, observed by Geological Survey engineers (discharge, 145,000 second-feet).

Remarks.- Records fair. Gage read twice daily, oftener during periods of rapidly changing stage. Many diversions above station for irrigation and municipal supply. Regulation same as that for station at Austin, Tex.

Cooperation.- Results of two discharge measurements furnished by Corps of Engineers, U. S. Army. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	948	2,630	1,120	1,450	1,120	1,790	1,950	1,670	3,350	49,600	1,410	1,520
2	915	2,190	1,160	1,410	1,120	1,340	2,190	2,570	2,350	77,300	948	1,370
3	1,050	1,990	1,160	1,340	1,080	1,080	2,110	2,780	1,940	90,600	946	1,370
4	980	2,270	1,120	1,410	1,060	915	2,400	1,750	1,300	45,100	807	1,600
5	915	2,110	1,190	1,340	1,080	855	2,360	1,120	856	18,200	885	1,480
6	948	1,990	1,260	1,300	1,260	825	1,830	837	652	17,100	980	1,370
7	948	1,870	1,260	1,300	1,520	753	1,870	680	807	13,200	915	1,220
8	915	1,750	1,260	1,340	1,910	747	1,640	530	585	8,300	1,050	1,300
9	855	1,710	1,260	1,300	2,350	686	2,490	422	518	6,200	885	1,080
10	855	1,640	1,190	1,340	2,270	686	5,220	389	1,160	5,050	843	1,220
11	915	1,640	1,160	1,300	2,030	885	6,060	526	1,710	4,650	825	1,410
12	948	1,480	1,260	1,050	2,030	1,020	4,800	403	1,640	4,070	696	1,560
13	980	1,410	1,300	855	1,950	1,120	3,630	757	1,520	3,710	885	1,480
14	1,070	1,480	1,260	795	1,870	1,160	3,030	2,330	1,750	3,460	1,190	1,190
15	3,500	1,520	1,190	849	1,910	1,120	2,480	1,340	1,740	3,200	1,220	1,080
16	3,030	1,560	1,260	1,220	1,990	1,020	2,350	828	1,220	3,770	1,260	980
17	2,860	1,560	1,190	1,340	2,400	1,080	1,710	455	1,190	3,890	1,260	1,740
18	3,030	1,480	1,160	1,370	3,170	1,370	1,560	430	1,320	4,250	1,050	2,350
19	3,030	1,480	1,300	1,340	2,940	1,710	1,560	566	1,910	3,920	855	1,830
20	2,190	1,450	1,340	1,260	2,350	1,790	1,480	885	1,790	2,820	801	1,450
21	1,910	1,410	1,300	1,220	2,350	1,750	1,260	1,160	5,690	2,190	885	1,670
22	1,790	1,370	1,340	1,220	2,440	1,670	1,120	1,220	6,700	2,030	1,160	1,790
23	1,560	1,300	1,340	1,190	2,520	1,520	1,080	1,370	9,030	2,350	1,670	1,950
24	1,480	1,220	1,300	1,220	2,600	1,370	1,220	1,220	9,160	2,190	1,520	1,370
25	1,340	1,190	1,410	1,340	2,350	1,660	1,220	1,730	6,340	1,830	1,410	1,830
26	1,220	1,080	1,710	1,300	1,870	1,990	1,120	3,090	4,550	1,520	1,300	2,190
27	1,190	1,020	1,450	1,300	1,640	2,270	1,020	2,860	3,620	1,410	1,670	1,870
28	1,670	980	1,410	1,260	1,480	2,270	948	3,120	3,120	1,410	1,830	1,640
29	6,740	980	1,450	1,050	1,450	2,190	915	4,270	2,520	1,410	1,600	1,660
30	5,190	1,080	1,410	980	-	1,910	1,230	7,280	11,100	1,120	1,410	1,910
31	3,540	-	1,370	1,050	-	1,750	-	4,530	-	1,260	1,600	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	58,512	6,740	855	1,887	116,100
November	46,840	2,630	980	1,561	92,910
December	39,890	1,710	1,120	1,287	79,120
Calendar year 1939	617,258	10,400	442	1,691	1,224,000
January	38,039	1,450	795	1,227	75,450
February	56,130	3,170	1,080	1,936	111,300
March	42,302	2,270	686	1,365	83,900
April	63,863	6,060	915	2,128	126,700
May	53,118	7,280	389	1,713	105,400
June	91,638	11,100	518	3,055	181,800
July	387,110	90,600	1,120	12,490	767,800
August	35,768	1,830	696	1,154	70,940
September	46,980	2,350	980	1,566	93,180
Water year 1939-40	960,180	90,600	389	2,623	1,905,000

Peak discharge.- July 3 (4 a.m.) 100,000 sec.-ft.

Elm Creek at Ballinger, Tex.

Location.- Water-stage recorder upstream from spillway of masonry dam, lat. 31°45'00", long. 99°56'50", in Ballinger, Runnels County, 1¼ miles upstream from Colorado River. Datum of gage is 1,617.72 feet above mean sea level (general adjustment of 1929).

Drainage area.- 458 square miles.

Records available.- April 1932 to September 1940.

Extremes.- Maximum discharge during year, 9,830 second-feet May 22 (gage height, 7.57 feet); no flow at times.

1932-40: Maximum discharge, about 26,100 second-feet Sept. 3, 1935 (gage height, 10.30 feet, from floodmarks, probably slightly affected by backwater from Colorado River), from rating curve extended in a straight line above 15,000 second-feet; no flow at times.

Remarks.- Records good except those for period of no gage-height record and those below 50 second-feet, all of which are poor. Stage-discharge relation affected below about 50 second-feet by wind action and occasional accumulation of drift on dam. Low-water flow affected by diversions through Ballinger city pumping plant.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

3.80	0	3.88	4.5	4.40	544
3.82	.2	3.90	11	5.00	1,550
3.84	.6	4.00	74	5.50	2,580
3.86	1.5	4.20	284	6.00	3,800

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0		0	0	0.6	7.0	0	16
2					0		0	0	.4	11	0	4.5
3					0		0	0	0	.6	0	168
4					0		0	0	0	.4	0	213
5					0		11	0	0	.6	0	54
6					0		f2,320	0	0	.2	0	21
7					0		191	0	0	0	0	7.0
8					0		27	69	1,540	0	0	4.5
9					0		4.5	2.5	204	0	0	1.5
10					0		.6	2.5	86	0	0	.2
11					0		0	1.0	21	0	0	0
12					0		.4	.4	7.0	0	0	0
13					0		1.0	.1	2.5	0	0	0
14					0		1.0	0	19	0	0	0
15					0		.1	0	281	0	0	0
16					226		0	0	a21	0	1,280	0
17					447		0	0	a11	0	1,860	0
18					11		0	0	a11	0	54	0
19					2.5		0	0	a11	0	12	0
20					1.5		0	0	a11	0	2.5	0
21					1.0		0	0	a11	0	1.0	0
22					1.0		0	3,540	365	0	.4	0
23					.4		0	1,120	106	0	0	0
24					.2		0	64	16	0	0	0
25					0		0	21	11	0	0	0
26					0		0	4.5	11	0	0	0
27					0		0	2.5	11	0	31	0
28					0		0	1.0	11	0	16	0
29					0		0	1.0	11	0	3.1	0
30					-		0	.6	7.0	0	76	0
31					-		-	.6	-	0	42	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	33,710.9	11,300	0	92.4	66,870
January	0	0	0	0	0
February	690.6	447	0	23.8	1,370
March	0	0	0	0	0
April	2,556.6	2,320	0	85.2	5,070
May	4,830.7	3,540	0	156	9,580
June	2,786.5	1,540	0	92.9	5,530
July	19.8	11	0	.64	39
August	3,378.0	1,860	0	109	6,700
September	489.7	213	0	16.3	971
Water year 1939-40	14,761.9	3,540	0	40.3	29,260

Peak discharges.- May 22 (4 a.m.) 9,830 sec.-ft.; June 8 (3:30 a.m.) 5,180 sec.-ft.; Aug. 16 (12 p.m.) 7,270 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

South Concho River at Christoval, Tex.

Location.- Water-stage recorder, lat. 31°13', long. 100°30', at Panhandle & Santa Fe Ry. bridge at Christoval, Tom Green County. Datum of gage is 2,010.22 feet above mean sea level (general adjustment of 1929).

Drainage area.- 434 square miles.

Records available.- February 1930 to September 1940.

Average discharge.- 10 years, 63.9 second-feet.

Extremes.- Maximum discharge during year, 4,600 second-feet June 9 (gage height, 7.42 feet); minimum, 4.2 second-feet Oct. 4.

1930-40: Maximum discharge, 100,000 second-feet July 23, 1938 (gage height, 21.95 feet, from floodmarks), from rating curve extended above 9,000 second-feet on basis of one slope-area measurement; minimum, 2.1 second-feet July 17-19, 26-29, Aug. 28 to Sept. 5, 1934.

Flood of Aug. 6, 1906, reached a stage about 1.1 feet higher than flood of July 23, 1938, at a point 0.5 mile downstream from gage, according to information furnished by local residents.

Remarks.- Records good. Low flow materially affected by diversion to South Concho Irrigation Co.'s canal 600 feet upstream.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	13	18	18	19	20	13	19	17	40	18	18
2	6.0	14	18	22	20	20	13	19	17	30	19	17
3	5.1	12	18	22	23	21	13	19	17	28	19	17
4	6.6	12	18	22	21	21	12	16	17	29	18	17
5	8.1	13	18	22	19	20	35	15	17	29	18	17
6	8.8	13	19	18	19	20	174	14	17	29	26	17
7	8.8	14	19	19	19	20	37	16	18	30	20	16
8	8.8	19	19	18	20	21	17	16	17	31	19	16
9	29	29	19	16	20	20	17	15	679	31	21	16
10	18	23	19	16	20	20	17	14	37	31	21	14
11	10	15	19	19	19	21	17	14	18	30	21	14
12	10	13	19	19	19	21	16	14	18	31	21	14
13	10	12	19	19	19	19	16	13	18	31	21	14
14	11	12	18	19	20	17	16	13	18	30	20	13
15	11	13	18	16	20	17	17	13	19	30	20	13
16	11	12	18	16	23	18	17	13	19	29	20	13
17	11	11	18	16	21	18	17	13	18	29	20	13
18	11	11	18	16	21	19	17	13	18	30	24	13
19	11	11	18	16	20	19	17	14	85	30	21	13
20	12	10	17	18	20	20	18	14	31	29	21	13
21	12	14	15	18	20	21	18	14	22	28	21	14
22	12	19	17	19	20	21	18	18	22	25	20	14
23	12	18	17	19	20	22	18	17	22	18	20	14
24	12	18	18	20	20	23	19	15	24	18	20	14
25	11	18	21	19	20	24	20	14	23	18	20	14
26	13	18	25	19	20	25	20	14	23	18	20	14
27	11	18	24	19	21	25	20	15	23	17	20	14
28	12	18	18	19	20	21	20	15	24	15	20	14
29	12	20	18	20	21	13	19	16	70	15	20	14
30	14	20	22	19	-	13	19	17	44	15	20	14
31	14	-	22	19	-	12	-	17	-	18	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	350.3	29	5.1	11.3	695
November	463	29	10	15.4	918
December	584	25	15	18.8	1,160
Calendar year 1939	7,205.1	68	5.1	19.7	14,280
January	591	22	18	19.1	1,170
February	564	23	19	20.1	1,160
March	612	25	12	19.7	1,210
April	707	174	12	23.6	1,400
May	473	19	13	15.3	938
June	1,412	679	17	47.1	2,800
July	812	40	15	26.2	1,610
August	629	26	18	20.3	1,250
September	438	18	13	14.6	869
Water year 1939-40	7,655.3	679	5.1	20.9	15,180

Peak discharge.- June 9 (1 a.m.) 4,600 sec.-ft.; June 9 (11 a.m.) 920 sec.-ft.; June 19 (5:30 p.m.) 607 sec.-ft.

South Concho River at San Angelo, Tex.

Location.- Water-stage recorder above spillway of San Angelo waterworks concrete dam, lat. 31°26'45", long. 100°25'30", at bridge on U. S. Highways 87 and 277, half a mile south of San Angelo, Tom Green County, and 1 mile upstream from confluence with North Concho River. Datum of gage is 1,802.94 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,687 square miles, of which about 152 square miles is probably non-contributing.

Records available.- October 1931 to September 1940.

Extremes.- Maximum discharge during year, 9,440 second-feet June 29 (gage height, 5.50 feet); minimum, 0.3 second-foot Sept. 20.

1931-40: Maximum discharge, 111,000 second-feet Sept. 17, 1936 (gage height, 23.4 feet, of which about 2.4 feet was caused by backwater from North Concho River), by slope-area method; no flow at times.

Maximum stage known, 29.7 feet, Aug. 6, 1906 (not affected by backwater), according to information furnished by local residents.

Remarks.- Records good. Diversions above station for irrigation, municipal supply, and power. Flow partly regulated by reservoirs (combined capacity, about 11,000 acre-feet), the largest of which is Lake Nasworthy (capacity, 10,500 acre-feet), 6.5 miles above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	12	24	30	26	26	24	18	30	276	11	26
2	9.2	9.2	24	30	26	22	22	20	30	241	11	30
3	9.2	11	24	30	40	24	20	22	26	40	9.2	36
4	11	11	24	30	96	26	18	24	24	26	11	180
5	9.2	11	24	30	276	28	34	24	24	26	11	300
6	8.1	11	22	32	276	24	1,520	18	20	28	56	288
7	11	9.2	24	32	265	22	174	168	34	28	48	276
8	11	9.2	24	30	253	24	37	868	1,070	26	42	203
9	27	11	24	32	222	24	40	32	1,210	26	48	30
10	14	14	24	32	24	26	37	32	294	24	42	32
11	14	18	24	32	14	30	40	32	44	24	45	30
12	12	14	24	32	12	26	37	30	37	26	42	10
13	12	12	20	32	11	22	37	26	37	24	37	3.9
14	12	14	22	28	14	22	40	24	40	30	42	1.2
15	12	18	22	26	14	22	37	24	40	24	37	1.7
16	12	20	20	26	17	28	37	24	40	22	35	3.2
17	12	20	22	26	18	30	30	26	40	18	37	.9
18	12	18	22	f26	18	24	32	24	37	15	48	1.1
19	14	17	20	f28	20	28	35	28	51	15	45	.9
20	12	16	22	f32	22	24	35	28	265	17	45	1.0
21	12	17	22	a32	20	24	35	26	276	20	42	1.2
22	14	17	26	a32	20	22	26	30	253	18	40	6.2
23	11	17	26	f32	20	22	24	40	44	17	35	8.0
24	14	17	24	32	18	22	28	35	35	15	35	5.1
25	14	15	32	32	22	28	28	12	32	12	37	3.2
26	18	15	30	30	26	28	26	15	32	14	35	1.7
27	17	17	28	32	22	26	26	15	32	12	35	1.5
28	15	20	32	30	22	24	28	15	31	15	35	3.4
29	15	26	32	30	24	28	24	18	3,400	14	35	5.7
30	11	35	30	28	-	24	22	18	300	9.2	20	4.6
31	14	-	30	26	-	26	-	37	-	11	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	399.7	27	8.1	12.9	793
November	470.6	35	9.2	15.7	933
December	768	32	20	24.8	1,520
Calendar year 1939	19,505.9	4,070	0	53.4	38,680
January	932	32	26	30.1	1,850
February	1,858	276	11	64.1	3,690
March	776	30	22	25.0	1,540
April	2,553	1,520	18	85.1	5,060
May	1,753	868	12	56.5	3,480
June	7,828	3,400	20	261	15,530
July	1,113.2	276	9.2	35.9	2,210
August	1,071.2	56	9.2	34.6	2,120
September	1,495.5	300	.9	49.8	2,970
Water year 1939-40	21,018.2	3,400	.9	57.4	41,700

Peak discharge.- Apr. 6 (9:30 a.m.) 5,000 sec.-ft.; June 9 (7 p.m.) 4,710 sec.-ft.; June 29 (7:30 a.m.) 9,440 sec.-ft.

a No gage-height record; discharge interpolated.

f Discharge computed on basis of partly estimated gage heights.

Concho River near San Angelo, Tex.

Location.- Water-stage recorder, lat. 31°27'10", long. 100°24'40", half a mile downstream from confluence of North and South Concho Rivers and 1¾ miles southeast of San Angelo, Tom Green County. Datum of gage is 1,776.8 feet above mean sea level (general adjustment of 1929).

Drainage area.- 4,492 square miles, of which about 275 square miles is probably non-contributing.

Records available.- September 1915 to September 1940.

Average discharge.- 25 years, 196 second-feet.

Extremes.- Maximum discharge during year, 34,400 second-feet June 29 (gage height, 26.05 feet); minimum, 2.0 second-feet Sept. 27.

1915-40: Maximum discharge, 230,000 second-feet Sept. 17, 1936 (gage height, 46.6 feet, from floodmarks), by slope-area method; no flow, Nov. 29, 1921.

Maximum stage known, 47.5 feet Aug. 6, 1906 (discharge, about 246,000 second-feet), according to information furnished by local residents.

Remarks.- Records good. Many diversions above station for irrigation and municipal supply. Flow partly regulated by diversions and reservoirs above station (combined capacity, about 11,000 acre-feet), the largest of which is Lake Nasworthy (capacity, 10,500 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	25	35	35	31	22	23	34	492	16	24
2	11	13	25	36	36	24	21	23	33	325	16	28
3	11	13	29	36	54	24	20	23	29	77	14	1,250
4	13	14	27	34	73	25	19	24	27	46	14	572
5	11	14	24	36	265	30	43	25	26	41	16	310
6	11	16	29	38	251	28	1,550	22	25	40	587	256
7	8.7	13	23	36	246	26	184	673	67	41	80	246
8	11	14	23	36	238	27	45	1,170	1,130	41	51	201
9	40	15	25	38	220	27	42	56	1,330	37	42	31
10	17	17	24	37	32	27	40	41	391	35	40	25
11	16	23	27	38	17	30	39	36	92	34	40	24
12	15	17	25	39	14	28	37	36	65	34	41	14
13	15	17	24	42	15	25	37	32	57	31	36	7.6
14	15	17	27	36	17	26	37	30	50	33	39	5.3
15	16	17	25	34	17	27	36	31	50	28	38	4.5
16	16	19	25	36	25	25	34	30	61	26	36	6.1
17	15	19	25	35	23	27	33	30	71	26	33	4.1
18	16	19	26	34	22	22	32	28	146	25	38	3.7
19	16	19	25	34	25	24	32	32	109	23	41	3.3
20	14	19	25	34	25	24	31	32	355	22	38	2.9
21	13	19	25	34	25	24	33	29	340	25	37	2.5
22	14	19	29	38	26	24	29	34	315	22	35	6.4
23	14	19	30	38	25	25	28	72	66	20	33	7.6
24	14	19	29	37	23	29	32	76	47	19	31	5.7
25	9.3	19	39	37	24	28	32	49	79	18	33	4.1
26	18	20	34	35	28	28	30	44	225	19	33	2.4
27	16	19	32	35	24	27	29	39	86	19	1,090	2.1
28	14	20	33	35	25	23	31	33	66	20	98	3.3
29	16	30	35	35	27	29	26	33	11,300	19	50	4.9
30	13	36	34	35	-	25	25	32	804	16	30	5.3
31	14	-	36	35	-	28	-	42	-	16	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	457.0	40	8.7	14.7	906
November	548	36	13	18.3	1,090
December	864	39	23	27.9	1,710
Calendar year 1939	22,062.0	4,060	1.8	60.4	43,760
January	1,118	42	34	36.1	2,220
February	1,877	265	14	64.7	3,720
March	817	31	22	26.4	1,620
April	2,629	1,550	19	87.6	5,210
May	2,880	1,170	22	92.9	5,710
June	17,476	11,300	25	582	34,660
July	1,670	492	16	53.9	3,310
August	2,748	1,090	14	88.6	5,450
September	3,062.8	1,250	2.1	102	6,070
Water year 1939-40	36,146.8	11,300	2.1	98.8	71,680

Peak discharge.- Apr. 6 (11 a.m.) 4,830 sec.-ft.; May 8 (3 p.m.) 5,340 sec.-ft.; June 8 (11 a.m.) 4,630 sec.-ft.; June 9 (8:30 p.m.) 4,830 sec.-ft.; June 29 (7:30 a.m.) 34,400 sec.-ft.; Aug. 27 (11 a.m.) 4,340 sec.-ft.

Concho River near Paint Rock, Tex.

Location.- Water-stage recorder upstream from spillway of masonry dam, lat. 31°31', long. 99°55', at bridge on U. S. Highway 83, a quarter of a mile north of Paint Rock, Concho County. Datum of gage is 1,574.43 feet above mean sea level (general adjustment of 1929). Prior to Jan. 15, wire-weight gage at same site and datum.

Drainage area.- 5,538 square miles, of which about 275 square miles is probably non-contributing.

Records available.- September 1915 to September 1940.

Average discharge.- 25 years, 261 second-feet.

Extremes.- Maximum discharge during year, 25,100 second-feet June 29 (gage height, 22.90 feet); minimum, 5.0 second-feet Sept. 30.
1915-40: Maximum discharge, 301,000 second-feet Sept. 17, 1936 (gage height, 43.4 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records good except those for periods of rapidly changing stage, which are fair. Gage read once daily Oct. 1 to Jan. 14. Many diversions above station for irrigation and municipal supply. Low-water flow materially affected by diversions and storage above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	13	55	34	34	27	27	26	29	733	13	41
2	7.8	14	39	34	34	26	26	23	34	469	10	29
3	10	14	32	37	49	27	26	19	32	359	7.8	116
4	10	13	32	37	49	32	21	19	27	200	7.1	1,380
5	11	14	34	39	55	27	53	17	24	113	6.4	469
6	12	14	34	39	218	27	5,800	19	24	84	11	341
7	12	14	34	39	252	27	1,030	53	23	73	370	306
8	12	14	34	44	257	29	278	2,650	928	66	126	284
9	44	16	34	41	241	27	122	321	824	62	77	252
10	88	21	32	41	225	29	77	122	1,390	55	46	109
11	44	32	32	41	130	29	66	66	335	49	41	51
12	24	29	32	41	41	29	55	46	180	49	39	39
13	19	29	32	39	32	27	49	37	109	44	39	37
14	14	26	32	39	27	27	49	34	92	44	41	29
15	13	23	32	39	24	27	46	29	109	41	51	21
16	13	23	29	39	546	27	46	26	126	39	41	16
17	13	23	29	34	110	27	41	26	81	39	37	13
18	12	23	32	32	41	27	39	24	84	32	34	11
19	13	24	29	29	34	29	39	24	117	29	29	9.4
20	14	24	27	32	26	27	37	24	185	29	32	7.8
21	13	23	27	34	26	24	37	24	273	27	32	7.8
22	13	23	27	37	26	24	37	204	278	26	29	9.4
23	16	23	27	37	26	24	32	824	257	24	29	9.4
24	16	23	34	37	26	26	34	185	157	24	27	7.8
25	16	24	37	37	26	24	29	101	62	23	24	6.4
26	19	24	37	37	24	26	32	73	49	20	26	5.7
27	17	24	39	37	24	29	34	55	162	17	250	7.1
28	17	24	37	34	27	27	32	49	109	14	684	7.8
29	17	26	37	34	27	27	27	41	12,300	13	160	7.1
30	17	34	37	34	-	27	27	34	2,180	13	105	5.7
31	16	-	37	34	-	26	-	32	-	13	77	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	571.3	88	7.8	18.4	1,130
November	651	34	13	21.7	1,290
December	1,042	55	27	33.6	2,070
Calendar year 1939	29,508.3	4,450	.3	80.8	58,520
January	1,142	44	29	36.8	2,270
February	2,657	546	24	91.6	5,270
March	838	32	24	27.0	1,660
April	8,245	5,600	21	275	16,360
May	5,227	2,650	17	169	10,370
June	20,580	12,300	23	686	40,820
July	2,823	733	13	91.1	5,600
August	2,521.3	684	6.4	81.3	5,000
September	3,635.4	1,380	5.7	121	7,210
Water year 1939-40	49,936.0	12,300	5.7	136	99,050

Peak discharge.- Apr. 6 (3:30 a.m.) 12,800 sec.-ft.; May 8 (11:30 a.m.) 4,960 sec.-ft.; June 10 (6:30 a.m.) 4,380 sec.-ft.; June 29 (6 p.m.) 25,100 sec.-ft.

South Concho Irrigation Co.'s canal at Christoval, Tex.

Location.- Water-stage recorder, lat. 31°13', long. 100°30', at Christoval, Tom Green County, 85 feet downstream from point of diversion and 100 feet downstream from bridge on U. S. Highway 277. Datum of gage is 2,017.0 feet above mean sea level (general adjustment of 1929).

Records available.- November 1939 to September 1940 (November 1921, February 1930 to September 1939, miscellaneous discharge measurements only).

Extremes.- Maximum discharge during period, 66 second-feet June 9 (gage height, 5.25 feet), from rating curve extended above 15 second-feet by logarithmic plotting; minimum, 3.7 second-feet Dec. 26, 27.

Remarks.- Records fair. No diversions above station. Canal diverts water for irrigation from right bank of South Concho River 600 feet above gaging station on that stream.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	10	8.1	7.7	7.2	14	16	11	15	15	16
2		-	10	5.3	7.7	7.1	14	16	11	14	15	16
3		-	10	6.2	8.3	7.0	14	16	11	14	15	16
4		-	10	5.8	8.2	6.8	13	15	11	14	15	16
5		-	10	5.9	8.1	6.7	14	15	11	14	16	16
6		-	10	8.1		6.6	22	14	11	14	16	16
7		-	10	8.0		6.5	15	14	11	14	16	16
8		-	10	8.1		6.6	14	14	12	14	16	16
9		-	9.7	8.1		6.7	14	14	30	14	16	16
10		-	9.7	8.1		7.0	14	14	14	14	16	16
11		-	9.5	8.1		7.2	14	14	13	14	16	15
12		-	9.5	8.1		7.3	14	14	12	14	16	15
13		-	9.4	8.1		8.6	14	13	12	14	16	15
14		-	9.3	8.1	a8.0	10	14	13	12	14	16	15
15		-	9.3	8.2		11	14	13	12	14	16	15
16		17	9.3	8.2		11	15	13	13	14	16	15
17		17	9.3	8.2		11	15	13	13	14	16	15
18		17	9.3	8.2		11	15	13	13	14	16	15
19	†17	17	9.3	8.3		12	15	13	16	14	16	15
20		17	10	8.3		12	15	13	14	14	16	15
21		14	11	8.3		12	15	12	13	14	16	15
22		e.9	9.0	8.5		12	15	12	13	14	16	15
23		10	8.3	8.6	7.9	12	15	12	13	14	16	15
24		10	8.1	8.3	7.7	12	15	12	14	14	16	15
25		10	6.3	8.3	7.6	12	15	12	13	14	16	15
26		10	3.7	8.2	7.5	12	16	12	13	14	16	15
27		10	6.0	8.2	7.4	12	15	12	13	14	16	15
28		10	8.8	8.2	7.4	12	15	11	14	14	16	15
29		10	7.8	8.1	7.3	13	15	11	16	14	16	15
30		10	5.0	8.1	-	13	16	11	15	15	16	15
31		-	6.2	8.0	-	13	-	12	-	15	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-	-
November 16-30	187.9	17	8.9	12.5	373
December	273.8	11	3.7	8.83	543
Calendar year	-	-	-	-	-
January	244.2	8.5	5.3	7.88	484
February	228.8	-	-	7.89	454
March	304.3	13	6.5	9.82	604
April	444	22	13	14.8	881
May	409	16	11	13.2	811
June	400	30	11	13.3	793
July	437	15	14	14.1	867
August	491	16	15	15.8	974
September	460	16	15	15.3	912
The period	-	-	-	-	7,700

a No gage-height record; discharge computed on basis of field notes and records for station on South Concho River at Christoval.
† Result of discharge measurement.

Middle Concho River near Tankersly, Tex.

Location.- Water-stage recorder and masonry control, lat. 31°22'35", long. 100°36'50", at Twelvemile Bridge, 3 miles northeast of Tankersly, Tom Green County, and 9½ miles upstream from Spring Creek. Datum of gage is 1,919.5 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,280 square miles, of which about 152 square miles is probably non-contributing.

Records available.- February 1930 to September 1940.

Average discharge.- 10 years, 45.0 second-feet.

Extremes.- Maximum discharge during year, 5,680 second-feet June 28 (gage height, 14.40 feet); no flow at times.

1930-40: Maximum discharge, about 35,000 second-feet Sept. 26, 1936 (gage height, 24.2 feet), computed on basis of record of flow over Nasworthy Dam 12 miles downstream, corrected for inflow and storage; no flow at times.

Maximum stage known, about 27.2 feet in April 1922, according to information furnished by State Highway Department.

Remarks.- Records good. Small diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 3-9, Aug. 27, 28)

1.9	0	2.8	19	4.0	265
2.0	0.9	3.0	31	4.5	480
2.2	3.2	3.2	52	5.0	685
2.4	6.3	3.4	e9	6.0	1,050
2.6	11	3.6	141		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	0	46	0	
2								0	0	21	0	
3								0	0	10	0	
4								0	0	5.8	0	
5								0	0	3.2	0	
6								0	0	1.8	148	
7								87	0	.9	.5	
8								5.4	0	.3	0	
9								0	45	0	0	
10								0	54	0	0	
11								0	22	0	0	
12								0	5.4	0	0	
13								0	.9	0	0	
14								0	.1	0	0	
15								0	12	0	0	
16								0	1.6	0	0	
17								0	0	0	0	
18								0	0	0	0	
19								0	0	0	0	
20								0	0	0	0	
21								0	0	0	0	
22								0	0	0	0	
23								0	0	0	0	
24								0	0	0	0	
25								0	146	0	0	
26								0	42	0	44	
27								0	14	0	25	
28								0	437	0	.3	
29								0	2,000	0	0	
30								0	210	0	0	
31								0	-	0	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	5,169.4	1,020	0	14.2	10,260
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	92.4	87	0	2.96	183
June	2,990	2,000	0	99.7	5,930
July	89	46	0	2.87	177
August	217.8	148	0	7.03	432
September	0	0	0	0	0
Water year 1939-40	3,389.2	2,000	0	9.26	6,720

Peak discharges.- June 28 (11:30 p.m.) 5,680 sec.-ft.; June 29 (9 a.m.) 3,520 sec.-ft.; Aug. 6 (2 a.m.) 1,280 sec.-ft.

Spring Creek near Tankersly, Tex.

Location.- Water-stage recorder and concrete control, lat. 31°21'30", long. 100°32'05", 2¾ miles upstream from mouth and 6½ miles east of Tankersly, Tom Green County. Datum of gage is 1,874.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 734 square miles.

Records available.- February 1930 to September 1940.

Average discharge.- 10 years, 38.5 second-feet.

Extremes.- Maximum discharge during year, 5,080 second-feet Apr. 6 (gage height, 10.28 feet); minimum, 0.1 second-foot Oct. 2-8, 12-17.
1930-40: Maximum discharge, 23,900 second-feet Sept. 17, 1936 (gage height, 20.3 feet); no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are poor. Several small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	1.4	17	19	12	19	1.9	1.6	9.0	64	0.8	4.0
2	.1	1.7	11	20	12	11	1.7	1.6	6.2	52	.7	5.5
3	.1	2.2	9.6		23	9.0	1.7	2.1	4.8	41	.6	8.1
4	.1	2.3	9.8		24	10	1.7	3.7	3.7	37	.6	457
5	.2	2.3	15		19	11	2.1	1.9	3.1	38	.7	97
6	.2	2.3	16		15	11	1,370	1.4	3.0	36	156	38
7	.1	2.3	16		15	10	112	23	59	34	57	24
8	.1	2.3	15		20	7.8	44	29	197	32	15	17
9	.9	3.0	15		21	7.3	26	26	51	26	57	12
10	.2	2.3	16		18	7.6	22	36	42	24	3.5	11
11	.2	.9	19		18	8.3	23	12	18	21	2.7	9.0
12	.1	.7	19		18	8.0	22	7.1	13	17	2.6	8.3
13	.1	.6	19		18	6.7	19	5.8	40	10	2.5	7.8
14	.1	.5	20	a15	18	5.8	18	5.1	64	8.3	2.5	7.3
15	.1	.5	20		18	3.3	15	5.0	80	7.6	2.6	7.8
16	.1	.7	21		24	3.0	12	5.5	69	6.5	3.3	8.6
17	.1	1.3	20		32	2.7	7.8	4.4	36	4.6	3.4	7.6
18	.2	2.7	20		29	2.6	5.5	5.0	29	3.3	217	4.3
19	.2	3.3	19		25	2.6	5.0	4.8	30	2.6	44	3.0
20	.2	3.3	19		23	2.6	4.4	4.3	25	2.1	18	2.5
21	.2	3.4	19		22	2.5	3.7	4.4	25	1.7	10	2.1
22	.2	3.5	21		22	2.5	3.0	9.2	24	1.6	7.8	2.0
23	.2	3.5	26		21	2.3	2.6	32	20	1.5	6.2	2.2
24	.2	4.1	24		21	2.5	2.6	27	19	1.4	5.5	5.3
25	.2	4.1	27	f15	20	2.2	2.5	18	24	1.2	6.2	3.9
26	.8	4.1	30	a15	21	2.2	2.3	14	25	1.1	11	2.5
27	1.1	5.0	26	f15	21	2.0	2.2	13	15	1.0	11	2.1
28	1.1	6.2	24	15	20	2.0	2.1	10	13	1.0	7.8	1.9
29	1.1	11	24	15	19	2.1	1.7	8.0	477	.9	5.8	1.7
30	1.1	27	24	14	-	1.9	1.6	8.0	155	.9	4.1	1.7
31	1.2	-	24	14	-	1.9	-	13	-	.8	4.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11.0	1.2	0.1	0.35	22
November	108.4	27	.5	3.61	215
December	605.4	30	9.6	19.5	1,200
Calendar year 1939	8,959.5	2,190	.1	24.5	17,770
January	472	-	-	15.2	936
February	589	32	12	20.3	1,170
March	173.4	19	1.9	5.59	344
April	1,739.1	1,370	1.6	58.0	3,450
May	341.9	36	1.4	11.0	678
June	1,579.8	477	3.0	52.7	3,130
July	482.1	64	.8	15.6	956
August	669.9	217	.8	21.6	1,330
September	765.2	457	1.7	25.5	1,520
Water year 1939-40	7,537.2	1,370	.1	20.6	14,950

Peak discharges.- Apr. 6 (3 a.m.) 5,080 sec.-ft.; June 7 (11 p.m.) 1,420 sec.-ft.; June 29 (11 a.m.) 1,910 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of recorded range of stage and weather records.

f Discharge computed on basis of partly estimated gage heights.

North Concho River at Sterling City, Tex.

Location.- Water-stage recorder, lat. 31°50', long. 100°59', at county highway bridge, 0.3 mile south of Sterling City, Sterling County, and 4 miles upstream from Sterling Creek. Datum of gage is 2,242.4 feet above mean sea level (general adjustment of 1929). Prior to Dec. 17, chain gage at same site and datum.

Drainage area.- 690 square miles, of which about 75 square miles is probably non-contributing.

Records available.- September 1939 to September 1940.

Extremes.- Maximum discharge during period, 1,200 second-feet June 29 (gage height, 12.03 feet); no flow at times.
Maximum stage known, 23.3 feet May 6, 1891, according to information furnished by local residents.

Remarks.- Records good except those below 2 second-feet, which are fair. Chain gage read once daily Sept. 1 to Dec. 5. Small diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

1.85	0	2.5	6.7	5.0	153
2.0	.2	2.8	18	6.0	233
2.15	.7	3.2	35	7.0	315
2.2	1.0	3.6	53	8.0	409
2.3	2.0	4.0	77		
2.4	3.5	4.5	113		

Discharge, in second-feet, 1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.2	0	0.7	0.1	0.1	0	20	0	0
2			0	.3	1.9	.4	1.7	.1	0	7.0	0	79
3			0	.3	2.0	.1	.8	0	0	4.8	0	132
4			0	.3	1.8	0	.4	0	0	1.1	0	2.3
5			0	.4	1.3	.1	.3	0	0	1.3	0	.2
6			0	.4	.9	.5	1.2	0	0	1.7	0	0
7			0	.4	.8	.4	1.8	0	0	.6	0	0
8			0	.4	.6	.5	1.3	.5	4.9	.4	0	0
9			0	.4	.6	1.3	1.0	.8	202	.5	0	0
10			0	3.2	.7	1.1	.7	.4	11	.3	0	0
11			0	1.0	.7	.8	.7	.2	2.2	.2	0	0
12			0	.2	.8	.7	.7	.1	1.3	.1	0	0
13			0	0	.7	.5	.7	.1	.6	0	4.3	0
14			0	1.6	.7	.5	.7	0	1.7	.1	3.2	0
15			0	.8	.7	.5	1.0	0	.7	.1	.2	0
16			0	.2	1.0	.5	1.1	0	.4	0	0	0
17			0	0	1.4	.6	.9	0	.5	0	1.2	0
18			0	0	1.6	.5	.4	0	2.4	0	0	0
19			0	0	1.4	.7	.3	0	.4	0	0	0
20			0	.1	1.1	1.7	.7	0	.2	0	0	0
21			0	2.9	.9	1.7	.9	0	.1	0	0	0
22			0	.4	.8	1.6	.8	2.8	0	0	0	0
23			0	.1	.9	1.7	.6	.8	0	0	0	0
24			0	0	.8	4.4	.6	.4	282	0	0	0
25			0	0	.9	3.1	.6	.2	176	0	0	0
26			0	.3	.8	1.0	.5	.1	15	0	0	0
27			0	.7	.8	1.1	.4	.1	5.7	0	0	0
28			0	3.1	.9	2.0	.4	0	3.3	0	0	0
29			0	1.4	.8	1.4	.3	0	318	0	0	0
30			0	.8	-	.8	.3	0	178	0	0	0
31			.1	.2	-	.4	-	0	-	0	0	-

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
September 1939	0	0	0	0	0
Water year	-	-	-	-	-
October 1939	0	0	0	0	0
November	0	0	0	0	0
December	.1	.1	0	0	.2
Calendar year	-	-	-	-	-
January 1940	20.1	3.2	0	.65	40
February	27.9	2.0	0	.96	55
March	31.3	4.4	0	1.01	62
April	21.9	1.8	.1	.73	43
May	6.7	2.8	0	.22	13
June	1,206.4	318	0	40.2	2,390
July	38.2	20	0	1.23	76
August	8.9	4.3	0	.29	18
September	213.5	132	0	7.12	423
Water year 1939-40	1,575.0	318	0	4.30	3,120

Peak discharges.- June 9 (1:30 a.m.) 553 sec.-ft.; June 24 (10:45 p.m.) 1,152 sec.-ft.; June 29 (7:50 a.m.) 1,200 sec.-ft.

North Concho River near Carlsbad, Tex.

Location.- Water-stage recorder upstream from spillway of State Sanatorium Dam, lat. 31°36', long. 100°40', 2 miles upstream from Carlsbad, Tom Green County. Datum of gage is 2,000.8 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,529 square miles, of which about 123 square miles is probably non-contributing.

Records available.- March 1924 to September 1940.

Average discharge.- 16 years, 59.7 second-feet.

Extremes.- Maximum discharge during year, 5,130 second-feet Aug. 27 (gage height, 9.11 feet, from floodmark); no flow at times.
1924-40: Maximum discharge, 94,600 second-feet Sept. 26, 1936 (gage height, 16.0 feet, from highest floodmarks known), by slope-area method; no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are fair. Diversions by pumping above station affect low-water flow (pump capacity, 40 second-feet), which is also partly regulated by small reservoir above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0.1	3.3	2.3		2.0	a2.6	1.2	1.4	80	0.1	1.4
2		.1	4.4	3.0		2.0	a2.6	1.2	.9	46	.1	.9
3		.1	4.3	3.0		2.3	2.9	1.1	.6	16	.1	1,440
4		.1	4.3	3.0		3.0	2.5	.9	.5	8.1	.1	158
5		.1	4.2	3.0		2.6	3.3	.8	.4	6.5	.1	29
6		.1	4.7	3.8		2.3	8.0	.8	.3	5.8	.1	13
7		.1	4.6	3.0		2.0	6.4	1.2	.2	5.1	.1	8.1
8		.1	4.5	3.0		2.3	4.4	2.0	.1	3.9	.1	5.1
9		.1	3.8	3.0		2.6	3.8	1.7	40	2.3	.1	3.4
10		.1	4.3	3.0	a4.0	2.6	3.3	2.0	70	1.7	.1	2.6
11		.1	2.1	3.0		2.6	3.3	1.7	17	1.3	.1	1.5
12		.1	.8	3.0		2.3	2.9	1.5	8.1	.9	.1	1.4
13		.1	.9	2.3		2.3	2.8	1.2	5.8	.8	.1	1.2
14		.1	1.4	2.3			3.2	.9	5.1	.7	.1	1.0
15		.1	1.8	2.3			2.8	.8	50	.6	.1	.8
16		.1	1.7	2.3			3.2	.6	14	.5	.1	.7
17		.1	1.7	3.0			3.2	.6	6.5	.4	.1	.6
18		.1	1.7	3.0			2.8	.4	5.1	.3	21	.4
19		.1	1.7	3.0	5.1		2.8	.3	4.5	.2	14	.4
20		.1	1.7	a3.0	5.1		2.8	.3	3.0	.2	3.9	.3
21		.1	1.7	a3.0	4.5		3.2	.3	2.0	.1	1.8	.2
22		.1	2.3	a3.0	3.9	a2.6	3.2	80	1.7	.1	.8	.2
23		.1	1.7	a3.0	3.0		3.2	40	1.2	.1	.3	.3
24		.1	2.0	a3.0	2.6		3.1	11	1.0	.1	.1	.3
25		.1	3.0	3.0	2.6		3.1	5.8	247	.1	.1	.2
26		.1	3.0	a3.0	3.4		2.3	4.5	59	.1	11	.1
27		.2	2.3	a3.0	3.9		1.7	3.0	20	.1	1,110	.1
28		.6	2.3	a3.0	3.4		1.5	2.3	25	.1	19	.1
29		1.2	2.3	a3.0	3.0		1.4	1.8	670	.1	6.5	.1
30		2.0	2.3	a4.0	-		1.2	1.7	263	.1	3.4	.1
31		-	2.3		-		-	1.8	-	.1	1.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	6.6	2.0	.1	.22	13
December	83.4	4.7	.8	2.69	165
Calendar year 1939	2,071.6	-	0	5.68	4,110
January	92.3	4.0	2.3	2.98	183
February	112.5	-	2.6	3.88	223
March	77.7	-	-	2.51	154
April	93.5	8.0	1.2	3.12	185
May	173.4	80	.3	5.59	344
June	1,523.4	670	.1	50.8	3,020
July	182.4	80	.1	5.88	362
August	1,195.4	1,110	.1	38.6	2,370
September	1,671.5	1,440	.1	55.7	3,320
Water year 1939-40	5,212.1	1,440	0	14.2	10,340

Peak discharges.- June 29 (12:30 a.m.) 4,750 sec.-ft.; Aug. 27 (4:30 a.m.) 5,130 sec.-ft.; Sept. 3 (10 a.m.) 3,780 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage, field notes, and weather records.

Pecan Bayou at Brownwood, Tex.

Location.- Water-stage recorder above spillway of city dam, lat. 31°44'10", long. 98°58'30", at Fort Worth & Rio Grande Ry. bridge, 1 mile north of Brownwood, Brown County, 6 miles downstream from Salt Creek, and 10 miles downstream from Brownwood Reservoir. Datum of gage is 1,318.58 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,614 square miles.

Records available.- May 1917 to June 1918, October 1923 to September 1940.

Average discharge.- 15 years (1924-28, 1929-40), 211 second-feet.

Extremes.- Maximum discharge during year, 5,700 second-feet Aug. 17 (gage height, 5.78 feet); no flow May 1-3, 5-7.

1917-18, 1923-40: Maximum discharge, 52,700 second-feet Oct. 14, 1930 (gage height, 16.92 feet), from rating curve extended above 38,000 second-feet; no flow at times.

Flood of July 3, 1932, probably the greatest known, reached a discharge of about 235,000 second-feet as it entered Brownwood Reservoir (computed from rate of storage in reservoir, according to information furnished by engineers of Brown County Water Improvement District No. 1).

Remarks.- Records good except those below 10 second-feet, which are poor. Stage-discharge relation for low flows occasionally affected by accumulation of drift on dam. Flow regulated by Brownwood Reservoir (capacity, 140,000 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a3.7	1.3	8.9	3.7	6.0	6.0	2.8	0	181	48	162	286
2	a3.7	1.9	6.0	3.7	7.4	6.0	2.8	0	324	38	11	286
3	a3.7	1.3	8.9	3.7	12	6.0	2.8	.1	311	41	7.4	286
4	3.7	1.3	11	4.7	7.4	6.0	3.7	.1	305	26	7.4	292
5	3.7	1.9	14	4.7	6.0	6.0	7.8	.1	305	14	4.7	292
6	2.8	1.9	11	8.9	4.7	6.0	637	0	311	14	4.7	292
7	2.8	2.8	11	6.0	4.7	6.0	20	2.4	311	12	4.7	298
8	2.8	2.8	12	4.7	6.0	6.0	4.7	126	485	12	4.7	298
9	2.8	3.7	12	4.7	4.7	6.0	1.9	8.9	364	7.4	3.7	298
10	2.8	4.7	14	4.7	4.7	6.0	2.8	3.7	334	6.0	2.8	298
11	1.3	4.7	14	4.7	4.7	6.0	4.7	2.8	305	6.0	3.7	305
12	1.3	1.9	16	6.0	4.7	6.0	3.7	2.8	305	6.0	4.7	305
13	1.3	1.3	12	4.7	4.7	4.7	2.8	3.7	604	4.7	3.7	298
14	1.3	1.3	11	4.7	4.7	4.7	7.4	3.7	1,450	4.7	6.0	298
15	1.3	1.3	11	4.7	6.0	6.0	12	3.7	882	3.7	284	305
16	1.3	.9	11	6.0	12	6.0	5.6	3.7	712	271	2,250	305
17	1.3	1.3	11	6.0	16	6.0	2.8	3.7	548	298	4,770	305
18	1.3	1.3	12	4.7	7.4	6.0	2.8	2.8	727	298	4,630	305
19	1.3	1.3	11	3.7	6.0	4.7	2.8	2.8	1,190	298	2,660	263
20	1.3	1.3	7.4	4.7	6.0	4.7	3.7	2.8	619	298	1,650	152
21	1.9	1.9	8.9	6.0	6.0	4.7	3.7	2.8	473	292	1,020	152
22	1.9	2.8	12	6.0	6.0	6.0	3.7	464	389	292	683	174
23	1.9	4.0	9.4	6.0	6.0	6.0	2.8	1,060	330	292	496	163
24	2.8	6.0	4.7	6.0	6.0	4.7	3.7	931	450	298	383	146
25	3.7	7.4	6.0	6.0	6.0	3.7	3.7	638	683	298	324	16
26	3.7	6.0	6.0	6.0	6.0	3.7	11	445	548	305	311	7.4
27	1.9	6.0	6.0	6.0	6.0	3.7	35	324	431	311	305	7.4
28	1.9	6.0	6.0	6.0	6.0	3.7	32	286	229	311	298	8.9
29	2.8	10	3.7	6.0	6.0	3.7	23	231	38	317	292	8.9
30	1.3	16	3.7	6.0	-	3.7	.6	168	38	311	286	8.9
31	.9	-	3.7	6.0	-	2.8	-	129	-	311	286	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	70.2	3.7	0.9	2.26	139
November	106.3	16	.9	3.54	211
December	295.3	16	3.7	9.53	586
Calendar year 1939	69,552.0	7,710	.2	191	138,000
January	165.4	8.9	3.7	5.34	328
February	189.8	16	4.7	6.54	376
March	161.2	6.0	2.8	5.20	320
April	853.8	637	.6	28.5	1,690
May	4,852.6	1,060	0	157	9,620
June	14,182	1,450	38	473	28,130
July	5,044.5	317	3.7	163	10,010
August	21,159.2	4,770	2.8	683	41,970
September	6,459.5	305	7.4	215	12,810
Water year 1939-40	53,539.8	4,770	0	146	106,200

Peak discharges.- Aug. 16 (3 a.m.) 3,480 sec.-ft.; Aug. 17 (7 p.m.) 5,700 sec.-ft.
a No gage-height record; discharge computed on basis of field notes and weather records.

San Saba River at Menard, Tex.

Location.- Water-stage recorder, lat. 30°55', long. 99°47', on bridge on U. S. Highway 83 in Menard, Menard County, 0.7 mile downstream from Las Moras Creek. Datum of gage is 1,863.05 feet above mean sea level (general adjustment of 1929). Prior to Jan. 26, 1940, chain gage at same site and datum. Prior to Feb. 21, 1939, staff gage 1,000 feet upstream and at 2.00 feet higher datum.

Drainage area.- 1,151 square miles.

Records available.- September 1915 to September 1940.

Average discharge.- 25 years, 75.7 second-feet.

Extremes.- 1938-39: Maximum discharge observed during water year, 5,930 second-feet May 1 (gage height, 11.22 feet); minimum observed, 9.0 second-feet (regulated) Sept. 12-17.

1939-40: Maximum discharge during water year, 1,360 second-feet June 29 (gage height, 7.13 feet); minimum, 5.8 second-feet Sept. 27-29.

1915-40: Maximum discharge, 117,000 second-feet July 23, 1938 (gage height, 22.2 feet, present site and datum, from floodmark), from rating curve extended above 60,000 second-feet on basis of two measurements by slope-area method; no flow at times.

Maximum stage known, 23.3 feet, present site and datum, June 5 or 6, 1899, from information furnished by local residents.

Remarks.- Records good except those for periods of unstable stage-discharge relation or no gage-height record, which are fair. Low 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 (see records of Noyes canal at Menard). Staff gage read twice daily, oftener during periods of high water.

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	35	35	31	33	32	40	914	18	38	24	11
2	74	35	34	30	33	34	40	572	18	22	23	11
3	70	35	35	29	31	38	36	64	18	17	22	11
4	70	35	35	27	31	38	34	41	16	16	26	9.3
5	67	35	35	27	31	36	36	54	16	16	28	9.3
6	67	35	35	28	31	34	36	60	16	16	16	9.9
7	67	35	35	31	31	34	38	53	16	16	19	9.9
8	67	35	34	43	31	34	38	50	16	16	18	9.9
9	67	35	35	51	31	36	37	50	16	16	21	9.9
10	67	38	34	53	31	37	36	51	16	16	21	9.9
11	66	40	33	70	31	36	36	37	16	16	16	9.9
12	59	40	35	84	31	34	36	20	16	38	16	9.0
13	53	38	34	72	31	35	37	19	16	57	15	9.0
14	48	40	33	53	31	35	36	22	15	626	15	9.0
15	45	38	35	47	31	34	36	22	14	169	14	e9.0
16	39	39	33	40	31	35	53	22	14	51	13	e9.0
17	36	35	31	35	32	36	61	24	13	28	17	e9.0
18	35	35	31	38	33	36	55	21	14	24	14	e9.4
19	35	34	31	38	33	36	59	16	14	25	12	e9.4
20	38	33	31	35	32	37	59	16	14	27	14	e9.8
21	34	33	33	38	31	38	54	16	16	27	15	e9.8
22	32	33	31	38	31	38	54	16	16	29	11	9.8
23	36	33	32	36	32	38	40	16	16	28	11	e14
24	35	33	35	38	33	38	25	15	16	19	11	e14
25	35	33	35	39	34	79	25	15	16	20	11	e10
26	35	35	33	40	34	62	28	15	16	19	11	e10
27	35	35	33	40	32	42	30	15	16	19	11	e10
28	35	34	31	40	32	40	27	15	15	18	11	e10
29	35	33	31	35	-	39	26	17	15	17	11	e10
30	35	33	31	35	-	40	25	17	16	16	11	e12
31	35	-	33	34	-	41	-	18	-	32	11	-

Peak discharge.- May 1 (8 p.m.) 5,930 sec.-ft.; July 14 (10 a.m.) 1,120 sec.-ft.

e Stage-discharge relation unstable; discharge computed on basis of records for Noyes canal at Menard and weather records.

Discharge, in second-feet, of San Saba River at Menard, Tex., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e13	17	25	44	43	23	18	20	16	120	13	20
2	e10	17	22	44	44	22	18	20	16	71	13	32
3	e10	16	20	44	56	22	18	22	11	60	13	32
4	e10	16	20	44	59	22	18	22	13	55	13	31
5	e10	17	19	44	50	23	20	21	15	53	13	31
6	e10	17	18	44	45	24	89	22	14	51	13	31
7	e10	17	19	48	43	24	56	23	14	51	12	31
8	e10	18	19	46	43	23	33	31	14	50	12	31
9	23	18	20	45	48	24	28	26	313	49	12	28
10	34	20	20	45	35	24	26	26	119	40	12	17
11	39	27	21	45	a26	25	26	24	40	27	13	16
12	39	28	25	45	a26	25	24	24	26	26	14	16
13	39	22	41	45	a26	22	24	22	29	26	14	16
14	40	20	42	43	a26	21	24	22	74	26	15	16
15	40	19	42	41	a26	21	24	22	215	26	15	16
16	40	19	42	41	f132	22	24	20	102	25	14	16
17	40	20	42	43	58	22	23	17	70	24	14	15
18	40	22	44	43	f28	21	23	16	54	24	51	11
19	40	21	44	42	f29	21	23	16	115	22	29	8.5
20	40	19	43	42	f28	20	23	15	78	22	22	8.0
21	40	19	41	42	h23	19	22	16	54	22	18	8.5
22	40	17	45	45	h22	18	22	19	51	21	18	11
23	40	19	46	45	f21	22	22	20	48	20	17	12
24	39	20	43	45	22	20	23	19	247	20	17	12
25	38	20	45	44	22	23	25	18	135	18	17	8.0
26	28	20	49	f43	23	23	24	18	60	17	17	6.8
27	24	20	45	44	24	20	23	18	51	16	16	6.4
28	21	20	45	44	23	19	22	17	50	14	16	6.4
29	19	22	44	44	23	20	21	17	612	13	17	6.4
30	18	25	44	44	-	20	20	16	215	13	20	7.1
31	17	-	44	43	-	20	-	16	-	14	20	-

Peak discharge.- June 9 (7 a.m.) 680 sec.-ft.; June 9 (11 a.m.) 855 sec.-ft.; June 15 (7:30 a.m.) 460 sec.-ft.; June 24 (4:30 p.m.) 1,120 sec.-ft.; June 29 (10:30 a.m.) 1,360 sec.-ft.

a No gage-height record; discharge computed on basis of records for Noyes canal at Menard and weather records.

e Stage-discharge relation unstable; discharge computed on basis of discharge measurements, records for Noyes canal at Menard, and weather records.

f Computed on basis of partly estimated gage heights.

h Computed from readings of staff gage.

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1938	1,526	74	32	49.2	3,030
November	1,060	40	33	35.3	2,100
December	1,032	35	31	33.3	2,050
Calendar year 1938	176,254.7	53,300	6.8	483	349,600
January 1939	2,275	84	27	41.1	2,530
February	889	34	31	31.8	1,760
March	1,202	79	32	38.8	2,380
April	1,173	61	25	39.1	2,330
May	2,303	914	15	74.3	4,570
June	470	18	13	15.7	932
July	1,494	626	16	48.2	2,960
August	489	28	11	15.8	970
September	303.2	14	9.0	10.1	601
Water year 1938-39	13,216.2	914	9.0	36.2	26,210
October 1939	861	40	10	27.8	1,710
November	592	28	16	19.7	1,170
December	1,079	49	18	34.8	2,140
Calendar year 1939	12,130.2	914	9.0	33.2	24,050
January 1940	1,361	48	41	43.9	2,700
February	1,074	132	21	37.0	2,130
March	675	25	18	21.8	1,340
April	786	89	18	26.2	1,560
May	625	31	15	20.2	1,240
June	2,871	612	11	95.7	5,690
July	1,036	120	13	33.4	2,050
August	520	51	12	16.8	1,030
September	507.1	32	6.4	16.9	1,010
Water year 1939-40	11,987.1	612	6.4	32.8	23,770

San Saba River at San Saba, Tex.

Location.- Water-stage recorder, lat. 31°12'10", long. 98°42'15", at bridge on San Saba-Chadwick Mill highway, three-quarters of a mile northeast of San Saba, San Saba County, and 15 miles upstream from mouth. Datum of gage is 1,153.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,046 square miles.

Records available.- August 1930 to September 1940. December 1904 to December 1906 and September 1915 to August 1930 at site 4½ miles upstream.

Average discharge.- 25 years (1915-40), 289 second-feet.

Extremes.- Maximum discharge during year, 5,570 second-feet May 9 (gage height, 22.25 feet); minimum, 44 second-feet Aug. 10.
1904-6, 1915-40: Maximum discharge, 203,000 second-feet July 23, 1938 (gage height, 45.18 feet, from floodmarks at highest stage known), by slope-area method; no flow Aug. 9, 10, 1918.

Remarks.- Records good except those for periods of no gage-height record and those above 500 second-feet, which are fair. Diversions above station for irrigation and municipal supply affect low-water flow.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a56	a81	107	100	90	96	79	76	86	1,750	50	108
2	a57	a76	104	98	92	93	75	70	83	755	48	100
3	57	a76	99	97	100	91	73	71	80	584	46	e1
4	57	a73	95	97	119	91	73	68	76	429	46	76
5	58	a79	94	96	131	89	72	64	72	272	46	73
6	58	a92	92	98	118	89	799	62	68	a217	46	69
7	58	a88	92	102	111	88	2,280	59	64	a191	46	68
8	58	a85	91	100	109	85	616	751	61	a174	47	69
9	57	a82	91	100	103	86	354	3,080	60	a155	46	68
10	59	a81	92	99	102	87	254	494	64	141	44	67
11	149	a78	90	100	100	89	197	254	211	133	45	64
12	132	126	89	98	100	91	167	173	246	128	46	61
13	110	149	87	96	97	90	152	135	178	124	46	62
14	97	122	e7	94	95	87	141	119	188	115	46	64
15	90	110	88	92	92	87	132	110	1,680	103	56	62
16	88	106	87	91	88	86	124	105	678	92	131	58
17	85	102	85	91	96	82	119	100	553	90	75	53
18	83	100	90	90	135	79	113	92	381	85	486	50
19	83	a98	91	85	190	76	109	86	920	82	1,130	49
20	84	a96	89	81	167	72	107	85	3,270	76	685	48
21	84	a94	90	91	134	68	105	83	1,130	72	318	48
22	84	92	94	94	120	71	100	457	384	70	176	50
23	e3	92	106	94	114	72	92	548	f234	66	126	52
24	83	92	117	92	110	72	89	676	f868	63	109	51
25	85	90	116	94	104	85	93	244	1,170	62	99	49
26	88	88	114	92	102	105	93	158	545	60	92	48
27	91	88	117	94	101	87	89	192	366	58	87	48
28	91	89	118	92	99	82	89	164	f227	55	83	53
29	91	90	110	94	97	84	90	111	458	56	79	55
30	88	100	109	92	-	90	87	98	2,170	54	76	55
31	83	-	105	91	-	88	-	89	-	52	74	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,529	149	57	81.6	5,020
November	2,817	149	73	93.9	5,590
December	3,038	118	85	98.0	6,030
Calendar year 1939	54,660	-	51	150	108,400
January	2,925	102	81	94.4	5,800
February	3,216	190	88	111	6,380
March	2,638	105	68	85.1	5,230
April	6,963	2,280	72	232	13,810
May	8,894	3,080	59	287	17,640
June	16,571	3,270	60	552	32,870
July	6,364	1,750	52	205	12,620
August	4,530	1,130	44	146	8,990
September	1,859	108	48	62.0	3,690
Water year 1939-40	62,344	3,270	44	170	123,700

Peak discharge.- Apr. 7 (5 a.m.) 3,300 sec.-ft.; May 9 (2 a.m.) 5,570 sec.-ft.; June 15 (5 p.m.) 3,330 sec.-ft.; June 20 (1 p.m.) 4,520 sec.-ft.; June 24 (11:30 p.m.) 2,490 sec.-ft.; June 30 (9 a.m.) 2,700 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of recorded range of stage and records for station on Colorado River near San Saba.

f Computed on basis of partly estimated gage heights.

San Saba River seepage investigation

A series of discharge measurements was made during the period Feb. 20, 21, 1940, on the San Saba River and its tributaries and diversions, Tex., between a point 1 mile northeast of Fort McKavett and gaging station at Menard, 20.9 miles downstream, to determine the seepage gains or losses. The investigation was made during period of constant stage of river. All flowing tributaries were measured. Determination of gain or loss represents normal conditions.

Discharge measurements of San Saba River and tributaries between Fort McKavett and Menard, Tex., 1940

Date	Stream or diversion	Location	Distance below Ft. McKavett (miles)	Discharge in second-feet			
				Main stream	Tributary	Gain or loss in section	Total gain or loss
Feb. 20	San Saba River	At first road crossing about 1 mile below Fort McKavett.	a1	23.8	-	-	-
20	....do.....	At third road crossing about 5 miles by road below Fort McKavett.	a6.7	20.8	-	-3.0	-
20	Rocky Creek...	At Fort McKavett-Menard road crossing about 1 mile above mouth.	c10	-	b1.3	-	-
20	Clear Creek...	150 feet above mouth.	12.5	-	18.2	-	-
20	San Saba River	¼ mile below Clear Creek.	12.7	44.9	-	+4.6	+1.6
20	Dry Creek.....	600 feet above mouth.	12.8	-	0	-	-
21	San Saba River	Near proposed dam-site 6.5 miles above Menard.	15.4	44.7	-	-.2	+1.4
21	....do.....	At first crossing above Menard on road to Fort McKavett.	b17	42.9	-	-1.8	-.4
21	Noyes canal	15 feet below head gate.	b17.9	-	d26.8	-	-
21	Coglin Creek..	At mouth.	b18.1	-	1.2	-	-
21	Las Moras Creek.	At road crossing from Menard to Ft. McKavett.	21.3	-	b.2	-	-
21	Celery Creek..	1,000 feet above mouth.	b21.7	-	b1.4	-	-
21	San Saba River	At gaging station at Menard.	21.9	23.3	-	e+4.4	+4.0

a Measured on topographic map of Fort McKavett quadrangle.
b Estimated.
c Distances below this point measured from U. S. Army Engineers profile of San Saba River except as noted.
d Diversion from San Saba River.
e The discharge of Noyes canal at the gaging station on the canal at Menard on this date was 22.7 second-feet, or 4.1 second-feet less than at the head gate. This loss of 4.1 second-feet from the canal presumably returns to the river above river gage at Menard and essentially accounts for this apparent gain of 4.4 second-feet.

Noyes canal at Menard, Tex.

Location.- Water-stage recorder, lat. 30°55', long. 99°47', at intersection of Canal and Day streets in Menard, Menard County, 4½ miles downstream from head gates. Datum of gage is 1,878.1 feet above mean sea level (general adjustment of 1929). Prior to July 23, staff gage 2,000 feet upstream, at datum 4.99 feet higher.

Records available.- March 1924 to September 1940.

Average discharge.- 15 years (1924-37, 1938-40), 15.1 second-feet.

Extremes.- Maximum discharge during year, 56 second-feet Aug. 18 (gage height, 3.64 feet), from rating curve extended above 24 second-feet by logarithmic plotting; no flow at times.
1924-40: Maximum discharge not determined; no flow at times.

Remarks.- Records good. Staff gage read twice daily Oct. 1 to July 22. Canal diverts water from right bank of San Saba River 4 miles above Menard for irrigation near Menard; 10 acres irrigated above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	18	29		0	21	21	d17	20	0	22	12
2	21	21	28		0	21	21	d17	18	0	22	.2
3	21	21	27		0	20	21	d16	17	0	22	0
4	22	21	27		0	20	21	d16	16	0	22	0
5	24	22	27		0	20	27	16	15	0	22	0
6	24	24	27		0	20	27	16	15	0	22	0
7	24	24	27		0	20	27	17	15	0	22	0
8	24	24	27		0	18	25	18	15	0	22	0
9	24	24	27		0	18	24	18	24	0	21	6.1
10	25	24	28		11	18	24	18	22	15	21	15
11	8.9	29	28		21	18	24	17	21	21	22	15
12	0	29	19		22	18	22	16	21	22	22	15
13	0	27	0		22	21	22	16	18	22	22	16
14	0	27	0		22	21	22	16	9.9	22	23	16
15	0	25	0		22	21	22	16	0	22	23	16
16	0	27	0		24	21	22	17	0	24	22	16
17	0	27	0		25	22	22	18	0	24	22	16
18	0	27	0		22	24	21	20	0	24	30	19
19	0	27	0		18	25	21	18	0	24	23	19
20	0	27	0		20	24	20	18	0	24	22	20
21	0	25	0		24	21	20	18	0	24	21	21
22	0	25	0		22	21	18	20	0	24	21	22
23	0	25	0		24	22	18	21	0	24	21	24
24	0	25	0		24	24	18	21	0	24	20	24
25	0	27	0		24	27	18	22	0	24	20	24
26	16	27	0		22	24	18	22	0	24	20	24
27	21	27	0		22	24	18	22	0	24	20	24
28	20	27	0		22	22	17	21	0	22	20	24
29	20	28	0		22	22	17	21	20	23	21	24
30	20	28	0		-	24	17	20	0	23	22	24
31	20	-	0		-	22	-	20	-	23	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	351.9	25	0	11.4	698
November	759	29	18	25.3	1,510
December	321	29	0	10.4	637
Calendar year 1939	7,677.9	36	0	21.0	15,240
January	0	0	0	0	0
February	435	25	0	15.0	863
March	664	27	18	21.4	1,320
April	635	27	17	21.2	1,260
May	569	22	16	18.4	1,130
June	266.9	24	0	8.90	529
July	503	24	0	16.2	998
August	676	30	20	21.8	1,340
September	436.3	24	0	14.5	865
Water year 1939-40	5,617.1	30	0	15.3	11,150

d Doubtful gage-height record; discharge interpolated.

Brady Creek at Brady, Tex.

Location.- Water-stage recorder, lat. 31°08'15", long. 99°19'55", just upstream from bridge on North Bridge Street at Brady, McCulloch County, and 0.4 mile downstream from Live Oak Creek. Datum of gage is 1,646.50 feet above mean sea level (general adjustment of 1929). Prior to July 10, 1940, staff gage 3,600 feet upstream and at datum 8.24 feet higher.

Drainage area.- 575 square miles. (554 square miles at former site).

Records available.- May 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period May to September, 855 second-feet May 30 (gage height, 3.13 feet, from graph based on gage readings); no flow at times.
1939-40: Maximum discharge during water year, 7,500 second-feet May 8 (gage height, 10.60 feet, from floodmark); no flow at times.
Maximum stage known, 29.1 feet, July 23, 1938, present site and datum (discharge at site 5 miles downstream, 86,000 second-feet, by slope-area method).

Remarks.- Records good. Gage read once daily May 4, 1939, to July 9, 1940, oftener during high water. No diversion above station.

Rating tables, period May 1939 to September 1940 (gage height, in feet, and discharge in second-feet)

May 4, 1939, to July 9, 1940

0.20	0	0.80	85.0	2.5	675
.25	1.0	1.00	137	3.0	810
.30	3.2	1.50	310	3.5	970
.35	7.4	1.7	408	4.0	1,180
.40	13.9	2.0	530	6.0	2,450
.60	44.0	2.2	594		

July 10 to Sept. 30, 1940

2.7	0	3.4	4.1
2.8	.1	3.6	6.9
2.9	.2	3.8	10.0
3.0	.3	4.0	13.6
3.1	.9	5.0	37.5
3.2	1.5	7.0	89.0
3.3	2.7	7.1	95.0

Discharge, in second-feet, May 1939 to September 1940

Day	1939					1940					
	May	June	July	Aug.		Apr.	May	June	July	Aug.	Sept.
1	-	15		0		0	0	0	174	0.1	0.2
2	-	7.4		0		0	0	0	98	.1	.2
3	-	9.7		0		0	0	0	44	.1	.2
4	3.9	24		0		0	0	0	20	.1	.2
5	3.2	7.4		0		0	0	0	11	.1	.1
6	2.6	1.8		0		696	0	0	5.5	.1	.1
7	2.6	1.4		0		158	0	0	3.2	.1	.1
8	2.2	.1		0		32	2,550	22	2.6	.1	.1
9	1.8	.1		0		13	120	213	2.6	.1	.1
10	1.4	.3		0		9.7	22	38	2.4	0	0
11	1.0	.1		0		4.7	7.4	11	2.0	0	0
12	1.0	0		0		2.2	2.6	3.9	1.4	0	0
13	20	0		0		1.8	2.2	2.6	1.3	0	0
14	2.6	0		0		1.4	1.8	45	1.0	0	0
15	1.8	0		0		.6	.6	35	.9	.1	0
16	78	0		0		.3	.6	28	.4	.2	0
17	349	0		0		.1	.3	22	.3	.2	0
18	38	0		0		0	.1	243	.3	S6	0
19	14	0		0		0	0	1,690	.2	94	0
20	7.4	0		.6		0	0	362	.2	12	0
21	4.7	0		0		0	0	50	.2	2.5	0
22	2.6	0		0		0	0	20	.2	1.0	0
23	2.2	0		.6		0	5.5	20	.2	.8	0
24	1.8	0		0		0	2.2	252	.2	.3	0
25	1.0	0		0		0	.6	62	.2	.2	0
26	5.5	0		0		0	0	22	.2	.2	0
27	1.8	0		0		0	.3	19	.2	.1	0
28	1.0	0		0		0	.1	16	.2	.1	0
29	.3	0		0		0	0	423	.2	.1	0
30	166	0		0		0	0	225	.2	.1	0
31	56	-		0		-	0	-	.2	.2	-

Monthly discharge, in second-feet, of Brady Creek at Brady, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 4-31, 1939	773.4	349	0.3	27.6	1,530
June	67.3	24	0	2.24	133
July	0	0	0	0	0
August	1.2	.6	0	.04	2.4
September	0	0	0	0	0
The period	-	-	-	-	1,670
October 1939	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January 1940	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	919.8	696	0	30.7	1,820
May	2,416.3	2,250	0	77.9	4,790
June	3,824.5	1,690	0	127	7,590
July	373.5	174	.2	12.0	741
August	199.0	94	0	6.42	395
September	1.3	.2	0	.04	2.6
Water year 1939-40	7,734.4	2,250	0	21.1	15,340

North Llano River near Junction, Tex.

Location.- Water-stage recorder, lat. 30°30', long. 99°47', about 1,000 feet upstream from remains of old Wilson Dam, 3 miles northwest of Junction, Kimble County, and 4 miles upstream from confluence with South Llano River. Datum of gage is 1,699.9 feet above mean sea level (general adjustment of 1929). Prior to June 22, staff gage 35 feet upstream at same datum.

Drainage area.- 914 square miles.

Records available.- September 1915 to September 1940.

Average discharge.- 25 years, 81.3 second-feet.

Extremes.- Maximum discharge during year, 8,320 second-feet Oct. 10 (gage height, 7.60 feet, from floodmark); minimum observed, 9.9 second-feet Oct. 4-6.

1915-40: Maximum discharge, 94,800 second-feet Sept. 16, 1936 (gage height, 29.2 feet, present site, based on gage-height relation curve), from rating curve extended above 70,000 second-feet on basis of two measurements by slope-area method; no flow at times.

Remarks.- Records good except those for periods of no gage-height record and those above 1,500 second-feet, which are poor. Diversions for irrigation reduce low flow materially. Staff gage read once daily, oftener during periods of high water.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	25	29	27	24	20	18	30	24		15	38
2	11	25	28	27	27	19	18	29	24		15	34
3	11	25	27	26	30	19	18	28	21		15	32
4	9.9	24	26	26	30	19	25	27	20		14	30
5	9.9	24	25	27	35	19	a82	26	19	a60	14	28
6	9.9	24	25	29	34	19	139	26	19		14	27
7	10	24	25	29	27	19	287	26	20		14	26
8	10	24	24	28	25	19	267	26	20		13	26
9	22	24	24	26	29	19	94	40	29	46	13	24
10	1,600	24	24	27	27	19	48	35	20	42	13	23
11	176	41	24	26	25	19	49	29	19	38	12	21
12	106	34	24	25	24	19	86	27	17	36	11	20
13	89	30	24	25	24	19	58	25	16	41	11	19
14	69	28	24	25	27	19	55	25	16	a35	12	19
15	55	28	24	25	48	19	53	24	16	a32	12	19
16	49	28	24	24	55	19	49	24	17	a30	13	17
17	46	28	24	24	30	18	48	23	16	a29	228	17
18	38	28	24	23	25	18	44	22	24	a28	1,000	17
19	35	28	24	23	24	18	41	22	71	26	330	16
20	32	27	24	23	23	18	40	22	64	26	130	16
21	30	25	24	23	22	19	38	21	42	25	86	16
22	30	25	24	23	22	19	36	36	32	24	69	17
23	29	26	42	27	21	19	36	263	28	22	57	18
24	29	26	46	26	20	19	36	40		21	51	18
25	30	26	44	26	20	19	36	36		20	46	18
26	130	26	42	25	20	19	36	32		19	41	17
27	40	26	38	25	20	19	35	26	a48	18	38	16
28	30	26	36	24	20	19	35	31		17	35	15
29	27	29	30	24	20	19	34	34		17	114	15
30	27	35	28	24	-	19	32	25		15	58	15
31	26	-	28	24	-	18	-	24	-	14	46	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,827.7	1,600	9.9	91.2	5,610
November	813	41	24	27.1	1,610
December	879	46	24	28.4	1,740
Calendar year 1939	28,662.5	11,100	4.4	78.5	56,860
January	786	29	23	25.4	1,560
February	778	55	20	26.8	1,540
March	585	20	18	18.9	1,160
April	1,853	267	18	61.8	3,680
May	1,104	263	21	35.6	2,190
June	930	-	16	31.0	1,840
July	1,101	-	14	35.5	2,180
August	2,540	1,000	11	81.9	5,040
September	634	38	15	21.1	1,260
Water year 1939-40	14,830.7	1,600	9.9	40.5	29,410

Peak discharges.- Oct. 10 (3 a.m.) 8,320 sec.-ft.; Oct. 26 (12 m.) 950 sec.-ft.; May 23 (4 a.m.) 2,450 sec.-ft.; Aug. 18 (10 a.m.) 2,810 sec.-ft. All peaks prior to June 22 from floodmarks or by observation.

a No gage-height record; discharge computed on basis of recorded range of stage and record for Llano River near Junction.

Llano River near Junction, Tex.

Location.- Water-stage recorder, lat. 30°30', long. 99°44', 960 feet upstream from bridge on Junction-Mason county road, 2 miles downstream from confluence of North Llano and South Llano Rivers, and 2½ miles east of Junction, Kimble County. Datum of gage is 1,636.32 feet above mean sea level (general adjustment of 1929). Prior to May 18, water-stage recorder, 5,340 feet downstream at datum 6.00 foot lower.

Drainage area.- 1,762 square miles.

Records available.- September 1915 to September 1940.

Average discharge.- 25 years, 239 second-feet.

Extremes.- Maximum discharge during year, 6,000 second-feet Oct. 10 (gage height, 6.01 feet); minimum, 69 second-feet Aug. 12.
1915-40: Maximum discharge, 319,000 second-feet June 14, 1935 (gage height, 41.4 feet, present site and datum, from floodmarks), by slope-area method; minimum, 13 second-feet Aug. 23-28, 1918.

Remarks.- Records good. About 2,500 acres above station and 1,300 acres below have been declared irrigated. Diversions slightly reduce low flows. Some regulation by water-power plant on South Llano River.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	170	114	114	94	85	82	104	a95	204	76	102
2	74	148	108	114	94	85	80	100	a94	178	74	97
3	77	134	111	111	97	85	80	97	a94	158	74	92
4	77	130	111	111	100	85	80	97	92	150	74	90
5	77	125	108	111	97	85	98	94	90	143	73	87
6	77	122	111	114	94	85	434	94	89	139	73	84
7	74	118	108	114	90	82	448	90	87	135	73	83
8	74	118	104	111	90	82	286	94	89	131	70	81
9	80	114	104	111	94	82	220	104	95	126	70	81
10	3,020	118	104	111	97	82	200	629	95	118	70	80
11	808	143	104	104	94	85	190	332	89	114	70	78
12	373	148	104	104	90	85	170	205	87	105	69	77
13	253	134	97	100	90	85	161	161	89	113	70	77
14	190	125	97	97	90	82	152	143	104	114	73	77
15	161	122	97	97	90	80	148	134	102	109	74	76
16	148	118	97	97	94	80	143	122	100	105	73	74
17	134	118	94	97	97	80	143	111	98	104	71	74
18	125	111	94	94	97	80	130	105	95	100	157	73
19	118	111	94	94	94	80	125	104	436	97	1,070	73
20	114	111	94	94	90	82	122	104	641	95	291	71
21	108	108	94	97	90	87	118	100	261	95	172	73
22	108	108	111	97	87	85	118	422	193	94	143	77
23	108	108	118	100	85	85	111	313	165	90	126	80
24	108	108	108	100	85	82	108	139	162	87	116	80
25	108	108	118	100	85	85	111	126	156	86	107	78
26	1,420	104	134	100	85	87	111	118	143	83	102	74
27	1,870	104	125	97	85	85	108	114	135	81	97	73
28	480	104	122	94	85	85	111	134	126	80	92	71
29	292	108	118	94	85	85	108	126	154	78	139	71
30	226	118	114	94	-	85	108	a109	246	78	131	70
31	195	-	111	94	-	85	-	a100	-	77	109	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,154	3,020	74	360	22,120
November	3,616	170	104	121	7,170
December	3,328	134	94	107	6,600
Calendar year 1939	78,850	24,400	53	216	156,400
January	3,167	114	94	102	6,280
February	2,645	100	85	91.2	5,250
March	2,593	87	80	83.6	5,140
April	4,604	448	80	153	9,130
May	4,825	629	90	156	9,570
June	4,502	641	87	150	8,930
July	3,467	204	77	112	6,880
August	4,079	1,070	69	132	8,090
September	2,374	102	70	79.1	4,710
Water year 1939-40	50,354	3,020	69	138	99,870

Peak discharge.- Oct. 10 (7:30 a.m.) 6,000 sec.-ft.; Oct. 10 (3 p.m.) 5,210 sec.-ft.; Oct. 26 (2:30 p.m.) 5,020 sec.-ft.; Oct. 27 (5 a.m.) 4,740 sec.-ft.; May 22 (11 p.m.) 2,860 sec.-ft.; Aug. 19 (12:30 a.m.) 2,260 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage and weather records.

Llano River at Llano, Tex.

Location.- Water-stage recorder, lat. 30°45', long. 98°40', in Llano, Llano County, 0.4 mile downstream from bridge on State Highway 81 and 7 miles upstream from Little Llano River. Datum of gage is 970.0 feet above mean sea level (general adjustment of 1929).
Drainage area.- 4,000 square miles.
Records available.- September 1939 to September 1940.
Extremes.- Maximum discharge recorded during period, 28,200 second-feet June 20 (gage height, 12.90 feet), from rating curve extended above 13,000 second-feet; minimum, 5.1 second-feet Oct. 6, 7; minimum daily observed, 34 second-feet Sept. 30, 1939.
Maximum stage known, 41.5 feet June 14, 1935, according to information furnished by local resident.
Remarks.- Records good except those for period of no gage-height record, which are poor. Low flow regulated by power plant half a mile upstream. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Sept.17	88	Sept.22	57	Sept.27	54
18	85	23	73	28	82
19	85	24	75	29	67
20	116	25	66	30	34
21	87	26	81		

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	290	142	126	139	105	105	153	153	6,920	39	93
2	68	241	169	151	107	157	95	131	169	980	76	124
3	94	224	145	118	142	119	92	134	111	646	49	129
4	39	189	165	139	190	95	105	123	151	591	73	78
5	83	178	133	139	186	103	63	95	102	393	47	99
6	38	160	124	130	156	100	2,920	131	98	297	43	93
7	46	157	109	139	132	83	2,590	110	103	260	53	71
8	82	143	122	139	125	114	1,020	793	103	230	40	80
9	38	160	120	142	131	99	644	668	107	202	53	77
10	768	132	131	145	166	94	472	265	107	182		71
11	2,240	226	121	140	179	100	416	174	123	156		62
12	1,350	271	136	133	163	115	349	336	111	300		62
13	711	312	97	121	119	107	319	364	142	401	a50	63
14	444	264	129	126	142	85	290	267	124	260		63
15	338	202	111	112	125	119	264	204	174	179		45
16	264	194	97	116	159	92	245	173	384	151		62
17	234	167	116	133	680	94	300	145	382	160		52
18	165	154	111	105	555	104	260	153	238	133		54
19	182	141	111	95	364	76	230	146	1,220	136		58
20	161	130	114	139	282	116	196	119	9,950	117		62
21	151	151	107	96	230	101	192	111	1,690	108	a250	62
22	133	107	125	114	213	107	166	1,800	653	95		58
23	133	137	141	142	161	90	198	868	405	97		80
24	136	126	147	109	170	124	165	1,100	404	93		82
25	104	132	171	137	165	101	165	476	537	110		87
26	139	134	176	113	160	126	176	304	338	75	132	66
27	175	127	186	116	110	131	169	281	252	87	88	52
28	1,880	134	206	118	145	119	173	216	212	71	119	71
29	884	123	190	133	163	92	160	186	6,680	74	102	70
30	522	162	166	106	-	124	144	140	6,490	60	164	90
31	382	-	145	100	-	94	-	192	-	64	128	-

Peak discharge.- Oct. 11 (10:30 a.m.) 4,040 sec.-ft.; Apr. 6 (8 p.m.) 9,500 sec.-ft.; May 22 (8:30 a.m.) 3,940 sec.-ft.; June 20 (3:30 a.m.) 28,200 sec.-ft.; June 29 (4 a.m.) 23,200 sec.-ft.; June 30 (11:30 p.m.) 22,200 sec.-ft.
a No gage-height record; discharge computed on basis of recorded range of stage, records for station near Junction and weather records.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
September 17-30, 1939	1,052	116	34	75.1	2,090
Water year	-	-	-	-	-
October 1939	12,034	2,240	38	388	23,870
November	5,298	312	107	177	10,510
December	4,263	206	97	138	8,460
Calendar year	-	-	-	-	-
January 1940	3,872	151	95	125	7,680
February	5,729	660	107	198	11,360
March	3,276	157	76	106	6,500
April	13,003	2,920	63	433	25,790
May	10,358	1,800	95	334	20,540
June	31,743	9,950	98	1,058	62,960
July	13,630	6,920	60	440	27,030
August	3,806	-	-	123	7,550
September	2,266	129	45	75.5	4,490
Water year 1939-40	109,278	9,950	-	299	216,700

Pedernales River near Johnson City, Tex.

Location.- Water-stage recorder, lat. 30°18', long. 98°24', on bridge on U. S. Highway 281, 1.5 miles north of Johnson City, Blanco County, and 1.9 miles downstream from Buffalo Creek. Datum of gage is 1,096.6 feet above mean sea level (unadjusted).

Drainage area.- 947 square miles.

Records available.- May 1939 to September 1940.

Extremes.- Maximum discharge during year, 42,900 second-feet Oct. 25 (gage height, 17.53 feet, from floodmark); minimum, 1.2 second-feet Oct. 1-3.
1939-40: Maximum discharge, that of Oct. 25, 1939; minimum, that of Oct. 1-3, 1939.
Maximum stage known, about 33 feet in July 1869, according to information furnished by local residents.

Remarks.- Records good. No diversions.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	21	24	19	16	45	78	64	29	358	23	22
2	1.3	20	22	18	18	42	60	54	31	214	22	17
3	1.3	18	19	18	450	40	52	46	24	1,250	21	14
4	1.4	16	18	18	539	38	48	43	22	336	19	12
5	1.5	16	17	17	142	38	43	42	19	191	18	12
6	1.6	15	17	22	82	38	4,540	37	18	149	17	11
7	1.6	15	17	25	62	32	1,190	895	18	123	16	10
8	1.5	15	17	24	48	32	313	1,530	16	109	15	10
9	324	15	17	22	62	34	187	192	22	95	15	9.8
10	4,390	15	17	21	87	34	136	156	38	85	15	9.8
11	122	80	16	20	95	37	114	95	21	78	15	9.4
12	42	194	16	19	64	35	98	70	18	529	14	8.4
13	26	73	15	18	52	31	87	58	826	290	13	8.0
14	18	42	15	16	45	29	80	50	272	179	13	8.0
15	14	32	15	16	42	29	75	45	1,030	114	12	8.0
16	12	28	15	15	60	28	70	42	376	87	12	8.0
17	11	26	15	15	792	28	73	37	178	73	12	8.0
18	9.8	26	15	13	259	26	62	35	755	68	22	7.7
19	8.9	24	15	11	126	26	58	108	3,980	60	38	7.7
20	8.4	22	14	15	98	358	54	148	906	54	73	7.4
21	8.0	20	14	15	85	1,030	52	75	282	50	48	7.4
22	7.7	19	16	16	75	168	45	210	142	46	32	12
23	7.4	18	18	18	68	85	45	146	112	45	24	17
24	7.4	18	17	18	64	70	416	95	87	40	19	15
25	f9,830	18	22	17	60	103	586	66	2,570	38	17	39
26	278	18	26	16	56	64	152	60	271	35	15	32
27	103	17	24	16	54	58	106	43	156	32	13	15
28	60	17	23	16	50	50	100	40	117	29	12	12
29	40	18	24	16	46	935	87	62	2,430	28	18	11
30	31	24	21	15	-	486	92	40	2,920	26	62	11
31	24	-	20	15	-	133	-	32	-	25	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	15,394.1	9,830	1.3	497	30,530
November	900	194	15	30.0	1,790
December	561	26	14	18.1	1,110
Calendar year	-	-	-	-	-
January	540	25	11	17.4	1,070
February	3,697	792	16	127	7,330
March	4,182	1,030	26	135	8,290
April	9,100	4,540	43	303	18,050
May	4,606	1,530	32	149	9,140
June	17,686	3,930	16	590	35,080
July	4,836	1,250	25	156	9,590
August	702	73	12	22.6	1,390
September	379.6	39	7.4	12.7	753
Water year 1939-40	62,583.7	9,830	1.3	171	124,100

Peak discharge.- Oct. 10 (4:30 a.m.) 16,300 sec.-ft.; Oct. 25 (4 a.m.) 42,900 sec.-ft.; Apr. 6 (12:30 p.m.) 11,900 sec.-ft.; June 19 (6:30 p.m.) 17,400 sec.-ft.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage height.

Dry Creek at Buescher Lake, near Smithville, Tex.

Location.- Water-stage recorder 200 feet upstream from concrete spillway of dam, lat. 30°03', long. 97°09', in Bastrop-Buescher State Park, 1.9 miles upstream from mouth and 2.2 miles north of Smithville, Bastrop County. Datum of gage is 327.9 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1.48 square miles (area above dam).

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge into reservoir during year, 1,870 second-feet June 30, computed by combining flow over spillway with that going into storage in reservoir; maximum gage height, 24.96 feet June 30; no flow at times.

Remarks.- Records fair. Discharge represents flow into Buescher Lake, part of which, at times, passes over spillway. Discharge below gage height 22.27 feet (spillway crest) determined from change in contents in lake. Discharge above spillway crest determined from spillway rating curve based on formula $Q = 3.09 LH^{3/2}$, and adjustments for rate of change in contents of reservoir. Gage heights of lake are those recorded by water-stage recorder for 12 p.m. except as noted. No diversions above station or from lake. Total capacity of reservoir, 255 acre-feet (spillway crest).

Capacity table (gage height, in feet, and contents, in acre-feet)
(Prepared from map furnished by State Park Board and National Park Service)

2.0	0	6.0	16.5	20.0	194.0
3.0	1.0	10.0	32.0	22.27	255.0 (spillway crest)
4.0	3.0	12.0	52.0	23.0	276.0
6.0	6.6	16.0	109.0		

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	0	2.0		
2								0	0	0		
3								0	0	0		
4								0	0	0		
5								0	0	0		
6								0	0	0		
7								0	0	0		
8								0	0	0		
9								0	0	0		
10								0	0	0		
11								0	0	0		
12								0	0	0		
13								0	0	0		
14								0	0	.7		
15								0	0	0		
16								0	0	15		
17								0	0	0		
18								0	62	0		
19								0	7.6	0		
20								0	0	0		
21								0	0	0		
22								3.5	0	0		
23								0	0	0		
24								0	0	0		
25								0	0	0		
26								0	0	0		
27								0	0	0		
28								4.9	0	0		
29								0	64	0		
30								0	383	0		
31								0	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	8.4	4.9	0	.27	17
June	516.6	383	0	17.2	1,020
July	17.7	15	0	.57	35
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	542.7	383	0	1.46	1,070

Note.- Discharge for period Oct. 1 to May 21, when level of reservoir was below recorder intake, computed on basis of engineer notes and weather records. Discharge from rains in December and April amounting to less than 1 second-foot considered negligible.

Lavaca River at Hallettsville, Tex.

Location.- Water-stage recorder, lat. 29°26', long. 96°57', at bridge on U. S. Highway 77, in Hallettsville, Lavaca County, and 0.4 mile upstream from Texas & New Orleans R. R. bridge. Prior to July 13, 1939, wire-weight gage at same site and datum. Datum of gage is 186.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 101 square miles.

Records available.- July 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period July to September, 3,980 second-feet July 12 (gage height, 21.50 feet, from graph based on gage readings); minimum, 0.4 second-foot Sept. 29.

1939-40: Maximum discharge during year, 93,100 second-feet June 30 (gage height, 40.60 feet, from floodmarks to highest flood known), by slope-area method; minimum, 0.5 second-foot Oct. 6-16.

Remarks.- Records fair. Results of two discharge measurements furnished by Corps of Engineers, U. S. Army. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	1.3	1.4	11	-	1.4	2.5	21	2.7	1.1	2.0
2	-	1.6	1.4	12	g1,020	1.4	4.4	22	2.3	1.3	1.1
3	-	4.8	1.3	13	585	1.5	2.1	23	2.2	1.3	.8
4	-	2.6	1.3	14	19	1.4	3.1	24	2.2	1.3	.7
5	-	1.9	1.3	15	9.1	1.4	1.5	25	2.0	1.2	.6
6	-	1.6	1.2	16	6.1	1.3	17	26	1.9	1.2	.5
7	-	1.6	1.2	17	5.0	1.2	15	27	1.6	4.2	.5
8	-	1.4	1.2	18	4.1	1.1	1.8	28	1.6	2.5	.5
9	-	1.4	1.4	19	3.5	1.1	1.3	29	1.4	1.7	.6
10	-	1.3	1.9	20	3.0	1.1	2.9	30	1.4	1.6	1.0
								31	1.3	1.5	-

g Computed from graph based on gage readings.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.8	1.6	1.9	f2.3	2.5	2.3	1.6	1.4	g241	4.3	1.6
2	.8	.8	1.6	1.9	f2.4	2.4	2.3	1.4	1.4	g215	4.0	1.4
3	.7	1.0	1.6	2.0	f2.5	2.3	2.3	1.2	1.3	1,170	3.8	1.3
4	.6	1.0	1.6	2.2	f2.5	2.3	2.3	1.1	1.1	g218	3.6	1.3
5	.6	1.1	1.6	2.2	f3.7	2.3	2.3	1.0	1.0	g33	3.4	1.3
6	.6	1.3	1.6	2.2	f3.5	2.5	3.9	1.0	1.0	20	3.4	1.2
7	.6	1.3	1.6	2.4	f2.3	2.3	16	1.0	1.0	18	3.1	1.2
8	.6	1.3	1.7	2.3	2.1	2.2	3.6	1.0	1.0	16	2.9	1.1
9	.6	1.6	1.6	2.2	1.9	2.2	2.4	1.0	1.1	15	2.8	1.1
10	.5	1.8	1.6	2.2	1.8	2.2	2.1	1.0	1.3	14	2.7	1.0
11	.5	1.8	1.7	2.2	1.8	2.3	41	1.0	1.1	14	2.7	.9
12	.5	2.1	1.7	2.2	1.7	2.3	4.0	1.0	1.0	14	2.6	.9
13	.6	1.9	1.6	2.2	1.6	2.2	2.2	1.0	1.0	20	2.6	.9
14	.6	1.8	1.6	2.1	1.6	2.2	2.0	1.0	1.1	469	2.3	1.0
15	.6	1.9	1.6	2.2	1.6	2.2	1.9	1.0	6.4	279	2.3	1.0
16	.6	1.9	1.6	2.0	221	2.2	1.8	1.0	1.1	75	2.1	1.0
17	.6	1.9	1.6	2.1	125	2.2	1.7	1.0	1.1	19	2.0	1.0
18	.6	1.9	1.7	2.1	17	2.2	1.6	1.1	.9	f13	2.1	1.1
19	.6	2.1	1.8	2.6	5.2	2.2	1.6	560	..8	11	2.6	1.0
20	.6	2.0	1.9	f2.0	4.0	2.7	1.6	25	1.0	9.6	2.3	1.2
21	.6	1.8	1.8	f2.1	3.4	3.6	1.6	3.8	4.4	8.6	2.1	1.4
22	.6	1.6	1.9	f2.2	3.2	2.9	1.6	10	1.3	7.7	1.9	1.4
23	.6	1.6	3.3	f2.3	3.2	2.6	1.4	3.3	.9	7.3	1.8	1.3
24	.6	1.6	2.8	f2.3	3.0	2.4	1.5	2.8	2.9	6.8	1.7	1.3
25	.6	1.5	2.3	f2.3	2.8	2.3	1.8	2.3	5.1	6.5	1.7	1.4
26	.6	1.5	2.3	f2.2	2.8	2.3	2.1	2.2	1.6	6.0	1.6	1.2
27	.8	1.5	2.4	f2.2	2.8	2.6	1.8	1.8	.9	5.6	1.6	1.1
28	.7	1.5	2.1	f2.2	2.7	2.8	2.0	1.8	.8	5.4	1.5	1.1
29	.7	1.3	1.9	f2.2	2.6	2.8	2.1	2.2	1,690	5.0	1.7	1.1
30	.8	1.4	1.9	f2.2	-	2.6	2.1	1.7	g33,500	4.9	1.6	1.1
31	.8	-	2.0	f2.2	-	2.5	-	1.5	-	4.6	1.7	-

Peak discharge.- June 29 (11:50 a.m.) 4,980 sec.-ft.; June 30 (8 a.m.) 93,100 sec.-ft.

f Gage-height record incomplete; discharge computed on basis of partly estimated gage-height record and known range of stage.

g Computed from graph based on gage readings.

Monthly discharge, in second-feet, of Lavaca River at Hallettsville, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 12-31, 1939	1,675.4	1,020	1.3	83.8	3,320
August	51.3	4.8	1.1	1.65	102
September	73.5	17	.5	2.45	146
The period	-	-	-	-	3,570
October 1939	19.8	1.0	.5	.64	39
November	46.6	2.1	.8	1.55	92
December	57.6	3.3	1.6	1.86	114
Calendar year	-	-	-	-	-
January 1940	67.6	2.6	1.9	2.18	134
February	437.0	221	1.6	15.1	867
March	75.3	3.6	2.2	2.43	149
April	116.9	41	1.4	3.90	232
May	637.8	560	1.0	20.6	1,270
June	35,235.0	33,500	.8	1,174	69,890
July	2,952.0	1,170	4.6	95.2	5,860
August	76.5	4.3	1.5	2.47	152
September	34.9	1.6	.9	1.16	69
Water year 1939-40	39,757.0	33,500	.5	109	78,870

Lavaca River near Edna, Tex.

Location.- Wire-weight gage, lat. 28°58', long. 96°42', on bridge on U. S. Highway 96, 550 feet upstream from Texas & New Orleans R. R. bridge, and 2.8 miles southwest of Edna, Jackson County. Datum of gage is 13.88 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Drainage area.- 887 square miles.

Records available.- August 1938 to September 1940.

Extremes.- Maximum discharge during year, 73,000 second-feet July 1 (gage height, 32.51 feet); minimum observed, 7.4 second-feet Oct. 31 to Nov. 7, May 17.
1938-40: Maximum discharge, that of July 1, 1940; minimum observed, 5.2 second-feet July 10, 1939.
Maximum stage known, 33.8 feet May 25, 1936, according to information furnished by local resident (discharge, 83,400 second-feet).

Remarks.- Records excellent. Gage read twice daily, oftener during high stages. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	7.4	13	17	18	35	30	20	18	44,000	86	42
2	15	7.4	13	16	18	33	27	19	16	49,600	83	38
3	32	7.4	13	16	20	30	25	17	14	c13,900	78	38
4	22	7.4	13	18	20	29	24	15	13	c5,650	73	36
5	19	7.4	14	18	22	28	22	14	11	c2,450	73	35
6	16	7.4	14	17	49	27	23	13	11	614	71	35
7	15	7.4	13	18	29	27	22	11	10	432	66	34
8	15	7.9	13	16	51	25	23	11	10	340	66	33
9	14	7.9	13	17	32	25	36	11	74	284	64	32
10	14	9.0	13	17	24	25	33	10	70	243	51	32
11	15	11	14	19	21	25	25	10	27	217	60	30
12	13	11	14	18	19	25	21	9.0	16	204	57	28
13	13	14	14	18	18	25	18	9.6	14	191	58	28
14	12	13	14	17	17	24	47	9.0	13	293	56	28
15	11	13	14	17	17	24	29	9.0	12	754	53	28
16	11	13	14	16	31	23	24	7.9	13	1,650	51	28
17	11	13	14	16	952	22	21	7.9	11	782	49	27
18	11	13	14	16	3,160	22	20	8.4	59	415	49	26
19	11	13	16	16	576	24	18	10	30	339	64	27
20	11	13	15	16	161	25	18	268	16	261	50	28
21	11	13	15	16	98	25	17	177	13	191	68	28
22	11	13	16	16	73	24	16	64	10	158	67	30
23	13	13	16	17	60	24	17	81	10	139	49	33
24	12	12	16	17	55	27	18	192	9.6	133	46	32
25	12	11	16	16	48	25	19	64	74	121	46	28
26	11	11	29	16	44	24	19	43	19	115	43	26
27	11	10	28	18	41	25	18	32	10	109	43	24
28	11	10	21	18	38	102	19	28	22	103	41	24
29	10	11	20	18	36	115	21	24	18	98	41	23
30	9.0	13	19	18	-	60	21	21	2,300	93	40	23
31	7.4	-	18	18	-	39	-	19	-	88	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	415.4	32	7.4	13.4	824
November	320.6	14	7.4	10.7	636
December	489	29	13	15.8	970
Calendar year 1939	49,150.4	10,600	6.2	135	97,490
January	527	19	16	17.0	1,050
February	5,748	3,160	17	198	11,400
March	1,013	115	22	32.7	2,010
April	691	47	16	23.0	1,370
May	1,234.8	268	7.9	39.8	2,450
June	2,943.6	2,300	9.6	98.1	5,840
July	123,967	49,600	88	3,999	245,900
August	1,791	86	40	57.8	3,550
September	904	42	23	30.1	1,790
Water year 1939-40	140,044.4	49,600	7.4	383	277,800

Peak discharge.- July 1 (9:25 p.m.) 73,000 sec.-ft.
c Stage-discharge relation affected by backwater from return flow downstream; discharge computed from backwater curve based on discharge measurements made following floods exceeding 14,000 second-feet.

Navidad River near Ganado, Tex.

Location.- Wire-weight gage, lat. 29°02', long. 96°33', on bridge on U. S. Highway 96, 100 feet upstream from Texas & New Orleans R. R. bridge, a quarter of a mile downstream from Sandy Creek, and 2½ miles southwest of Ganado, Jackson County. Datum of gage is 13.62 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army).

Drainage area.- 1,116 square miles.

Records available.- May 1939 to September 1940.

Extremes.- Maximum discharge during year, 64,500 second-feet July 2 (gage height, 36.54 feet, from floodmark); minimum observed, 4.0 second-feet Nov. 1.
1939-40: Maximum discharge, that of July 2, 1940; minimum observed, that of Nov. 1, 1939.
Maximum stage known, 39.8 feet May 27, 1936, according to information furnished by engineers of Texas & New Orleans R. R. (discharge, 94,000 second-feet, from rating curve extended above 60,000 second-feet).

Remarks.- Records excellent. Gage read twice daily, oftener during high stages. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	4.4	8.5	13	14	24	85	14	18	7,430	56	21
2	26	4.8	8.5	13	15	22	56	13	19	53,300	56	20
3	23	5.2	8.2	13	16	17	29	12	9.9	24,500	56	25
4	15	5.1	8.0	16	15	17	24	8.5	8.2	c9,980	52	24
5	18	5.5	8.0	20	16	16	19	5.1	7.3	c5,260	49	28
6	15	5.8	8.2	16	75	17	19	4.6	6.2	c1,140	49	24
7	13	5.5	e.2	14	73	16	24	4.3	5.6	c470	56	22
8	11	5.8	e.5	13	24	17	25	4.3	5.9	c340	56	24
9	8.7	5.6	8.5	13	32	17	17	4.3	509	242	52	29
10	7.5	6.6	8.5	15	23	17	25	4.3	1,690	186	56	31
11	6.6	6.9	8.7	15	19	17	21	4.3	1,090	157	52	31
12	6.7	6.9	8.7	14	17	18	13	4.1	596	148	66	37
13	6.7	7.3	e.5	14	16	16	9.0	4.1	227	174	56	38
14	6.9	8.0	e.7	13	14	17	20	4.2	130	490	66	33
15	7.5	13	9.2	12	14	17	17	4.1	97	504	77	35
16	6.7	14	8.5	12	24	17	14	4.3	288	1,660	81	28
17	7.5	9.0	8.7	12	592	17	16	4.3	248	755	77	26
18	6.4	9.2	8.7	12	2,160	16	13	4.3	89	436	73	23
19	6.4	8.7	12	12	1,100	17	9.0	9.7	59	292	70	23
20	6.7	8.2	9.7	11	275	18	9.0	27	62	212	62	33
21	6.1	7.6	9.2	12	121	19	12	34	66	166	59	49
22	6.4	8.0	9.7	12	70	18	12	46	99	166	52	70
23	6.1	7.6	10	13	56	18	12	295	139	130	49	85
24	6.4	7.6	9.7	13	43	18	13	242	119	121	49	77
25	6.4	7.6	21	13	38	19	17	153	251	97	49	66
26	6.1	7.1	82	13	32	18	13	82	190	85	49	56
27	6.4	7.5	81	13	28	17	13	31	127	77	49	40
28	5.8	7.8	52	13	26	18	13	19	66	73	35	35
29	6.1	7.8	46	14	26	70	16	14	49	70	30	30
30	5.5	8.5	31	15	-	376	14	14	724	66	21	21
31	5.2	-	15	14	-	161	-	27	-	70	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	299.8	28	5.2	9.67	595
November	222.6	14	4.4	7.42	442
December	541.1	82	8.0	17.5	1,070
Calendar year	-	-	-	-	-
January	418	20	11	13.5	829
February	4,974	2,160	14	172	9,870
March	1,104	376	16	35.6	2,190
April	599.0	85	9.0	20.0	1,190
May	1,101.8	295	4.1	35.5	2,190
June	6,995.1	1,690	5.6	233	13,870
July	108,797	53,300	66	3,510	215,800
August	1,681	81	21	54.2	3,330
September	1,084	85	20	36.1	2,150
Water year 1939-40	127,817.4	53,300	4.1	349	253,600

Peak discharge.- July 2 (8:30 a.m.) 64,500 sec.-ft.
c Stage-discharge relation affected by backwater from return flow downstream; discharge computed from backwater curve based on discharge measurements made following floods exceeding 10,000 second-feet.

Guadalupe River at Comfort, Tex.

Location.- Water-stage recorder, lat. 29°58', long. 98°54', at bridge on U. S. Highway 87, a quarter of a mile downstream from Cypress Creek and half a mile east of Comfort, Kendall County. Datum of gage is 1,372.0 feet above mean sea level (general adjustment of 1929). Prior to Nov. 29, 1939, wire-weight gage at same site and datum.

Drainage area.- 986 square miles.

Records available.- May 1939 to September 1940. December 1917 to August 1924 at site 5 miles upstream; August 1924 to September 1932 at site 4 miles upstream. Records equivalent during flood run-off originating above upper site and during extremely low flow, at which times Cypress Creek contributes no appreciable flow.

Extremes.- Maximum discharge during year, 7,520 second-feet Oct. 10 (gage height, 14.79 feet, from floodmark); minimum observed, 10 second-feet Oct. 30.

1917-32, 1939-40: Maximum discharge, 182,000 second-feet July 1, 1932 (gage height, 38.4 feet, present site and datum, from floodmarks, according to data furnished by Texas Highway Department), by slope-area method (flood originated above Cypress Creek drainage); minimum observed, 0.4 second-foot Aug. 2, 1918, at site then in use.

Flood of July 16, 1900, reached about the same stage as that of July 1, 1932.

Remarks.- Records good except those for October and November which are poor. Gage read twice daily, Oct. 1 to Nov. 28. Several small diversions above station for irrigation. Slight regulation during low-water periods caused by power plants above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	29	60	53	51	67	108	124	122	246	56	60
2	18	32	54	53	58	65	96	112	136	318	58	57
3	19	33	49	56	68	70	88	110	112	532	67	51
4	17	34	46	50	101	64	86	103	99	285	57	49
5	19	33	48	51	108	64	77	103	92	220	51	48
6	21	32	49	54	92	65	2,680	98	84	182	50	45
7	22	31	46	58	81	64	1,310	94	83	166	45	40
8	21	33	46	54	74	64	472	110	77	153	49	40
9	146	33	45	56	75	58	315	779	136	142	45	39
10	1,520	33	44	58	78	64	254	466	94	130	45	40
11	78	154	46	54	83	61	220	235	86	120	43	33
12	57	91	46	53	83	68	189	171	80	126	42	26
13	44	89	45	51	81	61	166	142	262	138	44	31
14	45	84	43	49	75	61	153	128	548	136	44	30
15	54	70	44	48	71	60	145	118	188	122	44	30
16	54	54	46	50	77	58	136	108	153	114	48	30
17	45	50	45	58	91	58	130	107	176	116	48	29
18	58	50	45	49	116	60	124	415	137	107	54	29
19	57	56	48	48	101	64	114	430	375	96	584	28
20	60	57	43	45	92	164	107	177	209	91	254	28
21	54	56	44	49	86	349	103	142	180	86	145	30
22	60	53	45	46	80	199	101	573	145	84	107	93
23	57	51	51	51	80	126	98	933	134	78	86	65
24	93	49	48	54	74	105	478	410	732	75	77	67
25	1,160	44	51	51	74	92	575	268	237	72	71	71
26	86	48	67	51	72	92	259	204	140	70	63	63
27	39	46	68	49	72	94	192	180	116	68	56	56
28	27	44	67	49	71	88	171	175	114	65	51	53
29	23	43	60	49	70	138	163	173	269	60	51	50
30	17	51	58	51	-	162	138	153	285	58	63	49
31	31	-	53	49	-	132	-	134	-	58	61	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,019	1,520	17	130	7,970
November	1,563	154	29	52.1	3,100
December	1,550	68	43	50.0	3,070
Calendar year	-	-	-	-	-
January	1,597	58	45	51.5	3,170
February	2,337	118	51	80.6	4,640
March	2,937	349	58	94.7	5,830
April	9,238	2,680	77	308	18,320
May	7,475	933	94	241	14,830
June	5,601	732	77	187	11,110
July	4,314	532	58	139	8,560
August	2,549	584	42	82.2	5,060
September	1,360	93	26	45.3	2,700
Water year 1939-40	44,540	2,680	17	122	88,360

Peak discharge.- Oct. 10 (2:30 a.m.) 7,520 sec.-ft.; Oct. 25 (4 a.m.) 3,950 sec.-ft.; Apr. 6 (8:30 a.m.) 7,350 sec.-ft.; Apr. 6 (8 p.m.) 3,310 sec.-ft.; May 22 (11 p.m.) 2,460 sec.-ft.; June 24 (3:30 p.m.) 4,500 sec.-ft.

Guadalupe River near Spring Branch, Tex.

Location.- Water-stage recorder, lat. 29°51'40", long. 98°23'00", at bridge on State Highway 46, 4 miles southeast of town of Spring Branch, Comal County, and 6 miles downstream from Curry Creek. Datum of gage is 948.13 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,432 square miles.

Records available.- June 1922 to September 1940.

Average discharge.- 18 years, 265 second-feet.

Extremes.- Maximum discharge during year, 7,670 second-feet Oct. 10 (gage height, 12.38 feet); minimum, 17 second-feet Oct. 1, 2.
1922-40: Maximum discharge, 121,000 second-feet July 3, 1932 (gage height, 42.10 feet), from rating curve extended as a straight line above 70,000 second-feet; minimum, 2.2 second-feet July 11, 1939, from rating curve extended below 15 second-feet.
Maximum stage known, between 45 and 50 feet in 1900, according to information furnished by local residents.

Remarks.- Records good. Small diversions above station for irrigation. Slight regulation during low-water periods caused by power plants above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	62	63	75	65	82	169	156	161	318	62	80
2	18	58	67	71	69	82	145	140	150	286	62	78
3	20	54	78	67	75	78	130	130	143	393	60	73
4	19	50	75	67	95	73	121	121	145	495	60	65
5	19	47	71	67	104	78	114	118	123	318	58	60
6	20	47	67	71	121	73	896	111	114	245	56	56
7	20	49	67	71	118	73	3,120	111	104	215	54	52
8	20	50	67	71	109	71	1,080	123	100	191	52	49
9	21	50	65	71	102	71	505	123	107	183	49	45
10	3,060	52	63	71	95	71	370	660	268	166	47	42
11	644	67	62	71	93	67	307	435	140	158	47	38
12	188	78	60	73	98	71	264	272	118	191	45	37
13	116	102	60	71	102	67	236	215	118	172	44	34
14	98	102	60	67	98	67	215	180	1,340	166	42	31
15	89	100	60	63	95	63	200	163	789	186	40	29
16	75	91	58	62	95	63	188	153	303	161	42	31
17	69	78	58	60	104	63	180	143	264	150	44	31
18	65	71	58	60	107	63	166	138	373	143	47	29
19	62	69	60	62	123	63	156	336	523	140	52	29
20	56	67	58	65	121	67	150	413	1,230	130	352	29
21	56	63	60	63	114	1,260	140	212	365	121	268	31
22	52	62	63	63	104	374	133	177	272	107	174	35
23	50	63	56	63	100	248	126	1,050	224	100	135	44
24	52	62	60	63	95	180	118	699	194	100	111	86
25	962	60	67	63	93	150	571	410	984	93	98	73
26	636	58	71	63	86	133	478	296	329	91	89	63
27	209	56	71	65	86	126	275	239	227	86	80	63
28	128	56	82	65	84	126	224	221	191	80	73	58
29	98	58	82	65	84	126	197	304	230	73	71	50
30	82	65	84	63	-	258	174	194	282	69	78	47
31	67	-	80	63	-	194	-	174	-	65	75	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,089	3,060	18	229	14,060
November	1,947	102	47	64.9	3,860
December	2,053	84	56	66.2	4,070
Calendar year 1939	30,410.2	3,060	2.8	83.3	60,310
January	2,055	75	60	66.3	4,080
February	2,835	123	65	97.8	5,620
March	4,581	1,260	63	148	9,090
April	11,148	3,120	114	372	22,110
May	8,217	1,080	111	265	16,300
June	9,911	1,340	100	330	19,660
July	5,392	495	65	174	10,690
August	2,567	352	40	82.8	5,090
September	1,468	86	29	48.9	2,910
Water year 1939-40	59,263	3,120	18	162	117,500

Peak discharge.- Oct. 10 (6 p.m.) 7,670 sec.-ft.; Mar. 21 (7:30 a.m.) 3,960 sec.-ft.; Apr. 7 (3 a.m.) 5,520 sec.-ft.; June 14 (3:30 a.m.) 3,960 sec.-ft.

Guadalupe River above Comal River, at New Braunfels, Tex.

Location.- Water-stage recorder and concrete control, lat. 29°42'55", long. 98°06'40", at New Braunfels, Comal County, 1.1 miles upstream from Comal River. Datum of gage is 586.6 feet above mean sea level (general adjustment of 1929).
Drainage area.- 1,666 square miles.
Records available.- December 1927 to September 1940. March 1898 to December 1899, January 1915 to December 1927 at site 1 mile below Comal River.
Average discharge.- 12 years (1928-40), 373 second-feet.
Extremes.- Maximum discharge during year, 7,060 second-feet Oct. 11 (gage height, 7.24 feet); minimum, 18 second-feet Oct. 8-11.
1927-40: Maximum discharge, 101,000 second-feet June 15, 1935 (gage height, 32.95 feet); minimum, 9.6 second-feet July 9-11, 1939.
Maximum stage known, about 38 feet sometime in 1869 and in December 1913, according to information furnished by local residents.
Remarks.- Records good. Small diversions above station for irrigation. Slight regulation during low-water period caused by small power plants above station.
Revisions.- Figures given in the following table supersede those previously published in Water-Supply Papers 788, 850, and in the Summary of yearly discharge in Water-Supply Paper 878, because of erroneous figures of daily discharge for May 23, 1935.

May 23, 1935.....963 second-feet

Month	Second-foot days	Maximum	Mean	Run-off in acre-feet
May.....	40,109	7,720	1,294	79,560
Water year 1934-35..	257,769	52,300	706	511,300
Calendar year 1935..	289,238	52,300	792	573,700

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	74	63	83	70	91	194	190	176	379	72	64
2	20	68	62	78	74	90	170	170	160	408	69	64
3	20	63	63	76	78	87	146	150	143	379	65	63
4	20	59	62	75	91	85	126	136	128	520	64	63
5	21	56	71	71	98	83	114	124	136	529	62	59
6	21	53	72	76	98	82	459	119	119	372	58	57
7	20	52	71	78	112	85	2,160	110	104	299	58	51
8	19	52	69	77	123	81	2,010	108	94	254	53	47
9	19	50	66	74	121	80	887	108	91	228	51	45
10	20	51	68	74	108	80	538	188	98	215	50	42
11	2,650	62	63	75	102	82	408	538	208	194	47	40
12	621	69	65	76	96	80	324	393	138	183	45	38
13	228	65	63	74	95	75	275	254	110	238	44	35
14	130	66	60	74	98	74	249	199	594	228	44	35
15	98	91	60	74	101	72	228	173	843	207	41	35
16	86	68	62	69	104	72	215	153	773	211	39	35
17	77	87	62	66	114	72	199	140	431	190	38	34
18	68	82	62	66	114	72	186	133	312	170	39	30
19	64	74	59	63	114	72	176	126	562	156	64	30
20	60	68	58	63	112	76	160	304	1,070	150	51	30
21	57	65	58	64	138	252	156	372	783	138	201	30
22	53	63	60	71	123	974	148	244	415	124	259	44
23	50	62	63	66	115	386	138	233	324	115	176	57
24	48	60	66	66	110	264	133	1,000	259	107	133	46
26	57	59	66	66	104	190	128	645	284	104	106	45
26	946	62	70	68	100	153	561	379	930	96	91	63
27	455	58	71	66	98	146	471	280	379	92	81	66
28	211	57	71	69	95	126	330	233	259	88	72	58
29	140	56	70	70	94	123	249	343	280	83	70	59
30	101	62	78	69	-	121	220	286	429	80	70	58
31	83	-	81	69	-	203	-	194	-	76	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	6,384	2,650	19	206	12,660
November.....	1,936	91	50	64.5	3,840
December.....	2,035	81	58	65.6	4,040
Calendar year 1939.....	32,565.6	2,650	9.6	89.2	64,580
January.....	2,206	83	63	71.2	4,380
February.....	3,000	138	70	103	5,950
March.....	4,529	974	72	146	8,980
April.....	11,758	2,160	114	392	23,320
May.....	8,025	1,000	108	259	15,920
June.....	10,632	1,070	91	354	21,090
July.....	6,613	529	76	213	13,120
August.....	2,377	259	38	76.7	4,710
September.....	1,423	66	30	47.4	2,820
Water year 1939-40.....	60,918	2,650	19	166	120,800

Peak discharge.- Oct. 11 (5:30 a.m.) 7,060 sec.-ft.; Apr. 7 (2:30 p.m.) 4,880 sec.-ft.

Guadalupe River at Victoria, Tex.

Location.- Water-stage recorder, lat. 28°47', long. 97°01', at bridge on U. S. Highway 96, at Victoria, Victoria County, 1,300 feet upstream from Texas & New Orleans (Galveston, Harrisburg & San Antonio) R. R. bridge and 10 miles upstream from Coleto Creek. Datum of gage is 29.23 feet above mean sea level (general adjustment of 1929).

Drainage area.- 5,676 square miles.

Records available.- November 1934 to September 1940. Gage-height records collected in this vicinity since 1904 are contained in reports of Weather Bureau.

Extremes.- Maximum discharge during year, 55,900 second-feet July 3 (gage height, 29.67 feet); minimum, 304 second-feet (regulated) Oct. 7; minimum daily, 328 second-feet Oct. 9.

1934-40: Maximum discharge, 179,000 second-feet July 3, 1936 (gage height, 31.22 feet); minimum, 277 second-feet (regulated) Sept. 5, 1939; minimum daily, 308 second-feet Sept. 5, 1939.

Remarks.- Records good. Many small diversions above station; flow not materially affected. Low-water flow partly regulated by power plants above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	402	515	452	490	542	636	650	880	714	22,300	630	522
2	440	465	415	569	502	582	665	830	800	39,800	606	467
3	490	478	490	556	502	515	610	800	623	51,000	568	500
4	366	428	478	478	542	610	650	600	623	32,500	544	522
5	428	440	695	502	528	515	725	610	582	22,000	544	522
6	378	378	490	569	650	582	665	623	569	8,180	522	489
7	366	402	490	569	890	528	596	542	623	2,520	544	467
8	415	402	478	515	770	556	760	636	490	1,780	489	445
9	328	452	428	515	665	556	2,310	556	599	1,610	489	467
10	378	402	465	542	582	528	2,860	528	502	1,440	467	456
11	378	390	428	569	650	528	2,470	556	f428	1,330	456	511
12	342	402	478	515	515	515	1,740	515	f465	1,100	456	511
13	817	465	502	515	528	596	1,460	502	f465	1,100	489	467
14	1,050	428	569	528	596	596	1,100	654	490	1,200	467	456
15	1,260	452	515	478	623	569	854	810	490	1,220	478	395
16	842	502	478	502	1,020	542	795	800	582	2,040	511	435
17	542	465	465	490	1,940	478	860	680	860	1,320	467	395
18	490	465	478	542	1,550	490	830	665	1,170	1,860	489	365
19	428	440	440	478	1,170	528	680	804	1,200	1,470	500	415
20	415	415	452	490	834	556	695	1,150	1,300	1,160	544	467
21	490	528	528	596	665	582	725	645	1,260	910	500	435
22	466	569	478	502	610	569	755	556	1,760	850	630	395
23	415	390	515	490	596	644	636	612	2,160	850	544	435
24	402	465	596	415	596	1,070	650	860	1,890	792	511	456
25	478	402	558	490	665	1,070	680	682	1,420	880	511	445
26	478	465	478	528	582	950	680	1,400	1,100	708	533	489
27	478	465	502	542	502	800	665	1,200	1,170	894	544	478
28	440	428	515	490	582	755	623	942	1,200	680	555	467
29	636	440	569	452	582	695	803	1,070	1,010	630	544	478
30	800	556	490	502	-	710	981	771	6,770	655	533	456
31	665	-	452	490	-	740	-	635	-	756	580	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,002	1,260	328	516	31,740
November	13,494	569	378	450	26,760
December	15,365	695	415	496	30,480
Calendar year 1939	215,639	3,120	308	591	427,700
January	15,909	596	415	513	31,560
February	20,979	1,940	502	725	41,610
March	19,591	1,070	478	632	38,860
April	29,173	2,860	596	972	57,860
May	23,094	1,400	502	745	45,810
June	33,315	6,770	428	1,110	66,080
July	205,615	51,000	630	6,633	407,800
August	16,244	630	456	524	32,220
September	13,808	522	365	460	27,390
Water year 1939-40	422,589	51,000	328	1,155	838,200

f Computed on basis of partial gage-height record and one daily reading furnished by Weather Bureau.

Comal River at New Braunfels, Tex.

Location.- Water-stage recorder, lat. 29°42'05", long. 98°07'10", 200 feet upstream from San Antonio Street viaduct at New Braunfels, Comal County, and 1.1 miles upstream from mouth. Datum of gage is 582.80 feet above mean sea level (general adjustment of 1929).

Records available.- December 1927 to September 1940.

Extremes.- Maximum discharge during year, 2,190 second-feet Apr. 6 (gage height, 7.03 feet), from rating curve extended above 1,200 second-feet; minimum, 163 second-feet (regulated) Sept. 21; minimum daily, 252 second-feet May 13-16.

1927-40: Maximum gage height, 30.71 feet June 15, 1935, from floodmarks (affected by backwater from Guadalupe River; discharge not determined); minimum discharge, about 142 second-feet Dec. 11, 1928 (gage height, 2.12 feet, regulated); minimum daily, 245 second-feet July 17, 20, 1939.

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

Remarks.- Records good except those for periods of no gage-height record and backwater effect, which are fair. Flow partly regulated by steam power plant half a mile above station. Entire flow of river, except during periods of local rain, comes from Comal Springs, about 1 mile above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	300	a277	285	281	281	289	281	266	274	285	281	281
2	300	a277	289	285	289	289	281	266	281	289	281	274
3	296	a278	285	285	289	293	289	270	266	331	277	274
4	300	a279	289	289	281	289	277	266	285	296	281	277
5	293	a279	293	289	300	289	277	266	277	296	281	274
6	296	a280	285	293	296	293	696	256	277	293	274	274
7	293	281	285	285	293	289	c334	259	285	289	277	270
8	293	270	285	285	293	293	327	259	277	285	281	274
9	296	270	293	285	293	289	285	252	281	293	274	270
10	296	274	289	285	285	289	281	259	277	281	270	274
11	c300	274	289	289	285	289	281	256	274	281	277	270
12	293	266	285	281	281	293	281	256	281	289	274	270
13	293	274	281	281	281	285	281	252	285	281	270	277
14	289	274	281	281	285	289	281	252	285	293	274	266
15	289	274	289	285	289	289	281	252	312	281	277	270
16	289	274	293	281	293	281	281	252	281	289	281	270
17	285	277	289	289	289	281	277	256	270	285	274	277
18	281	281	281	285	285	277	270	256	270	285	277	281
19	285	270	285	285	289	281	274	256	619	285	277	277
20	289	277	285	285	285	277	266	262	596	281	277	281
21	281	277	281	285	289	281	274	266	371	281	277	281
22	281	270	285	285	285	293	270	300	285	281	277	281
23	277	274	289	285	289	285	270	349	281	285	274	281
24	277	281	285	a285	285	285	266	274	270	281	270	281
25	277	277	289	a285	285	281	270	274	274	281	274	281
26	281	277	289	a285	289	289	277	270	274	285	270	281
27	281	277	281	a285	289	281	274	266	274	277	274	281
28	274	289	285	a285	293	281	270	277	274	281	270	281
29	a275	281	285	285	289	281	274	277	570	281	277	285
30	a275	281	289	289	-	281	274	277	355	281	277	277
31	a276	-	281	285	-	281	-	274	-	281	274	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,911	300	274	287	17,670
November	8,290	289	266	276	16,440
December	8,875	293	281	286	17,600
Calendar year 1939	109,841	338	245	301	217,800
January	8,843	293	281	285	17,540
February	8,355	300	281	288	16,570
March	8,863	293	277	286	17,580
April	8,820	696	266	294	17,490
May	8,273	349	252	267	16,410
June	9,381	596	266	313	18,610
July	8,883	331	277	287	17,620
August	8,549	281	270	276	16,960
September	8,291	285	266	276	16,440
Water year 1939-40	104,334	696	252	285	206,900

Peak discharge.- Apr. 6 (11 a.m.) 2,190 sec.-ft.; June 20 (10 p.m.) 1,930 sec.-ft.; June 29 (9 p.m.) 1,820 sec.-ft.

a No gage-height record; discharge interpolated or computed from graph based on known range in stage.

c Stage-discharge relation affected by backwater from Guadalupe River.

San Marcos River at Luling, Tex.

Location.- Water-stage recorder, lat. 29°39'55", long. 97°39'05", 390 feet downstream from bridge on State Highway 80, 1 mile south of Luling, Caldwell County, and 8 miles upstream from Plum Creek. Datum of gage is 322.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 833 square miles.

Records available.- April 1939 to September 1940.

Extremes.- Maximum discharge during year, 23,400 second-feet June 30 (gage height, 32.81 feet), from rating curve extended above 16,000 second-feet; minimum, 10 second-feet (regulated) Aug. 6; minimum daily, 55 second-feet Oct. 15.
1939-40: Maximum discharge, that of June 30, 1940; minimum, that of Aug. 6, 1940; minimum daily, that of Oct. 15, 1939.
Maximum stage known, 40.4 feet in 1869 and 1870, according to information furnished by engineers of State Highway Department.

Remarks.- Records good except those for periods of rapidly changing stage, which are poor. Flow regulated by power plant 800 feet above station. Discharge is mostly from large springs near San Marcos. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	110	107	105	101	110	106	114	120	1,120	100	112
2	95	81	100	102	101	117	94	112	96	381	77	127
3	110	99	90	104	102	117	101	136	98	f291	96	122
4	108	103	86	e9	106	114	120	123	95	f246	86	113
5	105	86	88	94	120	91	90	112	96	213	88	113
6	110	101	99	103	93	103	644	118	93	206	101	113
7	108	93	96	100	108	94	1,250	122	101	182	99	116
8	91	99	81	93	112	101	516	112	102	171	95	106
9	85	89	95	90	104	110	252	118	83	162	108	77
10	118	103	89	92	107	99	184	110	100	157	102	77
11	83	125	91	92	98	110	161	130	108	151	96	92
12	84	90	95	105	92	92	145	105	96	149	98	92
13	129	94	85	95	85	107	132	118	93	133	100	88
14	114	107	93	91	96	98	121	118	98	153	93	96
15	55	92	83	89	98	103	114	114	149	223	102	88
16	64	89	106	86	166	106	118	111	166	166	90	85
17	84	112	93	94	153	102	116	112	162	144	105	67
18	104	105	98	90	112	100	111	102	125	135	90	84
19	95	82	103	92	91	93	101	106	226	130	106	102
20	83	88	93	90	111	122	136	114	433	132	106	89
21	106	88	103	80	92	390	105	111	311	116	98	102
22	85	93	101	105	105	115	124	95	246	129	87	100
23	100	92	96	101	101	118	115	547	194	122	93	110
24	104	95	87	86	93	142	106	163	169	177	105	111
25	90	99	84	95	100	120	106	121	139	79	88	155
26	94	91	112	96	93	118	110	111	136	101	90	102
27	104	87	81	89	101	118	115	105	129	112	101	95
28	111	89	95	95	103	117	105	103	108	94	98	98
29	100	94	100	101	113	112	131	113	554	121	93	90
30	98	112	91	88	-	121	115	115	4,100	108	103	92
31	91	-	102	88	-	121	-	101	-	104	107	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,006	129	55	97.0	5,960
November	2,888	125	81	96.3	5,730
December	2,923	112	81	94.3	5,800
Calendar year	-	-	-	-	-
January	2,920	105	80	94.2	5,790
February	3,059	166	85	105	6,070
March	3,681	390	91	119	7,300
April	5,744	1,250	90	191	11,390
May	3,992	547	95	129	7,920
June	8,726	4,100	83	291	17,310
July	5,908	1,120	79	191	11,720
August	3,001	108	77	96.8	5,950
September	3,014	155	67	100	5,980
Water year 1939-40	48,862	4,100	55	134	96,920

Peak discharge.- Apr. 7 (12:30 a.m.) 2,790 sec.-ft.; May 23 (5 p.m.) 1,480 sec.-ft.; June 30 (6 a.m.) 23,400 sec.-ft.
f Computed on basis of partial gage-height record.

San Marcos River at Ottine, Tex.

Location.- Water-stage recorder, lat. 29°36', long. 97°35', at highway bridge a quarter of a mile southwest of Ottine, Gonzales County, and 4 miles downstream from Plum Creek. Datum of gage is 285.2 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,249 square miles.

Records available.- June 1915 to September 1940.

Average discharge.- 25 years, 430 second-feet.

Extremes.- Maximum discharge during year, 20,000 second-feet June 30 (gage height, 34.38 feet), from rating curve extended above 12,000 second-feet on basis of one slope-area determination at gage height 40.6 feet; minimum not determined.

1915-40: Maximum discharge, about 202,000 second-feet May 29, 1929 (gage height, 43.32 feet), from rating curve extended above 12,000 second-feet on basis of slope-area determination at gage-height, 40.6 feet; no flow (result of regulation) July 29, 1923, Mar. 31, 1925, June 24, 1926; minimum daily, 40 second-feet Sept. 16, 1917.

Maximum stage known, about 44.0 feet in December 1913, according to information furnished by local residents.

Remarks.- Records good except those above 3,000 second-feet, which are fair, and those for periods of no gage-height record, which are poor. Low-water flow regulated by several small power plants above station. Most of ordinary flow comes from large springs near San Marcos.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			112	113	106	126	128	114	111	10,900	123	129
2			104	110	121	123	103	110	109	1,800	110	124
3			97	112	120	131	107	116	108	831	111	124
4			97	110	129	124	117	119	105	520	113	128
5			95	101	132	115	112	117	102	277	102	124
6			101	107	148	100	295	116	101	256	121	118
7		105	98	115	118	120	1,840	115	105	f221	127	115
8			99	107	131	115	798	112	96	f200	115	120
9	102		96	107	124	103	324	118	94	f194	115	96
10			99	104	127	112	221	116	111	188	115	83
11			98	104	119	123	188	110	109	174	115	101
12			104	96	110	106	164	118	96	168	107	97
13		f121	102	102	113	130	151	116	103	150	114	94
14		89	96	96	112	109	135	118	101	174	111	101
15		121	95	95	110	110	133	114	162	241	108	96
16		91	100	101	141	114	130	113	255	200	111	98
17	78	98	106	99	207	114	126	113	181	221	110	76
18	92	120	111	101	168	111	122	103	154	181	104	86
19	106	108	112	93	138	101	119	108	230	158	121	110
20	87	92	111	104	122	130	124	114	725	155	122	90
21	124	90	106	87	123	409	129	114	550	139	112	110
22	105	93	112	112	120	228	117	101	314	151	102	115
23		93	107	114	128	124	121	401	235	147	106	112
24		91	103	108	118	136	120	400	194	194	103	116
25		96	96	107	115	135	110	131	174	132	106	162
26		95	118	104	116	120	112	139	137	119	102	111
27	105	93	100	112	118	126	107	120	139	129	109	111
28		89	106	105	121	133	126	113	132	122	105	108
29		98	102	106	126	118	122	130	620	137	103	107
30		107	102	109	-	117	130	126	12,900	135	110	100
31		-	103	99	-	114	-	115	-	124	109	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,169	-	-	102	6,290
November	3,045	-	-	102	6,040
December	3,186	118	95	103	6,320
Calendar year 1939	50,980	1,430	-	140	101,100
January	3,240	115	87	105	6,430
February	3,681	207	106	127	7,300
March	4,077	409	100	132	8,090
April	6,631	1,840	103	221	13,150
May	4,170	401	101	135	8,270
June	18,553	12,900	94	618	36,800
July	18,738	10,900	119	604	37,170
August	3,442	127	102	111	6,830
September	3,262	162	76	109	6,470
Water year 1939-40	75,194	12,900	-	205	149,200

Peak discharge.- Apr. 7 (7:30 a.m.) 2,500 sec.-ft.; June 30 (2 p.m.) 20,000 sec.-ft.

f Computed on basis of partial gage-height record.

Note.- No gage-height record Oct. 1-16, Oct. 23 to Nov. 12; discharge computed on basis of records for stations at Luling and Plum Creek near Luling, and weather records.

Blanco River at Wimberley, Tex.

Location.- Water-stage recorder, lat. 29°59', long. 98°04', 800 feet downstream from Cypress Creek and a quarter of a mile south of Wimberley, Hays County. Datum of gage is 802.2 feet above mean sea level (general adjustment of 1929).

Drainage area.- 378 square miles.

Records available.- August 1924 to September 1926, June 1928 to September 1940.

Average discharge.- 14 years, 95.4 second-feet.

Extremes.- Maximum discharge during year, 2,370 second-feet Apr. 6 (gage height, 3.80 feet); minimum, 4.6 second-feet Jan. 19.
1924-26, 1928-40: Maximum discharge, 113,000 second-feet May 28, 1929 (gage height, 31.10 feet, from floodmarks), by slope-area method; minimum, 3.5 second-feet Sept. 24-27, 1934 (gage height, 0.20 foot).

Remarks.- Records good except those for periods of no gage-height record and those for August and September, which are fair. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	15	16	15	7.0	16	14	19	13	149	19	27
2	7.0	15	14	13	7.9	16	14	21	12	109	19	27
3	7.9	14	13	13	12	16	14	19	13	98	19	27
4	8.9	14	13	12	14	18	13	18	12	103	18	24
5	9.8	13	13	9.8	9.8	16	13	18	11	82	18	21
6	8.9	13	12	12	9.8	18	738	16	12	69	18	19
7	8.9	12	12	12	a7.9	21	266	16	11	62	18	16
8	8.9	12	12	11	a7.9	21	89	18	12	55	18	15
9	9.8	12	9.8	9.8	a7.9	19	55	18	12	51	18	15
10	11	11	11	g9.8	a7.9	19	39	16	12	49	16	13
11	12	18	9.8	g8.9	a7.9	21	35	16	13	44	15	12
12	12	15	8.9	g9.8	a7.9	21	33	18	15	47	14	13
13	12	11	8.9	9.8	a7.9	24	33	18	102	44	21	13
14	12	9.8	9.8	12	a7.9	24	33	18	60	41	29	14
15	13	9.8	8.9	11	a7.9	22	33	16	91	39	29	14
16	13	8.9	11	9.8	a40	21	31	15	41	35	31	13
17	14	8.9	12	9.8	a29	18	31	15	151	43	33	13
18	15	9.8	11	8.9	a24	16	33	15	135	35	37	13
19	15	9.8	12	8.9	a19	15	29	15	206	31	31	11
20	14	11	13	7.9	18	14	27	15	202	27	18	9.8
21	13	12	13	8.9	18	125	24	15	114	26	15	8.9
22	13	12	13	8.9	19	69	21	16	62	24	11	84
23	13	13	14	8.9	18	35	19	16	47	22	11	26
24	14	14	15	8.9	18	24	21	16	41	22	11	14
25	18	15	18	8.9	18	22	18	16	39	21	11	11
26	15	15	18	7.9	16	22	16	15	37	21	9.8	8.9
27	35	16	16	7.9	15	19	21	15	35	19	9.8	6.4
28	27	16	15	7.9	16	16	21	15	35	19	7.9	6.4
29	24	16	15	7.9	16	16	18	15	293	19	8.9	5.8
30	21	18	13	7.9	-	14	18	14	282	19	16	5.2
31	19	-	13	7.9	-	14	-	13	-	19	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	431.5	35	6.4	13.9	856
November	390.0	18	8.9	13.0	774
December	394.1	18	8.9	12.7	782
Calendar year 1939	6,625.9	-	5.2	18.2	13,150
January	304.1	13	7.9	9.81	603
February	415.6	40	7.0	14.3	824
March	752	125	14	24.3	1,490
April	1,770	738	13	59.0	3,510
May	506	21	13	16.3	1,000
June	2,121	293	11	70.7	4,210
July	1,444	149	19	46.6	2,860
August	572.4	37	7.9	18.5	1,140
September	506.4	84	5.2	16.9	1,000
Water year 1939-40	9,607.1	738	5.2	26.2	19,050

Peak discharge.- Apr. 6 (8:45 a.m.) 2,370 sec.-ft.; Apr. 6 (6:30 p.m.) 1,860 sec.-ft.
a No gage-height record; discharge computed from graph based on discharge measurements, local information, and weather records.
g Computed from graph based on one or more daily gage readings.

Plum Creek near Luling, Tex.

Location.- Water-stage recorder, lat. 29°42', long. 97°37', at county highway bridge, 1 mile downstream from West Fork of Plum Creek, 2 miles upstream from bridge of Texas & New Orleans (Galveston, Harrisburg & San Antonio) R. R., and 3 miles northeast of Luling, Caldwell County. Datum of gage is 326.6 feet above mean sea level (general adjustment of 1929).

Drainage area.- 356 square miles.

Records available.- March 1930 to September 1940.

Average discharge.- 10 years, 86.0 second-feet.

Extremes.- Maximum discharge during year, 11,000 second-feet June 30 (gage height, 18.12 feet); minimum, 0.7 second-foot Oct. 24.

1930-40: Maximum discharge, 78,500 second-feet July 1, 1936 (gage height, 25.7 feet, from floodmarks), from rating curve extended above 54,000 second-feet; minimum, that of Oct. 24, 1939.

Flood in December 1913 reached a stage of about 25.7 feet, present site and datum, according to information furnished by local residents.

Remarks.- Records fair. No diversion above station. Slight regulation during low water from oil-field operations above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	1.5	3.5	4.8	3.8	4.0	4.6	3.5	6.0	3,760	3.0	2.6
2	2.2	1.4	4.6	4.6	3.8	4.6	4.8	2.8	6.0	140	3.0	2.6
3	1.8	1.8	3.0	4.8	5.1	4.8	4.3	2.8	5.4	500	2.8	2.8
4	1.8	1.7	2.6	4.6	5.7	4.0	4.0	2.2	5.4	170	2.8	2.6
5	1.8	1.5	4.0	4.6	9.0	3.8	4.0	2.2	5.4	a22	2.8	2.6
6	1.0	2.2	4.0	5.7	10	3.5	148	2.0	5.4	a15	2.8	2.5
7	1.5	2.3	3.0	9.0	9.6	4.3	583	1.7	5.1	a13	2.5	1.8
8	1.8	2.5	3.5	7.0	6.4	4.3	57	1.7	5.7	all	2.3	2.2
9	1.8	2.5	3.0	4.8	4.8	3.5	18	2.2	5.4	8.6	2.8	2.3
10	2.0	3.0	2.6	4.8	5.1	3.5	9.6	2.0	5.4	6.7	2.6	1.8
11	2.5	4.0	3.3	4.6	5.7	5.4	8.2	2.0	5.4	6.4	2.6	1.7
12	1.8	6.0	4.0	4.3	4.8	4.8	5.7	2.0	5.1	6.4	3.3	1.8
13	1.7	4.3	4.0	4.6	4.8	4.6	7.0	1.7	4.8	5.7	3.0	1.7
14	1.7	3.8	3.0	4.0	5.1	4.8	6.0	1.5	5.4	5.4	2.5	2.0
15	1.4	2.8	3.5	3.8	5.4	5.1	6.7	2.6	47	6.4	2.8	2.2
16	1.5	3.0	3.5	3.5	8.2	4.8	5.1	2.2	34	24	2.5	2.0
17	1.5	3.5	4.0	4.0	18	4.6	5.1	1.5	11	36	2.5	2.3
18	1.4	3.3	4.0	3.5	24	4.0	4.6	1.7	21	12	2.6	2.3
19	1.0	4.3	6.4	3.5	17	5.4	4.0	1.4	125	5.7	6.7	1.8
20	1.8	5.4	5.4	3.3	7.0	9.0	4.3	1.4	420	4.3	3.3	2.5
21	1.5	3.0	4.6	3.3	4.8	64	5.1	1.5	131	4.0	2.8	2.3
22	1.4	2.8	4.3	3.3	5.1	32	3.8	1.7	20	3.5	2.6	2.3
23	1.4	2.8	4.8	4.6	9.0	9.6	4.0	116	7.4	3.5	2.5	4.6
24	1.0	2.6	4.8	4.8	4.8	7.0	3.5	39	6.7	3.5	2.3	4.6
25	1.0	2.5	4.8	4.3	4.3	4.8	4.0	12	3.3	3.5	2.5	3.0
26	1.4	2.6	4.6	3.8	3.5	4.6	4.0	8.2	2.8	3.5	2.2	2.3
27	1.8	2.5	5.4	3.8	4.0	5.7	5.1	7.0	2.5	4.0	2.3	2.6
28	2.0	3.8	5.4	3.8	3.8	5.4	4.6	6.4	2.0	3.5	2.3	2.3
29	1.8	4.3	4.6	4.3	4.0	6.0	6.7	7.8	146	3.5	2.3	2.6
30	1.2	3.5	4.6	4.0	-	5.1	5.4	7.8	4,920	3.8	2.6	2.6
31	1.4	-	4.8	3.8	-	4.8	-	6.7	-	2.8	3.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	50.1	2.5	1.0	1.62	99
November	91.2	6.0	1.4	3.04	181
December	127.6	6.4	2.6	4.12	253
Calendar year 1939	3,207.6	244	1.0	8.79	6,360
January	137.6	9.0	3.3	4.44	273
February	206.6	24	3.5	7.12	410
March	241.8	64	3.5	7.80	480
April	940.2	583	3.5	31.3	1,860
May	255.2	116	1.4	8.23	506
June	5,975.6	4,920	2.0	199	11,850
July	4,797.7	3,760	2.8	155	9,520
August	86.6	6.7	2.2	2.79	172
September	73.3	4.6	1.7	2.44	145
Water year 1939-40	12,983.5	4,920	1.0	35.5	25,750

Peak discharge.- Apr. 7 (2:30 p.m.) 698 sec.-ft.; June 30 (9 p.m.) 11,000 sec.-ft.; July 3 (1:30 p.m.) 723 sec.-ft.

a No gage-height record; discharge computed on basis of recorded range of stage, engineer's notes, and weather records.

Coleto Creek near Victoria, Tex.

Location.- Water-stage recorder and concrete control, lat. 28°43', long. 97°08', at bridge on U. S. Highway 96, 100 feet upstream from Texas & New Orleans R. R. bridge, 1.1 miles downstream from Perdido Creek, and 9.4 miles southwest of Victoria, Victoria County. Datum of gage is 49.2 feet above mean sea level (general adjustment of 1929).

Drainage area.- 514 square miles.

Records available.- June 1939 to September 1940.

Extremes.- 1939: Maximum discharge during period June to September, 6,760 second-feet July 12 (gage height, 11.40 feet), from rating curve poorly defined between 3,000 and 30,000 second-feet; minimum, 0.5 second-foot July 9.
1939-40: Maximum discharge during year, 39,200 second-feet June 30 (gage height, 22.05 feet); minimum, 1.5 second-feet May 16.
Maximum stage known, 27.2 feet July 1, 1936, at railroad bridge 100 feet below station, based on information from railroad company.

Remarks.- Records fair except those above 3,000 second-feet, which are poor. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	1.7	216	1.1
2									-	1.5	94	1.3
3									-	1.1	46	1.1
4									-	1.1	24	1.1
5									-	.9	10	1.1
6									-	.8	7.7	.9
7									-	.8	5.9	.8
8									-	.8	4.8	1.3
9									-	.8	3.0	2.2
10									-	.8	2.6	25
11									-	2.2	2.2	18
12									-	2,970	2.0	58
13									-	599	1.7	28
14									-	136	1.5	9.8
15									-	60	1.3	6.6
16									-	36	1.1	5.2
17									-	22	.9	4.1
18									-	15	.8	4.1
19									-	12	.8	3.4
20									-	8.8	.7	2.6
21									-	6.6	.6	2.2
22									-	5.5	.6	1.7
23									-	4.8	1.3	1.7
24									-	4.4	3.0	2.8
25									-	4.1	2.4	2.4
26									-	3.7	1.7	2.0
27									-	3.7	1.3	1.5
28									e2.0	3.4	1.3	1.1
29									2.0	3.4	1.3	.9
30									1.7	3.0	1.3	5.5
31									-	768	1.3	-

Peak discharge.- July 12 (7:45 a.m.) 6,760 sec.-ft.; July 31 (6:30 p.m.) 2,840 sec.-ft.
e Based on partial gage-height record.

Discharge, in second-feet, of Coleto Creek near Victoria, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	2.2	3.0	3.7	4.4	9.8	7.1	4.1	5.9	2,660	20	9.0
2	3.0	2.2	2.8	3.4	4.8	9.3	7.1	3.4	5.2	416	16	9.0
3	2.6	2.4	2.6	3.4	5.2	8.8	6.6	2.8	4.1	576	14	8.6
4		2.4	2.4	4.1	5.5	8.8	6.6	2.6	3.4	1,240	12	8.3
5		2.4	2.6	3.7	15	8.2	6.2	2.6	2.8	401	12	7.6
6		2.4	2.4	5.5	16	7.1	6.6	2.4	2.6	211	12	7.2
7		2.4	2.4	5.5	8.2	6.6	6.2	2.4	2.2	148	10	6.2
8		2.6	2.6	5.2	7.1	6.2	5.9	2.4	2.0	112	9.4	5.5
9		2.6	2.6	4.8	8.2	5.9	5.9	2.6	9.2	87	8.3	5.5
10		2.6	2.8	4.8	6.6	6.2	5.5	2.8	14	70	8.3	4.6
11		2.8	2.8	5.2	5.9	6.6	5.5	2.6	11	57	8.3	4.3
12		3.0	2.8	5.2	5.5	7.1	5.5	2.4	7.1	52	8.0	3.6
13	2.6	3.0	2.4	5.2	5.5	6.6	5.2	2.2	5.2	46	8.0	3.3
14		2.8	2.2	4.8	5.2	5.9	5.5	2.2	4.4	44	6.9	3.0
15		2.8	2.2	4.4	5.5	5.5	5.9	2.2	9.3	56	6.2	3.0
16		2.8	2.6	4.8	343	5.5	5.5	2.2	115	186	5.2	3.0
17		2.8	2.8	4.8	827	5.5	5.5	2.8	54	117	4.9	3.3
18		3.0	2.8	5.2	275	5.9	5.2	4.1	198	63	4.6	3.3
19		3.0	3.4	4.8	76	6.6	4.4	678	62	48	1,240	3.0
20		2.8	3.0	4.4	36	8.2	4.1	429	19	43	478	3.0
21		2.6	2.8	4.8	23	12	3.7	66	11	38	116	4.0
22		2.4	2.8	5.5	17	11	3.7	30	8.2	35	45	4.9
23	2.6	2.4	2.8	5.9	14	9.8	3.7	30	6.2	29	28	5.2
24	2.4	2.4	2.8	5.5	13	9.3	4.1	46	5.8	26	21	4.7
25	2.2	2.6	4.4	5.2	12	8.8	4.8	17	24	24	19	4.2
26	2.2	2.6	9.8	4.8	12	7.7	4.8	13	15	22	15	3.8
27	2.2	2.6	5.5	4.8	12	8.8	4.4	12	10	20	13	3.3
28	2.2	2.6	4.8	4.8	12	9.8	4.4	12	7.1	19	12	2.8
29	2.2	2.6	4.1	4.8	10	9.3	4.8	9.8	17	18	10	2.4
30	2.2	3.0	3.7	4.4	-	8.8	4.8	7.7	18,600	16	11	1.9
31	2.2	-	3.7	4.4	-	7.7	-	6.6	-	16	9.9	-

Peak discharge.- June 30 (4:15 p.m.) 39,200 sec.-ft.; July 4 (12:30 a.m.) 1,940 sec.-ft.; Aug. 19 (3:40 p.m.)3,660 sec.-ft.

Note.- No gage-height record Oct. 4-22, Sept. 24-30; discharge computed on basis of recorded range in stage and weather records.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 1939	4,681.9	2,970	0.8	151	9,290
August	443.1	216	.6	14.3	879
September	197.5	58	.8	6.58	392
The period	-	-	-	-	10,560
October 1939	79.1	3.7	-	2.55	157
November	78.8	3.0	2.2	2.63	156
December	100.4	9.8	2.2	3.24	199
Calendar year	-	-	-	-	-
January 1940	147.8	5.9	3.4	4.77	293
February	1,790.6	827	4.4	61.7	3,550
March	243.3	12	5.5	7.85	483
April	159.2	7.1	3.7	5.31	316
May	1,405.9	678	2.2	45.4	2,790
June	19,240.7	18,600	2.0	641	38,160
July	6,896	2,660	16	222	13,680
August	2,192.0	1,240	4.6	70.7	4,350
September	141.5	9.0	1.9	4.72	281
Water year 1939-40	32,475.3	18,600	1.9	88.7	64,420

San Antonio River at San Antonio, Tex.

Location.- Water-stage recorder, lat. 29°24'35", long. 98°29'40", at South Alamo Street bridge in San Antonio, Bexar County, 2.1 miles upstream from San Pedro Creek. Datum of gage is 612.3 (revised) feet above mean sea level (general adjustment of 1929). Gage is at same site and datum as that which was discontinued Nov. 16, 1929.

Drainage area.- 38 square miles.

Records available.- January 1915 to November 1929, February 1939 to September 1940. Estimated monthly ground-water discharge contained in Water-Supply Paper 773-B.

Average discharge.- 15 years, 70.3 second-feet.

Extremes.- 1939: Maximum discharge during period February to September, 1,600 second-feet May 30 (gage height, 5.68 feet), from rating curve extended above 900 second-feet; minimum, 5.9 second-feet (regulated) May 6; minimum daily, 12 second-feet July 8.

1939-40: Maximum discharge during year, 1,040 second-feet June 29 (gage height, 4.45 feet); minimum, 4.9 second-feet (regulated) Apr. 13; minimum daily, 10 second-feet Dec. 22.

1915-29, 1939-40: Maximum discharge, 15,300 second-feet Sept. 10, 1921 (gage height, 20.14 feet, from floodmark), by slope-area method; no flow at times because of regulation.

Flood of July 5, 1819, equaled or exceeded that of Sept. 10, 1921.

Remarks.- Records poor. Normal flow of river comes from springs. Diurnal fluctuation caused by industrial pumping from wells (depleting the under-ground reservoir) above station. Diversions above station for irrigation and industrial uses.

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	41	34	23	16	16	24	25
2					-	41	33	18	19	16	22	23
3					-	41	33	24	16	16	27	24
4					-	42	32	24	20	16	64	24
5					-	43	32	25	24	16	81	28
6					-	42	29	28	18	16	19	22
7					-	49	30	21	21	16	22	24
8					-	43	32	25	23	12	22	25
9					-	45	30	32	22	14	19	22
10					-	45	33	21	23	18	22	24
11					-	48	29	20	22	18	34	42
12					-	43	26	17	27	87	23	27
13					-	46	31	27	25	16	27	31
14					-	41	32	16	18	14	28	22
15					-	38	33	25	18	13	27	23
16					38	38	33	23	21	14	22	32
17					48	38	28	21	20	16	27	23
18					43	38	26	22	18	16	25	34
19					48	40	27	28	22	14	25	23
20					45	40	27	22	19	18	148	22
21					43	37	25	22	17	20	26	27
22					43	36	26	24	18	15	24	22
23					45	34	26	24	18	16	20	22
24					50	36	26	18	16	18	23	22
25					46	48	25	21	16	20	24	22
26					45	37	28	21	19	16	23	22
27					42	41	46	23	24	21	25	22
28					41	41	25	16	17	21	26	23
29					-	36	22	18	22	18	26	24
30					-	33	22	213	21	21	20	22
31					-	33	-	34	-	24	25	-

Peak discharge.- May 30 (7:45 p.m.) 1,600 sec.-ft.; Aug. 20 (7:45 p.m.) 1,460 sec.-ft.

Discharge, in second-feet, of San Antonio River at San Antonio, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	16	18	16	18	18	14	17	19	22	16	16
2	22	16	17	16	21	14	17	15	17	20	15	14
3	22	15	17	16	43	16	14	15	18	17	15	19
4	26	16	17	14	19	17	15	16	31	16	15	14
5	20	16	17	14	34	18	21	15	21	17	22	14
6	19	17	16	21	18	16	210	16	18	16	14	14
7	17	20	16	16	17	11	19	18	18	16	14	14
8	18	19	16	16	16	17	18	16	25	17	14	14
9	18	16	16	16	38	17	17	101	22	18	12	14
10	18	15	18	17	20	14	18	17	22	14	13	18
11	16	26	18	17	18	17	18	17	23	17	14	12
12	22	16	20	17	18	16	18	16	18	17	16	12
13	17	16	17	18	22	14	19	17	26	18	16	12
14	18	17	13	18	21	16	18	22	81	22	12	12
15	17	17	14	18	20	15	17	20	63	19	12	12
16	21	17	15	18	20	12	16	21	12	23	11	13
17	20	17	16	16	23	13	18	30	14	26	12	19
18	16	17	16	12	19	22	16	22	17	19	15	14
19	16	18	15	22	19	17	15	20	64	18	19	16
20	14	18	15	16	18	15	13	19	20	11	18	14
21	14	14	14	18	18	21	12	21	17	18	12	20
22	16	16	10	22	17	17	15	25	14	18	13	20
23	17	16	14	20	16	17	18	63	14	23	12	19
24	18	17	15	18	16	17	16	21	16	17	12	73
25	18	16	55	17	17	13	15	19	17	18	15	22
26	20	16	17	16	17	18	16	19	12	14	20	14
27	20	16	16	18	17	16	22	20	15	16	21	12
28	18	16	16	17	18	16	19	92	16	19	14	12
29	18	17	15	18	17	19	22	73	311	17	50	12
30	17	23	16	18	-	17	16	22	148	19	27	14
31	16	-	16	17	-	16	-	22	-	15	12	-

Peak discharge.- Apr. 6 (7:45 p.m.) 940 sec.-ft.; June 29 (4 p.m.) 1,040 sec.-ft.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
February 16-28, 1939	577	50	38	44.4	1,140
March	1,254	49	33	40.5	2,490
April	881	46	22	29.4	1,750
May	896	213	16	28.9	1,780
June	600	27	16	20.0	1,190
July	592	87	12	19.1	1,170
August	970	148	19	31.3	1,920
September	748	42	22	24.9	1,480
The period	-	-	-	-	12,920
October 1939	571	26	14	18.4	1,130
November	512	26	14	17.1	1,020
December	531	55	10	17.1	1,050
Calendar year	-	-	-	-	-
January 1940	533	22	12	17.2	1,060
February	595	43	16	20.5	1,180
March	504	22	11	16.3	1,000
April	702	210	12	23.4	1,390
May	847	101	15	27.3	1,680
June	1,129	311	12	37.6	2,240
July	557	26	11	18.0	1,100
August	503	50	11	16.2	998
September	505	73	12	16.8	1,000
Water year 1939-40	7,489	311	10	20.5	14,850

San Antonio River near Falls City, Tex.

Location.- Water-stage recorder, lat. 28°57'05", long. 98°03'55", at highway bridge half a mile upstream from Scared Dog Creek and 3.4 miles southwest of Falls City, Karnes County. Datum of gage is 285.5 feet above mean sea level (general adjustment of 1929).

Drainage area.- 2,067 square miles.

Records available.- April 1925 to September 1940.

Average discharge.- 15 years, 283 second-feet.

Extremes.- Maximum discharge during year, 3,700 second-feet Apr. 7 (gage height, 5.39 feet); minimum, 65 second-feet Sept. 14.

1925-40: Maximum discharge, 16,200 second-feet July 3, 1936; maximum gage height, 22.3 feet June 13, 1935 (affected by backwater); minimum discharge, 36 second-feet May 11, 12, 1928 (gage height, 0.97 foot).

Maximum stage known, 28.36 feet in October 1913, according to information furnished by local residents.

Remarks.- Records good except those for periods of doubtful gage-height record, which are poor. Flow partly regulated by Medina Reservoir (capacity, 254,000 acre-feet). Medina canal diverts water above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	78	82	106	120	141	161	131	181	2,730	116	181
2	85	78	89	102	120	138	134	120	145	1,220	109	123
3	85	78	99	102	127	134	127	109	138	448	109	113
4	82	75	95	106	127	123	127	102	131	310	106	109
5	82	75	95	106	180	113	127	102	123	305	102	113
6	85	75	92	109	204	109	235	92	120	224	99	106
7	85	75	92	106	169	106	2,750	82	123	189	102	92
8	85	82	95	113	161	106	2,080	82	116	165	99	92
9	85	85	92	116	138	99	360	89	116	149	89	85
10	85	85	89	106	138	99	206	104	95	149	82	78
11	85	89	89	102	173	102	169	606	109	145	82	78
12	85	89	92	102	233	99	145	261	113	131	78	82
13	85	92	92	102	228	102	141	138	106	123	75	72
14	85	113	122	113	224	120	134	109	109	123	72	72
15	85	123	356	116	215	106	131	99	310	336	85	75
16	85	109	403	113	219	106	131	95	548	830	82	72
17	85	99	286	113	215	102	131	95	690	996	82	72
18	89	92	113	109	185	109	127	92	340	1,100	82	78
19	89	92	89	102	173	113	123	120	233	387	864	72
20	89	89	85	102	153	116	120	138	711	290	1,470	69
21	85	85	82	102	149	123	120	325	964	242	435	72
22	89	82	85	102	138	116	113	173	676	215	157	85
23	85	82	92	120	138	127	102	131	350	198	127	116
24	82	82	89	127	138	134	106	168	233	185	109	181
25	85	78	89	131	131	131	113	345	219	173	106	106
26	82	75	95	131	127	131	109	228	181	161	102	198
27	82	75	158	123	131	145	113	149	181	153	102	219
28	82	78	177	123	138	134	116	139	173	149	102	116
29	82	82	120	123	138	141	113	341	1,170	141	109	99
30	82	85	113	120	-	141	113	497	1,870	131	109	89
31	78	-	109	120	-	161	-	354	-	123	149	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,624	89	78	84.6	5,200
November	2,577	123	75	85.9	5,110
December	3,856	403	82	124	7,650
Calendar year 1939	46,735	790	69	128	92,690
January	3,468	131	102	112	6,880
February	4,730	233	120	163	9,380
March	3,727	161	99	120	7,390
April	8,777	2,750	102	293	17,410
May	5,616	606	82	181	11,140
June	10,574	1,870	95	352	20,970
July	12,221	2,730	123	394	24,240
August	5,592	1,470	72	180	11,090
September	3,115	219	69	104	6,180
Water year 1939-40	66,877	2,750	69	183	132,600

Peak discharge.- Apr. 7 (9:45 p.m.) 3,700 sec.-ft.

Note.- Doubtful gage-height record June 15 to July 9, July 16-19, Aug. 19-25; discharge computed on basis of available gage heights, recorded range in stage, discharge measurements, and weather records.

San Antonio River at Goliad, Tex.

Location.- Water-stage recorder, lat. 28°39', long. 97°23', at bridge on State Highway 29, 1.3 miles southeast of courthouse in Goliad, Goliad County, and 10 miles upstream from Manahuilla Creek. Datum of gage is 90.6 feet above mean sea level.

Drainage area.- 3,914 square miles.

Records available.- June 1924 to March 1929, February 1939 to September 1940.

Extremes.- Maximum discharge during year, 11,600 second-feet July 2 (gage height, 31.37 feet); minimum, 85 second-feet Oct. 30, 31.

1924-29, 1939-40: Maximum discharge, 13,100 second-feet Jan. 11, 1929 (gage height, about 30.5 feet, present site and datum, from floodmarks at site then in use); minimum observed, 44 second-feet during several periods in 1927.

Maximum stage known, about 45.6 feet, present site and datum, in October 1913, from floodmark at site then in use, according to information furnished by local residents.

Remarks.- Records good except those above 2,000 second-feet, which are fair. Low flow partly regulated by Medina Reservoir (capacity, 254,000 acre-feet). Water is diverted at Medina Reservoir for irrigation, and in city of San Antonio, for industrial use and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	f107	90	101	132	148	137	151	141	470	10,200	f159	133
2	f107	91	103	125	148	135	162	200	308	11,300	f153	166
3	92	92	104	121	148	135	169	186	407	c7,440	f150	202
4	92	95	113	120	150	133	148	153	189	c2,850	f146	153
5	91	93	113	120	153	132	139	135	150	1,030	f141	139
6	87	92	111	120	362	130	137	123	137	632	f137	133
7	89	92	111	121	445	121	166	118	130	488	f135	135
8	90	92	110	120	238	120	1,680	111	123	371	128	135
9	90	92	110	120	196	118	3,560	107	130	317	128	125
10	92	92	111	123	182	120	1,260	104	126	272	130	121
11	92	95	110	137	166	120	425	105	123	236	126	118
12	97	97	106	130	166	120	299	148	180	218	114	113
13	101	98	105	128	189	121	238	486	132	209	110	107
14	103	97	103	126	234	120	207	250	166	254	107	111
15	98	100	103	125	232	120	195	159	168	524	104	111
16	97	116	105	130	263	135	186	132	518	524	100	108
17	98	125	263	142	1,520	126	178	123	470	749	103	110
18	97	114	362	137	445	125	169	116	501	944	108	108
19	96	108	290	133	254	125	164	108	744	1,120	470	105
20	95	104	157	133	209	133	160	202	488	860	4,460	113
21	96	98	113	130	191	141	153	254	1,240	f470	2,280	116
22	96	97	108	133	177	159	146	168	1,620	f308	1,040	113
23	97	98	107	133	166	148	146	308	1,070	f254	445	116
24	96	97	105	130	155	139	141	218	560	f231	f247	139
25	97	96	116	144	148	137	126	178	563	238	f187	157
26	95	96	123	153	146	144	130	281	1,280	213	f160	214
27	96	93	121	155	142	146	135	389	308	f193	f150	150
28	95	95	121	155	137	153	137	263	223	f184	142	213
29	90	97	130	150	137	171	139	157	222	f180	137	234
30	86	100	196	150	-	157	142	536	4,760	f171	133	153
31	87	-	146	148	-	155	-	425	-	f164	135	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,946	107	86	95.0	5,840
November	2,942	125	90	98.1	5,840
December	4,179	362	101	135	8,290
Calendar year	-	-	-	-	-
January	4,124	155	120	133	8,180
February	7,247	1,520	137	250	14,370
March	4,176	171	118	135	8,280
April	11,188	3,560	126	373	22,190
May	6,416	536	104	207	12,730
June	17,526	4,760	123	594	35,360
July	43,144	11,300	164	1,392	85,570
August	12,265	4,460	100	396	24,330
September	4,151	234	105	138	8,230
Water year 1939-40	120,604	11,300	86	330	239,200

c Stage-discharge relation affected by backwater.

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

Cibolo Creek near Falls City, Tex.

Location.- Water-stage recorder, lat. 29°01', long. 97°56', at bridge on State Highway 123, 9 miles upstream from mouth and 5.5 miles northeast of Falls City, Karnes County. Prior to Aug. 6, water-stage recorder at site 1,600 feet upstream at datum 0.56 foot higher.

Drainage area.- 831 square miles.

Records available.- November 1930 to September 1940.

Extremes.- Maximum discharge during year, 7,880 second-feet June 29 (gage height, 19.80 feet, from floodmark); minimum observed, 4.9 second-feet Aug. 27, 28.
1930-40: Maximum discharge, 28,600 second-feet June 14, 1935 (gage height, 32.0 feet, present site and datum, based on floodmarks at site then in use), from rating curve extended above 16,000 second-feet; minimum observed, that of Aug. 27, 28, 1940.
Flood in October 1913 reached a stage about 3 feet higher than that of June 14, 1935.

Remarks.- Records good. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	7.9	11	12	14	12	14	62	32	f2,170	11	a7.0
2	8.2	7.9	11	12	14	12	13	30	23	140	11	a7.0
3	8.2	7.9	11	12	17	12	13	20	13	93	10	7.0
4	8.2	7.9	10	12	16	12	13	14	12	195	10	7.0
5	8.2	7.9	10	12	33	11	13	12	11	78	10	9.6
6	8.6	8.2	10	12	20	11	27	12	10	44	10	9.6
7	8.6	8.2	10	13	16	11	f2,380	11	9.8	32	7.6	8.9
8	8.6	8.2	10	13	15	12	198	10	9.5	27	8.3	a8.9
9	8.6	8.2	11	13	14	12	72	11	9.8	25	8.3	8.9
10	18	8.2	11	13	14	12	43	11	15	23	7.0	8.9
11	34	8.6	11	13	14	13	30	10	11	22	6.5	8.3
12	18	9.5	11	13	13	13	24	11	9.5	20	8.3	6.5
13	12	9.5	9.8	13	13	13	22	12	8.6	20	8.3	7.0
14	10	9.2	9.8	13	12	12	19	12	8.9	20	8.3	6.5
15	9.2	8.9	9.8	13	12	12	18	11	79	95	8.3	7.0
16	8.9	8.9	10	13	15	12	18	10	257	67	8.3	7.6
17	8.9	8.9	11	13	17	12	18	8.9	112	59	8.3	8.3
18	8.6	8.9	11	13	14	12	17	8.6	64	28	8.3	8.9
19	8.6	8.9	11	12	17	13	17	73	246	20	29	8.9
20	8.6	8.9	11	12	20	14	16	10	1,400	64	18	8.3
21	8.2	8.6	10	12	15	17	15	17	517	19	7.0	8.3
22	8.2	8.6	13	13	13	15	14	9.5	150	15	7.0	9.6
23	8.2	8.2	16	14	12	15	14	12	79	15	8.3	18
24	7.9	8.2	13	14	12	14	14	97	155	14	7.0	15
25	7.9	8.2	14	14	12	14	15	122	45	13	7.0	10
26	7.9	8.2	14	14	12	14	14	56	24	13	7.0	8.9
27	7.9	8.9	13	14	12	20	14	30	19	13	5.4	8.9
28	7.9	8.9	12	14	12	15	15	21	17	12	6.0	8.9
29	7.9	8.9	12	14	12	15	16	28	f2,470	12	7.0	8.9
30	7.9	10	12	14	-	17	95	14	f5,530	12	7.0	8.9
31	7.9	-	12	14	-	19	-	13	-	12	7.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	308.0	34	7.9	9.94	611
November	257.4	10	7.9	8.58	511
December	351.4	16	9.8	11.3	697
Calendar year 1939	6,061.5	284	7.0	16.6	12,020
January	403	14	12	13.0	799
February	432	33	12	14.9	857
March	418	20	11	13.5	829
April	3,211	2,380	13	107	6,370
May	779.0	122	8.6	25.1	1,550
June	11,347.1	5,530	8.6	378	22,510
July	3,392	2,170	12	109	6,730
August	280.5	29	5.4	9.05	556
September	265.5	18	6.5	8.85	527
Water year 1939-40	21,444.9	5,530	5.4	58.6	42,550

Peak discharge.- Apr. 7 (1:30 p.m.) 4,610 sec.-ft.; June 29 (11:30 p.m.) 7,880 sec.-ft.; June 30 (11 p.m.) 6,580 sec.-ft. All peaks from floodmarks.
a No gage-height record; discharge interpolated.
f Computed on basis of partly estimated gage-height record.
Note.- Discharge Aug. 6-31, Sept. 3-7, 9-14 computed from graph based on two or more daily readings from wire-weight gage at present site and datum.

Mission River at Refugio, Tex.

Location.- Wire-weight gage, lat. 28°17', long. 97°17', on bridge on U. S. Highway 77, 500 feet upstream from Missouri Pacific R. R. bridge and a quarter of a mile southwest of Refugio, Refugio County. Datum of gage is 1.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 643 square miles.

Records available.- July 1939 to September 1940.

Extremes.- 1939: Maximum discharge observed during period July to September, 1,860 second-feet July 12 (gage height, 15.13 feet); minimum observed, 1.1 second-feet July 2, Sept. 3, 5.
1939-40: Maximum discharge observed during water year, 3,770 second-feet June 30 (gage height, 21.70 feet); minimum observed, 1.0 second-foot Sept. 27-30.
Maximum stage known, 32.3 feet, about Aug. 8, 1914, and May 17, 1938, based on information from local residents.

Remarks.- Records poor. Gage read twice daily. No large diversion above station.

Discharge, in second-feet, 1939-40

1939

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	1.2	7.9	1.2	11	43	2.2	44	21	6.1	2.2	3.8
2	1.1	58	1.2	12	956	2.2	97	22	5.5	2.2	4.0
3	1.2	45	1.1	13	864	2.0	39	23	4.6	2.0	3.4
4	1.2	45	1.2	14	154	1.8	17	24	4.2	1.5	2.5
5	1.2	16	1.2	15	51	1.8	14	25	3.2	1.4	1.8
6	1.2	6.4	1.2	16	23	1.5	8.2	26	2.8	1.2	1.8
7	1.2	4.6	1.3	17	16	1.4	51	27	3.1	1.3	1.8
8	1.4	3.2	1.4	18	12	1.4	10	28	3.1	1.7	1.8
9	1.2	3.0	1.4	19	8.6	1.4	4.8	29	3.1	1.8	1.8
10	1.2	2.7	5.0	20	6.7	1.7	4.8	30	2.9	1.5	1.8
								31	2.8	1.2	-

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.4	1.8	3.4	3.4	3.0	2.1	1.8	3.4	1,700	2.2	d1.4
2	1.8	1.4	1.8	2.4	3.4	3.0	2.1	1.6	1.8	350	2.2	d1.4
3	1.7	1.4	1.8	2.1	3.6	3.0	2.0	1.5	1.5	536	2.1	1.7
4	1.8	1.4	1.8	2.0	4.2	3.0	2.0	1.5	1.5	584	2.1	1.7
5	1.8	1.4	1.8	2.1	3.8	2.4	1.8	1.3	1.4	184	2.0	2.7
6	1.8	1.4	1.8	2.6	3.6	2.4	2.0	1.3	1.5	51	2.2	1.8
7	1.8	1.3	1.8	3.0	3.6	2.4	2.1	1.4	1.4	42	2.5	1.5
8	1.8	1.4	1.8	3.1	d3.4	2.4	2.0	1.3	1.4	36	2.1	1.5
9	1.8	1.4	1.8	3.1	d3.2	2.4	2.0	1.3	137	31	2.2	1.5
10	1.8	1.4	1.8	3.1	d3.2	2.4	2.0	2.1	116	34	2.0	1.5
11	2.2	1.4	1.8	3.1	d3.1	2.4	2.0	2.1	172	42	2.1	1.5
12	2.2	1.4	1.9	2.8	d3.0	2.5	2.1	1.9	39	32	1.8	1.5
13	1.9	1.5	2.1	3.1	3.0	2.6	1.8	1.8	9.8	32	1.8	1.5
14	1.8	1.5	1.9	3.0	d3.0	3.1	1.8	1.6	7.3	356	1.9	1.5
15	1.8	1.6	1.8	3.1	d3.2	2.8	2.0	1.6	11	75	1.8	1.4
16	1.9	1.6	1.8	3.1	5.5	2.6	1.8	1.6	477	14	1.7	1.2
17	1.8	1.6	1.8	3.4	9.0	2.8	2.5	1.8	102	11	1.6	1.1
18	d1.8	1.5	1.9	3.2	11	2.6	1.9	1.7	31	8.2	1.8	1.3
19	d1.6	1.6	1.9	3.2	8.2	d2.7	1.6	1.5	13	8.6	1.7	1.2
20	d1.5	1.5	2.1	3.4	6.4	3.0	1.3	1.3	6.7	7.6	1.6	1.2
21	d1.4	1.5	1.9	3.6	4.0	d2.8	1.4	1.3	4.8	6.7	1.7	1.1
22	1.4	1.6	1.9	3.8	3.6	d2.7	1.4	1.4	2.4	5.5	d1.6	1.1
23	d1.4	1.5	2.0	4.0	3.6	2.4	1.4	54	2.2	4.2	d1.6	1.1
24	d1.5	1.6	2.1	3.8	3.6	2.4	1.8	9.0	2.7	4.0	d1.5	1.2
26	1.6	1.7	3.8	4.0	3.2	2.4	2.1	4.0	3.2	3.2	d1.4	1.1
26	1.7	1.5	4.2	3.8	3.0	2.4	1.9	3.6	105	3.6	d1.4	1.1
27	1.5	1.7	4.4	4.4	2.7	2.2	1.9	3.0	152	2.5	d1.4	d1.0
28	1.5	1.7	4.4	3.8	2.7	2.2	1.9	2.2	26	2.1	d1.4	d1.0
29	1.5	1.7	4.6	3.8	3.0	2.5	2.1	1.8	27	2.0	1.4	d1.0
30	1.5	1.7	4.2	3.4	-	2.8	2.1	13	2,600	2.0	d1.4	1.0
31	1.4	-	3.4	3.4	-	2.6	-	11	-	2.5	d1.4	-

Note.- Doubtful gage-height record; discharge computed on basis of engineer's readings and indicated trend of those by observer.

Monthly discharge, in second-feet, of Mission River at Refugio, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 1939	2,187.7	956	1.1	70.6	4,340
August	227.2	58	1.2	7.33	451
September	330.5	97	1.1	11.0	656
The period	-	-	-	-	5,450
October 1939	52.8	2.2	1.4	1.70	105
November	45.3	1.7	1.3	1.51	90
December	73.9	4.6	1.8	2.38	147
Calendar year	-	-	-	-	-
January 1940	100.1	4.4	2.0	3.23	199
February	120.2	11	2.7	4.14	238
March	80.9	3.1	2.2	2.61	160
April	56.9	2.5	1.3	1.90	115
May	135.9	54	1.5	4.38	270
June	4,061.0	2,600	1.4	135	8,050
July	4,172.7	1,700	2.0	135	8,280
August	55.8	2.5	1.4	1.80	111
September	40.8	2.7	1.0	1.36	81
Water year 1939-40	8,996.3	2,600	1.0	24.6	17,840

Nueces River at Laguna, Tex.

Location.- Water-stage recorder, lat. 29°25'45", long. 99°59'50", half a mile downstream from Sycamore Creek and 1 mile northeast of Laguna, Uvalde County. Datum of gage is 1,119.72 feet above mean sea level (general adjustment of 1929).

Drainage area.- 764 square miles.

Records available.- October 1923 to September 1940.

Average discharge.- 17 years, 164 second-feet.

Extremes.- Maximum discharge during year, 9,760 second-feet Oct. 10 (gage height, 9.15 feet); minimum, 28 second-feet Oct. 9.

1923-40: Maximum discharge, 222,000 second-feet July 13, 1939 (gage height, 26.40 feet), from rating curve extended above 40,000 second-feet on basis of one float measurement (110,000 second-feet) and one slope-area measurement (213,000 second-feet); minimum, 7.8 second-feet Nov. 3-15, 18, 1934.

Flood of June 1913 reached a stage of approximately 29 feet, based on statement of local resident that the stage exceeded that of the flood of Sept. 21, 1923, by 2 or 3 feet. Flood of Sept. 21, 1923, reached a stage of 26.5 feet (discharge, 226,000 second-feet, from rating curve extended as outlined above).

Remarks.- Records good except those for October and November, which are fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	110	84	74	67	74	60	76	133	99	49	56
2	41	99	84	71	67	74	60	74	125	91	49	53
3	38	88	84	71	91	74	58	71	119	84	49	53
4	38	84	84	71	76	71	56	69	113	84	49	53
5	34	81	84	71	78	71	72	67	110	78	49	51
6	32	76	84	69	78	71	153	64	102	78	49	51
7	30	74	84	69	76	71	170	99	96	76	47	51
8	30	71	84	69	69	71	125	74	94	74	45	49
9	42	67	84	69	96	71	110	419	109	71	45	49
10	5,210	67	84	69	78	71	102	303	94	69	45	47
11	1,660	88	81	69	78	69	99	299	88	69	43	45
12	763	78	81	69	78	69	94	237	84	69	41	45
13	445	71	78	69	76	69	91	197	84	69	41	43
14	299	71	78	69	74	69	88	181	108	69	51	43
15	230	71	76	69	74	69	88	170	144	69	45	43
16	192	71	76	67	76	67	86	157	125	69	41	43
17	165	71	74	67	76	67	84	181	113	69	41	43
18	149	71	71	67	76	67	84	161	105	69	66	41
19	141	76	71	67	76	64	84	157	105	69	79	40
20	125	76	69	67	76	64	84	141	107	67	60	40
21	119	76	69	67	76	64	84	129	102	64	67	40
22	113	74	69	69	76	64	84	129	94	62	64	41
23	108	71	67	71	76	62	84	141	88	62	62	41
24	99	76	67	71	76	62	84	311	91	60	60	40
25	96	76	110	71	76	78	84	268	91	60	60	38
26	91	76	84	71	74	67	84	218	88	58	58	38
27	491	76	84	71	74	69	84	192	86	56	56	38
28	364	76	84	69	74	64	84	181	84	56	56	38
29	207	86	81	69	74	64	84	165	108	53	53	36
30	157	86	78	69	-	64	81	157	105	53	60	36
31	129	-	76	67	-	60	-	145	-	51	56	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11,673	5,210	30	377	23,150
November	2,334	110	67	77.8	4,630
December	2,464	110	67	79.5	4,890
Calendar year 1939	82,700	41,300	20	227	164,000
January	2,148	74	67	69.3	4,260
February	2,212	96	67	76.3	4,390
March	2,111	78	60	68.1	4,190
April	2,685	170	56	89.5	5,330
May	5,233	419	64	169	10,380
June	3,095	144	84	103	6,140
July	2,127	99	51	68.6	4,220
August	1,636	79	41	52.8	3,240
September	1,325	56	36	44.2	2,630
Water year 1939-40	39,043	5,210	30	107	77,450

Peak discharge.- Oct. 10 (1:30 a.m.) 9,760 sec.-ft. Oct. 27 (12 m.) 770 sec.-ft.

Nueces River near Asherton, Tex.

Location.- Water-stage recorder, lat. 28°30', long. 99°42', at bridge on county road between Asherton and Brundage, 1.2 miles downstream from El Moro Creek and 5.5 miles northeast of Asherton, Dimmit County. Datum of gage is 470.9 feet above mean sea level (general adjustment of 1929). Prior to Feb. 2, chain gage at same site and datum.

Drainage area.- 4,082 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 5,200 second-feet Apr. 7 (gage height, 24.65 feet); no flow at times.
Maximum stage known, 32 feet June 17, 1935, according to information furnished by local residents.

Remarks.- Records good except those for period of no gage-height record, which are poor. Gage read twice daily, more often during high stages Oct. 1 to Feb. 1. Part of the flow of the Nueces River and its tributaries enters the Balcones fault which crosses the basin just north of Uvalde. At low stages most of headwater flow enters this fault. Flow partly regulated by several small reservoirs, and irrigation of about 12,000 acres from river or jointly from wells and river above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	9.3	3.1		0	0	0.2	0	817	1,670	0	304
2	0	5.9	2.4		0	0	.1	0	817	745	0	220
3	0	3.7	2.2		53	0	0	0	508	833	0	176
4	0	2.4	2.0		18	0	0	0	263	785	0	122
5	0		1.6		.7	0	17	0	142	424	0	78
6	0		1.3		.2	0	2,740	0	86	224	0	53
7	0		1.0		0	0	4,380	0	f53	128	0	41
8	0		.7		0	0	817	0	f37	80	0	32
9	0		.5		0	0	291	34	f27	f49	0	21
10	0	a17	.4		0	0	285	52	f21	f30	0	12
11	2,710		.4		0	0	205	44	19	f19	0	5.0
12	4,150		.3		0	0	134	743	31	f16	0	1.9
13	4,570		.3		0	0	90	1,040	55	f7.5	0	.8
14	4,300		.1		0	0	58	606	60	5.2	0	.4
15	2,340		.1		0	0	42	305	54	4.0	0	.2
16	667	26	0		0	0	31	168	49	4.2	0	.1
17	341	26	0		0	0	20	861	43	25	0	0
18	202	24	0		0	0	12	1,040	41	22	0	0
19	138	23	0		0	0	5.7	580	1,120	7.7	0	0
20	106	22	0		0	0	3.9	595	2,710	3.2	0	0
21	87	19	0		0	0	2.2	424	2,590	1.6	0	0
22	65	17	0		0	0	1.2	424	1,340	.8	0	0
23	54	15	0		0	0	.7	536	562	.4	0	0
24	46	9.7	0		0	5.7	.4	1,160	315	.3	0	0
25	36	7.8	0		0	132	.2	1,010	392	.2	100	0
26	28	6.6	0		0	305	.1	480	580	.1	73	0
27	26	5.9	0		0	80	0	358	226	0	42	0
28	23	6.1	0		0	23	0	263	97	0	22	0
29	21	5.2	0		0	8.1	0	274	233	0	9.4	0
30	18	4.0	0		-	2.6	0	230	1,360	0	1,240	0
31	14	-	0		-	.8	-	548	-	0	1,220	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	19,942	4,570	0	643	39,550
November	425.6	-	-	14.2	844
December	16.4	3.1	0	.53	33
Calendar year	-	-	-	-	-
January	0	0	0	0	0
February	71.9	53	0	2.48	143
March	557.2	305	0	18.0	1,110
April	9,136.7	4,380	0	305	18,120
May	11,775	1,160	0	380	23,360
June	14,648	2,710	19	488	29,050
July	5,085.2	1,670	0	164	10,090
August	2,706.4	1,240	0	87.3	5,370
September	1,067.4	304	0	35.6	2,120
Water year 1939-40	65,431.8	4,570	0	179	129,800

Peak discharge.- Apr. 7 (5 a.m.) 5,200 sec.-ft.
a No gage-height record; discharge computed on basis of weather records and local information.
f Computed on basis of partly estimated gage-height record.

Nueces River at Cotulla, Tex.

Location.- Wire-weight gage, lat. 28°26', long. 99°16', at bridge on U. S. Highway 81, at Cotulla, La Salle County, a third of a mile above International-Great Northern R. R. bridge. Datum of gage is 368.08 feet above mean sea level (general adjustment of 1929).

Drainage area.- 5,260 square miles.

Records available.- October 1923 to September 1940. July 1915 to June 1918, at site 4 miles upstream; 1914-17, and since 1922 (gage heights only) in reports of Weather Bureau.

Average discharge.- 17 years (1923-40), 346 second-feet.

Extremes.- Maximum discharge during year, 5,400 second-feet June 23 (gage height, 14.90 feet, from graph based on gage readings); no flow Aug. 14-18.
1923-40: Maximum discharge, 82,600 second-feet June 18, 1935 (gage height, 32.4 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records fair. Part of flow of Nueces River and its tributaries enters the Balcones fault which crosses basin just north of Uvalde. At low stages most of headwater flow enters this fault. Low-water flow partly regulated by small reservoirs above station; most if it is diverted above station by pumping. Gage read once daily.

Cooperation.- Gage-height record furnished by Weather Bureau.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	14	2.0	0.4	0.3	0.8	41	2.9	210	1,340	0.4	479
2	.4	13	3.0	.4	.4	.8	24	2.0	462	1,720	.8	1,040
3	.4	12	3.2	.4	2.4	.8	18	1.8	810	2,960	.4	855
4	.4	12	3.2	.8	3.4	.6	7.2	1.6	810	3,080	.8	305
5	.3	15	3.2	.4	.5	.4	157	1.0	508	2,320	.4	195
6	.4	12	3.2	.3	.4	.4	1,050	1.0	236	1,650	.3	144
7	.4	4.9	2.8	.3	.6	.9	490	1.7	138	905	.3	78
8	.4	3.0	1.9	.3	6.7	.9	1,670	1.7	87	262	.4	40
9	.4	2.4	1.9	.3	3.0	.5	4,340	1.0	72	138	.8	26
10	30	1.4	1.9	.3	2.4	.5	3,900	11	49	92	.8	12
11	26	2.8	1.9	.3	2.2	.8	1,920	4.5	41	55	.3	12
12	153	7.0	1.8	.3	.8	.5	550	152	30	32	.3	6.5
13	1,100	3.4	1.4	.3	.6	.4	279	195	33	24	.2	4.0
14	3,210	2.0	1.4	.3	.6	.4	151	641	114	15	0	2.8
15	4,340	2.0	.8	.3	.3	.4	108	975	114	14	0	1.0
16	4,200	2.0	.8	.3	.3	.9	87	705	103	26	0	.6
17	3,560	5.4	1.2	.3	.3	.8	60	600	92	21	0	.3
18	2,020	5.4	1.1	.3	.3	.4	29	321	70	17	0	.3
19	833	3.4	.6	.3	.3	.4	13	880	742	21	.7	.3
20	235	7.2	.6	.3	.3	.5	5.1	1,200	1,340	36	.4	.3
21	132	20	.6	.3	.3	.8	7.2	1,340	2,220	30	.8	.3
22	98	19	.6	.4	.3	.4	5.1	1,160	2,960	21	.4	.3
23	78	16	.6	.3	.6	.4	4.9	1,530	5,240	11	.3	.4
24	60	19	.6	.3	.3	2.3	4.5	900	4,340	7.2	.3	.7
25	50	12	.6	.3	.3	57	3.0	750	3,680	7.0	.3	.8
26	44	12	.8	.3	.6	26	3.0	1,550	2,020	4.1	.3	.6
27	38	12	.8	.3	.8	298	2.9	2,740	1,480	4.0	.3	.3
28	33	14	.4	.3	.8	800	2.3	2,040	1,530	2.8	.3	.6
29	27	4.1	.4	.3	.8	783	2.9	1,280	1,590	1.4	.3	.7
30	20	1.3	.4	.3	-	185	2.2	578	1,720	.9	20	.7
31	15	-	.4	.3	-	82	-	296	-	.9	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	20,305.5	4,340	0.3	655	40,280
November	259.7	20	1.3	8.66	515
December	44.1	3.2	.4	1.42	87
Calendar year 1939	101,937.8	8,520	0	279	202,200
January	10.3	.8	.3	.33	20
February	30.9	6.7	.3	1.07	61
March	2,247.0	800	.4	72.5	4,460
April	15,237.3	4,340	2.2	508	30,220
May	19,863.2	2,740	1.0	641	39,400
June	32,841	5,240	30	1,095	65,140
July	14,818.3	3,080	.9	478	29,390
August	48.6	20	0	1.57	96
September	3,207.5	1,040	.3	107	6,360
Water year 1939-40	108,913.4	5,240	0	298	216,000

Nueces River near Three Rivers, Tex.

Location.- Water-stage recorder, lat. 28°26'10", long. 98°11'10", 100 feet downstream from bridge of San Antonio, Uvalde & Gulf (Missouri Pacific) R.R., half a mile downstream from Frio River, and 2 miles southeast of town of Three Rivers, Live Oak County. Datum of gage is 101.16 feet above mean sea level (general adjustment of 1929).

Drainage area.- 15,600 square miles.

Records available.- July 1915 to September 1940. Since 1922 (gage heights only), in reports of Weather Bureau.

Average discharge.- 23 years (1915-18, 1920-40), 779 second-feet.

Extremes.- Maximum discharge during year, 19,600 second-feet July 3 (gage height, 37.74 feet); minimum, 2.1 second-feet Oct. 11.

1915-40: Maximum discharge observed, 55,000 second-feet Sept. 18, 1919 (gage height, 46.0 feet), from rating curve extended above 55,000 second-feet; no flow at times.

Remarks.- Records good. Part of flow of Nueces River and its tributaries enters the Balcones fault, which crosses basin just north of Uvalde. At low stages most of headwater flow enters this fault. About 5,000 acres irrigated from river above station, and about 12,000 acres jointly from river and wells.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	116	15	18	28	22	2,850	35	2,450	13,700	25	1,510
2	65	84	25	17	29	20	1,420	30	2,450	18,800	22	1,780
3	35	61	25	18	32	20	1,150	25	2,170	19,000	18	1,480
4	16	48	25	18	44	19	1,370	20	1,960	17,800	f16	366
5	10	39	23	20	80	18	622	16	1,900	16,800	f13	448
6	7.4	34	22	21	324	18	2,720	13	1,110	12,900	12	602
7	5.6	30	22	20	304	17	6,040	11	690	9,310	9.8	715
8	4.3	25	22	20	114	16	5,760	9.8	740	7,010	8.0	652
9	3.6	20	22	22	52	18	4,560	9.4	1,650	4,990	6.8	324
10	3.2	18	21	22	38	20	f3,610	10	3,130	3,750	6,2	199
11	2.4	20	19	23	33	20	f3,250	400	3,340	3,070	6.2	131
12	29	20	19	24	30	19	f4,490	185	2,880	f2,790	12	87
13	34	18	18	25	29	17	f5,130	59	3,470	f2,600	6.6	64
14	389	17	16	24	30	16	f4,200	47	4,910	1,720	30	51
15	1,020	16	16	23	37	15	3,100	110	6,730	1,620	33	42
16	1,420	16	16	23	142	16	2,510	95	7,700	422	27	36
17	1,830	18	16	23	166	18	2,450	180	7,440	552	23	30
18	1,600	19	16	23	54	16	2,600	664	7,180	245	19	25
19	896	18	16	20	44	15	f1,760	4,810	6,100	154	4,960	20
20	840	16	16	20	34	15	f318	4,270	5,020	112	7,700	17
21	952	14	14	20	30	46	f164	2,100	4,870	131	5,850	13
22	1,150	14	14	22	28	54	f100	1,200	3,840	129	2,730	73
23	1,340	14	13	23	26	35	f81	2,350	2,880	100	2,060	335
24	1,540	14	12	24	25	28	f60	3,540	3,030	79	1,480	155
25	1,780	14	13	24	24	30	159	3,110	5,440	74	1,540	76
26	1,880	13	20	24	24	172	87	2,820	4,470	69	1,600	93
27	482	12	20	24	25	733	57	2,940	2,510	57	576	63
28	216	12	22	25	25	1,060	52	2,750	2,600	46	214	26
29	104	12	22	26	23	1,440	42	2,080	3,530	40	127	15
30	73	12	20	26	-	2,250	37	2,290	8,660	35	114	10
31	75	-	18	26	-	3,100	-	2,420	-	31	1,440	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	17,871.5	1,880	2.4	576	35,450
November	784	116	12	26.1	1,560
December	578	25	12	18.6	1,150
Calendar year 1939	166,727.7	6,260	0	457	330,700
January	688	26	17	22.2	1,360
February	1,874	324	23	64.6	3,720
March	9,303	3,100	15	300	18,450
April	60,749	6,040	37	2,025	120,500
May	38,629.2	4,810	9.4	1,246	76,620
June	114,850	8,660	690	3,828	227,800
July	138,136	19,000	31	4,456	274,000
August	30,684.6	7,700	6.2	990	60,860
September	9,438	1,780	10	315	18,720
Water year 1939-40	423,585.3	19,000	2.4	1,157	840,200

f Computed on basis of partial gage-height record, part of which was furnished by Weather Bureau.

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Nueces River near Mathis, Tex.

Location.- Water-stage recorder, lat. 97°52', long. 28°02', at bridge on U. S. Highway 96, 200 feet downstream from Texas & New Orleans R. R. bridge, 0.8 mile downstream from Lake Corpus Christi Dam and 4 miles southwest of Mathis, San Patricio County. Datum of gage is 27.50 feet above mean sea level.

Drainage area.- 16,660 square miles.

Records available.- August 1939 to September 1940.

Extremes.- Maximum discharge during year, 18,400 second-feet July 6 (gage height, 28.53 feet); minimum, 3.7 second-feet (regulated) Aug. 15; minimum daily, 6.8 second-feet Aug. 15.

1939-40: Maximum discharge, that of July 6, 1940; minimum and minimum daily, those of Aug. 15, 1940.

Maximum stage known, 36.0 feet, June 18, 1935, from floodmark at railroad bridge, 200 feet upstream (discharge, 44,000 second-feet, by computation of flow over Lake Corpus Christi Dam).

Remarks.- Records good except those for period of no gage-height record and those below 20 second-feet, which are poor. Flow regulated by Lake Corpus Christi Dam (capacity, 64,000 acre-feet). Part of flow of Nueces River and its tributaries enters the Balcones fault, which crosses the basin just north of Uvalde. At low stages most of the headwater flow enters this fault. About 5,000 acres irrigated from river above station and about 12,000 acree jointly from river and wells.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	41	29	28	28	27	792	31		5,960	59	265
2	43	39	29	28	28	29	2,460	29		8,330	46	353
3	42	37	29	28	28	30	2,150	27	a2,940	11,400	51	1,340
4	42	36	29	28	28	32	2,010	25		15,300	48	1,930
5	42	35	29	28	27	34	1,690	24		17,700	29	1,400
6	42	34	29	29	27	34	1,410	24	1,770	18,400	38	439
7	42	34	29	29	27	34	2,320	24	1,730	17,700	30	381
8	40	34	29	29	27	34	3,570	21	912	15,300	30	376
9	40	34	29	29	28	34	3,330	22	494	11,200	20	376
10	40	30	29	29	26	62	2,870	22	3,070	7,270	17	363
11	40	30	29	29	24	134	2,290	22	3,920	4,690	18	354
12	40	29	29	29	24	71	2,740	22	3,660	3,550	16	281
13	40	28	29	28	25	70	3,480	22	3,470	2,910	16	156
14	39	28	26	28	26	68	4,470	22	3,830	2,860	9.0	155
15	38	28	26	28	26	68	4,540	21	4,480	3,000	6.8	153
16	39	28	26	28	26	67	3,470	21	4,890	2,620	44	152
17	40	28	26	29	28	67	3,260	62	5,700	2,840	40	151
18	209	28	26	29	26	64	3,030	202	6,900	2,300	30	73
19	1,080	28	27	29	26	63	2,740		7,260	1,140	184	38
20	1,260	28	28	28	26	62	3,050		6,730	454	1,580	38
21	1,260	29	29	28	26	62	3,280		5,780	336	3,660	39
22	1,260	29	28	28	26	63	1,770		4,980	328	5,740	40
23	1,260	29	25	27	26	64	913		4,060	304	3,850	37
24	1,260	29	25	27	26	70	581	a2,940	3,250	265	2,480	36
25	1,260	29	28	27	26	66	138		5,150	237	2,170	36
25	1,810	30	28	27	26	68	121		5,840	173	2,280	36
27	2,100	30	28	27	27	68	115		4,910	132	2,360	36
28	1,500	30	28	27	27	67	113		3,080	98	1,980	36
29	550	30	28	27	27	68	107		2,770	92	502	36
30	115	29	28	28	-	64	84		3,500	83	194	36
31	43	-	28	28	-	80	-		-	74	173	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	15,659	2,100	38	505	31,060
November	931	41	28	31.0	1,850
December	865	29	25	27.9	1,720
Calendar year	-	-	-	-	-
January	871	29	27	28.1	1,730
February	768	28	24	26.5	1,520
March	1,624	134	27	58.8	3,220
April	62,894	4,540	84	2,096	124,700
May	38,863	-	21	1,254	77,080
June	116,836	7,260	494	3,895	231,700
July	157,066	18,400	74	5,067	311,500
August	27,702.8	5,740	6.8	894	54,950
September	9,042	1,830	36	301	17,930
Water year 1939-40	433,321.8	18,400	6.8	1,184	859,400

a No gage-height record; discharge computed on basis of gate opening record at Lake Corpus Christi Dam, floodmark, and records for station near Three Rivers.

Nueces River at Calallen, Tex.

Location.- Staff gage, lat. 27°52'40", long. 97°37'35", at old pump house of city of Corpus Christi, half a mile northwest of Calallen, Nueces County, and half a mile upstream from tidewater and breakwater dam. Datum of gage is 1.12 feet above mean sea level (general adjustment of 1929).

Drainage area.- 16,920 square miles.

Records available.- August 1915 to September 1940 (1918-40, gage heights only).

Extremes.- Maximum gage height observed during year, 10.50 feet July 8; minimum observed, 2.70 feet Mar. 9, 10.
1915-40: Maximum gage height observed, 12.40 feet June 19, 27, 1935; no flow Aug. 23-29, 1918.

Remarks.- Discharge not computed. Gage read twice daily.

Cooperation.- Gage readings furnished by city of Corpus Christi.

Gage height, in feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.59	3.62	3.37	3.57	3.35	3.24	3.69	3.85	7.55	7.25	3.60	3.80
2	3.58	3.50	3.36	3.57	3.48	3.08	3.76	3.68	7.21	7.74	3.61	3.81
3	3.53	3.46	3.39	3.58	3.56	3.08	5.02	3.65	6.66	8.44	3.62	4.02
4	3.52	3.45	3.47	3.57	3.57	3.12	5.92	3.63	6.32	9.00	3.49	4.97
5	3.51	3.43	3.38	3.57	3.56	3.10	5.84	3.65	6.10	9.75	3.53	5.70
6	3.54	3.40	3.31	3.58	3.58	3.07	5.65	3.62	5.66	9.96	3.54	4.80
7	3.53	3.39	3.37	3.58	3.57	3.11	5.48	3.62	5.63	10.25	3.57	4.66
8	3.53	3.47	3.38	3.58	3.48	2.88	6.06	3.62	5.64	10.50	3.56	4.37
9	3.53	3.38	3.45	3.56	3.48	2.71	6.53	3.63	5.00	10.18	3.58	4.34
10	3.56	3.47	3.59	3.51	3.39	2.72	6.66	3.70	6.15	9.92	3.67	4.30
11	3.60	3.55	3.47	3.58	3.50	3.09	6.56	3.71	7.28	9.52	3.67	4.30
12	3.58	3.57	3.39	3.60	3.34	3.76	6.33	3.63	7.62	9.15	3.57	4.25
13	3.56	3.53	3.35	3.59	3.22	3.63	6.40	3.66	7.60	8.22	3.63	4.00
14	3.57	3.48	3.35	3.58	3.20	3.54	6.78	3.66	7.35	7.54	3.67	3.95
15	3.54	3.44	3.37	3.58	3.30	3.55	7.11	3.68	7.32	7.17	3.62	3.92
16	3.54	3.37	3.45	3.53	3.53	3.50	7.43	3.68	7.56	7.03	3.55	3.92
17	3.54	3.37	3.41	3.49	3.57	3.65	7.42	3.65	7.84	6.68	3.62	3.90
18	3.54	3.48	3.40	3.52	3.53	3.67	7.12	3.79	8.08	6.68	3.77	3.85
19	3.87	3.53	3.44	3.55	3.48	3.61	6.90	4.11	8.55	5.71	3.74	3.79
20	4.91	3.37	3.39	3.52	3.47	3.61	6.64	5.55	8.77	4.71	3.86	3.71
21	5.06	3.38	3.44	3.48	3.47	3.59	6.68	6.18	8.95	4.12	5.72	3.62
22	5.06	3.21	3.41	3.49	3.45	3.57	6.41	6.59	8.90	3.98	6.69	4.05
23	5.04	3.24	3.40	3.57	3.42	3.59	5.79	6.67	8.65	3.96	7.55	3.70
24	5.06	3.33	3.44	3.57	3.47	3.60	4.83	6.90	8.27	3.96	7.77	3.60
25	5.06	3.45	3.56	3.59	3.49	3.63	4.35	7.28	7.75	3.91	7.09	3.57
26	5.06	3.48	3.65	3.55	3.42	3.65	3.90	7.40	7.79	3.76	6.51	3.56
27	5.62	3.49	3.62	3.58	3.41	3.68	3.90	7.51	8.13	3.65	6.35	3.48
28	5.73	3.47	3.60	3.55	3.36	3.69	3.90	7.52	8.29	3.69	6.28	3.46
29	5.05	3.50	3.62	3.55	3.31	3.69	3.91	7.58	7.86	3.68	6.26	3.50
30	4.29	3.59	3.61	3.53	-	3.71	3.90	7.70	7.20	3.64	5.80	3.50
31	3.85	-	3.60	3.23	-	-	-	7.65	-	3.60	3.98	-

Nueces River seepage investigations

A series of discharge measurements was made during each of the periods May 2, 3, July 9, 10, Aug. 28, 29, and Sept. 26, 27, on the Nueces River and tributaries, Texas, between a point 0.4 mile upstream from gaging station at Laguna and a point 4.8 miles southeast of La Pryor. The river distance is 46.5 miles. The investigations were made during periods of constant stage of the river, and determinations of gain or loss represent normal conditions. All tributaries and diversions were measured.

Discharge measurements of Nueces River and tributaries, Texas, between point 0.4 mile upstream from gaging station at Laguna and point near La Pryor, 1940

Date	Stream or diversion	Location	Distance below initial point (miles)	Discharge, in second-feet			
				Main stream	Tributary	Gain or loss in section	Total gain or loss
May 2	Nueces River	2,000 feet above gaging station, 1 mile northeast of Laguna.	-0.4	72.4	-	-	-
2	....do.....	200 feet above Spring Branch, 4.4 miles above West Nueces River.	+7.6	54.9	-	-17.5	-17.5
2	Spring Branch	175 feet above mouth, 4.4 miles above West Nueces River.	7.6	-	4.0	-	-
2	Nueces River	3.2 miles above West Nueces River.	8.8	18.4	-	-40.5	-58.0
2	....do.....	Just below mouth of West Nueces River.	12.0	0	-	-18.4	-76.4
2	....do.....	Bridge on U. S. Highway 90, 7 miles west of Uvalde.	19.6	0	-	0	-76.4
2	....do.....	Former gaging station at Tom Nunn crossing, near Uvalde.	21.6	8.6	-	+8.6	-67.8
2	....do.....	1 mile below present gaging station, 9 miles southwest of Uvalde.	27.6	*15.0	-	+6.4	-61.4
3	....do.....	1,000 feet above bridge on U.S. Highway 83, 11 miles southwest of Uvalde.	30.4	9.3	-	-5.7	-67.1
3	....do.....	1 mile below crossing on old Uvalde-La Pryor road, 13 miles southwest of Uvalde.	35.7	6.0	-	-3.3	-70.4
3	....do.....	1,300 feet above gas well, 5 miles northeast of La Pryor.	37.8	0	-	-6.0	-76.4
3	....do.....	500 feet above gas well, 5 miles northeast of La Pryor.	37.9	4.6	-	+4.6	-71.8
3	....do.....	0.2 mile below bridge on Batesville-La Pryor road, 3.2 miles southeast of La Pryor.	43.4	2.2	-	-2.4	-74.2
3	....do.....	3.3 miles below bridge on Batesville-La Pryor road, 4.8 miles southeast of La Pryor.	46.5	12.6	-	+10.4	-63.8
July 9	....do.....	2,000 feet above gaging station, 1 mile northeast of Laguna.	-.4	74.6	-	-	-
9	....do.....	500 feet above Spring Branch, 4.5 miles above West Nueces River.	7.5	64.1	-	-10.5	-10.5
9	Spring Branch	500 feet above mouth, 4.4 miles above West Nueces River.	7.6	-	3.1	-	-
9	Nueces River	3.2 miles above West Nueces River.	8.8	21.2	-	-46.0	-56.5
9	....do.....	500 feet below mouth of West Nueces River.	12.0	0	-	-21.2	-77.7
9	....do.....	Bridge on U. S. Highway 90, 7 miles west of Uvalde.	19.6	0	-	0	-77.7
9	....do.....	Former gaging station at Tom Nunn crossing near Uvalde.	21.6	10.8	-	+10.8	-66.9
9	....do.....	1 mile below present gaging station, 9 miles southwest of Uvalde.	27.6	†18.4	-	+7.6	-59.3
10	....do.....	900 feet above bridge on U. S. Highway 83, 11 miles southwest of Uvalde.	30.4	11.3	-	-7.1	-66.4
10	....do.....	1 mile below crossing on old Uvalde-La Pryor road, 13 miles southwest of Uvalde.	35.7	8.8	-	-2.5	-68.9
10	....do.....	0.2 mile above gas well, 5 miles northeast of La Pryor.	37.8	0	-	-8.8	-77.7
10	....do.....	300 feet above gas well, 5 miles northeast of La Pryor.	37.9	5.2	-	+5.2	-72.5
10	....do.....	0.2 mile below bridge on Batesville-La Pryor road, 3.2 miles southeast of La Pryor.	43.4	1.4	-	-3.8	-76.3
10	....do.....	3.3 miles below bridge on Batesville-La Pryor road, 4.8 miles southeast of La Pryor.	46.5	11.0	-	+9.6	-66.7
Aug. 28	....do.....	2,000 feet above gaging station, 1 mile northeast of Laguna.	-.4	56.7	-	-	-
28	....do.....	500 feet above Spring Branch, 4.5 miles above West Nueces River.	7.5	45.9	-	-10.8	-10.8
28	Spring Branch	500 feet above mouth, 4.4 miles above West Nueces River.	7.6	-	3.6	-	-
28	Nueces River	3.2 miles above West Nueces River.	8.8	5.4	-	-44.1	-54.9
28	....do.....	500 feet below West Nueces River.	12.0	0	-	-5.4	-60.3
28	....do.....	At U. S. Highway 90, 7.0 miles west of Uvalde.	19.6	0	-	0	-60.3
28	....do.....	Former gaging station at Tom Nunn crossing, near Uvalde.	21.6	8.2	-	+8.2	-52.1

*Discharge measurement, May 3, 14.8 second-feet.
†Discharge measurement, July 10, 18.9 second-feet.

Discharge measurements of Nueces River and tributaries, Texas, between point 0.4 mile upstream from gaging station at Laguna and point near La Pryor, 1940--Continued

Date	Stream or Diversion	Location	Distance below initial point (miles)	Discharge, in second-feet			
				Main stream	Tributary	Gain or loss in section	Total gain or loss
Aug. 28	Nueces River	1 mile below present gaging station, 9 miles below Uvalde.	27.6	‡13.7	-	+5.5	-46.6
29	....do.....	Bridge on U. S. Highway 83, 11 miles southwest of Uvalde.	30.6	6.8	-	-6.9	-53.5
29	....do.....	1 mile below crossing on old Uvalde-La Pryor road, 13 miles southwest of Uvalde.	35.7	5.3	-	-1.5	-55.0
29	....do.....	1,300 feet above gas well, 5 miles northeast of La Pryor.	37.8	0	-	-5.3	-60.3
29	....do.....	500 feet above gas well, 5 miles northeast of La Pryor.	37.9	.2	-	+.2	-60.1
29	....do.....	0.2 mile below bridge on Batesville-La Pryor road, 3.2 miles southeast of La Pryor.	43.4	.3	-	+.1	-60.0
29	....do.....	3.3 miles below bridge on Batesville-La Pryor road, 4.8 miles southeast of La Pryor.	46.5	8.0	-	+7.7	-52.3
Sept.26	....do.....	2,000 feet above gaging station, 1 mile northeast of Laguna.	-.4	37.5	-	-	-
26	....do.....	500 feet above Spring Branch, 4.5 miles above West Nueces River.	7.5	25.9	-	-11.6	-11.6
26	Spring Branch	500 feet above mouth, 4.4 miles above West Nueces River.	7.6	-	3.2	-	-
26	Nueces River	3.2 miles above West Nueces River.	8.8	0	-	-29.1	-40.7
26	....do.....	500 feet below West Nueces River.	12.0	0	-	0	-40.7
26	....do.....	Bridge on U. S. Highway 90, 7 miles west of Uvalde.	19.6	0	-	0	-40.7
26	....do.....	Former gaging station, 7 miles southwest of Uvalde.	21.6	7.0	-	+7.0	-33.7
26	....do.....	1 mile below present gaging station, 9 miles southwest of Uvalde.	27.6	**12.1	-	+5.1	-28.6
27	....do.....	Bridge on U. S. Highway 83, 11 miles southwest of Uvalde.	30.6	6.5	-	-5.6	-34.2
27	Childress and Miles Produce Co. Pump.	On right bank 0.6 mile below crossing on old Uvalde-La Pryor road, 13 miles southwest of Uvalde.	35.3	-	††5.0	-	-
27	Nueces River	1 mile below crossing on old Uvalde-La Pryor road, 13 miles southwest of Uvalde.	35.7	‡‡.1	-	-1.4	-35.6
27	....do.....	500 feet above gas well, 5 miles northeast of La Pryor.	37.9	‡‡.1	-	0	-35.6
27	....do.....	Bridge on Batesville-La Pryor road, 3.2 miles southeast of La Pryor.	43.2	‡‡.1	-	0	-35.6
27	....do.....	3.3 miles below bridge on Batesville-La Pryor road, 4.8 miles southeast of La Pryor.	46.5	7.8	-	+7.7	-27.9

‡Discharge measurement, Aug. 29, 13.8 second-feet.
**Discharge measurement Sept. 27, 12.0 second-feet.
‡‡Estimated.
††Diversion from Nueces River.
Note.- Tributaries not listed were not flowing.

Frio River at Concan, Tex.

Location.- Water-stage recorder, lat. 29°29', long. 99°42', half a mile southeast of Concan post office, Uvalde County, and 15 miles upstream from Dry Frio River. Datum of gage is 1,203.71 feet above mean sea level (general adjustment of 1929). Prior to May 18, 1939, water-stage recorder at site 130 feet downstream and at same datum.

Drainage area.- 485 square miles.

Records available.- October 1923 to September 1940.

Average discharge.- 15 years (1924-29, 1930-40), 118 second-feet.

Extremes.- 1938-39: Maximum discharge during water year, 21,300 second-feet July 13 (gage height, 12.90 feet, from floodmark), from rating curve extended above 8,000 second-feet on basis of slope-area determination at gage height, 34.4 feet; minimum, 11 second-feet July 4-12.
1939-40: Maximum discharge during water year, 1,360 second-feet July 3 (gage height, 3.57 feet); minimum, 27 second-feet Oct. 8, 9.
1923-40: Maximum discharge, 162,000 second-feet July 1, 1932 (gage height, 34.44 feet, from floodmarks), by slope-area method; minimum observed, 8.1 second-feet, Aug. 2, 3, 1928.

Remarks.- Records good except those above 400 second-feet, which are poor. No diversions above gage.

Discharge, in second-feet, 1938-40

1938-39

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	a26	27	34	45	41	32	29	23	15	80	57
2	27	a26	27	34	45	41	32	30	21	15	74	54
3	29	26	27	36	43	41	32	26	21	12	77	54
4	29	26	27	36	45	41	32	26	23	11	74	52
5	29	24	29	34	45	41	32	26	26	11	74	50
6	29	24	29	34	45	39	30	26	24	11	72	48
7	29	24	27	37	45	39	32	26	24	11	300	43
8	29	23	27	43	45	39	32	26	24	11	168	43
9	29	23	27	48	45	39	32	24	23	11	138	48
10	29	24	27	39	43	39	30	23	21	11	118	43
11	30	24	29	41	43	37	30	23	21	11	105	43
12	30	24	29	54	43	36	30	23	20	19	99	45
13	30	24	29	52	43	36	30	23	20	8,860	94	50
14	30	24	29	50	43	36	30	21	20	764	88	45
15	29	24	29	48	43	36	32	21	18	310	85	41
16	29	26	29	48	41	36	45	21	17	196	83	39
17	29	26	29	45	43	36	37	21	16	146	80	41
18	29	26	29	45	43	36	32	21	16	118	85	41
19	29	24	29	45	45	36	30	23	16	105	94	41
20	27	24	29	43	43	36	30	23	16	99	83	39
21	27	24	30	43	43	36	30	23	16	88	80	37
22	a27	26	30	43	43	37	30	23	15	85	83	36
23	a27	26	30	43	43	36	30	20	15	80	77	34
24	a27	26	30	43	45	36	30	18	15	77	74	34
25	a27	26	36	43	45	111	30	23	17	74	72	34
26	a27	26	37	43	45	43	30	21	17	72	64	34
27	a27	26	36	43	43	36	30	20	17	70	67	34
28	a26	26	34	43	41	34	32	20	16	70	67	39
29	a26	27	34	45	-	32	34	34	15	67	64	36
30	a26	27	34	45	-	32	30	29	15	67	62	30
31	a26	-	34	45	-	32	-	24	-	91	60	-

a No gage-height record; discharge computed on basis of known range in stage and weather records.

Discharge, in second-feet, of Frio River at Concan, Tex., 1938-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	52	52	43	39	50	48	57	77	165	48	50
2	30	52	50	43	41	50	45	54	72	135	48	50
3	30	50	48	43	54	50	45	54	67	595	48	48
4	30	48	48	43	57	50	45	52	64	258	45	45
5	30	48	48	43	52	50	50	52	62	157	43	43
6	29	50	48	43	48	50	102	50	62	126	43	43
7	29	50	48	43	48	48	99	54	60	116	41	41
8	29	50	48	43	48	48	122	62	57	105	39	41
9	30	50	48	41	54	48	112	282	204	102	41	41
10	155	50	48	43	54	48	102	281	88	97	39	39
11	274	60	48	41	50	48	97	153	74	91	39	37
12	118	57	48	41	50	48	91	122	70	91	37	36
13	91	52	46	41	50	46	85	105	70	91	37	36
14	77	52	43	41	50	46	83	97	83	91	46	36
15	70	50	43	41	48	46	83	88	94	94	43	36
16	67	50	43	41	54	46	83	88	80	88	39	36
17	62	50	43	41	52	46	80	118	74	80	37	34
18	60	50	43	41	50	46	77	88	70	74	46	34
19	60	50	43	41	50	43	74	85	72	72	60	32
20	60	50	41	41	50	41	72	83	70	70	60	32
21	57	48	41	41	50	41	72	77	97	67	57	30
22	57	48	41	43	50	39	70	88	72	64	54	43
23	54	48	43	45	50	39	67	331	70	62	52	37
24	57	48	41	41	50	39	64	251	91	62	52	34
25	67	48	50	41	50	41	64	163	88	60	52	32
26	57	48	54	41	50	41	64	118	70	57	52	30
27	57	48	46	41	50	41	64	102	70	54	52	30
28	54	48	43	39	50	39	64	94	70	54	52	30
29	54	50	43	39	50	41	62	85	288	52	54	30
30	52	54	43	39	-	48	60	85	288	52	79	30
31	52	-	43	39	-	45	-	80	-	50	54	-

Monthly discharge, in second-feet, 1938-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1938	871	30	26	28.1	1,730
November	752	27	23	25.1	1,490
December	929	37	27	30.0	1,840
Calendar year 1938	25,122	204	23	68.8	49,830
January 1939	1,325	54	34	42.7	2,630
February	1,224	45	41	43.7	2,430
March	1,226	111	32	39.5	2,430
April	948	45	30	31.6	1,880
May	737	34	18	23.8	1,460
June	568	26	16	18.9	1,130
July	11,588	8,860	11	374	22,980
August	2,841	300	60	91.6	5,640
September	1,265	57	30	42.2	2,510
Water year 1938-39	24,274	8,860	11	66.5	48,150
October 1939	1,979	274	29	63.8	3,930
November	1,509	60	48	50.3	2,990
December	1,413	54	41	45.6	2,800
Calendar year 1939	26,623	8,860	11	72.9	52,810
January 1940	1,285	43	39	41.5	2,550
February	1,449	57	39	50.0	2,870
March	1,396	50	39	45.0	2,770
April	2,246	122	45	74.9	4,450
May	3,472	331	50	112	6,890
June	2,754	288	57	91.8	5,460
July	3,320	585	50	107	6,590
August	1,487	79	37	48.0	2,950
September	1,116	50	30	37.2	2,210
Water year 1939-40	23,426	585	29	64.0	46,460

Frio River near Derby, Tex.

Location.- Water-stage recorder and concrete control, lat. 28°44'10", long. 99°08'45", at bridge on U. S. Highway 81, 150 feet upstream from International-Great Northern R. R. bridge, 750 feet downstream from Leona River, and 2.4 miles south of Derby, Frio County. Datum of gage is 449.3 feet above mean sea level (general adjustment of 1929). Prior to Mar. 7, water-stage recorder at site 150 feet downstream at same datum.

Drainage area.- 3,493 square miles.

Records available.- August 1915 to September 1940.

Average discharge.- 25 years, 174 second-feet.

Extremes.- Maximum discharge during year, 2,370 second-feet Oct. 13 (gage height, 6.23 feet); no flow Aug. 18, 19, Aug. 23 to Sept. 30.
1915-40: Maximum discharge, 230,000 second-feet July 4, 1932 (gage height, 29.45 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are poor. Diversions above station for irrigation. Part of flow of Frio River and its tributaries enters the Balcones fault, which crosses the basin just north of Uvalde. At low stages all of headwater flow, except that of a few tributaries, enters this fault.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	14	17	19	20	19	11	9.0	24		3.2	
2	1.8	14	17	20	20	19	11	8.2	15		3.7	
3	1.8	15	19	19	21	19	11	9.0	11		3.7	
4	1.8	14	19	19	21	19	11	7.5	9.0		3.2	
5	2.2	16	18	19	19	18	11	6.1	8.2		2.7	
6	2.2	16	18	19	19	17	24	5.5	7.5		2.7	
7	1.8	18	18	19	19	17	48	5.5	6.1	a16	2.7	
8	1.8	17	18	19	20	18	146	6.1	5.5		2.7	
9	2.2	16	17	18	21	18	198	6.8	6.1		2.2	
10	361	17	17	19	21	17	84	26	5.5		1.8	
11	1,560	17	17	19	20	16	37	236	4.9		1.8	
12	1,780	18	17	19	20	17	22	70	4.9		1.4	
13	1,800	15	15	19	21	18	18	38	8.2		1.0	
14	464	15	14	19	21	17	16	22	9.0		.3	
15	109	15	13	19	21	17	16	14	38	24	.2	
16	43	14	11	19	20	16	15	12	27	67	.1	
17	26	14	12	19	19	15	15	13	15	71	.1	
18	19	14	13	18	19	13	16	23	27	42	0	
19	17	13	14	18	19	12	15	84	902	27	.2	
20	16	13	14	19	19	12	14	49	520	15	.2	
21	16	13	15	19	19	13	13	31	225	9.8	.2	
22	16	13	15	19	19	14	12	18	50	8.2	.1	
23	16	13	14	19	19	15	12	21	23	6.1	.1	
24	15	13	14	19	19	14	11	20	19	5.5	0	
25	15	13	16	20	18	14	11	59	19	5.5	0	
26	14	14	17	21	19	12	9.8	48	32	6.1	0	
27	140	15	17	20	20	12	9.0	39	20	6.1	0	
28	77	15	17	20	19	12	8.2	28	15	4.9	0	
29	39	15	19	20	20	13	9.8	22	a175	4.3	0	
30	21	16	18	20	-	12	9.0	16		3.7	0	
31	17	-	17	20	-	11	-	16	-	3.2	0	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,600.3	1,800	1.8	213	13,090
November	445	18	13	14.8	883
December	497	19	11	16.0	986
Calendar year 1939	29,944.7	10,000	0	82.0	59,400
January	595	21	18	19.2	1,180
February	572	21	18	19.7	1,130
March	475	19	11	15.3	942
April	843.8	198	8.2	28.1	1,670
May	968.7	236	5.5	31.2	1,920
June	2,406.9	902	4.9	80.2	4,770
July	533.4	-	3.2	17.2	1,060
August	34.3	3.7	0	1.11	68
September	0	0	0	0	0
Water year 1939-40	13,971.4	1,800	0	38.2	27,700

Peak discharge.- Oct. 11 (3:30 a.m.) 1,870 sec.-ft.; Oct. 13 (3:30 a.m.) 2,370 sec.-ft.; June 19 (8 a.m.) 1,490 sec.-ft.

a No gage-height record; discharge computed on basis of known range in stage, weather records and records for stations above station.

Frio River at Calliham, Tex.

Location.- Water-stage recorder and concrete control, lat. 28°29'30", long. 98°20'45", at bridge on Calliham-Whitsett Highway, 1 mile north of Calliham, McMullen County, and 9.7 miles downstream from San Miguel Creek. Datum of gage is 153.47 feet above mean sea level.

Drainage area.- 5,491 square miles.

Records available.- October 1924 to April 1926, April 1932 to September 1940.

Extremes.- Maximum discharge during year, 9,490 second-feet July 1 (gage height, 24.22 feet); no flow Sept. 27-30.
1924-26, 1932-40: Maximum discharge, 109,000 second-feet July 6, 1932 (gage height, 39.20 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records good except those below 10 second-feet, which are fair. Diversions above station for irrigation. Part of flow of Frio River and its tributaries enters Balcones fault, which crosses the basin just north of Uvalde. At low stages all of headwater flow, except that of a few tributaries, enters this fault.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	69	11	12	20	16	22	12	61	9,110	3.4	161
2	34	44	11	12	19	16	24	9.7	37	6,730	2.7	88
3	10	31	12	13	27	15	25	7.8	26	4,160	2.4	49
4	7.5	22	12	15	30	15	20	7.1	18	2,300	1.9	27
5	5.5	18	12	15	129	15	15	6.2	14	844	1.8	16
6	4.0	15	12	15	188	14	2,940	5.5	16	254	1.8	12
7	2.9	14	12	15	153	13	3,190	5.2	15	135	1.6	12
8	2.2	12	12	16	52	14	2,940	4.5	11	88	1.4	9.2
9	1.8	12	12	16	36	15	2,550	4.5	161	77	1.3	6.8
10	1.6	12	12	16	32	15	1,480	178	179	57	1.2	5.2
11	1.3	12	12	17	28	14	406	118	207	40	1.0	4.0
12	3.6	12	12	17	25	12	254	50	68	31	1.4	2.9
13	77	12	12	17	23	11	167	42	27	25	1.6	2.2
14	610	11	12	17	21	11	90	80	607	100	1.4	1.8
15	939	11	12	17	20	12	58	130	1,020	57	.7	1.4
16	1,270	13	12	17	19	12	39	75	975	273	.7	1.3
17	1,410	14	12	17	20	10	30	262	915	109	.5	1.0
18	504	13	12	17	19	9.2	24	338	1,330	39	.4	.9
19	100	12	13	16	18	8.7	20	540	1,390	26	1,600	.8
20	58	12	12	16	17	12	17	125	2,490	69	3,710	.7
21	42	12	11	16	17	13	15	121	2,970	69	1,370	.6
22	31	12	9.2	16	17	13	14	118	1,570	49	1,380	.6
23	26	12	8.7	17	17	12	13	585	1,580	37	494	.7
24	22	12	8.3	17	17	12	79	1,080	2,380	36	123	.6
25	20	11	9.2	16	17	12	90	1,080	3,150	30	65	.7
26	18	11	12	16	17	9.7	29	1,360	590	15	42	.5
27	17	11	12	17	18	10	33	894	656	11	29	.3
28	16	11	12	17	17	22	19	254	626	7.8	21	.3
29	15	10	13	17	15	30	15	178	3,260	6.5	16	.3
30	14	11	12	17	-	36	12	259	8,240	5.2	384	.3
31	88	-	12	19	-	29	-	113	-	4.0	348	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	5,381.4	1,410	1.3	174	10,670
November	484	69	10	16.1	960
December	358.4	13	8.3	11.6	711
Calendar year 1939	40,757.2	4,280	0	112	80,850
January	498	19	12	16.1	988
February	1,048	188	15	36.1	2,080
March	458.6	36	8.7	14.8	910
April	14,630	3,190	12	488	29,020
May	8,042.5	1,360	4.5	259	15,950
June	34,589	8,240	11	1,153	68,610
July	24,794.5	9,110	4.0	800	49,180
August	9,609.2	3,710	.4	310	19,060
September	408.1	161	.3	13.6	809
Water year 1939-40	100,301.7	9,110	.3	274	198,900

Peak discharge.- Apr. 6 (11:30 p.m.) 4,730 sec.-ft.; June 24 (11:30 p.m.) 4,570 sec.-ft.; July 1 (10 a.m.) 9,490 sec.-ft.; Aug. 20 (11 a.m.) 4,650 sec.-ft.

Leona River spring flow near Uvalde, Tex.

Location.- Water-stage recorder, lat. 29°09', long. 99°44', at old road crossing on White's Ranch, 3½ miles downstream from Cooks Slough and 5.6 miles southeast of Uvalde, Uvalde County. Prior to June 13, 1939, staff gage at same site and datum.

Records available.- January 1939 to September 1940. Occasional discharge measurements since 1925 in connection with seepage investigations.

Extremes.- 1939: Maximum daily spring discharge during period January to September, 26 second-feet (discharge measurement) Feb. 7; maximum gage height (flood run-off). 12.87 feet from floodmark July 13; minimum daily discharge, 13 second-feet July 8 10.
1939-40: Maximum daily spring discharge during water year, 27 second-feet Jan. 10, 11; maximum gage height (flood run-off), 8.95 feet Oct. 10; minimum daily discharge, 14 second-feet Sept. 26-30.

Remarks.- Discharge represents flow from several springs that enter river above station and below Uvalde. Surface run-off from precipitation is excluded. Many small diversions by pumping from river channel above station.

Discharge, in second-feet, 1939-40

1939

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

* Discharge measurement.

Discharge, in second-feet, of Leona River spring flow near Uvalde, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	21	23	25	25	23	21	20	18	18	15	a16
2	19	21	23	25	25	23	21	20	18	18	15	a16
3	19	22	23	26	25	23	21	20	18	18	15	a16
4	19	22	23	26	25	22	21	20	18	18	16	16
5	19	22	23	26	25	23	21	20	18	18	16	16
6	19	22	23	26	25	21	21	20	17	17	16	16
7	19	22	23	26	25	21	21	20	17	18	16	16
8	19	22	23	26	24	21	21	20	17	18	16	16
9	19	22	24	26	24	21	21	20	17	17	16	16
10	19	22	24	27	24	21	21	20	18	17	16	16
11	20	22	24	27	24	21	20	20	18	17	16	15
12	20	22	25	26	24	21	20	20	18	17	16	15
13	21	23	25	26	24	21	20	19	18	17	15	15
14	21	22	24	25	24	21	20	19	18	18	15	15
15	21	22	24	25	24	21	20	19	18	18	15	15
16	21	22	24	25	24	21	20	19	18	18	15	15
17	20	22	24	25	24	21	20	19	18	18	15	15
18	20	22	25	25	24	21	20	18	18	18	15	15
19	20	22	25	25	23	21	20	18	18	18	15	15
20	20	22	25	25	23	21	20	18	18	17	a15	15
21	20	22	25	25	23	21	20	19	18	18	a15	15
22	20	22	25	25	23	21	20	19	19	18	a15	15
23	21	22	25	25	23	21	20	19	19	17	a15	16
24	21	23	26	25	23	21	20	20	19	17	a15	16
25	21	23	26	25	23	21	20	20	19	17	a15	15
26	21	23	26	25	23	21	20	20	19	16	a16	14
27	21	23	26	25	23	21	21	20	18	16	a16	14
28	21	23	25	25	23	21	21	20	18	17	a16	14
29	21	23	25	25	23	21	20	19	18	16	a16	14
30	21	23	25	25	-	21	20	19	18	16	a16	14
31	21	-	25	25	-	21	-	19	-	16	a16	-

a No gage-height record; discharge computed on basis of known change in spring flow.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 13-30, 1939	276	16	14	15.3	547
July	454	16	13	14.6	900
August	585	20	16	18.9	1,160
September	600	20	20	20.0	1,190
The period	-	-	-	-	3,800
October 1939	623	21	19	20.1	1,240
November	666	23	21	22.2	1,320
December	756	26	23	24.4	1,500
Calendar year	-	-	-	-	-
January 1940	788	27	25	25.4	1,560
February	692	25	23	23.9	1,370
March	660	23	21	21.3	1,310
April	612	21	20	20.4	1,210
May	603	20	18	19.5	1,200
June	541	19	17	18.0	1,070
July	537	18	16	17.3	1,070
August	480	16	15	15.5	952
September	457	16	14	15.2	906
Water year 1939-40	7,415	27	14	20.3	14,710

Atascosa River at Whitsett, Tex.

Location.- Water-stage recorder and wooden control, lat. 28°39', long. 98°18', 0.9 mile west of Whitsett, Live Oak County, and 4 miles downstream from La Parita Creek. Datum of gage is 159.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,171 square miles.

Records available.- September 1924 to May 1926, May 1932 to September 1940.

Extremes.- Maximum discharge during year, 5,100 second-feet June 30 (gage height, 23.60 feet); minimum not determined.
1924-26, 1932-40: Maximum discharge, 38,300 second-feet, June 14, 1935 (gage height, 38.0 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are poor. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	0.4	2.9	5.2	6.1	8.2	30	8.2		2,630	3.8	134
2	6.1	.4	2.9	5.2	6.1	7.4	20	6.4		210	3.4	38
3	2.3	.4	2.9	5.2	8.6	6.4	13	5.8		361	3.0	25
4	1.6	.4	2.9	5.2	13	6.4	11	4.9	a17	434	2.7	19
5	1.2	.4	2.7	5.2	72	6.1	9.0	4.0		181	2.3	16
6	1.0	.4	2.5	5.2	199	6.4	607	3.6		57	1.9	13
7	.9	.4	2.9	5.5	46	6.4	1,740	3.4	7.4	36	1.6	10
8	.8	.5	2.7	5.5	25	6.4	1,130	3.6	6.4	27	1.2	9.0
9	.7	.5	2.9	5.5	13	6.4	113	4.3	8.4	22	.9	8.2
10	.7	.4	2.9	5.5	9.4	6.4	55	92	7.8	19		7.4
11	27	.6	3.0	5.8	9.0	6.7	40	271	7.4	18		6.1
12	21	.6	3.0	6.1	9.0	6.7	31	38	9.0	16		5.2
13	6.7	.6	2.9	6.4	8.6	6.4	25		6.4	16		4.6
14	3.0	.7	2.7	5.8	7.8	6.1	22		7.7	48	a.2	4.0
15	1.8	1.1	2.7	5.2	8.2	5.5	20	a15	501	44		3.8
16	1.3	1.4	2.5	5.2	9.4	5.2	19		562	126		3.6
17	1.1	1.6	2.7	5.2	26	5.5	18		204	136		3.6
18	.9	1.6	2.9	5.2	27	5.8	13		85	69		4.0
19	.9	1.7	2.9	4.6	16	5.5	12		33	33		4.0
20	.9	1.8	2.9	4.6	11	30	11	a604	94	22		3.4
21	.9	1.8	2.9	4.9	9.4	53	10		218	18	a601	3.6
22	.9	1.7	3.0	5.2	9.0	36	9.4		331	18		3.0
23	.8	1.8	3.4	5.5	8.6	17	8.6		400	15		72.0
24	.6	1.8	3.6	6.4	8.6	13	7.8		287	12	32	46.0
25	.6	1.4	4.0	6.7	8.2	11	7.8		818	9.4	25	18.0
26	.6	1.6	6.1	6.4	8.2	11	9.4	a17	348	8.2	20	40.0
27	.6	1.6	8.2	6.1	8.2	31	8.6		63	7.0	16	11.0
28	.6	1.6	7.0	6.4	8.2	21	9.0		28	6.1	14	6.4
29	.6	1.7	5.5	6.4	8.2	16	9.0		1,520	5.2	11	4.9
30	.4	2.3	4.9	6.4	-	13	8.6		4,330	4.9	406	4.0
31	.4	-	4.9	6.4	-	13	-		-	4.6	835	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	113.9	27	0.4	3.67	226
November	33.2	2.3	.4	1.11	66
December	109.9	8.2	2.5	3.55	218
Calendar year 1939	13,645.2	-	0	37.4	27,070
January	174.1	6.7	4.6	5.62	345
February	606.8	199	6.1	20.9	1,200
March	364.9	53	5.2	12.4	763
April	4,027.2	1,740	7.8	134	7,990
May	3,695.2	-	3.4	119	7,330
June	9,984.5	4,330	6.4	333	19,800
July	4,612.4	2,630	4.6	149	9,150
August	4,386.6	-	-	142	8,700
September	530.8	134	3.0	17.7	1,050
Water year 1939-40	28,659.5	4,330	-	78.3	56,840

Peak discharge.- Apr. 7 (9:30 p.m.) 2,710 sec.-ft.; May 19 (3 a.m.) 2,580 sec.-ft.; June 30 (8 p.m.) 5,100 sec.-ft.

a No gage-height record; discharge computed on basis of floodmarks, information from local residents, weather records, and records for Nueces River near Three Rivers and Frio River at Calliham.

Rio Grande at Thirtymile Bridge, near Creede, Colo.

Location.- Water-stage recorder, lat. 37°44', long. 107°16', in sec. 13, T. 40 N., R. 4 W., 500 feet upstream from Squaw Creek, three-quarters of a mile downstream from Rio Grande Reservoir, and 20 miles southwest of Creede.

Drainage area.- 163 square miles.

Records available.- June 1909 to September 1913 and October 1933 to September 1940 in reports of Geological Survey. June 1909 to September 1940 in reports of State engineer.

Average discharge.- 27 years (1910-23, 1926-40), 224 second-feet.

Extremes.- Maximum discharge during year, 1,380 second-feet May 17 (gage height, 3.79 feet); minimum daily, 3.0 second-feet Nov. 19 to Mar. 20.
1909-40: Maximum discharge, 7,500 second-feet June 28, 1927 (gage height, 7.03 feet); minimum daily, 0.6 second-foot at times when reservoir was about empty and gates were closed.

Remarks.- Records excellent except those for Oct. 1 to Mar. 31, which are fair. Flow regulated by Rio Grande Reservoir (capacity, 45,800 acre-feet) just above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	54	3	3	3	3	58	151	577	128	47	40
2	74	53	3	3	3	3	58	146	567	111	47	36
3	70	50	3	3	3	3	58	232	532	100	52	40
4	66	48	3	3	3	3	58	356	458	94	41	38
5	60	51	3	3	3	3	58	453	406	91	38	35
6	62	53	3	3	3	3	58	490	376	86	43	33
7	61	36	3	3	3	3	57	570	348	81	43	34
8	70	37	3	3	3	3	57	624	325	81	37	34
9	65	38	3	3	3	3	57	638	285	78	34	34
10	54	32	3	3	3	3	57	787	261	74	33	32
11	61	34	3	3	3	3	57	869	248	73	32	30
12	61	38	3	3	3	3	57	1,030	258	66	32	30
13	60	42	3	3	3	3	58	1,060	261	66	31	32
14	57	32	3	3	3	3	58	1,130	264	74	29	30
15	56	34	3	3	3	3	75	1,170	261	67	29	29
16	53	43	3	3	3	3	102	1,200	229	63	32	28
17	53	48	3	3	3	3	111	1,310	242	66	32	33
18	49	28	3	3	3	3	111	1,140	216	64	34	174
19	51	3	3	3	3	3	111	570	202	59	43	274
20	46	3	3	3	3	3	121	410	190	57	52	186
21	43	3	3	3	3	14	220	372	196	62	43	130
22	46	3	3	3	3	14	364	356	196	57	41	154
23	43	3	3	3	3	14	401	401	177	59	41	128
24	42	3	3	3	3	14	428	468	161	58	51	114
25	48	3	3	3	3	14	437	538	146	64	57	111
26	44	3	3	3	3	27	437	544	142	67	55	112
27	32	3	3	3	3	52	432	557	130	64	48	109
28	46	3	3	3	3	62	376	564	125	62	41	109
29	45	3	3	3	3	62	236	557	118	63	39	172
30	57	3	3	3	-	60	177	551	164	55	36	216
31	52	-	3	3	-	59	-	564	-	57	38	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,705	78	32	55.0	3,380
November	787	54	3	26.2	1,560
December	93	3	3	3.0	184
Calendar year 1939	75,210	1,130	3	206	149,200
January	93	3	3	3.0	184
February	87	3	3	3.0	173
March	452	62	3	14.6	897
April	4,945	437	57	165	9,810
May	19,808	1,310	146	639	39,290
June	8,049	577	118	268	15,960
July	2,247	128	55	72.5	4,460
August	1,251	57	29	40.4	2,480
September	2,556	274	28	85.2	5,070
Water year 1939-40	42,073	1,310	3	115	83,450

Note.- Reservoir gates closed Nov. 19 to Mar. 20; discharge is leakage through gates and seepage through dam.

Rio Grande at Wason, below Creede, Colo.

Location.- Water-stage recorder, lat. 37°49', long. 106°53', in sec. 8, T. 41 N., R. 1 E., at Wason, 1½ miles downstream from Willow Creek and 3 miles southeast of Creede.

Drainage area.- 705 square miles.

Records available.- April 1907 to September 1913 and October 1933 to September 1940 in reports of Geological Survey. April 1907 to September 1940 in reports of State engineer.

Average discharge.- 33 years, 631 second-feet.

Extremes.- Maximum discharge during year, 2,100 second-feet May 15 (gage height, 3.05 feet); minimum daily, 60 second-feet Dec. 21, 31, Jan. 6, Feb. 26.
1907-40: Maximum discharge, 9,750 second-feet June 28, 1927 (gage height, 7.65 feet); minimum not determined.

Remarks.- Records good except those for period of ice effect, which are fair. Diversions above station for irrigation. Flow regulated by three reservoirs (total capacity, 117,600 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	262	210	89	72	76	70	203	357	1,090	352	172	155
2	248	203	83	72	76	73	179	369	1,060	279	164	152
3	240	196	77	72	80	73	169	540	1,010	253	161	166
4	229	189	85	68	78	72	169	900	926	233	155	166
5	221	186	83	64	76	*80	182	1,070	651	229	147	150
6	214	186	77	60	78	75	172	1,120	786	233	155	139
7	210	169	87	64	76	77	169	1,200	716	214	166	136
8	225	161	78	70	76	86	169	1,240	663	214	152	134
9	233	179	82	72	77	84	166	1,230	603	210	141	131
10	217	161	87	72	78	82	169	1,470	568	199	139	134
11	214	150	80	72	75	80	161	1,610	519	192	141	134
12	214	158	80	72	75	85	166	1,620	526	186	136	128
13	214	158	71	78	65	82	186	1,630	547	179	128	128
14	210	152	75	70	65	87	225	1,790	596	236	123	126
15	199	136	75	71	72	91	248	1,860	582	244	121	128
16	196	126	75	*73	78	92	248	1,800	575	233	126	123
17	192	126	72	72	82	100	253	1,820	568	221	126	123
18	189	123	72	70	79	100	253	1,700	526	203	123	253
19	186	114	72	70	*69	105	293	1,180	467	192	147	670
20	175	105	68	68	75	114	363	926	460	182	175	526
21	166	114	60	68	72	128	480	842	429	192	179	381
22	166	98	68	72	65	164	596	810	429	186	172	352
23	164	95	68	80	62	186	754	883	404	186	166	363
24	164	95	68	82	66	192	802	978	363	179	179	314
25	164	96	68	84	69	203	851	996	340	186	206	284
26	196	98	62	86	60	199	626	1,060	304	192	203	279
27	152	96	65	84	69	210	651	1,090	293	214	186	270
28	152	92	72	80	68	199	693	1,100	270	221	166	253
29	179	89	*70	78	69	186	561	1,090	270	210	161	335
30	169	85	61	80	-	182	410	1,070	335	199	155	493
31	210	-	60	76	-	199	-	1,090	-	182	152	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,170	262	152	199	12,240
November	4,148	210	85	138	8,230
December	2,290	89	60	73.9	4,540
Calendar year 1939	179,740	2,250	60	492	356,500
January	2,272	86	60	73.3	4,510
February	2,108	82	60	72.7	4,180
March	3,756	210	70	121	7,450
April	10,967	851	161	366	21,750
May	36,441	1,860	357	1,176	72,280
June	17,076	1,090	270	569	33,870
July	6,631	352	179	214	13,150
August	4,823	206	121	156	9,570
September	7,126	670	123	238	14,130
Water year 1939-40	103,808	1,860	60	284	205,900

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 21-27, Dec. 14 to Mar. 11

Rio Grande near Del Norte, Colo.

Location.- Water-stage recorder, lat. 37°41', long. 106°28', near east line of sec. 30, T. 40 N., R. 5 E., 5 miles upstream from Pinos Creek and 6 miles west of Del Norte. Datum of gage is 7,982.21 feet above mean sea level (general adjustment of 1929).
Drainage area.- 1,320 square miles.
Records available.- July 1889 to November 1906 (at site 4 miles downstream), April 1908 to September 1913, and October 1933 to September 1940 in reports of Geological Survey. July 1889 to September 1906 and April 1908 to September 1940 in reports of State engineer. May to September 1907 (at site 4 miles downstream), unpublished, in files of State engineer.
Average discharge.- 51 years, 954 second-feet.
Extremes.- Maximum discharge during year, 2,810 second-feet May 15 (gage height, 3.18 feet); minimum daily, 102 second-feet Dec. 20-23.
1889-1940: Maximum discharge, 18,000 second-feet Oct. 5, 1911 (gage height, 6.80 feet), from rating curve extended above 6,000 second-feet; minimum daily, 90 second-feet Dec. 3, 1934.
Remarks.- Records excellent except those for Dec. 1 to Mar. 31, which are good. Small diversions above station for irrigation. Flow regulated by three main reservoirs (total capacity, 117,600 acre-feet) and several smaller ones.

Rating table, water year 1939-40, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 13)

0.4	130	0.8	236	2.0	1,040
.5	148	1.0	322	2.3	1,390
.6	170	1.5	624	2.6	1,810
.7	200	1.8	854	3.1	2,660

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	318	300	159	112	135	165	342	570	1,660	453	225	211
2	313	300	152	112	140	160	318	556	1,590	378	207	211
3	304	296	146	116	140	160	300	734	1,480	322	207	218
4	291	278	146	115	140	155	291	1,170	1,380	304	197	222
5	282	278	152	113	140	*150	309	1,440	1,290	296	188	211
6	270	282	146	112	140	155	309	1,550	1,220	291	222	191
7	270	274	141	114	140	150	287	1,620	1,120	278	229	185
8	282	244	144	121	143	155	287	1,740	1,050	270	200	188
9	304	257	148	128	143	175	282	1,630	900	265	182	182
10	296	261	157	131	143	200	278	1,840	797	261	166	176
11	278	218	150	131	143	214	265	2,120	749	253	166	179
12	278	222	150	136	144	188	257	2,120	704	249	166	182
13	274	232	130	130	146	180	274	2,220	726	236	159	182
14	265	229	130	132	146	175	327	2,410	772	244	155	185
15	261	211	130	137	152	191	383	2,570	772	296	148	188
16	257	191	129	*139	155	200	394	2,570	772	296	148	182
17	249	185	136	143	150	211	406	2,570	749	274	148	188
18	244	185	128	143	148	211	406	2,590	711	249	157	225
19	244	185	120	143	*160	214	459	1,990	638	229	173	653
20	244	163	102	139	162	218	570	1,530	610	222	197	689
21	232	173	102	139	160	249	719	1,330	576	229	278	530
22	225	182	102	135	163	274	805	1,250	576	229	225	447
23	225	168	102	132	166	318	993	1,280	563	218	218	459
24	218	166	105	134	168	337	1,100	1,390	503	214	236	428
25	225	166	110	141	166	352	1,190	1,420	459	222	287	389
26	291	170	109	135	175	378	1,200	1,490	428	240	278	372
27	270	194	106	135	175	362	1,270	1,590	400	300	270	378
28	218	197	103	135	175	347	1,020	1,650	367	322	236	352
29	257	168	108	135	170	313	854	1,620	347	278	222	367
30	278	168	*110	135	-	304	674	1,600	417	261	229	543
31	282	-	111	*135	-	318	-	1,650	-	249	218	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,245	318	218	266	16,350
November	6,543	300	163	218	12,980
December	3,964	159	102	128	7,860
Calendar year 1939	261,619	3,270	102	717	519,000
January	4,038	143	112	130	8,010
February	4,428	175	135	153	8,780
March	7,179	378	150	232	14,240
April	16,569	1,270	257	552	32,860
May	51,840	2,590	556	1,672	102,800
June	24,326	1,660	347	811	48,250
July	8,428	453	214	272	16,720
August	6,337	287	148	204	12,570
September	9,113	689	176	304	18,080
Water year 1939-40	151,010	2,590	102	413	299,500

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 14 to Mar. 10, Mar. 13, 14.

Rio Grande near Monte Vista, Colo.

Location.- Water-stage recorder, lat. 37°37', long. 106°09', near west line of sec. 19, T. 39 N., R. 8 E. (revised), 2 miles north of Monte Vista. Datum of gage is 7,654.54 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,740 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey (no winter records in earlier years). May 1926 to September 1940 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,070 second-feet May 18 (gage height, 2.74 feet); minimum daily, 8 second-feet Apr. 11.
1926-40: Maximum discharge, 18,500 second-feet June 30, 1927 (gage height, 7.85 feet); minimum daily, 4 second-feet Apr. 18, 1926.

Remarks.- Records good except those for period of ice effect, which are fair. Diversions above station for irrigation. Flow regulated by three main reservoirs (total capacity, 117,600 acre-feet) and several smaller ones.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	18	172	110	135	175	19	118	640	116	91	80
2	18	19	169	110	135	180	17	123	581	91	82	76
3	17	19	166	115	135	175	15	159	568	86	71	74
4	16	18	172	115	140	175	11	251	543	84	67	76
5	16	15	166	115	140	195	14	494	466	88	51	71
6	17	15	166	115	140	206	12	581	434	91	38	61
7	23	14	156	115	140	169	12	626	335	91	60	65
8	30	10	159	120	140	143	10	741	262	84	73	69
9	32	10	151	125	140	133	10	710	182	80	60	67
10	41	12	102	130	140	116	9	822	95	93	42	60
11	41	10	93	130	140	106	8	855	102	91	35	61
12	35	12	97	130	145	97	10	710	71	86	31	69
13	34	12	102	135	145	104	30	680	98	80	28	67
14	36	12	111	140	145	120	35	702	143	78	19	71
15	36	17	93	140	150	118	34	710	143	71	26	76
16	40	20	130	140	155	52	32	640	125	56	35	74
17	35	47	135	*145	150	30	46	772	123	52	32	67
18	26	58	135	145	150	28	42	940	108	69	30	76
19	23	123	125	145	155	17	41	633	97	88	38	97
20	22	148	110	140	*160	15	54	392	106	80	41	93
21	22	148	100	140	160	14	84	444	108	78	49	54
22	22	175	100	140	160	23	93	543	106	80	44	80
23	19	175	100	140	165	21	125	512	104	78	51	97
24	17	162	100	140	165	24	285	478	93	73	69	86
25	15	162	105	135	165	24	373	466	97	63	78	80
26	13	153	110	135	165	20	408	519	108	56	71	80
27	14	166	110	135	170	15	402	512	116	82	73	86
28	15	155	105	135	170	14	335	478	108	97	73	80
29	11	165	105	135	170	12	220	472	104	91	71	82
30	12	169	*110	135	-	12	175	562	116	88	80	111
31	15	-	110	*135	-	12	-	620	-	104	76	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	732	41	11	23.6	1,450
November	2,289	185	10	76.3	4,540
December	3,865	172	93	125	7,670
Calendar year 1939	82,782	985	10	227	164,200
January	4,065	145	110	131	8,060
February	4,370	170	135	151	8,670
March	2,545	206	12	82.1	5,050
April	2,961	408	8	98.7	5,870
May	17,265	940	118	557	34,240
June	6,279	640	71	209	12,450
July	2,545	116	52	82.1	5,050
August	1,685	91	19	54.4	3,340
September	2,286	111	54	76.2	4,530
Water year 1939-40	50,887	940	8	139	100,900

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 16 to Mar. 4.

Rio Grande at Alamosa, Colo.

Location.- Water-stage recorder, lat. 37°29', long. 105°53', in sec. 4, T. 37 N., R. 10 E., a quarter of a mile northwest of Alamosa. Datum of gage is 7,533.66 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,840 square miles.

Records available.- May 1912 to September 1913 and October 1933 to September 1940 in reports of Geological Survey. May 1912 to September 1940 in reports of State engineer.

Average discharge.- 28 years (1912-40), 327 second-feet.

Extremes.- Maximum discharge during year, 405 second-feet Mar. 7; maximum gage height, 3.05 feet Mar. 5 (ice jam); minimum daily discharge, 4.0 second-feet Nov. 8-10.
1912-40: Maximum discharge, 14,000 second-feet July 1, 1927 (gage height, 8.37 feet); minimum daily, 2 second-feet Oct. 24-29, 1933.

Remarks.- Records fair. Many diversions above station for irrigation. During irrigation season, low-water flow is water returned from irrigated lands above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	4.6	78	125	153	218	29	46	36	41	33	16
2	14	5.2	75	*128	157	230	23	46	43	43	34	16
3	14	7.0	73	130	160	250	22	41	42	43	27	16
4	13	5.8	71	135	164	260	21	48	36	42	19	16
5	13	5.8	75	138	158	300	20	45	35	41	16	16
6	13	4.6	84	138	152	300	19	42	35	40	16	16
7	13	4.6	87	135	150	287	18	42	40	40	16	16
8	15	4.0	79	130	*152	263	17	36	42	39	15	16
9	14	4.0	79	130	153	226	16	39	43	39	15	16
10	a14	4.0	79	132	153	196	16	45	39	39	15	16
11	a14	4.6	60	132	150	181	15	85	41	38	13	16
12	a14	5.8	46	134	145	169	14	63	42	39	12	17
13	a14	5.8	49	140	140	120	15	41	41	39	13	18
14	a13	5.8	71	135	140	130	15	36	41	38	10	18
15	a13	5.8	56	130	145	156	13	44	41	36	10	16
16	a13	5.8	70	128	155	135	13	44	43	38	10	18
17	13	6.4	88	128	159	100	14	22	41	39	10	20
18	13	6.4	98	130	160	82	13	42	41	39	10	24
19	13	7.0	102	130	161	68	19	127	41	38	8.9	24
20	12	7.0	109	130	163	61	22	83	41	39	8.1	24
21	12	7.0	103	130	164	55	23	61	40	39	8.9	26
22	12	7.6	102	130	165	53	34	63	40	39	21	24
23	9.4	8.6	110	125	*168	50	50	82	42	39	18	20
24	5.6	19	110	128	170	48	39	108	41	38	17	20
25	5.8	37	116	*132	172	45	46	96	39	36	17	19
26	5.2	62	120	135	176	45	42	80	39	35	16	18
27	5.2	85	110	138	182	44	50	72	41	35	16	18
28	5.2	84	110	141	200	42	44	63	40	34	16	18
29	5.2	78	110	145	214	38	42	39	41	33	16	18
30	5.2	78	120	148	-	36	40	34	41	38	16	19
31	4.6	-	125	150	-	35	-	33	-	35	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	346.6	16	4.6	11.2	687
November	576.4	65	4.0	19.2	1,140
December	2,767	125	46	89.3	5,490
Calendar year 1939	43,295.0	896	4.0	119	85,880
January	4,140	150	125	134	8,210
February	4,681	214	140	161	9,280
March	4,245	300	35	137	8,420
April	764	50	13	25.5	1,520
May	1,748	127	22	56.4	3,470
June	1,208	43	35	40.3	2,400
July	1,191	43	33	38.4	2,360
August	488.9	34	8.1	15.8	970
September	557	26	16	18.6	1,100
Water year 1939-40	22,712.9	300	4.0	62.1	45,050

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of record for station near Monte Vista.
Note.- Stage-discharge relation affected by ice Dec. 25 to Mar. 6.

Rio Grande above mouth of Trinchera Creek, near La Sauses, Colo.

Location.- Water-stage recorder, lat. 39°19', long. 105°45', in sec. 35, T. 36 N., R. 11 E., a quarter of a mile upstream from Trinchera Creek and 5 miles north of La Sauses.

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 345 second-feet Mar. 6; maximum gage height, 3.82 feet Mar. 3 (ice jam); minimum daily discharge, 0.4 second-foot July 4. 1936-40: Maximum discharge, 2,580 second-feet June 16, 1938 (gage height, 7.02 feet, from recorded range in stage); minimum daily, that of July 4, 1940.

Remarks.- Records good except those below 10 second-feet and those for period of ice effect, which are fair. Storage and several diversions above station for irrigation. During irrigation season, low-water flow is water returned from irrigated lands above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	25	116	160	175	260	64	21	43	0.8	1.0	2.0
2	30	26	114	160	*178	260	60	18	42	.6	.9	2.0
3	29	24	112	160	178	265	56	17	39	.5	.9	1.5
4	26	26	112	*160	180	300	50	16	42	.4	.9	1.5
5	26	27	*115	155	180	340	47	15	42	.6	.9	.9
6	26	27	118	150	185	345	47	13	42	2.5	1.0	.9
7	26	26	120	146	185	*335	45	11	39	2.0	1.0	.9
8	31	27	122	145	185	330	42	13	35	1.0	.9	.8
9	32	30	124	145	165	330	41	11	34	1.0	.9	.8
10	29	32	126	150	185	315	39	11	31	.9	.9	.7
11	29	32	128	155	180	305	38	11	28	.9	.9	.7
12	28	32	107	155	175	270	38	13	26	.9	.9	.7
13	27	31	110	155	175	250	36	16	24	1.5	.9	.7
14	28	30	120	148	178	230	36	18	21	4.5	.9	.7
15	29	34	130	148	*180	232	34	42	18	1.5	.9	2.0
16	28	37	128	145	180	246	31	25	16	1.5	.9	.8
17	28	38	126	148	180	206	27	23	15	1.0	.9	.9
18	29	41	124	148	180	176	24	43	13	1.0	.9	2.5
19	29	48	*124	*150	185	155	22	39	9.6	1.5	.9	3.0
20	29	54	122	150	180	140	21	32	e.4	2.5	.9	.8
21	29	60	120	150	180	135	21	32	7.8	2.5	1.0	.7
22	29	64	120	155	185	127	21	31	6.0	1.5	1.0	.7
23	29	83	120	160	190	111	23	30	5.0	1.5	1.0	.7
24	29	75	120	165	190	106	24	33	4.5	1.5	1.0	.8
25	26	86	124	160	192	99	23	36	3.0	1.5	2.0	16
26	25	136	130	160	205	94	21	41	2.5	1.5	2.0	6.6
27	26	132	140	160	230	91	18	39	2.0	1.5	18	3.5
28	26	132	140	160	240	88	21	36	1.0	1.5	4.0	2.0
29	26	111	155	165	245	83	21	49	1.5	1.5	1.0	2.0
30	26	107	162	165	-	76	22	57	1.5	1.5	.9	6.6
31	26	-	162	170	-	70	-	50	-	1.0	2.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	872	36	25	28.1	1,730
November	1,633	136	24	54.4	3,240
December	3,891	162	107	126	7,720
Calendar year 1939	63,586.3	1,180	2.0	174	126,100
January	4,805	170	145	155	9,530
February	5,466	245	175	188	10,840
March	6,370	345	70	205	12,630
April	1,013	64	18	33.8	2,010
May	844	57	11	27.2	1,670
June	602.8	43	1.0	20.1	1,200
July	44.1	4.5	.4	1.42	87
August	52.2	18	.9	1.68	104
September	64.4	16	.7	2.15	128
Water year 1939-40	25,657.5	345	.4	70.1	50,890

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 3-8, 13, Dec. 16 to Mar. 13.

Rio Grande near Lobatos, Colo.

Location.- Water-stage recorder, lat. 37°05', long. 105°45', in sec. 22, T. 33 N., R. 11 E., 6 miles north of Colorado-New Mexico State line, 7 miles downstream from Culebra Creek, and 10 miles east of Lobatos. Datum of gage is 7,426.79 feet above mean sea level (general adjustment of 1929).

Drainage area.- 7,700 square miles (includes 2,940 square miles in closed basin).

Records available.- June 1899 to September 1913 and October 1933 to September 1940 in reports of Geological Survey. June 1899 to September 1940 in reports of State engineer.

Average discharge.- 41 years (1899-1940), 744 second-feet.

Extremes.- Maximum discharge during year, 1,190 second-feet May 19 (gage height, 2.59 feet); minimum daily, 5.0 second-feet Aug. 4.
1899-1940: Maximum daily discharge, 13,100 second-feet June 8, 1905, from rating curve extended above 8,000 second-feet; minimum daily, that of Aug. 4, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation. Flow regulated by many reservoirs on headwaters.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	68	143	212	230	350	93	99	706	18	5.5	19
2	51	68	143	210	*240	350	90	90	642	17	5.5	16
3	41	68	134	*205	235	350	79	79	530	16	5.5	16
4	41	66	138	204	240	380	79	76	376	15	5.0	17
5	36	66	138	201	240	420	74	103	232	15	5.5	17
6	33	68	143	197	240	427	79	123	168	13	7.5	16
7	34	68	147	190	240	408	79	120	127	12	9.5	16
8	41	66	151	192	247	402	74	127	96	12	10	15
9	46	68	159	196	233	395	68	168	76	12	10	13
10	51	76	159	199	233	376	63	159	66	11	10	19
11	46	71	164	204	237	370	56	123	61	10	9.0	17
12	49	71	159	207	239	341	54	116	56	10	12	21
13	61	71	160	201	225	335	54	134	49	10	13	25
14	63	71	165	197	*237	271	51	151	44	9.0	14	25
15	63	71	153	194	249	282	51	228	41	9.5	13	25
16	63	71	150	194	244	287	99	266	38	10	9.5	25
17	66	62	150	190	235	282	147	308	36	9.0	8.5	28
18	66	76	148	*190	242	247	123	690	33	9.5	10	33
19	76	76	*154	190	260	232	90	1,100	31	10	11	38
20	68	90	145	200	254	218	58	814	28	10	10	34
21	68	92	143	210	246	209	46	573	27	12	9.0	31
22	66	90	145	215	270	204	51	451	26	12	10	30
23	66	88	148	210	268	172	103	451	25	11	15	30
24	66	93	152	210	264	143	159	551	22	12	15	31
25	66	93	167	210	264	138	209	558	20	9.0	18	33
26	68	156	175	210	268	120	209	537	18	8.5	20	54
27	63	123	182	210	290	120	136	558	18	9.5	20	39
28	66	156	198	215	320	164	204	619	17	8.5	27	38
29	71	151	196	220	*340	155	177	690	16	8.5	20	36
30	66	134	200	220	-	130	120	706	18	8.0	18	38
31	68	-	205	225	-	110	-	722	-	8.0	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,771	76	33	57.1	3,510
November	2,606	155	66	86.9	5,170
December	4,914	205	134	159	9,750
Calendar year 1939	104,735.5	1,590	8.0	287	207,700
January	6,328	225	190	204	12,550
February	7,329	340	225	253	14,540
March	8,388	427	110	271	16,640
April	3,025	209	46	101	6,000
May	11,580	1,100	76	374	22,970
June	3,643	706	16	121	7,230
July	345.0	18	8.0	11.1	684
August	373.0	27	5.0	12.0	740
September	795	54	13	26.5	1,580
Water year 1939-40	51,097.0	1,100	5.0	140	101,400

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 20-22, Dec. 13 to Mar. 5.

Rio Grande below Taos Junction Bridge, near Taos, N. Mex.

Location.- Water-stage recorder, lat. 36°19', long. 105°46', in sec. 15, T. 24 N., R. 11 E., 2 miles downstream from Taos Creek and bridge on Taos-Taos Junction highway and about 12 miles southwest of Taos.

Drainage area.- 9,730 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- October 1930 to September 1940 in reports of Geological Survey. July 1925 to December 1931 in reports of State engineer.

Average discharge.- 15 years (1925-40), 783 second-feet.

Extremes.- Maximum discharge during year, 1,770 second-feet May 20 (gage height, 5.23 feet); minimum daily, 202 second-feet Sept. 9, 12.

1930-40: Maximum discharge, 6,950 second-feet May 25, 1932 (gage height, 8.56 feet, former site and datum); minimum daily discharge, 140 second-feet (estimated), Aug. 21, 1931.

Flood of July 4, 1927, reached a stage of 11.0 feet (discharge 8,700 second-feet).

Remarks.- Records good. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	233	270	332	360	438	576	365	395	1,100	256	215	215
2	228	270	321	365	458	564	360	360	1,090	242	210	220
3	224	265	326	377	458	592	343	343	990	238	210	224
4	228	265	321	383	464	600	332	343	890	238	206	215
5	224	265	316	395	470	553	316	348	756	238	206	215
6	220	265	316	407	464	672	326	343	624	242	210	210
7	228	260	316	395	470	656	321	377	497	238	270	206
8	246	256	321	395	470	640	310	451	425	228	249	210
9	246	256	332	407	451	640	300	490	395	228	228	202
10	242	260	338	401	451	632	285	464	360	224	228	238
11	246	256	338	407	458	584	275	477	338	224	228	242
12	251	260	338	413	470	576	265	464	321	220	233	202
13	242	256	338	425	444	546	256	444	310	220	224	210
14	242	256	310	389	458	497	256	451	305	228	220	206
15	246	256	260	348	458	484	260	504	285	220	215	210
16	246	256	270	365	451	490	270	553	285	220	220	215
17	251	256	295	401	444	497	290	648	280	215	220	210
18	246	256	321	a410	444	497	332	756	270	215	387	215
19	251	260	332	a390	451	470	360	1,210	265	210	260	228
20	251	256	295	a380	444	444	332	1,630	265	210	277	228
21	260	251	305	a400	438	432	326	1,250	270	210	290	242
22	260	256	316	401	444	425	332	1,050	265	210	220	246
23	260	260	326	383	464	425	338	930	275	206	256	246
24	260	265	332	407	518	419	354	880	265	210	228	233
25	256	270	316	413	497	401	407	960	265	224	224	228
26	260	275	348	407	504	401	470	950	260	206	220	318
27	265	265	321	419	497	395	518	940	256	238	215	260
28	256	300	265	419	504	383	490	940	316	233	215	251
29	265	326	280	419	546	377	470	1,010	280	275	215	260
30	265	348	316	425	-	401	464	1,090	260	224	215	242
31	275	-	343	438	-	377	-	1,100	-	215	215	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	7,673	275	220	248	15,220
November	8,016	348	251	267	15,900
December	9,804	348	260	316	19,450
Calendar year 1939	200,187	2,270	188	548	397,100
January	12,344	438	348	398	24,480
February	13,528	546	438	466	26,830
March	15,666	672	377	505	31,070
April	10,323	518	256	344	20,480
May	22,151	1,630	343	715	43,940
June	12,763	1,100	256	425	25,320
July	7,005	275	206	226	13,890
August	7,229	387	206	233	14,340
September	6,847	318	202	228	13,580
Water year 1939-40	133,349	1,630	202	364	264,500

Peak discharge.- June 28 (8 p.m.) 1,020 sec.-ft.; July 29 (7 p.m.) 783 sec.-ft.; Aug. 18 (7 a.m.) 1,130 sec.-ft.; Aug. 20 (8 p.m.) 810 sec.-ft.; Sept. 26 (9 p.m.) 810 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Embudo.

Rio Grande at Embudo, N. Mex.

Location.- Water-stage recorder, lat. 36°12', long. 105°57', in SW¼ sec. 23, T. 23 N., R. 9 E., a quarter of a mile downstream from depot at Embudo and about 2¼ miles downstream from Embudo Creek.

Drainage area.- 10,400 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.

Records available.- January 1889 to December 1903, September 1912 to September 1916, October 1930 to September 1940 in reports of Geological Survey; January 1889 to December 1903, September 1912 to December 1931 in reports of State engineer.

Average discharge.- 40 years (1889-93, 1894-1903, 1912-16, 1917-40) 1,053 second-feet.

Extremes.- Maximum discharge during year, 1,990 second-feet May 20 (gage height, 4.62 feet); minimum daily, 201 second-feet Aug. 5.

1889-1903, 1912-40: Maximum discharge, 15,900 second-feet June 19, 1903 (gage height, 15.8 feet); minimum daily, 35 second-feet Dec. 31, 1903.

Remarks.- Records good. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	273	306	391	419	462	596	480	540	1,290	288	231	228
2	264	302	371	415	476	608	495	490	1,290	270	219	237
3	255	302	387	427	480	624	471	510	1,210	255	213	267
4	261	299	383	427	490	635	444	565	1,100	258	204	234
5	261	299	375	440	485	602	431	596	994	264	201	228
6	261	302	379	444	466	708	431	608	834	258	219	222
7	264	302	379	427	495	714	431	635	679	249	264	216
8	306	299	383	427	515	696	407	780	586	243	255	219
9	306	306	399	458	476	696	387	840	550	240	228	213
10	296	316	403	444	480	714	379	792	500	237	225	213
11	288	310	407	440	490	657	371	756	444	237	228	288
12	296	310	411	453	515	646	367	792	411	231	231	222
13	292	306	399	458	466	608	371	762	395	228	222	219
14	288	299	367	407	471	565	399	756	379	240	216	222
15	292	299	313	359	485	545	453	828	359	234	207	219
16	296	296	324	379	471	550	471	896	348	231	207	222
17	292	299	334	423	458	570	466	1,070	341	228	204	228
18	296	296	387	423	466	580	453	1,210	324	225	329	243
19	299	299	399	403	476	555	490	1,480	306	219	299	270
20	292	288	341	395	462	525	505	1,890	299	219	234	276
21	302	292	341	431	458	520	560	1,620	296	222	351	320
22	299	296	359	423	480	515	555	1,450	310	222	225	344
23	292	302	371	391	476	530	560	1,290	310	216	252	313
24	296	306	391	423	535	540	550	1,210	330	216	246	310
25	296	313	375	423	525	535	580	1,210	306	234	228	288
26	299	320	411	419	520	540	657	1,250	296	222	231	306
27	302	313	367	423	530	535	744	1,250	288	228	228	405
28	292	341	310	419	540	515	708	1,210	282	285	225	302
29	296	375	302	423	565	480	657	1,250	375	270	219	316
30	299	407	355	431	-	490	630	1,290	310	258	216	306
31	306	-	399	444	-	485	-	1,290	-	237	219	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,957	306	255	289	17,770
November	9,300	407	288	310	18,450
December	11,513	411	302	371	22,840
Calendar year 1939	221,218	2,190	190	606	438,800
January	13,118	458	359	423	26,020
February	14,214	565	458	490	28,190
March	18,079	714	480	583	35,860
April	14,903	744	367	497	29,560
May	31,146	1,890	490	1,005	61,780
June	15,742	1,290	282	525	31,220
July	7,494	288	216	242	14,860
August	7,276	351	201	235	14,430
September	7,896	405	213	263	15,660
Water year 1939-40	159,638	1,890	201	436	316,600

Rio Grande at Otowi Bridge, near San Ildefonso, N. Mex.

Location.- Water-stage recorder, lat. 35°52', long. 106°09', at Denver & Rio Grande Western R. R. bridge in San Ildefonso Pueblo Grant, 2 miles southwest of San Ildefonso, Santa Fe County, and 3 miles downstream from Rio Pojoaque. Datum of gage is 5,488.48 feet above mean sea level (general adjustment of 1929).

Drainage area.- 14,300 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- February 1895 to December 1905, June 1909 to December 1914, October 1930 to September 1940 in reports of Geological Survey. February 1895 to December 1905, June 1909 to December 1931 in reports of State engineer.

Average discharge.- 13 years (1927-40), 1,422 second-feet.

Extremes.- Maximum discharge during year, 2,330 second-feet Aug. 22 (gage height, 7.34 feet); minimum daily, 317 second-feet Nov. 19, 22, 23, Aug. 29.
1930-40: Maximum discharge, 21,900 second-feet Aug. 20, 1935 (gage height, 12.01 feet), from rating curve extended above 7,500 second-feet by logarithmic plotting; minimum daily, 128 second-feet June 21, 1934.

Remarks.- Records good except those for periods of ice effect and days of doubtful or no gage-height record, which are fair. Flow partially regulated by El Vado Reservoir on upper Rio Chama, which stores water for irrigation. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	644	353	475	490	545	799	736	778	1,220	1,010	1,050	978
2	644	345	455	485	578	799	806	687	1,360	862	1,030	1,100
3	644	329	435	485	584	778	806	729	1,460	792	994	806
4	650	329	450	490	590	799	701	855	1,160	906	914	694
5	644	341	440	510	590	827	668	1,410	994	1,050	656	632
6	650	341	445	500	550	813	687	1,400	848	962	662	816
7	480	341	455	485	550	883	662	1,230	680	876	614	1,260
8	535	337	470	475	566	820	656	1,130	806	970	d460	1,280
9	520	345	485	510	535	799	644	1,320	1,240	1,030	d370	1,250
10	490	383	500	505	545	813	668	1,110	1,560	1,110	d510	1,220
11	425	378	500	485	560	841	662	1,050	1,510	1,070	986	1,610
12	415	361	510	500	572	813	644	1,100	1,510	1,120	1,000	1,330
13	401	353	500	510	555	750	680	1,050	1,510	1,300	954	1,210
14	378	353	450	475	525	687	1,140	970	1,410	1,510	1,050	1,070
15	365	333	415	445	545	638	1,510	994	1,180	1,460	1,260	883
16	370	329	383	396	540	644	1,510	1,040	1,090	1,400	1,130	701
17	353	325	378	480	530	650	1,180	1,190	1,050	1,310	1,030	722
18	361	321	401	475	525	687	922	1,510	708	1,340	1,000	680
19	365	317	440	455	540	701	785	1,610	620	1,350	1,060	785
20	370	321	440	475	540	680	855	2,200	1,120	1,160	978	750
21	361	329	406	505	550	650	1,080	1,950	1,320	1,030	1,120	715
22	361	317	420	b490	555	650	1,080	1,720	1,460	978	891	820
23	341	317	445	470	566	662	1,060	1,560	1,190	930	515	708
24	a340	329	455	500	602	701	1,060	1,560	1,030	970	d520	694
25	a340	349	480	510	650	729	1,010	1,510	785	1,240	a460	644
26	a340	361	475	520	632	785	1,060	1,510	1,170	1,060	d390	584
27	a340	370	460	530	638	848	1,160	1,410	1,120	954	357	694
28	a340	378	435	525	694	841	1,200	1,300	1,110	978	333	602
29	a340	406	b360	505	792	792	1,040	1,290	1,290	1,090	317	596
30	341	460	b410	515	-	743	906	1,280	1,180	1,140	555	650
31	349	-	b470	540	-	715	-	1,280	-	1,040	764	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	13,497	650	340	435	26,770
November	10,451	460	317	348	20,730
December	13,843	510	360	447	27,460
Calendar year 1939	396,743	4,860	280	1,087	787,000
January	15,241	540	396	492	30,230
February	16,744	792	525	577	33,210
March	25,337	883	638	753	46,290
April	27,573	1,510	644	919	54,700
May	39,733	2,200	637	1,282	78,810
June	34,691	1,560	620	1,156	68,810
July	33,998	1,510	792	1,097	67,430
August	23,930	1,260	317	772	47,460
September	26,484	1,610	584	883	52,530
Water year 1939-40	279,527	2,200	317	764	554,400

a No gage-height record; discharge computed on basis of records for station at Embudo and for Rio Chama near Chamita.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of records for station at Embudo and for Rio Chama near Chamita.

Rio Grande at Cochiti, N. Mex.

Location.- Water-stage recorder, lat. 35°38', long. 106°19', at highway bridge 1 mile northeast of Cochiti, Sandoval County, 4 miles north of Pena Blanca, and 8 miles upstream from Galisteo Creek.

Drainage area.- 14,600 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- October 1930 to September 1940 in reports of Geological Survey. January 1925 to December 1931 in reports of State engineer.

Average discharge.- 15 years (1925-40), 1,446 second-feet.

Extremes.- Maximum discharge during year, 2,790 second-feet Aug. 22; maximum gage height, 5.60 feet Apr. 15; minimum daily discharge, 185 second-feet Oct. 24, 30, Aug. 29.
1930-40: Maximum discharge, 20,500 second-feet Aug. 20, 1935 (gage height, 8.97 feet), from rating curve extended above 7,500 second-feet by logarithmic plotting; minimum daily, 1 second-foot Aug. 10-12, 1934.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	308	480	500	592	802	706	648	1,190	910	960	970
2	500	359	470	500	592	e10	722	600	1,210	760	900	1,060
3	500	359	450	510	590	818	754	600	1,310	722	940	770
4	510	350	450	539	600	754	620	690	1,110	834	920	706
5	500	360	450	528	590	802	564	1,340	958	960	550	517
6	550	360	460	564	570	754	690	1,290	850	870	528	462
7	450	360	470	570	560	886	550	1,250	620	850	606	1,160
8	470	350	480	590	570	850	550	940	662	834	380	1,200
9	420	360	490	600	560	800	540	1,380	1,050	886	290	1,250
10	380	390	510	590	560	818	560	1,070	1,380	1,110	480	1,250
11	336	390	510	550	570	818	560	1,000	1,450	1,050	958	1,550
12	301	395	520	550	580	786	540	1,060	1,450	1,210	1,130	1,380
13	300	262	510	540	580	690	578	980	1,420	1,360	976	1,120
14	320	232	460	510	578	592	922	850	1,280	1,530	958	1,080
15	330	238	430	460	564	506	1,360	900	1,100	1,380	1,100	860
16	308	226	400	431	550	578	1,400	994	1,020	1,270	1,050	660
17	301	238	390	495	540	550	1,150	1,070	920	1,230	1,030	680
18	294	274	420	490	540	539	904	1,550	850	1,340	960	620
19	308	280	450	a460	550	578	648	1,760	484	1,400	1,000	634
20	308	220	450	a490	560	564	802	2,280	1,100	1,380	920	648
21	300	200	420	a510	570	528	1,110	1,980	1,400	994	1,120	662
22	290	195	430	a500	580	495	1,050	1,780	1,500	834	800	834
23	200	200	450	a480	590	606	994	1,620	1,150	770	a520	676
24	185	210	460	a510	620	620	958	1,550	950	786	a550	528
25	190	226	490	a520	650	640	922	1,460	722	1,170	a420	495
26	210	368	480	530	640	700	1,010	1,400	1,100	904	a330	461
27	215	413	470	530	680	750	1,170	1,280	1,070	994	a270	528
28	262	422	440	530	754	730	1,100	1,150	1,020	700	226	564
29	287	440	390	520	818	700	920	1,150	1,220	886	185	520
30	185	480	430	517	-	670	818	1,210	1,100	1,050	397	560
31	205	-	480	517	-	660	-	1,190	-	904	722	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10,415	550	185	336	20,660
November	9,465	480	195	316	18,770
December	14,190	520	390	458	28,150
Calendar year 1939	376,103	4,790	138	1,030	746,000
January	16,131	600	431	520	32,000
February	17,298	818	540	596	34,310
March	21,394	886	495	690	42,430
April	25,172	1,400	540	839	49,930
May	38,022	2,280	600	1,227	75,420
June	32,646	1,500	484	1,088	64,750
July	31,975	1,530	700	1,028	63,230
August	22,176	1,130	185	715	43,990
September	24,395	1,550	451	813	48,390
Water year 1939-40	263,182	2,280	185	719	522,000

a No gage-height record; discharge computed on basis of weather records, records for stations near San Ildefonso and at San Felipe, and records of diversion for Cochiti main canal and Sili main canal near Cochiti.

Rio Grande at San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°26', long. 106°26', at highway bridge in San Felipe Grant, 2,000 feet downstream from mouth of Tonque Arroyo, half a mile upstream from San Felipe Pueblo, Sandoval County, and about 12 miles northeast of Bernalillo. Datum of gage is 5,110.38 feet above mean sea level (general adjustment of 1929).

Drainage area.- 16,100 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- October 1930 to September 1940 in reports of Geological Survey. March 1925 to December 1931 in reports of State engineer.

Average discharge.- 14 years (1926-40), 1,557 second-feet.

Extremes.- Maximum discharge during year, 3,880 second-feet Sept. 21 (gage height, 5.70 feet); minimum daily, 240 second-feet Oct. 24.
1930-40: Maximum discharge, 42,100 second-feet Aug. 21, 1935, from rating curve extended above 15,000 second-feet by logarithmic plotting; maximum gage height, 11.13 feet June 26, 1937; minimum daily discharge, 34 second-feet July 7, 1934.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	550	388	501	500	590	830	720	799	1,170	950	1,050	1,020
2	550	396	501	500	591	840	770	680	1,250	850	928	1,200
3	550	380	465	520	600	820	780	680	1,060	750	980	1,050
4	560	364	456	540	610	840	730	799	1,060	1,050	954	653
5	550	380	465	560	600	850	690	1,320	950	950	653	601
6	670	388	465	570	590	858	755	1,430	850	900	601	563
7	610	404	400	570	570	943	755	1,290	711	650	708	1,230
8	600	404	500	590	590	870	660	1,100	766	900	491	1,420
9	537	412	510	610	570	858	630	1,240	1,160	960	332	1,420
10	450	430	520	600	570	870	640	1,240	1,600	1,040	450	1,380
11	410	438	530	580	560	900	630	1,150	1,580	941	620	1,690
12	400	412	540	560	600	882	620	1,200	1,540	980	994	1,380
13	380	388	520	560	582	788	788	1,080	1,560	1,380	967	1,200
14	370	396	500	520	555	650	995	1,000	1,400	1,650	863	1,260
15	360	372	460	480	591	573	1,560	960	1,250	1,610	1,110	1,000
16	310	364	430	460	570	640	1,600	1,000	1,140	1,560	1,150	802
17	300	356	420	490	560	650	1,380	1,120	1,030	1,420	1,090	754
18	300	350	440	500	560	630	1,140	1,430	882	1,380	1,000	778
19	310	340	470	470	570	670	894	1,650	591	1,430	1,050	838
20	310	333	470	500	580	660	956	2,050	799	1,250	1,010	1,080
21	330	356	460	520	590	630	1,140	2,170	1,380	1,110	1,200	1,660
22	320	348	440	510	600	620	1,100	1,990	1,550	1,080	1,960	802
23	284	348	470	490	610	650	1,010	1,790	1,380	1,200	850	850
24	240	348	460	510	640	680	1,060	1,650	1,120	1,040	620	814
25	246	340	515	530	670	700	1,000	1,510	799	1,360	520	742
26	258	396	500	530	660	750	1,100	1,430	1,130	980	508	664
27	264	410	490	540	700	810	1,100	1,300	1,150	1,120	380	720
28	291	420	470	540	750	840	1,160	1,250	1,080	1,020	306	582
29	350	456	400	530	820	760	930	1,090	1,350	1,110	246	554
30	250	510	430	540	-	720	755	1,240	1,200	1,010	400	600
31	252	-	480	550	-	700	-	1,180	-	1,040	620	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	12,162	670	240	392	24,120
November	11,627	510	333	388	23,060
December	14,698	540	400	474	29,150
Calendar year 1939	394,895	4,620	240	1,082	783,300
January	16,470	610	460	531	32,670
February	17,669	820	555	609	35,050
March	23,482	943	573	757	46,580
April	28,048	1,600	620	935	55,630
May	39,838	2,170	680	1,285	79,020
June	34,498	1,600	591	1,150	68,410
July	34,871	1,650	750	1,125	69,170
August	24,611	1,960	246	794	48,820
September	29,307	1,690	554	977	58,130
Water year 1939-40	287,271	2,170	240	785	569,300

Rio Grande at San Acacia, N. Mex.

Location.- Water-stage recorders on right and left banks, lat. 34°15', long. 106°53', in NE¼ sec. 1, T. 1 S., R. 1 W., 0.2 mile downstream from San Acacia diversion dam, half a mile east of San Acacia, and 2 miles downstream from Rio Salado. Datum of gages is 4,662.56 feet above mean sea level (general adjustment of 1929).

Drainage area.- 26,770 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- April 1936 to September 1940 in reports of Geological Survey. February to December 1925, January 1926 to September 1927 (gage heights and discharge measurements only) in reports of State engineer.

Extremes.- Maximum discharge during year, 10,600 second-feet Aug. 24 (gage height, left bank gage, 5.62 feet); minimum daily, 9 second-feet July 25.
1936-40: Maximum discharge, 27,400 second-feet Aug. 5, 1936 (gage height, 8.35 feet), from rating curve extended above 18,000 second-feet by logarithmic plotting; minimum daily, 1 second-foot June 23, 1939.

Remarks.- Records good except those for period of ice effect, which are fair. Socorro main canal north diverts 0.2 mile above gage. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	86	730	452	605	700	452	298	485	685	230	65
2	50	65	760	496	854	745	496	230	373	618	138	28
3	32	38	657	507	905	973	420	142	312	354	210	10
4	52	21	605	760	888	1,010	364	100	420	206	411	16
5	110	20	529	592	939	922	290	52	236	739	452	122
6	130	48	553	592	730	905	312	27	224	106	744	130
7	260	42	486	820	715	871	328	96	134	212	786	175
8	922	36	518	775	670	775	275	175	97	100	956	160
9	1,030	48	592	730	670	837	392	138	155	230	463	143
10	820	44	685	700	871	888	126	305	52	76	290	320
11	592	46	644	631	871	805	62	474	58	46	190	670
12	518	118	566	566	618	888	30	402	60	21	116	1,190
13	566	89	592	518	631	775	32	364	106	79	72	854
14	529	58	579	464	685	700	78	566	212	382	170	790
15	354	62	685	566	715	631	73	305	312	59	190	592
16	328	48	618	518	670	579	18	275	242	138	260	854
17	335	48	474	605	618	553	441	275	224	206	268	657
18	180	78	507	b550	529	496	760	275	254	518	275	312
19	150	114	518	b500	644	507	430	605	100	715	239	212
20	146	165	312	b500	670	335	248	1,390	24	745	335	170
21	134	206	420	b500	618	354	180	1,170	27	553	487	1,060
22	230	175	529	507	644	402	118	2,550	111	402	2,120	2,640
23	254	190	566	496	631	402	344	2,060	134	354	1,980	1,960
24	130	180	507	566	657	382	382	1,990	706	118	3,880	1,290
25	134	218	540	618	715	335	474	1,390	335	9	3,330	775
26	86	268	592	730	760	540	392	1,330	130	54	2,600	820
27	92	320	592	790	670	364	260	1,440	82	29	2,000	441
28	86	260	500	820	605	452	224	1,010	36	932	507	382
29	96	354	540	745	553	553	290	973	88	2,210	260	392
30	42	566	618	644	-	496	553	745	474	1,040	212	507
31	36	-	452	631	-	452	-	553	-	592	110	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8,479	1,030	32	274	16,820
November	4,011	566	20	134	7,960
December	17,465	760	312	563	34,640
Calendar year 1939	287,771	5,870	1	788	570,800
January	18,889	820	452	609	37,470
February	20,351	939	529	702	40,370
March	19,627	1,010	335	633	38,930
April	8,844	760	18	295	17,540
May	21,705	2,550	27	700	43,050
June	6,203	706	24	207	12,300
July	12,528	2,210	9	404	24,850
August	24,281	3,880	72	783	48,160
September	17,737	2,640	10	591	35,180
Water year 1939-40	180,120	3,880	9	492	357,300

b Stage-discharge relation affected by ice.

Rio Grande at San Marcial, N. Mex.

Location.- Water-stage recorder, lat. 33°41', long. 106°58', at Atchison, Topeka & Santa Fe Ry. bridge, in Pedro Armendaris Grant 34, 1.1 miles downstream from San Marcial, Socorro County.

Drainage area.- 27,700 square miles (including 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- January 1895 to September 1940 in reports of Geological Survey. January 1895 to December 1931 in reports of State engineer. Records prior to January 1922 at a site 0.3 mile upstream; those for January 1922 to February 1932 at site at highway bridge half a mile northeast of San Marcial and 1.8 miles upstream from present site.

Average discharge.- 44 years (1896-1940), 1,511 second-feet.

Extremes.- Maximum discharge during year, 2,910 second-feet May 24 (gage height, 3.33 feet); minimum daily, 45 second-feet June 15.
1895-1940: Maximum discharge, about 50,000 second-feet Oct. 11, 1904; no flow at times.

Remarks.- Records good. Diversions above station for irrigation.

Cooperation.- Records furnished by International Boundary Commission, U. S. Section (formerly known as U. S. Boundary Commission).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	117	396	550	640	563	404	569	513	249	703	140
2	75	111	614	499	899	590	403	325	423	399	288	135
3	74	131	637	470	1,010	572	526	240	364	509	201	108
4	74	113	558	515	966	800	481	186	270	374	332	92
5	90	99	516	662	892	941	466	146	333	251	367	73
6	123	106	520	683	740	1,000	406	113	174	476	380	103
7	184	112	472	656	760	845	387	71	157	187	639	174
8	974	121	466	710	716	854	412	56	117	207	649	211
9	1,410	119	503	704	671	767	350	61	84	120	839	195
10	948	120	515	679	642	690	343	134	73	108	379	131
11	764	113	529	642	620	756	264	145	77	107	265	315
12	539	99	550	580	646	740	153	310	56	62	201	562
13	457	106	510	566	559	832	118	423	52	55	177	1,040
14	371	106	516	542	566	752	92	334	.8	50	138	892
15	314	144	559	586	548	749	76	361	45	66	137	971
16	277	142	564	621	637	721	71	296	53	74	160	761
17	253	143	581	663	603	638	72	225	128	69	223	834
18	250	136	569	571	560	569	104	216	122	146	245	645
19	246	128	495	244	567	522	495	240	128	419	238	420
20	220	127	411	312	567	604	619	385	107	615	280	279
21	192	133	479	413	558	448	317	1,090	64	581	268	610
22	165	135	471	642	559	404	239	1,280	69	411	289	1,070
23	155	156	550	588	552	448	171	1,880	57	336	1,150	1,730
24	158	147	597	657	559	478	250	2,700	80	266	1,450	1,860
25	155	159	b565	598	590	463	296	2,100	162	144	2,320	933
26	159	164	b593	571	583	361	354	1,400	250	82	2,490	697
27	145	172	b585	611	652	426	369	1,320	162	76	2,170	714
28	126	217	573	672	599	501	315	1,300	99	127	1,400	572
29	124	255	b539	776	538	494	264	934	115	551	568	567
30	116	297	561	793	-	510	276	762	146	1,700	295	526
31	108	-	611	649	-	583	-	656	-	1,180	202	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	9,329	1,410	74	301	18,500
November	4,228	297	99	141	8,390
December	16,675	637	396	538	33,070
Calendar year 1939	264,373.9	4,690	.8	724	524,400
January	18,425	793	244	594	36,550
February	18,999	1,010	538	655	37,680
March	19,611	1,000	351	633	38,900
April	9,093	619	71	303	18,040
May	20,268	2,700	56	654	40,200
June	4,526	513	45	151	8,980
July	9,997	1,700	50	322	19,830
August	19,443	2,490	137	627	38,560
September	17,360	1,860	73	579	34,430
Water year 1939-40	167,954	2,700	45	459	333,100

b Stage-discharge relation affected by ice.

Elephant Butte Reservoir at Elephant Butte, N. Mex.

Location.- Water-stage recorder, lat. 33°09'15", long. 107°11'30", in NW¼ sec. 30, T. 13 S., R. 3 W. (surveys by Bureau of Reclamation), 1 mile west of Elephant Butte post office and 4 miles northeast of Hot Springs. Datum of gage is 43.3 feet above mean sea level.

Records available.- January to September 1940.

Remarks.- Reservoir is formed by concrete dam; storage began Jan. 6, 1915, dam completed May 13, 1916. Capacity, 2,273,700 acre-feet between gage heights 4,231.5 feet (sill of lower outlet gate) and 4,407.0 feet (spillway crest), survey of 1935. No dead storage. Figures given herein represent usable contents. Water is used for power development and irrigation on Rio Grande project of Bureau of Reclamation. Contents as here given are computed from mean daily gage heights.

Cooperation.- Gage-height record and capacity table furnished by Bureau of Reclamation.

Capacity table (gage height, in feet, and contents in acre-feet)
(Prepared by Bureau of Reclamation from surveys by Soil Conservation Service in 1935 and Bureau of Reclamation in 1940)

4,231.5	0	4,310	282,900
4,250	2,220	4,330	499,670
4,270	37,600	4,350	783,200
4,290	129,100	4,370	1,147,600

Monthly gage height and contents, period January to September 1940

Month	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Jan. 31.....	4,353.44	839,200	-
Feb. 29.....	4,355.47	874,700	+35,500
Mar. 31.....	4,356.22	886,700	+12,000
Apr. 30.....	4,350.4	789,700	-97,000
May 31.....	4,346.83	732,700	-57,000
June 30.....	4,339.54	625,400	-107,300
July 31.....	4,331.82	522,300	-103,100
Aug. 31.....	4,325.97	451,000	-71,300
Sept.30.....	4,324.23	429,900	-21,100
The period.....	-	-	-409,300

Rio Grande below Elephant Butte Dam, N. Mex.

Location.- Water-stage recorder, lat. 33°09'10", long. 107°11'50" (revised), in NE¼ sec. 25, T. 13 S., R. 4 W. (surveys by Bureau of Reclamation), in Pedro Armendaris grant, 1,900 feet downstream from Elephant Butte Dam. Datum of gage is 4,240.94 feet (revised) above mean sea level.

Records available.- October 1916 to September 1940.

Average discharge.- 24 years, 1,161 second-feet.

Extremes.- Maximum daily discharge during year, 2,920 second-feet July 15; minimum daily, 11 second-feet Dec. 24.
1916-40: Maximum daily discharge, 3,200 second-feet July 29 to Aug. 3, 1917; no flow at times.

Remarks.- Records good. Considerable diversion above station for irrigation. Flow regulated by Elephant Butte Reservoir (capacity when constructed, 2,638,000 acre-feet).

Cooperation.- Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,410	15	16	13	18	18	2,190	1,510	2,180	1,780	1,440	1,690
2	2,400	15	16	14	19	18	2,180	1,510	2,170	1,780	1,620	1,680
3	2,400	15	16	15	17	18	2,190	1,510	2,160	1,150	2,010	1,640
4	2,390	14	16	15	14	17	2,210	1,510	2,150	870	2,010	1,580
5	2,390	14	16	15	15	17	2,210	1,350	2,130	1,270	1,860	1,580
6	2,370	14	15	15	18	18	2,210	1,900	2,140	2,100	941	1,570
7	2,360	14	15	14	18	17	2,200	1,910	2,140	2,160	1,730	1,560
8	2,350	14	15	15	16	18	2,170	1,910	2,130	2,200	1,730	1,490
9	2,350	14	15	15	17	19	2,140	1,920	2,110	2,310	1,860	1,230
10	2,350	14	15	15	18	19	2,150	1,910	2,100	2,370	2,070	1,320
11	1,170	14	15	15	18	17	2,150	1,910	1,940	2,440	2,080	1,060
12	36	14	15	16	17	17	2,140	1,910	2,100	2,620	2,110	1,020
13	19	16	15	18	18	17	2,160	1,900	2,100	2,540	2,110	1,000
14	18	16	16	16	18	a17	2,160	1,760	2,090	2,640	2,100	1,110
15	18	15	16	17	18	a18	2,170	1,600	2,060	2,920	1,930	1,460
16	17	14	16	18	17	18	2,160	1,600	2,060	2,760	2,080	852
17	17	16	16	18	16	16	2,160	1,610	2,060	2,580	2,080	997
18	17	15	15	17	17	18	1,780	1,610	2,050	2,550	2,070	1,070
19	16	15	15	17	18	19	1,980	1,610	2,050	2,560	2,070	930
20	16	15	15	16	19	18	2,120	1,610	2,040	2,390	2,020	822
21	16	15	15	16	19	18	2,110	1,620	2,050	2,280	1,910	830
22	16	14	16	16	18	18	1,880	1,660	2,140	1,930	1,860	1,090
23	17	14	14	17	19	19	1,810	1,390	2,130	2,110	1,860	422
24	17	15	11	18	19	18	1,650	1,070	2,130	2,020	1,860	453
25	18	14	13	18	20	209	1,420	1,070	2,130	1,600	1,860	256
26	18	15	14	18	19	1,400	1,440	1,070	2,130	1,770	1,850	79
27	19	16	15	19	18	1,710	1,450	1,070	2,130	1,680	1,780	76
28	19	16	15	18	19	1,940	1,460	1,070	2,120	1,940	1,700	76
29	19	16	15	19	19	1,940	1,460	1,120	1,260	1,560	1,700	72
30	19	16	13	20	-	1,950	1,460	1,870	1,780	1,800	1,710	70
31	19	-	13	19	-	2,000	-	1,960	-	1,620	1,690	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	25,311	2,410	16	816	50,200
November	444	16	14	14.8	881
December	463	16	11	14.9	918
Calendar year 1939	416,302	2,900	11	1,141	825,800
January	512	20	13	16.5	1,020
February	518	20	14	17.9	1,030
March	11,576	2,000	16	373	22,960
April	58,970	2,210	1,420	1,966	117,000
May	49,030	1,960	1,070	1,582	97,250
June	61,960	2,180	1,260	2,065	122,900
July	64,600	2,920	870	2,084	128,100
August	57,701	2,110	941	1,861	114,400
September	29,085	1,690	70	970	57,690
Water year 1939-40	360,170	2,920	11	984	714,300

a No gage-height record; discharge estimated.

Caballo Reservoir near Arrey, N. Mex.

Location.- Water-stage recorder, lat. 32°53'45", long. 107°17'30", at dam on Rio Grande, in SE¼SW¼ sec. 19, T. 16 S., R. 4 W., 0.5 mile downstream from mouth of Apache Canyon, 0.8 mile above Bojorquez bridge, 2 miles above Percha diversion dam, 3.5 miles northeast of Arrey, and 4.5 miles south of Caballo. Datum of gage is 43.3 feet above mean sea level.

Records available.- February 1938 to September 1940.

Remarks.- Reservoir is formed by earth-fill dam; storage began Feb. 8, 1938; dam completed Sept. 19, 1938. Capacity, 345,870 acre-feet between gage heights 4,104 feet (bottom of tunnel entrance to gates) and 4,182 feet (maximum gage height at which spillway gates operate automatically). No dead storage. Figures given herein represent usable contents. Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande Project of Bureau of Reclamation. Contents as here given are computed from mean daily gage heights.

Cooperation.- Gage-height record and capacity table furnished by Bureau of Reclamation.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Prepared by Bureau of Reclamation)

4,104	0	4,150	85,510
4,110	1SS	4,160	145,480
4,120	4,450	4,170	233,640
4,130	20,140	4,180	323,240
4,140	46,210	4,182	345,870

Monthly gage heights and contents, February 1938 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Feb. 28, 1938	4,119.95	4,450	-
Mar. 31	4,123.7	8,910	+4,460
Apr. 30	4,127.25	14,580	+5,670
May 31	4,126.35	13,180	-1,400
June 30	4,128.92	17,900	+4,720
July 31	4,127.4	14,960	-2,940
Aug. 31	4,125.8	12,180	-2,780
Sept.30	4,116.62	1,880	-10,300
The period	-	-	-2,570
Oct. 31, 1938	4,125.10	11,070	+9,190
Nov. 30	4,134.53	30,720	+19,650
Dec. 31	4,148.95	80,600	+49,880
Calendar year 1938	-	-	-
Jan. 31, 1939	4,154.89	112,400	+31,800
Feb. 28	4,151.44	92,580	-19,820
Mar. 31	4,132.34	25,320	-67,260
Apr. 30	4,138.98	43,200	+17,880
May 31	4,133.35	27,960	-15,240
June 30	4,129.11	18,300	-9,660
July 31	4,130.30	20,790	+2,490
Aug. 31	4,134.38	30,460	+9,670
Sept.30	4,147.27	73,260	+42,800
Water year 1938-39	-	-	+71,380
Oct. 31, 1939	4,152.13	96,240	+22,980
Nov. 30	4,150.10	86,010	-10,130
Dec. 31	4,148.70	79,280	-6,730
Calendar year 1939	-	-	-1,320
Jan. 31, 1940	4,148.89	80,160	+880
Feb. 29	4,146.69	70,770	-9,390
Mar. 31	4,125.74	12,020	-58,750
Apr. 30	4,128.64	17,300	+5,280
May 31	4,129.11	18,300	+1,000
June 30	4,131.80	24,140	+5,840
July 31	4,128.12	16,300	-7,840
Aug. 31	4,128.28	16,700	+400
Sept.30	4,123.90	9,180	-7,520
Water year 1939-40	-	-	-64,080

Rio Grande below Caballo Dam, N. Mex.

Location.- Water-stage recorder, lat. 32°53', long. 107°18', in NE¼SW¼ sec. 30, T. 16 S., R. 4 W., 600 feet upstream from Bojorquez Bridge, 4,200 feet downstream from Caballo Dam, 1¼ miles downstream from Apache Canyon, 1 1/3 miles upstream from Percha diversion dam, 3 miles northeast of Arrey, and 5 miles south of Caballo. Datum of gage is 4,145.9 feet above mean sea level.

Records available.- January 1938 to September 1940.

Extremes.- Maximum daily discharge during year, 2,550 second-feet July 14; minimum daily, 2.0 second-feet Jan. 15, Feb. 5-8.
1938-40: Maximum daily discharge, that of July 14, 1940; minimum daily, 1.4 second-feet Dec. 29-31, 1938.

Remarks.- Records good. Considerable diversion above station for irrigation. Flow regulated by Caballo Reservoir (capacity when constructed, 345,900 acre-feet).

Cooperation.- Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	38	31	3.5	2.3	1,060	2,110	1,520	2,100	1,670	1,500	1,800
2	1,060	30	31	3.4	2.6	1,070	2,120	1,550	2,140	1,560	1,440	1,750
3	1,070	25	32	3.2	2.4	1,070	2,190	1,660	2,090	1,930	1,660	1,630
4	684	25	32	2.8	2.4	1,010	2,130	1,650	2,060	1,770	1,750	1,540
5	316	25	32	2.7	2.0	1,030	2,080	1,660	2,020	1,860	1,750	1,540
6	114	25	32	2.7	2.0	853	2,180	1,730	2,000	2,000	1,690	1,540
7	93	25	32	2.7	2.0	653	2,180	1,650	2,050	2,040	1,780	1,490
8	90	26	32	2.7	2.0	967	2,180	1,530	2,070	1,990	1,820	1,460
9	86	26	32	2.7	163	1,150	2,100	1,450	2,140	2,260	1,900	1,460
10	106	296	32	2.3	334	1,030	2,010	1,390	2,090	2,380	2,130	1,420
11	106	987	32	2.3	399	771	2,020	1,430	2,040	2,440	2,140	1,320
12	88	965	57	2.3	281	644	2,030	1,450	1,920	2,430	1,920	1,240
13	68	849	29	2.1	273	1,110	2,030	1,460	1,860	2,360	1,850	1,240
14	68	800	668	2.1	735	1,110	2,030	1,410	1,800	2,550	1,790	1,300
15	68	392	920	2.0	888	1,180	2,000	1,490	1,900	2,460	1,770	1,300
16	76	82	837	2.1	888	1,400	1,890	1,510	1,900	2,450	1,840	1,290
17	907	56	707	2.1	821	1,400	1,810	1,450	1,910	2,400	1,970	1,180
18	855	32	559	2.1	798	1,390	1,750	1,450	1,930	2,410	2,240	1,050
19	831	32	188	2.1	446	1,440	1,760	1,450	2,020	2,380	2,160	958
20	739	32	9	2.1	3.9	1,520	1,770	1,410	2,050	2,280	2,050	865
21	591	31	4.3	2.1	3.9	1,520	1,770	1,360	2,140	2,200	1,900	663
22	247	31	4.3	2.2	3.9	1,570	1,770	1,270	2,120	2,050	1,830	620
23	84	31	4.3	2.2	3.9	1,830	1,620	925	1,890	1,950	1,850	620
24	83	31	4.3	2.2	3.2	1,820	1,480	1,010	1,510	1,910	1,980	650
25	60	31	4.3	2.2	3.2	1,830	1,430	1,220	1,500	1,910	1,990	699
26	43	31	3.7	2.2	3.2	1,840	1,430	1,370	1,710	1,920	1,980	677
27	35	31	3.7	2.1	33	1,900	1,430	1,460	1,710	1,940	1,860	731
28	36	31	3.7	2.1	60	1,840	1,430	1,630	1,720	1,950	1,700	890
29	36	31	3.7	2.1	253	1,840	1,440	1,690	1,640	1,970	1,710	690
30	37	31	3.6	2.1	-	2,120	1,480	1,890	1,600	1,960	1,860	873
31	37	-	3.4	2.1	-	2,120	-	2,020	-	1,730	1,800	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	9,744	1,070	35	314	19,330
November	5,078	987	25	169	10,070
December	4,367.3	920	3.4	141	8,660
Calendar year 1939	397,822.3	2,490	1.8	1,090	789,100
January	73.6	3.5	2.0	2.37	146
February	6,414.9	888	2.0	221	12,720
March	42,488	2,120	771	1,371	84,270
April	55,650	2,190	1,430	1,855	110,400
May	46,145	2,020	925	1,489	91,530
June	57,630	2,140	1,500	1,921	114,300
July	65,110	2,550	1,560	2,100	129,100
August	57,610	2,240	1,440	1,858	114,300
September	34,686	1,800	620	1,156	68,800
Water year 1939-40	384,996.8	2,550	2.0	1,052	763,600

Clear Creek below Continental Reservoir, Colo.

Location.- Water-stage recorder and Parshall flume, lat. 37°53', long. 107°11', in sec. 22, T. 42 N., R. 3 W., 1,000 feet downstream from Continental Reservoir and 15 miles west of Creede.

Drainage area.- 49 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. May 1929 to September 1940 in reports of State engineer.

Extremes.- Maximum discharge during year, 143 second-feet May 9 (gage height, 2.01 feet); minimum daily recorded, 7.0 second-feet Sept. 11, may have been less during period of ice effect.

1929-40: Maximum discharge, 313 second-feet May 4, 1937 (gage height, 3.41 feet); no flow June 22, 23, 1935.

Remarks.- Records good except those for period of ice effect, which are fair. Flow regulated by Continental Reservoir (capacity, 28,700 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17						10	26	46	22	8.6	14
2	a17						10	27	47	22	7.8	14
3	a17						10	31	45	18	7.6	16
4	a17						10	32	46	16	8.6	17
5	a17						10	31	48	18	9.0	11
6	a17						10	30	47	16	14	8.2
7	a17						10	28	46	15	14	8.2
8	a17						10	27	45	14	13	7.4
9	a17						10	59	58	14	14	8.6
10	a17						10	136	66	16	14	7.8
11	a17						10	136	57	16	15	7.0
12	a10						10	134	30	15	9.0	7.8
13	a10						10	130	22	14	7.8	7.4
14	10						10	129	22	14	8.2	7.4
15	10						10	129	24	14	8.2	all
16	10	8.5	9.0	9.0	9.5	9.5	10	128	25	18	9.0	a15
17	10						10	100	24	18	11	a16
18	10						10	70	23	17	12	a16
19	10						10	61	21	16	11	a14
20	10						10	49	14	16	16	a12
21	10						10	42	15	16	18	a9.4
22	10						17	88	19	16	17	9.4
23	10						24	128	20	13	16	9.8
24	10						25	66	20	14	12	11
25	11						25	58	21	15	11	11
26	11						25	38	18	16	9.8	10
27	11						25	35	20	18	11	9.4
28	10						25	39	24	17	11	9.8
29	10						26	45	24	12	13	12
30	8.5				-		25	46	22	11	16	14
31	8.5	-			-		-	46	-	11	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	386.6	17	8.3	12.5	767
November	255.0	-	-	8.5	506
December	279.0	-	-	9.0	553
Calendar year 1939	13,912.9	228	-	38.1	27,600
January	279.0	-	-	9.0	553
February	275.5	-	-	9.5	546
March	294.5	-	-	9.6	584
April	426	25	10	14.2	845
May	2,104	136	26	67.9	4,170
June	959	66	14	32.0	1,900
July	486	22	11	16.7	964
August	368.8	18	7.8	11.9	732
September	331.6	17	7.0	11.1	658
Water year 1939-40	6,445.0	136	-	17.6	12,780

a No gage-height record; discharge computed on basis of records for outflow of Continental Reservoir.

Note.- Stage-discharge relation affected by ice Oct. 26 to Apr. 22.

Goose Creek near Wagon Wheel Gap, Colo.

Location.- Water-stage recorder, lat. 37°41', long. 106°50', in NW¼ sec. 26, T. 40 N., R. 1 E., 1½ miles downstream from Roaring Fork and 6 miles south of Wagon Wheel Gap.

Drainage area.- 51 square miles.

Records available.- October 1939 to September 1940. October 1924 to July 1926 at site 1 mile upstream.

Extremes.- Maximum discharge during year, 181 second-feet May 13 (gage height, 1.84 feet), from rating curve extended above 90 second-feet; minimum daily, 10 second-feet Dec. 29-31.

1924-26, 1939-40: Maximum discharge, 454 second-feet (revised) June 6, 1926 (gage height, 1.50 feet, site and datum then in use), extended by weir formula over Ogee weir; minimum discharge, 8 second-feet (regulated) Nov. 29 to Dec. 16, 1924 (corrected) (gage height, 0.08 foot, site and datum then in use).

Remarks.- Records good except those for period of ice effect and no gage-height record, which are fair. Lake Humphryes, above station, (capacity, 842 acre-feet) has slight effect on flow.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a16	20	14	11	12	13	21	30	114	31	18	21
2	a15	20	14	12	12	13	20	42	98	26	18	20
3	a15	19	12	12	12	13	19	71	90	24	18	23
4	a15	a18	12	12	13	14	20	98	84	24	18	22
5	a15	a18	14	12	13	*14	21	95	79	18	18	20
6	a15	a17	*13	12	13	13	19	101	69	22	21	20
7	a16	16	13	12	14	13	18	101	65	20	20	19
8	a18	17	13	12	14	14	18	90	61	21	19	20
9	a18	18	14	12	14	14	18	71	53	21	18	a19
10	a16	17	14	12	14	14	18	82	46	22	18	a18
11	a16	17	13	12	14	14	18	93	45	22	18	17
12	a16	17	14	12	13	14	18	95	44	21	18	18
13	a17	16	12	13	13	13	22	101	42	20	17	20
14	a17	16	12	13	13	13	28	123	42	21	16	19
15	a16	16	12	13	13	13	29	114	44	20	18	20
16	a16	16	12	*13	14	13	24	110	46	20	18	18
17	a16	16	12	13	14	14	24	104	44	19	17	20
18	a16	14	12	13	13	14	28	90	40	18	17	55
19	a16	13	12	13	*14	16	35	71	39	18	a21	69
20	a16	13	12	13	13	16	45	67	38	19	a27	50
21	a15	13	12	12	14	17	53	55	35	23	a25	40
22	a14	13	12	12	13	19	50	55	36	18	a23	40
23	a14	14	12	12	14	20	57	57	35	17	a23	39
24	16	15	12	12	14	21	61	61	29	18	a25	40
25	18	15	11	12	13	23	67	65	28	18	a25	38
26	20	15	11	12	13	25	71	76	29	29	a24	38
27	17	14	11	12	13	23	63	98	28	31	a24	38
28	19	14	12	13	13	20	42	107	26	21	25	35
29	20	12	*10	13	13	19	35	107	25	20	24	50
30	18	14	10	13	-	19	30	107	42	20	23	59
31	19	-	10	*12	-	22	-	117	-	19	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	511	20	14	16.5	1,010
November	473	20	12	15.8	938
December	379	14	10	12.2	752
Calendar year	-	-	-	-	-
January	382	13	11	12.3	758
February	385	14	12	13.3	764
March	503	25	13	16.2	998
April	992	71	18	33.1	1,970
May	2,654	123	30	85.6	5,260
June	1,496	114	25	49.9	2,970
July	661	31	17	21.3	1,310
August	635	27	16	20.5	1,260
September	925	69	17	30.8	1,830
Water year 1939-40	9,996	123	10	27.3	19,820

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of record for South Fork of Rio Grande.
Note.- Stage-discharge relation affected by ice Dec. 29 to Feb. 14.

South Fork of Rio Grande at South Fork, Colo.

Location.- Water-stage recorder, lat. 37°40', long. 106°39', in sec. 4, T. 39 N., R. 3 E., 1¼ miles upstream from mouth and 1½ miles southwest of village of South Fork. Datum of gage is 8,221.79 feet above mean sea level (general adjustment of 1929).

Drainage area.- 216 square miles.

Records available.- August 1910 to September 1913, May 1936 to September 1940 in reports of Geological Survey. August 1910 to September 1922, May 1936 to September 1940 in reports of State engineer. Records for 1910-22 at site 1 mile downstream.

Average discharge.- 16 years (1910-22, 1936-40), 241 second-feet.

Extremes.- Maximum discharge during year, 614 second-feet May 16 (gage height, 3.31 feet); minimum daily, 26 second-feet Dec. 20-22, 27.

1910-22, 1936-40: Maximum discharge, 8,000 second-feet (revised) Oct. 5, 1911 (gage height, 9.7 feet, from floodmarks, site and datum now in use), from rating curve extended above 1,500 second-feet; minimum daily, 20 second-feet Jan. 1, 2, 8, 17, 23-25, 1915, Dec. 20, 1937.

Remarks.- Records good. A few small diversions above station for irrigation, and several small storage reservoirs.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	52	32	30	36	42	92	169	481	92	52	44
2	51	52	30	32	36	41	80	166	453	76	50	42
3	49	52	31	31	36	40	77	267	426	71	50	49
4	47	50	31	31	36	39	74	363	407	65	45	44
5	47	52	32	30	36	*40	82	385	429	65	44	40
6	47	54	*31	30	36	41	77	403	437	69	60	38
7	47	47	30	32	38	41	73	418	418	58	57	38
8	59	50	31	34	38	43	75	399	395	58	52	42
9	58	54	33	35	38	50	80	381	288	52	47	38
10	52	50	35	35	38	58	83	422	252	51	41	35
11	52	49	34	36	38	55	78	414	238	48	42	39
12	52	49	31	34	38	52	83	395	224	50	39	36
13	53	51	30	33	39	48	101	465	222	48	37	47
14	53	47	30	34	39	52	126	485	230	52	35	47
15	52	47	29	35	41	58	135	490	222	49	33	52
16	51	45	32	*36	40	62	121	498	211	49	33	49
17	50	43	30	37	36	62	110	523	198	46	33	40
18	48	43	28	37	36	*64	119	523	182	45	40	86
19	49	42	27	39	*38	68	152	441	171	44	48	138
20	a45	36	26	38	41	68	189	418	160	43	56	104
21	a40	40	26	37	41	76	213	381	156	49	94	80
22	a37	38	26	36	42	82	219	363	158	45	58	84
23	a33	37	27	36	42	94	238	367	148	44	56	79
24	a32	37	29	35	43	104	264	374	126	49	64	86
25	51	39	27	35	42	114	283	374	116	44	76	78
26	66	44	27	35	45	122	302	399	104	53	66	79
27	47	43	26	36	45	117	312	429	98	91	67	86
28	51	38	27	35	43	100	232	445	87	110	55	75
29	52	36	28	34	43	88	196	457	88	71	55	88
30	51	33	*29	34	-	89	180	465	126	67	50	106
31	51	-	30	*34	-	95	-	481	-	58	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,525	66	32	49.2	3,020
November	1,350	54	33	45.0	2,680
December	915	35	26	29.5	1,810
Calendar year 1939	51,655	778	26	142	102,400
January	1,066	39	30	34.4	2,110
February	1,140	45	36	39.3	2,260
March	2,105	122	39	67.9	4,180
April	4,446	312	73	148	8,820
May	12,580	523	169	406	24,950
June	7,251	481	87	242	14,380
July	1,814	110	43	58.5	3,600
August	1,582	94	33	51.0	3,140
September	1,889	138	35	63.0	3,750
Water year 1939-40	37,663	523	26	103	74,700

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of record for Rio Grande near Del Norte.
Note.- Stage-discharge relation affected by ice Nov. 16 to Mar. 22.

Pinos Creek near Del Norte, Colo.

Location.- Water-stage recorder and Parshall flume, lat. 37°27', long. 106°35', in sec. 29, T. 39 N., R. 5 E., just downstream from Bennett Creek and 8 miles southwest of Del Norte.

Drainage area.- 53 square miles.

Records available.- May 1936 to September 1940 in reports of Geological Survey. May 1919 to September 1924, May 1936 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 119 second-feet July 21 (gage height, 1.63 feet); minimum daily recorded, 3.6 second-feet Oct. 27, may have been less during period of no records.
1919-24, 1936-40: Maximum daily discharge, 2,400 second-feet June 3, 1922; minimum not determined.

Remarks.- Records excellent except those for Apr. 1, 2, which are good. None for Nov. 7 to Mar. 31. One small diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	6.0					a11	14	38	11	8.8	5.3
2	5.3	6.0					a10	21	37	10	8.1	5.3
3	5.0	6.0					9.9	32	32	10	8.8	6.0
4	5.0	6.0					9.9	42	30	11	8.8	5.3
5	4.7	6.0					8.8	41	30	11	9.2	4.7
6	4.7	4.7					8.4	36	29	11	13	4.7
7	4.7	-					8.4	32	26	8.e	12	5.0
8	5.7	-					8.1	33	23	8.s	10	5.0
9	6.0	-					9.2	28	22	8.1	9.2	4.2
10	5.0	-					10	34	20	7.7	6.7	5.7
11	5.7	-					12	33	19	8.4	6.7	5.7
12	5.3	-					11	32	18	8.1	6.7	5.0
13	4.7	-					15	52	17	8.8	6.4	6.3
14	4.2	-					20	44	16	8.4	6.4	5.7
15	4.2	-					22	40	15	7.7	6.4	5.0
16	4.7	-					16	43	14	8.4	6.7	4.4
17	5.7	-					11	46	14	8.1	6.0	4.7
18	5.7	-					12	49	12	8.4	7.4	9.2
19	6.0	-					17	44	11	7.7	9.2	7.7
20	4.7	-					22	44	11	9.9	11	6.7
21	4.4	-					26	38	11	12	9.2	6.0
22	5.0	-					25	38	11	9.5	7.7	6.7
23	5.0	-					25	42	10	8.4	7.7	5.7
24	5.0	-					22	41	9.5	12	9.2	5.3
25	5.0	-					30	41	9.9	8.1	8.8	4.7
26	5.3	-					35	47	10	8.8	7.7	4.7
27	3.6	-					35	50	11	12	7.7	5.3
28	5.0	-					24	47	10	9.9	6.4	4.4
29	5.7	-					18	46	12	9.9	7.0	4.4
30	5.0	-					13	42	18	12	6.7	5.3
31	5.7	-					-	40	-	11	6.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	157.0	6.0	3.6	5.06	311
November 1-6	34.7	6.0	4.7	5.78	69
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	502.7	35	8.1	16.8	997
May	1,212	52	14	39.1	2,400
June	546.4	38	9.5	18.2	1,080
July	294.9	12	7.7	9.51	585
August	251.6	13	6.0	8.12	499
September	164.1	9.2	4.2	5.47	325
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of discharge measurement Apr. 2.

San Francisco Creek near Del Norte, Colo.

Location.- Water-stage recorder, lat. 37°35', long. 106°22', in sec. 31, T. 39 N., R. 6 E., 1⅛ miles downstream from East Fork and 6 miles south of Del Norte.

Drainage area.- 13.1 square miles.

Records available.- April 1936 to September 1940 (no winter records).

Extremes.- Maximum discharge during year, 25 second-feet Aug. 18 (gage height, 0.68 foot); minimum daily recorded, 0.7 second-foot Oct. 5-7, 12-16, 24, 31, Apr. 18, 19, 30, 8ept. 8, 9, 16; probably less during period of no record.
1936-40: Maximum discharge, 364 second-feet July 27, 1936 (gage height, 1.47 feet), by slope-area method; minimum daily recorded, 0.4 second-foot Oct. 30, 31, 1937.

Remarks.- Records good except those for period of no gage-height record, which are fair. None for Nov. 1 to Mar. 31. One small diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2						a1.6	1.0	4.7	2.3	1.5	1.5
2	1.0						a1.5	2.6	5.1	2.1	1.5	1.5
3	.8						a1.2	6.4	4.3	2.1	1.0	1.5
4	.8						a1.2	5.9	3.8	1.9	.8	1.2
5	.7						a1.0	3.8	3.8	1.9	1.0	1.0
6	.7						a1.0	3.0	3.4	1.7	1.7	1.5
7	.7						a1.1	3.4	3.0	1.7	1.7	1.2
8	.8						a1.1	3.0	3.4	1.7	1.2	.7
9	.8						1.2	2.8	3.4	1.7	1.2	.7
10	.8						1.0	3.4	3.0	1.5	1.2	1.0
11	.8						1.5	3.4	2.8	1.5	1.2	1.2
12	.7						1.9	3.0	2.8	1.5	1.0	1.0
13	.7						1.2	3.8	2.8	1.2	1.0	1.2
14	.7						1.5	3.8	2.8	1.2	.8	.8
15	.7						1.7	3.8	2.6	1.2	.8	.8
16	.7						1.2	a4.0	2.6	1.7	1.0	.7
17	.8						1.0	a4.2	2.6	1.7	1.0	.8
18	.8						.7	a4.6	2.6	1.9	2.6	1.2
19	.8						.7	a3.8	2.3	1.7	2.8	1.0
20	.8						.8	3.4	2.1	1.9	2.8	1.0
21	.8						.8	3.8	2.1	1.9	2.3	1.0
22	.8						.8	4.3	2.1	1.9	1.9	1.5
23	.8						1.0	5.1	1.9	1.5	1.7	1.7
24	.7						1.0	5.9	1.9	1.5	2.1	1.7
25	.8						1.5	6.8	1.9	1.5	1.9	1.9
26	1.0						2.1	7.9	1.9	1.5	1.5	1.9
27	1.0						2.3	7.9	1.9	1.5	1.5	1.9
28	1.0						1.5	7.9	2.1	1.5	1.5	1.7
29	.8						1.0	5.9	2.6	1.2	1.5	1.7
30	1.7						.7	5.1	2.8	1.5	1.5	1.9
31	.7						-	4.7	-	1.2	1.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	25.9	1.7	0.7	0.84	51
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	36.8	2.3	.7	1.23	73
May	138.4	7.9	1.0	4.46	275
June	85.1	5.1	1.9	2.84	169
July	50.8	2.3	1.2	1.64	101
August	46.9	2.8	.8	1.51	93
September	38.4	1.9	.7	1.28	78
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Rock Creek near Monte Vista.

Rock Creek near Monte Vista, Colo.

Location.- Water-stage recorder and 8-foot Parshall flume, lat. 37°29', long. 106°16', in SE¼ sec. 36, T. 38 N., R. 6 E., 3 miles downstream from North Fork and 9 miles southwest of Monte Vista.

Drainage area.- 33.6 square miles.

Records available.- May 1935 to September 1940 in reports of Geological Survey. April 1919 to September 1924, May 1935 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 31 second-feet May 3 (gage height, 0.97 feet); minimum daily recorded, 1.9 second-feet Aug. 16; probably less during period of no record.
1935-40: Maximum discharge, 156 second-feet Aug. 11, 1935 (gage height, 2.65 feet); minimum not determined.

Remarks.- Records good except those for period of no gage-height record, which are fair. None for Nov. 11 to Mar. 28. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	2.9				-	6.3	7.0	15	5.8	3.4	2.6
2	3.8	2.9				-	6.1	12	14	5.1	3.2	2.5
3	3.6	3.1				-	a5.1	17	13	4.9	3.4	2.6
4	3.4	2.9				-	a5.2	14	12	5.1	3.0	2.5
5	3.4	a3.1				-	4.7	10	12	5.6	3.0	2.5
6	3.4	a3.1				-	4.7	9.5	11	5.3	3.4	2.1
7	3.4	3.6				-	4.9	10	10	4.9	3.4	2.1
8	3.6	4.0				-	4.9	10	9.5	4.7	3.0	2.1
9	3.8	4.7				-	5.6	a8.4	9.2	4.7	2.8	2.1
10	4.0	4.9				-	a5.4	11	8.5	4.5	2.5	2.6
11	4.0	-				-	a5.8	9.8	8.2	4.3	2.5	3.2
12	4.0	-				-	a6.2	10	7.8	4.3	2.5	2.8
13	4.2	-				-	6.5	15	7.8	4.0	2.3	3.4
14	4.0	-				-	8.0	13	7.8	4.3	2.1	3.2
15	4.0	-				-	9.2	12	7.3	3.6	2.1	3.0
16	4.0	-				-	7.5	13	7.0	4.7	1.9	2.6
17	4.0	-				-	6.8	15	6.8	4.0	2.3	2.6
18	3.8	-				-	7.0	17	6.3	4.5	2.1	3.8
19	4.0	-				-	8.2	15	6.8	4.0	a2.8	3.2
20	3.8	-				-	9.5	16	6.3	4.5	a4.3	3.2
21	3.6	-				-	10	16	6.1	5.8	3.2	2.8
22	3.8	-				-	11	16	5.8	4.3	3.0	3.4
23	3.8	-				-	11	20	5.6	4.3	3.6	3.4
24	3.4	-				-	9.2	19	5.8	4.5	4.3	3.2
25	3.4	-				-	11	19	5.6	3.6	3.2	3.2
26	3.8	-				-	15	22	5.3	3.6	3.0	3.2
27	2.7	-				-	12	20	5.8	4.5	3.0	3.4
28	a2.9	-				-	8.0	19	5.3	4.3	2.8	3.2
29	a3.3	-				4.9	7.3	18	6.5	4.5	3.0	3.0
30	a2.9	-				5.6	7.0	18	8.8	4.3	2.8	3.2
31	3.1	-				6.1	-	16	-	3.8	2.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	113.1	4.2	2.7	3.65	224
November 1-10	35.2	4.9	2.9	3.52	70
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	229.1	15	4.7	7.64	454
May	447.7	22	7.0	14.4	888
June	246.9	15	5.3	8.23	490
July	140.3	5.8	3.6	4.53	278
August	90.7	4.3	1.9	2.93	180
September	86.7	3.8	2.1	2.89	172
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for Alamosa Creek above Terrace Reservoir.

Closed basin in San Luis Valley, Colo.

Kerber Creek at Ashley Ranch, near Villa Grove, Colo.

Location.- Water-stage recorder, lat. 38°15', long. 106°08', in sec. 7, T. 46 N., R. 8 E., at Ashley Ranch, 10 miles west of Villa Grove.

Drainage area.- 38 square miles.

Records available.- May 1936 to September 1940 in reports of Geological Survey. June 1923 to September 1926, May 1936 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 49 second-feet Aug. 22 (gage height, 2.51 feet); minimum daily recorded, 1.2 second-feet Aug. 14, 16, 17; may have been less during period of no record.
1923-26, 1936-40: Maximum discharge, 306 second-feet July 30, 1936 (gage height, 2.83 feet), by slope-area method; minimum daily recorded, that of Aug. 14, 16, 17, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. None for Nov. 14 to Mar. 31. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	2.3					b6.0	12	22	5.1	2.6	3.2
2	3.2	2.6					b5.7	13	22	4.9	2.3	2.9
3	2.9	2.4					b5.7	15	a21	4.3	2.4	2.7
4	2.7	1.9					b5.3	15	a18	4.0	1.9	2.6
5	2.7	2.1					5.1	19	a17	3.7	1.9	2.4
6	2.7	2.7					4.6	20	16	5.1	2.4	2.4
7	2.7	1.9					4.6	22	15	4.6	3.7	2.4
8	4.0	1.6					4.9	22	14	3.7	2.6	2.3
9	4.0	2.1					4.6	22	13	2.9	2.3	2.7
10	2.9	1.8					3.7	23	13	2.7	2.1	2.7
11	2.7	1.9					4.6	23	12	2.9	2.3	2.7
12	2.9	2.1					5.4	26	12	2.9	1.6	3.7
13	3.2	1.9					7.5	25	12	2.7	1.3	4.0
14	3.5	-					8.9	25	12	2.4	1.2	4.0
15	3.7	-					8.6	26	16	2.4	1.3	2.7
16	3.5	-					7.5	28	16	2.6	1.2	2.7
17	3.5	-					8.0	30	12	2.7	1.2	2.7
18	3.5	-					9.4	28	12	2.1	1.6	3.5
19	3.5	-					12	23	9.8	2.3	2.4	3.7
20	3.5	-					14	21	9.4	2.6	2.3	3.2
21	3.2	-					15	21	8.9	3.7	2.3	4.0
22	3.5	-					15	19	9.4	2.7	4.6	8.5
23	3.5	-					15	19	8.5	2.7	7.5	5.4
24	3.5	-					16	18	8.0	2.6	5.1	5.7
25	3.2	-					15	18	7.1	2.1	6.6	4.9
26	4.6	-					15	19	7.1	2.1	5.1	4.6
27	3.7	-					15	21	5.7	2.9	4.0	4.3
28	a2.8	-					12	21	5.7	2.9	3.7	4.3
29	a3.8	-					12	20	5.7	2.7	3.5	4.3
30	a3.6	-					12	21	5.7	4.9	3.2	5.1
31	3.7	-					-	22	-	4.0	3.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	103.9	4.6	2.7	3.35	206
November 1-13	27.3	2.7	1.6	2.10	54
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	278.0	16	3.7	9.27	551
May	658	30	12	21.2	1,310
June	366.0	22	5.7	12.2	726
July	99.9	5.1	2.1	3.22	198
August	89.4	7.5	1.2	2.88	177
September	110.3	8.5	2.3	3.68	219
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Saguache Creek near Saguache.
b Stage-discharge relation affected by ice.

Closed basin in San Luis Valley, Colo.

Saguache Creek near Saguache, Colo.

Location.- Water-stage recorder, lat. 38°09', long. 106°19', in sec. 11, T. 45 N., R. 6 E., 10 miles northwest of Saguache.

Drainage area.- 595 square miles.

Records available.- August 1910 to September 1912, October 1933 to September 1940 in reports of Geological Survey (no winter records in later years). August 1910 to September 1912, June 1914 to September 1940 in reports of State engineer.

Extremes.- Maximum discharge during year, 137 second-feet May 18 (gage height, 1.03 feet); minimum daily recorded, 14 second-feet July 15, Sept. 12; may have been less during period of no record.
1910-12, 1914-40: Maximum discharge, 746 second-feet June 15, 1921 (gage height, 3.45 feet, datum then in use); minimum daily recorded, 14 second-feet Oct. 1, 2, 1933, July 15, Sept. 12, 1940.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. None for Nov. 17 to Mar. 15. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	29				-	26	31	47	26	23	21
2	28	29				-	29	31	45	25	20	21
3	28	28				-	25	36	44	18	18	21
4	27	27				-	25	47	40	17	18	21
5	26	26				-	26	55	39	17	19	18
6	28	31				-	28	56	37	18	22	15
7	28	30				-	32	55	37	17	29	17
8	29	26				-	32	54	33	16	26	17
9	31	31				-	32	54	34	15	22	16
10	30	27				-	31	54	a34	15	18	15
11	28	24				-	26	59	a33	15	18	15
12	30	25				-	26	56	a33	15	19	14
13	30	26				-	29	54	a33	15	17	15
14	30	25				-	34	55	a32	15	17	18
15	30	23				-	42	56	a32	14	17	18
16	29	26				33	40	57	32	16	a17	18
17	29	-				33	38	66	30	17	a19	16
18	30	-				30	32	80	28	17	25	17
19	31	-				26	34	66	27	21	25	22
20	31	-				25	38	56	26	18	24	23
21	30	-				26	45	55	27	21	25	21
22	31	-				25	43	57	31	24	31	24
23	31	-				25	38	57	31	22	33	a30
24	30	-				25	40	55	a29	22	28	a28
25	30	-				29	43	62	a27	21	34	a25
26	31	-				31	43	56	24	21	35	a24
27	33	-				33	45	60	25	31	31	a24
28	25	-				30	39	51	24	35	26	a24
29	31	-				25	36	48	21	32	23	a30
30	28	-				23	34	48	22	31	21	36
31	30	-				24	-	46	-	27	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	914	33	25	29.5	1,810
November 1-16	433	31	23	27.1	859
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 16-31	443	33	23	27.7	879
April	1,031	45	25	34.4	2,040
May	1,673	80	31	54.0	3,320
June	957	47	21	31.9	1,900
July	634	35	14	20.5	1,260
August	721	35	17	23.3	1,430
September	624	36	14	20.8	1,240
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for Carnero and La Garita Creeks near La Garita.

Closed basin in San Luis Valley, Colo.

North Crestone Creek near Crestone, Colo.

Location.- Water-stage recorder, lat. 38°01', long. 105°41', in sec. 5, T. 43 N., R. 12 E., 1⅛ miles upstream from Crestone and 3 miles upstream from South Crestone Creek.

Drainage area.- 10.7 square miles.

Records available.- May 1936 to September 1940 (no winter records).

Extremes.- Maximum discharge during year, 63 second-feet May 31 (gage height, 1.45 feet); minimum daily recorded, 3.4 second-feet Oct. 30, Aug. 15; probably less during period of no record.
1936-40: Maximum discharge, 735 second-feet Aug. 6, 1936 (gage height, 4.33 feet), by slope-area method; minimum daily, 2.1 second-feet Aug. 19, 24, 1939.

Remarks.- Records good. None for Nov. 16 to Mar. 26. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	3.6				-	5.2	12	47	15	6.2	6.4
2	6.6	3.6				-	5.4	18	43	13	6.0	6.1
3	6.6	3.6				-	5.0	33	40	12	5.6	6.1
4	6.2	3.6				-	5.0	41	34	12	5.2	5.8
5	6.2	3.6				-	4.8	40	32	11	5.2	5.4
6	5.8	3.8				-	4.8	34	31	9.6	5.4	5.3
7	5.2	3.8				-	4.6	35	29	9.4	5.7	5.7
8	5.6	3.8				-	4.4	33	27	9.2	5.1	6.1
9	5.8	4.0				-	4.2	34	25	8.8	4.6	5.8
10	5.2	4.0				-	4.2	41	22	8.6	4.6	6.1
11	5.2	4.0				-	4.0	41	21	8.6	4.6	6.1
12	5.2	4.2				-	3.8	40	23	9.4	4.2	5.8
13	5.2	4.2				-	4.0	43	27	11	3.8	6.0
14	4.8	4.2				-	4.6	43	30	9.4	3.5	6.1
15	4.4	4.6				-	5.2	43	29	9.0	3.4	5.8
16	4.4	-				-	4.8	42	25	8.6	3.6	5.4
17	4.2	-				-	4.6	41	22	8.2	3.6	6.0
18	3.8	-				-	5.4	35	21	7.8	3.7	6.1
19	4.0	-				-	8.3	33	18	7.3	3.8	6.0
20	4.0	-				-	12	32	18	7.2	4.4	5.7
21	4.0	-				-	12	30	18	7.4	4.9	6.2
22	4.0	-				-	13	29	18	7.0	4.9	8.0
23	4.0	-				-	15	29	18	6.6	6.4	9.2
24	4.0	-				-	17	29	17	6.1	9.2	11
25	3.8	-				-	18	29	17	5.8	12	15
26	3.8	-				-	20	31	15	6.6	10	16
27	3.8	-				5.8	19	33	14	7.6	9.4	15
28	3.6	-				5.8	15	36	13	7.2	8.8	14
29	3.8	-				5.4	14	41	14	6.7	8.0	13
30	3.4	-				5.4	12	45	16	7.3	7.3	14
31	3.6	-				5.4	-	47	-	6.7	7.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	147.0	6.8	3.4	4.74	292
November 1-15	58.6	4.6	3.6	3.91	116
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 27-31	27.8	5.8	5.4	5.56	55
April	259.3	20	3.8	8.64	514
May	1,093	47	12	35.3	2,170
June	724	47	13	24.1	1,440
July	270.1	15	5.8	8.71	536
August	180.1	12	3.4	5.81	357
September	239.2	16	5.3	7.97	474
Water year	-	-	-	-	-

Closed basin in San Luis Valley, Colo.

Carnero Creek near La Garita, Colo.

Location.- Water-stage recorder, lat. 37°52', long. 106°20', in sec. 26, T. 42 N., R. 6 E., 3 miles northwest of La Garita.

Drainage area.- 117 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. April 1919 to September 1940 in reports of State engineer. (No winter records most years.)

Extremes.- Maximum discharge during year, 31 second-feet Mar. 28 (gage height, 0.72 feet); minimum daily, 0.5 second-foot July 9.
1919-40: Maximum daily discharge, 500 second-feet Apr. 14, 1924; minimum daily, that of July 9, 1940.

Remarks.- Records good except those for periods of no gage-height records, which are fair. None for Nov. 8 to Mar. 26. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	3.8				-	13	6.6	6.3	1.9	1.0	1.2
2	2.9	3.8				-	10	7.1	6.0	1.8	a.8	1.2
3	2.9	3.3				-	9.5	8.8	5.4	1.5	a.8	1.1
4	2.9	3.3				-	8.8	9.1	4.9	1.8	a.8	1.0
5	2.9	3.8				-	8.4	8.4	4.7	1.5	a.8	1.0
6	3.1	4.0				-	8.0	8.0	4.7	.8	a.9	1.0
7	3.1	3.1				-	7.7	7.7	4.7	a.7	2.3	.9
8	4.2	-				-	7.1	7.7	4.4	a.6	1.5	1.0
9	5.4	-				-	6.8	8.8	4.0	a.5	1.0	1.1
10	4.4	-				-	6.0	8.8	4.0	a.7	a.8	1.1
11	4.0	-				-	6.8	8.4	3.3	a.8	a.8	1.3
12	4.0	-				-	6.8	9.5	3.1	a.8	a.8	1.8
13	4.0	-				-	7.4	9.5	3.1	1.1	a.7	2.3
14	4.0	-				-	9.1	9.1	3.1	1.3	a.7	2.9
15	4.0	-				-	9.5	8.4	2.7	1.3	a.7	2.4
16	4.0	-				-	9.1	8.4	2.7	1.0	a.6	2.1
17	3.8	-				-	7.7	9.5	2.9	a.7	a.6	2.1
18	3.8	-				-	8.4	16	2.7	a.7	a.6	2.7
19	3.6	-				-	10	12	2.3	a.8	a.8	3.3
20	3.3	-				-	9.9	10	2.1	a.9	1.5	2.6
21	3.1	-				-	10	10	1.9	a.9	2.1	2.6
22	3.1	-				-	8.4	13	1.9	1.2	2.4	2.9
23	3.1	-				-	8.0	15	1.8	1.3	2.7	4.2
24	3.6	-				-	8.4	12	1.6	1.2	4.0	3.8
25	3.3	-				-	9.5	9.5	1.6	a.9	3.3	3.3
26	4.0	-				-	10	8.8	1.6	a.9	2.6	3.1
27	3.8	-				14	9.9	9.1	1.8	a1.0	2.3	2.7
28	3.8	-				15	7.7	8.8	1.5	2.3	1.8	2.6
29	4.2	-				16	6.8	8.4	1.3	2.3	1.3	2.4
30	4.0	-				13	6.8	7.7	1.3	1.5	1.2	2.4
31	3.8	-				14	-	7.1	-	1.2	1.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	113.2	5.4	2.9	3.65	225
November 1-7	25.1	4.0	3.1	3.59	50
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 27-31	72	16	13	14.4	143
April	255.5	13	6.0	8.52	507
May	291.2	16	6.6	9.39	578
June	93.4	6.3	1.3	3.11	185
July	35.9	2.3	.5	1.16	71
August	43.4	4.0	.6	1.40	86
September	64.1	4.2	.9	2.14	127
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for La Garita Creek near La Garita.

Closed basin in San Luis Valley, Colo.

La Garita Creek near La Garita, Colo.

Location.- Water-stage recorder, lat. 37°49', long. 106°18', in sec. 10, T. 41 N., R. 6 E., 4 miles southwest of La Garita.

Drainage area.- 61 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. April 1919 to September 1940 in reports of State engineer. (No winter records most yeare.)

Extremes.- Maximum discharge during year, 68 second-feet July 21 (gage height, 1.46 feet), from rating curve extended above 40 second-feet; minimum daily, 0.7 second-foot Aug. 29.
1919-40: Maximum discharge, 395 second-feet July 14, 1938 (gage height, 2.07 feet), from rating curve extended above 100 second-feet; minimum daily, that of Aug. 29, 1940.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. None for Nov. 1 to Mar. 26. Diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-31)

0.5	0.5	0.8	5.2
.6	1.1	.9	9
.7	2.8	1.0	15

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5					-	6.7	5.0	7.5	3.0	2.1	a1.6
2	4.0					-	4.7	5.2	6.7	2.6	2.5	2.1
3	4.0					-	4.5	7.9	6.7	3.0	2.5	2.1
4	3.8					-	6.0	11	6.7	2.5	2.1	2.3
5	3.5					-	9.0	13	7.1	2.5	1.6	1.8
6	3.5					-	8.6	10	7.1	2.3	2.3	1.6
7	3.5					-	8.2	8.8	6.7	2.1	3.5	1.8
8	4.0					-	7.1	8.2	6.0	2.3	2.3	1.6
9	5.0					-	6.0	8.2	6.0	2.6	1.6	1.6
10	4.2					-	4.5	7.9	5.6	2.8	1.6	2.6
11	4.2					-	5.0	7.5	5.6	2.6	1.6	2.6
12	4.0					-	4.7	7.5	5.6	2.6	1.6	2.3
13	4.2					-	6.3	7.5	5.2	2.6	1.3	2.6
14	4.2					-	8.2	7.1	5.2	2.8	1.1	3.0
15	4.5					-	9.0	6.0	4.7	2.1	1.4	2.8
16	4.2					-	7.9	6.3	4.5	2.0	1.1	2.5
17	4.0					-	5.2	7.1	5.2	2.3	1.4	2.6
18	4.0					-	4.7	10	4.0	2.3	2.0	3.8
19	4.0					-	7.9	9.0	3.5	2.5	2.1	3.5
20	3.8					-	9.6	9.0	3.8	2.1	2.5	2.8
21	3.5					-	11	9.6	3.3	3.8	2.5	2.6
22	3.8					-	9.0	12	4.2	2.1	2.1	2.6
23	3.5					-	8.2	14	3.8	2.5	3.3	3.3
24	3.5					-	7.9	13	3.0	2.0	4.7	3.0
25	3.3					-	7.1	9.0	3.8	1.8	3.8	3.5
26	3.8					-	7.9	8.6	3.5	2.1	3.0	3.8
27	2.8					6.7	10	11	3.3	2.6	a2.4	3.3
28	2.3					5.0	6.7	9.6	2.6	3.0	a1.8	2.8
29	3.3					4.7	5.6	8.6	3.5	4.0	.7	2.8
30	2.8					4.7	5.6	8.2	2.8	3.5	.8	2.8
31	4.2					6.0	-	7.9	-	3.0	a.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	117.9	5.0	2.3	3.80	234
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 27-31	27.1	6.7	4.7	5.42	54
April	212.8	11	4.5	7.09	422
May	273.5	14	5.0	8.82	542
June	147.2	7.5	2.6	4.91	292
July	80.0	4.0	1.8	2.58	159
August	64.2	4.7	.7	2.07	127
September	78.1	3.8	1.6	2.60	155
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of Carnero Creek near La Garita.

Alamosa Creek above Terrace Reservoir, Colo.

Location.- Water-stage recorder, lat. 37°23', long. 106°21', in sec. 8, T. 36 N., R. 6 E., 3 miles upstream from Terrace Reservoir Dam and 15 miles northwest of Capulin.

Drainage area.- 107 square miles.

Records available.- September 1911 to June 1912, October 1934 to September 1940 in reports of Geological Survey. April 1914 to October 1919, October 1923 to September 1927, and October 1934 to September 1940 in reports of State engineer. (No winter records most years.)

Extremes.- Maximum discharge during year, 629 second-feet May 15 (gage height, 2.90 feet); minimum discharge recorded, 13 second-feet Oct. 27 (gage height, 0.86 foot), may have been less during period of no record.
1911-12, 1914-19, 1923-27, 1934-40: Maximum discharge, 5,200 second-feet (revised) Oct. 5, 1911 (gage height, 11.0 feet, datum then in use, from floodmark), computed by weir formula; minimum not determined.

Remarks.- Records good except those for period of no gage-height record, which are fair. None for Nov. 7 to Mar. 17. No regulation or diversion.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	20				-	43	82	332	82	26	24
2	30	21				-	41	132	302	72	23	22
3	28	20				-	36	251	270	63	22	23
4	27	20				-	34	358	251	58	20	22
5	25	21				-	35	358	232	57	21	a22
6	25	22				-	33	345	214	63	25	a19
7	25	-				-	32	345	200	53	28	19
8	28	-				-	32	311	186	49	25	22
9	28	-				-	33	274	159	45	22	18
10	28	-				-	35	332	135	45	20	18
11	28	-				-	34	311	127	43	20	20
12	28	-				-	36	319	123	42	18	18
13	28	-				-	45	372	123	43	16	a25
14	28	-				-	72	372	127	42	16	a30
15	25	-				-	103	410	125	39	16	a25
16	25	-				-	91	420	114	41	16	21
17	24	-				-	75	386	109	36	17	20
18	24	-				18	69	324	107	36	16	49
19	24	-				20	86	278	99	32	18	62
20	22	-				24	114	290	95	32	38	49
21	21	-				29	156	258	95	33	40	a42
22	21	-				34	183	251	89	32	33	a38
23	20	-				41	232	282	86	28	32	40
24	20	-				48	251	306	86	34	40	38
25	21	-				60	235	294	91	28	42	36
26	23	-				70	261	328	86	28	34	a36
27	16	-				75	251	358	82	42	34	a42
28	17	-				64	132	368	77	34	29	a37
29	20	-				49	101	363	80	52	28	a37
30	18	-				42	84	358	103	35	28	40
31	20	-				43	-	358	-	32	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	748	31	16	24.1	1,480
November 1-6	124	22	20	20.7	246
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 18-31	617	75	18	44.1	1,220
April	2,955	251	32	98.5	5,860
May	9,794	420	82	316	19,430
June	4,305	332	77	144	8,540
July	1,329	82	28	42.9	2,640
August	788	42	16	25.4	1,560
September	914	62	18	30.5	1,810
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Rock Creek near Monte Vista.

Alamosa Creek below Terrace Reservoir, Colo.

Location.- Water-stage recorder, lat. 37°21', long. 106°17', in sec. 23, T. 36 N., R. 6 E., half a mile downstream from Terrace Reservoir and 11 miles northwest of Capulin.

Drainage area.- 116 square miles.

Records available.- April 1909 to June 1912, October 1933 to September 1940 in reports of Geological Survey. April 1909 to November 1912, April to October 1915, February 1917 to October 1920, and April 1922 to September 1940 in reports of State engineer.

Average discharge.- 22 years (1909-10, 1915-18, 1922-40), 120 second-feet.

Extremes.- Maximum discharge during year, 406 second-feet May 17 (gage height, 3.26 feet); minimum daily, 3 second-feet Dec. 14-31.
1909-12, 1915, 1917-20, 1922-40: Maximum daily discharge, 1,450 second-feet June 16-18, 1917; minimum daily, 3 second-feet Dec. 18, 1937, to Mar. 14, 1938, and Dec. 14-31, 1939.

Remarks.- Records good except those for period of no gage-height record and those below 10 second-feet, which are fair. No diversion above station. Flow regulated by Terrace Reservoir (capacity, 17,700 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	20	17	4	4	4	64	121	347	79	39	29
2	45	20	17	4	4	4	63	110	326	81	39	25
3	45	20	16	4	4	4	63	142	293	78	39	25
4	44	20	17	4	4	4	61	252	262	64	39	26
5	41	20	17	4	4	4	61	354	255	66	43	26
6	38	20	17	4	4	4	52	376	237	69	45	25
7	37	20	17	4	4	4	46	340	210	58	45	20
8	37	20	17	4	4	4	38	320	199	58	48	17
9	37	19	17	4	4	4	30	316	199	61	45	18
10	33	19	17	4	4	4	30	313	172	58	34	19
11	30	17	17	4	4	4	30	313	142	54	20	19
12	29	17	16	4	4	4	31	313	133	53	20	19
13	28	17	10	4	4	4	32	313	149	50	20	20
14	28	17	3	4	4	4	33	340	157	50	20	25
15	28	17	3	4	4	4	33	362	152	54	20	32
16	28	16	3	4	4	4	46	387	133	57	19	32
17	28	15	3	4	4	4	64	403	128	57	17	31
18	29	13	3	4	4	6	66	337	128	50	18	32
19	29	13	3	4	4	20	85	287	128	48	18	39
20	29	13	3	4	4	23	106	287	140	48	25	60
21	28	13	3	4	4	30	117	287	145	49	46	72
22	29	14	3	4	4	32	175	240	126	49	55	61
23	29	14	3	4	4	39	243	219	112	49	53	52
24	29	14	3	4	4	39	277	255	102	49	53	52
25	28	14	3	4	4	52	277	287	90	60	52	50
26	25	15	3	4	4	64	274	287	88	60	52	50
27	22	17	3	4	4	64	296	287	87	50	52	50
28	21	17	3	4	4	64	306	290	78	46	40	46
29	18	17	3	4	4	64	191	337	69	45	20	45
30	18	17	3	4	-	64	137	347	68	45	40	45
31	20	-	3	4	-	63	-	347	-	45	37	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	958	48	18	30.9	1,900
November	505	20	13	16.8	1,000
December	264	17	3	8.5	524
Calendar year 1939	31,442	570	3	86.1	62,360
January	124	4	4	4.0	246
February	116	4	4	4.0	230
March	692	64	4	22.3	1,370
April	3,327	306	30	111	6,600
May	9,169	403	110	296	18,190
June	4,855	347	68	162	9,630
July	1,738	81	45	56.1	3,450
August	1,113	55	17	35.9	2,210
September	1,058	72	17	35.3	2,100
Water year 1939-40	23,919	403	3	65.4	47,450

Note.- No gage-height record Oct. 30 to Mar. 17; discharge based on gate openings at Terrace Reservoir.

La Jara Creek at Gallegos Ranch, near Capulin, Colo.

Location.- Water-stage recorder, lat. 37°09', long. 106°13', in NE¼ sec. 32 (revised), T. 34 N., R. 7 E., 2 miles upstream from former station (published as La Jara Creek near Capulin, Colo.), 2¼ miles upstream from Canyon del Rancho, 11 miles southwest of Capulin, and 11⅛ miles downstream from La Jara Reservoir.

Drainage area.- 79 square miles.

Records available.- May 1936 to September 1940 (no winter records).

Extremes.- Maximum discharge during year, 50 second-feet May 23 (gage height, 2.29 feet); minimum daily recorded, 4.4 second-feet Aug. 18; probably less during period of no record.

1936-40: Maximum discharge, 653 second-feet Apr. 15, 1937 (gage height, 5.94 feet); minimum daily recorded, 3.5 second-feet Nov. 28, 1936.

Remarks.- Records good. None for Nov. 10 to Mar. 25. Flow regulated by La Jara Reservoir (capacity, 14,040 acre-feet). Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	8.5				-	18	18	10	14	5.0	6.6
2	7.9	8.2				-	14	18	9.8	14	5.2	6.6
3	7.9	8.2				-	15	18	9.5	14	5.0	6.6
4	7.9	8.5				-	16	16	9.2	14	4.7	6.3
5	7.6	8.5				-	15	15	9.2	14	5.5	6.1
6	7.9	8.8				-	16	14	8.8	9.2	6.6	6.1
7	7.9	7.9				-	16	15	8.8	6.1	7.2	5.8
8	8.5	8.2				-	15	10	8.8	6.1	12	6.1
9	8.2	8.8				-	15	9.2	8.5	6.6	6.9	6.1
10	7.9	-				-	16	8.5	8.5	6.3	6.9	6.6
11	7.6	-				-	15	9.2	8.5	6.3	7.2	6.9
12	7.2	-				-	15	9.5	8.5	5.8	6.9	7.6
13	7.2	-				-	15	9.8	8.5	6.1	6.3	8.2
14	7.2	-				-	19	10	8.5	5.8	5.5	7.2
15	7.2	-				-	25	8.5	8.2	5.8	4.7	7.2
16	6.9	-				-	22	7.9	8.2	15	6.0	6.9
17	6.9	-				-	20	9.2	8.8	16	5.2	7.2
18	6.9	-				-	23	17	8.5	15	4.4	8.2
19	6.9	-				-	24	22	8.8	7.6	4.7	7.6
20	6.9	-				-	23	16	8.5	6.3	6.3	7.6
21	6.6	-				-	27	15	8.5	6.1	7.2	7.2
22	6.6	-				-	26	18	8.8	6.3	5.8	7.2
23	6.9	-				-	26	37	8.8	5.2	5.8	7.2
24	7.2	-				-	24	34	9.2	5.0	8.5	6.9
25	7.2	-				-	21	24	9.2	4.7	6.9	6.9
26	8.5	-				14	19	20	13	4.7	7.6	6.6
27	8.2	-				19	21	17	14	6.1	9.2	6.9
28	7.9	-				15	20	14	14	5.0	9.8	6.6
29	8.2	-				15	20	13	15	5.0	11	6.6
30	7.9	-				15	20	12	14	6.1	8.5	7.6
31	8.2	-				18	-	11	-	6.1	6.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	233.6	8.5	6.6	7.54	463
November 1-9	75.6	8.8	7.9	8.40	150
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 26-31	96	19	14	16.0	190
April	581	27	14	19.4	1,150
May	475.8	37	7.9	15.3	944
June	290.6	15	8.2	9.69	576
July	254.3	16	4.7	8.20	504
August	207.8	12	4.4	6.70	412
September	207.2	8.2	5.8	6.91	411
Water year	-	-	-	-	-

Trinchera Creek above Turners Ranch, near Fort Garland, Colo.

Location.- Water-stage recorder, lat. 37°22', long. 105°19', in sec. 2, T. 31 S., R. 71 W., just upstream from Turners Ranch and 7 miles southeast of Fort Garland.

Drainage area.- 45 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. April 1923 to September 1940 in reports of State engineer. (No winter records most years.)

Extremes.- Maximum discharge during year, 119 second-feet May 17 (gage height, 1.55 feet); minimum daily recorded, 8.9 second-feet Oct. 28, probably less during period of no record.

1923-40: Maximum discharge, 318 second-feet May 23, 1926 (gage height, 2.54 feet); minimum not determined.

Remarks.- Records good. None for Nov. 1 to Mar. 30. No diversion or regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11						15	33	80	29	15	11
2	11						16	36	80	27	14	12
3	11						16	47	78	26	14	12
4	11						14	58	75	29	14	11
5	11						15	56	73	30	14	11
6	11						14	58	68	25	20	11
7	11						13	63	66	24	27	12
8	13						12	68	66	23	18	11
9	12						12	63	65	22	16	11
10	10						12	66	63	22	15	13
11	10						14	70	60	21	16	14
12	10						14	66	54	20	15	12
13	10						15	68	51	21	14	11
14	11						20	75	48	20	14	11
15	11						22	80	47	20	14	11
16	11						20	85	47	19	14	11
17	10						20	92	45	19	15	12
18	10						20	92	41	19	16	13
19	10						22	90	40	18	16	14
20	10						26	82	38	19	17	11
21	10						30	80	38	23	15	13
22	10						32	75	37	20	14	14
23	10						33	73	36	18	15	14
24	9.6						35	70	35	18	17	13
25	9.6						36	73	35	17	14	13
26	10						41	73	35	18	14	13
27	9.6						48	70	32	17	14	12
28	8.9						44	73	31	16	14	12
29	9.6						38	75	31	16	13	12
30	10						33	78	31	15	12	13
31	9.6					14	-	80	-	16	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	321.9	13	8.9	10.4	638
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	702	48	12	23.4	1,390
May	2,168	92	33	69.9	4,300
June	1,524	80	31	50.8	3,020
July	647	30	15	20.9	1,280
August	471	27	11	15.2	934
September	364	14	11	12.1	722
Water year	-	-	-	-	-

Trinchera Creek above Mountain Home Reservoir, near Fort Garland, Colo.

Location.- Water-stage recorder upstream from rating flume, lat. 37°24', long. 105°32', in sec. 31, T. 30 S., R. 71 W., 1½ miles upstream from Mountain Home Reservoir Dam and 4 miles southeast of Fort Garland.

Drainage area.- 61 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. May 1923 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 56 second-feet June 3 (gage height, 0.68 foot); minimum daily recorded, 5.2 second-feet Oct. 30, probably less during period of no record.

1923-40: Maximum discharge, 385 second-feet May 24, 1926 (gage height, 1.84 feet, site and datum then in use); minimum not determined.

Remarks.- Records excellent. None for Nov. 1 to Mar. 30. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4						13	8.8	48	24	11	9.7
2	6.0						14	9.7	46	24	10	11
3	6.4						13	11	45	23	9.7	11
4	7.4						13	18	41	25	8.8	10
5	6.0						13	21	39	29	8.8	9.2
6	6.0						14	20	36	26	11	8.8
7	6.9						13	20	35	23	24	9.7
8	7.4						12	24	34	20	15	8.3
9	8.4						12	23	33	18	13	7.4
10	7.9						12	25	32	16	12	7.8
11	6.4						12	27	31	14	12	9.2
12	7.4						12	28	28	13	12	7.8
13	8.4						13	31	27	13	11	6.7
14	9.4						16	32	27	13	9.2	6.3
15	8.9						20	33	33	12	8.3	7.0
16	6.9						19	37	37	12	7.8	7.0
17	6.9						18	42	33	11	9.2	6.7
18	7.4						16	46	32	11	8.3	7.4
19	7.4						18	40	31	12	12	8.3
20	7.9						23	38	37	12	9.7	7.4
21	7.9						29	39	36	17	10	7.4
22	7.9						32	39	36	16	10	8.3
23	8.4						32	37	33	13	12	7.8
24	8.4						32	35	31	13	14	7.0
25	7.9						29	38	28	12	13	7.0
26	8.4						16	40	28	12	12	7.4
27	8.4						18	37	27	13	12	6.3
28	7.4						15	40	26	12	11	5.9
29	5.6						12	42	27	12	11	7.0
30	5.2						9.7	42	26	12	10	6.3
31	5.6					12	-	46	-	12	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	227.9	9.4	5.2	7.35	452
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	520.7	32	9.7	17.4	1,030
May	969.5	46	8.8	31.3	1,920
June	1,003	48	26	33.4	1,990
July	495	29	11	16.0	982
August	347.8	24	7.8	11.2	690
September	237.1	11	5.9	7.90	470
Water year	-	-	-	-	-

Trinchera Creek below Smith Reservoir, near Blanca, Colo.

Location.- Water-stage recorder, lat. 37°23', long. 105°35', in sec. 5, T. 31 S., R. 73 W., 1 mile downstream from Smith Reservoir and 5 miles southwest of Blanca.

Drainage area.- 396 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. October 1929 to September 1940 in reports of State engineer. (No winter records most years.)

Extremes.- Maximum discharge during year, 34 second-feet Apr. 30 (gage height, 1.26 feet); minimum daily, 0.3 second-foot Oct. 20, may have been less during period of no record. 1929-40: Maximum discharge, 584 second-feet Apr. 18, 1937 (gage height, 5.20 feet); minimum daily recorded, 0.1 second-foot Nov. 3, 1937, to Feb. 28, 1938.

Remarks.- Records good. None for Nov. 1 to Mar. 30. Diversions above station for irrigation. Flow regulated by Smith Reeervoir (capacity, 5,335 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9						0.8	29	10	5.3	1.0	0.8
2	.8						.8	28	7.8	4.4	.9	.8
3	.8						.9	21	7.6	2.8	.9	.8
4	.8						.8	17	7.3	2.8	1.0	.7
5	.8						.8	20	7.3	3.3	.9	.7
6	.8						.9	20	6.0	3.5	1.0	.7
7	.8						.9	20	4.6	3.3	1.1	.7
8	.9						.8	22	4.6	3.3	.9	.6
9	.9						.7	22	4.8	3.5	.8	.8
10	.9						.7	22	5.1	3.5	.9	.6
11	.9						.7	24	2.8	3.3	.8	.6
12	.6						.7	21	3.1	1.6	.8	.6
13	.6						.8	21	8.1	1.5	.8	.6
14	.6						.7	20	8.1	1.5	.8	.6
15	.6						.7	18	8.4	1.3	.7	.6
16	.6						.7	16	8.7	1.4	.8	.6
17	.6						.8	12	8.4	1.5	.8	.6
18	.8						.7	13	8.1	1.5	1.0	.7
19	.4						.7	13	8.4	1.5	1.2	.6
20	.3						.8	14	8.7	1.8	1.2	.6
21	.4						.8	18	8.1	1.6	1.1	.7
22	.4						3.1	18	8.1	1.5	1.0	.7
23	.4						10	17	7.6	1.5	1.1	.7
24	.4						12	17	6.8	1.5	1.2	.7
25	.5						13	16	5.3	1.3	1.0	.7
26	.4						13	15	5.5	1.3	.9	.7
27	.4						10	14	5.5	1.4	.9	.7
28	.5						11	13	5.8	1.1	.9	.8
29	.6						11	13	6.8	.9	.8	.8
30	.5						20	14	5.3	.9	.8	.8
31	.6					0.8	-	14	-	1.1	.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	19.2	0.9	0.3	0.62	38
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	119.3	20	.7	3.98	237
May	562	29	12	18.1	1,110
June	201.7	10	2.8	6.72	400
July	66.7	5.3	.9	2.15	132
August	28.8	1.2	.7	.93	57
September	20.3	.8	.6	.68	40
Water year	-	-	-	-	-

Sangre de Cristo Creek near Fort Garland, Colo.

Location.- Water-stage recorder, lat. 37°26', long. 105°24', in sec. 23, T. 30 S., R. 72 W., 1½ miles east of Fort Garland and 4 miles upstream from confluence with Ute Creek.

Drainage area.- 187 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. March to October 1916, May 1923 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 79 second-feet Apr. 22 (gage height, 2.18 feet); no flow July 30, 31, Aug. 3-6, 14-18, 30, 31, Sept. 1-19.
1916, 1923-40: Maximum discharge, 1,520 second-feet Aug. 31, 1936 (gage height, 6.10 feet), by slope-area method; no flow at times during 1934-36, 1939-40.

Remarks.- Records good. No record for Nov. 1 to Mar. 31. A few diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9						42	41	27	3.6	0.2	0
2	2.7						45	39	25	3.4	.4	0
3	2.6						37	39	24	3.4	0	0
4	2.3						36	41	23	3.6	0	0
5	2.3						35	41	22	7.2	0	0
6	2.4						34	41	21	6.6	0	0
7	2.6						32	39	20	4.4	6.6	0
8	3.4						27	43	18	6.0	5.2	0
9	4.4						26	50	16	3.9	2.7	0
10	4.6						25	43	16	2.7	1.5	0
11	4.6						24	38	16	2.1	1.0	0
12	4.4						21	40	14	2.4	.7	0
13	4.2						27	39	14	2.4	.5	0
14	5.2						29	37	13	5.2	0	0
15	4.9						35	35	11	3.4	0	0
16	4.9						37	34	11	2.9	0	0
17	5.2						27	38	11	2.4	0	0
18	5.2						36	61	8.8	2.1	0	0
19	5.4						43	69	8.4	1.9	.7	0
20	5.4						49	45	7.5	2.1	2.3	.2
21	5.4						64	44	6.9	2.1	3.2	.5
22	4.9						71	55	7.8	2.1	2.4	.2
23	4.4						64	52	8.1	1.8	2.7	.7
24	4.6						60	48	6.9	1.1	3.4	.6
25	4.6						60	46	6.0	.7	2.7	1.0
26	4.9						59	61	5.2	.7	2.1	1.8
27	5.7						60	44	4.9	.8	1.2	1.5
28	a5.5						55	38	3.9	.5	.6	1.2
29	a5.0						54	36	4.2	.1	.2	1.1
30	a5.0						49	33	3.9	0	0	2.6
31	a5.0						-	29	-	0	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	134.6	5.7	2.3	4.34	267
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	1,263	71	21	42.1	2,510
May	1,319	61	29	42.5	2,620
June	384.5	27	3.9	12.8	763
July	81.6	7.2	0	2.63	162
August	40.3	6.6	0	1.30	80
September	11.4	2.6	0	.38	23
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Trinchera Creek near Fort Garland.

Ute Creek at upper station, near Fort Garland, Colo.

Location.- Water-stage recorder, lat. 37°32', long. 105°23', in sec. 12, T. 29 S., R. 72 W., 150 yards downstream from forks and 9 miles northeast of Fort Garland.

Drainage area.- 23.3 square miles.

Records available.- May to July 1936 and October 1939 to September 1940. (No winter records.)

Extremes.- Maximum discharge during year, 103 second-feet May 31 (gage height, 1.40 feet), from rating curve extended above 40 second-feet; minimum recorded, 4.3 second-feet Oct. 28 (gage height, 0.38 foot), probably less during period of no record.
1936, 1939-40: Maximum discharge, 554 second-feet July 27, 1936 (gage height, 3.04 feet, datum then in use), by slope-area method; minimum recorded, that of Oct. 28, 1939.

Remarks.- Records good. None for Nov. 1 to Mar. 31. No diversion or regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a9.5						a18	22	76	18	16	13
2	a9.3						16	24	70	19	18	12
3	a9.1						16	33	63	18	16	12
4	a8.7						16	42	56	20	14	11
5	a8.4						16	40	55	23	15	9.9
6	a8.4						14	36	48	19	18	9.6
7	a9.2						14	40	42	18	21	9.6
8	12						14	46	40	16	18	10
9	12						14	31	38	16	16	9.6
10	11						14	33	34	16	14	12
11	10						12	42	32	16	14	13
12	10						13	37	30	16	13	12
13	9.9						16	44	30	19	12	11
14	9.9						20	50	29	19	11	11
15	10						23	55	32	17	11	16
16	10						21	60	32	16	12	9.9
17	10						19	61	29	16	11	12
18	10						19	52	28	14	12	14
19	10						22	44	26	14	11	20
20	9.9						25	40	26	15	11	18
21	9.9						27	42	29	19	11	18
22	9.2						32	38	33	22	16	24
23	8.8						30	36	29	18	29	22
24	8.8						32	37	26	16	33	20
25	8.8						33	38	24	16	31	20
26	9.6						35	44	22	16	22	20
27	8.5						35	48	20	16	19	18
28	7.8						28	55	21	14	17	16
29	8.5						25	61	20	14	16	16
30	a9.0						23	65	20	17	14	17
31	a9.3						-	70	-	16	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	295.5	12	7.8	9.53	586
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	641	35	12	21.4	1,270
May	1,366	70	22	44.1	2,710
June	1,060	76	20	35.3	2,100
July	529	23	14	17.1	1,050
August	506	33	11	16.3	1,000
September	436.6	24	9.6	14.6	866
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for station near Fort Garland.

Ute Creek near Fort Garland, Colo.

Location (revised).- Water-stage recorder upstream from rating flume, lat. 37°28', long. 105°24', in sec. 2, T. 30 S., R. 72 W., 2½ miles north of Fort Garland and 6 miles upstream from mouth.

Drainage area.- 32 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. March to October 1916, May 1923 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 78 second-feet May 17 (gage height, 1.46 feet); minimum daily recorded, 2.9 second-feet Aug. 16, may have been less during period of no record.
1916, 1923-40: Maximum discharge, 353 second-feet Aug. 5, 1936 (gage height, 3.05 feet); minimum daily recorded, 1.6 second-feet July 6, 1936.

Remarks.- Records excellent. None for Nov. 1 to Mar. 30. A few diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0						17	14	51	12	9.7	7.0
2	6.6						17	13	48	12	10	6.5
3	6.6						14	16	45	13	9.2	6.2
4	6.1						15	21	39	14	8.1	5.8
5	6.1						16	24	37	16	7.6	5.1
6	6.1						15	23	32	16	12	4.8
7	5.7						15	21	28	15	16	4.8
8	7.9						15	29	27	12	14	5.1
9	9.2						15	24	24	11	12	4.8
10	8.3						16	22	23	10	10	5.4
11	7.9						14	26	22	8.1	9.7	7.0
12	7.4						13	27	20	6.2	9.2	6.2
13	7.4						16	28	20	8.6	8.1	5.4
14	7.4						18	31	17	11	8.4	6.2
15	7.9						21	34	17	10	4.4	6.2
16	7.4						22	40	19	9.7	2.9	5.4
17	5.2						20	61	18	11	5.4	6.5
18	4.8						20	55	17	10	5.1	11
19	5.7						22	41	16	9.7	7.0	14
20	5.7						24	34	16	9.7	7.6	14
21	5.7						27	39	20	11	6.2	14
22	6.1						28	35	24	17	6.5	20
23	6.6						28	31	20	15	21	20
24	6.6						28	31	17	11	24	18
25	6.6						28	33	15	8.6	24	17
26	6.6						28	36	15	8.6	17	18
27	6.6						31	34	12	8.6	17	17
28	5.7						25	36	12	8.1	15	16
29	6.1						23	40	13	7.6	12	15
30	7.0						18	41	13	9.2	11	15
31	7.0					16	-	44	-	10	9.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	207.0	9.2	4.8	6.68	411
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	608	31	13	20.3	1,210
May	984	61	13	31.7	1,950
June	697	51	12	23.2	1,380
July	335.7	17	6.2	10.8	666
August	336.3	24	2.9	10.8	667
September	307.4	20	4.8	10.2	610
Water year	-	-	-	-	-

Conejos River at Platoro, Colo.

Location.- Water-stage recorder, lat. 37°21'00", long. 106°31'30", in sec. 22, T. 36 N., R. 4 E., half a mile east of Platoro and 5 miles downstream from Adams Fork.

Drainage area.- 44.4 square miles.

Records available.- April 1937 to September 1940. (No winter records.)

Extremes.- Maximum discharge during year, 836 second-feet May 31 (gage height, 2.56 feet); minimum daily recorded, 7.5 second-feet Dec. 9, probably less during period of no record.

1937-40: Maximum discharge, 1,230 second-feet May 28, 1938 (gage height, 3.17 feet), from rating curve extended above 800 second-feet; minimum daily recorded, 6.6 second-feet Dec. 13, 1937, but may have been less during periods of no record.

Remarks.- Records excellent above 50 second-feet and good below. None Dec. 12 to Mar. 31. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	18	b13				a46	90	546	77	18	27
2	35	19	b13				a42	124	480	69	16	24
3	31	19	b13				a37	202	441	61	14	28
4	28	18	14				a35	279	417	60	11	26
5	25	19	11				37	317	384	56	12	21
6	24	19	16				30	348	352	56	18	20
7	23	17	17				37	375	326	56	21	24
8	28	16	14				37	321	313	48	18	28
9	30	16	7.5				40	313	268	42	15	20
10	27	16	9.0				40	375	248	40	12	21
11	26	17	8.0				46	370	237	36	12	21
12	26	16	-				56	352	218	34	11	19
13	25	16	-				69	441	218	37	10	39
14	24	19	-				99	485	237	34	9.6	29
15	23	19	-				108	531	221	32	10	29
16	22	b20	-				88	541	191	39	17	23
17	20	b20	-				67	485	183	30	13	27
18	19	b20	-				71	375	172	28	10	75
19	18	b18	-				102	308	159	27	13	90
20	16	b17	-				163	275	146	24	24	65
21	16	b17	-				187	262	135	27	44	56
22	15	b17	-				218	244	121	26	37	56
23	14	b18	-				260	248	111	21	36	48
24	14	b18	-				233	291	118	20	56	47
25	14	b15	-				176	308	118	18	54	48
26	12	11	-				191	362	102	24	47	45
27	11	8.0	-				166	441	88	28	45	40
28	16	11	-				121	475	82	24	37	40
29	17	11	-				99	506	80	24	36	48
30	16	b12	-				88	531	88	23	30	58
31	17	-	-				-	572	-	19	28	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	669	37	11	21.6	1,330
November	497.0	20	8.0	16.6	986
December 1-11	135.5	17	7.5	12.3	269
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	297.8	260	30	99.3	5,910
May	1,113.7	572	90	359	22,090
June	6,800	546	80	227	13,490
July	1,140	77	18	36.8	2,260
August	734.6	56	9.6	23.7	1,460
September	1,142	90	19	38.1	2,270
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Alamosa Creek above Terrace Reservoir.

b Stage-discharge relation affected by ice.

Conejos River near Mogote, Colo.

Location.- Water-stage recorder, lat. 37°03', long. 106°11', in SE¼ sec. 34, T. 33 N., R. 7 E., three-quarters of a mile downstream from Fox Creek and 5½ miles west of Mogote.

Drainage area.- 282 square miles.

Records available.- September 1899 to March 1900, April 1903 to September 1913, and October 1933 to September 1940 in reports of Geological Survey. September 1899 to March 1900, April 1903 to September 1940 in reports of State engineer.

Average discharge.- 38 years (1902-40), 374 second-feet.

Extremes.- Maximum discharge during year, 1,650 second-feet May 17 (gage height, 3.72 feet); minimum discharge, 18 second-feet (discharge measurement) Dec. 19, 1939.
1899-1900, 1903-40: Maximum discharge, 9,000 second-feet (revised) Oct. 5, 1911 (gage height, 8.50 feet), from rating curve extended above 3,500 second-feet; minimum, that of Dec. 19, 1939.

Remarks.- Records excellent except those for periods of ice effect, which are fair. No diversion or regulation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	64	44	37	56	50	202	341	1,310	209	69	81
2	93	63	47	36	*54	44	187	410	1,210	187	65	73
3	88	63	48	*38	52	45	144	564	1,090	170	64	81
4	81	61	48	37	50	43	147	754	990	160	57	76
5	78	61	47	37	50	48	157	800	938	163	53	71
6	73	63	46	35	46	50	144	876	876	173	63	64
7	72	60	45	33	50	44	141	948	809	141	78	62
8	79	56	46	38	50	48	136	980	727	141	79	72
9	92	63	45	39	50	50	150	828	700	127	66	69
10	84	64	44	40	50	52	160	958	572	124	56	65
11	78	55	43	39	48	50	157	1,030	548	121	54	71
12	76	55	44	39	46	46	173	1,020	491	111	50	76
13	73	56	40	43	40	44	216	1,160	464	144	47	83
14	71	53	37	35	42	*35	306	1,220	470	124	44	88
15	69	50	37	39	*44	35	383	1,310	477	109	43	76
16	66	49	36	43	44	45	346	1,420	440	109	44	73
17	64	49	34	44	42	65	288	1,440	399	104	49	71
18	63	50	35	*45	44	79	257	1,210	388	93	45	127
19	62	53	*20	45	46	86	297	927	367	92	44	194
20	51	53	20	46	48	88	372	876	341	90	65	187
21	58	54	20	48	48	107	498	809	331	86	99	150
22	56	54	21	51	48	141	548	838	316	95	99	144
23	55	53	22	53	48	183	644	866	288	92	102	138
24	53	53	20	54	48	220	709	948	284	78	163	124
25	53	51	25	55	48	284	636	948	288	72	173	127
26	63	51	26	57	52	326	636	1,000	266	72	133	127
27	55	54	26	56	50	341	676	1,140	240	150	141	116
28	51	50	26	56	48	266	505	1,220	228	104	114	107
29	58	44	32	55	*47	209	422	1,260	224	90	109	109
30	57	46	34	56	-	190	367	1,270	228	95	97	133
31	62	-	37	55	-	198	-	1,250	-	79	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,138	104	51	69.0	4,240
November	1,651	64	44	55.0	3,270
December	1,095	48	20	35.3	2,170
Calendar year 1939	82,655	1,450	20	226	163,900
January	1,384	57	33	44.6	2,750
February	1,389	56	40	47.9	2,760
March	3,512	341	35	113	6,970
April	10,004	709	136	333	19,840
May	30,621	1,440	341	988	60,740
June	16,300	1,310	224	543	32,330
July	3,705	209	72	120	7,350
August	2,449	173	43	79.0	4,860
September	3,035	194	62	101	6,020
Water year 1939-40	77,283	1,440	20	211	153,300

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Dec. 15 to Mar. 17.

Conejos River near La Sauses, Colo.

Location.- Two water-stage recorders, lat. 37°23', long. 105°45', in sec. 2, T. 35 N., R. 11 E., half a mile upstream from mouth and 2 miles north of La Sauses.

Drainage area.- 887 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. March 1921 to September 1940 in reports of State engineer.

Average discharge.- 19 years (1921-40), 241 second-feet.

Extremes.- Maximum discharge during year, 1,110 second-feet May 18; minimum daily, 0.1 second-foot Aug. 9, Sept. 1, 2.
1921-40: Maximum daily discharge, 3,650 second-feet May 24, 1932; no flow July 21 to Sept. 8, 1934.

Remarks.- Records good above 10 second-feet and fair below. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.4	37	40	54	71	89	32	36	563	3.6	1.2	0.1
2	8.8	38	40	53	71	84	26	26	458	3.6	1.4	.1
3	8.2	37	39	52	70	82	18	30	351	3.4	1.6	.4
4	7.4	36	39	52	69	80	17	46	186	2.8	1.4	.4
5	6.4	37	39	52	72	75	18	65	91	2.7	1.6	.2
6	6.5	37	38	56	69	67	19	57	50	3.6	2.5	.2
7	6.5	37	39	54	70	62	17	58	23	2.9	1.4	.2
8	6.5	37	43	54	70	68	16	76	14	2.1	.3	.8
9	7.2	34	43	52	66	68	7.9	90	12	1.6	.1	1.0
10	7.6	36	44	52	66	66	3.1	56	10	1.4	.2	1.0
11	10	35	45	53	66	66	2.8	43	8.0	1.4	.3	1.0
12	18	34	46	56	67	67	2.4	51	5.1	1.2	.7	1.4
13	18	35	44	60	65	63	3.7	73	4.5	.6	.7	5.7
14	18	35	44	54	65	63	4.6	128	4.3	.6	.3	14
15	18	37	46	51	65	63	32	144	4.2	.4	.3	15
16	18	37	46	54	64	63	85	184	4.2	.6	.3	15
17	19	37	46	61	61	61	69	276	4.5	.4	.3	16
18	19	37	47	68	61	59	30	902	4.5	.4	.3	16
19	20	37	46	56	61	59	22	856	4.7	.4	.3	16
20	20	37	46	61	61	59	18	569	4.7	.4	.5	16
21	20	37	46	65	61	60	18	378	4.7	.3	.9	16
22	19	38	48	60	61	56	61	366	4.4	.3	.5	16
23	20	39	49	54	60	44	101	433	4.4	.2	.6	16
24	20	40	51	54	63	43	135	451	3.8	.2	1.2	17
25	20	40	51	60	64	41	168	441	3.5	.2	1.2	18
26	22	41	51	58	68	33	120	440	3.3	.2	.6	17
27	23	41	54	61	71	62	129	506	3.4	.2	.3	17
28	33	40	54	63	77	92	119	563	3.6	.2	.3	17
29	35	40	52	64	84	62	74	588	3.6	.2	.3	17
30	35	41	52	64	-	45	46	594	3.8	.3	.3	17
31	36	-	52	68	-	37	-	591	-	1.8	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	535.5	36	6.4	17.3	1,060
November	1,124	41	34	37.5	2,230
December	1,420	54	38	45.8	2,820
Calendar year 1939	39,455.5	958	.6	108	78,260
January	1,776	68	51	57.3	3,520
February	1,939	84	60	66.9	3,850
March	1,939	92	33	62.5	3,850
April	1,414.5	168	2.4	47.2	2,810
May	9,117	902	26	294	18,080
June	1,845.2	563	3.3	61.5	3,660
July	38.2	3.6	.2	1.23	76
August	22.1	2.5	.1	.71	44
September	288.5	18	.1	9.62	572
Water year 1939-40	21,459.0	902	.1	58.6	42,570

San Antonio River at Ortiz, Colo.

Location.- Water-stage recorder, lat. 37°00', long. 106°02', in New Mexico, in sec. 19, T. 32 N., R. 9 E., a quarter of a mile south of Colorado-New Mexico State line, half a mile south of Ortiz, and half a mile upstream from Los Pinos Creek.

Drainage area.- 110 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. January to October 1915, May 1919 to October 1920, and October 1924 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 218 second-feet Apr. 21 (gage height, 2.13 feet); no flow June 24 to Aug. 7, Aug. 19-23.
1915, 1919-20, 1924-40: Maximum discharge, 1,750 second-feet Apr. 15, 1937 (gage height, 5.38 feet), from rating curve extended above 1,100 second-feet; no flow for periods in nearly every year.

Remarks.- Records good except those for period of ice effect and no gage-height record, which are fair. None for Dec. 1 to Mar. 28. A few small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	3.0				-	83	52	10		0	0.2
2	.9	2.0				-	88	81	8.0		0	2.0
3	.6	1.6				-	64	86	6.9		0	1.4
4	.9	2.0				-	50	91	6.3		0	1.7
5	.9	3.0				-	55	73	6.3		0	.9
6	.9	3.8				-	45	a75	5.9		0	.6
7	1.1	4.7				-	56	a78	5.1		0	.5
8	2.0	5.8				-	47	a60	4.2		13	.4
9	13	5.4				-	59	51	3.8		5.9	.4
10	8.6	5				-	77	47	2.6		1.9	.4
11	5.5	5				-	81	45	2.6		1.1	3.0
12	4.2	5				-	77	50	2.6		.5	6.9
13	3.8	5				-	96	51	2.6		.4	5.1
14	3.4	5				-	134	43	2.2		.3	2.2
15	3.8	5				-	159	36	1.6		.2	1.4
16	3.8	5				-	139	32	1.4		.1	1.2
17	3.8	4				-	98	a34	1.1		.1	.9
18	4.2	4				-	78	a37	.6		.1	1.7
19	4.2	4				-	85	a35	.5		0	4.2
20	3.8	4				-	117	a31	.4		0	3.8
21	3.8	4				-	159	a33	.3		0	2.6
22	3.4	4				-	159	a40	.2		0	3.0
23	3.8	4				-	157	43	.1		0	5.5
24	3.8	4				-	150	45	0		1.6	3.4
25	3.0	5				-	139	37	0		1.2	2.6
26	3.4	5				-	150	30	0		1.1	2.2
27	4.7	5				-	143	25	0		.6	2.6
28	6.9	*5				-	98	22	0		.4	2.6
29	5.1	5				46	83	19	0		.2	2.0
30	2.2	4				43	64	16	0		.2	2.0
31	3.0	-				65	-	13	-		.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	113.7	13	0.6	3.67	226
November	109.3	5	1.6	3.64	217
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	2,989	159	45	99.6	5,930
May	1,411	91	13	45.5	2,800
June	75.3	10	0	2.51	149
July	0	0	0	0	0
August	29.0	13	0	.94	58
September	67.4	6.9	.2	2.25	134
Water year	-	-	-	-	-

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of record for Los Pinos near Ortiz.
Note.- Stage-discharge relation affected by ice Nov. 10-30.

San Antonio River at mouth, near Manassa, Colo.

Location.- Water-stage recorder, lat. 37°11', long. 105°53', in sec. 21, T. 34 N., R. 10 E., 1 mile upstream from mouth and 2½ miles east of Manassa.

Drainage area.- 348 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. April 1923 to September 1940 in reports of State engineer.

Average discharge.- 17 years, 97.1 second-feet.

Extremes.- Maximum discharge during year, 495 second-feet May 18 (gage height, 3.49 feet); no flow Oct. 1 to Nov. 22, July 23 to Sept. 30.
1923-40: Maximum discharge, 1,890 second-feet May 5, 1924; no flow for periods in nearly every year.

Remarks.- Records excellent above 5 second-feet and fair below. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.2	0.2	0.3	8	44	107	145	0.5		
2		0	.2	.2	*.3	8	52	117	134	.4		
3		0	.2	.2	.3	6	41	168	118	.4		
4		0	.2	.2	.3	5	28	248	91	.4		
5		0	.2	.2	.3	4	23	231	68	.4		
6		0	.2	.2	.3	4	29	219	48	.3		
7		0	.2	.2	.3	4	29	221	42	.3		
8		0	.2	.2	.3	4	26	224	33	.3		
9		0	.2	.2	.3	4	23	201	22	.2		
10		0	.2	.2	.3	4	29	194	14	.2		
11		0	.3	.2	.3	4	45	198	14	.2		
12		0	.3	.2	.3	4	47	212	13	.2		
13		0	.3	.2	.3	4	73	238	8.4	.2		
14		0	.3	.2	.3	*4	149	238	7.5	.1		
15		0	.2	.2	.3	3.7	250	224	5.5	.1		
16		0	.2	.2	.3	3.7	236	217	4.7	.1		
17		0	.2	.2	.3	3.7	182	257	4.4	.1		
18		0	.2	*.2	.3	3.9	132	442	3.7	.1		
19		0	*.2	.2	.3	3.9	100	324	2.8	.1		
20		0	.2	.2	.3	4.2	118	231	2.6	.1		
21		0	.2	.2	.3	4.2	221	187	2.4	.1		
22		0	.2	.2	.3	4.4	298	192	2.4	.1		
23		.1	.2	.2	.3	5.0	311	243	2.0	0		
24		.2	.2	.2	.5	3.7	340	238	2.0	0		
25		.2	.2	.2	1.0	22	319	224	1.7	0		
26		.2	.2	.2	2	72	314	224	1.4	0		
27		.2	.2	.2	2	102	353	240	1.2	0		
28		*.2	.2	.2	5	89	236	221	1.1	0		
29		.2	.2	.2	*8	62	168	203	.9	0		
30		.2	.2	.2	-	36	132	187	.8	0		
31		-	.2	.2	-	32	-	170	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	1.5	.2	0	.05	3.0
December	6.6	.3	.2	.21	13
Calendar year 1939	21,654.0	822	0	59.3	42,940
January	6.2	.2	.2	.20	12
February	25.4	8	.3	.88	50
March	522.4	102	3.7	16.9	1,040
April	4,348	353	23	145	8,620
May	6,840	442	107	221	13,570
June	797.5	145	.8	26.6	1,580
July	4.9	.5	0	.16	9.7
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	12,552.5	442	0	34.3	24,900

* Winter discharge measurement made on this day.
Note.- Stage-discharge relation affected by ice Nov. 23 to Mar. 14.

Los Pinos River near Ortiz, Colo.

Location.- Water-stage recorder, lat. 36°58', long. 106°03', in New Mexico, in N½ sec. 34, T. 32 N., R. 8 E., 1 mile south of Colorado-New Mexico State line, 2 miles southwest of Ortiz, and 2⅛ miles upstream from mouth.

Drainage area.- 167 square miles.

Records available.- October 1933 to September 1940 in reports of Geological Survey. January 1914 to November 1920, October 1924 to September 1940 in reports of State engineer. (No winter records.)

Extremes.- Maximum discharge during year, 887 second-feet Apr. 26 (gage height, 3.40 feet); minimum daily recorded, 11 second-feet Aug. 19, may have been less during period of no record.
1914-20, 1924-40: Maximum discharge, 2,770 second-feet May 9, 1937 (gage height, 5.30 feet), from rating curve extended above 1,500 second-feet; minimum daily, 5 second-feet Aug. 11, Sept. 19, 1934.

Remarks.- Records good. None Dec. 1 to Mar. 28. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	15				-	142	228	253	34	15	13
2	13	17				-	137	348	240	32	14	14
3	13	16				-	102	473	222	30	15	20
4	13	15				-	102	486	201	27	14	17
5	13	16				-	107	424	193	42	13	15
6	12	17				-	92	440	179	42	16	14
7	13	16				-	100	456	160	31	19	13
8	16	15				-	96	408	147	27	62	13
9	18	16				-	112	370	134	25	26	13
10	18	16				-	140	416	122	24	19	15
11	16	13				-	150	424	112	24	16	15
12	16	13				-	171	440	102	21	16	16
13	16	14				-	244	444	98	22	13	15
14	16	13				-	378	424	94	21	12	15
15	15	13				-	432	408	90	20	12	14
16	14	13				-	334	412	85	19	12	13
17	15	16				-	234	461	81	19	13	13
18	15	26				-	196	428	73	18	12	18
19	14	19				-	237	331	66	18	11	19
20	14	20				-	366	290	60	19	16	20
21	14	26				-	486	283	58	19	20	17
22	13	21				-	515	317	58	21	17	16
23	14	20				-	558	378	53	19	20	16
24	13	22				-	563	363	53	17	36	14
25	13	24				-	550	324	46	16	34	14
26	15	27				-	563	310	42	16	24	16
27	16	28				-	507	320	37	30	20	14
28	15	27				-	320	303	38	19	17	13
29	16	27				117	266	293	37	17	16	13
30	16	20				110	225	273	37	17	15	17
31	17	-				124	-	263	-	16	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	458	18	12	14.8	908
November	561	28	13	18.7	1,110
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	8,425	563	92	281	16,710
May	11,538	486	228	372	22,890
June	3,171	253	37	106	6,290
July	722	42	16	23.3	1,430
August	578	62	11	18.6	1,150
September	455	20	13	15.2	902
Water year	-	-	-	-	-

Culebra Creek at San Luis, Colo.

Location.- Water-stage recorder and 12-foot Parshall flume, lat. 37°11', long. 105°26', in sec. 35, T. 3 N., R. 72 W., Beaubien grant survey, 1 mile southeast of San Luis, and 1½ miles upstream from Rito Seco.

Drainage area.- 220 square miles.

Records available.- January 1910 to December 1911, October 1933 to September 1940 in reports of Geological Survey. May 1909 to December 1910, April 1927 to September 1940 in reports of State engineer. 1911-19 (unpublished) in files of office of State engineer.

Average discharge.- 23 years (1909-19, 1927-40), 65.1 second-feet.

Extremes.- Maximum discharge during year, 310 second-feet June 8 (gage height, 3.30 feet); minimum daily, 8.8 second-feet Sept. 1.
1909-19, 1927-40: Maximum daily discharge, 470 second-feet June 26, 1915; minimum daily, 5 second-feet Sept. 14-16, 1934.

Remarks.- Records excellent except those for period of no gage-height record, which are fair. Diversions above station for irrigation. Flow regulated by Sanchez Reservoir on Ventero Creek (capacity, 103,000 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	24	28	28	26	29	26	22	94	178	149	8.8
2	21	23	24	27	26	24	26	22	102	170	143	45
3	26	23	12	27	23	14	24	14	110	108	130	85
4	25	22	26	27	12	29	24	14	148	21	116	42
5	26	14	29	27	27	30	24	14	220	88	155	39
6	24	25	29	25	27	29	24	20	250	131	122	38
7	22	27	29	11	27	29	16	25	272	134	82	33
8	11	24	28	26	27	29	22	30	302	200	69	9.6
9	26	27	24	28	27	27	23	37	272	198	68	37
10	23	33	13	28	23	16	22	41	288	220	73	39
11	22	19	24	27	11	29	20	51	276	229	62	35
12	25	14	26	27	26	29	20	40	288	219	51	39
13	21	26	27	23	26	28	20	35	259	200	47	37
14	22	28	28	10	27	29	12	51	234	184	50	76
15	22	28	27	22	27	28	21	56	223	213	50	35
16	24	29	24	25	26	24	26	39	179	203	50	35
17	23	29	12	27	22	13	27	54	230	197	47	36
18	21	26	24	27	10	25	23	48	236	179	82	37
19	23	13	26	27	26	26	22	25	227	169	46	32
20	23	27	23	24	27	28	23	35	243	142	42	29
21	21	29	24	12	27	29	12	37	224	105	46	29
22	12	29	26	28	27	26	23	39	231	112	42	22
23	23	29	22	20	27	23	24	47	218	151	41	26
24	26	29	12	20	23	12	23	50	247	204	34	26
25	22	29	11	24	12	22	23	47	237	176	9.2	25
26	23	29	24	23	28	24	23	42	215	164	36	30
27	21	29	26	20	32	22	23	46	234	126	40	28
28	23	29	26	9.2	32	23	14	58	233	76	39	23
29	22	29	26	24	31	18	24	83	215	90	40	18
30	22	29	24	24	-	16	22	85	190	109	40	23
31	23	-	12	26	-	12	-	91	-	137	33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	680	26	11	21.9	1,350
November	771	33	13	25.7	1,530
December	716	29	11	23.1	1,420
Calendar year 1939	24,319	292	11	66.6	48,240
January	723.2	28	9.2	23.3	1,430
February	712	32	10	24.6	1,410
March	744	30	12	24.0	1,480
April	656	27	12	21.9	1,300
May	1,298	91	14	51.9	2,570
June	6,697	302	94	223	13,280
July	4,835	229	21	156	9,590
August	2,034.2	155	9.2	65.6	4,030
September	1,017.4	85	8.8	33.9	2,020
Water year 1939-40	20,885.6	302	8.8	57.1	41,410

Note.- No gage-height record Dec. 19-31; discharge computed on basis of flow through San Luis Power and Water Co. power plant.

Culebra Creek below San Luis, Colo.

Location.- Water-stage recorder, lat. 37°12', long. 105°26', in sec. 27, T. 3 N., R. 72 W., Beaubien grant survey, 500 feet downstream from bridge on State Highway 160, 600 feet downstream from Rito Seco, and a quarter of a mile southwest of San Luis.

Drainage area.- 255 square miles.

Records available.- August 1938 to September 1940 (no winter records).

Extremes.- Maximum discharge during year, 380 second-feet June 8 (gage height, 2.90 feet), from rating curve extended above 290 second-feet; minimum daily recorded, 18 second-feet Sept. 1, probably less during period of no record.
1938-40: Maximum discharge, 512 second-feet July 15, 1939 (gage height, 3.29 feet); from rating curve extended above 290 second-feet; minimum daily recorded, that of Sept. 1, 1940.

Remarks.- Records good. None for Dec. 11 to Mar. 18. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	35	40			-	38	28	94	202	152	18
2	32	34	36			-	39	29	100	194	152	49
3	34	34	25			-	37	22	109	120	133	76
4	38	33	38			-	37	20	152	42	111	42
5	36	25	39			-	37	19	237	129	177	41
6	36	36	39			-	39	23	260	150	142	41
7	33	38	40			-	31	25	293	147	89	36
8	25	35	40			-	36	30	314	228	71	19
9	38	39	36			-	36	36	290	228	65	39
10	34	44	26			-	34	41	296	251	68	45
11	33	30	-			-	32	50	275	257	61	41
12	36	25	-			-	31	42	299	251	49	48
13	33	37	-			-	31	36	263	234	44	48
14	32	39	-			-	25	45	257	199	49	89
15	32	39	-			-	33	51	251	237	48	44
16	36	40	-			-	37	42	196	216	53	45
17	34	40	-			-	39	64	245	205	49	46
18	32	37	-			-	36	65	254	186	80	49
19	34	24	-			33	34	37	248	175	45	49
20	34	39	-			34	38	41	272	140	42	41
21	32	40	-			37	28	44	257	100	45	42
22	23	40	-			36	37	46	266	102	40	36
23	34	40	-			31	36	48	251	145	41	34
24	37	40	-			22	33	50	231	211	39	37
25	33	40	-			32	34	49	275	177	19	38
26	34	40	-			34	37	41	242	162	40	44
27	32	40	-			32	38	42	266	115	41	45
28	34	40	-			33	28	55	269	67	40	39
29	33	40	-			29	36	80	248	77	41	34
30	33	40	-			29	29	83	222	98	41	38
31	34	-	-			24	-	94	-	136	36	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,024	38	23	33.0	2,030
November	1,103	44	24	36.8	2,190
December 1-10	361	40	25	36.1	716
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 19-31	406	37	22	31.2	805
April	1,036	39	25	34.5	2,050
May	1,378	94	19	44.5	2,730
June	7,282	314	94	243	14,440
July	5,181	257	42	167	10,280
August	2,103	177	19	67.8	4,170
September	1,293	89	18	43.1	2,560
Water year	-	-	-	-	-

Note.- No gage-height record Oct. 17 to Nov. 27; discharge computed on basis of record for station at San Luis.

Costilla Creek above reservoir, near Costilla, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°54'25", long. 105°15'00", in Sangre de Cristo Grant, 2¾ miles by road upstream from Costilla Dam and 17 miles southeast of Costilla, Taos County. Prior to July 9, 1940, water-stage recorder and timber control 60 feet downstream, at datum 1.78 feet lower.

Records available.- April 1937 to September 1940 (irrigation seasons only).

Extremes.- Maximum discharge recorded during year, 62 second-feet May 17 (gage height, 1.44 feet); minimum daily recorded, 2.0 second-feet Aug. 29.
1937-40: Maximum discharge recorded, 175 second-feet May 15, 1938 (gage height, 1.90 feet); minimum daily recorded, that of Aug. 29, 1940.

Remarks.- Records fair except those for periods of doubtful or no gage-height record, which are poor.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8							-	17	h4.6	4.2	2.8
2	3.2							-	16	h4.2	3.4	a2.7
3	2.6							-	14	h4.2	3.4	a2.7
4	2.6							-	15	h4.6	3.0	2.8
6	2.6							-	14	h4.6	3.0	2.6
6	-							-	13	h4.6	5.0	3.0
7	-							-	12	h4.2	6.6	4.2
8	-							-	11	h4.2	3.8	3.4
9	-							-	12	4.2	3.4	a3.4
10	-							-	11	4.6	3.0	a3.2
11	-							-	9.9	4.2	3.0	3.8
12	-							-	9.9	4.6	3.0	3.4
13	-							20	9.0	3.8	3.4	a3.1
14	-							22	8.6	4.8	3.0	a3.1
15	-							21	7.6	4.2	2.6	a2.8
16	-							22	7.6	4.6	3.0	a2.7
17	-							26	7.2	3.0	3.4	a3.1
18	-							29	6.9	3.0	3.8	4.2
19	-							21	6.6	2.8	3.4	6.0
20	-							20	6.6	3.4	3.4	3.0
21	-							23	6.2	12	3.4	a4.6
22	-							23	5.6	5.0	8.2	a4.0
23	-							20	5.3	3.4	5.0	a5.6
24	-							17	5.3	3.0	4.6	a3.4
25	-							19	5.0	2.8	3.8	3.8
26	-							22	6.2	2.8	3.0	4.2
27	-							a20	h5.8	2.6	3.4	3.8
28	-							17	h5.2	2.4	2.4	a4.6
29	-							18	h4.9	3.4	2.0	a4.4
30	-							17	h4.6	3.0	2.2	a4.6
31	-							17	-	4.2	2.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1-5	14.8	3.8	2.6	2.96	29
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May 13-31	394	29	17	20.7	781
June	259.0	17	4.6	8.97	534
July	126.8	12	2.4	4.09	252
August	109.2	6.6	2.0	3.52	217
September	107.8	6.2	2.6	3.59	214
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for Casias Creek near Costilla and Santistevan Creek near Costilla.
h Gage readings from a temporary unrated staff; discharge computed on basis of records for Casias Creek near Costilla and Santistevan Creek near Costilla.

Costilla Creek below reservoir, near Costilla, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°52'25", long. 105°16'55", in Sangre de Cristo Grant, 125 feet downstream from outlet of Costilla Dam and 18 miles southeast of Costilla, Taos County.

Records available.- April 1937 to September 1940 (irrigation seasons only).

Extremes.- Maximum discharge recorded during year, 218 second-feet July 1 (gage height, 2.13 feet); minimum daily recorded, 0.4 second-foot May 21-25, June 15.
1937-40: Maximum discharge recorded, 225 second-feet July 23, 1937 (gage height, 2.24 feet); minimum daily recorded, that of May 21-25 and June 15, 1940.

Remarks.- Records good. No diversion above station. Flow controlled by Costilla Reservoir (capacity, 20,750 acre-feet).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.4	8.4						-	0.6	128	98	13
2	8.4	8.4						-	.6	130	63	13
3	8.4	8.4						-	17	126	12	13
4	8.4	8.4						-	37	129	54	25
5	8.4	8.4						-	52	81	103	21
6	8.4	8.4						-	69	17	64	10
7	8.4	6.0						-	75	72	12	10
8	8.4	2.1						-	73	126	13	10
9	8.4	-						-	78	125	13	10
10	8.4	-						-	84	124	13	10
11	8.4	-						-	84	124	13	25
12	8.4	-						e20	84	75	13	25
13	8.4	-						26	84	15	13	12
14	8.4	-						30	39	55	13	12
15	8.4	-						34	.4	113	13	12
16	8.4	-						34	48	112	13	12
17	8.4	-						16	86	106	13	17
18	8.4	-						.6	88	101	13	22
19	8.4	-						.6	101	67	13	19
20	8.4	-						.6	109	12	13	18
21	8.4	-						.4	65	48	31	17
22	8.4	-						.4	12	94	25	16
23	8.4	-						.4	64	96	13	15
24	8.4	-						.4	109	101	13	13
25	8.4	-						.4	120	107	13	12
26	8.4	-						.6	128	67	13	12
27	8.4	-						.6	121	13	13	12
28	8.4	-						.6	76	13	29	12
29	8.4	-						.6	17	13	27	12
30	8.4	-						.6	73	13	13	12
31	8.4	-						.6	-	55	13	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	260.4	8.4	8.4	8.40	516
November 1-8	58.5	8.4	2.1	7.31	116
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May 12-31	167.4	34	.4	8.37	332
June	1,994.6	128	.4	66.5	3,960
July	2,458	130	12	79.3	4,880
August	778	103	12	25.1	1,540
September	442	25	10	14.7	877
Water year	-	-	-	-	-

e Estimated.

Costilla Creek near Costilla, N. Mex.

Location.- Water-stage recorder, lat. 36°58', long. 105°32', in Sangre de Cristo Grant, half a mile upstream from diversion dam and 2 miles south of Costilla, Taos County.

Records available.- March 1936 to September 1940 (irrigation seasons only).

Extremes.- Maximum gage height recorded during year, 4.61 feet Sept. 2 (discharge not determined); minimum daily discharge recorded, 12 second-feet Sept. 9.
1936-40: Maximum discharge recorded, 892 second-feet Apr. 13, 1937, from rating curve extended above 160 second-feet; maximum gage height recorded, that of Sept. 2, 1940; minimum daily discharge recorded, 11 second-feet Oct. 7, 9-11, 1937.

Remarks.- Records fair except those for periods of incomplete or no gage-height record, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a20	-				-	36	39	62	122	98	19
2	a19	*17				-	34	41	57	127	93	23
3	a18	-				-	25	54	51	134	26	18
4	17	-				-	28	73	74	133	21	17
5	16	-				-	28	72	68	135	91	29
6	16	-				-	26	74	96	48	112	15
7	18	-				-	26	76	107	38	42	16
8	24	-			*12	-	25	93	106	122	32	14
9	24	-				-	25	81	110	122	26	12
10	23	-				-	29	72	116	130	22	14
11	22	-				-	27	71	120	129	24	18
12	21	-				-	26	69	110	135	22	38
13	21	-	*17			-	30	90	108	44	20	20
14	21	-				-	34	97	102	36	20	17
15	21	-				-	38	106	31	116	17	16
16	20	*18				-	37	102	26	117	15	14
17	20	-				-	34	124	94	125	14	16
18	21	-				-	38	113	93	119	15	30
19	-	-				*26	43	93	a100	116	18	33
20	-	-				-	52	81	a110	44	18	30
21	-	-				-	56	79	a120	45	22	34
22	-	-				-	53	90	a40	109	a25	36
23	-	-				-	53	79	a35	113	28	32
24	-	-				-	53	72	a70	a115	28	31
25	-	-				-	57	74	a120	113	26	31
26	-	-				35	60	75	a130	123	23	28
27	-	-				37	66	76	115	60	23	28
28	-	-				30	58	74	116	37	22	27
29	-	-				23	55	72	48	34	53	29
30	-	-				26	48	69	44	35	22	41
31	-	-				34	-	66	-	30	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1-18	366	24	17	20.3	726
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 26-31	186	37	23	30.8	367
April	1,200	66	25	40.0	2,380
May	2,447	124	39	78.9	4,850
June	2,599	130	26	86.6	5,160
July	2,896	135	30	93.4	5,740
August	1,038	112	14	33.5	2,060
September	726	41	12	24.2	1,440
Water year	-	-	-	-	-

* Discharge measurement made on this day.
a No or incomplete gage-height record; discharge computed on basis of records for station below Costilla Dam.

Casias Crsek near Costilla, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°54'05", long. 105°15'30", in Sangre de Cristo Grant, 200 feet downstream from road crossing, 2.5 miles by road upstream from Costilla Dam, and 17 miles southeast of Costilla, Taos County. Prior to July 18, 1940, water-stage recorder and timber control 100 feet downstream, at datum 1.56 feet lower.

Records available.- April 1937 to September 1940 (irrigation season only).

Extremes.- Maximum discharge recorded during year, 51 second-feet May 17 (gage height, 1.08 feet); minimum daily recorded, 4.5 second-feet Aug. 4.
1937-40: Maximum dischargs recorded, 108 second-feet June 3, 1937, from rating curve extended above 40 second-feet by logarithmic plotting; maximum gage height, 1.90 feet June 14, 1938 affected by backwater from Costilla Reservoir); minimum daily discharge recorded, 3.0 second-feet Aug. 14, 1939.

Remarks.- Records good except those for periods of no gage-height record, which are poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9							-	32	a10	6.7	6.2
2	5.6							-	33	a10	7.1	5.7
3	5.4							-	31	9.5	5.1	5.7
4	5.4							-	29	9.5	4.5	5.4
5	5.4							-	28	10	4.8	5.1
6	-							-	26	7.7	5.1	5.4
7	-							-	24	7.0	7.6	6.2
8	-							-	23	7.3	a6.2	5.4
9	-							-	21	6.6	4.8	5.4
10	-							-	20	5.9	7.1	9.1
11	-							-	18	a5.8	7.1	6.7
12	-							-	19	a5.8	7.6	5.7
13	-							24	16	a6	6.7	5.4
14	-							28	15	a7	6.7	5.4
15	-							30	13	a6	6.2	5.1
16	-							34	13	a5.5	6.7	4.8
17	-							39	13	a5.5	6.7	5.4
18	-							38	13	5.7	7.1	6.7
19	-							31	13	6.7	6.7	7.6
20	-							27	13	7.1	6.7	5.7
21	-							26	12	11	6.7	8.1
22	-							26	13	8.6	9.5	7.1
23	-							25	12	7.1	7.6	6.7
24	-							25	11	8.6	7.1	6.2
25	-							23	11	5.7	7.1	7.1
26	-							24	a11	6.2	6.7	7.1
27	-							24	a11	5.7	6.7	6.7
28	-							26	a10	5.7	5.7	8.1
29	-							27	a10	8.1	5.4	7.6
30	-							29	a10	7.6	5.7	8.1
31	-							32	-	6.2	6.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1-5	27.7	5.9	5.4	5.54	55
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May 13-31	534	39	23	28.1	1,060
June	524	33	10	17.5	1,040
July	225.1	11	5.5	7.26	446
August	201.6	9.5	4.5	6.60	400
September	190.9	9.1	4.8	6.36	379
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of record for Santistevan Creek near Costilla.

Santistevan Creek near Costilla, N. Mex.

Location.- Water-stage recorder and metal Parshall flume, lat. 36°53'05", long. 105°16'50", in Sangre de Cristo Grant, 200 feet upstream from road crossing, 0.9 mile upstream from Costilla Dam, and 16 miles southeast of Costilla, Taos County. Prior to June 27, 1940, water-stage recorder and timber control at same site but at datum 0.99 foot lower.

Records available.- April 1937 to September 1940 (irrigation season only).

Extremes.- Maximum discharge during year not determined; minimum daily recorded, 0.9 second-foot Aug. 28, Sept. 2-5, 8, 9.
1937-40: Maximum discharge observed, 14 second-feet June 6, 1938 (gage height, 1.20 feet); minimum daily recorded, 0.5 second-foot Oct. 23, 1938.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0							-	a10	3.0	1.9	1.0
2	1.0							-	a10	2.8	1.7	.9
3	1.0							-	a8	2.8	1.6	.9
4	1.0							-	5.8	2.8	1.6	.9
5	1.0							-	a6	2.6	1.5	.9
6	-							-	6.3	2.6	1.6	1.2
7	-							-	a6	2.5	1.6	1.0
8	-							-	a5.5	2.3	1.5	.9
9	-							-	a6	2.2	1.4	.9
10	-							-	a5.5	2.2	1.4	1.5
11	-							-	5.5	2.5	1.4	1.2
12	-							-	a5	2.4	1.4	1.1
13	-							3.8	a5	2.3	1.4	1.0
14	-							3.8	a5	2.3	1.3	1.0
15	-							4.2	a4.5	2.3	1.3	1.0
16	-							a4.5	a4.5	2.3	1.3	1.0
17	-							5.3	a4.5	2.2	1.2	1.0
18	-							a6	4.2	2.2	1.2	1.1
19	-							a5.5	a4.2	2.1	1.1	1.2
20	-							5.0	4.2	2.2	1.1	1.0
21	-							4.4	a4.2	2.2	1.1	1.2
22	-							4.4	a4.1	1.9	1.2	1.2
23	-							4.4	a4	1.9	1.2	1.1
24	-							a5	4.0	1.9	1.1	1.1
25	-							6.0	3.8	1.8	1.0	1.2
26	-							a6.5	3.4	2.0	1.0	1.1
27	-							a7	3.3	1.9	1.0	1.1
28	-							5.8	3.3	1.7	.9	1.0
29	-							a7	3.3	1.7	1.0	1.0
30	-							a8	3.2	1.7	1.0	1.0
31	-							a9	-	1.8	1.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1-5	5.0	1.0	1.0	1.00	9.9
November	-	-	-	-	-
December	-	-	-	-	-
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May 13-31	105.6	9	3.8	5.56	209
June	152.3	10	3.2	5.08	302
July	69.1	3.0	1.7	2.23	137
August	40.0	1.9	.9	1.29	79
September	31.7	1.5	.9	1.06	63
Water year	-	-	-	-	-

a No gage-height record; discharge computed on basis of records for Costilla Creek above reservoir, near Costilla, and Casias Creek near Costilla.

Latir Creek near Cerro, N. Mex.

Location.- Water-stage recorder and concrete Parshall flume, lat. 36°49'45", long. 105° 32'45", in SW¼ sec. 15, T. 30 N., R. 13 E., at mouth of canyon, 100 feet upstream from heading of Cerro community ditch and 6 miles northeast of Cerro.

Records available.- April 1937 to September 1940 (irrigation season only).

Extremes.- Maximum discharge recorded during year, 28 second-feet May 31 and Aug. 22; maximum gage height recorded, 1.20 feet May 31; minimum daily discharge recorded, 2.8 second-feet Sept. 16.

1937-40: Maximum discharge recorded, 71 second-feet June 13, 1938 (gage height, 1.88 feet), from rating curve extended above 34 second-feet by logarithmic plotting; probably higher stages occurred during May and June 1937, discharge not determined; minimum daily discharge recorded, 0.6 second-foot May 9, 1937.

Remarks.- Records good except those determined by interpolation, which are fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-					-	5.3	23	8.0	4.7	4.1
2		*2.7					-	7.7	22	7.5	4.5	4.5
3		-					-	11	21	8.0	4.3	4.1
4		-					-	10	20	7.5	4.1	4.0
5		-					-	9.5	20	7.5	4.1	3.8
6	*3.7	-					-	11	19	7.0	4.5	3.8
7		-					-	11	17	6.8	7.6	4.5
8		-					-	10	16	6.8	4.9	4.1
9		-					-	8.0	14	6.4	4.5	3.6
10		-					-	8.7	13	6.1	4.7	3.6
11		-					*2.8	10	13	5.9	5.3	3.4
12		-					-	10	13	5.9	4.9	3.3
13		-	*3.0				-	11	13	5.9	4.7	3.3
14		-					-	13	13	5.9	4.3	3.1
15		-					-	14	13	5.9	4.1	3.0
16		*3.3					-	15	13	5.7	4.0	2.8
17		-					-	22	12	5.7	3.8	3.4
18		-					-	20	12	5.5	4.7	3.8
19		-				*2.3	-	17	11	5.3	4.3	4.3
20		-					-	15	11	5.3	4.5	3.3
21		-					-	15	11	5.5	6.2	4.0
22		-					-	14	10	5.1	11	3.8
23		-					-	13	11	5.1	7.3	3.8
24		-					f9	14	10	5.1	7.0	3.6
25		-					8.7	a16	9.7	5.1	6.1	3.8
26		-					11	18	9.5	6.6	5.5	3.8
27		-					7.5	17	9.2	5.1	5.3	3.6
28		-					5.1	18	9.0	4.7	a5.0	3.6
29		-					4.1	20	8.7	4.9	a4.7	4.0
30		-					3.6	20	8.4	4.9	a4.4	4.1
31		-					-	22	-	4.9	4.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April 24-30	49.0	11	3.6	7.00	97
May	486.2	22	5.3	13.7	845
June	405.6	23	8.4	13.5	804
July	185.6	8.0	4.7	5.99	368
August	159.1	11	3.8	5.13	316
September	111.9	4.5	2.8	3.73	222
The period	-	-	-	-	2,650

* Discharge measurement.
a No gage-height record; discharge interpolated.
f Fragmentary gage-height record; discharge computed on basis of partly estimated graph.

Rio Colorado near Questa, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°42', long. 105°33', in sec. 33, T. 29 N., R. 13 E., 1¾ miles upstream from Cabresto Creek and 2 miles east of Questa. Datum of gage is 7,449.88 feet above mean sea level.

Drainage area.- 112 square miles.

Records available.- October 1912 to August 1915 (fragmentary), October 1930 to September 1940 in reports of Geological Survey; October 1912 to December 1931 in reports of State engineer.

Average discharge.- 24 years (1915-25, 1926-40), 64.7 second-feet.

Extremes.- Maximum discharge during year, 292 second-feet May 18 (gage height, 1.65 feet), from rating curve extended above 148 second-feet by logarithmic plotting; minimum daily, 11 second-feet Jan. 14, 15, 19, 20.

1930-40: Maximum discharge, 870 second-feet June 14, 1935 (gage height, 3.14 feet, datum then in use, from curve extended above 250 second-feet by logarithmic plotting; minimum daily, 6.3 second-feet Nov. 24, 25, 1931.

Remarks.- Records good except those for period of ice effect, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	21	18	b16	16	18	29	47	122	47	29	25
2	21	21	18	b15	16	16	30	56	143	54	30	25
3	20	21	18	b15	16	16	30	62	170	52	27	24
4	20	20	18	b14	14	17	30	69	138	56	27	24
5	20	19	18	b14	15	16	30	72	122	56	28	23
6	20	21	16	b13	13	18	30	72	118	61	29	22
7	20	21	18	13	15	16	30	77	108	49	37	23
8	25	20	18	b14	15	17	30	100	97	45	30	21
9	25	21	18	b14	13	20	30	90	94	41	28	20
10	23	22	19	b15	14	20	30	80	100	39	27	20
11	23	18	18	b15	16	19	30	80	143	37	27	21
12	22	18	18	b15	16	18	30	80	143	36	26	20
13	23	18	16	b13	14	14	30	85	94	37	26	20
14	22	18	17	11	16	16	32	85	77	37	26	20
15	21	17	17	11	17	18	35	90	72	36	25	20
16	21	18	18	b12	15	18	37	108	72	35	25	19
17	21	18	18	b12	15	21	37	210	69	33	25	19
18	21	18	18	b13	17	20	36	244	62	32	27	20
19	21	18	16	b11	18	20	37	210	62	31	26	22
20	21	18	16	b11	16	20	40	161	61	33	26	20
21	21	19	16	b13	16	21	47	130	62	35	26	22
22	21	19	16	b15	18	23	54	114	64	33	28	23
23	21	20	b15	18	16	25	61	90	97	32	30	21
24	21	20	b15	18	16	26	61	82	77	31	30	21
25	21	20	b14	17	16	27	61	82	62	30	27	26
26	22	19	b13	16	16	29	64	94	59	29	25	26
27	21	20	12	16	16	29	69	97	57	30	25	25
28	20	18	b13	16	16	28	62	94	54	29	24	23
29	18	19	14	17	17	26	59	104	52	29	23	23
30	19	21	14	18	-	27	54	108	49	30	23	24
31	20	-	b16	18	-	29	-	111	-	30	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	656	25	18	21.2	1,300
November	681	22	17	19.4	1,150
December	511	19	12	16.5	1,010
Calendar year 1939	16,126	185	12	44.2	31,980
January	449	18	11	14.5	891
February	454	18	13	15.7	900
March	648	29	14	20.9	1,290
April	1,235	69	29	41.2	2,450
May	3,184	244	47	103	6,320
June	2,700	170	49	90.0	5,360
July	1,185	61	29	38.2	2,350
August	835	37	23	26.9	1,660
September	662	26	19	22.1	1,310
Water year 1939-40	13,100	244	11	35.8	25,990

b Stage-discharge relation affected by ice.

Rio Hondo near Valdez, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°32'20", long. 105°33'30", in SE¼ sec. 28, T. 27 N., R. 13 E., a quarter of a mile upstream from Forest Service gate (revised), 1½ miles east of Valdez, and 9 miles upstream from mouth.

Records available.- August 1934 to September 1940. October 1930 to September 1934 at site half a mile downstream, below two diversions.

Extremes.- Maximum discharge during year, 116 second-feet May 31 (gage height, 1.52 feet); minimum daily, 4 second-feet (estimated) Feb. 21.
1934-40: Maximum daily discharge, 350 second-feet (estimated) May 17, 1937; maximum gage height, 5.59 feet, datum then in use, Dec. 15, 1936 (ice jam); minimum daily discharge, 3.0 second-feet (estimated) Jan. 21, 1935.

Remarks.- Records fair except those for periods of ice effect and of partial or no gage-height record, which are poor. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	a13	9.5		10	10	24	33	108	43	21	18
2	14	13	9.5		11	10	24	36	107	41	21	18
3	14	13	9.5		11	10	24	42	103	39	21	18
4	14	12	9.5		11	9.5	21	50	99	37	21	17
5	14	12	9.5		10	11	21	54	101	35	20	16
6	14	12	8.2		10	11	20	56	101	35	21	16
7	14	12	7.8		b10	11	20	60	91	32	29	16
8	20	12	7.0		b10	10	20	66	91	30	22	16
9	18	12	7.4		*b9	11	19	60	92	29	19	16
10	16	12	7.4		b10	12	19	58	91	29	18	19
11	16	11	6.1		10	11	18	58	89	29	19	18
12	15	11	a8	a9	8.2	a11	18	59	86	28	19	17
13	15	11	9.5		b8	a10	20	60	80	29	18	16
14	14	11	*11		b7.5	11	22	63	76	28	18	16
15	14	11	12		b7	12	25	64	75	27	18	16
16	14	11	11		b6.5	12	25	70	74	26	19	15
17	14	11	9.5		b6	12	27	81	70	25	18	16
18	15	11	9.5		b5.5	12	26	75	64	24	21	18
19	15	11	b9		4.9	13	29	76	63	24	19	21
20	14	11	b8.5		4.4	*13	34	81	62	24	21	18
21	14	12	b8		b4	15	41	84	60	23	21	20
22	14	11	b8.5		4.4	17	42	88	59	24	21	19
23	14	11	b9		4.6	19	43	91	64	26	21	18
24	14	11	b9		9.0	21	43	89	58	25	21	17
25	14	10	9.0	*9.5	9.5	24	41	86	55	24	21	18
26	14	10	9.5	9.5	10	24	42	88	53	24	20	18
27	13	10	11	9.0	9.5	23	44	94	51	24	19	17
28	13	10		8.6	9.5	a20	42	94	50	22	18	17
29	13	10	a8	8.6	*9.5	a18	38	101	48	24	18	17
30	13	10		8.6	-	a20	36	103	46	24	18	16
31	13	-		8.6	-	a22	-	107	-	23	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	447	20	13	14.4	887
November	338	13	10	11.3	670
December	275.4	12	6.1	8.88	546
Calendar year 1939	10,626.4	103	6.1	29.1	21,080
January	278.4	-	-	8.98	552
February	240.0	11	4	8.28	476
March	445.5	24	9.5	14.4	884
April	868	44	18	28.9	1,720
May	2,227	107	33	71.8	4,420
June	2,267	108	46	75.6	4,500
July	877	43	22	28.3	1,740
August	619	29	18	20.0	1,230
September	518	21	15	17.3	1,030
Water year 1939-40	9,400.3	108	4	25.7	18,660

* Winter discharge measurement made on this day.
a Partial or no gage-height record; discharge computed on basis of records for station at Arroyo Hondo, Rio Colorado near Questa, and Rio Lucero near Arroyo Seco.
b Stage-discharge relation affected by ice.

Rio Hondo at Arroyo Hondo, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°31'55", long. 105°41'05", in sec. 32, T. 27 N., R. 12 E., 1 mile downstream from Arroyo Hondo and 1¼ miles upstream from mouth.

Records available.- April 1910 to August 1915 (at site 200 yards above mouth, published as Rio Hondo near Arroyo Hondo) and January 1932 to September 1940 in reports of Geological Survey. April 1910 to December 1928 in reports of State engineer.

Extremes.- Maximum discharge during year, 109 second-feet Aug. 18 (gage height, 1.81 feet), from rating curve extended above 60 second-feet by logarithmic plotting; minimum daily, 6.2 second-feet Apr. 9, 12, 15.

1932-40: Maximum discharge, 2,510 second-feet Aug. 23, 1935 (gage height, 5.45 feet, datum then in use), from rating curve extended above 170 second-feet by logarithmic plotting; minimum daily, 4.0 second-feet July 13-16, 1934.

Remarks.- Records fair except those for periods of ice effect or no or faulty gage-height record, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	15	17		17	15	24	16	59	9.8	7.6	8.3
2	7.8	15	17		17	15	25	15	50	9.0	7.3	8.0
3	8.2	15	17		17	14	22	15	53	8.3	7.1	7.6
4	8.4	15	17		17	14	14	14	65	8.5	6.7	7.6
5	8.7	15	17		17	14	8.3	14	85	8.5	7.6	7.6
6	8.4	17	16		14	14	8.5	13	78	9.0	7.6	7.6
7	11	15	16		17	14	7.6	29	44	8.8	8.0	9.3
8	14	11	16		18	15	6.9	47	38	8.5	7.8	8.0
9	13	12	16		12	14	6.2	53	34	8.3	7.1	7.6
10	12	14	16		13	13	6.5	43	25	8.3	7.6	9.6
11	9.1	16	16		b15	13	6.5	35	20	8.3	8.0	8.3
12	8.4	17	15	a14	b16	13	6.2	30	18	8.3	7.3	8.3
13	8.0	17	14		b11	a9	6.7	28	20	8.0	7.1	9.3
14	6.7	18	14		14	a8	6.7	35	18	8.8	6.9	8.8
15	6.7	18	14		b11	a8	6.2	47	16	8.3	6.5	8.3
16	6.9	18	15		b11	a8	7.3	36	13	8.0	6.9	7.6
17	7.8	18	15		b11	8.4	7.8	56	13	7.8	6.9	8.5
18	8.0	18	15		b12	9.1	7.1	68	12	7.6	14	9.3
19	8.2	18	14		b11	12	7.6	68	10	7.6	9.6	9.3
20	8.2	18	13		b10	13	9.6	64	9.3	7.3	9.6	8.8
21	8.7	18	14		12	17	16.0	62	9.8	7.3	8.3	12
22	8.4	18	14		16	19	27	70	11	7.6	8.8	10
23	8.9	17	14		16	20	31	66	13	7.3	9.0	9.8
24	9.4	16	14	17	16	22	25	64	12	6.9	9.0	a9.8
25	11	16	15	18	15	24	18	64	11	6.7	9.6	a9.8
26	17	17	15	16	15	29	22	62	9.8	6.7	8.3	a9.8
27	16	17		17	15	30	25	68	10	6.7	8.3	9.8
28	16	17		16	14	30	25	66	14	6.7	7.8	9.8
29	14	17	a13	16	15	26	24	65	19	8.0	7.8	10
30	15	18		16	-	18	18	65	15	8.0	7.6	9.8
31	15	-		16	-	20	-	64	-	7.6	7.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	316.3	17	6.7	10.2	627
November	491	18	11	16.4	974
December	461	17	-	14.9	914
Calendar year 1939	7,186.5	76	6.3	19.7	14,260
January	454	-	-	14.6	900
February	415	18	10	14.3	823
March	498.5	30	8	16.1	989
April	431.7	31	6.2	14.4	856
May	1,442	70	13	46.5	2,860
June	804.9	85	9.3	26.8	1,600
July	246.5	9.8	6.7	7.95	489
August	249.0	14	6.5	8.03	494
September	268.3	12	7.6	8.94	532
Water year 1939-40	6,078.2	85	6.2	16.6	12,060

a No gage-height record or record incomplete; discharge computed on basis of weather records and records for Rio Hondo near Valdez and Rio Lucero near Arroyo Seco.
b Stage-discharge relation affected by ice.

Rio Pueblo de Taos near Taos, N. Mex.

Location.- Water-stage recorder, lat. 36°26', long. 105°30', in sec. 36, T. 26 N., R. 13 E., 2½ miles east of Taos Pueblo, 4½ miles northeast of Taos and 5 miles above confluence with Rio Lucero.

Records available.- February to September 1940.

Extremes.- Maximum discharge during period, 90 second-feet May 17 (gage height, 1.80 feet); minimum daily, 4.4 second-feet Feb. 6.

Remarks.- Records fair except those for periods of no gage-height record, which are poor.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					7.1	10	30	34	67	16	11	9.4
2					7.1	9.0	34	33	64	15	9.9	8.2
3					6.8	8.6	29	44	61	15	9.0	8.2
4					6.8	8.6	26	61	58	14	7.8	7.4
5					6.8	8.2	26	67	52	14	8.2	7.1
6					4.4	9.0	24	71	48	15	9.9	7.1
7					7.8	7.4	23	71	46	14	14	7.4
8					6.3	8.2	22	76	44	13	9.9	7.1
9					5.4	10	21	64	41	12	8.2	6.8
10					6.3	12	22	56	40	12	8.2	7.1
11					6.6	12	23	55	38	13	9.0	9.0
12					6.3	10	24	61	34	13	9.4	7.4
13					5.4	6.6	27	61	33	11	9.0	7.4
14					7.4	7.8	34	62	31	10	8.6	7.1
15					6.8	9.9	41	69	30	11	8.2	6.8
16					6.8	11	41	74	29	10	8.6	6.3
17					6.6	13	35	85	28	10	9.0	6.8
18					7.4	13	32	83	26	10	9.0	8.2
19					6.6	15	35	76	24	10	9.9	11
20					5.9	14	44	67	23	11	14	8.6
21					6.3	15	55	62	23	11	14	11
22					6.8	19	55	67	23	10	13	10
23					6.8	23	62	61	25	9.5	13	8.6
24					6.8	26	62	59	21	10	11	7.8
25					6.8	30	62	58	20	10	11	8.6
26					7.1	33	64	58	19	9.5	9.4	8.2
27					7.4	30	66	64	18	9.2	8.6	8.6
28					7.8	27	58	67	18	8.5	8.2	7.8
29					9.0	23	46	71	17	8.2	7.8	7.8
30					-	21	39	69	17	8.2	9.9	7.8
31				7.1	-	24	-	67	-	9.0	8.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October					
November					
December					
Calendar year					
January	-	-	-	-	-
February	195.4	9.0	4.4	6.74	388
March	474.3	33	6.6	15.3	941
April	1,162	66	21	38.7	2,300
May	1,973	85	33	63.6	3,910
June	1,018	67	17	33.9	2,020
July	352.1	16	8.2	11.4	698
August	305.3	14	7.8	9.85	606
September	240.6	11	6.3	8.02	477
The period	-	-	-	-	11,400

Note.- No gage-height record June 29, 30, July 1-8, 13-28; discharge computed on basis of weather records and record for Rio Lucero near Arroyo Seco.

Rio Pueblo de Taos at Taos, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°25', long. 105°34', in NE¼ sec. 8, T. 25 N., R. 13 E., 50 feet downstream from highway bridge, half a mile upstream from Rio Lucero, and three-quarters of a mile northwest of Taos.

Records available.- June 1936 to September 1940.

Extremes.- Maximum discharge during year, 48 second-feet May 18 (gage height, 1.29 feet); minimum daily, 0.2 second-foot Aug. 31 and several days in September.
1936-40: Maximum discharge, 230 second-feet May 16, 1937 (gage height, 2.35 feet, datum then in use); minimum daily, 0.1 second-foot Aug. 11, 1939.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation. Records do not include discharge of North Channel of Rio Pueblo de Taos, which diverts water at point about 1 mile upstream.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.7	3.3	2.0	4.5	7.0	18	9.7	27	0.4	0.6	0.2
2	.4	.9	3.3	2.5	4.6	6.4	20	7.5	25	.3	.6	.2
3	.4	1.0	3.1	2.6	4.8	5.3	15	11	23	.4	.4	.2
4	.6	1.3	3.1	2.8	4.5	5.6	10	26	20	.6	.4	.2
5	.6	1.2	3.1	3.0	4.3	5.6	9.3	25	15	.5	.4	.2
6	.5	1.5	3.0	3.1	2.5	5.8	8.9	20	12	.5	.4	.2
7	.5	1.5	2.4	2.5	3.9	4.8	8.6	21	10	.4	.5	.3
8	.9	1.6	3.9	2.2	4.3	5.8	7.8	32	6.7	.4	.6	.3
9	1.2	1.7	3.9	3.7	3.1	7.5	5.8	32	4.5	.4	.4	.2
10	1.1	1.4	3.1	3.7	b2.5	8.6	4.1	28	3.9	.3	.3	.4
11	1.1	1.3	3.3	4.1	5.0	8.6	4.5	27	3.5	.4	.3	.3
12	.9	1.2	4.1	4.3	4.6	7.8	4.8	28	3.1	.4	.3	.3
13	.9	1.2	2.6	3.7	b2.4	4.8	4.1	28	2.4	.4	.3	.2
14	.9	2.6	1.8	1.5	3.9	4.5	4.5	26	2.4	.4	.4	.2
15	1.1	2.4	2.2	2.2	5.0	6.4	7.5	26	1.7	.4	.4	.2
16	1.2	2.4	2.8	3.0	4.1	8.6	8.2	28	1.3	.4	.4	.2
17	1.4	2.4	3.9	3.1	3.3	10	10	39	1.2	.4	.4	.2
18	1.2	2.4	3.5	3.3	b3.9	11	8.2	46	.9	.6	.3	.3
19	.6	2.6	2.5	3.1	5.0	11	7.8	41	.7	.6	.3	.3
20	.6	2.5	1.8	3.3	4.3	12	12	36	.8	.6	.3	.3
21	.6	2.5	2.2	3.7	b2.4	13	22	31	.8	.7	.4	.3
22	.5	2.6	2.6	b3.5	5.0	15	21	30	.7	.9	.6	.3
23	.5	2.6	3.3	b3.9	4.8	18	21	28	.6	1.2	.7	.3
24	.5	3.0	2.6	4.3	4.5	21	22	24	.6	.7	.6	.3
25	.5	2.8	3.7	4.1	4.5	24	21	23	.4	.6	.6	.3
26	.6	3.1	3.1	4.1	4.8	26	21	26	.5	.4	.6	.3
27	.6	3.1	1.4	4.3	5.3	23	27	28	.5	.4	.4	.3
28	.7	3.0	1.2	4.1	5.6	21	26	28	.5	.4	.3	.3
29	.6	3.3	1.0	4.1	6.1	18	18	30	.6	.4	.3	.3
30	.7	4.1	.9	4.8	-	16	14	32	.5	.4	.3	.3
31	.7	-	1.4	5.0	-	16	-	30	-	.4	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	23.0	1.4	0.4	0.74	46
November	63.9	4.1	.7	2.13	127
December	84.1	4.1	.9	2.71	167
Calendar year 1939	3,565.7	71	.1	9.77	7,070
January	105.6	5.0	1.5	3.41	209
February	123.9	6.1	2.4	4.27	246
March	358.1	26	4.5	11.6	710
April	392.1	27	4.1	13.1	778
May	847.2	46	7.5	27.3	1,680
June	170.8	27	.4	5.69	339
July	15.3	1.2	.3	.49	30
August	12.8	.7	.2	.41	25
September	7.9	.4	.2	.26	16
Water year 1939-40	2,204.7	46	.2	6.02	4,370

b Stage-discharge relation affected by ice.

Rio Taos at Los Cordovas, N. Mex.

Location.- Water-stage recorder, lat. 36°23', long. 105°39', in N½ sec. 23, T. 25 N., R. 12 E., in Martinez Grant, 50 feet downstream from Rio Ranchos de Taos and Arroyo Seco, half a mile northeast of Los Cordovas, and 4 miles west of Taos.

Drainage area.- 359 square miles.

Records available.- April 1910 to August 1915, October 1930 to September 1940 in reports of Geological Survey. April 1910 to December 1931 in reports of State engineer.

Average discharge.- 29 years (1910-25, 1926-40), 54.9 second-feet.

Extremes.- Maximum discharge during year, 199 second-feet July 24 (gage height, 2.82 feet); minimum daily, 3.9 second-feet July 12-14.
1911-40: Maximum daily discharge, 1,160 second-feet June 16, 1921; minimum daily, 1.4 second-feet Aug. 5, 10, 1934.

Remarks.- Records fair except those for periods of ice effect, which are poor. Several diversions above station for irrigation.

Revisions.- Revised figures of yearly summaries for the years 1921-22, superseding those published in Water-Supply Paper 878, are given herein. The figures of discharge for October 1920 to September 1922 as given in the report of the New Mexico State engineer entitled "Surface Water-Supply of New Mexico, 1888-1925", page 239, are those for Rio Ranchos de Taos near Ranches of Taos, N. Mex.

Year	Water year				Calendar year			
	Maximum day	Minimum day	Mean	Run-off in acre-feet	Maximum day	Minimum day	Mean	Run-off in acre-feet
1921	1,160	14	101	73,200	1,160	14	101	73,360
1922	107	1.7	37.6	27,200	107	1.7	31.7	22,950

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	17	25	b21	28	37	37	20	54	6.8	5.0	6.4
2	13	15	24	23	28	35	41	17	53	5.7	4.5	7.4
3	13	15	24	23	28	31	37	16	47	5.0	4.0	7.4
4	12	15	23	24	28	30	28	28	37	4.7	4.5	7.4
5	12	16	23	24	27	30	28	39	29	5.7	5.0	7.0
6	14	17	23	24	b24	29	32	34	21	5.4	6.7	6.7
7	14	17	23	23	25	27	31	34	16	5.0	7.0	6.7
8	19	18	24	23	25	28	23	77	13	4.5	6.2	6.7
9	18	19	25	24	b22	30	23	87	14	4.2	5.0	6.2
10	19	23	25	25	b23	32	18	72	11	4.2	4.8	9.0
11	18	21	24	27	27	34	15	72	9.0	4.2	6.4	9.0
12	17	20	26	30	27	32	15	76	9.0	3.9	7.4	7.8
13	16	21	23	27	b23	28	14	79	10	3.9	7.0	7.8
14	17	23	23	b21	b25	27	17	76	9.5	3.9	6.4	8.6
15	18	22	23	b18	27	28	18	80	6.8	5.4	6.4	7.0
16	16	22	23	b19	24	28	23	92	7.4	5.4	6.4	6.7
17	15	22	24	b21	b23	31	28	129	7.4	5.7	6.2	7.4
18	16	22	23	b22	b26	30	24	162	7.1	5.4	6.7	9.0
19	17	21	21	b18	27	30	21	162	6.0	5.0	7.0	11
20	16	20	19	19	25	30	22	141	6.8	5.4	7.8	9.4
21	16	21	19	19	25	32	37	116	6.8	6.0	8.6	12
22	17	21	19	19	28	36	36	110	6.8	6.8	7.8	12
23	16	21	22	b25	38	39	34	112	7.1	6.6	7.8	12
24	15	22	20	24	53	45	32	98	6.0	14	9.0	12
25	15	22	b19	26	42	52	34	91	6.8	7.6	8.6	12
26	17	23	b19	26	48	57	33	92	6.0	6.7	8.2	15
27	17	23	b18	27	48	54	39	87	6.4	6.7	7.8	15
28	17	24	b17	26	39	54	41	74	6.0	6.7	7.8	12
29	17	24	b17	25	36	46	36	72	7.1	7.0	7.4	12
30	19	27	b18	26	-	41	27	74	6.8	6.2	6.7	12
31	19	-	b20	26	-	41	-	64	-	5.6	6.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	499	19	12	16.1	990
November	614	27	15	20.5	1,220
December	676	26	17	21.8	1,340
Calendar year 1939	14,247.0	250	2.7	39.0	28,270
January	725	30	18	23.4	1,440
February	869	53	22	30.0	1,720
March	1,102	57	27	35.5	2,190
April	844	41	14	28.1	1,670
May	2,483	162	16	80.1	4,920
June	439.8	54	6.0	14.7	872
July	179.7	14	3.9	5.80	356
August	206.5	9.0	4.0	6.66	410
September	280.6	15	6.2	9.35	557
Water year 1939-40	8,918.6	162	3.9	24.4	17,680

b Stage-discharge relation affected by ice.

Acequia Madre at Taos, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 36°25', long. 105°34', in SW¼ sec. 9, T. 25 N., R. 13 E., half a mile northeast of Taos and 1 mile below head gate.

Records available.- February to September 1940.

Extremes.- Maximum daily discharge during period, 30 second-feet June 5; no flow at times.

Remarks.- Records fair except those less than 1.0 second-feet, which are poor. Ditch diverts water from left bank of Rio Pueblo de Taos for irrigation. Some diversions above station.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	-	-	-	-
February	3.4	0	0.49	28
March	3.8	0	.48	30
April	19	0	11.5	684
May	23	9.6	16.2	994
June	30	.1	10.8	643
July	9.9	0	1.59	98
August	10	0	2.69	166
September	6.2	0	1.37	82
The period	-	-	-	2,720

North channel of Rio Pueblo de Taos at Taos, N. Mex.

Location.- Water-stage recorder and wooden control, lat. 36°25', long. 105°34', in SE¼ sec. 5, T. 25 N., R. 13 E., at highway bridge, 0.1 mile upstream from Rio Lucero, 1 mile downstream from point of diversion from Rio Pueblo de Taos, and 1 mile northwest of Taos.

Records available.- July 1936 to September 1940.

Extremes.- Maximum discharge during year, 16 second-feet May 17 (gage height, 1.13 feet); minimum daily, 0.1 second-foot Sept. 9.
1936-40: Maximum discharge, 35 second-feet May 11, 1937 (gage height, 1.46 feet, datum then in use); minimum daily, 0.1 second-foot Aug. 10-16, 1939, Sept. 9, 1940.

Remarks.- Records good except those for period of no gage-height record, which are fair. Discharge includes diversion from Rio Pueblo de Taos, plus seepage inflow, less some small diversions for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.2	1.9	0.7	0.9	1.3	1.3	3.4	2.6	0.9	0.5	0.2
2	.2	.3	1.7	.7	.9	1.4	3.5	3.3	1.9	.4	.4	.2
3	.2	.3	1.6	.8	.9	1.3	2.4	5.0	1.3	.4	.3	.2
4	.2	.3	1.6	.8	.9	1.3	1.4	11	1.6	.4	.3	.2
5	.2	.3	1.6	.8	.9	1.2	1.3	10	1.7	.5	.3	.2
6	.2	.3	1.6	.7	.9	1.2	1.2	7.4	1.2	.4	.3	.2
7	.2	.3	1.6	.7	.9	1.2	1.1	6.8	.7	.3	.2	.2
8	.2	.3	1.2	.7	.9	1.2	.9	13	.9	.3	.3	.2
9	.2	.3	1.1	.7	.9	1.2	1.3	15	1.3	.3	.2	.1
10	.2	.3	1.0	.7	.9	1.2	1.5	13	1.3	.6	.3	.2
11	.2	.3	1.1	.7	.9	1.2	1.6	12	1.6	.4	.3	.2
12	a.2	.3	1.1	.7	.9	1.2	1.7	13	.8	.4	.3	.2
13	a.2	.3	1.1	.7	.9	1.0	1.6	13	.9	.4	.3	.2
14	a.2	.4	1.0	.7	.9	.9	1.7	12	.7	.5	.3	.2
15	a.2	.5	1.1	.6	.9	.9	3.2	11	1.2	.4	.3	.2
16	.2	.4	.9	.6	.9	.9	3.4	12	.7	.4	.3	.2
17	.2	.5	.9	.6	.9	1.1	4.4	15	.8	.4	.2	.2
18	.3	.5	.8	.6	.9	1.2	3.8	14	.4	.3	.2	.2
19	.2	.5	.8	.6	.9	1.1	3.5	11	.4	.4	.2	.3
20	.2	.5	.7	.6	.9	1.2	5.3	8.9	.3	.5	.2	.3
21	.2	.6	.7	.7	.8	1.3	9.5	6.6	.3	.5	.2	.3
22	.2	.7	.7	.7	.8	1.5	8.9	6.6	.3	.4	.2	.3
23	.2	.9	.7	.9	.9	2.1	8.4	6.1	.4	.4	.2	.2
24	.2	1.0	.7	.8	.9	3.0	8.9	4.9	.4	.5	.5	.2
25	.2	1.0	.7	.8	1.1	2.6	8.9	3.9	.3	.4	.6	.2
26	.2	1.6	.7	.8	1.2	3.0	8.9	4.6	.3	.4	.4	.2
27	.2	2.6	.7	.8	1.2	2.4	11	3.5	.3	.4	.3	.2
28	.2	2.4	.7	.8	1.2	1.0	10	2.9	.4	.4	.2	.3
29	.2	2.4	.7	.8	1.3	.3	7.6	3.4	.7	.5	.2	.2
30	.2	1.8	.7	.9	-	.3	5.3	3.5	1.2	.5	.2	.2
31	.2	-	.7	.9	-	.4	-	3.0	-	.5	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	6.3	0.3	0.2	0.20	12
November	22.1	2.6	.2	.74	44
December	32.1	1.9	.7	1.04	64
Calendar year 1939	383.3	7.3	.1	1.05	761
January	22.6	.9	.6	.73	45
February	27.4	1.3	.8	.94	54
March	41.1	3.0	.3	1.33	82
April	133.5	11	.9	4.45	265
May	258.5	15	2.9	8.35	513
June	26.9	2.6	.3	.90	53
July	13.4	.9	.3	.43	27
August	8.9	.6	.2	.29	18
September	6.3	.3	.1	.21	12
Water year 1939-40	599.4	15	.1	1.64	1,190

a No gage-height record; discharge computed on basis of records for Rio Pueblo de Taos.

Rio Lucero near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and wooden control, lat. 36°30', long. 105°32', in sec. 10, T. 26 N., R. 13 E., in Antoine Leroux Grant, 200 feet upstream from diversion dam for Tenorio and Indian ditches, 2 miles southeast of Arroyo Seco, 4⅛ miles north of Taos Pueblo, and 7⅛ miles northeast of Taos.

Records available.- April 1910 to December 1916 (published as Rio Lucero near Taos), and November 1933 to September 1940 in reports of Geological Survey. January 1911 to December 1915 in reports of State engineer.

Extremes.- Maximum discharge during year, 129 second-feet May 17 (gage height, 2.06 feet); minimum daily, 4.4 second-feet Dec. 13, 14, Feb. 6, 17.
1933-40: Maximum discharge, 190 second-feet May 17, 1937 (gage height, 2.37 feet); minimum daily not determined.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	6.6	5.4	4.8	4.8	6.2	15	23	100	26	14	15
2	8.6	6.6	5.4	4.8	4.8	6.2	17	28	93	24	13	15
3	8.6	6.2	5.0	4.8	4.8	6.2	14	38	85	23	14	15
4	8.6	6.2	4.8	4.8	4.8	6.2	13	47	76	22	12	14
5	8.3	6.6	4.8	5.0	4.8	6.2	13	50	70	21	12	14
6	8.3	6.6	4.8	5.0	4.4	6.2	13	51	68	22	13	13
7	8.3	6.6	4.8	b5	4.8	6.0	12	53	65	20	17	14
8	11	6.2	4.8	b5	4.8	6.2	12	60	61	19	14	12
9	9.8	6.8	4.8	5.0	4.8	6.8	11	52	56	19	13	12
10	9.0	6.6	4.8	5.0	5.4	7.6	11	50	52	19	13	13
11	8.6	6.2	4.8	5.0	5.0	6.8	11	55	48	19	15	13
12	8.3	6.2	4.8	5.0	5.0	6.6	12	59	46	19	14	13
13	8.3	6.0	4.4	5.4	b5.6	6.6	14	60	43	20	14	12
14	8.3	5.6	4.4	b5	5.4	7.2	20	67	42	18	14	11
15	8.0	5.6	4.8	b5	5.4	6.8	22	77	41	17	13	12
16	8.0	5.6	4.8	b5	5.0	7.2	19	88	41	16	13	11
17	8.0	6.0	4.8	b5	4.4	8.3	16	109	39	15	12	12
18	8.0	6.0	4.8	b5	5.0	8.6	16	108	39	16	13	13
19	8.0	6.0	4.8	b5	5.0	9.8	19	99	38	15	17	14
20	7.6	6.2	5.4	b5	4.8	10	25	90	37	15	18	13
21	7.6	6.6	6.0	5.4	4.8	12	29	82	36	15	18	15
22	7.2	6.8	6.6	4.8	4.8	15	30	81	37	18	20	15
23	7.2	6.8	6.6	4.8	5.0	18	32	71	40	17	21	15
24	7.2	6.8	6.6	4.8	5.0	21	31	68	36	15	21	14
25	7.2	7.2	6.0	4.8	5.0	24	31	66	35	14	19	14
26	7.2	6.8	5.0	4.8	5.0	22	34	66	33	14	19	14
27	6.8	6.6	5.0	4.8	5.0	16	35	71	32	13	18	14
28	6.6	6.0	4.8	4.8	5.4	13	32	79	30	13	17	13
29	6.6	5.4	4.8	4.8	5.6	11	27	89	29	15	17	14
30	6.6	5.4	4.8	4.8	-	11	25	89	27	13	16	14
31	6.6	-	4.8	4.8	-	12	-	95	-	14	16	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	247.0	11	6.6	7.97	490
November	188.8	7.2	5.4	6.29	374
December	158.2	6.6	4.4	5.10	314
Calendar year 1939	6,151.1	73	4.4	16.9	12,210
January	153.0	5.4	4.8	4.94	303
February	144.4	5.6	4.4	4.98	286
March	316.7	24	6.0	10.2	628
April	611.0	35	11	20.4	1,210
May	2,121.0	109	23	68.4	4,210
June	1,475.0	100	27	49.2	2,930
July	546.0	26	13	17.6	1,080
August	480.0	21	12	15.5	952
September	403.0	15	11	13.4	799
Water year 1939-40	6,844.1	109	4.4	18.7	13,580

b Stage-discharge relation affected by ice.

Rio Lucero below diversions, near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°28', long. 105°34', in sec. 21, T. 26 N., R. 13 E., 80 feet downstream from head of Prado ditch, 2 miles northwest of Taos Pueblo, 3½ miles south of Arroyo Seco, and 4 miles northeast of Taos.

Records available.- May 1934 to September 1940.

Extremes.- Maximum discharge during year, 66 second-feet May 17 (gage height, 1.72 feet); no flow at times.
1934-40: Maximum discharge, about 130 second-feet May 17, 1937 (gage height, 2.05 feet), from rating curve extended above 59 second-feet; no flow at times.

Remarks.- Records fair except those for periods of ice effect and no gage-height records, which are poor.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.0	0.7	b0.5	1.3	6.4	1.0	20	0.1		
2		0	1.2	.8	.5	.9	1.3	.8	18	.1		
3		.7	1.4	.8	.5	.8	1.0	.2	12	.1		
4		1.9	1.4	.9	.5	.5	1.3	.2	6.4	.1		
5		2.0	1.2	.9	.5	.5	1.7	.2	5.7	.1		
6		2.1	.9	.8	b.4	.5	2.6	.5	5.7	.1		
7		2.0	1.0	.6	b.4	.5	3.3	1.3	4.8	.1		
8		2.0	1.0	.8	.5	.5	2.9	1.0	8.6	.1		
9		2.1	1.0	.6	.5	.8	2.6	.4	5.7	0		
10		2.2	1.0	.6	.5	.8	2.1	.4	3.6	0		
11		1.9	.9	.7	.5	.5	.7	.4	.8	0		
12		1.2	.8	.6	.5	.3	0	.4	.3	0		
13		.4	.7	.5	.4	.2	.4	.3	.3	0		
14		1.6	1.7	b.5	.4	.4	.7	.3	.3	0		
15		1.5	1.9	.5	.5	.1	.2	.3	.3	0		
16		1.6	b1.5	.5	.5	.2	1.1	.3	.2	0		
17		1.8	1.5	.5	.5	.2	1.1	25	.2	0		
18		1.8	1.5	.5	.5	.2	.2	32	1.3	0		
19		1.9	.8	.5	.4	.2	.2	25	.1	0		
20		2.2	b1.0	.5	.4	.2	2.3	25	.1	0		
21		2.2	b.6	.5	.4	.3	2.6	26	.1	0		
22		2.1	.5	.5	.4	1.8	1.5	29	.1	0		
23		2.3	.8	.5	.5	2.0	1.8	28	.2	0		
24		2.2	.8	.5	.5	1.0	1.8	22	.1	0		
25		2.0	.8	.5	.6	1.5	1.8	18	.1	0		
26		1.9	.8	.5	.8	1.7	1.1	17	.1	0		
27		1.9	.7	.5	.8	.9	4.9	18	.1	0		
28		1.8	.7	.5	.9	.2	.2	20	.1	0		
29		1.8	.7	.5	1.1	3.2	.2	26	.1	0		
30		1.4	.7	.5	-	5.1	.7	25	.1	0		
31		-	.7	.5	-	6.0	-	20	-	0		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0	0
November	50.5	2.3	0	1.68	100
December	31.2	1.9	.5	1.01	62
Calendar year 1939	1,523.2	32	0	4.17	3,020
January	18.3	.9	.5	.59	36
February	15.2	1.1	.4	.52	30
March	33.3	6.0	.1	1.07	66
April	48.7	6.4	0	1.62	97
May	364.0	32	.2	11.7	722
June	95.5	20	.1	3.18	189
July	.8	.1	0	.03	1.6
August	0	0	0	0	0
September	0	0	0	0	0
Water year 1939-40	657.5	32	0	1.80	1,300

b Stage-discharge relation affected by ice.
Note.- No gage-height record Jan. 15-31; discharge computed on basis of weather records and records for Rio Lucero near Arroyo Seco. Gage-height record for Jan. 10 partially estimated.

Diversions from Rio Lucero

Tenorio ditch near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and concrete-lined channel, lat. 36°30', long. 105°32', in sec. 10 (projected), T. 26 N., R. 13 E., in Antoine Leroux Grant, 400 feet below head gate, 2 miles southeast of Arroyo Seco, 4½ miles north of Taos Pueblo, and 7½ miles northeast of Taos.
Records available.- June 1935 to September 1940.
Extremes.- Maximum daily discharge during year, 13 second-feet May 16; no flow at times.
1935-40: Maximum daily discharge, 15 second-feet June 1-5, 1937; no flow at times.
Remarks.- Records good. No diversion above station. Ditch diverts water from right bank of Rio Lucero for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.4	1.6	2.34	144
November	.7	0	.02	1.4
December	0	0	0	0
Calendar year 1939	13	0	1.67	1,210
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	3.4	0	.71	42
May	13	.7	3.72	229
June	11	3.5	6.27	373
July	4.1	1.1	2.75	169
August	7.5	3.4	4.86	299
September	4.7	2.0	2.47	147
Water year 1939-40	13	0	1.93	1,400

Indian ditch at head, near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and concrete-lined channel, lat. 36°30', long. 105°32', in sec. 10, T. 26 N., R. 13 E., 500 feet below head, 2 miles southeast of Arroyo Seco, 4½ miles north of Taos Pueblo, and 7½ miles northeast of Taos.
Records available.- July 1934 to September 1940.
Extremes.- Maximum daily discharge during year, 18 second-feet May 5, June 11; no flow at times.
1934-40: Maximum daily discharge, 18 second-feet May 30, 31, 1937, and May 5, June 11, 1940; no flow at times.
Remarks.- Records good. No diversion above station. Ditch diverts water from left bank of Rio Lucero for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.9	2.0	2.44	150
November	.9	0	.04	2.6
December	0	0	0	0
Calendar year 1939	13	0	2.07	1,500
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	3.7	0	.33	20
May	18	.3	6.04	310
June	18	0	9.40	560
July	8.6	4.3	6.86	422
August	6.5	4	5.03	309
September	5.3	3.7	4.41	263
Water year 1939-40	18	0	2.80	2,040

Diversions from Rio Lucero

Seco ditch at head, near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 36°31, long. 105°32', in sec. 10, T. 26 N., R. 13 E., 2 miles southeast of Arroyo Seco, 4½ miles north of Taos Pueblo, and 7½ miles northeast of Taos.
Records available.- July 1934 to September 1940.
Extremes.- Maximum daily discharge during year, 24 second-feet May 18, June 3; minimum daily, 0.1 second-foot April 5-10.
1934-40: Maximum daily discharge, 28 second-feet July 3, 1935; no flow at times.
Remarks.- Records good. No diversions above station. Ditch diverts water from right bank of Rio Lucero for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.7	0.9	1.26	77
November	4.1	2.3	3.05	181
December	3.2	2.0	2.56	157
Calendar year 1939	20	0	3.22	2,330
January	2.5	1.8	2.09	129
February	1.8	1.6	1.68	96
March	8.5	2.0	3.66	225
April	9.4	.1	5.52	328
May	24	4.2	15.7	967
June	24	5.5	11.5	682
July	5.3	1.9	3.25	200
August	3.9	1.8	2.67	164
September	3.4	2.0	2.74	163
Water year 1939-40	24	.1	4.64	3,370

Juan Manuel ditch at head, near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 36°29', long. 105°34', in sec. 16 (projected), T. 26 N., R. 13 E., in Antoine Leroux Grant, 40 feet downstream from head, 2½ miles south of Arroyo Seco, 3 miles north of Taos Pueblo, and 5½ miles north of Taos.
Records available.- June 1935 to September 1940.
Extremes.- Maximum daily discharge during year, 15 second-feet May 18; no flow at times.
1935-40: Maximum daily discharge, 21 second-feet May 5-7, 1939; no flow at times.
Remarks.- Records good. No diversion above station. Ditch diverts water from right bank of Rio Lucero for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	1.7	0	.17	10
December	1.0	0	.31	19
Calendar year 1939	21	0	2.07	1,500
January	0	0	0	0
February	0	0	0	0
March	.2	0	.03	1.6
April	8.4	0	2.37	141
May	15	.4	6.75	415
June	9.5	0	3.01	179
July	0	0	0	0
August	.1	0	.01	.8
September	.5	.1	.13	7.5
Water year 1939-40	15	0	1.07	774

Diversions from Rio Lucero

Prado ditch near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 36°28', long. 105°34', in sec. 21, T. 26 N., R. 13 E., 250 feet downstream from head, 2 miles northwest of Taos Pueblo, 3½ miles south of Arroyo Seco, and 4 miles northeast of Taos.
Records available.- May 1934 to September 1940.
Extremes.- Maximum daily discharge during year, 19 second-feet June 2; minimum daily, 0.1 second-foot, Oct. 28-31, Nov. 13.
1934-40: Maximum daily discharge, 24 second-feet May 3, 1936; no flow at times.
Remarks.- Records good. No diversions above station. Ditch diverts water from right bank of Rio Lucero for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.1	0.1	0.76	47
November	2.2	.1	.71	42
December	1.2	.4	.79	48
Calendar year 1939	15	0	2.64	1,910
January	1	.9	.96	59
February	1.2	.9	.94	54
March	9.2	.2	3.26	201
April	11	2.4	6.67	397
May	18	5.2	11.4	699
June	19	5.1	10.1	599
July	4.8	2.1	3.02	186
August	3.0	1.4	1.99	122
September	2.3	1.0	1.58	94
Water year 1939-40	19	.1	3.51	2,550

Embudo Creek at Dixon, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 36°12', long. 105°55', in sec. 29, T. 23 N., R. 10 E., 1¼ miles northwest of Dixon and 1¼ miles upstream from mouth.

Drainage area.- 305 square miles.

Records available.- October 1930 to September 1940 in reports of Geological Survey. October 1923 to December 1931 in reports of State engineer.

Average discharge.- 17 years (1923-40), 82.8 second-feet.

Extremes.- Maximum discharge during year, 804 second-feet July 29 (gage height, 2.60 feet), from rating curve extended above 400 second-feet by logarithmic plotting; minimum daily, 5.9 second-feet Aug. 4.

1930-40: Maximum stage, 6.95 feet July 8, 1936 (discharge not determined); minimum daily discharge, 1 second-foot July 23, 24, 1932.

Remarks.- Records fair except those for periods of ice effect, which are poor. Records include flow by-passed around station in mill ditch. Diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	18	24	28	30	41	92	134	218	a30	8.6	16
2	e26	18	26	28	27	30	126	138	242	a20	9.8	37
3	e30	17	28	29	27	31	104	180	236	a15	6.1	47
4	e31	17	27	27	29	30	98	242	212	a13	5.9	26
5	31	20	28	25	26	31	104	267	186	a12	9.5	18
6	e33	21	27	23	16	37	95	288	150	all	21	18
7	e34	21	25	17	*b20	24	92	288	134	a10	25	18
8	e67	20	26	21	b17	31	78	393	122	a10	16	15
9	64	26	29	b23	b18	40	71	375	122	10	13	11
10	e49	e39	28	27	b20	46	78	366	101	11	14	9.5
11	e45	e34	24	27	b22	46	89	348	80	10	19	16
12	e43	31	28	27	b19	41	98	339	68	9.8	22	18
13	e40	29	19	23	b17	29	114	323	64	9.2	18	17
14	e38	24	18	9.5	b20	24	146	323	57	10	15	15
15	e37	24	22	b10	b19	32	206	348	47	9.2	14	14
16	e37	24	23	b11	b19	40	218	366	49	8.1	12	12
17	e34	24	25	b13	18	51	180	486	43	8.6	11	15
18	e30	24	24	b10	b18	51	138	519	31	11	11	21
19	26	24	21	b11	b18	56	134	486	27	10	13	39
20	e26	24	15	a13	b18	52	190	393	21	10	17	43
21	e28	25	b14	a15	b18	55	260	384	21	12	25	71
22	29	26	b14	*b15	28	68	242	402	27	12	21	86
23	e26	25	b15	b16	28	78	254	339	33	10	22	64
24	e25	26	b15	b17	27	89	230	295	51	9.2	23	57
25	e25	25	b14	b17	26	101	206	274	36	8.9	20	54
26	e25	23	b12	b18	32	118	236	288	29	e.6	20	51
27	24	24	b11	b19	37	114	254	274	24	12	17	47
28	22	28	b12	20	38	104	218	248	24	26	15	40
29	e22	29	b15	21	40	83	190	230	38	26	11	39
30	19	31	20	24	-	73	156	256	40	13	9.2	38
31	19	-	26	24	-	80	-	224	-	11	8.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,013	67	19	32.7	2,010
November	741	39	17	24.7	1,470
December	658	29	11	21.2	1,310
Calendar year 1939	25,751.5	420	6.1	70.6	51,080
January	608.5	29	9.5	19.6	1,210
February	692	40	16	23.9	1,370
March	1,725	118	24	55.6	3,420
April	4,696	260	71	157	9,310
May	9,796	519	134	316	19,430
June	2,532	242	21	84.4	5,020
July	386.6	30	8.1	12.5	767
August	473.0	25	5.9	15.3	938
September	972.5	86	9.6	32.4	1,930
Water year 1939-40	24,293.6	519	5.9	66.4	48,180

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Pecos River near Pecos, N. Mex.
b Stage-discharge relation affected by ice.
e Discharge adjusted to include flow by-passed around station in mill ditch.

Pueblo Creek near Penasco, N. Mex.

Location.- Water-stage recorder, lat. 36°11', long. 105°40', in SW¼ sec. 28, T. 23 N., R. 12 E., 300 feet downstream from head gate of Picuris ditch, 1¼ miles east of Picuris Pueblo, 2 miles northeast of Penasco, and 3¼ miles upstream from Rio Santa Barbara.

Records available.- March 1936 to September 1940.

Extremes.- Maximum discharge during year, 228 second-feet May 17 (gage height, 1.53 feet); no flow July 10-15.
1936-40: Maximum discharge, 944 second-feet Aug. 27, 1939 (gage height, 2.39 feet), from rating curve extended above 375 second-feet by logarithmic plotting; no flow July 10-15, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	11	7.8	12	9.8	17	74	84	105	5.6	4.2	4.9
2	8.8	12	b11	12	9.3	16	86	95	97	3.9	4.9	8.3
3	7.8	10	b10	11	13	14	66	120	92	3.9	6.0	10
4	7.4	11	b9.8	11	9.3	14	66	143	86	4.5	5.2	6.0
5	7.4	13	b9.3	11	9.8	16	63	146	78	4.5	6.3	3.9
6	7.4	13	b9.3	10	b9.6	16	56	149	68	3.5	16	3.9
7	7.8	13	b9.3	b7.8	b9	18	54	153	61	3.5	16	4.2
8	13	10	b9.3	b11	b8.6	18	49	166	56	2.8	14	3.2
9	16	13	b13	11	b9.2	19	48	156	52	1.1	10	2.8
10	13	14	11	11	b10	20	54	149	45	0	10	3.0
11	12	11	b10	10	b11	21	63	146	35	0	12	7.4
12	12	b10	b11	10	b10	18	68	149	27	a0	14	4.5
13	11	b7.8	b8.8	9.3	b8	18	82	149	24	a0	11	6.0
14	11	b7.0	b9.8	b8	b9.4	19	110	156	20	0	6.3	5.6
15	11	b6.7	b12	b7.5	b11	21	134	160	18	0	5.2	4.2
16	11	b8.3	b12	b9	b10	22	129	170	17	.6	4.9	3.5
17	11	b8.8	14	b10	b9.5	27	102	199	a16	1.5	4.9	3.9
18	11	b8.8	12	b11	b9.5	26	88	207	a15	2.4	4.9	5.6
19	10	b8.8	b11	b10	b9.5	29	95	188	a14	1.2	6.3	12
20	10	b9.3	b13	b10	*b9.5	30	126	170	a12	4	4.5	11
21	11	9.3	b12	11	b9.6	34	149	163	a11	a5	5.2	20
22	10	9.3	b15	8.8	b10	43	143	163	12	a3	7.8	22
23	10	9.8	10	b9.3	10	52	143	149	16	a1	10	16
24	9.8	10	b13	10	10	60	126	134	16	a2	7.8	14
25	10	10	12	8.8	11	70	123	129	11.0	a4	7.0	14
26	11	8.3	13	9.8	13	78	140	126	a10	a4	6.0	13
27	9.8	12	b10	8.8	15	74	146	126	7.4	a5	4.5	12
28	9.3	10	b9	11	16	63	132	117	7.8	a4	3.5	11
29	10	10	b9	11	17	52	112	105	7.8	5.2	2.8	11
30	9.8	11	b10	11	-	50	92	102	8.3	4.5	1.8	10
31	9.8	-	b11	16	-	58	-	107	-	4.2	2.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	317.9	16	7.4	10.3	631
November	306.2	14	6.7	10.2	607
December	337.4	15	7.8	10.9	669
Calendar year 1939	15,403.1	274	1.0	42.2	30,560
January	318.1	16	7.5	10.3	631
February	306.6	17	8	10.6	608
March	1,033	78	14	33.3	2,050
April	2,918	149	48	97.3	5,790
May	4,476	207	84	144	8,880
June	1,045.3	105	7.4	34.8	2,070
July	84.7	5.6	0	2.73	168
August	225.6	16	1.8	7.28	447
September	254.9	22	2.8	8.50	506
Water year 1939-40	11,623.7	207	0	31.8	23,060

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for Rio Pueblo de Taos near Taos, Rio Lucero near Arroyo Seco, and Picuris ditch.
b Stage-discharge relation affected by ice.

Picuris ditch near Penasco, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 36°11', long. 105°40', in SW¼ sec. 28, T. 23 N., R. 12 E., 500 feet below head gate, 1½ miles east of Picuris Pueblo, and 2 miles northeast of Penasco.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 10 second-feet July 15, 16, 23; no flow at times.
1936-40: Maximum daily discharge, that of July 15, 16, 23, 1940; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Pueblo Creek for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.2	0.3	0.88	54
November	.3	0	.06	3.6
December	0	0	0	0
Calendar year 1939	8.2	0	1.51	1,100
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	6.2	0	2.44	150
June	8.1	5.8	7.11	423
July	10	5.5	7.67	471
August	8.3	.9	5.06	311
September	6.2	.6	3.59	214
Water year 1939-40	10	0	2.24	1,630

Diversions from Rio Grande between Embudo Creek and Rio Chama

Alcalde ditch at Chamita, N. Mex.

Location.- Water-stage recorder and wooden control, lat. 36°04', long. 106°04', near center of sec. 11, T. 21 N., R. 8 E., 1 mile northeast of Chamita and 5½ miles downstream from head gate.

Records available.- March to September 1940.

Extremes.- Maximum daily discharge during period, 21 second-feet July 1; no flow at times.

Remarks.- Records fair. Ditch diverts water from left bank of Rio Grande for irrigation on San Juan Grant. Several diversions between station and head.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March	0	0	0	0
April	19	0	7.24	431
May	13	1.0	7.19	442
June	19	0	6.11	364
July	21	0	5.98	368
August	18	.1	5.32	327
September	11	.7	6.07	361
The period	-	-	-	2,290

Diversions from Rio Grande between Embudo Creek and Rio Chama

San Rafael ditch at Alcalde, N. Mex.

Location.- Water-stage recorder and 5-foot Parshall flume, lat. 36°05', long. 106°05', in SE¼SE¼ sec. 34, T. 22 N., R. 8 E., 200 feet south of north boundary of San Juan Pueblo Grant, 1 mile west of Alcalde, 1½ miles downstream from head gate, and 2½ miles north of Chamita.

Records available.- February 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 27 second-feet Sept. 22; no flow at times.
1936-40: Maximum daily discharge, 27 second-feet June 28, 1936, Sept. 22, 1940; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Rio Grande for irrigation on San Juan Grant. Some diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	5.4	13.3	820
November	21	6.2	13.1	780
December	15	1.4	6.86	422
Calendar year 1939	25	0	9.97	7,220
January	0	0	0	0
February	0	0	0	0
March	11	0	.35	22
April	18	1.3	11.7	694
May	24	10	16.4	1,010
June	18	2.0	10.1	600
July	16	0	7.25	446
August	20	3.9	12.9	796
September	27	3.2	16.3	971
Water year 1939-40	27	0	9.03	6,560

Acequia Madre at Alcalde, N. Mex.
(known also as Indian ditch)

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 36°04', long. 106°04', in SE¼SW¼ sec. 2, T. 21 N., R. 8 E., three-quarters of a mile downstream from head and 1 mile south of Alcalde.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 23 second-feet Jan. 25, Aug. 21; no flow at times.
1936-40: Maximum daily discharge, 31 second-feet May 31, 1938; no flow at times.

Remarks.- Records good. Several diversions between station and head. Acequia diverts water from left bank of Rio Grande for irrigation, almost entirely on Indian land.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	0	8.36	514
November	18	0	13.5	801
December	9.3	0	2.70	166
Calendar year 1939	29	0	9.93	7,190
January	23	0	6.02	370
February	0	0	0	0
March	0	0	0	0
April	20	0	9.85	586
May	20	4.5	13.0	801
June	20	4.3	11.8	703
July	22	0	10.9	672
August	23	11	14.8	912
September	18	9.1	12.5	746
Water year 1939-40	23	0	8.64	6,270

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Rio Chama at Park View, N. Mex.

Location.- Water-stage recorder, lat. 36°44'15", long. 106°34'40" (revised), in Tierra Amarilla Grant, at present mouth (shifts position) of Rio Brazos, 150 feet upstream from bridge on State Highway 51, half a mile northwest of Park View, Rio Arriba County.

Drainage area.- 405 square miles, including that of Rio Brazos.

Records available.- November 1912 to September 1916, October 1930 to September 1940 in reports of Geological Survey. November 1912 to September 1916, August 1924 to December 1931 in reports of State engineer. Records include flow of Rio Brazos.

Average discharge.- 17 years (1913-15, 1925-40), 383 second-feet.

Extremes.- Maximum discharge during year, 2,480 second-feet Apr. 26; maximum gage height, 5.16 feet May 3; minimum daily discharge, 10 second-feet Aug. 6.
1930-40: Maximum discharge, 8,530 second-feet Apr. 16, 1937 (gage height, 7.15 feet), from rating curve extended above 4,000 second-feet by logarithmic plotting, minimum daily, 3 second-feet July 6, 7, 1934.

Remarks.- Records fair except those for periods of ice effect, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	42	31	20	39	60	572	684	596	59	14	27
2	41	41	30	22	48	60	537	1,140	566	46	13	27
3	38	39	31	24	50	55	436	1,660	536	41	13	54
4	35	38	31	26	46	67	430	1,450	494	37	12	37
5	35	38	32	29	44	60	430	1,420	474	44	11	32
6	34	46	31	28	40	57	388	1,560	428	40	10	29
7	34	46	30	26	39	52	382	1,630	385	30	17	28
8	48	43	28	29	42	57	376	1,450	355	29	56	26
9	75	55	30	33	43	65	406	1,340	325	26	25	25
10	60	54	30	34	41	81	436	1,420	296	23	18	24
11	52	46	30	34	43	81	488	1,400	264	20	19	24
12	49	43	30	34	45	69	558	1,370	240	16	18	24
13	45	42	22	31	48	59	769	1,340	228	20	17	27
14	42	38	20	29	43	67	1,240	1,270	220	21	18	26
15	41	35	20	26	47	85	1,420	1,180	188	20	17	24
16	39	36	22	27	46	113	1,240	1,110	170	20	16	23
17	38	35	23	28	45	156	931	1,250	158	19	14	24
18	36	35	22	33	43	179	769	1,300	139	20	15	35
19	35	34	19	35	41	176	922	1,080	124	18	15	48
20	36	33	19	36	41	204	1,410	900	111	17	21	44
21	33	34	22	36	43	255	1,800	810	104	16	32	36
22	31	34	24	35	45	315	1,730	860	100	17	36	38
23	31	35	22	34	48	370	1,800	1,100	100	16	52	37
24	31	34	21	34	52	406	1,730	1,000	94	14	124	32
25	31	33	23	35	51	454	1,660	860	82	12	104	33
26	39	33	21	36	52	608	1,930	774	75	11	77	35
27	41	35	19	37	52	895	1,660	765	66	14	53	33
28	35	35	17	37	59	616	1,010	720	64	22	43	32
29	36	33	19	36	59	509	783	711	58	18	39	39
30	35	34	20	35	-	502	630	664	68	19	35	58
31	36	-	22	36	-	530	-	630	-	17	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,238	75	31	39.9	2,460
November	1,159	55	33	38.6	2,300
December	761	32	17	24.5	1,510
Calendar year 1939	85,561	2,310	8	234	169,700
January	975	37	20	31.5	1,930
February	1,335	59	39	46.0	2,650
March	7,263	895	52	234	14,410
April	28,973	1,930	376	966	57,470
May	34,848	1,660	630	1,124	69,120
June	7,110	598	58	237	14,100
July	742	59	11	23.9	1,470
August	985	124	10	31.7	1,950
September	981	58	23	32.7	1,950
Water year 1939-40	86,368	1,930	10	236	171,300

Note.- Stage-discharge relation affected by ice Nov. 12-27, 30, Dec. 9-12, 15-18, 20-23, and Dec. 25 to Feb. 25.

El Vado Reservoir near Tierra Amarilla, N. Mex.

Location.- Water-stage recorder (records above spillway floor only) and slope gage, lat. 36°35'45", long. 106°43'55", in SE¼ sec. 4, T. 27 N., R. 2 E. (revised, unsurveyed), at left end of El Vado Dam, 2 miles downstream from old town of El Vado and 13 miles southwest of Tierra Amarilla. Datum of gage is 9,565 feet above mean sea level (general adjustment of 1929).

Records available.- January 1935 to September 1940.

Extremes.- Maximum daily contents during year, 182,900 acre-feet June 7 (gage height, 6,898.6 feet); minimum daily, 13,560 acre-feet Oct. 6, 7 (gage height, 6,793.9 feet). 1935-40: Maximum daily contents, 195,700 acre-feet July 1, 1938 (gage height, 6,901.1 feet); minimum daily, 56 acre-feet Jan. 1, 1935.

Remarks.- Reservoir is formed by rock-fill dam, steel faced; storage began in January 1935. Capacity, 200,300 acre-feet between gage height 6,740.00 feet (bottom of trash rack) and 6,902.0 feet (top of spillway gate). Dead storage unknown. Figures given herein represent usable contents. Water is used for irrigation by Middle Rio Grande Conservancy District. Gage read daily at 8 a.m. Continuous water stage recorder registers gage height from 6,879.3 feet (floor of spillway) to 6,907.3 feet (floor of shelter). Contents as here given are those at 8 a.m.

Cooperation.- Staff gage readings and capacity table furnished by Middle Rio Grande Conservancy District.

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	6,800.0	17,520	-
Oct. 31	6,795.6	14,500	-2,920
Nov. 30	6,799.8	17,380	+2,780
Dec. 31	6,802.8	19,580	+2,200
Calendar year 1939	-	-	-38,700
Jan. 31	6,805.7	21,870	+2,290
Feb. 29	6,809.7	25,250	+3,380
Mar. 31	6,855.0	52,950	+27,700
Apr. 30	6,869.7	111,700	+58,750
May 31	6,895.2	178,600	+66,900
June 30	6,884.9	148,600	-30,000
July 31	6,860.6	93,500	-55,100
Aug. 31	6,840.7	60,820	-32,680
Sept 30	6,812.9	28,150	-32,670
Water year 1939-40	-	-	+10,630

Rio Chama near Tierra Amarilla, N. Mex.

Location.- Water-stage recorder, lat. 36°34', long. 106°43', in NW¼ sec. 15, T. 27 N., R. 2 E (projected survey), 1.5 miles downstream from El Vado Dam, 2.7 miles upstream from Rio Nutrias, and 13 miles southwest of Tierra Amarilla.

Records available.- October 1935 to September 1940. October 1913 to November 1916 at site 1.5 miles upstream (records of unregulated flow, published as Rio Chama near El Vado and near Tierra Amarilla) in reports of Geological Survey. October 1913 to September 1916, February 1920 to December 1924 in reports of State engineer.

Extremes.- Maximum discharge during year, 2,020 second-feet June 14 (gage height, 4.70 feet); minimum daily, 1.2 second-feet Dec. 3.
1935-40 (regulated): Maximum discharge, 4,330 second-feet May 30, 1937 (gage height, 9.63 feet), site and datum then in use; minimum daily, that of Dec. 3, 1940. During period of unregulated records there was a peak of 4,860 second-feet May 10, 1916, site and datum then in use.

Remarks.- Records good. Flow regulated by El Vado Reservoir (capacity, 200,342 acre-feet at gage height of 6,902.0 feet, which is top of spillway gate). Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	430	6.0	2.3	3.7	4.0	6.5	8.2	14	361	706	856	723
2	430	6.0	1.4	3.7	4.0	6.0	8.7	15	313	670	856	486
3	425	4.8	1.2	3.7	4.3	6.0	8.2	299	82	765	719	436
4	420	4.8	1.4	3.4	4.3	7.0	8.7	525	69	828	503	481
5	254	4.3	1.4	3.4	4.0	5.4	8.7	530	61	752	503	698
6	52	3.4	1.4	3.1	4.3	4.8	9.8	222	266	688	332	1,130
7	52	3.4	1.4	3.4	4.0	4.3	8.7	17	460	793	253	1,130
8	56	2.8	1.4	3.1	3.7	4.8	9.2	18	857	898	233	1,090
9	50	2.8	1.4	3.1	4.0	6.0	8.7	19	1,130	965	601	1,060
10	50	2.3	2.0	3.1	3.7	6.0	9.2	19	1,130	965	849	980
11	50	2.0	2.0	3.1	3.7	4.8	9.2	18	1,090	1,020	849	891
12	52	1.4	2.0	3.4	3.4	3.7	116	18	1,090	1,170	842	828
13	52	1.4	2.0	3.4	4.0	3.1	460	18	1,020	1,250	980	821
14	52	1.3	2.0	3.4	3.7	4.0	465	19	860	1,250	1,130	603
15	52	1.4	2.0	3.4	4.0	4.0	405	19	746	1,210	980	470
16	54	1.3	2.6	3.7	4.0	4.0	405	20	688	1,170	928	470
17	54	1.4	2.3	3.7	4.0	3.7	14	20	395	1,170	828	470
18	36	1.7	2.6	3.4	3.7	4.0	14	20	524	1,170	739	465
19	4.0	1.3	2.3	3.7	3.4	4.0	14	20	928	1,010	732	410
20	8.2	1.4	3.1	4.0	3.4	4.3	14	21	1,120	821	586	325
21	9.8	1.7	2.8	3.7	4.0	4.0	14	22	1,130	821	263	325
22	9.8	1.7	3.1	3.7	4.0	4.3	15	22	849	814	124	325
23	9.2	2.0	2.8	b4.0	4.3	4.8	15	24	608	814	124	325
24	a8.5	2.0	2.8	3.7	4.3	6.0	15	22	617	814	124	289
25	7.6	2.0	2.8	3.7	4.8	6.5	15	24	928	807	124	252
26	8.2	2.6	2.8	3.7	6.5	7.0	15	24	905	384	124	252
27	6.5	2.6	3.1	3.7	7.6	8.2	14	24	877	562	124	252
28	6.5	2.6	3.1	4.0	6.5	8.2	13	24	942	870	297	248
29	5.4	2.6	3.4	3.7	7.0	7.0	13	24	884	863	470	248
30	5.4	2.6	3.7	3.7	-	7.6	14	25	758	863	657	204
31	5.4	-	3.4	3.7	-	7.6	-	149	-	863	786	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,715.5	430	4.0	87.6	5,390
November	77.6	6.0	1.3	2.59	154
December	72.5	3.7	1.2	2.34	144
Calendar year 1939	126,726.8	1,450	1.2	347	251,400
January	110.2	4.0	3.1	3.55	219
February	126.6	7.6	3.4	4.37	251
March	167.6	8.2	3.1	5.41	332
April	2,147.3	465	8.2	71.6	4,260
May	2,255	530	14	72.7	4,470
June	21,688	1,130	61	723	43,020
July	27,746	1,250	384	895	55,030
August	17,496	1,130	124	564	34,700
September	16,737	1,130	204	558	33,200
Water year 1939-40	91,339.3	1,250	1.2	250	181,200

a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

Rio Chama near Chamita, N. Mex.

Location.- Water-stage recordsr, lat. 36°06', long. 106°08', in S½ sec. 31, T. 22 N., R. 8 E., 80 feet downstream from bridge on Espanola-Ojo Caliente highway, 3¼ miles northwest of Chamita, and 4 miles upstream from mouth.

Records available.- October 1912 to June 1915, October 1930 to September 1940 in reports of Geological Survey. October 1912 to December 1931 in reports of State engineer.

Average discharge.- 26 years (1913-17, 1918-40), 684 second-feet.

Extremes.- Maximum discharge during year, 3,360 eecond-feet Aug. 22 (gage hsight, 4.28 feet) from rating curve extended above 3,000 second-feet by logarithmic plotting; minimum daily, 19 second-feet Nov. 22.
1930-40: Maximum discharge, 7,700 second-feet May 20, 1932; maximum gage height, 6.74 feet May 16, 1935; no flow at times.

Remarks.- Records fair except those for periods of ice effect and doubtful gage-height record, which are poor. Several diversions above station for irrigation. Flow regulated by El Vado Reservoir (see p. 251).

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	356	26	35	52	55	150	249	184	24	710	840	829
2	335	24	28	*50	62	150	278	184	200	610	840	851
3	300	26	22	58	62	96	221	242	294	550	862	521
4	276	26	*22	47	65	136	189	431	118	730	710	467
5	276	26	22	50	*d60	145	194	774	65	783	503	440
6	270	25	22	43	55	145	200	763	38	710	530	763
7	138	25	22	b35	58	127	221	494	68	741	342	1,030
8	164	25	20	*b40	60	127	200	278	377	765	221	1,140
9	151	25	25	47	45	127	235	286	906	640	194	1,090
10	140	24	30	45	38	122	256	200	1,110	895	549	1,110
11	98	24	*30	43	55	136	263	162	1,180	884	796	1,260
12	95	24	29	45	*60	114	263	235	1,190	962	818	1,010
13	87	22	30	47	42	93	302	228	1,240	1,210	796	962
14	84	21	30	b55	42	72	507	150	1,080	1,320	1,010	862
15	79	21	33	*b40	58	50	998	127	851	1,260	1,170	580
16	77	21	32	b35	48	40	917	100	796	1,210	928	494
17	75	20	33	b40	45	60	610	127	820	1,150	895	476
18	75	20	*33	b40	40	96	334	194	359	1,210	741	449
19	75	20	33	b35	*45	136	242	270	454	1,210	752	449
20	72	21	28	b40	40	167	350	228	939	928	690	431
21	47	20	b25	b35	38	172	570	150	1,150	851	640	422
22	40	19	b25	*b30	48	172	512	145	1,180	796	966	386
23	37	21	b25	b35	45	172	467	156	939	796	413	395
24	37	22	b30	b45	45	221	431	221	610	851	359	386
25	39	20	b35	b60	45	221	369	189	665	917	263	368
26	37	21	b30	b70	*55	256	422	172	895	873	178	326
27	35	21	*b25	b70	62	263	458	127	862	651	109	294
28	35	20	b25	b60	132	207	395	82	862	657	100	278
29	33	22	b30	*55	178	189	270	65	962	829	222	302
30	32	27	b35	52	-	184	221	68	840	840	550	278
31	33	-	b40	52	-	194	-	50	-	840	720	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,626	356	32	117	7,190
November	679	27	19	22.6	1,350
December	884	40	20	28.5	1,750
Calendar year 1939	153,387	2,670	19	420	304,200
January	1,449	70	30	46.7	2,870
February	1,683	178	38	58.0	3,340
March	4,540	263	40	146	9,000
April	11,434	998	189	381	22,680
May	7,082	774	50	228	14,050
June	20,974	1,240	24	696	41,400
July	27,779	1,320	550	896	55,100
August	18,707	1,170	100	603	37,100
September	18,649	1,260	278	622	36,990
Water year 1939-40	117,386	1,320	19	321	232,800

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Gage-height record doubtful; discharge computed on basis of discharge measurement and records for stations on Rio Grande at Embudo and near San Ildefonso.

Willow Creek near Park View, N. Mex.

Location.- Water-stage recorder, lat. 36°40'20", long. 106°42'10" (revised), in Tierra Amarilla Grant, 500 feet upstream from Willow Creek dam site, 0.3 mile downstream from Horse Lake Creek, and 7 miles southwest of Park View, Rio Arriba County.

Records available.- May 1936 to September 1940.

Extremes.- Maximum discharge during year, 1,000 second-feet Mar. 20 (gage height, 4.87 feet); minimum daily recorded, 0.2 second-foot Oct. 4-7, Dec. 22, July 12.
1936-40: Maximum discharge, 3,100 second-feet Apr. 10, 1937 (gage height, 7.59 feet); no flow at times.

Remarks.- Records fair except those for periods of doubtful or no gage-height record, which are poor. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.5	0.8	-		-	35	3.4	4.4	a15	4.4	0.7
2	.4	.4	.6	-		-	43	2.1	4.4	a8	2.8	1.7
3	.3	.4	.5	-		-	36	1.4	4.1	4.7	2.5	2.5
4	.2	.5	.5	-		d50	30	1.2	3.2	4.1	1.9	2.3
5	.2	.5	.4	-		46	23	3.2	2.8	3.4	1.7	2.8
6	.2	.5	.4	-		38	22	4.1	2.3	1.8	1.7	2.3
7	.2	.8	.4	-		23	20	4.1	1.7	2.3	1.8	1.8
8	5.9	.5	.4	-		22	16	3.4	1.2	1.6	2.8	1.6
9	2.3	1.7	.3	*b0.5		36	16	5.0	1.1	1.0	2.3	1.2
10	.9	7.3	.3	-		62	15	4.7	1.9	.7	2.7	1.1
11	.8	3.6	.4	-		68	13	4.1	1.7	.3	2.3	1.0
12	.6	1.9	.4	-		37	11	4.4	1.9	.2	2.5	.7
13	.5	1.4	.4	-	*b1.4	29	9.4	6.0	2.3	.8	2.1	.6
14	.5	1.0	.4	-		43	9.0	4.7	1.8	1.9	1.7	.6
15	.4	.5	.3	-		122	8.5	3.4	1.9	3.2	1.1	.7
16	.4	.6	.3	-		244	9.0	4.1	2.1	2.8	.9	.7
17	.4	.5	.3	-		321	13	6.0	2.7	2.7	1.0	.6
18	.3	.5	.4	-		358	12	6.3	2.1	2.5	2.3	1.2
19	.3	.5	*.4	-		299	8.1	7.7	2.1	1.3	2.1	1.3
20	.3	.4	.4	-		345	6.0	6.9	1.7	3.2	9.0	1.8
21	.3	.4	.3	-		340	4.7	5.4	1.8	2.7	7.7	2.5
22	.3	.4	.2	-		315	4.4	6.0	4.7	2.1	6.6	2.3
23	.4	.4	.3	-		244	3.6	10	7.7	3.6	2.8	1.8
24	.4	.4	.3	-		166	3.8	10	9.8	6.6	118	1.9
25	.5	.4	.4	-		122	5.0	7.7	9.0	4.1	14	1.8
26	.6	.4	.4	-		98	5.0	6.9	9.0	4.4	8.5	1.7
27	.7	.4	.4	-		79	3.2	5.4	9.0	20	3.0	2.3
28	.6	.6	-	-		82	2.8	4.4	8.5	14	1.8	2.1
29	.6	.7	-	-		43	3.4	4.4	11	6.6	1.4	2.8
30	.6	.8	-	*b0.4		34	3.4	5.4	24	5.0	1.0	5.7
31	.5	-	-	-		39	-	4.7	-	5.0	.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	21.1	5.9	0.2	0.68	42
November	29.8	7.3	.4	.99	59
December 1-27	10.6	.8	.2	.39	21
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March 4-31	3,705	358	22	132	7,350
April	394.3	43	2.8	13.1	782
May	156.5	10	1.2	5.05	310
June	141.9	24	1.1	4.73	281
July	135.6	20	.2	4.37	269
August	215.0	118	.6	6.94	426
September	52.1	5.7	.6	1.74	103
Water year	-	-	-	-	-

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for Rio Chama near Parkview.
b Stage-discharge relation affected by ice.
d Gage-height record doubtful; discharge computed on basis of weather records and records for Rio Chama near Parkview.

El Rito Creek near El Rito, N. Mex.

Location.- Water-stage recorder, lat. 36°23', long. 106°13', in sec. 19, T. 25 N., R. 7 E., three-quarters of a mile upstream from boundary of Carson National Forest and 3 miles northwest of El Rito.

Records available.- May 1931 to September 1940.

Extremes.- Maximum discharge during year, 138 second-feet Apr. 14 (gage height, 2.63 feet); minimum daily recorded, 0.4 second-foot Oct. 4.
1931-40: Maximum discharge not determined; minimum daily discharge recorded, 0.3 second-foot June 21-23, 1934.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. One diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.2	1.5		-	2.9	38	a20	9.2	1.8	a1.5	0.9
2	.5	1.2	1.4		-	2.4	36	a30	8.3	1.7	a1.6	.8
3	.5	1.1	b1.5		-	2.2	25	a40	7.5	1.6	1.8	1.5
4	.4	1.1	b1.5		-	2.2	26	a50	7.0	1.7	1.2	1.1
5	.5	1.2	b1.6		-	3.1	27	a40	6.5	1.6	1.1	.9
6	.6	1.3	b1.5		-	2.9	25	a35	6.0	1.8	1.3	.7
7	.6	1.3	b1.3		-	2.3	30	a35	5.3	1.5	1.9	.7
8	1.9	1.2	b1.2		-	2.2	30	a45	4.7	1.5	1.7	.7
9	1.8	1.7	b1.2		-	2.2	35	a25	4.3	1.8	1.0	.6
10	1.2	2.2	b1.3		-	2.7	40	a25	3.9	1.3	1.6	.7
11	1.1	1.7	b1.2		-	2.5	44	a30	3.7	1.5	1.2	1.2
12	1.0	1.6	b1.2		*b1.4	1.8	48	a40	3.5	1.5	1.1	1.2
13	1.0	1.5	b.9		-	1.8	62	a35	3.4	1.4	.9	1.8
14	1.0	1.3			-	2.1	88	a30	3.3	1.4	.8	1.0
15	1.0	1.2	b.8		-	2.0	107	a25	3.0	1.3	.9	.9
16	1.0	1.2			-	2.0	79	a20	2.9	1.3	.9	.7
17	1.1	1.2			-	2.8	53	a25	2.7	1.0	1.0	1.0
18	1.1	1.1			-	2.9	45	a30	2.5	1.2	.7	1.6
19	1.1	1.2	*b.8		-	4.5	60	a30	2.4	1.2	.7	1.6
20	.8	1.3			-	4.9	a80	25	2.3	1.3	1.0	1.2
21	1.0	1.5	b.8		-	7.0	a90	a20	2.4	1.1	1.4	1.8
22	1.1	1.6			-	9.8	a80	a20	3.4	1.4	2.8	2.2
23	1.1	1.5			-	12	a80	a30	3.4	1.4	1.6	1.6
24	1.2	1.4			-	17	a70	a35	3.0		1.3	1.2
25	1.2	1.7	-		-	22	a60	a25	2.4		1.4	1.3
26	1.3	1.8	-		-	26	a80	a20	2.2		1.2	1.3
27	1.5	1.7	-		bl.8	27	a60	a17	2.1	a1.5	1.0	1.2
28	1.2	1.8	-		2.4	23	a40	15	2.3		.8	1.2
29	1.2	1.7	-	*b2.2	3.0	20	a30	14	2.3		.8	1.1
30	1.2	1.7	-		-	24	a25	12	2.3		.8	1.2
31	1.2	-	-		-	30	-	10	-		.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	32.0	1.9	0.4	1.03	63
November	43.2	2.2	1.1	1.44	86
December 1-24	26.1	1.6	-	1.09	52
Calendar year	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	270.2	30	1.8	8.72	536
April	1,591	107	25	53.0	3,160
May	853	60	10	27.5	1,690
June	118.2	9.2	2.1	3.94	234
July	45.3	1.8	1.0	1.46	90
August	37.9	2.8	.7	1.22	75
September	34.9	2.2	.6	1.16	69
Water year	-	-	-	-	-

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of one discharge measurement, weather records, and records for Rio Ojo Caliente at La Madera and Jemez Creek near Jemez.
b Stage-discharge relation affected by ice.

Rio Ojo Caliente at La Madera, N. Mex.

Location.- Water-stage recorder, lat. 36°20'45", long. 106°02'50", in NE¼ sec. 1, T. 24 N., R. 8 E., 2.5 miles south of La Madera, 3 miles downstream from confluence of Rio Vallecitos and Rio Tusas, and 4 miles north of Ojo Caliente.

Records available.- April 1932 to September 1940.

Extremes.- Maximum discharge during year, 895 second-feet June 21 (gage height, 3.16 feet); minimum daily, 3 second-feet October 24-28.

1932-40: Maximum discharge, 2,570 second-feet Apr. 16, 1937, from rating curve extended above 1,100 second-feet by logarithmic plotting; maximum gage height, 7.60 feet (site and datum then in use) July 15, 1933; minimum daily discharge, 1 second-foot at times.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	6	10	b13	20	28	200	79	31	5	6	8
2	12	6	10	b13	20	19	206	116	30	4	5	8
3	12	7	10	b16	22	22	116	185	25	4	5	12
4	10	7	12	b17	20	20	120	200	19	4	5	11
5	8	8	14	b16	19	26	130	144	17	5	5	10
6	8	10	16	b18	b16	31	95	140	15	5	5	9
7	8	10	16	b12	13	20	140	128	13	4	7	9
8	14	12	14	b13	17	23	125	167	a11	4	11	8
9	23	14	17	b16	b16	31	176	100	9	4	11	8
10	14	16	22	b18	b15	40	246	100	9	6	13	59
11	13	14	20	b17	16	43	258	104	8	5	12	35
12	10	17	22	b15	20	23	279	162	7	5	8	16
13	7	14	16	b19	b14	20	380	124	6	5	8	18
14	6	13	14	b14	b15	22	466	116	6	5	7	14
15	5	12	13	b11	16	31	514	97	6	5	7	12
16	4	11	14	b12	11	38	365	82	6	5	7	11
17	4	11	16	b14	11	50	170	88	6	5	7	13
18	4	10	13	b15	11	50	130	124	5	5	6	16
19	4	8	12	b12	14	66	188	116	6	6	6	17
20	4	11	10	b13	10	66	380	112	6	6	8	15
21	4	11	10	b16	11	70	434	91	54	12	9	15
22	4	11	12	b15	13	95	372	85	12	11	7	18
23	4	11	17	b14	16	135	365	116	6	6	7	19
24	3	11	12	b17	19	194	314	136	11	6	10	16
25	3	11	b14	b19	16	232	258	108	7	11	12	14
26	3	13	b16	b18	23	232	321	85	5	41	9	16
27	3	13	b12	b20	26	258	304	70	5	32	7	15
28	3	13	b9	19	25	182	149	61	5	15	7	14
29	4	14	b10	20	22	140	116	52	6	10	7	14
30	5	13	b11	16	-	110	104	45	5	8	6	14
31	5	-	b14	17	-	146	-	37	-	6	9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	221	23	3	7.1	438
November	338	17	6	11.3	670
Decembsr	428	22	9	13.8	849
Calendar year 1939	21,173	561	2	58.0	41,990
January	488	20	11	15.7	968
February	487	26	10	16.8	966
March	2,463	258	19	79.5	4,890
April	7,420	514	95	247	14,720
May	3,370	200	37	109	6,690
June	357	54	5	11.9	708
July	255	41	4	8.2	506
August	239	13	5	7.7	474
September	464	59	8	15.5	920
Water year 1939-40	16,530	514	3	45.2	32,790

Peak discharge.- June 21 (8 p.m.) 895 sec.-ft.; July 26 (6 p.m.) 404 sec.-ft.; Sept. 10 (7 p.m.) 410 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for Jemez Creek near Jemez.

b Stage-discharge rslation affectsd by ice.

Chamita ditch near Chamita, N. Mex.

Location.- Water-stage recorder, lat. 36°05', long. 106°07', in NW¼ sec. 5, T. 21 N., R. 8 E., 2,000 feet downstream from head gate and 3½ miles northwest of Chamita.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 35 second-feet June 21; no flow at times.
1936-40: Maximum daily discharge, 40 second-feet Aug. 3, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Rio Chama for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	30	0	13.7	840
November	17	7.3	12.0	712
December	14	0	2.61	160
Calendar year 1939	34	0	10.8	7,830
January	0	0	0	0
February	0	0	0	0
March	21	0	4.97	305
April	34	0	18.6	1,110
May	26	0	16.2	996
June	35	0	18.7	1,110
July	30	0	15.6	960
August	28	0	16.2	996
September	19	0	6.61	393
Water year 1939-40	35	0	10.4	7,580

Santa Clara ditch near Espanola, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°38', long. 106°05', in NW¼ sec. 15, T. 20 N., R. 8 E., 300 feet upstream from siphon under Santa Clara Creek, three-quarters of a mile east of Santa Clara, about 2 miles downstream from head gate, and 2 miles south of Espanola.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 14 second-feet June 10-12; no flow at times.
1936-40: Maximum daily discharge, 18 second-feet June 26, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Rio Grande at Espanola for irrigation on Santa Clara Pueblo Grant. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5.2	0	1.64	101
November	.9	0	.14	8.1
December	0	0	0	0
Calendar year 1939	13	0	3.09	2,240
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	7.8	0	3.89	231
May	10	.4	6.89	423
June	14	4.1	9.41	560
July	12	3.3	9.46	582
August	9.8	2.4	6.47	398
September	10	0	3.50	208
Water year 1939-40	14	0	3.46	2,510

Rio Santa Cruz at Cundiyo, N. Mex.

Location.- Water-stage recorder, lat. 35°58', long. 105°55', in SE¼NW¼ sec. 17, T. 20 N., R. 10 E., 135 feet downstream from highway bridge at confluence of Rio Medio and Rio Frijoles and a quarter of a mile northwest of Cundiyo.

Records available.- September 1931 to September 1940 in reports of Geological Survey. September 1915 to December 1931 (as Rio Medio at Cundiyo and Rio Santa Cruz above Chimayo, N. Mex.) in reports of State engineer.

Average discharge.- 23 years (1916-29, 1930-40), 32.2 second-feet.

Extremes.- Maximum discharge during year, 162 second-feet May 17 (gage height, 2.49 feet); minimum daily, 3.5 second-feet Dec. 27.
1931-40: Maximum discharge, 2,610 second-feet Sept. 24, 1931 (gage height, 8.20 feet, datum then in use), from rating curve extended above 170 second-feet; minimum daily, 3 second-feet Feb. 3, 1932, and Jan. 21, 1935.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	9.7	6.8	a7.5	7.5	13	59	57	90	28	13	9.4
2	10	9.4	b7.5	a8	7.8	12	63	65	89	27	13	8.0
3	9.7	8.9	7.8	a8	7.8	11	54	80	85	25	12	10
4	9.7	8.9	8.3	a8	7.5	12	50	92	82	24	13	8.6
5	9.4	9.4	8.6	a8	7.0	15	49	97	78	24	27	8.3
6	9.2	10	8.3	a7	b7	17	45	102	73	22	41	8.0
7	9.4	9.4	7.8	a6	b7	16	41	104	69	22	24	8.0
8	30	10	7.8	a6.5	b6.5	17	38	116	66	20	17	8.6
9	21	all	7.2	a6.5	b6	21	38	112	64	18	14	8.6
10	15	a9	7.5	a7	*b6.5	28	42	110	59	18	12	8.9
11	14	a7.5	7.8	a7	b6.5	27	47	110	56	17	14	11
12	13	a8	7.2	a7	b6.5	22	49	115	56	20	15	11
13	12	a7.5	6.8	a6.5	b6	18	56	116	55	18	13	10
14	12	d6.5	b6	a6	b6	17	66	122	51	24	11	10
15	12	6.3	b6	a6	b6.5	20	71	128	48	18	10	9.7
16	11	b6	b6.5	a6	b6	20	66	134	47	17	9.7	8.6
17	11	b6	b7	a6.5	b6	26	57	150	46	15	9.4	10
18	11	b6	b6	a6	b6	30	52	146	41	16	8.9	11
19	11	b6	5.2	a5.5	b6.5	32	56	142	38	16	9.7	26
20	11	b6	b5	*b5.5	b6.5	30	66	132	41	16	11	14
21	10	b6.5	*b4	a5.5	b7	34	76	126	40	15	18	37
22	10	b6.5	b4.5	a5.5	7.8	46	77	128	37	15	14	32
23	10	*b6.5	b5	a5.5	7.8	53	78	121	49	15	12	24
24	10	b6.5	b4.5	a6	7.8	61	72	114	39	16	12	20
25	10	b6	b4.5	a6	7.8	69	71	109	33	13	15	19
26	11	b5.5	b4	a6.5	8.6	70	78	106	30	13	13	18
27	9.2	b5.5	a3.5	7.2	8.9	62	76	102	31	15	12	18
28	9.2	b5.5	a4	7.2	9.4	54	68	99	31	15	10	25
29	9.7	b5.5	a4.5	8.9	11	46	61	97	33	15	8.9	23
30	9.4	b6	a5.5	9.2	-	41	57	93	32	14	9.2	18
31	9.7	-	a6.5	8.9	-	49	-	90	-	13	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	360.6	30	9.2	11.6	715
November	221.5	11	5.5	7.38	439
December	191.6	8.6	3.5	6.18	380
Calendar year 1939	10,098.9	115	3.5	27.7	20,030
January	210.9	9.2	5.5	6.80	418
February	209.2	11	6	7.21	415
March	989	70	11	31.9	1,960
April	1,779	78	38	59.3	3,530
May	3,415	150	57	110	6,770
June	1,589	90	30	53.0	3,150
July	564	28	13	18.2	1,120
August	432.8	41	8.9	14.0	858
September	441.7	37	8.0	14.7	876
Water year 1939-40	10,404.3	150	3.5	28.4	20,630

Peak discharge.- May 17 (5 p.m.) 162 sec.-ft.; June 23 (7 a.m.) 66 sec.-ft.; Aug. 5 (8 p.m.) 100 sec.-ft.; Aug. 6 (1 a.m.) 86 sec.-ft.; Sept. 21 (9 a.m.) 59 sec.-ft.; Sept. 28 (3 p.m.) 156 sec.-ft.

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for Pecos River near Pecos.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of records for Pecos River near Pecos.

Santa Clara Creek near Espanola, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°58', long. 106°11', in SW¼SW¼ sec. 11, T. 20 N., R. 7 E., 5½ miles upstream from mouth and 5½ miles southwest of Espanola.

Records available.- February 1936 to September 1940.

Extremes.- Maximum discharge during year, 680 second-feet July 24 (gage height, 5.1 feet), from rating curve extended above 36 second-feet on basis of slope-area determination at gage height 4.19 feet; minimum daily, 1.8 second-feet Jan. 15.
1936-40: Maximum discharge, that of July 24, 1940; minimum daily, 0.8 second-foot Jan. 25, 1938.

Remarks.- Records good except those for periods of no gage-height record or ice effect, which are poor. Small diversion a quarter of a mile above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	3.2	3.5	a3.1	3.5	4.3	4.9	4.5	4.0	2.9	6	5.7
2	3.2	3.2	3.6	a3.2	3.6	4.3	5.1	4.2	4.0	2.5	a5	5.9
3	3.2	3.3	3.6	a3.5	3.5	3.5	4.7	4.0	4.0	3.0	a4	5.7
4	3.3	3.3	3.6	a3.5	3.5	2.3	4.5	3.6	3.8	3.3	a3.5	5.1
5	3.3	3.3	3.6	a4.0	3.5	4.0	4.7	3.6	3.6	3.6	a4	4.9
6	3.2	3.3	3.5	3.8	b2.0	4.3	4.5	3.6	3.6	2.9	a4.5	4.3
7	3.3	3.3	3.5	3.6	b3.3	4.0	4.3	3.8	3.6	2.7	3.3	4.3
8	5.7	3.5	3.6	b3.8	3.5	4.5	4.2	5.9	3.6	2.6	3.2	4.0
9	3.8	4.0	3.6	b4.5	2.7	4.9	4.3	5.7	3.5	2.1	3.0	4.2
10	3.5	4.0	3.6	4.3	4.0	5.1	4.3	4.9	3.3	2.3	3.0	6.8
11	3.5	3.8	3.6	4.5	4.2	4.7	4.2	4.7	3.5	2.2	3.2	4.7
12	3.3	3.6	3.6	4.9	3.6	4.5	4.0	4.7	3.3	2.3	3.3	4.3
13	3.3	3.6	3.5	4.5	2.6	3.8	4.2	4.7	3.5	2.3	3.2	3.2
14	3.3	3.6	3.6	2.1	3.3	4.2	4.2	4.5	3.6	2.3	2.9	3.2
15	3.3	3.6	3.6	1.8	4.2	4.5	4.2	4.5	3.3	2.2	3.0	2.7
16	3.3	3.3	3.8	b1.9	3.5	4.9	4.5	4.5	3.2	2.2	3.3	2.7
17	3.5	3.5	3.5	b2.9	b3.0	5.1	4.5	5.3	3.2	2.1	3.3	3.6
18	3.5	3.5	3.3	b2.9	4.0	5.1	4.5	5.1	2.9	3.2	3.2	3.6
19	3.5	3.6	3.3	b2.5	4.0	5.1	4.3	4.9	2.7	2.7	4.3	4.2
20	3.3	3.6	3.2	b2.5	3.5	5.1	4.5	5.5	2.7	3.0	4.5	3.5
21	3.3	3.6	3.6	b3.5	3.8	5.5	4.3	5.1	2.9	3.5	3.8	5.9
22	3.2	3.6	3.3	b3.2	a3.9	5.5	4.3	5.1	3.3	3.3	4.9	3.6
23	3.2	3.5	2.9	b3.0	4.0	5.5	4.5	5.3	3.3	2.6	4.5	3.0
24	3.2	3.5	3.2	4.2	4.0	5.5	4.7	5.1	3.0	19	4.5	2.6
25	3.0	3.6	3.6	4.2	4.0	5.5	4.9	4.9	2.9	4.7	4.2	2.9
26	3.3	3.6	2.2	4.2	4.2	5.7	4.5	4.7	2.9	2.9	4.0	4.3
27	3.2	3.6	a2.0	4.0	4.2	5.5	4.5	4.5	2.9	9.1	4.3	3.2
28	3.2	3.6	a2.0	3.8	4.3	5.5	4.7	5.1	3.6	6.2	5.3	3.0
29	3.2	3.8	a2.3	3.8	4.3	5.1	4.7	5.1	3.5	6.2	5.5	3.3
30	3.2	3.8	a2.6	3.6	-	4.9	4.5	4.7	3.3	5.7	5.5	2.9
31	3.2	-	a3.0	3.5	-	4.9	-	4.3	-	5.1	5.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	104.8	5.7	3.0	3.38	208
November	106.8	4.0	3.2	3.56	212
December	102.1	3.8	2.0	3.29	203
Calendar year 1939	1,292.1	6.6	1.6	3.54	2,570
January	108.8	4.9	1.8	3.51	216
February	105.7	4.3	2.0	3.64	210
March	147.3	5.7	2.3	4.75	292
April	134.2	5.1	4.0	4.47	266
May	146.1	5.9	3.6	4.71	290
June	100.5	4.0	2.7	3.35	199
July	120.7	19	2.1	3.89	239
August	125.7	6	2.9	4.05	249
September	121.3	6.8	2.6	4.04	241
Water year 1939-40	1,424.0	19	1.8	3.89	2,820

Peak discharge.- July 24 (10 p.m.) 680 sec.-ft.; July 27 (3 p.m.) 58 sec.-ft.; July 27 (4 p.m.) 63 sec.-ft.; Sept. 21 (2:30 p.m.) 29 sec.-ft.

a No gage-height record; discharge computed on basis of range of stage, weather records, and records for Nambe Creek near Nambe.

b Stage-discharge relation affected by ice.

Hill acequia near Espanola, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°58', long. 106°07', in SE¼ sec. 8, T. 20 N., R. 8 E., 2⅛ miles southwest of Espanola.

Records available.- December 1939 to November 1940 (discontinued).

Extremes.- Maximum daily discharge during period, 3.7 second-feet Aug. 28; no flow at times.

Remarks.- Records good. No diversions above station. Ditch diverts water from right bank of Santa Clara Creek for irrigation of Indian lands on the Santa Clara Reservation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-
November	-	-	-	-
December 21-31	0	0	0	0
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	1.e	0	.66	39
May	3.1	0	1.12	69
June	2.0	0	.68	41
July	2.4	0	.70	43
August	3.7	.1	1.08	66
September	1.1	0	.35	21
The period	-	-	-	279

Note.- No flow Oct. 1 to Nov. 13, 1940.

Guachupangue ditch near Espanola, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°58', long. 106°07', in SE¼ sec. 8, T. 20 N., R. 8 E., a quarter of a mile downstream from head, 1⅛ miles west of Santa Clara Pueblo, and 2⅛ miles southwest of Espanola.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 3.5 second-feet Oct. 8; no flow at times. 1936-40: Maximum daily discharge, 6.0 second-feet Mar. 14, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Santa Clara Creek for irrigation of Spanish-American lands near Guachupangue. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.5	0.2	1.02	63
November	.7	.2	.50	30
December	.6	0	.31	19
Calendar year 1939	3.5	0	.47	341
January	1.1	0	.26	16
February	1.1	0	.07	4.2
March	1.6	0	.22	13
April	3.0	0	1.23	73
May	3.3	0	1.14	70
June	2.1	0	.85	51
July	2.8	0	.58	36
August	2.2	0	.38	24
September	2.6	0	.43	26
Water year 1939-40	3.5	0	.58	425

San Ildefonso ditch near Espanola, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°57', long. 106°05', in sec. 22, T. 20 N., R. 8 E., 2½ miles south of Espanola.

Records available.- December 1939 to September 1940.

Extremes.- Maximum daily discharge during period, 8.2 second-feet Aug. 16; no flow at times.

Remarks.- Records good. No diversion above station. Ditch diverts water from right bank of Rio Grande for irrigation of Indian lands.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	-	-
November	-	-	-	-
December 22-31	0.4	0.3	0.39	7.7
January	.8	0	.35	22
February	0	0	0	0
March	0	0	0	0
April	7.8	0	3.01	179
May	5.8	3.0	4.21	259
June	6.5	4.0	5.57	331
July	8.0	2.3	5.39	331
August	8.2	3.5	4.66	286
September	6.1	2.0	3.22	192
The period	-	-	-	1,610

Nambe Creek near Nambe, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°52', long. 105°57', in sec. 24, T. 19 N., R. 9 E., in Nambe Pueblo Grant, about 1,000 feet downstream from diversion dam for Nambe canal, 2½ miles southeast of Nambe, and 6½ miles upstream from confluence with Rio Tesuque.

Records available.- May 1932 to September 1940.

Extremes.- Maximum discharge during year, 84 second-feet Aug. 1 (gage height, 3.56 feet); minimum daily, 2.4 second-feet Dec. 28.
1932-40: Maximum discharge, about 878 second-feet Aug. 23, 1935 (gage height, 6.43 feet); no flow several days in October 1934.

Remarks.- Records fair except those for periods of ice effect and no gage-height record, which are poor. One diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	3.8	3.7	3.5	3.7	4.8	14	20	35	9.5	8.4	6.0
2	5.3	3.8	3.7	3.5	3.7	4.6	15	21	37	8.4	6.9	4.8
3	5.3	3.7	3.7	3.7	3.8	4.5	12	23	33	7.9	5.3	4.3
4	5.1	3.7	3.7	3.8	3.7	4.6	12	25	32	8.4	5.3	4.5
5	5.3	3.6	3.8	4.0	3.7	4.8	13	28	31	9.3	6.9	4.0
6	5.3	3.5	3.7	3.7	b3.8	b5.3	12	30	30	8.7	7.9	3.7
7	5.8	3.5	3.8	b3.2	b3.7	b4.8	10	31	29	9.5	6.0	3.8
8	13	3.3	3.8	b3.5	b3.3	5.1	9.8	34	27	8.4	a5	4.3
9	9.8	3.3	3.8	3.8	b3.4	6.0	10	29	27	7.1	a5	4.0
10	8.1	4.1	3.8	3.8	b3.7	6.9	12	31	25	6.9	a7	4.0
11	7.6	3.7	3.1	3.8	b3.5	7.1	12	32	22	7.6	a7	4.0
12	7.3	3.3	3.1	3.8	b3.5	6.6	12	32	21	7.3	a8	4.0
13	7.1	3.2	3.3	3.7	b3.7	b5.5	14	34	21	7.9	a7	3.8
14	7.1	3.1	b3.1	b3.2	b3.8	b5.1	17	37	20	7.9	6.2	3.8
15	7.1	3.1	3.3	b3.2	3.7	b5.5	18	37	19	7.1	5.5	3.5
16	6.9	3.0	3.5	b4.1	b3.4	5.8	17	37	19	7.1	5.3	3.5
17	6.6	2.7	3.8	b4.1	b3.7	6.6	15	41	18	6.6	5.3	4.1
18	6.6	3.3	3.4	b3.7	b3.5	7.6	15	39	15	6.6	6.6	4.3
19	6.6	3.8	b2.8	b3.5	3.5	8.1	18	37	13	6.2	5.1	8.7
20	5.8	3.5	b2.6	b3.7	b3.2	8.4	21	37	15	5.8	5.8	5.3
21	4.8	3.3	b2.6	3.7	b3.4	8.4	22	37	16	6.4	7.3	12
22	4.6	3.3	b3.3	b3.3	3.7	9.8	22	39	16	5.8	5.8	9.8
23	3.7	b3.3	b3.2	b3.5	3.7	11	24	36	22	5.3	5.8	8.7
24	2.7	3.7	3.7	3.5	3.7	12	21	33	18	5.8	5.8	8.4
25	3.3	4.1	3.5	3.8	a3.8	12	21	33	16	5.1	7.1	8.7
26	4.6	3.8	b3.3	3.7	4.0	14	24	37	13	4.6	5.3	8.1
27	4.1	3.8	b2.5	3.8	4.0	13	23	37	13	4.8	4.8	7.9
28	4.1	3.8	b2.4	b3.5	4.1	12	21	39	12	5.5	4.1	8.1
29	3.5	3.8	b2.5	b3.5	4.5	11	20	37	13	5.3	4.5	8.7
30	3.3	4.0	b3.2	b3.5	-	11	19	36	13	4.9	4.9	8.1
31	3.7	-	b3.5	b3.5	-	12	-	36	-	4.6	6.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	179.9	13	2.7	5.80	357
November	105.8	4.1	2.7	3.53	210
December	103.2	4.0	2.4	3.33	205
Calendar year 1939	2,991.2	25	.4	8.20	5,930
January	112.6	4.1	3.2	3.63	223
February	106.9	4.5	3.2	3.69	212
March	243.9	14	4.5	7.87	484
April	495.8	24	9.8	16.5	983
May	1,035	41	20	33.4	2,050
June	641	37	12	21.4	1,270
July	212.3	9.5	4.6	6.85	421
August	186.9	8.4	4.1	6.03	371
September	176.9	12	3.5	5.90	351
Water year 1939-40	3,600.2	41	2.4	9.84	7,140

Peak discharge.- Aug. 1 (6 p.m.) 84 sec.-ft.
a No gage-height record; discharge Feb. 25 interpolated; Aug. 8-13, computed on basis of weather records and records for Rio Tesuque above diversions near Santa Fe and Santa Clara Creek near Espanola.
b Stage-discharge relation affected by ice.

Nambe Creek at Pojoaque Bridge, near Nambe, N. Mex.

Location.- Water-stage recorder, lat. 35°54', long. 106°01', in NW¼ sec. 8, T. 19 N., R. 9 E., 300 feet downstream from head of Barranco Alto ditch, a quarter of a mile upstream from highway bridge at Pojoaque, 1 mile upstream from Rio Tesuque, and 3 miles west of Nambe.

Records available.- February 1936 to September 1940.

Extremes.- Maximum discharge during year, 483 second-feet Sept. 28 (gage height, 3.56 feet), from rating curve extended above 40 second-feet on basis of slope-area determination at gage height 8.8 feet; no flow at times.
1936-40: Maximum discharge, 4,700 second-feet July 15, 1938 (gage height, 8.8 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records poor. Many diversions above and below station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.2	0.5	9.9	3.2	4.6	15	5.2	17	d1.0	0.1	2.8
2	.7	.7	.6	8.2	4.1	4.1	18	9.0	15	d.2	0	1.6
3	0	.6	.8	8.2	4.1	b3.2	15	8.2	9.9	d.2	0	.3
4	.7	.3	2.1	*7.4	4.1	b5.2	9.9	9.9	3.2	d.2	.3	.1
5	1.8	.6	3.6	6.6	4.1	12	9.0	13	5.2	d.2	.3	.1
6	.3	.6	2.1	6.6	*5.2	11	11	9.9	1.6	d.2	2.1	.1
7	.3	.5	1.8	b5.0	6.6	9.9	9.9	18	2.4	d7	.6	.2
8	30	.3	1.2	5.2	5.9	9.9	8.2	31	3.2	d2	.6	2.4
9	22	.3	1.0	6.6	b4.5	9.9	6.6	24	21	d.2	.6	.4
10	8.2	.1	1.0	5.9	b7	12	7.4	24	4.1	d.2	.7	13
11	4.1	.1	1.0	5.2	b8	12	5.2	19	2.1	d.2	4.6	3.6
12	3.2	.1	2.4	5.2	8.2	9.9	2.4	38	.1	.2	.5	6.2
13	2.8	.1	4.1	4.1	b7.5	*8.2	1.6	27	0	.3	.1	2.1
14	1.6	.2	2.8	b3.6	b9	9.0	5.9	21	0	1.4	0	d.6
15	1.8	.3	3.6	*b6.0	7.4	11	8.2	33	0	d.2	0	d3.0
16	1.8	.5	2.1	b8	5.9	9.0	4.6	35	14	d.1	0	d.7
17	1.4	.6	1.2	b8	b6	9.0	4.1	25	2.1	d.1	0	d.5
18	4.1	1.4	1.0	b5	b7.5	9.0	2.8	25	.2	d.1	2.1	d.2
19	1.6	1.8	.7	b4.5	6.6	11	2.8	27	.2	d.1	.3	d2.4
20	.8	.8	.7	b4.5	6.6	9.0	1.8	19	d.2	d.1	.1	d.6
21	1.2	.6	.7	b5	b7	6.6	12	27	d.2	d1.5	.3	7.4
22	3.6	.6	2.1	b4	7.4	6.6	3.2	54	d3	d.2	.3	5.9
23	9.0	.3	b7.0	b4.5	*8.2	9.9	3.2	54	d20	d.1	.1	2.8
24	2.8	.1	b4.0	5.2	6.6	13	12	67	2.8	d.1	.2	1.8
25	.7	2.1	b4.5	4.6	6.6	17	3.6	15	.6	d.1	4.1	1.2
26	1.6	1.2	b4.5	4.6	6.6	19	4.1	31	.5	d.1	.4	.6
27	1.8	.8	b3.5	3.6	5.2	25	4.1	33	.5	d.1	.1	.4
28	2.4	.7	b3.5	2.8	4.1	19	8.2	31	.7	.2	.1	42
29	.8	.5	b6.0	3.6	2.8	15	5.9	25	.2	.1	.1	d3
30	.3	.5	b8.0	2.8	-	12	5.9	31	d7.0	.1	.1	17
31	.1	-	b10	4.1	-	12	-	35	-	.1	.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	112.1	30	0	3.62	222
November	17.3	2.1	.1	.58	34
December	88.1	10	.5	2.84	175
Calendar year 1939	2,135.2	74	0	5.85	4,240
January	168.5	9.9	2.8	5.44	334
February	176.0	9	2.8	6.07	349
March	334.0	25	3.2	10.8	662
April	211.6	18	1.6	7.05	420
May	824.2	67	5.2	26.6	1,630
June	137.0	21	0	4.57	272
July	16.9	7	.1	.55	34
August	18.9	4.6	0	.61	37
September	123.0	42	.1	4.10	244
Water year 1939-40	2,227.6	67	0	6.09	4,410

Peak discharge.- Sept. 10 (5 p.m.) 230 sec.-ft.; Sept. 28 (4 p.m.) 483 sec.-ft.; Sept. 30 (4:30 p.m.) 180 sec.-ft.

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record and uncertain stage-discharge relation; discharge computed on basis of gage heights, weather records, and records for station near Nambe and for the intervening diversions.

Diversions from Nambe Creek

Nambe canal near Nambe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°52', long. 105°57', in sec. 24, T. 19 N., R. 9 E., in Nambe Pueblo Grant, about 300 feet downstream from head gate and 2½ miles southeast of Nambe.

Records available.- May 1932 to September 1940.

Extremes.- Maximum daily discharge during year, 3.9 second-feet May 3; no flow at times.
1932-40: Maximum daily discharge, 5.2 second-feet Oct. 26, 1934; no flow at times.

Remarks.- Records good. Canal diverts water from right bank of Nambe Creek for irrigation on Indian land. No diversion between station and head.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.8	0	0.70	43
November	2.2	0	.93	55
December	1.3	0	.22	13
Calendar year 1939	3.9	0	.74	532
January	.3	0	.01	.8
February	0	0	0	0
March	.4	0	.07	4.2
April	1.8	.1	.87	52
May	3.9	.3	1.55	95
June	3.0	.1	1.63	97
July	2.8	0	1.29	79
August	2.1	.3	1.24	76
September	2.0	.1	.89	53
Water year 1939-40	3.9	0	.78	568

Llano Frio ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°52', long. 105°57', in SW¼ sec. 14, T. 19 N., R. 9 E., 1,100 feet downstream from head and 1½ miles southeast of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.6 second-feet Apr. 13; no flow at times.
1936-40: Maximum daily discharge, 9.4 second-feet (estimated) Apr. 20, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.6	0	1.45	89
November	3.3	.7	1.98	118
December	3.7	0	2.02	124
Calendar year 1939	7.8	0	1.77	1,260
January	1.0	0	.12	7.1
February	4.5	0	.28	16
March	4.5	0	.42	26
April	6.6	0	3.42	204
May	5.1	2.1	4.51	277
June	4.9	0	2.34	139
July	1.3	0	.58	36
August	2.1	0	.70	43
September	3	0	.33	20
Water year 1939-40	6.6	0	1.51	1,100

Diversions from Nambe Creek

Llano ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°52', long. 105°57', in SW¼ sec. 14, T. 19 N., R. 9 E., a quarter of a mile downstream from head and 1.1 miles southeast of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.7 second-feet June 2; no flow at times.
1936-40: Maximum daily discharge, that of June 2, 1940; no flow at times.

Remarks.- Records good. Ditch diverts water from the right bank of Nambe Creek for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.3	0	0.99	61
November	1.3	0	.30	18
December	1.9	0	.35	21
Calendar year 1939	6.5	0	1.03	748
January	1.0	.2	.57	35
February	.3	0	.07	4.0
March	2.5	0	.74	45
April	5.5	0	1.64	98
May	6.3	0	2.58	159
June	6.7	.1	3.54	211
July	3.2	0	1.55	95
August	2.4	0	1.05	64
September	3.7	0	1.11	66
Water year 1939-40	6.7	0	1.21	877

Mocha ditch at Nambe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°53', long. 105°57', near center of sec. 14, T. 19 N., R. 9 E., 800 feet downstream from head and 1 mile southeast of Nambe.

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 2.1 second-feet May 3; no flow at times.
1936-40: Maximum daily discharge, that of May 3, 1940; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Nambe Creek for irrigation on Indian land. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	1.6	0	.18	134
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	1.0	0	.12	7.3
May	2.1	0	.51	31
June	1.5	.1	.78	46
July	1.2	0	.49	30
August	1.5	0	.44	27
September	.6	0	.09	5.4
Water year 1939-40	2.1	0	.20	147

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Diversions from Nambe Creek

Comunidad ditch at Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°53', long. 105°58', in NW¼ sec. 14, T. 19 T. 19 N., R. 9 E., 400 feet downstream from head and half a mile south of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.4 second-feet May 7; no flow at times.
1936-40: Maximum daily discharge, that of May 7, 1940; no flow at times.

Remarks.- Records fair. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.1	0.2	1.24	76
November	1.6	.1	.69	41
December	1.7	.3	.97	60
Calendar year 1939	5.0	0	1.08	785
January	.5	0	.22	14
February	.6	0	.21	12
March	1.9	0	.39	24
April	3.5	.4	2.11	126
May	6.4	.5	3.26	200
June	5.4	0	2.44	145
July	2.1	0	1.13	70
August	2.3	.1	1.09	67
September	2.6	0	1.11	66
Water year 1939-40	6.4	0	1.24	901

Ortiz ditch at Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°53', long. 105°58', in SE¼ sec. 10, T. 19 N., R. 9 E., 400 feet downstream from head and half a mile northwest of Nambe.

Records available.- February 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 3.0 second-feet June 18; no flow at times.
1936-40: Maximum daily discharge, 5.0 second-feet June 16, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Nambe Creek for irrigation. Some water is diverted from ditch between gaging station and head for irrigation of about 5 acres.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0	0.23	14
November	.2	0	.02	1.0
December	.7	0	.18	11
Calendar year 1939	3.4	0	.68	494
January	.3	0	.11	6.7
February	.4	0	.07	3.8
March	1.1	0	.18	11
April	2.1	.1	1.25	74
May	2.5	.5	1.32	81
June	3.0	.8	1.83	109
July	1.4	.4	.88	54
August	1.8	.1	.78	48
September	1.7	.2	.66	39
Water year 1939-40	3.0	0	.62	452

Diversions from Nambe Creek

Canyon ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°54', long. 105°59', in NW¼ sec. 10, T. 19 N., R. 9 E., 600 feet downstream from head and 1½ miles west of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 4.9 second-feet June 15; no flow at times. 1936-40: Maximum daily discharge, 5.5 second-feet Apr. 29, June 1, 1939; no flow at times.

Remarks.- Records fair. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.1	0.5	1.56	96
November	2.0	.1	1.19	71
December	1.9	0	.35	21
Calendar 1939	5.5	0	1.11	803
January	1.0	0	.28	17
February	1.4	.2	.66	38
March	1.6	.3	1.00	61
April	4.8	.8	1.86	111
May	4.4	.5	2.43	149
June	4.9	0	2.25	134
July	1.3	0	.53	32
August	2.9	0	.73	45
September	2.7	.1	.93	55
Water year 1939-40	4.9	0	1.14	830

Acequia Rincon near Nambe, New Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°53', long. 105°59', in SE¼ sec. 9, T. 19 N., R. 9 E., 400 feet downstream from head and 1½ miles west of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 3.9 second-feet June 7; no flow at times. 1936-40: Maximum daily discharge, 5.1 second-feet Apr. 14, 1936; no flow at times.

Remarks.- Records good. Acequia diverts water from left bank of Nambe Creek for irrigation. No diversion above station.

Monthly discharge, on second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.4	0.1	0.40	25
November	1.1	.1	.55	33
December	1.8	0	.63	38
Calendar year 1939	3.5	0	.62	450
January	0	0	0	0
February	0	0	0	0
March	1.5	0	.12	7.3
April	2.2	.2	1.17	70
May	2.5	.3	1.43	88
June	3.9	0	2.21	131
July	1.5	0	.67	41
August	2.6	0	.73	45
September	3.4	0	.73	43
Water year 1939-40	3.9	0	.72	521

Diversions from Nambe Creek

Las Joyas ditch near Nambe, N. Mex.

Location.- Water-stage recorder, lat. 35°53', long. 106°00', in NW¼ sec. 9, T. 19 N., R. 9 E., 1,100 feet downstream from head and 2½ miles west of Nambe. Prior to Mar. 6 water-stage recorder about 150 feet upstream.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.8 second-feet June 1; no flow at times.
1936-40: Maximum daily discharge, 8.4 second-feet June 4, 1938; no flow at times.

Remarks.- Records March to September good; others fair. Ditch diverts water from right bank of Nambe Creek for irrigation of Spanish grants. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.8	0	1.06	65
November	4.2	.4	1.51	90
December	1.9	0	.47	29
Calendar year 1940	7.6	0	1.25	908
January	.8	.8	.03	1.6
February	0	0	0	0
March	2.4	0	.14	8.7
April	4.5	0	1.85	110
May	6.2	0	3.32	204
June	6.8	1.9	3.56	212
July	2.3	.9	1.48	91
August	2.3	.6	1.16	72
September	3.2	0	.91	54
Water year 1939-40	6.8	0	1.29	937

Trujillo ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°53', long. 106°01', in NW¼ sec. 8, T. 19 N., R. 9 E., 600 feet downstream from head and 3½ miles west of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 2.0 second-feet May 16; no flow at times.
1936-40: Maximum daily discharge, 2.5 second-feet May 9, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0	0.32	20
November	.7	0	.36	21
December	.7	0	.11	6.5
Calendar year 1939	2.2	0	.39	284
January	0	0	0	0
February	0	0	0	0
March	.1	0	0	.2
April	1.3	0	.59	35
May	2.0	0	.76	47
June	1.5	0	.67	40
July	.7	.1	.39	24
August	.6	0	.31	19
September	.3	0	.09	5.2
Water year 1939-40	2.0	0	.30	218

Diversions from Nambe Creek

Barranco Alto ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°53', long. 106°01', in NW¼ sec. 8, T. 19 N., R. 9 E., 400 feet downstream from head, a quarter of a mile upstream from highway bridge at Pojoaque, and 3 miles west of Nambe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 2.3 second-feet May 8; no flow at times.
1936-40: Maximum daily discharge, 2.4 second-feet Apr. 26, 1939; no flow at times.

Remarks.- Records fair. Ditch diverts water for irrigation from left bank of Nambe Creek, 300 feet upstream from gaging station on Nambe Creek at Pojoaque Bridge. No divsrsion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.8	0	0.41	25
November	.9	.2	.49	29
December	.8	0	.13	8.1
Calendar year 1939	2.4	0	.42	300
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	1.9	0	.63	37
May	2.3	0	.77	47
June	1.8	.2	.87	52
July	1.0	.4	.77	47
August	1.0	.4	.65	40
September	.4	0	.17	10
Water year 1939-40	2.3	0	.41	295

Jacona ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°54', long. 106°02', in NW¼ sec. 7, T. 19 N., R. 9 E., 600 feet upstream from Rio Tesuque crossing, half a mile downstream from head, and 4 miles west of Nambe.

Records available.- April 1936 to December 1939 (discontinued).

Extremes.- Maximum daily discharge during period, 3.5 second-feet Dec. 5; minimum daily, 0.2 second-foot Oct. 2, 3.
1936-40: Maximum daily discharge, 5.2 second-feet Apr. 4, 1939; no flow at times.

Remarks.- Records poor. Ditch diverts water from left bank of Nambe Creek and crosses bed of Rio Tesuque below station. Water used for irrigation. During nonirrigation season it is probable that entire flow is wasted into Rio Tesuque. Records include some seepage water. Additional seepage and some flow from Rio Tesuque enters ditch below station. No diversion above station.

Monthly discharge, in second-feet, 1939

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.1	0.2	1.07	66
November	2.4	.4	1.13	67
December	3.5	.4	1.20	74
Calendar year 1939	5.2	0	1.27	919

Diversions from Nambe Creek

Jacona ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and wooden control, lat. 35°54', long. 106°02', in NW¼ sec. 7, T. 19 N., R. 9 E., 100 feet downstream from Rio Tesuque crossing, three-quarters of a mile downstream from head, and 4⅛ miles east of San Ildefonso.

Records available.- January to September 1940.

Extremes.- Maximum daily discharge during period, 4.1 second-feet Apr. 28; no flow at times.

Remarks.- Records fair. Ditch diverts water from left bank of Nambe Creek for irrigation. Records include water from seepage and some from Rio Tesuque. No diversion from ditch above station.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 4-31	0	0	0	0
February	0	0	0	0
March	.5	0	.02	1.0
April	4.1	0	1.87	111
May	4.0	0	2.33	143
June	2.7	.5	1.37	81
July	1.3	.2	.54	33
August	1.7	.4	.62	38
September	3.1	0	.78	46
The period	-	-	-	453

Rio Tesuque above diversions, near Santa Fe, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°44', long. 105°54', in SE¼ sec. 32, T. 18 N., R. 10 E., 1 mile upstream from Rito Tesuque and 4 miles northeast of Santa Fe.

Records available.- March 1936 to September 1940 in reports of Geological Survey. May to October 1919, at site 175 feet downstream, in reports of State engineer.

Extremes.- Maximum discharge during year, 52 second-feet Aug. 1 (gage height, 3.02 feet), from rating curve extended above 11 second-feet by logarithmic plotting; minimum daily, 0.5 second-foot Dec. 28.

1936-40: Maximum discharge, 425 second-feet July 19, 1938 (gage height, 4.2 feet, from floodmarks), from rating curve extended above 10 second-feet by logarithmic plotting on basis of slope-area determination at gage height, 4.0 feet; minimum daily, 0.3 second-foot Dec. 5-9, 1938.

Remarks.- Records good except those for periods of doubtful or no gage-height record or ice effect, which are poor. Flow from small tributary spring diverted above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	1.9	1.0	a0.7	1.0	2.3	7.4	7.1	7.7	2.4	2.0	1.1
2	1.8	1.8	1.1	a.7	1.0	1.9	7.7	7.4	7.7	2.3	1.3	1.0
3	1.8	1.7	1.1	a.7	1.0	1.7	7.1	e.0	7.7	2.1	1.0	.9
4	1.8	1.7	1.2	a.8	1.0	2.0	6.3	9.3	7.4	2.1	.9	1.0
5	1.8	1.7	1.2	.8	1.0	2.4	6.1	9.6	7.4	2.1	1.0	.9
6	1.8	1.7	1.2	b.7	b.9	2.8	5.6	10	7.1	1.9	1.6	.8
7	1.8	1.7	1.0	b.7	1.1	2.7	5.1	10	6.e	2.0	1.1	.8
8	4.3	1.5	1.1	b.8	1.0	3.0	5.1	11	6.3	2.0	.9	.8
9	3.0	1.8	1.1	.9	b.9	3.5	4.9	11	6.1	1.9	.8	.8
10	2.6	1.e	1.1	1.0	b.9	4.1	5.3	11	5.8	1.8	.7	1.2
11	2.4	d1.5	1.1	1.0	1.0	4.1	5.6	11	5.6	1.7	1.0	1.5
12	2.3	d1.7	1.0	1.0	1.0	3.7	5.8	11	5.1	1.6	1.0	1.1
13	2.1	d1.6	.8	b1.0	b.9	3.2	6.3	10	4.9	1.4	.9	1.0
14	2.1	d1.3	.8	b.9	b1.0	2.7	7.4	11	4.7	1.8	.8	.8
15	2.1	d1.4	.9	b.8	1.0	2.6	7.7	11	4.5	1.5	.8	.8
16	2.1	d1.5	1.1	b1.1	b.9	2.7	7.4	12	4.3	1.4	.8	.7
17	2.1	d1.4	1.1	1.0	b.8	3.3	6.8	11	4.5	1.4	.9	.9
18	2.3	d1.2	1.1	b.9	b.9	3.9	6.3	11	4.1	1.4	1.3	1.0
19	2.3	d1.2	.6	b.8	1.0	4.1	6.6	10	3.9	1.3	1.1	2.1
20	2.3	d1.2	1.0	b.9	b.9	4.1	7.4	10	3.5	1.1	1.2	1.5
21	2.3	d1.2	1.0	1.0	b.9	4.5	8.0	9.6	3.7	1.2	1.5	2.3
22	2.3	d1.3	1.1	.8	1.0	5.8	8.3	10	3.3	1.3	1.1	1.8
23	2.3	d1.3	b.9	b.8	1.0	6.6	8.6	10	3.7	1.3	1.2	1.5
24	2.3	d1.3	1.1	b.9	1.0	6.8	8.6	9.3	3.2	1.2	1.6	1.4
25	2.3	d1.2	1.0	1.0	1.0	7.4	8.3	8.9	3.0	1.2	2.3	1.4
26	2.3	d1.0	b.9	1.0	1.1	8.3	8.3	8.3	2.8	1.0	2.3	1.5
27	2.1	d1.1	b.7	1.0	1.3	7.7	8.3	e.0	2.7	1.0	1.3	1.5
28	2.1	d1.2	b.5	.9	1.6	7.1	8.0	7.7	2.8	1.1	1.2	1.5
29	2.0	d1.1	b.6	.9	2.1	6.3	7.4	7.7	2.8	1.4	1.2	1.6
30	2.0	d1.2	b.6	1.0	-	6.3	7.4	7.7	2.6	1.2	1.2	1.5
31	2.0	-	a.7	1.0	-	6.3	-	7.4	-	1.0	1.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	68.7	4.3	1.8	2.22	136
November	43.2	1.9	1.0	1.44	86
December	29.7	1.2	.5	.96	59
Calendar year 1939	1,066.0	11	.5	2.92	2,110
January	27.5	1.1	.7	.89	55
February	30.2	2.1	.8	1.04	60
March	133.9	8.3	1.7	4.32	266
April	209.1	8.6	4.9	6.97	415
May	297.0	12	7.1	9.58	589
June	145.7	7.7	2.6	4.86	289
July	48.1	2.4	1.0	1.55	95
August	37.2	2.3	.7	1.20	74
September	36.7	2.3	.7	1.22	73
Water year 1939-40	1,107.0	12	.5	3.02	2,200

Peak discharge.- Aug. 1 (5 p.m.) 52 second-feet.

a No gage-height record; discharge computed on basis of range of stage, weather records, and records for Nambe Creek near Nambe.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of weather records and records for Nambe Creek near Nambe.

Rio Tesuque at Tesuque, near Santa Fe, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°45', long. 105°56', in NW¼NW¼ sec. 31, T. 18 N., R. 10 E., 2,000 feet upstream from head of Acequia Medio, 3,100 feet upstream from bridge on U. S. Highways 64 and 285 at Tesuque, 1 mile downstream from Rito Tesuque, and 5 miles north of Santa Fe.

Records available.- October 1938 to September 1940. March 1936 to October 1938 at site 3,100 feet downstream (published as Rio Tesuque at Tesuque Bridge, near Santa Fe); records equivalent for flood flow only.

Extremes.- Maximum discharge during year, 500 second-feet Aug. 1 (gage height, 1.90 feet), by slope-area method; no flow at times.
1938-40: Maximum discharge, that of Aug. 1, 1940; no flow at times.

Remarks.- Records for period March to July fair; others poor. Diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.1				0	8.0	3.0	4.6	0.6	5.7	0.3
2	.1	.1				0	8.6	2.5	4.2	.5	.4	.3
3	.1	.1				0	7.0	3.0	3.6	.5	.2	.3
4	.1	.1				0	6.1	3.6	3.6	.5	.2	.3
5	.1	.1				0	6.6	3.6	3.6	.5	.2	.3
6	.1	.1				.8	6.1	4.2	a2.2	.5	.4	.3
7	.1	0				1.2	5.0	4.2	a1.8	.5	.2	.3
8	1.4	0				2.0	4.2	5.4	a2.2	.5	.3	.3
9	a2.0	0				2.8	4.0	7.0	a2.1	.5	.3	.3
10	a1.6	0				5.4	4.0	7.0	a1.7	.4	.4	.3
11	a1.3	0				4.0	5.0	6.6	a1.5	.4	.4	.3
12	a.8	.1				3.0	5.0	6.6	a1.4	.4	.5	.3
13	a.2	.1				2.0	4.2	5.0	a1.1	.4	.7	.3
14	.1	.1				2.8	4.0	4.2	a1.0	.4	.8	.3
15	a.1	.1				2.2	4.2	5.4	a1.0	.4	.8	.3
16	a.1	.1				2.4	5.0	6.1	a1.0	.4	.9	.3
17	a.1	.1				2.8	5.0	7.0	a1.1	.4	.9	.3
18	a.1	.1				4.2	4.2	7.5	a.9	.4	1.0	.2
19	.1	.1				4.6	4.2	9.7	a.8	.4	1.0	.2
20	.1	.1				4.2	4.2	8.0	.6	.4	a.7	1.6
21	.1	.1				5.4	5.0	5.7	.5	.4	a.7	a.7
22	.1	.1				5.7	4.0	7.5	.5	.4	a.7	1.1
23	.1	.1				6.1	5.4	7.5	.5	.4	.4	a1.0
24	.1	.1				7.5	5.7	6.6	.5	.4	.3	a.9
25	.1	.1				9.7	6.6	5.7	.4	.4	.3	a.9
26	.2	a0				7.5	6.6	5.7	.4	.4	.3	a1.1
27	.2	a0				9.1	6.1	5.7	.4	.4	.3	a1.1
28	.1	a0				9.7	5.4	5.0	.4	.4	.3	a1.1
29	.1	a0				8.6	4.0	5.0	.4	.4	.3	a.8
30	.1	a0				8.0	3.0	5.0	.4	.5	.3	a.2
31	.1	-				8.0	-	4.2	-	.5	.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	10.2	2.0	0.1	0.33	20
November	2.0	.1	0	.07	4.0
December	0	0	0	0	0
Calendar year 1939	488.8	17	0	1.34	970
January	0	0	0	0	0
February	0	0	0	0	0
March	129.7	9.7	0	4.18	257
April	156.4	8.6	3.0	5.21	310
May	173.5	9.7	2.8	5.60	344
June	44.3	4.6	.4	1.48	88
July	13.5	.5	.4	.44	27
August	20.2	5.7	.2	.65	40
September	16.0	1.6	.2	.53	32
Water year 1939-40	565.8	9.7	0	1.55	1,120

Peak discharge.- Oct. 8 (1 p.m.) 44 sec.-ft.; Aug. 1 (6 p.m.) 500 sec.-ft.; Sept. 20 (3 p.m.) 88 sec.-ft.; Sept. 22 (1 p.m.) 25 sec.-ft.

a No gage-height record; discharge computed on basis of records for station above diversions and for the intervening diversions.

Rito Tesuque near Santa Fe, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°44', long. 105°53', in sec. 4, T. 17 N., R. 10 E., 0.9 mile downstream from Santa Fe National Forest boundary, 2½ miles upstream from mouth, and 5 miles northeast of Santa Fe.

Records available.- March 1936 to September 1940.

Extremes.- Maximum discharge during year, 6.2 second-feet Mar. 27 (gage height, 1.18 feet); minimum, less than 0.1 second-foot for extended periods.
1936-40: Maximum discharge, about 186 second-feet July 19, 1938 (gage height, 3.2 feet, from floodmarks), by slope-area method; minimum, less than 0.1 second-foot for extended periods.

Remarks.- Records fair except those for periods of ice effect, and those below 0.1 second-foot, which are poor. No divereion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.2	0.2	-	0.2	0.8	5.8	3.6	1.1	0.2	-	-
2	.4	.2	.2	-	.2	1.0	5.8	3.4	1.0	.1	-	-
3	.4	.2	.2	-	.2	.9	5.5	3.4	.9	.1	-	-
4	.3	.2	.2	-	.2	1.0	5.3	3.8	.9	.1	-	-
5	.2	.2	.2	.1	.2	1.6	5.1	3.4	.8	-	-	-
6	.2	.2	.2	b.1	b.2	2.2	4.6	3.4	.7	.1	-	-
7	.3	.2	.2	b.1	b.2	2.6	4.2	3.4	.6	-	-	-
8	.8	.2	.2	b.1	b.2	2.7	3.8	3.8	.6	.1	-	-
9	.6	.2	.2	.1	b.1	3.1	3.6	3.8	.5	-	-	-
10	.6	.2	.2	.1	b.2	3.6	3.6	3.4	.5	-	-	-
11	.5	.2	.2	.2	b.2	3.6	3.6	2.9	.6	-	-	-
12	.4	.2	.2	.2	b.2	3.4	3.6	2.7	.6	-	-	-
13	.4	.2	.2	b.2	b.1	b3.0	3.6	2.6	.5	-	-	-
14	.4	.2	.2	b.1	b.2	b2.7	3.8	2.4	.5	.1	-	-
15	.4	.2	b.2	b.1	.2	b2.8	4.0	2.2	.4	-	-	-
16	.4	.2	b.2	b.2	b.2	b3.0	4.4	2.2	.4	-	-	-
17	.4	.2	.2	.2	b.1	3.2	4.2	2.2	.6	-	-	-
18	.4	.2	.2	b.1	b.2	3.2	4.0	2.4	.4	-	-	-
19	.4	.2	b.2	b.1	.3	3.2	3.6	2.4	.3	-	-	-
20	.4	.2	b.2	b.2	b.3	3.2	3.8	2.4	.3	-	-	-
21	.4	.2	b.2	b.2	b.4	3.4	4.2	2.2	.4	-	-	.6
22	.4	.2	.2	b.1	.4	3.8	4.6	2.7	.3	-	-	.4
23	.4	.2	b.2	b.1	.4	4.2	4.6	2.6	.3	-	-	.2
24	.4	.2	.2	b.1	.4	4.8	4.6	2.2	.2	-	.4	.2
25	.3	.2	.1	.1	.4	5.3	4.8	2.2	.2	-	.3	.2
26	.3	.2	b.1	.1	.4	5.8	4.8	2.0	.2	-	.1	.2
27	.3	.2	b.1	.1	.4	5.8	4.8	1.7	.2	-	-	.2
28	.3	.2	b.1	.2	.5	5.8	4.6	1.6	.3	-	-	.2
29	.2	.2	.2	.2	.6	5.5	4.2	1.4	.2	-	-	.2
30	.2	.2	.2	.2	-	5.3	3.8	1.3	.2	-	-	.2
31	.2	-	.2	.2	-	5.5	-	1.2	-	-	-	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	11.7	0.8	0.2	0.38	23
November	6.0	.2	.2	.20	12
December	5.8	.2	.1	.19	12
Calendar year 1939	261.72	4.8	.01	.72	519
January	4.04	.2	.03	.13	8.0
February	7.8	.6	.1	.27	15
March	106.2	5.8	.8	3.43	211
April	130.9	5.8	3.6	4.36	260
May	80.9	3.8	1.2	2.61	160
June	14.7	1.1	.2	.49	29
July	2.33	.2	.05	.08	4.6
August	1.82	.4	.01	.06	3.6
September	3.44	.6	.01	.11	6.8
Water year 1939-40	375.63	5.8	.01	1.03	745

b Stage-discharge relation affected by ice.
Note.- Discharge less than 0.1 second-foot on days for which no figure is given.

Diversions from Rio Tesuque

Cajon Grande ditch near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°44', long. 105°54', in SE¼ sec. 32, T. 18 N., R. 10 E., 450 feet downstream from head and 4 miles northeast of Santa Fe.
Records available.- March 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 2.4 second-feet June 6; no flow at times. 1936-40: Maximum daily discharge, 3.4 second-feet May 20, 21, 1937; no flow at times.
Remarks.- Records good. Ditch diverts water for irrigation from right bank of Rio Tesuque 500 feet downstream from gaging station known as Rio Tesuque above diversions, near Santa Fe. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.7	0.2	0.65	40
November	.9	.2	.47	28
December	.7	0	.41	25
Calendar year 1939	2.3	0	.60	434
January	.8	.1	.47	29
February	.5	.1	.24	14
March	1.3	.1	.49	30
April	1.8	.2	.92	55
May	2.1	.4	1.17	72
June	2.4	.4	1.05	62
July	.7	0	.30	18
August	1.0	.1	.53	32
September	1.1	.2	.53	32
Water year 1939-40	2.4	0	.60	437

De La Cruz ditch near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°44', long. 105°55', in SW¼ sec. 32, T. 18 N., R. 10 E., 250 feet downstream from head and 4 miles northeast of Santa Fe.
Records available.- June 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 1.0 second-feet May 4; no flow at times. 1936-40: Maximum daily discharge, 1.8 second-feet Apr. 22, 1939; no flow at times.
Remarks.- Records fair. Ditch diverts water from left bank of Rio Tesuque for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.3	0.1	0.27	17
November	.4	0	.12	7.3
December	.2	0	.02	1.4
Calendar year 1939	1.8	0	.21	155
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	.8	0	.25	15
May	1.0	.2	.72	44
June	.8	.4	.60	36
July	.5	0	.16	9.9
August	.6	0	.05	3.2
September	.2	0	.02	1.0
Water year 1939-40	1.0	0	.19	135

Diversions from Rio Tesuque

Acequia Madre at head, near Santa Fe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°44', long. 105°55', in SE¼ sec. 31, T. 18 N., R. 10 E., 350 feet downstream from head and 4 miles northeast of Santa Fe.
Records available.- April 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 4.4 second-feet May 18; no flow at times. 1936-40: Maximum daily discharge, 4.8 second-feet May 23, 1939; no flow at times.
Remarks.- Records fair. Acequia diverts water from right bank of Rio Tesuque for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.0	0	0.45	28
November	1.6	0	.22	13
December	0	0	0	0
Calendar year 1939	4.8	0	.60	435
January	0	0	0	0
February	0	0	0	0
March	.7	0	.06	4.0
April	3.4	1.1	2.23	132
May	4.4	1.0	3.19	196
June	4.3	.8	2.04	121
July	1.1	.1	.58	36
August	.7	0	.07	4.2
September	.2	0	.01	.4
Water year 1939-40	4.4	0	.74	535

Acequia Medio at head, near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°46', long. 105°56', near east line of sec. 25, T. 18 N., R. 9 E., 350 feet downstream from head and 5 miles north of Santa Fe.
Records available.- March 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 3.5 second-feet May 26; no flow at times. 1936-40: Maximum daily discharge, 4.1 second-feet May 23, 1936; no flow at times.
Remarks.- Records good. Acequia diverts water for irrigation from right bank of Rio Tesuque 2,000 feet below station at Tesuque. No diversion between station and head.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.5	0.1	0.29	18
November	.5	.3	.38	22
December	.4	.3	.31	19
Calendar year 1939	2.7	0	.65	470
January	.5	.3	.36	22
February	.4	.3	.38	22
March	.8	0	.15	8.9
April	2.6	0	1.74	104
May	3.5	1.5	2.56	157
June	3.0	1.2	1.88	112
July	1.2	.9	1.04	64
August	.9	.4	.82	51
September	.9	.1	.69	41
Water year 1939-40	3.5	0	.88	641

Diversions from Rio Tesuque

Hubbard ditch near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°46', long. 105°56', in sec. 25, T. 18 N., R. 9 E., a quarter of a mile downstream from head and 5½ miles north of Santa Fe.
Records available.- June 1938 to September 1940.
Extremes.- Maximum daily discharge during year, 1.3 second-feet May 5-7; no flow at times.
1938-40: Maximum daily discharge, that of May 5-7, 1940; no flow at times.
Remarks.- Records good. Ditch diverts water for irrigation from left bank of Rio Tesuque about three-quarters of a mile below station at Tesuque. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.6	0	0.21	13
November	.4	.3	.31	18
December	.3	.1	.24	14
Calendar year 1939	1.1	0	.23	170
January	.2	0	.10	6.0
February	0	0	0	0
March	0	0	0	0
April	1.2	0	.53	32
May	1.3	0	.47	29
June	1.1	.2	.48	29
July	.6	.3	.50	31
August	.4	0	.18	11
September	.4	0	.19	12
Water year 1939-40	1.3	0	.27	195

Mitchell ditch near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot rectangular weir, lat. 35°46', long. 105°56', near N½ sec. 25, T. 18 N., R. 9 E., at pipe line outlet 5½ miles north of Santa Fe.
Records available.- June 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 0.9 second-foot May 8-10, 20, May 29 to June 2, June 4; no flow June 6, 9, 10.
1936-40: Maximum daily discharge recorded, 2.1 second-feet June 7, 1937; no flow at times.
Remarks.- Records good. Discharge computed by formula for rectangular weir. Ditch supplied by underground flow from pipeline laid in bed of Rio Tesuque. Water diverted is used for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.6	0.1	0.40	24
November	.6	.5	.52	31
December	.6	.5	.53	32
Calendar year 1939	.9	0	.49	356
January	.6	.5	.51	31
February	.6	.5	.52	30
March	.8	.5	.66	40
April	.8	.6	.67	40
May	.9	.7	.81	50
June	.9	0	.68	40
July	.7	.6	.69	43
August	.7	.4	.60	37
September	.6	.5	.54	32
Water year 1939-40	.9	0	.59	430

Diversions from Rio Tesuque

Post ditch near Tesuque Pueblo, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°47', long. 105°57', in SE¼ sec. 14, T. 18 N., R. 9 E., a quarter of a mile downstream from head and 2 miles southeast of Tesuque Pueblo.
Records available.- July 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 1.6 second-feet May 8; no flow at times.
1936-40: Maximum daily discharge recorded, 1.7 second-feet several days during 1937; no flow at times.
Remarks.- Records good. Ditch diverts water from right bank of Rio Tesuque for irrigation on Tesuque Pueblo land. Several diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	1.6	0	.24	178
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	.4	0	.02	1.2
May	1.6	0	.51	31
June	1.4	0	.61	36
July	1.4	0	.64	39
August	1.3	0	.48	30
September	1.4	0	.59	35
Water year 1939-40	1.6	0	.24	172

Qwiyo ditch near Tesuque Pueblo, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flumé, lat. 35°47', long. 105°58', in SW¼ sec. 14, T. 18 N., R. 9 E., 400 feet downstream from head and 1¼ miles southeast of Tesuque Pueblo.
Records available.- July 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 1.7 second-feet May 6, July 4; no flow at times.
1936-40: Maximum daily discharge, 2.1 second-feet May 13, 1939; no flow at times.
Remarks.- Records fair. Ditch diverts water from right bank of Rio Tesuque for irrigation on Tesuque Pueblo land. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	2.1	0	.23	170
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	1.5	0	.25	15
May	1.7	0	.24	14
June	1.2	0	.28	17
July	1.7	0	.15	9.5
August	0	0	0	0
September	1.6	0	.34	20
Water year 1939-40	1.7	0	.10	76

Diversions from Rio Tesuque

Corral ditch at Tesuque Pueblo, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°48', long. 105°58', in NE¼ sec. 15, T. 18 N., R. 9 E., 1,700 feet downstream from head and half a mile southeast of Tesuque Pueblo.
Records available.- July 1936 to September 1940.
Extremes.- Maximum daily discharge during year, 0.9 second-foot Apr. 26; no flow most of year.
1936-40: Maximum daily discharge, 1.0 second-foot July 26, 1938; no flow most of time.
Remarks.- Records fair. Ditch diverts water from left bank of Rio Tesuque for irrigation on Tesuque Pueblo Grant. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	.9	0	.03	23.0
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	.9	0	.09	5.4
May	.4	0	.06	3.6
June	.8	0	.10	5.8
July	.8	0	.09	5.8
August	.6	0	.10	6.0
September	.1	0	.01	.6
Water year 1939-40	.9	0	.04	27.2

Diversions from Rio Pojoaque

Del Barranco ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and 1.5-foot Parshall flume, lat. 35°53', long. 106°03', in SW¼ sec. 12, T. 19 N., R. 8 E., 1,800 feet downstream from head and 3¾ miles east of San Ildefonso.

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 3.3 second-feet June 1; minimum daily, 0.2 second-foot several days in November and July, and Aug. 2.
1936-40: Maximum daily discharge, 3.6 second-feet Mar. 18, 1939; no flow July 9 and 10, 1936.

Remarks.- Records poor. Ditch diverts water from left bank of Rio Pojoaque for irrigation. Records include seepage inflow from drainage ditch about 100 feet above station. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0.3	0.35	22
November	1.2	.2	.59	35
December	1.8	.6	1.04	64
Calendar year 1939	3.6	.1	.74	536
January	.7	.4	.52	32
February	.4	.3	.36	21
March	1.0	.3	.43	26
April	3.1	.6	1.76	105
May	2.9	.5	1.62	100
June	3.3	.3	1.22	72
July	1.1	.2	.45	28
August	1.9	.2	.67	41
September	1.4	.3	.52	31
Water year 1939-40	3.3	.2	.80	577

Diversions from Rio Pojoaque

De La Otra Banda ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°54', long. 106°04', near center of sec. 11, T. 19 N., R. 8 E., 2,000 feet downstream from head and 3 miles east of San Ildefonso.

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 4.9 second-feet May 8; no flow at times. 1936-40: Maximum daily discharge, 6.5 second-feet May 1, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Rio Pojoaque for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.3	0	0.41	25
November	.5	0	.04	2.6
December	1.1	0	.37	23
Calendar year 1939	6.1	0	.51	367
January	0	0	0	0
February	0	0	0	0
March	.9	0	.12	7.1
April	2.6	.5	1.38	82
May	4.9	.7	1.91	118
June	3.8	0	.91	54
July	2.2	0	.52	19
August	2.3	0	.38	23
September	1.6	0	.42	25
Water year 1939-40	4.9	0	.52	379

Rancho ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and 1.5-foot Cippoletti weir, lat. 35°53', long. 106°04', near line between SE¼ sec. 10 and SW¼ sec. 11, T. 19 N., R. 8 E., 350 feet downstream from head and 2⅝ miles east of San Ildefonso.

Records available.- April 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 3.0 second-feet May 28; no flow at times. 1936-40: Maximum daily discharge, 3.9 second-feet May 29, 1938; no flow at times.

Remarks.- Records poor. Ditch diverts water from left bank of Rio Pojoaque for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-	-	0.33	20
November	-	0	.42	25
December	1.0	0	.29	18
Calendar year	-	-	-	-
January	.2	0	.05	2.8
February	.2	0	.04	2.4
March	.9	0	.23	14
April	1.7	0	.88	53
May	3.0	0	1.24	76
June	2.5	.1	.68	40
July	.4	.1	.16	10
August	-	-	.24	15
September	-	0	.29	17
Water year 1939-40	3.0	0	.40	293

Diversions from Rio Pojoaque

De Los Indios ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°54', long. 106°05', in NE¼SW¼ sec. 10, T. 19 N., R. 8 E., 1,000 feet downstream from head and 2 miles east of San Ildefonso.

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 5.0 second-feet June 9; no flow at times. 1936-40: Maximum daily discharge, 5.8 second-feet July 11, 1937, and June 11, 1939; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Rio Pojoaque for irrigation. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.9	0	0.13	7.7
November	.6	0	.21	12
December	1.0	0	.21	13
Calendar year 1939	5.8	0	.33	235
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	3.0	0	1.08	64
May	2.9	0	.90	56
June	5.0	0	.89	53
July	2.6	0	.21	13
August	3.5	0	.43	27
September	3.1	0	.40	24
Water year 1939-40	5.0	0	.37	270

Well ditch at San Ildefonso, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°54', long. 106°06', in NW¼ sec. 9, T. 18 N., R. 8 E., 50 feet downstream from head of open ditch and three-quarters of a mile northeast of San Ildefonso.

Records available.- June 1938 to September 1940.

Extremes.- Maximum daily discharge during year, 3.3 second-feet June 3; no flow at times. 1938-40: Maximum daily discharge, that of June 3, 1940; no flow at times.

Remarks.- Records good. Ditch supplied by underground flow from pipe line laid in bed of Rio Pojoaque and water is used for irrigation. No diversion above station except occasionally to Ortiz ditch, amount of which is included in records for that station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.9	0.2	0.64	39
November	.4	0	.25	15
December	1.2	0	.32	19
Calendar year 1939	2.6	0	.70	506
January	0	0	0	0
February	1.6	0	.29	16
March	0	0	0	0
April	2.3	0	.75	44
May	3.2	1.5	2.60	160
June	3.3	1.1	2.28	136
July	1.6	1.0	1.25	77
August	1.1	0	.85	52
September	1.1	.5	.72	43
Water year 1939-40	3.3	0	.83	601

Diversions from Rio Pojoaque

Ortiz ditch at San Ildefonso, N. Mex.

Location.- Water-stage recorder and 1½-foot Parshall flume, lat. 35°54', long. 106°06', in NW¼ sec. 9, T. 19 N., R. 8 E., 1,000 feet downstream from head and three-quarters of a mile northeast of San Ildefonso.

Records available.- April 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 0.4 second-foot Aug. 21; no flow at times.

1936-40: Maximum daily discharge, 4.2 second-feet Aug. 4, 1936; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Rio Pojoaque for irrigation. Records include water received from Well ditch not included in records for that ditch. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0	0.01	0.8
November	.2	0	.06	3.8
December	0	0	0	0
Calendar year 1939	1.0	0	.07	47
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	.2	0	.01	.4
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	.4	0	.02	1.0
September	0	0	0	0
Water year 1939-40	.4	0	.01	6.0

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Santa Fe Creek near Santa Fe, N. Mex.

Location.- Water-stage recorder and sharp-crested concrete control, lat. 35°41', long. 105°50', in SW¼SW¼ sec. 24, T. 17 N., R. 10 E., 300 feet downstream from upper storage reservoir of New Mexico Power Co. and 6 miles east of Santa Fe.

Records available.- May to June 1910 (at site 3 miles downstream), April 1913 to December 1914 (at site 2 miles downstream), and October 1930 to September 1940 in reports of Geological Survey. January 1913 to November 1930 (at site 2 miles downstream) and November 1930 to December 1931 in reports of State engineer.

Average discharge.- 25 years (1913-18, 1919-27, 1928-40), 9.47 second-feet.

Extremes.- Maximum discharge during year, 31 second-feet May 7 (gage height, 0.96 foot); minimum daily, 1.7 second-feet Dec. 13 to Feb. 15.
1930-40: Maximum discharge, 139 second-feet Sept. 19, 1931 (gage height, 2.35 feet, datum then in use); minimum daily, 0.6 second-foot Nov. 13, 1933.

Remarks.- Records good. No diversion above gage.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	2.9	2.1	1.7	1.7	2.9	18	18	19	3.5	5.4	5.2
2	2.9	2.9	2.1	1.7	1.7	3.0	19	17	19	3.5	5.4	5.2
3	2.9	2.9	1.9	1.7	1.7	3.3	17	20	18	3.3	5.4	5.2
4	2.9	2.9	1.9	1.7	1.7	3.5	15	23	17	2.7	5.4	5.2
5	2.9	2.9	1.9	1.7	1.7	3.5	14	26	15	2.7	5.4	4.7
6	2.9	2.9	1.9	1.7	1.7	4.0	13	27	14	3.0	5.4	4.7
7	2.9	2.9	1.9	1.7	1.7	6.8	13	28	13	5.2	5.4	4.7
8	2.9	2.9	1.9	1.7	1.7	8.1	12	29	11	5.2	5.4	4.7
9	2.9	2.9	1.9	1.7	1.7	15	12	28	10	5.2	4.5	4.7
10	2.9	2.9	1.9	1.7	1.7	20	13	27	9.0	5.2	2.9	4.7
11	3.0	3.0	1.9	1.7	1.7	19	14	25	9.3	5.2	2.9	4.5
12	3.0	3.0	1.9	1.7	1.7	19	15	24	9.0	5.2	2.9	4.5
13	3.0	3.0	1.7	1.7	1.7	19	15	23	9.0	5.4	2.9	4.5
14	3.0	3.0	1.7	1.7	1.7	19	16	25	9.0	5.4	2.9	4.5
15	3.0	3.0	1.7	1.7	1.7	19	20	27	9.0	5.9	4.0	4.5
16	3.0	3.0	1.7	1.7	1.9	19	21	28	8.7	6.2	5.2	4.5
17	3.0	3.0	1.7	1.7	1.9	19	19	30	8.7	6.2	5.2	4.5
18	3.0	3.3	1.7	1.7	2.1	18	18	28	8.7	6.2	5.2	4.5
19	3.0	3.3	1.7	1.7	2.1	13	17	26	4.7	6.2	5.2	4.5
20	3.0	3.3	1.7	1.7	2.3	8.4	19	24	2.7	6.2	5.2	4.5
21	3.0	3.3	1.7	1.7	2.3	7.3	22	23	2.7	6.5	5.2	4.5
22	3.0	3.3	1.7	1.7	2.1	7.6	24	23	2.7	5.9	5.7	4.2
23	3.0	3.3	1.7	1.7	2.1	7.6	25	20	2.7	4.0	6.2	4.2
24	3.0	3.0	1.7	1.7	2.3	7.8	23	20	2.7	4.0	6.5	4.2
25	3.0	3.0	1.7	1.7	2.3	7.8	21	19	2.5	3.8	6.5	4.5
26	2.9	3.0	1.7	1.7	2.5	8.1	22	20	3.5	3.8	5.7	4.5
27	2.9	3.0	1.7	1.7	2.5	8.4	22	20	4.0	3.8	3.5	4.5
28	2.9	3.0	1.7	1.7	2.9	8.4	21	20	5.7	3.8	4.2	2.9
29	2.9	2.7	1.7	1.7	2.9	9.9	20	20	5.7	3.8	4.9	1.9
30	2.9	2.1	1.7	1.7	-	15	18	20	4.5	3.8	4.9	1.9
31	2.9	-	1.7	1.7	-	16	-	20	-	4.7	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	91.5	3.0	2.9	2.95	181
November	89.6	3.3	2.1	2.99	178
December	55.5	2.1	1.7	1.79	110
Calendar year 1939	2,515.7	29	1.5	6.89	4,980
January	52.7	1.7	1.7	1.70	105
February	57.7	2.9	1.7	1.99	114
March	346.4	20	2.9	11.2	687
April	540	25	12	18.0	1,070
May	728	30	17	23.5	1,440
June	260.5	19	2.5	8.68	517
July	145.5	6.5	2.7	4.69	289
August	150.7	6.5	2.9	4.86	299
September	131.3	5.2	1.9	4.38	260
Water year 1939-40	2,649.4	30	1.7	7.24	5,250

San Felipe east side acequia near Domingo, N. Mex.

Location.- Water-stage recorder, lat. 35°31', long. 106°22', in NW¼SE¼ sec. 23, T. 15 N., R. 5 E., at siphon of Santo Domingo east riverside drain, 50 feet downstream from head gate, three-quarters of a mile west of Santo Domingo Pueblo, and 3 miles west of Domingo. Datum of gage is 5,156.94 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 48 second-feet May 5; no flow at times. 1936-40: Maximum daily discharge, 50 second-feet June 24, 25, Aug. 4, 1936; no flow at times.

Remarks.- Records fair April to July; others poor. Acequia diverts water from left bank of Rio Grande for irrigation. Gage-height record for October and result of one discharge measurement furnished by Office of Indian Affairs.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	0	2.36	145
November	-	-	-	-
December 8-31	11	1	5.75	274
Calendar year	-	-	-	-
January	14	0	4.19	257
February	13	0	2.72	157
March	3.4	0	.11	5.7
April	33	0	10.5	626
May	48	.2	15.4	949
June	29	.3	17.1	1,020
July	21	5.1	13.9	856
August	18	0	5.96	367
September	27	0	9.08	540
Water year	-	-	-	-

Jemez Creek near Jemez, N. Mex.

Location.- Water-stage recorder, lat. 35°39', long. 106°44', in SE¼NE¼ sec. 32, T. 17 N., R. 2 E., 700 feet upstream from diversion dam of Jemez west side and Jemez east side ditches, 1 mile downstream from Rio Guadalupe, and 4 miles north of town of Jemez.

Records available.- June 1936 to September 1940.

Extremes.- Maximum discharge during year, 1,980 second-feet July 4 (gage height, 6.98 feet); minimum daily, 13 second-feet Dec. 27.
1936-40: Maximum discharge, 3,000 second-feet Sept. 26, 1936 (gage height, 9.15 feet, from floodmarks), by slope-area method; minimum daily, 12 second-feet July 12, 13, 1939.

Remarks.- Records good except those above 500 second-feet and those for periods of ice effect or doubtful gage-height record, which are fair. Several diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	27	29	30	29	48	235	113	31	32	16	40
2	23	26	31	30	31	43	209	142	31	23	43	30
3	22	24	31	31	30	44	152	140	27	21	65	26
4	22	25	30	29	30	41	142	138	23	122	27	24
5	23	25	31	32	b26	44	147	118	23	d55	17	24
6	23	26	30	29	b18	47	126	107	21	d35	31	26
7	52	26	27	22	b25	43	126	99	17	d27	32	23
8	67	26	30	25	b29	48	120	107	21	d23	25	23
9	61	30	32	31	*b24	56	122	131	21	d20	22	22
10	40	37	32	30	b27	69	126	116	18	d18	17	23
11	36	31	29	29	b29	71	122	101	22	d19	22	26
12	33	27	31	31	31	59	122	101	22	35	23	30
13	31	26	24	26	27	41	135	95	24	d30	21	25
14	33	23	22	b15	30	50	159	91	24	68	20	23
15	32	20	25	b20	32	56	198	89	24	d40	26	22
16	31	21	27	b24	27	62	179	83	24	d30	32	22
17	31	23	27	25	26	74	152	101	24	d25	25	24
18	26	23	27	27	30	80	128	140	24	d25	25	27
19	26	22	26	31	30	91	128	99	15	d23	35	27
20	26	22	22	29	26	87	156	83	15	d20	77	32
21	26	24	23	27	27	107	198	76	18	d18	86	29
22	25	25	*23	27	32	149	204	81	26	d16	117	38
23	25	22	29	*b25	32	229	218	109	37	16	81	43
24	25	25	27	31	31	321	154	87	38	35	61	35
25	27	30	32	30	31	396	159	69	32	45	38	29
26	29	30	25	27	36	392	182	62	27	29	35	25
27	27	30	b13	29	*40	324	193	54	25	25	35	25
28	27	31	24	27	41	281	140	47	117	22	30	24
29	26	33	b24	27	45	212	118	47	48	18	27	37
30	25	32	b26	29	-	201	103	44	43	20	27	31
31	27	-	26	26	-	241	-	36	-	18	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	951	67	22	30.7	1,890
November	792	37	20	26.4	1,570
December	834	32	13	26.9	1,650
Calendar year 1939	24,651	710	12	67.5	48,890
January	851	32	15	27.5	1,690
February	872	45	18	30.1	1,730
March	4,007	396	41	129	7,950
April	4,653	235	103	155	9,230
May	2,906	142	36	93.7	5,760
June	862	117	15	28.7	1,710
July	953	122	16	30.7	1,890
August	1,167	117	16	37.6	2,310
September	835	43	22	27.8	1,660
Water year 1939-40	19,683	396	13	53.8	39,040

Peak discharge.- June 28 (4 p.m.) 1,010 sec.-ft.; July 4 (6 p.m.) 1,980 sec.-ft.; July 14 (7 p.m.) 1,130 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of gage heights, weather records, and records for Jemez east and west side ditches near Jemez and Rio Guadalupe near Jemez Springs.

Jemez Creek at San Ysidro, N. Mex.

Location.- Water-stage recorder upstream from diversion dam of Zia ditch, lat. 35°34', long. 106°45', in sec. 32, T. 16 N., R. 2 E., in San Ysidro grant, a quarter of a mile northeast of San Ysidro and 2½ miles upstream from Rio Salado.

Records available.- May 1937 to September 1940.

Extremes.- Maximum discharge during year, 1,160 second-feet July 4 (gage height, 4.51 feet), from rating curve extended above 500 second-feet on basis of slope-area determinations at gage heights, 4.29 feet, 4.68 feet, and 6.30 feet; minimum daily, 1.5 second-feet July 22.

1937-40: Maximum discharge, 4,100 second-feet July 28, 1939 (gage height, 6.30 feet), by slope-area method; minimum daily, 0.7 second-foot Sept. 25, 1939.

Remarks.- Records poor. Discharge includes flow diverted by Zia ditch. Several diversions for irrigation above and below station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	18	28	33	31	57	250	68	13	42	72	15
2	6.6	15	27	30	35	40	187	72	12	32	45	22
3	7.0	17	25	31	35	40	163	79	13	24	68	11
4	7.2	22	27	30	37	47	138	108	6.7	137	15	9.0
5	9.4	20	27	29	36	47	108	91	4.0	126	7.7	8.2
6	9.0	24	28	26	36	43	114	79	3.2	39	10	7.4
7	39	24	27	25	34	40	132	75	2.8	9.6	14	6.2
8	91	24	27	28	36	40	108	120	a2	5.9	10	6.4
9	75	31	31	32	34	42	91	91	a2	4.5	7.7	6.3
10	43	39	31	33	36	57	132	79	1.8	a4	6.3	5.0
11	38	37	28	31	33	57	132	68	2.3	a4	12	4.5
12	33	28	30	31	36	40	132	72	2.7	a5	13	14
13	27	27	25	32	b34	41	138	65	3.3	31	6.3	5.6
14	26	27	19	29	b32	41	195	50	3.6	40	4.9	5.4
15	25	23	23	30	38	42	212	43	3.4	114	5.3	6.2
16	27	19	25	29	38	54	167	42	3.1	6.4	9.8	5.5
17	29	22	27	30	37	68	146	57	3.1	a6	17	7.7
18	28	23	27	29	38	86	126	91	3.3	a5	5.5	8.0
19	25	23	24	30	37	126	126	61	3.2	a5	4.8	8.0
20	22	22	21	a30	34	146	138	57	3.2	a4	26	15
21	27	25	27	a31	37	195	163	61	4.3	a3	22	24
22	26	26	21	a32	36	280	195	75	4.1	1.5	38	24
23	26	24	28	33	37	320	204	97	4.0	1.6	36	29
24	27	22	27	35	39	331	154	79	4.3	2.1	35	27
25	27	29	27	33	41	364	171	68	4.8	45	33	24
26	26	30	b25	34	42	430	163	61	4.0	5.3	29	22
27	31	29	b22	30	68	353	146	36	3.9	4.9	27	19
28	28	30	24	31	43	290	154	27	79	4.6	19	28
29	19	38	26	33	57	230	108	24	68	55	13	30
30	15	32	20	33	-	195	79	24	68	5.5	8.7	32
31	18	-	22	31	-	230	-	18	-	6.4	6.7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	846.6	91	6.6	27.3	1,680
November	770	39	15	25.7	1,530
December	796	31	19	25.7	1,580
Calendar year 1939	24,269.0	667	.7	66.5	48,150
January	954	35	25	30.8	1,890
February	1,111	68	31	38.3	2,200
March	4,372	430	40	141	8,670
April	4,492	250	79	150	8,910
May	2,038	120	18	65.7	4,040
June	336.1	79	1.8	11.2	667
July	779.3	137	1.5	25.1	1,550
August	627.7	72	4.8	20.2	1,250
September	435.4	32	4.5	14.5	864
Water year 1939-40	17,558.1	430	1.5	48.0	34,830

Peak discharge.- June 28 (6 p.m.) 820 sec.-ft.; July 4 (8:30 p.m.) 1,160 sec.-ft.; July 14 (11 p.m.) 502 sec.-ft.; Aug. 1 (7 p.m.) 490 sec.-ft.

a No gage-height record; discharge computed on basis of records for station near Jemez and intervening diversions.

b Stage-discharge relation affected by ice.

Rio Las Vacas near Cuba, N. Mex.

Location.- Water-stage recorder, lat. 35°58', long. 106°47', in sec. 13, T. 20 N., R. 1 E., 600 feet downstream from Rito Penas Negras and 10 miles southeast of Cuba.

Records available.- December 1938 to September 1940.

Extremes.- Maximum discharge during year, 258 second-feet Apr. 26 (gage height, 1.79 feet); minimum daily, 0.2 second-foot Oct. 5.
1938-40: Maximum discharge, 264 second-feet May 1, 1939 (revised); maximum gage height, that of Apr. 26, 1940; minimum daily discharge, that of Oct. 5, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Several diversions for irrigation above and below station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	1.5	0.8	0.9	1.3	3.1	71	103	14	3.1	7.3	a3.0
2	1.0	1.3	.9	1.0	1.5	4.7	59	116	11	2.1	1.5	a2.5
3	.8	1.2	.9	1.0	1.5	4.3	53	114	e.2	1.7	.9	a2.0
4	.7	1.2	*.9	b.9	b1.4	4.3	51	101	7.7	1.7	.8	1.7
5	.2	1.2	.9	1.0	b1.0	5.4	49	90	6.7	2.1	.6	1.5
6	.5	1.3	.8	b.7	b.7	4.7	46	81	6.7	2.3	1.3	1.2
7	1.0	1.3	.7	b.5	b1.0	5.4	48	74	5.8	1.5	1.3	1.0
8	7.7	1.0	.8	b.3	1.5	5.8	51	76	5.4	1.0	1.0	1.0
9	6.7	2.3	1.2	1.3	b1.0	7.7	59	67	5.0	.9	.7	.8
10	3.1	2.3	.9	1.3	b1.2	8.7	62	59	5.0	.9	.7	.7
11	1.9	1.7	1.0	1.3	b1.4	9.9	64	59	4.7	.7	.6	.9
12	2.1	1.5	.9	1.3	b1.5	b6.0	71	55	4.3	.7	.6	1.9
13	2.1	1.3	.6	b.8	b.6	b4.0	90	55	4.7	1.3	.5	1.0
14	1.9	1.0	.6	b.5	b1.0	b5.0	124	55	5.0	2.3	.4	.7
15	1.7	.9	.6	b.4	1.5	*b6.0	138	55	4.3	1.3	.4	.6
16	1.7	.9	.6	b.7	b1.0	b7.0	107	53	3.7	.9	.4	.6
17	1.7	.8	.6	b1.0	b.7	b9.5	79	96	3.1	.6	.6	.6
18	1.5	.7	.6	b.8	b1.1	b12	67	76	2.6	.6	.4	1.0
19	1.3	.5	.5	b.9	1.5	18	84	53	2.1	.7	.4	1.2
20	1.2	.4	.4	b1.0	b.8	21	124	46	1.9	.7	1.0	1.0
21	1.2	.4	*.4	1.5	b1.0	23	166	38	2.3	.7	2.5	1.9
22	1.0	.4	.6	b1.2	1.3	28	178	61	2.6	.6	7.7	2.1
23	1.0	.4	.5	b.9	1.3	35	149	64	5.0	.7	11	3.1
24	1.0	.4	.6	*1.2	.9	40	114	40	5.4	1.2	4.3	2.9
25	1.2	.6	.6	1.2	b1.0	44	124	35	3.1	.6	6.7	1.9
26	1.7	.8	b.4	1.2	b1.2	51	161	30	2.3	.4	8.2	1.3
27	a1.7	.9	b.3	1.0	b1.4	*62	131	27	2.3	.5	4.0	1.2
28	a1.6	.9	b.4	1.2	*1.7	59	84	23	2.3	.7	2.6	2.9
29	a1.6	1.0	b.6	1.2	1.9	51	69	21	3.7	.7	a1.5	2.8
30	a1.6	1.0	.9	1.3	-	57	69	18	5.0	1.0	a1.0	2.8
31	a1.5	-	.9	1.3	-	69	-	17	-	.8	a1.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	55.1	7.7	0.2	1.78	109
November	31.6	2.8	.4	1.05	63
December	21.4	1.2	.3	.69	42
Calendar year 1939	6,432.8	210	.2	17.6	12,760
January	31.3	1.5	.4	1.01	62
February	34.9	1.9	.6	1.20	69
March	671.5	69	3.1	21.7	1,330
April	2,742	178	46	91.4	5,440
May	1,858	116	17	59.9	3,690
June	145.9	14	1.9	4.86	289
July	35.5	3.1	.4	1.15	70
August	72.4	11	.4	2.34	144
September	47.8	3.1	.6	1.59	95
Water year 1939-40	5,747.4	178	.2	15.7	11,400

* Winter discharge measurement made on this day.
a No gage-height record; discharge for Oct. 27-31 interpolated, and for Aug. 29 to Sept. 3, computed on basis of weather records, recorded range of stage, and records for Rio Guadalupe near Jemez Springs.
b Stage-discharge relation affected by ice.
Note.- Discharge Dec. 28 to Feb. 27 computed on basis of twice-daily gage readings.

Rio Guadalupe near Jemez Springs, N. Mex.

Location.- Water-stage recorder, lat. 35°42', long. 106°46', in Canyon de San Diego grant, 3 miles upstream from mouth and 5½ miles southwest of Jemez Springs, Sandoval County.

Records available.- December 1938 to September 1940.

Extremes.- Maximum discharge during year, 330 second-feet Aug. 22 (gage height, 3.20 feet), from rating curve extended above 155 second-feet by logarithmic plotting; minimum daily, 4.2 second-feet Dec. 27.

1938-40: Maximum discharge, 967 second-feet April 4, 1939 (gage height, 5.14 feet), from rating curve extended above 155 second-feet by logarithmic plotting; minimum daily, that of Dec. 27.

Remarks.- Records good. Diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	10	10	12	10	23	112	92	24	16	8.4	11
2	8.8	9.8	9.8	11	11	20	114	114	22	14	18	12
3	9.3	9.8	10	12	11	20	86	115	19	13	12	11
4	9.3	9.8	9.8	11	11	19	83	112	18	14	8.8	10
5	8.8	9.8	10	12	9.3	19	88	96	16	17	9.3	9.8
6	8.8	9.8	10	11	7.3	21	78	89	16	14	11	9.8
7	10	9.8	9.8	7.7	8.4	20	78	82	15	12	11	8.8
8	20	9.3	10	9.3	10	23	78	80	14	11	9.8	8.8
9	21	10	12	12	7.7	26	86	82	14	11	8.8	8.8
10	16	12	12	11	9.3	33	90	73	14	10	8.4	8.8
11	14	11	11	11	11	35	99	71	14	10	9.3	9.3
12	13	10	12	12	12	29	96	72	14	10	9.8	10
13	12	9.3	10	9.8	7.7	20	109	68	14	11	9.8	9.8
14	11	8.8	9.3	5.8	9.8	23	143	67	14	14	9.3	9.8
15	11	8.4	10	6.1	12	25	185	66	14	13	10	9.3
16	10	8.0	9.8	8.8	11	29	156	62	15	11	8.8	8.8
17	10	8.4	11	9.8	7.7	35	119	75	16	10	8.0	9.3
18	10	8.0	11	8.8	9.8	36	100	103	14	9.8	8.0	11
19	10	7.7	9.8	8.4	12	42	103	67	11	9.8	8.0	11
20	11	8.0	6.9	8.4	9.3	41	135	60	10	8.8	11	11
21	8.8	8.4	8.0	11	8.4	46	160	53	11	7.7	10	10
22	9.3	8.8	8.0	11	12	58	170	58	15	7.7	34	11
23	9.3	8.4	8.4	7.7	12	64	176	78	18	8.4	33	16
24	9.8	8.8	9.3	11	12	72	151	58	21	10	19	12
25	11	9.8	10	11	12	78	124	47	18	13	14	12
26	11	9.8	7.7	10	14	89	146	42	14	9.3	16	11
27	11	9.8	4.2	9.8	17	98	160	39	14	8.4	16	11
28	11	9.8	6.1	8.8	18	119	109	35	19	8.4	12	10
29	11	11	6.5	9.3	21	92	90	33	16	7.7	10	13
30	10	11	8.0	9.3	-	89	79	30	19	8.4	8.4	13
31	11	-	10	8.4	-	106	-	27	-	8.8	9.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	346.5	21	8.8	11.2	687
November	283.3	12	7.7	9.44	562
December	290.4	12	4.2	9.37	576
Calendar year 1939	12,859.8	387	4.2	35.2	25,500
January	305.2	12	5.8	9.85	605
February	323.7	21	7.3	11.2	642
March	1,450.0	119	19	46.8	2,880
April	3,473.0	185	78	116	6,890
May	2,146.0	115	27	69.2	4,260
June	473.0	24	10	15.8	938
July	337.2	17	7.7	10.9	669
August	379.2	34	8.0	12.2	752
September	317.1	16	8.8	10.6	629
Water year 1940	10,124.6	185	4.2	27.7	20,090

Peak discharge.- July 4 (6 p.m.) 39 sec.-ft.; July 14 (7 p.m.) 82 sec.-ft.; Aug. 22 (6 p.m.) 330 sec.-ft.

Diversions from Jemez Creek

Jemez west side ditch near Jemez, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°39', long. 106°44', in NW¼NW¼ sec. 4, T. 16 N., R. 2 E., 3,000 feet downstream from head gate and 3¼ miles north of Jemez.

Records available.- April 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 24 second-feet Apr. 12, 14; no flow at times.
1936-40: Maximum daily discharge, 27 second-feet Apr. 30, 1936; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Jemez Creek for irrigation of Indian lands in the Jemez Pueblo Grant. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	17	0	5.10	314
November	2.2	0	.60	36
December	.7	0	.36	22
Calendar year 1939	25	0	6.93	5,020
January	.2	0	.01	.8
February	0	0	0	0
March	0	0	0	0
April	24	0	15.2	907
May	22	9.7	19.7	1,210
June	23	0	17.0	1,010
July	20	2.8	12.7	778
August	20	7.3	11.9	733
September	21	.3	14.2	847
Water year 1939-40	24	0	8.08	5,860

Jemez east side ditch near Jemez, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°39', long. 106°44', in NE¼NW¼ sec. 4, T. 16 N., R. 2 E., about 4,500 feet downstream from head gate and 3 miles north of Jemez.

Records available.- April 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 11 second-feet Apr. 13, 14; no flow at times.
1936-40: Maximum daily discharge, 13 second-feet Mar. 10, 11, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Jemez Creek for irrigation of Indian lands in Jemez Pueblo Grant. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5.4	0	2.90	179
November	3.0	0	.94	56
December	.1	0	0	.2
Calendar year 1939	11	0	2.87	2,070
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	11	0	6.14	365
May	9.1	2.7	6.12	376
June	9.2	0	5.78	344
July	9.3	0	5.61	345
August	9.2	3.7	6.75	415
September	9.4	.2	6.12	364
Water year 1939-40	11	0	3.37	2,440

Diversions from Jemez Creek

Antonio Pecos ditch at Jemez, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°37', long. 106°44', in SE¼SW¼ sec. 16, T. 16 N., R. 2 E., a third of a mile west of Jemez and about 2,500 feet downstream from head.

Records available.- June 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.9 second-feet May 4; no flow at times.
1936-40: Maximum daily discharge, 10 second-feet Apr. 29, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Jemez Creek for irrigation of Indian lands in Jemez Pueblo Grant. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.0	0	0.81	50
November	1.0	0	.09	5.2
December	1.1	0	.07	4.6
Calendar year 1939	6.4	0	1.10	798
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	5.5	0	2.35	140
May	6.9	1.6	4.00	246
June	3.8	0	1.83	109
July	4.1	0	1.59	98
August	4.5	.1	1.70	105
September	4.8	.1	1.91	114
Water year 1939-40	6.9	0	1.20	872

San Ysidro ditch near San Ysidro, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°35', long. 106°46', in SE¼SE¼ sec. 30, T. 16 N., R. 2 E., 6,000 feet downstream from head and 1½ miles north of San Ysidro.

Records available.- July 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 13 second-feet Sept. 26; no flow at times.
1936-40: Maximum daily discharge, 16 second-feet Apr. 22, 1939; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of Jemez Creek for irrigation of Spanish-American lands. One or two small diversions above gage.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	7.1	0	1.72	106
November	8.2	3.9	5.41	322
December	4.8	0	.94	58
Calendar year 1939	16	0	3.03	2,190
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	9.7	0	2.53	151
May	9.0	.9	5.36	329
June	3.9	.1	2.43	145
July	7.3	0	2.44	150
August	7.6	0	3.56	219
September	13	.1	3.36	200
Water year 1939-40	13	0	2.31	1,680

Diversions from Jemez Creek

Zia ditch near San Ysidro, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°33', long. 106°45', in SE¼SE¼ sec. 1, T. 15 N., R. 1 E., 1 mile south of San Ysidro and about 6,500 feet downstream from head gate.

Records available.- June 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 12 second-feet May 25; no flow at times. 1936-40: Maximum daily discharge, 15 second-feet Aug. 4, 1939; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of Jemez Creek for irrigation of Zia Indian lands. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	0	3.98	245
November	0	0	0	0
December	3.3	0	.20	12
Calendar year 1939	15	0	2.59	1,870
January	0	0	0	0
February	0	0	0	0
March	11	0	1.73	106
April	10	3.4	6.33	377
May	12	0	7.06	434
June	6.1	0	2.18	130
July	9.0	.3	2.88	177
August	10	2.1	6.21	382
September	7	1.9	3.39	202
Water year 1939-40	12	0	2.84	2,060

Rio Puerco at Rio Puerco, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 34°37', long. 107°00', in W½ sec. 31, T. 7 N., R. 1 W., in San Clemente Grant at Atchison, Topeka, and Santa Fe Ry. bridge in hamlet of Rio Puerco, 7 miles downstream from San Jose River.

Drainage area.- 5,160 square miles.

Records available.- September 1910 to October 1911, August 1912 to December 1914 (records fragmentary, gage heights only prior to March 1913), and March 1934 to September 1940 in reports of Geological Survey. January 1913 to December 1925 and September 1926 to December 1927 in reports of State engineer.

Average discharge.- 15 years (1913-17, 1919-20, 1921-24, 1926-27, 1934-40), 105 second-feet.

Extremes.- Maximum discharge during year, 8,830 second-feet Aug. 26 (gage height, 3.80 feet), from rating curve extended above 2,500 second-feet; no flow at times.
1934-40: Maximum discharge, 28,300 second-feet Aug. 21, 1935 (gage height, 7.24 feet), by computation of flow over dam; no flow at times.

Remarks.- Records poor. Diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	2	a0	0	106	0	18		d0	a10	7
2	0	0	2	a0	0	66	a0	8		a0	9	2
3	0	0	0	a0	1	42	a0	5		a0	40	53
4	0	0	1	a0	0	22	0	1		a0	31	80
5	0	0	0	a0	0	22	0	20		a0	18	34
6	0	0	0	a4	0	20	0	31		d10	24	70
7	0	0	0	a2	0	16	0	9		d30	1,000	22
8	248	1	0	a1	0	15	0	9		a10	179	7
9	578	1	0	a1	0	14	0	12		a2	31	1
10	75	1	0	1	0	7	0	24		0	26	0
11	24	2	0	1	1	6	a0	11		0	22	970
12	16	1	0	0	0	1	a0	8		51	41	342
13	9	0	0	0	a0	1	a0	5		267	62	386
14	1	0	0	a0	0	2	0	3		24	31	280
15	0	0	0	a0	0	2	a0	2		11	200	39
16	1	0	0	a0	0	2	a0	2		14	86	15
17	1	0	0	a0	0	a2	0	2		15	58	8
18	0	0	a0	a0	a0	a1	0	1		15	106	4
19	1	0	a0	a0	1	1	1	1		154	70	2
20	1	0	a0	a0	1	1	20	1		39	55	1
21	0	0	a0	a0	2	1	10	6		d10	345	833
22	0	0	a0	a0	4	1	4	5		a6	451	539
23	0	0	a0	a0	7	1	1	31		a10	1,740	528
24	0	0	a0	a0	7	0	16	26		a9	1,400	66
25	0	0	a0	a0	7	0	62	4		a8	1,890	20
26	0	0	a5	a0	5	0	36	2		d35	2,580	15
27	0	0	a2	a0	3	0	22	1		d460	734	39
28	0	0	a1	a0	2	0	15	0		1,260	93	42
29	0	1	a0	a0	36	0	39	0		d1,100	26	24
30	0	9	a0	a0	-	0	24	0		a210	16	336
31	0	-	a0	a0	-	0	-	0		a30	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	955	578	0	30.8	1,890
November	16	9	0	.5	32
December	13	5	0	.4	26
Calendar year 1939	18,968	3,050	0	52.0	37,620
January	10	4	0	.3	20
February	77	36	0	2.7	153
March	352	106	0	11.4	698
April	250	62	0	8.3	496
May	248	31	0	8.0	492
June	0	0	0	0	0
July	3,780	1,260	0	122	7,500
August	11,385	2,580	9	367	22,580
September	4,767	970	0	159	9,460
Water year 1939-40	21,853	2,580	0	59.7	43,350

Peak discharge.- July 28 (2 p.m.) 5,410 sec.-ft.; Aug. 23 (9 p.m.) 8,350 sec.-ft.; Aug. 25 (11 a.m.) 8,050 sec.-ft.; Aug. 26 (7 p.m.) 8,830 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for station near Bernardo.

d Doubtful gage-height record; discharge computed on basis of weather records and records for station near Bernardo.

Bluewater Creek near Bluewater, N. Mex.

Location.- Water-stage recorder, lat. 35°18', long. 108°01', in SW¼ sec. 5, T. 12 N., R. 11 W., 2½ miles northwest of Bluewater and 8 miles downstream from storage reservoir of Bluewater-Toltec irrigation district.

Drainage area.- 235 square miles.

Records available.- May 1912 to December 1914 and October 1930 to September 1940 in reports of Geological Survey. May 1912 to June 1919 and April 1921 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 840 second-feet Aug. 15 (gage height, 6.36 feet); minimum daily, 0.2 second-foot Feb. 28, 29, Mar. 1-3.
1930-40: Maximum discharge, that of Aug. 15, 1940; no flow Mar. 9, 1931, and Feb. 3, 1935.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow regulated by Bluewater-Toltec Reservoir.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	7.1	1.2	bl	1.0	0.2	1.2	4.5	20	7.6	20	18
2	4.3	5.6	1.3	bl	bl	.2	1.4	4.6	22	6.0	21	18
3	4.1	4.0	1.2	.9	bl	.2	1.4	7.4	25	4.6	20	18
4	4.0	2.0	1.2	.8	bl	.3	1.4	8.2	25	4.6	16	20
5	6.3	.9	1.2	.9	b.9	.3	1.6	8.6	24	4.3	6.6	21
6	2.1	.7	1.2	.8	b.9	.3	1.6	8.9	23	10	1.7	20
7	1.2	.7	1.1	.7	b.9	.3	1.6	8.9	21	14	1.9	19
8	1.7	.6	1.0	.9	.8	.3	1.7	16	20	19	1.0	16
9	5.1	.7	1.0	.9	.6	.3	1.7	18	20	20	.8	16
10	9.9	.8	1.0	1.0	.6	.3	1.7	24	20	15	.7	22
11	9.4	.6	1.0	*1.0	.6	.3	1.7	25	19	13	.7	13
12	8.2	.6	1.0	.9	.5	*.3	1.8	20	16	12	2.5	12
13	2.8	.6	1.0	.8	*.5	.4	1.9	17	16	6.9	11	12
14	1.1	.6	1.1	.7	.4	.3	2.0	23	16	9.9	12	11
15	.8	1.6	1.1	.9	.4	.3	2.0	24	13	19	56	14
16	.7	2.4	1.2	b.9	.4	.3	2.2	29	7.6	20	14	12
17	4.0	2.1	.9	b.9	.4	.3	2.3	29	7.6	22	7.6	10
18	15	2.0	.9	b.8	.5	.3	2.1	29	23	10	4.1	6.7
19	1.4	2.2	.9	*b.7	.6	.4	2.0	26	18	11	4.7	5.8
20	.8	2.1	.9	b.7	.5	.4	2.0	20	9.9	11	12	5.1
21	.7	2.0	.9	b.7	.5	.4	2.0	22	9.9	16	12	4.9
22	4.5	1.6	.9	b.7	.5	.5	2.1	25	9.9	16	12	1.8
23	6.1	1.4	.9	b.7	.5	.5	2.2	22	8.4	9.4	9.9	1.2
24	9.6	1.1	.9	b.7	.4	.5	2.3	20	2.2	15	8.9	1.0
25	7.6	1.1	.9	*b.7	.3	.6	2.1	25	1.5	17	2.8	5.5
26	4.0	1.0	.8	b.8	.3	.6	3.7	26	1.4	18	7.8	1.2
27	3.6	1.0	b.8	.9	.3	.8	4.3	28	1.4	16	9.2	.9
28	3.3	1.1	b.9	.9	.2	1.5	4.6	26	4.7	9.2	8.4	.9
29	3.2	*1.3	bl	.7	.2	1.0	4.6	22	12	5.3	8.4	.9
30	3.1	1.3	bl	.8	-	1.0	4.5	21	8.2	4.6	17	.9
31	4.5	-	bl	.8	-	1.1	-	19	-	16	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	142.7	15	0.7	4.60	283
November	50.8	7.1	.8	1.69	101
December	31.4	1.3	.8	1.01	62
Calendar year 1939	4,626.3	66	.5	12.7	9,170
January	25.6	1.0	.7	.83	51
February	16.7	1.0	.2	.58	33
March	14.5	1.5	.2	.47	29
April	67.7	4.6	1.2	2.26	134
May	607.1	29	4.5	19.6	1,200
June	425.7	25	1.4	14.2	844
July	382.4	22	4.3	12.3	758
August	328.7	56	.7	10.6	652
September	308.8	22	.9	10.3	612
Water year 1939-40	2,402.1	56	.2	6.56	4,760

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

San Jose River near Grants, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°04', long. 107°44'; in SE¼SE¼ sec. 23, T. 10 N., R. 9 W., at west boundary of Acoma Indian Reservation, 8½ miles southeast of Grants.

Records available.- June 1936 to September 1940.

Extremes.- Maximum discharge during year, 340 second-feet Sept. 21 (gage height, 2.77 feet); minimum daily, 4.0 second-feet Apr. 6.
1936-40: Maximum discharge, that of Sept. 21, 1940; minimum daily, 4.0 second-feet Apr. 17-21, 1937, Jan. 2-6, 1939 and Apr. 6, 1940.
Revisions.- The figures of maximum discharge for previous water years have been revised, as shown in the following table. They supersede those published in the water-supply papers indicated.

Water-Supply Paper	Water year	Date	Gage height (feet)	Discharge (second-feet)
808	1936	Aug. 5	1.82	116
828	1937	Sept.29	2.48	245
858	1938	Sept.16	2.02	145
878	1939	Sept.12	2.46	240

Remarks.- Records good except those for period of no gage-height record, which are fair. Diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct..	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	5.5	a6.0	6.4	9.0	6.1	4.7	4.7	5.5	6.1	6.1	5.2
2	5.2	5.5	a6.0	7.3	12	6.1	4.4	5.0	5.8	5.8	5.5	5.2
3	5.5	5.5	a6.1	7.9	12	6.1	4.4	4.7	5.5	5.8	5.5	5.2
4	5.5	5.5	a6.1	6.7	11	6.4	4.2	4.7	6.1	5.8	5.2	5.2
5	5.5	5.5	6.1	9.0	9.0	6.4	4.2	4.7	6.4	5.8	5.2	5.2
6	5.5	5.5	6.1	7.3	8.6	6.1	4.0	4.7	6.1	5.8	5.5	5.5
7	5.8	5.5	6.4	7.0	8.6	6.4	4.2	4.7	6.1	5.8	5.2	5.5
8	5.8	5.5	6.7	8.2	7.0	6.7	4.2	4.7	6.4	5.5	7.3	5.5
9	5.8	5.8	6.7	7.9	7.0	6.4	4.2	4.7	6.4	5.5	6.1	5.5
10	5.8	5.8	6.7	7.6	7.3	6.4	4.4	4.7	6.1	5.5	5.8	5.5
11	5.8	5.8	5.8	7.9	8.2	6.4	4.4	4.7	6.4	5.5	5.8	5.5
12	5.5	5.5	5.8	7.6	7.6	5.8	4.4	4.7	6.4	5.8	5.8	5.8
13	5.5	5.5	6.1	7.3	7.0	5.8	4.4	4.7	6.7	5.8	5.8	5.8
14	5.2	5.5	6.1	6.1	7.3	5.8	4.4	4.7	6.7	5.8	11	5.8
15	5.2	5.5	5.5	6.4	7.6	5.0	4.7	4.7	6.7	5.8	5.8	5.8
16	5.2	a5.5	5.2	6.4	7.3	5.0	4.7	4.7	6.7	5.5	5.5	5.5
17	5.0	a5.5	5.2	6.7	7.0	5.5	4.7	4.7	6.7	5.0	9.5	5.8
18	5.0	a5.6	5.5	6.4	7.0	5.0	4.4	4.7	7.0	5.0	10	5.8
19	5.0	a5.6	5.5	6.1	6.7	5.0	4.4	5.0	7.0	5.0	20	6.1
20	5.0	a5.6	5.0	5.8	6.4	5.0	4.4	5.0	7.3	4.7	6.7	17
21	5.0	a5.7	5.0	6.7	6.4	5.0	4.2	5.0	7.3	4.7	6.4	92
22	5.0	a5.7	5.0	7.0	6.4	5.0	4.2	5.0	7.6	4.4	5.5	8.2
23	5.0	a5.7	5.2	6.7	6.7	4.7	4.2	5.2	7.6	4.4	7.0	5.5
24	5.2	a5.8	5.5	7.3	6.4	4.7	4.2	5.0	7.3	4.2	11	5.5
25	5.0	a5.8	5.8	9.0	6.7	4.7	4.4	5.2	7.3	4.7	7.6	6.1
26	5.2	a5.8	5.8	9.0	6.7	4.7	4.4	5.2	7.3	14	7.0	23
27	5.2	a5.9	5.2	9.8	6.7	4.7	4.4	5.2	6.7	29	5.8	10
28	5.2	a5.9	5.5	9.0	6.1	5.5	4.4	5.2	6.4	9.0	5.5	8.2
29	5.2	a5.9	5.5	9.0	5.8	5.8	4.4	5.2	6.4	14	5.2	6.4
30	5.2	a6.0	5.2	8.6	-	5.5	4.4	5.5	6.4	7.3	5.2	5.8
31	5.5	-	5.8	8.2	-	5.0	-	5.2	-	7.3	5.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	164.7	5.8	5.0	5.31	327
November	169.4	6.0	5.5	5.65	336
December	178.1	6.7	5.0	5.75	353
Calendar year 1939	2,111.9	95	4.0	5.79	4,190
January	232.3	9.8	5.8	7.49	461
February	221.5	12	5.8	7.64	439
March	172.7	6.7	4.7	5.57	343
April	131.0	4.7	4.0	4.37	260
May	151.8	5.5	4.7	4.90	301
June	198.3	7.6	5.5	6.61	393
July	214.3	29	4.2	6.91	425
August	217.7	20	5.2	7.02	432
September	293.1	92	5.2	9.77	581
Water year 1939-40	2,344.9	92	4.0	6.41	4,650

Peak discharge.- July 26 (8 p.m.) 140 sec.-ft.; Aug. 14 (9 p.m.) 168 sec.-ft.; Aug. 19 (5 p.m.) 127 sec.-ft.; Sept. 21 (1 a.m.) 340 sec.-ft.
a No gage-height record; discharge interpolated.

San Jose River near San Fidel, N. Mex.

Location.- Water-stage recorder and concrete control with angle-iron crest, lat. 35°04', long. 107°40', near quarter corner between secs. 27 and 28, T. 10 N., R. 8 W., at McCartys, 500 feet downstream from Atchison, Topeka & Santa Fe Ry. bridge and 4½ miles west of San Fidel.

Records available.- June 1936 to September 1940.

Extremes.- Maximum discharge during year, 307 second-feet July 27 (gage height, 5.88 feet); minimum daily, 0.7 second-foot Dec. 16-24.
1936-40: Maximum discharge, that of July 27, 1940; minimum daily, 0.5 second-foot Mar. 25, 26, 1937.

Remarks.- Records good except those for period of no gage-height record, which are poor. Several diversions above and below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	5.9	0.8	1.1	11	9.3	4.1	3.9	2.5	2.5	5.2	3.7
2	4.3	5.9	.8	.8	13	9.0	4.3	3.4	2.5	3.1	4.6	3.3
3	4.8	4.6	.8	.8	13	9.0	2.6	3.2	1.5	2.9	4.3	2.3
4	4.4	4.6	.8	1.2	14	9.3	2.1	3.4	2.0	3.6	3.9	2.5
5	4.6	4.3	.8	4.1	12	9.6	1.8	3.1	2.3	2.9	3.2	3.4
6	4.7	4.0	.8	3.7	9.9	9.9	3.2	2.3	1.9	2.9	3.2	3.7
7	5.2	2.8	1.1	3.4	11	9.9	5.7	2.3	1.9	1.4	3.1	2.9
8	3.2	1.3	.8	4.1	9.3	10	3.6	2.3	1.8	1.5	3.9	2.6
9	3.3	1.8	.8	2.9	9.3	7.8	2.7	2.9	1.4	1.8	3.1	3.1
10	4.1	1.9	.8	2.7	9.9	6.9	2.9	1.8	1.5	1.9	5.4	2.7
11	4.4	1.6	.8	4.0	11	8.0	2.8	2.2	1.6	1.2	4.9	3.2
12	4.6	1.2	.8	10	11	8.0	3.3	2.3	1.9	2.6	5.4	3.4
13	4.4	1.2	.8	9.3	9.0	6.9	2.9	1.7	1.9	1.1	3.7	2.2
14	4.4	1.2	.8	7.3	9.9	5.4	3.9	2.1	1.9	1.8	1.6	2.1
15	4.4	1.2	.8	7.3	11	4.3	4.9	1.6	1.5	2.9	3.4	2.5
16	4.6	1.6	.7	8.0	9.9	4.0	4.3	2.1	2.3	3.4	2.1	2.8
17	4.7	1.0	.7	7.8	9.6	4.0	4.0	2.5	2.1	2.8	1.8	3.9
18	4.1	.9	.7	8.2	9.9	4.4	2.9	2.8	2.0	1.8	4.0	4.3
19	4.0	.8	.7	7.3	9.6	5.7	3.6	3.1	2.0	1.4	3.4	4.7
20	3.7	.8	.7	6.4	9.0	6.2	3.2	2.7	2.1	2.6	7.1	6.6
21	3.6	.8	.7	6.9	9.0	6.1	3.6	2.5	1.8	1.9	3.2	76
22	3.7	.8	.7	7.6	9.9	4.9	3.1	3.9	2.1	2.1	5.7	33
23	3.9	.8	.7	7.6	10	3.3	1.6	3.7	2.8	1.5	3.9	a10
24	3.9	.8	.7	7.8	9.6	3.7	1.8	3.9	4.7	1.6	7.1	a20
25	5.2	.9	1.2	8.2	10	3.2	2.1	3.9	6.1	1.5	6.9	a25
26	6.1	.9	1.2	8.7	10	6.1	2.1	3.6	6.4	11	5.4	16
27	5.9	.8	1.2	9.9	9.9	5.7	1.7	2.1	1.8	100	4.6	9.6
28	5.4	.8	1.2	10	9.6	4.6	1.8	2.3	2.7	19	4.0	9.6
29	5.4	1.0	1.3	10	8.7	3.9	3.1	2.7	3.2	7.6	2.7	8.5
30	5.4	.8	1.2	10	-	3.7	4.6	2.3	3.2	6.9	2.0	8.0
31	4.7	-	1.2	10	-	3.7	-	1.8	-	5.0	2.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	139.6	6.1	3.2	4.50	277
November	57.0	5.9	.8	1.90	113
December	27.1	1.3	.7	.87	54
Calendar year 1939	1,674.1	64	.7	4.59	3,320
January	197.1	10	.8	6.36	391
February	299.0	14	8.7	10.3	593
March	196.6	10	3.2	6.34	390
April	94.3	5.7	1.6	3.14	187
May	84.4	3.9	1.6	2.72	167
June	73.4	6.4	1.4	2.45	146
July	204.1	100	1.1	6.58	405
August	125.4	7.1	1.6	4.05	249
September	281.6	76	2.1	9.39	559
Water year 1939-40	1,779.5	100	.7	4.86	3,530

Peak discharge.- July 27 (2 a.m.) 307 sec.-ft.; Sept. 21 (12 m.) 112 sec.-ft.; Sept. 26 (3 p.m.) 31 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for stations near Grants and near Casa Blanca.

San Jose River near Casa Blanca, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°02', long. 107°27', in NW¼NE¼ sec. 3, T. 9 N., R. 6 W., 400 feet downstream from head of New Laguna ditch, 1 mile upstream from Encinal Creek, 1½ miles east of Casa Blanca, and 2 miles upstream from New Laguna Reservoir. Datum of gage is 5,586.1 feet above mean sea level (Atchison, Topeka & Santa Fe Ry. bench mark).

Records available.- June 1936 to September 1940.

Extremes.- Maximum discharge during year, 1,180 second-feet Sept. 21 (gage height, 5.30 feet), by slope-area method; no flow at times.

1936-40: Maximum discharge, 1,330 second-feet (revised) July 26, 1937 (gage height, 5.60 feet, from floodmarks in gage well), from rating curve extended above 420 second-feet on basis of slope-area determination at gage height 5.30 feet; no flow at times.

Revisions.- The figures of maximum discharge for previous water years have been revised, as shown in the following table. They supersede those published in the water-supply papers indicated.

Water-Supply Paper	Water year	Date	Gage height (feet)	Discharge (second-feet)
808	1936	July 10	5.09	1,080
828	1937	July 26	5.60	1,330
858	1938	July 23	5.5	1,280
878	1939	Sept.14	5.14	1,100

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Diversions above and below station for irrigation. Records do not include flow by-passed station in New Laguna ditch wasteway. See records for New Laguna ditch wasteway near Casa Blanca.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	3.5	0.6	0.3	9.6	9.3			0	0	a0	a0
2	.2	3.3	.3	4.1	15	9.4			0	0	a0	a0
3	.1	2.8	.2	3.4	13	8.7			0	0	a0	a0
4	.1	2.4	.2	.4	12	9.S			0	0	a0	a0
5	.1	2.0	.1	.1	11	9.S			0	0	a0	a.2
6	.2	3.4	.2	1.S	S.8	8.7			0	0	96	7.0
7	14	3.6	.2	1.1	9.4	8.7			0	0	a0	0
8	37	2.2	.4	2.3	9.9	7.1			0	0	a0	0
9	.5	.7	.4	1.0	S.1	3.5			0	0	a0	0
10	.4	.2	.2	0	S.6	3.7			0	0	a0	65
11	.3	.2	.3	0	a9	2.9			0	0	176	30
12	.2	.7	1.1	1.9	a9	3.2			0	0	77	a15
13	.2	.3	.2	4.2	a10	2.5			0	0	a2	aS
14	.2	.1	.1	.6	a10	1.4			0	0	a0	a10
15	.2	.3	0	1.6	11	.8			0	0	78	a5
16	.2	.2	.1	2.7	10	.5			0	0	37	a2
17	.2	.6	.1	2.9	9.2	.1			0	0	8.4	a2
18	.2	.3	.1	1.7	9.4	0			0	0	a0	a2
19	.2	.2	.1	.4	9.1	0			0	0	a0	a2
20	.2	.1	.1	2.4	8.6	0			0	0	a0	a5
21	.2	.1	.1	3.0	8.5	0			0	0	a0	300
22	.1	.1	0	1.3	10	0			0	0	a0	a75
23	0	.1	0	1.5	11	0			0	0	a0	a5
24	0	.1	0	3.3	10	0			0	0	22	a5
25	0	.7	0	2.5	10	0			0	0	29	36
26	.3	.4	0	3.1	9.S	0			0	33	7.0	32
27	1.S	0	0	3.5	9.5	0			0	234	a0	13
28	3.1	.2	0	2.4	9.3	0			0	62	a0	7.1
29	3.0	.9	.1	6.3	8.8	0			4.6	25	a0	9.6
30	3.2	1.4	.1	9.3	-	0			8.0	37	a0	8.6
31	2.7	-	.2	9.0	-	0			-	a1	a0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	69.2	37	0	2.23	137
November	31.1	3.6	0	1.04	62
December	5.5	1.1	0	.18	11
Calendar year 1939	1,351.1	186	0	3.70	2,680
January	78.1	9.3	0	2.52	155
February	287.6	15	S.1	9.92	570
March	90.1	9.S	0	2.91	179
April	0	0	0	0	0
May	0	0	0	0	0
June	12.6	8.0	0	.42	25
July	392	234	0	12.6	778
August	532.4	176	0	17.2	1,060
September	644.5	300	0	21.5	1,280
Water year 1939-40	2,143.1	300	0	5.86	4,260

Peak discharge.- Aug. 11 (9 p.m.) 1,130 sec.-ft.; Sept. 10 (9 p.m.) 697 sec.-ft.; Sept. 21 (S p.m.) 1,180 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for New Laguna ditch near New Laguna and New Laguna ditch wasteway near Casa Blanca.

San Jose River near Laguna, N. Mex.

Location.- Water-stage recorder upstream from diversion dam of Mesita ditch, lat. 35°01', long. 107°19', in sec. 12, T. 9 N., R. 5 W., 3½ miles east of Laguna and 4 miles downstream from Cebolleta Creek.

Records available.- February 1937 to September 1940.

Extremes.- Maximum discharge during year, 1,350 second-feet Sept. 22 (gage height, 4.05 feet), by computation of flow over dam; no flow at times.
1937-40: Maximum discharge, 3,400 second-feet Aug. 1, 1937 (gage height, 5.50 feet), by computation of flow over dam; no flow at times.

Remarks.- Records poor. Discharge includes flow diverted by Mesita ditch just below station. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	4.0	1.9	5.7	2.4	10	2.5	2.8	1.6	a0.4	1.8	0.3
2	2.4	3.3	1.8	5.1	3.9	11	2.8	2.4	1.8	0	.8	.3
3	2.2	2.4	1.9	*2.3	4.2	7.8	2.8	a2.4	2.0	0	.4	.3
4	2.0	2.0	1.7	1.1	1.5	11	3.0	a1.1	2.1	0	.4	.3
5	2.0	1.7	1.2	2.5	2.8	12	3.0	a1.7	2.4	0	.3	0
6	3.3	2.7	*1.1	1.4	.8	12	3.9	a2.5	8.6	0	12	7.2
7	4.0	1.8	1.1	1.2	1.0	11	3.3	2.2	2.6	0	18	5.5
8	7.2	5.5	1.4	1.2	1.2	9.1	3.1	.3	2.2	0	5.1	1.9
9	4.2	5.5	1.1	1.6	1.3	8.6	2.8	.2	2.0	0	1.1	1.1
10	4.5	2.7	1.4	1.8	1.0	7.6	2.1	.1	2.1	0	.1	1.2
11	4.8	2.2	1.0	1.4	1.6	*4.0	1.8	0	2.3	1.0	0	13
12	4.0	1.5	1.0	1.2	.8	5.7	2.0	0	2.4	1.1	49	22
13	3.5	1.5	.8	1.0	1.0	11	2.3	0	3.9	0	5.8	1.4
14	2.7	a1.4	1.2	.3	*2.6	2.8	2.1	0	8.8	0	4.2	2.5
15	3.3	a1.3	1.2	.8	9.7	1.9	.6	0	4.7	0	3.8	4.3
16	4.2	*1.2	1.1	.5	15	1.7	.3	0	.2	0	4.9	4.5
17	4.2	1.1	1.0	.5	11	1.4	.7	.5	.2	0	3.9	4.6
18	2.9	1.1	1.0	1.0	11	1.1	.6	.4	0	.1	9.3	5.1
19	1.7	1.0	.8	.5	11	.7	.4	.6	0	.2	2.5	4.5
20	1.7	1.0	.8	1.0	8.3	.6	.2	.2	0	0	1.1	4.0
21	2.0	1.0	.9	1.7	8.1	.4	.3	0	0	0	1.7	19
22	2.7	1.0	.9	2.3	12	.4	3.8	6.9	0	0	.5	411
23	2.9	1.0	1.3	1.6	15	.4	6.0	4.0	0	0	.4	268
24	2.7	1.1	1.1	2.1	15	.8	4.3	.3	0	0	5.2	61
25	2.9	3.3	1.2	2.3	14	.7	3.6	.2	0	0	14	50
26	3.3	2.0	1.5	*2.7	14	2.9	2.8	0	0	0	15	103
27	2.4	1.3	1.5	1.6	14	3.0	3.0	0	0	3.2	6.8	64
28	1.7	1.4	1.6	1.5	10	6.2	2.9	0	.6	24	2.0	16
29	1.6	5.6	1.4	1.3	9.1	2.7	2.8	0	3.1	8.1	.7	19
30	2.4	4.2	1.7	1.4	-	2.7	2.8	0	1.1	5.3	.3	39
31	5.1	-	2.9	1.3	-	2.8	-	.4	-	6.2	.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	96.9	7.2	1.6	3.13	192
November	66.8	5.6	1.0	2.23	132
December	40.5	2.9	.8	1.31	80
Calendar year 1939	2,567.7	632	0	7.03	5,090
January	51.9	5.7	.3	1.67	103
February	203.3	15	.8	7.01	403
March	154.0	12	.4	4.97	305
April	72.6	6.0	.2	2.42	144
May	29.2	6.9	0	.94	58
June	54.7	8.8	0	1.82	108
July	49.6	24	0	1.60	98
August	171.4	49	0	5.53	340
September	1,134.0	411	0	37.8	2,250
Water year 1939-40	2,124.9	411	0	5.81	4,210

Peak discharge.- Aug. 12 (5 a.m.) 853 sec.-ft.; Sept. 12 (8 p.m.) 715 sec.-ft.; Sept. 22 (3 a.m.) 1,350 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of records for Mesita ditch near Laguna.

Note.- Stage-discharge relation affected by ice on parts of many days during period Nov. 16 to Mar. 7.

Acomita Reservoir outlet near San Fidel, N. Mex.

Location.- Water-stage recorder and wooden control, lat. 35°04', long. 107°36', in sec. 29, T. 10 N., R. 7 W., 500 feet downstream from Acomita Reservoir and 1¼ miles southeast of San Fidel.

Records available.- June 1938 to September 1940.

Extremes.- Maximum daily discharge during year, 4.4 second-feet Aug. 4, 5; no flow at times.
1938-40: Maximum daily discharge, that of Aug. 4, 5, 1940; no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are fair. Records represent flow released from Acomita Reservoir for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.7	0.04	0.08	0.11	0.12	0.14	2.1	1.6	1.0	0	2.5
2	.7	.01	.04	.09	.15	.12	.14	2.1	1.6	2.8	0	2.5
3	.5	0	.05	.09	.12	.13	.14	2.1	1.6	3.0	3.0	2.5
4	.4	0	.05	.09	.11	.13	.14	2.1	1.5	3.0	4.4	2.8
5	.3	0	.05	.11	.09	.13	.14	2.1	1.8	3.0	4.4	3.0
6	.6	0	.05	.09	.11	.13	.15	2.1	2.2	2.9	2.8	2.6
7	.6	0	.05	.09	.12	.13	.15	2.1	2.8	2.8	0	2.6
8	.8	0	.05	.11	.11	.13	.15	2.8	3.0	2.8	1.0	2.6
9	.9	.01	.05	.11	.11	.13	.15	3.0	2.9	2.8	2.2	2.5
10	1.1	.01	.05	.09	.09	.13	.15	3.0	2.8	2.8	2.2	2.5
11	1.1	.01	.06	.09	.11	.13	.15	2.4	2.8	2.8	2.4	2.5
12	1.2	.01	.06	.11	.09	.13	.17	2.1	2.6	2.8	2.6	2.7
13	1.4	.02	.06	.11	.09	.13	1.5	2.0	2.9	2.7	2.7	2.6
14	1.5	.02	.05	.11	.11	.14	1.9	2.0	3.1	2.6	2.6	2.4
15	1.5	.02	.05	.11	.12	.14	2.0	2.1	2.8	3.5	2.4	2.3
16	1.5	.02	.06	.11	.12	.14	2.1	2.4	2.5	4.2	2.3	2.1
17	1.8	.02	.06	.11	.12	.14	2.8	2.0	2.3	3.2	2.4	1.9
18	2.0	.02	.06	.11	.12	.13	2.8	1.6	2.1	2.5	2.3	1.7
19	2.0	.02	.06	.09	.07	.13	2.8	1.6	2.5	2.4	2.3	1.4
20	2.2	.02	.06	.11	.01	.13	2.8	1.6	2.8	2.4	2.4	1.3
21	2.2	.02	.06	.11	.10	.13	1.9	1.6	2.8	2.4	2.4	1.1
22	2.2	.02	.07	.11	a.1	.18	2.0	2.3	2.0	3.4	2.3	2.4
23	2.2	.02	.07	.09	a.1	.19	1.8	2.1	1.5	4.2	2.3	2.3
24	2.2	.02	.07	.11	a.1	.19	2.0	2.1	1.6	3.1	2.3	2.3
25	2.2	.02	.08	.11	a.1	.17	2.1	2.1	1.6	2.4	2.3	2.1
26	2.2	.02	.08	.11	a.1	.14	2.1	1.6	2.8	2.6	2.4	1.9
27	2.2	.03	.08	.09	a.1	.17	2.1	1.6	3.3	1.6	2.4	1.6
28	2.0	.05	.08	.09	a.1	.14	2.1	1.6	2.8	.02	2.4	.5
29	2.0	.05	.08	.09	a.1	.14	2.1	1.6	2.4	.03	2.4	.03
30	1.9	.04	.08	.11	-	.14	2.1	1.6	.9	.03	2.4	.02
31	1.9	-	.09	.09	-	.14	-	1.6	-	.01	2.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	46.0	2.2	0.3	1.48	91
November	1.18	.7	0	.04	2.3
December	1.90	.09	.04	.06	3.8
Calendar year 1939	241.50	3.2	0	.66	479
January	3.12	.11	.08	.10	6.2
February	2.98	.15	.01	.10	5.9
March	4.35	.19	.12	.14	8.6
April	40.77	2.8	.14	1.36	81
May	63.1	3.0	1.6	2.04	125
June	69.9	3.3	.9	2.33	139
July	75.79	4.2	.01	2.44	150
August	70.5	4.4	0	2.27	140
September	61.25	3.0	.02	2.04	121
Water year 1939-40	440.84	4.4	0	1.20	874

a No gage-height record; discharge computed on basis of knowledge of local conditions.

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Encinal Creek near Casa Blanca, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°08', long. 107°28', in sec. 34, T. 11 N., R. 6 W., 150 feet upstream from diversion dam for Encinal Pueblo ditches, 1⅛ miles north of Encinal Pueblo, and 6½ miles north of Casa Blanca.

Records available.- January 1937 to January 1940 (discontinued).

Extremes.- Maximum discharge during period, 39 second-feet Oct. 7 (gage height, 2.69 feet), from rating curve extended above 1 second-foot on basis of slope-area determination at 93 second-feet; no flow Oct. 1 and 2.
1937-40: Maximum discharge, 215 second-feet Sept. 4, 1938 (gage height, 5.0 feet), from rating curve extended above 1 second-foot on basis of slope-area determination at 93 second-feet; no flow at times.

Remarks.- Records poor. One diversion above station and one below for irrigation of Indian land.

Discharge, in second-feet, October 1939 to January 1940

Day	Oct.	Nov.	Dec.	Jan.	Day	Oct.	Nov.	Dec.	Jan.
1	0	-	0.2	0.4	16	-	0.1	0.1	-
2	0	-	.2	.3	17	-	.1	.1	-
3	-	0.1	.2	-	18	-	.1	.1	-
4	-	.1	.2	-	19	-	.1	.1	-
5	-	.1	.2	-	20	-	.1	.1	-
6	-	.1	.2	-	21	-	.1	.1	-
7	.8	.1	.2	-	22	-	.1	.1	-
8	-	.2	.2	-	23	-	.1	.1	-
9	-	.2	.2	-	24	-	.1	-	-
10	-	.2	.2	-	25	-	.1	-	-
11	-	.2	.2	-	26	0.1	.1	-	-
12	-	.2	.2	-	27	.1	.1	.1	-
13	-	.1	.2	-	28	-	.1	.2	-
14	-	.1	.2	-	29	-	.2	.2	-
15	-	.1	.2	-	30	-	.2	.3	-
					31	-	-	.4	-

Note.- No gage-height record Oct. 8-10; discharge computed on basis of estimated gage heights and weather records. Discharge less than 0.1 second-foot for days for which no figure is given.

Monthly discharge, in second-feet, 1939

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.13	0.8	0	0.07	4.2
November	3.65	.2	-	.12	7.2
December	5.24	.4	-	.17	10
Calendar year 1939	56.00	3.0	0	.15	110

Paguate Reservoir outlet near Laguna, N. Mex.

Location.- Water-stage recorder and 1.5-foot Cipoletti weir, lat. 35°04', long. 107°19', in NW¼ sec. 25, T. 10 N., R. 5 W., 600 feet downstream from Paguate Dam and 4 miles northeast of Laguna.

Records available.- February to September 1940.

Extremes.- Maximum daily discharge during period, 5.5 second-feet May 6; no flow for long periods.

Remarks.- Records good. Records show flow released from Paguate Reservoir for irrigation.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February 15-29	0	0	0	0
March	2.0	0	.38	23
April	2.6	0	1.54	92
May	2.6	0	.55	34
June	5.5	0	1.49	88
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The period	-	-	-	237

Paquate Creek near Laguna, N. Mex.

Location.- Water-stage recorder, lat. 35°09', long. 107°25', in sec. 30, T. 11 N., R. 5 W., 300 feet upstream from upper diversion dam, 3 miles northwest of Paguate Pueblo, 5 miles upstream from mouth, and 8½ miles northwest of Laguna.

Records available.- February 1937 to September 1940.

Extremes.- Maximum discharge during year, 56 second-feet Oct. 7 (gage height, 2.55 feet), from rating curve extended above 20 second-feet on basis of slope-area determination at gage height 2.66 feet; minimum daily, 0.3 second-foot June 19, July 9-16.
1937-40: Maximum gage height, 4.28 feet Aug. 1, 1937 (discharge not determined); minimum daily discharge, 0.2 second-foot several days in June and July 1937, Aug. 20, 1938.

Remarks.- Records fair. No diversion above station; several below.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.1	1.3	1.1	1.4	1.3	1.3	1.0	0.6	0.5	0.6	0.6
2	.6	1.1	1.3	1.2	1.8	1.2	1.3	1.0	.6	.5	.5	.6
3	.6	1.1	1.3	1.2	1.4	1.1	1.3	1.0	.5	.5	.5	.5
4	.6	1.0	1.3	1.1	1.4	1.2	1.3	1.0	.5	.5	.4	.5
5	.6	1.0	1.3	1.2	1.3	1.2	1.3	1.0	.5	.5	.4	.5
6	.6	1.1	1.3	1.1	1.2	1.1	1.3	1.0	.5	.4	1.0	.6
7	2.4	1.1	1.3	1.0	1.3	1.1	1.2	1.0	.5	.4	1.8	.5
8	.9	1.1	1.3	1.2	1.2	1.1	1.2	1.0	.5	.4	1.0	.5
9	.8	1.1	1.3	1.2	1.1	1.1	1.2	1.0	.4	.3	.8	.5
10	.8	1.0	1.3	1.2	1.2	1.1	1.2	1.0	.5	.3	.6	.6
11	.8	1.0	1.3	1.2	1.2	1.1	1.2	1.0	.5	.3	.6	.7
12	.8	1.0	1.2	1.2	1.2	1.1	1.2	1.0	.5	.3	.9	.6
13	.8	1.0	1.2	1.0	1.0	1.0	1.2	.9	.5	.3	.9	.6
14	.8	1.0	1.2	.9	1.1	1.1	1.1	.9	.5	.3	.8	1.2
15	.8	1.0	1.2	1.0	1.2	1.1	1.1	.8	.4	.3	.7	.9
16	.7	1.0	1.2	1.2	1.2	1.2	1.1	.8	.4	.3	.8	.5
17	.7	1.0	1.2	1.3	1.1	1.2	1.1	.9	.4	.4	.7	.7
18	.7	1.0	1.2	1.0	1.1	1.2	1.1	.9	.4	.4	.8	.7
19	.7	1.0	1.3	.9	1.1	1.2	1.0	.9	.3	4.0	.8	.6
20	.8	1.0	1.3	1.3	1.0	1.2	1.0	.8	.4	1.4	1.1	1.8
21	.8	1.1	1.3	1.3	1.0	1.2	1.0	.8	.4	.5	.8	3.3
22	.8	1.1	1.3	1.2	1.1	1.2	1.0	1.3	.4	.4	.7	5.8
23	.8	1.1	1.3	1.2	1.4	1.2	1.2	1.1	.4	.4	.7	2.2
24	.8	1.1	1.3	1.2	2.1	1.2	1.0	1.0	.4	.4	1.1	.8
25	.9	1.4	1.3	1.2	5.0	1.2	1.0	.9	.4	.5	.9	.8
26	.9	1.3	1.0	1.2	5.8	1.2	1.0	.8	.4	1.5	.8	1.0
27	1.0	1.3	.7	1.2	2.6	1.3	1.1	.8	.4	4.3	.7	1.0
28	1.0	1.3	.9	1.3	1.8	1.4	1.1	.8	.4	1.8	.6	1.6
29	1.0	1.4	1.0	1.2	1.6	1.3	1.1	.7	.8	1.1	.6	.8
30	1.1	1.3	1.2	1.2	-	1.3	1.0	.7	.7	.9	.5	.8
31	1.1	-	1.2	1.3	-	1.3	-	.6	-	.8	.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	26.3	2.4	0.6	0.85	52
November	33.1	1.4	1.0	1.10	66
December	37.8	1.3	.7	1.22	75
Calendar year 1939	386.2	13	.4	1.06	765
January	36.0	1.3	.9	1.16	71
February	46.9	5.8	1.0	1.62	93
March	36.7	1.4	1.0	1.18	73
April	34.2	1.3	1.0	1.14	68
May	28.4	1.3	.6	.92	56
June	14.1	.8	.3	.47	28
July	24.9	4.3	.3	.80	49
August	23.6	1.8	.4	.76	47
September	31.8	5.8	.5	1.06	63
Water year 1939-40	373.8	5.8	.3	1.02	741

Peak discharge.- Oct. 7 (4 p.m.) 56 sec.-ft.; July 19 (8 p.m.) 34 sec.-ft.; July 27 (5 p.m.) 34 sec-ft.; Sept. 22 (7 p.m.) 39 sec.-ft.

Diversions from San Jose River

McCartys south side ditch nsar San Fidel, N. Mex.

Location.- Water-stags recorder and corrugatsd pipe control, lat. 35°04', long. 107°43', in SW¼ sec. 29, T. 10 N., R. 8 W., 7½ miles southwest of San Fidel.

Records available.- February to September 1940.

Extremes.- Maximum daily discharge during period, 7.4 second-feet Mar. 26; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of San Jose River for irrigation of Indian lands.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	-	-	-	-
February 13-29	0	0	0	0
March	7.4	0	1.55	95
April	5.7	0	2.64	157
May	3.4	1.6	2.65	163
June	3.2	.4	2.07	123
July	3.5	0	2.32	142
August	4.4	1	2.29	141
September	4.5	.1	2.39	142
The period	-	-	-	963

McCartys north side ditch near San Fidel, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°04', long. 107°41', in SE¼ sec. 29, T. 10 N., R. 8 W., 300 feet below McCarty diversion dam and 5½ miles southwest of San Fidel.

Records available.- February to September 1940.

Extremes.- Maximum daily discharge during period, 10 second-feet June 21, 22; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of San Jose River for irrigation of Indian lands and storage in Acomita Reservoir.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	-	-	-	-
February 13-29	0	0	0	0
March	6.3	0	2.68	165
April	7.2	2.0	4.69	279
May	4.8	2.9	3.95	243
June	10	1.1	4.98	296
July	6.4	2.1	3.70	228
August	7.9	1.8	4.52	278
September	6.5	0	4.19	249
The period	-	-	-	1,740

Diversions from San Jose River

Seama-Paraje ditch near Casa Blanca, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°03', long. 107°03', in sec. 36, T. 10 N., R. 7 W., three-quarters of a mile east of west boundary of Laguna Indian Reservation, 1 mile downstream from head, and 3 miles west of Casa Blanca.

Records available.- March 1937 to September 1940.

Extremes.- Maximum daily discharge during year, 4.7 second-feet Mar. 16; no flow at times.
1937-40: Maximum daily discharge, 9.0 second-feet July 3, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of San Jose River on Acoma Indian Reservation for irrigation on Laguna Indian lands. Several small diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.6	0	3.08	189
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	4.6	0	.85	616
January	0	0	0	0
February	0	0	0	0
March	4.7	0	1.88	116
April	2.9	.4	1.02	61
May	3.3	.4	1.26	78
June	2.9	.4	1.00	60
July	3.1	.1	1.30	80
August	4.4	0	1.55	95
September	2.8	0	1.21	72
Water year 1939-40	4.7	0	1.03	751

Casa Blanca ditch at Casa Blanca, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°03', long. 107°29', near northeast corner, sec. 5, T. 9 N., R. 6 W., half a mile west of Casa Blanca and 1¼ miles downstream from head gate.

Records available.- February 1937 to September 1940.

Extremes.- Maximum daily discharge during year, 3.8 second-feet Sept. 7; no flow at times.
1937-40: Maximum daily discharge, 6.7 second-feet Sept. 4, 1937; no flow at times.

Remarks.- Records fair. Ditch diverts water from right bank of San Jose River for irrigation of Indian lands. Several small diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.1	0.1	1.68	97
November	3.6	1.6	2.32	138
December	3.3	0	1.66	102
Calendar year 1939	4.9	0	.67	485
January	1.4	0	.05	2.8
February	2.8	.5	1.43	82
March	3.3	0	1.21	74
April	1.9	.1	.26	15
May	1.2	0	.23	14
June	1.2	0	.13	7.7
July	2.8	0	.51	31
August	2.8	0	.82	50
September	3.8	0	1.27	76
Water year 1939-40	3.8	0	.95	690

Diversions from San Jose River

New Laguna ditch near New Laguna, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°02', long. 107°27', in sec. 2, T. 9 N., R. 6 W., just upstream from flume over Encinal Creek, three-quarters of a mile downstream from head, and 1¼ miles west of New Laguna.

Records available.- February 1937 to September 1940. (February to September 1937 published as "near Casa Blanca").

Extremes.- Maximum daily discharge during year, 3.5 second-feet Jan. 8; no flow at times. 1937-40: Maximum daily discharge, 5.1 second-feet June 29 and Sept. 4, 1937; no flow at times.

Remarks.- Records good. Ditch diverts water from left bank of San Jose River for irrigation. Several small diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.2	0.2	1.57	96
November	1.8	.3	1.29	77
December	1.7	0	.75	46
Calendar year 1939	4.4	0	.51	370
January	3.5	0	.80	49
February	.1	0	.01	.4
March	3.0	0	1.09	67
April	2.0	0	.23	14
May	2.1	0	.26	16
June	1.7	0	.20	12
July	3.1	0	.63	38
August	1.4	0	.44	27
September	2.3	0	.94	56
Water year 1939-40	3.5	0	.69	498

New Laguna ditch wasteway near Casa Blanca, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°02', long. 107°27', in NW¼ sec. 3, T. 9 N., R. 6 W., 700 feet downstream from waste gate and 1¼ miles east of Casa Blanca.

Records available.- March 1937 to September 1940.

Extremes.- Maximum daily discharge during year, 12 second-feet Oct. 8; no flow at times. 1937-40: Maximum daily discharge, 15 second-feet (estimated) July 28, 1937; no flow at times.

Remarks.- Records fair. Discharge is unused water returned from New Laguna ditch to San Jose River below station on that river near Casa Blanca.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	12	0	1.87	115
November	0	0	0	0
December	3.7	0	.53	32
Calendar year 1939	12	0	1.00	721
January	9.3	.5	5.26	324
February	.4	0	.08	4.4
March	3.5	0	.75	46
April	.2	0	.02	1.2
May	.1	0	0	.2
June	.6	0	.03	1.6
July	9.6	0	.63	39
August	8.6	0	1.42	87
September	8.1	.6	5.04	300
Water year 1939-40	12	0	1.31	950

Diversions from San Jose River

Laguna ditch at New Laguna, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°02', long. 107°24', in SW¼NW¼ sec. 6, T. 9 N., R. 5 W., three-quarters of a mile southeast of New Laguna and 1 mile downstream from head gate.

Records available.- October 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 1.9 second-feet June 7; no flow at times.
1936-40: Maximum daily discharge, 2.0 second-feet Aug. 23, 1938; no flow at times.

Remarks.- Records good. Ditch supplied with water for irrigation from New Laguna Reservoir on San Jose River at New Laguna. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	.1	0	0	.2
Calendar year 1939	1.8	0	.10	72
January	0	0	0	0
February	0	0	0	0
March	.9	0	.09	5.4
April	1.2	0	.23	14
May	.8	0	.25	15
June	1.9	0	.32	19
July	1.0	0	.25	16
August	0	0	0	0
September	0	0	0	0
Water year 1939-40	1.9	0	.10	70

Mesita ditch near Laguna, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°01', long. 107°19', in SE¼ sec. 12, T. 9 N., R. 5 W., in the Mesita Indian village, 4,300 feet downstream from head gate and 4½ miles east of Laguna.

Records available.- June 1936 to September 1940.

Extremes.- Maximum daily discharge during year, 6.6 second-feet, June 14; no flow at times.
1936-40: Maximum daily discharge, 12 second-feet July 19, 1938; no flow at times.

Remarks.- Records good. Ditch diverts water from right bank of San Jose River for irrigation of Indian lands. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.1	0	0.59	36
November	0	0	0	0
December	0	0	0	0
Calendar year 1939	10	0	1.32	956
January	0	0	0	0
February	2.4	0	.20	12
March	5.6	0	1.76	108
April	3.8	0	1.88	112
May	2.3	0	.62	38
June	6.6	0	1.54	92
July	2.6	0	.43	26
August	4	0	1.78	109
September	6.5	0	1.46	87
Water year 1939-40	6.6	0	.86	620

Diversions from San Jose River

Socorro main canal north at San Acacia, N. Mex.

Location.- Water-stage recorder, lat. 34°15', long. 106°54', in SE¼NW¼ sec. 1, T. 1 S., R. 1 W., at San Acacia, half a mile downstream from point of diversion from Rio Grande. Datum of gage is 4,659.74 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1940.

Extremes.- Maximum discharge during year, 315 second-feet, sometime July 22-24 (gage height, 5.67 feet, from recorded range in stage); no flow at times.
1937-40: Maximum discharge, that during period July 22-24, 1940; no flow at times.

Remarks.- Records fair. Canal diverts water from right bank of Rio Grande for irrigation. Three acequias, together irrigating about 300 acres, divert water from canal above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	142	1	64.0	3,940
November	136	1	63.0	3,750
December	1	1	1.0	61
Calendar year 1939	219	0	72.3	52,350
January	1	1	1.0	61
February	1	1	1.0	58
March	140	1	58.8	3,620
April	153	82	123	7,330
May	165	24	124	7,630
June	178	0	122	7,240
July	202	0	109	6,700
August	218	1	119	7,330
September	192	1	124	7,370
Water year 1939-40	202	0	75.9	55,090

Alamosa River near Monticello, N. Mex.

Location.- Water-stage recorder, lat. 33°35', long. 107°36', in SW¼ sec. 31, T. 8 S., R. 7 W., at Alamosa dam site and old Fort Ojo Caliente, just downstream from Wildhorse Creek, and 15 miles northwest of Monticello.

Drainage area.- 470 square miles.

Records available.- May 1931 to September 1940 in reports of Geological Survey. October to December 1929 and May to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 2,920 second-feet Aug. 7 (gage height, 7.66 feet), from rating curve extended above 120 second-feet; minimum daily, 6.0 second-feet Aug. 13, 14.
1931-40: Maximum gage height, 13.6 feet Aug. 21, 1936 (discharge not determined); minimum daily discharge, 5.6 second-feet Jan. 9, 1932, Aug. 28-30, 1938.

Remarks.- Records good below 10 second-feet, poor above. Entire normal flow diverted below station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	7.3	7.0	7.3	8.0	7.8	7.5	7.5	7.5	7.8	7.5	11
2	6.4	7.3	7.0	7.3	8.6	7.8	7.5	7.5	7.5	7.5	9.5	7.0
3	6.4	7.3	7.0	7.3	8.0	7.8	7.5	7.5	7.3	7.3	17	7.0
4	6.4	7.5	7.3	7.0	7.8	7.8	7.5	7.5	7.5	7.5	8.3	6.8
5	6.4	7.8	7.3	7.0	7.8	7.8	7.5	7.5	7.5	7.5	7.5	6.8
6	6.4	7.8	7.5	7.3	7.8	7.5	7.5	7.5	7.5	43	8.0	6.8
7	19	7.8	7.3	7.3	7.5	7.5	7.5	7.5	7.8	36	82	6.6
8	20	7.8	7.8	7.3	7.6	7.5	7.5	7.5	7.8	a10	9.4	6.6
9	10	7.8	7.8	7.3	7.8	7.5	7.5	7.5	7.5	a9	7.3	6.8
10	8.6	7.8	7.8	7.3	7.8	7.5	7.3	7.5	7.5	a8	6.4	6.6
11	8.0	7.8	7.8	6.8	7.8	7.5	7.3	7.5	7.5	a7	6.4	7.0
12	7.8	7.8	8.0	7.0	7.8	7.3	7.3	7.3	7.8	a7	6.2	6.8
13	7.8	7.8	8.0	7.0	7.8	7.3	7.3	7.3	7.8	a7	6.0	6.6
14	7.8	7.8	8.0	7.0	7.8	7.5	7.3	7.5	8.0	a7	6.0	6.8
15	7.8	7.8	7.8	6.8	7.8	7.5	7.3	7.5	8.0	a7	11	6.8
16	7.8	7.8	7.8	6.8	7.5	7.5	7.3	7.5	8.0	a7	7.3	7.0
17	7.8	7.8	7.8	6.8	7.5	7.5	7.3	7.8	7.8	a7	7.0	7.0
18	7.8	7.3	8.0	6.8	7.5	a7.5	7.3	7.8	7.8	7.3	7.0	7.0
19	7.8	7.3	7.8	6.8	7.5	a7.4	7.3	7.8	7.8	7.9	12	7.0
20	7.5	7.3	7.8	6.8	7.5	a7.3	7.3	7.5	7.8	8.1	7.5	49
21	7.5	7.3	7.8	6.8	7.5	7.3	7.3	7.5	8.9	7.3	8.3	16
22	7.5	7.3	7.5	6.8	7.5	7.3	7.3	8.0	15	6.8	8.6	12
23	7.8	7.3	7.5	7.3	7.5	7.3	7.5	7.8	7.8	6.8	8.3	8.0
24	7.5	7.3	7.5	7.5	7.5	7.3	7.5	7.8	7.8	7.0	28	7.3
25	7.5	7.3	7.5	7.5	7.5	7.3	7.5	7.8	7.8	7.0	10	7.8
26	7.3	7.3	7.3	7.5	7.5	7.3	7.3	7.8	7.8	6.8	6.8	8.0
27	7.3	7.3	7.5	7.5	7.8	7.3	7.3	7.8	7.8	7.0	7.0	9.1
28	7.3	7.5	7.5	7.5	7.8	7.3	7.3	7.8	8.0	7.3	7.0	7.8
29	7.5	7.5	7.3	8.0	7.8	7.3	7.3	7.8	10	7.0	7.0	8.6
30	7.3	7.3	7.3	8.0	-	7.5	7.3	7.5	8.8	12	7.0	7.3
31	7.3	-	7.3	8.0	-	7.5	-	7.5	-	8.3	7.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	255.7	20	6.4	8.25	507
November	226.1	7.8	7.3	7.54	448
December	234.4	8.0	7.0	7.56	465
Calendar year 1939	3,048.0	81	5.8	8.35	6,040
January	223.4	8.0	6.8	7.21	443
February	223.8	8.6	7.5	7.72	444
March	231.5	7.8	7.3	7.47	459
April	221.4	7.5	7.3	7.38	439
May	235.6	8.0	7.3	7.60	467
June	245.4	15	7.3	8.11	483
July	299.2	43	6.8	9.65	593
August	344.3	82	6.0	11.1	683
September	274.9	49	6.6	9.16	545
Water year 1939-40	3,013.7	82	6.0	8.23	5,980

Peak discharge.- July 6 (10 p.m.) 760 sec.-ft.; Aug. 7 (6 p.m.) 2,920 sec.-ft.; Sept. 20 (7 p.m.) 554 sec.-ft.

a No gage-height record; discharge interpolated or estimated.

Pecos River near Pecos, N. Mex.
(Formerly published as Pecos River at Irvin Ranch, near Pecos, N. Mex.)

Location.- Water-stage recorder, lat. 35°42'25", long. 105°41'00", in NE¼NE¼ sec. 17, T. 17 N., R. 12 E., at bridge on private road, 600 feet upstream from Indian Creek, 2 miles downstream from Espiritu Santo Creek, and 11 miles north of Pecos.

Drainage area.- 189 square miles (contributing area).

Records available.- March 1910 to December 1914 (published as Pecos River near Cowles) and October 1930 to September 1940 (published as Pecos River at Irvin Ranch, near Pecos prior to 1940) in reports of Geological Survey. March 1910 to December 1931 (published as Pecos River near Cowles prior to 1926) in reports of State engineer.

Average discharge.- 10 years (1930-40), 95.5 second-feet.

Extremes.- Maximum discharge during year, 495 second-feet May 17 (gage height, 2.97 feet); minimum daily, 10 second-feet Dec. 27, 28.
1930-40: Maximum discharge, 1,390 second-feet Sept. 24, 1931 (gage height, 3.70 feet), from rating table extended above 500 second-feet by logarithmic plotting; minimum daily, 6.1 second-feet Jan. 16, 1934.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	34	b23	b26	*b24	35	116	167	283	76	60	76
2	52	33	b25	b26	b25	34	135	203	275	73	57	74
3	50	31	26	b26	b25	33	107	279	267	70	64	78
4	48	32	26	*b27	b28	33	105	330	248	68	55	67
5	46	33	26	b28	b30	b35	107	338	234	65	55	62
6	44	33	25	b23	b29	39	97	343	220	62	190	60
7	44	30	b25	b20	*b29	36	88	356	206	61	135	57
8	105	28	b23	b21	b25	39	81	384	194	58	107	53
9	84	36	23	b22	b23	44	84	356	181	60	94	53
10	62	34	23	b23	b23	53	99	348	170	61	82	54
11	58	25	23	b23	b28	50	110	334	158	55	84	64
12	54	29	23	b23	b28	42	125	325	150	60	86	52
13	52	27	20	b23	b23	36	145	321	150	67	78	49
14	49	26	*b16	b20	*b23	a35	184	356	140	71	74	47
15	48	b26	b19	b19	b24	a40	220	379	130	57	70	43
16	47	*b26	b22	b21	b22	a45	206	406	123	52	74	43
17	46	b26	b24	b23	b21	a50	164	460	116	49	73	44
18	43	b27	b22	*b21	b21	a55	140	430	107	49	73	50
19	42	b27	b18	b17	b21	a60	167	397	101	47	78	142
20	41	b27	b15	b16	b20	a65	220	370	97	44	95	84
21	40	b27	b14	b18	b22	*64	264	352	112	64	148	296
22	39	b27	b13	b17	*b23	73	252	356	123	62	128	244
23	39	b25	b14	b18	b23	88	267	325	170	62	128	170
24	38	b27	b15	b18	b24	97	226	308	128	55	112	142
25	38	27	b13	b19	b24	112	234	296	107	49	112	128
26	41	22	b12	b20	26	125	267	300	99	48	97	118
27	36	24	b10	b21	28	114	271	300	95	49	88	105
28	35	23	b10	b22	31	99	226	300	90	47	81	99
29	36	*23	b13	b23	*35	82	197	304	88	50	79	101
30	34	24	b20	b23	-	78	170	291	82	58	82	92
31	35	-	b25	b24	-	95	-	287	-	58	84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,480	105	34	47.7	2,940
November	842	36	22	28.1	1,670
December	606	26	10	19.5	1,200
Calendar year 1939	31,105	384	10	85.2	61,700
January	671	28	16	21.6	1,330
February	728	35	20	25.1	1,440
March	1,884	125	33	60.8	3,740
April	5,074	271	81	169	10,060
May	10,301	460	167	332	20,430
June	4,644	283	82	165	9,210
July	1,807	76	44	58.3	3,580
August	2,823	190	55	91.1	5,600
September	2,747	296	43	91.6	5,450
Water year 1939-40	33,607	460	10	91.8	66,650

* Winter discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range of stage and records for station near San Jose and for Nambe Creek near Nambe.
b Stage-discharge relation affected by ice.

Pecos River near San Jose, N. Mex.

Location.- Water-stage recorder, lat. 35°25', long. 105°29', in NE¼ sec. 30, T. 14 N., R. 14 E., at village of San Juan, 1⅛ miles downstream from Cow Creek and 1⅛ miles north of San Jose.

Drainage area.- 539 square miles (contributing area).

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939: Maximum discharge during period July to September, 2,220 second-feet July 14 (gage height, 6.2 feet), from rating curve extended above 500 second-feet by logarithmic plotting; minimum daily, 24 second-feet Sept. 8.
1939-40: Maximum discharge during water year, 1,180 second-feet Aug. 5 (gage height, 4.66 feet), from rating curve extended above 500 second-feet by logarithmic plotting; minimum daily, 14 second-feet Dec. 27, 28.
1940: Maximum discharge during period October to December, 144 second-feet Oct. 4 (gage height, 2.43 feet); minimum daily, 35 second-feet Dec. 16.

Remarks.- Records good except those for days of incomplete gage-height record, which are fair, and those for periods of ice effect, which are poor. Many diversions above station for irrigation.

Discharge, in second-feet, 1939-40

1939

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	127	40	16	96	94	202
2	-	183	38	17	73	86	237
3	-	161	34	18	62	77	240
4	-	181	32	19	64	69	231
5	-	256	29	20	57	129	183
6	-	224	28	21	44	117	157
7	-	225	25	22	45	83	144
8	-	183	24	23	52	79	129
9	-	152	27	24	53	72	121
10	-	131	48	25	52	61	112
11	-	117	65	26	140	69	106
12	-	104	41	27	127	62	103
13	29	104	45	28	264	77	99
14	214	119	122	29	150	60	93
15	123	106	236	30	274	52	91
				31	139	47	-

Peak discharge.- July 14 (3 p.m.) 2,220 sec.-ft.; July 28 (7 p.m.) 1,720 sec.-ft.; Aug. 5 (8 p.m.) 948 sec.-ft.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	48	33	43	*36	62	188	219	286	88	76	94
2	79	47	30	41	34	65	228	234	286	77	69	85
3	73	44	34	41	b37	64	213	f300	275	70	84	79
4	68	43	34	*44	b40	68	f194	374	258	70	73	77
5	66	43	33	37	41	48	f183	390	237	70	174	68
6	64	46	33	35	34	73	178	394	225	66	220	64
7	64	44	30	b35	31	70	165	394	213	66	181	61
8	90	41	30	b37	32	75	152	422	202	62	148	57
9	176	41	33	b39	b30	82	146	412	194	59	129	56
10	117	52	34	40	30	82	155	394	173	62	108	53
11	96	48	33	34	38	113	173	386	161	81	97	77
12	86	40	31	34	37	104	183	370	155	64	108	85
13	79	41	*33	32	b30	86	202	362	159	66	101	82
14	75	36	25	27	b35	70	231	382	157	80	91	57
15	70	30	22	b26	*41	72	289	404	139	72	93	52
16	68	30	27	b28	34	76	300	422	133	59	94	49
17	66	34	33	b30	34	82	268	453	129	56	94	45
18	64	31	31	*b26	32	96	222	471	117	56	91	49
19	61	32	28	b23	b35	112	216	430	106	53	99	116
20	60	32	*22	b21	32	112	258	399	101	48	213	179
21	55	33	b20	b24	*29	*112	326	382	106	48	237	386
22	55	32	b18	b22	37	125	326	382	121	62	196	417
23	54	33	b19	b23	36	155	346	358	159	72	181	275
24	54	31	b20	b24	36	173	314	334	157	61	159	202
25	53	36	b18	*b26	36	196	292	318	119	54	152	178
26	52	37	b16	b27	39	228	314	318	108	46	139	159
27	56	35	b14	b29	43	228	342	310	103	40	123	144
28	50	34	*b14	b30	45	213	310	303	97	44	108	131
29	49	34	b20	b32	*53	181	278	326	94	42	99	131
30	50	37	32	b33	-	159	244	303	94	62	101	117
31	48	-	40	b36	-	161	-	296	-	80	99	-

Peak discharge.- Aug. 5 (7 p.m.) 1,180 sec.-ft.; Aug. 20 (7 p.m.) 1,040 sec.-ft.; Sept. 20 (10 p.m.) 884 sec.-ft.

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights and records for station near Pecos.

Discharge, in second-feet, of Pecos River near San Jose, N. Mex., 1939-40--Continued

1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	113	70	54									
2	108	66	50									
3	104	68	50									
4	115	65	46									
5	121	65	54									
6	115	60	53									
7	108	64	55									
8	99	61	52									
9	96	61	52									
10	93	62	55									
11	99	57	57									
12	99	41	65									
13	99	b40	57									
14	101	b45	b45									
15	99	b50	b40									
16	94	55	b35									
17	91	54	b50									
18	88	57	b70									
19	86	66	b55									
20	83	66	b50									
21	82	54	b55									
22	79	57	60									
23	76	60	62									
24	76	59	76									
25	75	56	82									
26	75	f53	65									
27	75	f54	b60									
28	76	42	80									
29	73	53	75									
30	72	56	77									
31	73	-	77									

b Stage-discharge relation affected by ice.
f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights and records for station near Pecos.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 13-31, 1939	2,058	274	29	108	4,080
August	3,607	256	47	116	7,150
September	3,082	240	24	103	6,110
The period	-	-	-	-	17,340
October 1939	2,184	176	48	70.5	4,330
November	1,141	52	30	38.0	2,260
December	840	40	14	27.1	1,670
Calendar year	-	-	-	-	-
January 1940	977	44	21	31.5	1,940
February	1,047	53	29	36.1	2,080
March	3,543	228	48	114	7,030
April	7,237	346	146	241	14,350
May	11,242	471	219	363	22,300
June	4,864	286	94	162	9,650
July	1,936	88	40	62.5	3,840
August	3,937	237	69	127	7,810
September	3,605	417	45	120	7,150
Water year 1939-40	42,553	471	14	116	84,410
October 1940	2,843	121	72	91.7	5,640
November	1,717	70	40	57.2	3,410
December	1,814	82	35	58.5	3,600
Calendar year 1940	44,762	471	21	122	88,800

Pecos River near Anton Chico, N. Mex.

Location.- Water-stage recorder, lat. 35°10'50", long. 105°06'20", in Anton Chico grant, 2 miles upstream from Canyon Blanco, 2½ miles southeast of Anton Chico, and 10 miles downstream from Tecolote Creek.

Drainage area.- 1,050 square miles (contributing area).

Records available.- April 1910 to December 1914 and October 1930 to September 1940 in reports of Geological Survey. April 1910 to December 1931 in reports of State engineer. Prior to July 2, 1937, station was, during successive periods, at five different sites, where distance upstream from present site ranged from a sixth of a mile to 5 miles; records believed to be equivalent.

Average discharge.- 10 years (1930-40), 124 second-feet.

Extremes.- Maximum discharge during year, 3,440 second-feet Aug. 5 (gage height, 7.0 feet), from rating curve extended above 580 second-feet on basis of slope-area determination at 20.34 feet; minimum daily, 2 second-feet July 30.
1930-40: Maximum discharge, 40,300 second-feet June 1, 1937 (gage height, 20.34 feet, present site and datum), by slope-area method; no flow at times.

Remarks.- Records good except those for periods of ice effect or no gage-height record, those for August and September, and for peak discharges, all of which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	28	23	18	29	35	174	186	273	43	36	64
2	58	25	21	*24	22	42	202	172	252	25	39	58
3	50	26	18	23	b20	51	240	188	252	14	35	44
4	41	25	18	21	24	71	205	240	232	180	73	30
5	37	25	21	24	36	73	202	315	215	295	241	28
6	34	25	21	26	*36	56	200	330	195	168	905	22
7	34	27	19	b15	22	53	180	321	176	70	318	16
8	62	27	19	10	17	59	164	344	166	62	379	14
9	70	25	19	*17	b15	58	146	372	154	44	195	10
10	125	25	19	27	19	75	133	340	140	30	162	7
11	94	31	17	32	23	117	133	340	121	24	150	7
12	75	32	*17	29	21	137	154	334	116	22	348	15
13	66	26	16	28	*b18	121	162	330	112	24	192	27
14	58	23	17	b18	b14	98	172	321	111	16	99	15
15	54	23	15	b12	15	78	210	348	105	20	88	8
16	50	19	13	*b12	26	76	261	358	91	14	89	8
17	48	16	12	17	21	76	279	386	91	8	165	8
18	44	16	14	b18	19	80	238	432	66	6	124	6
19	41	18	*16	b14	21	93	188	428	48	10	199	13
20	40	16	15	a10	*28	111	180	386	40	7	396	38
21	39	17	12	a11	26	112	230	351	126	31	416	482
22	36	16	11	a10	21	111	291	382	246	108	330	240
23	34	16	12	b15	24	124	282	382	211	21	420	215
24	32	17	14	b12	28	150	306	354	131	17	205	154
25	29	17	9	a10	26	172	264	327	119	21	152	129
26	30	17	b8	a14	23	192	249	312	84	14	131	119
27	30	21	b8	b20	*23	228	288	309	70	12	116	110
28	30	21	b10	b25	27	232	306	297	59	33	100	104
29	30	21	b12	b27	29	215	267	494	54	4	92	95
30	28	22	b15	*28	-	184	220	318	50	2	80	92
31	27	-	b20	29	-	164	-	282	-	4	71	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,490	125	27	48.1	2,960
November	663	32	16	22.1	1,320
December	481	23	8	15.5	954
Calendar year 1939	36,691	508	2	100	72,560
January	596	32	10	19.2	1,180
February	673	36	14	23.2	1,330
March	3,444	232	35	111	6,830
April	6,626	306	133	218	12,940
May	10,279	494	172	332	20,390
June	4,106	273	40	137	8,140
July	1,349	295	2	43.5	2,680
August	6,346	905	35	205	12,590
September	2,178	482	6	72.6	4,320
Water year 1939-40	38,131	905	2	104	75,630

Peak discharge.- Aug. 5 (11 p.m.) 3,440 sec.-ft.; Aug. 6 (3 a.m.) 2,490 sec.-ft.; Aug. 19 (11 p.m.) 1,780 sec.-ft.; Sept. 21 (8 a.m.) 1,860 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations near San Jose and Santa Rosa.

b Stage-discharge relation affected by ice.

Pecos River at Santa Rosa, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 34°56', long. 104°41', in sec. 2, T. 8 N., R. 21 E., at bridge on U. S. Highway 66 at Santa Rosa, 1 mile upstream from Rio Agua Negro Chiquita.

Drainage area.- 2,650 square miles (contributing area).

Records available.- May 1903 to December 1906 (gage heights only), February 1910 to July 1911, September 1912 to December 1914, and October 1930 to September 1940 in reports of Geological Survey. February 1910 to July 1911 and September 1912 to December 1931 in reports of State engineer.

Average discharge.- 10 years (1930-40), 133 second-feet.

Extremes.- Maximum discharge during year, 13,400 second-feet Aug. 6 (gage height, 9.75 feet); minimum daily, 15 second-feet several days during December to March.
1930-40: Maximum discharge, 55,200 second-feet June 2, 1937 (gage height, 25.7 feet), from rating curve extended above 35,000 second-feet by logarithmic plotting; minimum daily, 2.7 second-feet June 25, 1937.

Remarks.- Records good except those for periods of ice effect, which are fair, and that for July 5, which is poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	20	20	24	18	15	85	93	170	17	21	24
2	19	20	20	22	19	16	60	64	146	28	19	23
3	19	20	20	23	b20	17	88	49	118	21	21	23
4	18	20	19	24	21	26	118	36	104	20	22	21
5	18	20	19	24	20	26	104	52	91	996	18	21
6	19	20	19	22	19	19	131	121	78	278	6,590	21
7	20	19	18	17	18	17	118	150	62	146	676	21
8	24	19	18	20	20	17	101	138	51	58	430	21
9	21	19	18	19	19	16	78	188	41	51	558	21
10	20	18	19	19	20	16	58	206	32	26	246	20
11	25	19	19	18	20	17	43	179	29	22	225	21
12	46	20	20	18	17	15	33	179	25	21	467	20
13	35	19	20	19	16	16	38	179	24	19	550	20
14	24	20	19	16	17	31	48	170	23	18	230	20
15	20	20	19	15	19	29	46	150	23	17	127	20
16	20	20	19	18	17	23	67	174	21	17	239	20
17	20	20	19	19	17	18	127	188	21	18	206	20
18	19	20	20	b15	17	16	166	226	19	37	134	20
19	19	20	20	b16	19	16	138	324	18	24	138	21
20	19	20	20	b17	17	15	96	307	19	19	433	21
21	20	21	20	b18	17	16	71	230	20	17	551	154
22	20	21	b20	b17	17	18	91	262	76	17	444	423
23	20	21	b21	b18	17	24	150	330	146	17	602	330
24	19	21	b21	20	17	23	162	262	127	21	582	220
25	19	21	b21	b16	17	28	183	206	58	17	241	146
26	19	20	20	17	16	48	142	179	48	17	150	104
27	19	20	b17	b19	15	69	118	142	32	16	98	83
28	19	21	b15	21	15	104	158	127	21	17	71	67
29	19	21	b16	22	15	118	170	275	17	33	49	58
30	19	21	23	21	-	104	124	437	18	45	33	48
31	20	-	29	20	-	80	-	230	-	41	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	657	46	18	21.2	1,300
November	601	21	18	20.0	1,190
December	608	29	15	19.6	1,210
Calendar year 1939	33,143	3,100	12	90.8	65,730
January	594	24	15	19.2	1,180
February	515	21	15	17.8	1,020
March	1,013	118	15	32.7	2,010
April	3,112	183	33	104	6,170
May	5,852	437	36	189	11,610
June	1,678	170	17	55.9	3,330
July	2,109	996	16	68.0	4,180
August	14,197	6,590	18	458	28,160
September	2,052	423	20	68.4	4,070
Water year 1939-40	32,988	6,590	15	90.1	65,430

Peak discharge.- July 5 (7 a.m.) 3,300 sec.-ft.; Aug. 6 (4 a.m.) 13,400 sec.-ft.; Aug. 6 (8 a.m.) 11,500 sec.-ft.; Aug. 12 (5 p.m.) 1,500 sec.-ft.
b Stage-discharge relation affected by ice.

Pecos River near Puerto de Luna, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 34°43', long. 104°32', in sec. 29, T. 6 N., R. 23 E., 10 miles southeast of Puerto de Luna and 14 miles upstream from Alamogordo Dam (revised).

Drainage area.- 3,970 square miles (contributing area).

Records available.- April 1938 to September 1940.

Extremes.- Maximum discharge during year, 12,200 second-feet Aug. 6 (gage height, 6.30 feet), from rating curve extended above 7,000 second-feet on basis of flow at Santa Rosa; minimum daily, 67 second-feet Oct. 5.
1938-40: Maximum discharge, 24,700 second-feet Sept. 6, 1938 (gage height, 10.33 feet), from rating curve extended above 7,000 second-feet on basis of flow at Santa Rosa; minimum daily, 59 second-feet Aug. 23, 1938.

Remarks.- Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Discharge represents inflow to Alamogordo Reservoir (capacity, 157,000 acre-feet).

Cooperation.- Gage-height record and result of one discharge measurement furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	85	106	122	120	101	136	180	203	92	106	101
2	95	85	99	117	130	103	125	154	160	110	90	99
3	87	83	99	115	125	99	120	125	180	147	88	94
4	91	85	95	115	130	128	150	115	191	106	90	92
5	67	87	89	110	125	130	191	108	176	614	297	92
6	72	93	95	122	117	125	184	154	147	452	5,770	96
7	85	95	99	106	103	110	199	214	133	282	1,060	96
8	108	93	99	103	106	106	191	232	125	199	444	92
9	95	93	93	110	120	103	176	210	120	141	496	88
10	93	95	93	110	120	94	160	232	110	133	354	94
11	91	97	93	108	115	99	139	246	106	106	354	92
12	99	91	93	117	106	90	120	242	96	94	282	90
13	117	91	87	117	106	94	106	228	94	90	720	86
14	108	89	95	112	101	99	112	228	94	84	404	90
15	95	89	97	110	110	120	110	214	86	80	282	99
16	91	89	97	110	112	110	117	214	80	78	203	92
17	95	89	97	108	103	90	150	219	80	84	322	88
18	93	89	95	106	94	86	210	232	80	108	210	84
19	85	93	93	99	101	82	219	288	78	133	173	92
20	87	89	89	94	103	82	199	298	86	106	276	103
21	85	83	86	b95	103	80	160	276	74	88	469	108
22	87	83	b85	b100	103	82	130	348	74	88	594	357
23	85	85	b85	103	106	90	160	334	169	90	428	328
24	85	89	b85	b105	103	99	214	276	223	88	496	304
25	79	91	b90	92	108	99	237	260	187	94	367	260
26	81	91	b90	b100	108	108	214	242	130	88	298	237
27	79	97	b85	b105	99	122	184	219	128	88	246	206
28	81	95	b80	b105	99	133	180	203	103	86	203	191
29	85	103	b85	122	103	170	232	203	94	84	170	173
30	93	108	b90	130	-	163	223	380	96	108	139	160
31	85	-	115	130	-	154	-	298	-	122	115	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,778	117	67	89.6	5,510
November	2,725	108	83	90.8	5,400
December	2,878	115	80	92.8	5,710
Calendar year 1939	67,483	3,120	65	185	133,800
January	3,398	130	92	110	6,740
February	3,179	130	94	110	6,310
March	3,351	170	80	108	6,650
April	5,048	237	106	168	10,010
May	7,172	380	108	231	14,230
June	3,703	223	74	123	7,340
July	4,263	614	78	138	8,460
August	15,546	5,770	88	501	30,840
September	4,184	357	84	139	8,300
Water year 1939-40	58,225	5,770	67	159	115,500

Peak discharge.- July 5 (1 p.m.) 2,040 sec.-ft.; Aug. 5 (9 p.m.) 4,610 sec.-ft.; Aug. 6 (8 a.m.) 10,200 sec.-ft.; Aug. 6 (3 p.m.) 12,200 sec.-ft.
b Stage-discharge relation affected by ice.

Alamogordo Reservoir near Guadalupe, N. Mex.

Location.- Mercury gage, lat. 34°36'30", long. 104°23'10", in SW¼ sec. 34, T. 5 N., R. 24 E., at Alamogordo Dam on Pecos River, 5 miles northeast of Guadalupe. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Drainage area.- 4,390 square miles (contributing area).

Records available.- January 1939 to September 1940.

Extremes.- Maximum daily contents during year, 103,700 acre-feet Feb. 29 (elevation, 4,263.45 feet); minimum daily, 11,600 acre-feet Aug. 5 (elevation, 4,205.90 feet).
1939-40: Maximum daily contents, 110,500 acre-feet Mar. 25, 1939 (elevation, 4,265.35 feet); minimum daily, that of Aug. 5, 1940.

Remarks.- Reservoir is formed by Alamogordo Dam completed and storage began in 1938. Capacity, 157,000 acre-feet between elevations 4,200.0 (sill of outlet gates) and 4,275.0 feet (top of spillway gates) above mean sea level. Dead storage, 9,000 acre-feet. Figures given herein represent total contents. Gage read once daily at 8 a.m.

Cooperation.- Gage-height record and capacity curve furnished by Bureau of Reclamation.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Prepared by Bureau of Reclamation from surveys and maps of the Bureau)

4,200	9,000	4,220	22,000	4,240	47,000	4,250	92,000
4,205	11,000	4,225	27,000	4,245	57,000	4,265	109,000
4,210	14,200	4,230	32,300	4,250	67,000	4,270	131,000
4,215	18,000	4,235	39,000	4,255	78,500	4,275	157,000

Monthly elevation and contents, water year October 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,259.15	89,700	-
Oct. 31	4,258.65	88,400	-1,300
Nov. 30	4,259.8	91,500	+3,100
Dec. 31	4,260.65	94,200	+2,700
Calendar year 1939	-	-	-5,100
Jan. 31	4,262.1	99,100	+4,900
Feb. 29	4,263.45	103,700	+4,600
Mar. 31	4,254.25	75,800	-26,900
Apr. 30	4,245.6	58,200	-18,600
May 31	4,249.8	65,600	+8,400
June 30	4,236.25	41,000	-25,600
July 31	4,222.90	24,900	-15,100
Aug. 31	4,233.30	36,700	+11,800
Sept.30	4,215.45	18,400	-18,300
Water year 1939-40	-	-	-71,300

Pecos River near Guadalupe, N. Mex.

Location.- Water-stage recorder, lat. 34°36'10", long. 104°23'10" (revised), in NE¼ sec. 2, T. 4 N., R. 24 E., half a mile downstream from Alamogordo Dam, 1¾ miles downstream from Alamogordo Creek, and 4½ miles northeast of Guadalupe (revised).

Drainage area.- 4,390 square miles (contributing area).

Records available.- October 1912 to December 1914, October 1930 to September 1936 (at site 1¾ miles upstream), and September 1936 to September 1940 in reports of Geological Survey. October 1912 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 3,370 second-feet Mar. 2 (gage height, 4.77 feet); minimum daily, about 1 second-foot Apr. 6-8.
1930-40: Maximum discharge 27,000 second-feet Oct. 11, 1930 (gage height, 12.8 feet, site and datum then in use), from rating curve extended above 13,500 second-feet by logarithmic plotting; no flow Sept. 1-3, 5, Nov. 22, 27, 1937.

Remarks.- Records good except those for periods of incomplete gage-height record, which are fair, and those below 10 second-feet, which are poor. Flow regulated by Alamogordo Reservoir (see page 312). Many diversions above station for irrigation.

Cooperation.- Gage-height record collected in cooperation with, and results of 31 discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	f28	2.4	3.3	5.0	1,270	76	85	102	76	1,380	479
2	92	f2.5	2.4	3.8	3.8	2,860	73	85	102	80	1,350	1,230
3	92	f2.4	2.8	3.8	4.4	3,240	73	92	102	80	1,310	1,470
4	94	2.4	2.8	4.4	5.0	2,960	80	92	99	92	1,270	1,460
5	94	2.0	2.8	5.0	4.4	2,630	f42	92	99	92	1,160	1,460
6	94	2.0	2.8	5.0	4.4	2,260	f1	94	97	107	857	1,420
7	94	2.0	2.8	5.0	4.4	595	f1	97	99	92	71	1,380
8	92	2.0	2.4	3.0	2.8	87	f1	94	102	71	85	1,370
9	82	2.4	2.4	5.0	3.8	71	29	97	97	73	87	828
10	80	2.0	2.4	5.0	3.8	73	62	97	99	92	85	107
11	82	2.0	2.8	5.0	3.3	92	69	97	99	92	85	107
12	82	2.0	2.4	4.4	2.4	82	73	97	99	94	85	94
13	85	2.4	2.0	3.8	2.4	92	71	97	99	90	90	87
14	85	2.4	2.0	3.8	2.8	92	76	97	99	92	92	87
15	87	2.4	37	4.4	2.8	94	76	99	97	97	94	65
16	87	2.4	71	5.0	2.0	94	76	99	97	97	94	85
17	87	2.4	73	5.7	2.0	94	73	97	97	94	97	85
18	85	2.4	65	2.8	3.8	94	73	97	97	94	97	87
19	85	2.4	73	2.8	3.8	94	78	97	94	92	99	78
20	85	2.4	85	2.8	3.8	94	78	97	750	94	99	76
21	85	2.4	90	2.4	5.0	76	78	97	1,680	94	99	78
22	85	2.4	90	2.4	6.4	76	1,040	102	1,660	90	102	78
23	87	2.4	90	2.4	4.4	78	1,710	102	1,650	87	102	73
24	87	2.4	87	2.0	5.0	80	1,700	104	1,610	85	102	76
25	87	2.4	48	1.7	6.4	85	1,690	104	1,600	1,050	f 62	80
26	90	2.4	2.0	1.7	7.2	67	1,680	104	1,590	1,530	f 53	87
27	87	2.4	2.8	2.8	8.1	78	1,680	102	1,570	1,520	107	90
28	87	2.4	2.8	3.3	10	69	1,670	104	1,440	1,490	127	90
29	85	2.4	2.8	4.4	11	73	1,640	104	390	1,470	114	90
30	82	2.4	3.3	5.0	-	73	734	104	76	1,450	112	92
31	78	-	3.3	4.4	-	73	-	102	-	1,420	112	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,696	94	78	87.0	5,350
November	94.9	28	2.0	3.16	188
December	s61.2	90	2.0	27.8	1,710
Calendar year 1939	69,361.2	5,380	1.0	190	137,600
January	118.5	5.7	1.7	3.82	235
February	134.4	11	2.0	4.63	267
March	17,796	3,240	67	574	35,300
April	14,803	1,710	1	493	29,360
May	5,028	104	85	97.7	6,010
June	15,872	1,680	78	529	31,480
July	12,077	1,530	71	390	23,950
August	9,679	1,380	53	312	19,200
September	12,909	1,470	73	430	26,600
Water year 1939-40	90,068.8	3,240	1	245	178,600

f Gage-height record incomplete; discharge computed on basis of partial gage-height record and record of operation of Alamogordo Reservoir outlet gates.

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Pecos River near Acme, N. Mex.

Location.- Water-stage recorder, lat. 33°32'10", long. 104°22'40", in NW¼ sec. 14, T. 9 S., R. 25 E., 1 mile southeast of Melena railroad station, 3½ miles downstream from Salt Creek, 5 miles southwest of Acme, and 13 miles northeast of Roswell.

Drainage area.- 11,380 square miles (contributing area).

Records available.- July 1937 to September 1940 in reports of Geological Survey. August 1921 to July 1923 in reports of State engineer.

Extremes.- Maximum discharge during year, 3,130 second-feet Mar. 4 (gage height, 5.34 feet); no flow at times.

1937-40: Maximum discharge, 9,040 second-feet Apr. 5, 1939 (gage height, 7.50 feet), from rating curve extended above 5,640 second-feet by logarithmic plotting; no flow at times.

Flood of May 28, 1937, reached a discharge of 53,300 second-feet (gage height, about 14.0 feet), by slope-area method.

Remarks.- Records good except those for periods of ice effect and those for periods of rapidly changing stage, all of which are poor. Many diversions above station for irrigation. Flow regulated by Alamogordo Reservoir (see page 312).

Cooperation.- Gage-height record collected in cooperation with, and results of 26 discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	19	15	48	23	1.2	17	1,240	28	253	1,060	0
2	23	15	15	53	*30	1.1	15	285	23	123	1,030	0
3	18	12	14	41	33	1,960	13	163	20	67	1,090	0
4	16	13	*13	32	30	2,870	12	92	13	67	1,170	862
5	15	14	12	*29	*25	2,750	19	56	11	33	1,040	1,110
6	14	18	12	29	29	2,520	67	39	8.6	19	985	1,220
7	21	22	11	24	25	2,250	59	30	6.8	18	1,240	1,110
8	40	19	10	*28	23	1,100	92	47	2.8	8.0	698	1,160
9	45	15	9.5	24	*27	310	88	84	1.0	3.0	200	1,110
10	73	15	8.6	22	18	156	54	31	.4	.7	87	1,120
11	90	13	*8.6	20	15	102	32	31	0	0	94	454
12	76	12	8.6	20	12	76	22	59	0	0	102	151
13	59	11	7.4	14	*10	59	16	45	0	0	60	84
14	48	10	7.1	12	9.0	59	12	25	0	0	38	54
15	42	10	7.1	*b11	7.7	48	11	15	0	0	30	40
16	40	10	7.1	10	*7.4	45	14	8.2	0	0	22	28
17	39	10	6.8	b9	6.5	45	18	5.2	0	0	18	16
18	39	10	*7.1	b8.5	5.5	42	16	3.4	0	0	11	7.2
19	39	10	6.5	*b8	5.2	43	15	18	0	8.0	6.4	4.8
20	34	10	6.8	b7	4.4	40	17	13	0	5.2	8.4	3.8
21	31	10	6.8	b6	4.6	39	23	13	0	.9	7.8	4.8
22	31	10	12	*b5.5	5.2	31	16	105	289	0	2.4	16
23	30	9.5	27	b5	4.9	29	9.0	179	1,170	0	.7	12
24	25	9.5	22	b5.5	4.9	27	905	270	1,460	0	0	5.0
25	22	10	22	b6	4.4	33	1,390	186	1,260	0	2.2	1.6
26	24	12	b35	*b7	4.4	31	1,410	114	1,160	0	15	0
27	23	12	*b50	b9	4.1	26	1,280	86	1,170	350	3.1	0
28	20	12	b40	b12	3.0	28	1,390	71	1,170	1,120	.5	0
29	18	14	*b30	*b14	2.5	26	1,410	46	1,110	1,240	0	0
30	16	15	b35	16	-	24	1,340	42	896	1,090	0	0
31	20	-	43	19	-	20	-	33	-	1,270	0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,057	90	14	34.1	2,100
November	382.0	22	9.5	12.7	758
December	516.0	50	6.6	16.6	1,020
Calendar year 1939	69,605	5,040	0	191	138,100
January	552.5	53	5	17.8	1,100
February	383.7	33	2.5	13.2	761
March	14,791.3	2,870	1.1	477	29,340
April	9,782.0	1,410	9.0	326	19,400
May	3,434.8	1,240	3.4	111	6,810
June	9,799.6	1,460	0	327	19,440
July	5,675.8	1,270	0	183	11,260
August	9,021.3	1,240	0	291	17,890
September	8,574.2	1,220	0	286	17,010
Water year 1939-40	63,970.2	2,870	0	175	126,900

* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Pecos River near Lake Arthur, N. Mex.

Location.- Water-stage recorder, lat. 32°59'25", long. 104°19'10", on line between secs. 26 and 27, T. 15 S., R. 26 E., 1,100 feet upstream from highway bridge, 3 miles east of Lake Arthur, 10 miles upstream from Cottonwood Creek, and 11 miles northeast of Artesia.

Drainage area.- 14,760 square miles (contributing area).

Records available.- August 1938 to September 1940.

Extremes.- Maximum discharge during year, 7,010 second-feet May 22 (gage height, 9.15 feet), from rating curve extended above 5,000 second-feet on basis of slope-area determination at gage height, 21.77 feet; minimum daily, 2 second-feet Aug. 29, 30.
1938-40: Maximum discharge, 10,500 second-feet Sept. 5, 1938 (gage height, 11.08 feet), from rating curve extended above 5,000 second-feet on basis of slope-area determination at gage height 21.77 feet; minimum daily, that of Aug. 29, 30, 1940.
Maximum stage known, 21.77 feet May 30, 1937 (discharge, 51,500 second-feet, by slope-area method), may have been exceeded by floods of 1904 and 1919.

Remarks.- Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Flow regulated to some extent by Alamogordo Reservoir, 150 miles above station (see page 312).

Cooperation.- Gage-height record collected in cooperation with, and results of 18 discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	66	101	140	94	79	76	1,340	83	928	1,080	6
2	67	65	100	140	106	78	66	914	83	362	1,050	20
3	62	67	98	145	132	76	58	354	82	255	1,000	9
4	62	68	96	136	147	2,490	51	236	68	190	1,030	6
5	59	71	103	124	153	2,910	75	180	65	153	1,050	749
6	54	70	116	118	142	2,730	124	142	62	145	994	1,050
7	56	65	115	111	138	2,370	193	111	54	118	1,060	1,140
8	75	72	115	108	111	1,980	182	151	47	101	1,080	1,060
9	76	78	103	106	108	842	140	298	46	82	497	1,040
10	92	79	96	106	120	382	147	334	59	72	268	1,020
11	90	78	94	106	120	262	124	185	48	61	172	930
12	118	82	94	103	111	198	103	134	39	57	142	354
13	132	78	111	106	100	162	89	116	33	43	185	221
14	115	72	122	98	96	132	89	124	31	43	160	158
15	103	76	120	95	92	122	89	113	28	47	136	124
16	108	75	115	96	92	120	64	100	38	29	104	90
17	96	76	95	101	89	128	65	88	40	22	80	75
18	95	78	85	b105	86	118	62	82	35	33	76	67
19	89	78	80	b95	86	108	71	82	35	33	71	53
20	88	79	80	b90	82	101	67	78	33	30	46	45
21	89	75	80	b94	85	101	70	76	28	28	46	37
22	92	76	82	b88	85	100	67	874	34	35	37	36
23	90	76	92	b83	85	98	59	1,640	329	19	27	40
24	88	76	100	86	83	100	58	350	1,330	10	16	36
25	85	79	115	b85	86	101	874	362	1,360	11	20	34
26	82	83	122	b82	86	95	1,300	262	1,240	10	26	41
27	76	86	130	b80	85	94	1,300	175	1,220	9	15	38
28	71	94	136	82	85	89	1,320	140	1,290	234	9	37
29	76	96	151	85	82	82	1,360	122	2,150	978	2	37
30	72	101	149	88	-	79	1,330	113	1,600	1,020	2	45
31	65	-	136	90	-	80	-	95	-	1,010	5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,584	132	54	83.4	5,130
November	2,315	101	65	77.2	4,590
December	3,332	151	80	107	6,610
Calendar year 1939	90,966	4,230	8	249	180,400
January	3,172	145	80	102	6,290
February	2,964	153	82	102	5,880
March	16,407	2,910	76	529	32,540
April	9,675	1,360	51	322	19,190
May	9,371	1,640	76	302	18,590
June	11,590	2,150	28	386	22,990
July	6,168	1,020	9	199	12,230
August	10,486	1,080	2	338	20,800
September	8,598	1,140	6	287	17,050
Water year 1939-40	86,660	2,910	2	237	171,900

b Stage-discharge relation affected by ice.

Pecos River near Artesia, N. Mex.

Location.- Water-stage recorder, lat. 32°50'00", long. 104°19'35", in W½ sec. 18, T. 17 S., R. 27 E., at bridge on Artesia-Lovington highway, 4.2 miles east of Artesia, 6.5 miles north of Rio Penasco, and 16½ miles north of McMillan Dam.

Drainage area.- 15,300 square miles (contributing area).

Records available.- March 1905 to September 1925 and October 1931 to February 1936 (published as Pecos River near Dayton), and February 1936 to September 1940 in reports of Geological Survey. March 1905 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 6,060 second-feet May 23 (gage height, 11.2 feet); minimum daily, 5 second-feet July 26.
1905-40: Maximum gage height, 15.9 feet Sept. 18, 1919, site and datum then in use (discharge not determined). Flood of May 30, 1937, reached a discharge of 51,500 second-feet (gage height, 14.7 feet), computed by slope-area method; no flow Aug. 17-24, 1934.

Remarks.- Records fair except those for periods of incomplete gage-height record, and those above 1,000 second-feet, which are poor. Diversions above station for irrigation. Flow regulated to some extent by Alamogordo Reservoir (see p. 312). Discharge represents inflow to Lake McMillan, which stores water for irrigation of about 25,000 acres of Carlsbad project.

Cooperation.- Gage-height record and results of 42 discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	70	112	138	106	85	90	1,390	87	1,170	1,280	9
2	61	69	112	140	115	86	73	1,100	83	528	1,190	8
3	68	70	110	140	134	85	68	532	83	348	1,130	15
4	62	74	109	142	148	1,690	57	306	70	260	1,110	8
5	63	75	106	138	158	2,780	65	215	67	193	1,110	405
6	60	77	118	134	151	2,840	127	154	64	153	970	1,030
7	61	74	122	127	148	2,580	158	125	57	129	1,090	1,250
8	84	73	123	123	138	2,150	223	113	52	111	1,180	1,190
9	88	80	122	123	128	1,140	156	219	46	95	785	1,140
10	86	82	112	119	128	477	141	390	50	f76	381	1,020
11	99	82	108	120	135	325	140	230	51	f63	221	1,020
12	105	82	104	118	130	233	124	154	46	58	165	565
13	130	88	106	114	115	194	104	132	37	46	153	255
14	125	82	128	111	110	156	100	126	31	39	191	177
15	109	82	128	109	103	138	98	130	29	41	137	134
16	106	88	128	110	99	127	87	121	26	35	111	114
17	100	85	119	112	98	125	72	107	37	22	85	75
18	95	86	102	116	98	132	72	100	37	22	69	66
19	94	86	92	111	97	121	75	99	37	31	74	62
20	90	89	90	110	96	119	77	99	42	23	57	50
21	90	89	90	111	92	115	77	91	36	16	41	44
22	91	88	92	106	97	107	79	102	36	14	39	39
23	92	88	102	104	95	106	72	2,350	37	21	30	41
24	88	88	102	103	92	104	67	524	1,180	11	23	40
25	85	89	121	98	91	111	485	408	1,390	7	22	36
26	83	90	129	f98	94	106	1,270	339	1,340	5	25	36
27	81	94	139	f98	91	97	1,350	207	1,320	7	21	39
28	75	97	138	101	90	98	1,390	152	1,330	10	13	38
29	75	105	148	98	87	88	1,350	131	2,030	920	12	40
30	78	110	154	101	-	82	1,400	118	1,780	1,100	12	41
31	73	-	144	101	-	86	-	103	-	1,170	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,657	130	60	85.7	5,270
November	2,532	110	69	84.4	5,020
December	3,610	154	90	116	7,160
Calendar year 1939	95,658	4,570	12	262	189,700
January	3,574	142	98	115	7,090
February	3,264	158	87	113	6,470
March	16,663	2,840	82	538	33,050
April	9,637	1,400	57	321	19,110
May	10,367	2,350	91	334	20,560
June	11,561	2,030	26	385	22,930
July	6,724	1,170	5	217	13,340
August	11,735	1,280	10	379	23,280
September	8,985	1,250	8	300	17,820
Water year 1939-40	91,309	2,840	5	249	181,100

f Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Lake McMillan near Lakewood, N. Mex.

Location.- Staff gage, lat. 32°35'45", long. 104°20'55", in SE¼ sec. 2, T. 20 S., R. 26 E., at McMillan Dam on Pecos River, 3 miles southeast of Lakewood. Datum of gage is 3,241.6 feet above mean sea level (levels by Bureau of Reclamation).

Drainage area.- 16,990 square miles (contributing area).

Records available.- January 1939 to September 1940.

Extremes.- Maximum daily contents during year, 25,600 acre-feet Mar. 13-16 (gage height, 23.45 feet); minimum daily, 1,700 acre-feet Sept. 5, 6, 29, 30 (gage height, 15.7 feet).

1939-40: Maximum daily contents, 28,000 acre-feet May 16, 17, 1939 (gage height, 24.0 feet); minimum daily, that of Sept. 5, 6, 29, 30, 1940.

Remarks.- Lake is formed by McMillan Dam, which was completed and storage began in 1906. Capacity, 38,500 acre-feet between gage heights 0.0 foot (sill of outlet gates) and 26.1 feet (crest of spillway 1). No dead storage; figures given herein represent usable contents. Water is used for irrigation on Carlsbad project of Bureau of Reclamation. Gage read twice daily.

Cooperation.- Gage-height record and capacity curve furnished by Bureau of Reclamation.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Prepared by Bureau of Reclamation from survey of 1939)

14	270	19	9,180	24	28,000
15	870	20	12,300	25	32,780
16	2,120	21	15,750	26	38,000
17	4,020	22	19,530		
18	6,400	23	23,620		

Monthly gage height and contents, water year October 1939 to September 1940

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	20.78	15,000	-
Oct. 31	19.0	9,200	-5,800
Nov. 30	18.2	6,900	-2,300
Dec. 31	18.1	6,700	-200
Calendar year 1939	-	-	-9,400
Jan. 31	18.3	7,200	+500
Feb. 29	18.3	7,200	0
Mar. 31	22.35	20,900	+13,700
Apr. 30	19.48	10,600	-10,300
May 31	21.65	18,200	+7,600
June 30	21.58	17,900	-300
July 31	17.42	5,000	-12,900
Aug. 31	17.30	4,700	-300
Sept.30	15.72	1,700	-3,000
Water year 1939-40	-	-	-13,300

Pecos River below McMillan Dam, near Lakewood, N. Mex.

Location.- Water-stage recorder, lat. 32°35'30", long. 104°21'00", in NE¼ sec. 11, T. 20 S., R. 26 E., 700 feet downstream from McMillan Dam and 3 miles southeast of Lakewood.

Drainage area.- 16,990 square miles (contributing area).

Records available.- August 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum discharge during water year, 388 second-feet Apr. 4, 5 (gage height, 2.95 feet); no flow during many periods.
1940: Maximum discharge during period October to December, 175 second-feet Dec. 22 (gage height, 2.20 feet); no flow during many periods.
1939-40: Maximum discharge, that of Apr. 4, 5, 1940; no flow during many periods.

Remarks.- Records good except those below 10 second-feet, which are poor. Discharge represents water released from Lake McMillan for irrigation on Carlsbad project. Flow regulated by Alamogordo Reservoir (see p. 312), and Lake McMillan (see p. 317). Many diversions above station for irrigation.

Discharge, in second-feet, 1939-40

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	0	0	0	0	0	271	218	0	0	175	218
2	92	0	0	0	0	0	295	220	.5	0	280	215
3	92	9	0	5.5	0	0	285	220	.5	0	310	232
4	92	0	0	0	0	0	309	222	.5	0	313	238
5	92	0	0	0	0	0	266	222	.5	0	316	.5
6	92	0	7	0	0	0	107	191	.5	0	319	.5
7	90	0	0	0	0	0	106	160	.5	0	319	.5
8	89	0	0	0	0	0	107	138	.5	0	322	0
9	30	4.5	0	0	0	0	122	136	0	0	325	72
10	0	0	0	0	0	0	190	136	0	0	220	307
11	0	0	0	3	0	2	204	108	0	215	178	340
12	0	0	0	0	0	1	240	96	0	286	178	340
13	0	0	7.5	0	0	.5	232	98	0	334	58	340
14	0	0	0	0	0	.5	250	49	0	349	0	340
15	0	0	0	0	.5	0	222	1	58	349	0	337
16	0	5	0	0	1	0	170	1	114	346	0	310
17	4.5	0	0	5	.5	0	170	1	114	346	0	250
18	0	0	0	0	.5	0	168	1	112	340	0	164
19	0	0	0	0	.5	0	168	1	155	337	0	.5
20	0	0	5.5	0	.5	1	158	1	140	334	0	.5
21	0	0	0	0	.5	1.5	130	1.5	69	331	0	.5
22	0	0	0	0	.5	.5	121	1.5	.0	331	178	.5
23	0	8	0	0	.5	.5	129	1	0	328	238	.5
24	0	0	0	3	.5	.5	134	1	0	325	238	.5
25	0	0	0	0	.5	.5	158	1	0	322	235	131
26	4	0	0	0	.5	.5	154	1	0	319	230	140
27	0	0	0	0	.5	.5	163	1	0	316	230	98
28	0	0	0	0	0	133	149	1	0	313	228	.5
29	0	7	0	0	0	277	150	1.5	0	307	225	.5
30	0	0	0	0	-	277	174	1.5	0	240	222	.5
31	0	-	0	4	-	274	-	0	-	175	220	-

1940

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	0.5	0	0	11	0	0	2.5	21	0	0	0
2	0	0	0	12	0	0	0	22	0	0	2.5
3	0	0	0	13	1	0	0	23	0	0	0
4	0	0	0	14	0	0	0	24	0	0	0
5	0	4.5	0	15	0	2.5	0	25	4	0	0
6	0	0	0	16	0	0	0	26	0	2	0
7	0	0	0	17	0	0	0	27	0	0	0
8	3	0	0	18	0	0	0	28	0	0	0
9	0	0	0	19	0	0	0	29	0	0	0
10	0	0	0	20	0	0	0	30	0	0	0
								31	0	-	0

Monthly discharge, in second-feet, of Pecos River below McMillan Dam, near Lakewood, N. Mex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	769.5	92	0	24.8	1,530
November	33.5	9	0	1.12	66
December	20.0	7.5	0	.65	40
Calendar year 1939	-	-	-	-	-
January 1940	20.5	5.5	0	.66	41
February	7.0	1	0	.24	14
March	970.5	277	0	31.3	1,920
April	5,502	309	106	183	10,910
May	2,232.0	222	0	72.0	4,430
June	765.5	155	0	25.5	1,520
July	6,543	349	0	211	12,980
August	5,557	325	0	179	11,020
September	4,078.0	340	0	136	8,090
Water year 1939-40	26,498.5	349	0	72.4	52,560
October 1940	8.5	4	0	.27	17
November	9.0	4.5	0	.30	18
December	5.0	2.5	0	.16	9.9
Calendar year 1940	25,698.0	349	0	70.2	50,970

Pecos River at dam site 3, near Carlsbad, N. Mex.

Location.- Water-stage recorder, lat. 32°30'30", long. 104°19'30", in E½ sec. 6, T. 21 S., R. 26 E., at dam site 3 of Carlsbad Project of Bureau of Reclamation, about a mile upstream from flow line of Lake Avalon, and 8 miles northwest of Carlsbad.
Drainage area.- 17,620 square miles (contributing area).
Records available.- August 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum discharge during water year, 4,220 second-feet June 24 (gage height, 5.75 feet), from rating curve extended above 510 second-feet on basis of slope-area determination at gage height 3.12 feet; minimum daily, 112 second-feet Sept. 30.
1940: Maximum discharge during period October to December, 5,600 second-feet Oct. 13 (gage height, 7.05 feet), from rating curve extended above 510 second-feet on basis of slope-area determination at gage height 3.12 feet; minimum daily, 62 second-feet Oct. 11.
1939-40: Maximum discharge, that of Oct. 13, 1940; minimum daily, that of Oct. 11, 1940.
Remarks.- Records good except those for periods of uncertain or no gage-height record, which are fair. Flow regulated by Alamogordo Reservoir (see p. 312), and Lake McMillan (see p. 317). Many diversions above station for irrigation. Discharge represents inflow to Lake Avalon.
Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, 1939-40
1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	132	118	119	116	119	415	335	160	148	320	360
2	230	129	118	119	119	119	431	350	160	148	380	355
3	230	126	116	119	123	119	436	355	160	152	448	a345
4	230	129	118	119	123	119	436	360	160	152	448	a425
5	230	129	118	119	123	119	502	365	160	156	448	a185
6	230	129	118	119	123	119	278	350	160	156	448	137
7	230	129	118	119	123	116	269	320	164	156	453	130
8	230	129	115	119	126	119	264	282	164	160	458	123
9	210	126	115	119	123	119	264	282	164	164	458	119
10	154	126	115	123	119	123	330	282	160	164	395	365
11	150	126	115	119	119	126	330	269	164	255	325	448
12	150	126	115	119	123	134	390	247	160	415	325	458
13	146	126	115	123	123	137	390	242	160	464	260	464
14	143	126	118	119	123	144	400	233	160	508	168	464
15	a142	126	118	119	123	148	395	171	164	508	164	464
16	a141	122	116	119	123	156	320	168	242	508	160	448
17	140	122	118	119	123	156	311	164	247	548	160	390
18	140	122	116	119	123	160	311	160	247	514	156	345
19	140	122	118	119	123	164	311	156	273	508	156	171
20	140	122	118	d119	119	164	311	156	296	497	156	144
21	140	122	118	d119	119	171	278	160	242	497	156	137
22	140	122	118	d119	119	171	264	546	171	492	242	134
23	136	122	116	119	123	171	269	179	164	486	380	134
24	136	122	118	119	119	171	264	164	1,290	480	380	130
25	136	122	116	119	123	171	301	160	a187	475	380	171
26	136	122	118	119	130	171	292	160	a155	470	380	251
27	132	118	118	119	126	171	287	160	a152	464	375	233
28	132	118	118	119	123	216	292	156	152	458	370	141
29	132	118	118	119	119	420	278	164	152	453	365	116
30	132	116	118	119	-	420	301	160	152	420	365	112
31	132	-	116	119	-	420	-	160	-	325	360	-

a No gage-height record; discharge Oct. 15, 16, interpolated; June 25-27, Sept. 3-5, computed on basis of partly estimated gage heights, range of stage, and records for station below McMillan Dam.
d Doubtful gage-height record; discharge interpolated.

1940

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	a106	89	96	11	82	76	102	21	96	82	109
2	a99	86	96	12	87	79	102	22	96	82	109
3	a92	86	96	13	2,000	76	102	23	96	82	109
4	86	82	96	14	259	73	102	24	96	86	109
5	82	79	96	15	86	73	105	25	96	86	109
6	79	76	99	16	86	73	105	26	96	89	109
7	76	76	99	17	89	73	105	27	92	89	109
8	70	76	99	18	89	73	105	28	89	92	105
9	67	76	99	19	92	76	109	29	89	96	105
10	70	76	99	20	92	79	109	30	89	96	105
								31	89	-	105

a No gage-height record; discharge interpolated.

Monthly discharge, in second-feet, of Pecos River at dam site 3, near Carlsbad, N. Mex.
1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	5,120	230	132	165	10,160
November	3,728	132	118	124	7,390
December	3,640	118	115	117	7,220
Calendar year 1939	-	-	-	-	-
January 1940	3,697	123	119	119	7,330
February	3,541	130	116	122	7,020
March	5,355	420	116	173	10,620
April	9,920	502	264	331	19,680
May	7,416	546	156	239	14,710
June	6,542	1,290	152	218	12,980
July	11,301	548	148	365	22,420
August	10,039	458	156	324	19,910
September	7,895	464	112	263	15,660
Water year 1939-40	78,190	1,290	112	214	158,100
October 1940	4,773	2,000	62	154	9,470
November	2,433	96	73	81.1	4,830
December	3,204	109	96	103	6,360
Calendar year 1940	76,112	2,000	62	208	151,000

Lake Avalon near Carlsbad, N. Mex.

Location.- Staff gage, lat. 32°29'25", long. 104°15'00", in SW¼ sec. 12, T. 21 S., R. 26 E., at Avalon Dam on Pecos River, 5 miles north of Carlsbad. Datum of gage is 3,157.0 feet above mean sea level (levels by Bureau of Reclamation).

Drainage area.- 18,070 square miles (contributing area).

Records available.- January 1939 to September 1940.

Extremes.- 1939: Maximum daily contents during period January to September, 5,810 acre-feet Jan. 12-31 (gage height, 20.2 feet); minimum daily, 880 acre-feet Sept. 29 (gage height, 13.35 feet).
1939-40: Maximum daily contents during water year, 5,830 acre-feet May 30 (gage height, 20.22 feet); no storage Sept. 7, when natural flow was passing through reservoir.

Remarks.- Reservoir is formed by Avalon Dam; storage began in 1906. Capacity, 6,600 acre-feet between gage heights 0 (sill of outlet gates) and 21.0 feet (crest of spillway 1). No dead storage. Figures given herein represent usable contents. Water is used for irrigation on Carlsbad project of Bureau of Reclamation. Gage read twice daily.

Cooperation.- Gage-height record and capacity curve furnished by Bureau of Reclamation.

Revisions.- Revised figures of contents for period January to September 1939, and latest capacity table are given herein. They are based on reservoir survey of 1940 and 1941, and supersede those published in Water-Supply Paper 878.

Capacity table (gage height, in feet, and contents, in acre-feet)

4	0	12	480	20	5,620
6	20	14	1,150	22	7,630
8	73	16	2,350		
10	200	18	3,850		

Monthly gage height and contents, January 1939 to September 1940

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Jan. 1, 1939	19.58	5,220	-
Jan. 31	20.2	5,810	+590
Feb. 28	19.4	5,060	-750
Mar. 31	14.95	1,670	-3,390
Apr. 30	16.75	2,880	+1,210
May 31	15.08	1,750	-1,130
June 30	17.2	3,220	+1,470
July 31	15.02	1,710	-1,510
Aug. 31	14.82	1,590	-120
Sept.30	13.4	900	-690
The period	-	-	-4,320
Oct. 31, 1939	18.85	4,570	+3,670
Nov. 30	19.05	4,740	+170
Dec. 31	18.92	4,630	-110
Calendar year 1939	-	-	-590
Jan. 31, 1940	19.65	5,290	+660
Feb. 29	19.8	5,430	+140
Mar. 31	10.28	230	-5,200
Apr. 30	13.38	890	+660
May 31	20.05	5,670	+4,780
June 30	18.72	4,460	-1,210
July 31	15.88	2,270	-2,190
Aug. 31	14.65	1,490	-780
Sept.30	8.80	180	-1,310
Water year 1939-40	-	-	-720

Pecos River below Avalon Dam, near Carlsbad, N. Mex.

Location.- Water-stage recorder, lat. 32°27'20", long. 104°16'00", in NW¼ sec. 26, T. 21 S., R. 26 E., half a mile upstream from Carlsbad project canal flume, 3 miles downstream from Avalon Dam, and 3 miles northwest of Carlsbad.

Drainage area.- 18,070 square miles (contributing area).

Records available.- February to December 1940 (discontinued).

Extremes.- Maximum discharge during period, 1,220 second-feet Oct. 15 (gage height, 3.90 feet), from rating curve extended above 34 second-feet on basis of slope-area determination at gage height 3.28 feet; minimum daily, 0.8 second-foot Nov. 16, 24-30.

Remarks.- Records fair except those for period of no gage-height record, which are poor. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon. Many diversions above station for irrigation.

Discharge, in second-feet, February to December 1940

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	-	1.6	2.2	1.8	1.4	1.4	2.4	2.0	1.4	1.4	2.5	
2	-	1.4	2.2	1.8	1.4	1.4	2.4	2.2	1.4	1.4	6.6	
3	-	1.6	2.2	1.8	1.4	1.4	2.4	2.2	1.4	1.4	7.0	
4	-	1.6	2.2	1.7	1.4	1.4	2.4	2.2	1.4	1.4	11	
5	-	1.7	2.6	1.6	1.4	1.2	2.6	2.2	1.4	1.2	11	
6	2.6	1.4	2.2	1.6	1.2	1.2	2.6	2.0	1.4	1.2	11	
7	11	1.6	2.2	1.7	1.2	1.2	2.4	2.0	1.4	1.4	10	
8	37	1.7	2.0	2.4	1.4	1.2	2.4	1.8	1.4	1.4	11	
9	34	1.7	2.0	3.2	1.4	1.2	2.6	1.7	1.4	1.2	14	
10	32	1.8	2.0	2.0	1.4	1.4	2.8	1.4	1.4	1.2	13	
11	33	1.8	1.8	1.8	1.4	1.4	3.2	1.4	1.4	1.2	14	
12	5.4	1.7	2.2	1.8	1.6	1.4	3.2	1.4	1.7	1.0	17	
13	1.4	1.7	2.4	1.8	1.4	1.6	3.4	1.6	124	1.0	30	
14	1.2	1.7	2.4	1.8	1.4	1.7	2.8	1.6	141	1.0	29	
15	1.2	1.8	2.2	1.8	1.4	1.8	2.4	1.4	116	1.0	25	
16	a1.1	2.2	2.2	2.0	1.4	2.0	2.4	1.4	3.0	.8	20	
17	a1.1	2.0	2.0	2.0	1.4	2.2	2.0	1.4	1.6	1.0	20	
18	a1.1	1.8	1.8	a2	1.6	2.2	1.8	1.4	1.6	1.0	20	
19	1.0	1.8	2.0	a2	1.6	2.4	1.8	1.4	1.4	1.0	20	
20	20	1.8	2.0	a2	1.7	2.6	1.7	1.4	1.4	1.0	20	
21	26	1.8	2.0	a2	1.7	2.6	1.8	1.4	1.4	1.0	19	
22	24	1.8	2.0	a70	1.6	2.4	1.7	1.4	1.4	1.0	19	
23	22	1.8	2.0	a5	1.4	2.6	1.7	1.4	1.4	1.0	22	
24	20	1.7	2.2	2.2	1.6	2.4	1.8	1.4	1.4	.8	26	
25	20	1.8	2.4	2.2	1.6	2.4	1.8	1.4	1.4	.8	26	
26	16	1.8	2.2	2.0	1.4	2.4	1.7	1.4	1.4	.8	25	
27	16	1.8	2.2	1.7	1.4	2.4	1.7	1.4	1.4	.8	23	
28	3.9	1.8	2.0	1.6	1.2	2.6	1.7	1.4	1.4	.8	21	
29	1.8	1.8	2.0	1.6	1.4	2.6	1.7	1.4	1.4	.8	20	
30	-	2.0	1.8	1.4	1.4	2.6	1.8	1.4	1.4	.8	20	
31	-	2.0	-	1.4	-	2.6	1.8	-	1.4	-	24	

a No gage-height record; discharge Feb. 16-18 computed on basis of range of stage; period May 18-23 computed on basis of weather records, range of stage, one slope-area determination, and records for station at Carlsbad.

Monthly discharge, in second-feet, 1940

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
February 6-29, 1940	332.3	37	1.0	13.9	660
March	54.5	2.2	1.4	1.76	108
April	63.6	2.6	1.8	2.12	126
May	129.7	70	1.4	4.18	257
June	43.2	1.7	1.2	1.44	86
July	59.9	2.6	1.2	1.93	119
August	68.9	3.4	1.7	2.22	137
September	48.1	2.2	1.4	1.60	95
The period	-	-	-	-	1,590
October	421.5	141	1.4	13.6	836
November	31.8	1.4	.8	1.06	63
December	557.1	30	2.5	18.0	1,100
Calendar year 1940	-	-	-	-	-

Pecos River at Carlsbad, N. Mex.

Location.- Water-stage recorder, lat. 32°24'50", long. 104°13'20", in NW¼SE¼ sec. 6, T. 22 S., R. 27 E., at Green Street Bridge in Carlsbad. Datum of gage is 3,080.38 feet above mean sea level (general adjustment of 1929).

Drainage area.- 18,100 square miles (contributing area).

Records available.- May 1903 to March 1908, May 1914 to September 1925, October 1928 to September 1930, and October 1931 to September 1940 in reports of Geological Survey. June 1903 to December 1906, May 1914 to December 1928, and January 1930 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 362 second-feet May 22 (gage height, 1.35 feet); minimum daily, 45 second-feet June 19.
1903-8, 1914-40: Maximum discharge, 85,700 second-feet Aug. 7, 1916 (gage height, about 21.0 feet), from rating curve extended above 34,000 second-feet by logarithmic plotting; no flow May 9, 1904.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon and at low stages by power plant above station. Large diversions above station for irrigation.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	51	106	53	121	64	67	61	58	58	56	67
2	58	51	99	56	117	64	64	61	58	56	56	64
3	58	51	96	56	99	70	67	64	58	58	56	64
4	56	51	96	56	99	67	64	61	58	58	56	64
5	56	51	99	61	96	67	80	64	61	58	61	64
6	58	51	114	58	64	70	67	64	58	61	58	64
7	67	a85	140	53	56	64	67	64	56	61	58	64
8	67	a270	124	56	89	70	67	70	58	58	61	64
9	61	a270	114	58	86	70	67	70	58	58	61	64
10	56	a220	103	56	86	70	64	64	56	61	61	61
11	56	169	89	56	86	67	61	64	56	64	61	61
12	56	148	67	58	70	67	64	64	58	56	64	61
13	53	128	64	73	56	64	64	67	58	61	70	56
14	53	128	64	103	58	67	67	61	56	64	64	48
15	56	117	64	103	61	67	67	64	58	64	70	53
16	56	114	64	103	58	67	67	64	61	61	61	53
17	56	114	64	110	53	67	64	61	67	61	64	56
18	56	124	64	110	58	67	67	61	67	64	70	58
19	58	121	61	110	58	67	67	70	45	58	70	61
20	58	124	61	106	73	67	67	67	67	58	70	61
21	58	124	61	103	89	67	67	64	58	58	70	61
22	58	117	67	106	89	67	67	144	58	58	70	61
23	61	114	61	110	86	67	67	58	58	61	70	61
24	61	110	61	114	83	67	67	61	56	58	70	61
25	61	110	58	114	86	70	64	58	56	58	73	61
26	61	110	56	114	83	73	64	61	56	58	73	61
27	58	121	56	114	80	70	64	58	56	58	73	61
28	56	136	53	110	70	67	61	58	56	58	70	61
29	56	140	53	106	64	67	58	61	56	58	70	61
30	53	128	53	114	-	67	61	58	58	56	67	61
31	53	-	53	121	-	67	-	58	-	56	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,792	67	53	57.8	3,550
November	3,648	270	51	122	7,240
December	2,385	140	53	76.9	4,730
Calendar year 1939	30,552	338	51	8.37	60,600
January	2,721	121	53	87.8	5,400
February	2,274	121	53	78.4	4,510
March	2,092	73	64	67.5	4,150
April	1,969	80	58	65.6	3,910
May	2,025	144	58	65.3	4,020
June	1,738	67	45	57.9	3,450
July	1,835	64	56	59.2	3,640
August	2,018	73	56	65.1	4,000
September	1,818	67	48	60.6	3,610
Water year 1939-40	26,315	270	45	71.9	52,210

a No gage-height record; discharge computed on basis of range of stage, one discharge measurement, records of regulation at Avalon Dam, and records for station near Malaga.

Pecos River near Malaga, N. Mex.

Location.- Water-stage recorder, lat. 32°12'30", long. 104°01'30", in NW¼NW¼ sec. 19, T. 24 S., R. 29 E., 3 miles southeast of Malaga and 3 miles downstream from Black River. Datum of gage is 2,898.68 feet above mean sea level (general adjustment of 1929).

Drainage area.- 19,190 square miles (contributing area).

Records available.- May 1920 to September 1925, October 1931 to September 1940 in reports of Geological Survey. January 1921 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 3,210 second-feet May 22 (gage height, 7.2 feet); minimum daily, 56 second-feet Apr. 17.
1920-40: Maximum discharge, 38,200 second-feet June 1, 1937 (gage height, 25.7 feet); no flow Aug. 20-22, 1934.
Maximum stage known, 26.4 feet in September 1919 (discharge, 40,400 second-feet).

Remarks.- Records good except those for periods of incomplete or no gage-height record, which are fair. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon; also by several small power and irrigation diversion dams near Carlsbad. Many diversions above station for irrigation.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	129	203	120	174	90	73	84	107	118	71	91
2	127	120	178	127	174	84	73	86	f90	127	70	88
3	120	103	170	122	176	102	75	84	f67	135	75	90
4	111	122	157	126	166	88	86	83	f70	135	75	90
5	114	100	168	126	155	105	107	90	f76	98	75	98
6	122	112	170	122	155	90	196	116	86	122	75	112
7	137	100	163	120	147	79	116	122	f84	131	79	116
8	161	107	200	131	96	100	78	152	f79	107	83	96
9	161	166	205	127	126	100	71	399	f68	120	90	88
10	135	252	200	124	139	91	86	145	93	133	98	86
11	129	252	139	122	133	98	84	127	95	137	102	83
12	149	205	166	124	135	102	91	126	95	122	109	79
13	129	189	129	161	127	111	76	149	78	122	116	90
14	120	174	120	133	100	107	68	133	79	102	145	111
15	185	174	139	98	102	107	95	129	83	84	114	114
16	131	174	139	166	103	118	86	133	83	83	98	114
17	102	131	137	153	84	111	58	139	81	86	91	111
18	124	145	143	174	88	112	68	133	84	76	131	98
19	118	153	147	159	86	111	93	122	98	98	102	91
20	124	153	145	a170	109	93	83	127	328	81	95	91
21	114	147	145	a155	116	93	84	139	214	109	73	96
22	112	172	143	a150	141	96	86	1,200	153	71	96	100
23	116	151	153	a150	114	76	78	489	98	64	139	96
24	112	153	141	a140	112	91	81	170	105	79	147	114
25	129	147	135	183	112	71	79	139	116	78	170	111
26	118	180	168	153	116	73	98	129	112	79	196	112
27	127	166	133	157	107	78	91	131	111	73	151	107
28	122	176	122	166	112	90	81	124	95	73	145	118
29	122	207	120	157	107	79	81	127	129	78	149	133
30	124	205	118	163	-	71	78	137	129	84	122	139
31	116	-	122	161	-	70	-	135	-	84	91	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,950	185	102	127	7,830
November	4,765	252	100	159	9,450
December	4,718	205	118	152	9,360
Calendar year 1939	46,865	317	42	128	92,950
January	4,440	183	98	143	8,810
February	3,612	176	84	125	7,160
March	2,887	118	70	93.1	5,730
April	2,598	196	56	86.6	5,150
May	5,599	1,200	83	181	11,110
June	3,186	328	67	106	6,320
July	3,089	137	64	99.6	6,130
August	3,373	196	70	109	6,690
September	3,063	139	79	102	6,080
Water year 1939-40	45,280	1,200	56	124	89,820

a No gage-height record; discharge computed on basis of weather records, and records for stations at Carlsbad, Pierce Canyon Crossing, and Red Bluff.
f Fragmentary gage-height record; discharge computed on basis of partly estimated gage heights, and records for station at Pierce Canyon Crossing.

Pecos River at Pierce Canyon Crossing, near Malaga, N. Mex.

Location.- Water-stage recorder, lat. 32°11'20", long. 103°59'00", in SE¼ sec. 28, T. 24 S., R. 29 E., a quarter of a mile upstream from Pierce Canyon Crossing and 6 miles southeast of Malaga.

Drainage area.- 19,260 square miles (contributing area).

Records available.- July 1938 to September 1940.

Extremes.- Maximum discharge during year, 3,140 second-feet May 22 (gage height, 3.82 feet), from rating curve extended above 270 second-feet on basis of records for stations near Malaga and at Red Bluff; minimum daily, 60 second-feet Aug. 2.
1938-40: Maximum discharge, that of May 22, 1940; minimum daily, 33 second-feet Aug. 12, 13, 1938.
Revisions.- The figure for maximum discharge for the period July to September 1938 has been revised to 2,710 second-feet Sept. 2 (gage height, 3.49 feet), superseding figure published in Water-Supply Paper 878.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow regulated by Alamogordo Reservoir, Lake McMillan, and Lake Avalon, and several small diversion and power dams below Carlsbad. Numerous diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	a128	190	115	f185	122	80	78	118	118	f67	91
2	128	a120	174	125	181	99	82	80	112	134	f60	91
3	118	a110	166	128	185	102	82	86	91	134	f65	91
4	122	118	f162	125	174	118	89	89	86	141	f67	94
5	107	107	f170	131	159	102	122	104	86	107	f69	102
6	128	115	170	122	159	109	198	131	99	115	f76	118
7	128	107	166	118	155	94	162	128	107	134	f86	131
8	170	112	198	138	115	86	86	131	99	115	89	109
9	177	148	207	128	104	107	82	426	86	115	96	96
10	177	234	202	128	144	99	86	151	99	131	94	89
11	131	266	155	122	141	112	102	131	104	141	107	86
12	159	215	144	125	144	112	91	128	104	125	125	89
13	141	207	141	144	138	122	104	148	96	122	131	99
14	128	194	125	155	115	118	76	138	91	109	144	115
15	162	181	138	99	94	122	104	131	99	91	125	134
16	166	177	138	144	109	131	94	141	104	89	104	131
17	104	162	f134	166	102	118	73	148	99	94	96	128
18	125	138	f148	155	76	122	71	148	99	86	122	112
19	122	166	148	a175	104	131	94	128	137	104	109	99
20	128	174	f144	a180	112	115	89	131	329	94	a95	96
21	115	170	144	a165	118	107	80	144	234	109	a70	99
22	125	185	141	a155	138	115	82	1,100	185	94	a95	109
23	112	162	151	a155	128	115	71	647	125	a65	a135	107
24	112	155	148	148	128	109	84	198	122	71	a145	125
25	134	151	138	185	128	91	82	144	134	71	a170	125
26	115	190	162	159	141	89	102	131	128	69	a190	128
27	125	f170	141	159	122	94	89	134	122	67	148	122
28	122	f177	122	166	131	102	82	128	104	65	141	131
29	118	207	118	162	125	89	78	128	138	67	144	144
30	122	198	118	166	-	86	73	138	141	86	134	155
31	107	-	115	f177	-	76	-	144	-	84	91	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,069	177	104	131	8,070
November	4,944	266	107	165	9,810
December	4,718	207	115	152	9,360
Calendar year 1939	50,115	305	58	137	99,400
January	4,520	185	99	146	8,970
February	3,855	185	76	133	7,650
March	3,514	131	76	107	6,570
April	2,790	198	71	93.0	5,530
May	5,812	1,100	78	187	11,530
June	3,678	329	86	123	7,300
July	3,147	141	65	102	6,240
August	3,590	190	60	109	6,720
September	3,546	155	86	112	6,640
Water year 1939-40	47,583	1,100	60	130	94,390

a No gage-height record; discharge computed on basis of records for stations near Malaga and at Red Bluff, records for Livingston pump ditch near Malaga, Harroun canal wasteway 3 near Malaga, and weather records.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Pecos River at Red Bluff, N. Mex.

Location.- Water-stage recorder, lat. 32°04'40", long. 104°02'20", at Red Bluff, Eddy County, just downstream from Red Bluff Creek and 5½ miles upstream from Delaware River. Datum of gage is 2,850.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 19,540 square miles (contributing area).

Records available.- October 1937 to September 1940. May 1914 to September 1937 at site 6 miles downstream and half a mile downstream from Delaware River, published as Pecos River near Angeles, Tex. Records equivalent except for short periods of flood run-off from Delaware River.

Extremes.- Maximum discharge during year, 2,820 second-feet May 22 (gage height, 7.56 feet); minimum, 49 second-feet July 24 (gage height, 3.09 feet); minimum daily, 60 second-feet Apr. 18.

1937-40: Maximum discharge, 6,460 second-feet June 28, 1938 (gage height, 10.12 feet); minimum, 34 second-feet Aug. 13, 1938.

Maximum stage known, 28.0 feet in October 1904, from information furnished by chief engineer of Panhandle & Santa Fe Ry. Co. (discharge not determined). Flood of June 1, 1937, reached a stage of 24.8 feet, present site and datum; from floodmarks (discharge, 41,400 second-feet, revised, from rating curve extended above 30,000 second-feet on basis of slope-area determination in 1941 at gage height 28.3 feet).

Remarks.- Records excellent except those for period of no gage-height record, which are good. Flow regulated to large extent by reservoirs above Carlsbad. Sum of discharge at this station and that on Delaware River near Red Bluff is practically equivalent to records at former station near Angeles, Tex. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	134	199	127	178	122	82	75	118	132	78	97
2	136	129	188	132	180	107	80	80	109	132	68	95
3	125	120	178	138	188	98	83	85	97	138	65	93
4	114	116	160	129	188	118	91	85	80	141	68	95
5	112	129	162	136	168	91	107	95	85	136	71	101
6	123	114	165	138	175	123	176	120	89	101	75	114
7	123	127	165	127	183	99	202	125	95	132	97	129
8	178	116	178	148	172	80	105	138	99	132	87	120
9	178	122	199	138	106	111	91	419	95	109	95	103
10	145	208	202	138	138	101	82	175	85	134	91	93
11	136	300	188	134	166	107	97	136	106	138	107	89
12	146	223	123	134	151	116	91	125	107	134	123	89
13	150	205	170	138	152	118	112	138	99	123	134	95
14	132	188	127	183	138	125	75	145	93	123	138	105
15	132	180	129	120	106	120	83	127	91	99	145	134
16	199	178	138	165	117	127	95	132	99	93	118	132
17	125	175	141	194	113	132	89	134	99	97	112	127
18	114	118	145	150	87	125	60	148	93	99	109	118
19	132	165	148	178	96	127	76	123	187	97	136	105
20	132	158	150	191	90	129	93	127	476	103	101	95
21	127	158	148	180	116	109	73	138	299	101	91	95
22	134	165	145	165	127	112	78	1,290	217	134	73	103
23	118	168	145	165	160	116	73	1,120	148	65	112	107
24	127	152	160	165	130	95	71	276	112	62	152	112
25	136	155	145	180	127	112	80	158	132	76	162	127
26	125	162	150	180	125	93	89	138	134	73	191	125
27	134	175	170	168	134	95	87	138	120	71	178	125
28	134	168	132	175	122	97	85	132	125	70	143	127
29	132	186	129	172	130	103	75	129	123	70	145	136
30	134	202	127	172	-	93	76	134	150	76	145	155
31	125	-	126	175	-	82	-	145	-	89	105	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,195	199	112	135	8,320
November	4,896	300	114	163	9,710
December	4,831	202	123	156	9,580
Calendar year 1939	52,069	354	65	143	103,300
January	4,835	194	120	156	9,590
February	4,052	188	87	140	8,040
March	3,383	132	80	109	6,710
April	2,757	202	60	91.9	5,470
May	6,528	1,290	75	211	12,950
June	3,961	476	80	132	7,860
July	3,280	141	62	106	6,510
August	3,515	191	65	113	6,970
September	3,341	155	89	111	6,630
Water year 1939-40	49,574	1,290	60	135	98,340

Peak discharge.- May 9 (12 m.) 831 sec.-ft.; May 22 (10 p.m.) 2,820 sec.-ft.; June 20 (8 a.m.) 950 sec.-ft.

Note.- No gage-height record Feb. 9 to Mar. 3; discharge computed on basis of records for Delaware River near Red Bluff, N. Mex., and old station, Pecos River near Angeles.

Red Bluff Reservoir near Orla, Tex.

Location.- Ashcroft Durogauge (pressure type), lat. 31°54'05", long. 103°54'40", at dam on Pecos River, 3 miles upstream from Salt (Screwbean) Draw, 4.5 miles north of Orla, Reeves County, and 11 miles downstream from New Mexico-Texas State line. Prior to June 11, 1937, staff gage at upstream side of dam at same datum. Datum of gage is 0.30 foot below mean sea level (general adjustment of 1929).

Drainage area.- 20,720 square miles (contributing area).

Records available.- February 1937 to September 1940.

Extremes.- Maximum and minimum contents for the period ending Sept. 30, 1937, and the water years 1938-40 are contained in the following table:

Water year	Maximum			Minimum		
	Date	Contents (acre-feet)	Elevation (feet)	Date	Contents (acre-feet)	Elevation (feet)
1937	June 17	305,000	2,841.5	Aug. 20*	243,000	2,835.3
1937-38	Nov. 16-18	268,000	2,837.8	Sept. 1	144,200	2,823.8
1938-39	Mar. 11, 14	159,000	2,826.0	Sept.30	47,000	2,803.0
1939-40	Mar. 18-23	76,000	2,811.1	Sept.17, 23-28	28,000	2,794.8

*Minimum in 1937 after filling of reservoir.

1937-40: Maximum contents, 305,000 acre-feet June 17, 1937 (elevation, 2,841.5 feet); minimum, subsequent to filling of reservoir June 17, 1937, 28,000 acre-feet Sept. 17, 23-28, 1940 (elevation, 2,794.8 feet).

Remarks.- Records good. Reservoir is formed by earth-fill dam, rip-rap faced; storage began in 1936; dam completed early in 1937. Capacity, 307,000 acre-feet between elevations 2,764.0 feet (penstock intake sill) and 2,842.0 feet (top of Taintor gates) above datum of gage. Dead storage below penstocks, 3,000 acre-feet. Records given herein represent total contents. Water is used for power developement and for irrigation from Mentone to Grandfalls. Gage read about 9 a.m. daily.

Cooperation.- Elevation record and capacity curve furnished by Red Bluff Water Power Control District.

Capacity table, Feb. 14, 1937, to Sept. 30, 1940 (elevation, in feet, and contents, in acre-feet)

2,780	10,100	2,800	39,000	2,825	152,000
2,784	13,200	2,805	53,000	2,830	192,000
2,788	17,800	2,810	71,500	2,835	240,000
2,792	23,300	2,815	94,000	2,842	310,000
2,796	30,300	2,820	121,000		

Note.- Derived from capacity curve prepared by Mr. O. N. Floyd, consulting engineer for Red Bluff Water Power Control District, Orla topographic map of the Geological Survey, and by estimating that portion of contents (comparatively small) above State line.

Monthly elevation and contents, 1937-40

Date	Elevation (feet)	Contents at end of month (acre-feet)	Change in contents during month (acre-feet)
May 31, 1937	2,798.2	34,800	-
June 30	2,840.6	296,000	+261,200
July 31	2,837.8	268,000	-28,000
Aug. 31	2,836.1	251,000	-17,000
Sept.30	a2,837.3	263,000	+12,000
Water year 1936-37	-	-	+219,000
Oct. 31, 1937	2,837.6	266,000	+3,000
Nov. 30	*2,837.4	264,000	-2,000
Dec. 31	*2,837.2	262,000	-2,000
Calendar year 1937	-	-	-
Jan. 31, 1938	*2,837.1	261,000	-1,000
Feb. 28	*2,837.0	260,000	-1,000
Mar. 31	*2,835.8	248,000	-12,000
Apr. 30	*2,832.9	219,000	-29,000
May 31	2,830.8	199,200	-19,800
June 30	2,831.0	201,000	+1,800
July 31	2,829.8	190,200	-10,800
Aug. 31	2,824.2	146,800	-43,400
Sept.30	2,824.0	145,500	-1,300
Water year 1937-38	-	-	-117,500

* Estimated.

Monthly elevation and contents, of Red Bluff Reservoir near Orla, Tex., 1937-40--continued

Date	Elevation (feet)	Contents at end of month (acre-feet)	Change in contents during month (acre-feet)
Oct. 31, 1938.....	2,823.4	141,600	-3,900
Nov. 30.....	2,823.8	144,200	+2,600
Dec. 31.....	2,824.1	146,200	+2,000
Calendar year 1938....	-	-	-115,800
Jan. 31, 1939.....	2,825.1	152,700	+6,500
Feb. 28.....	2,825.7	156,900	+4,200
mar. 31.....	2,825.0	152,000	-4,900
Apr. 30.....	2,820.4	123,400	-28,600
May 31.....	2,818.8	113,900	-9,500
June 30.....	2,816.4	101,000	-12,900
July 31.....	2,811.6	78,200	-22,800
Aug. 31.....	2,808.8	66,700	-11,500
Sept.30.....	2,803.0	47,000	-19,700
Water year 1938-39....	-	-	-98,500
Oct. 31, 1939.....	2,802.8	46,400	-600
Nov. 30.....	2,804.0	50,000	+3,600
Dec. 31.....	2,806.5	58,200	+8,200
Calendar year 1939....	-	-	-88,000
Jan. 31, 1940.....	2,808.6	65,900	+7,700
Feb. 29.....	2,810.4	73,100	+7,200
Mar. 31.....	2,809.8	70,700	-2,400
Apr. 30.....	2,804.3	50,900	-19,800
May 31.....	2,806.2	57,200	+6,300
June 30.....	2,805.2	53,700	-3,500
July 31.....	2,797.5	33,400	-20,300
Aug. 31.....	2,796.5	31,300	-2,100
Sept.30.....	2,795.0	28,400	-2,900
Water year 1939-40....	-	-	-18,600

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Pecos River near Orla, Tex.

Location.- Water-stage recorder, lat. 31°49', long. 103°48', in E½ sec. 26, Blk. 56, Texas & Pacific Ry. Co. Survey, about 600 feet upstream from Pasotex pipe-line crossing, 6 miles southeast of Orla, Reeves County, 16 miles downstream from Salt (Screwbean) Draw, and 19 miles downstream from Red Bluff Dam. Datum of gage is 2,718.0 feet above mean sea level (general adjustment of 1929).

Drainage area.- 21,300 square miles (contributing area).

Records available.- May 1937 to September 1940.

Extremes.- Maximum discharge during year, 770 second-feet June 29 (gage height, 2.92 feet); minimum, 2.1 second-feet (regulated) Mar. 4.
1937-40: Maximum discharge, 8,230 second-feet June 9, 1937 (gage height, 9.93 feet), computed on basis of slope-area measurement at site 16 miles above station in Salt (Screwbean) Draw; minimum daily, 2 second-feet (regulated) June 3, 1937.

Remarks.- Records good. Flow regulated by Red Bluff Reservoir (capacity at top of Taintor gates, 310,000 acre-feet, revised) except for occasional run-off from draws between dam and station. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	182	162	49	a37	15	9.5	496	219	50	21	243	136
2	178	162	45	f40	14	9.6	502	208	46	10	219	142
3	172	165	47	41	18	14	507	208	48	77	223	139
4	172	162	43	40	19	2.7	636	208	50	109	259	136
5	168	165	42	40	14	7.8	525	204	48	112	275	136
6	168	168	40	43	27	8.0	373	204	156	139	271	139
7	172	168	42	41	4.5	7.9	364	189	196	142	242	92
8	192	172	42	41	3.6	8.0	359	208	166	156	97	85
9	199	172	40	40	3.3	9.4	350	149	163	239	126	135
10	175	165	38	41	3.3	16	295	83	163	397	126	373
11	175	120	36	40	3.3	3.6	283	73	231	442	129	307
12	175	114	f33	39	3.3	7.9	287	51	315	442	139	164
13	175	91	f33	40	3.0	7.8	307	48	328	474	126	247
14	175	102	f33	39	3.0	8.0	426	46	333	474	29	247
15	133	109	g34	37	3.3	9.4	457	44	350	496	26	255
16	108	111	g33	30	3.3	9.1	392	44	355	479	30	235
17	100	73	g30	15	3.0	16	378	18	355	496	11	174
18	100	76	g32	15	6.5	3.3	397	3.6	350	567	341	170
19	86	70	g34	13	3.6	7.5	397	7.5	346	573	132	133
20	66	75	g34	14	8.0	14	392	3.6	333	573	23	126
21	84	73	g32	15	8.5	3.9	401	26	178	586	16	126
22	84	66	g33	15	9.4	7.5	421	180	71	555	170	126
23	84	65	g33	16	8.8	47	341	250	63	573	174	123
24	97	59	a32	15	9.9	291	324	120	67	579	174	123
25	168	63	a32	14	15	337	328	133	23	623	178	123
26	165	65	a32	14	3.6	368	328	129	6.8	579	174	123
27	162	62	g31	18	8.9	382	333	129	4.8	416	255	123
28	162	52	g34	17	8.9	421	319	126	3.6	401	271	112
29	162	52	g34	3.9	8.8	491	303	136	452	397	264	71
30	162	50	g37	14	-	496	251	149	109	341	149	69
31	162	--	g34	14	-	496	-	126	-	283	146	-

Month	8econd-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,583	199	84	148	9,090
November	3,209	172	50	107	6,360
December	1,124	49	30	36.3	2,230
Calendar year 1939	91,646	947	30	251	181,800
January	841.9	43	3.9	27.2	1,670
February	243.8	27	3.0	8.41	484
March	3,519.9	496	2.7	114	6,980
April	11,472	636	251	382	22,750
May	3,722.7	250	3.6	120	7,380
June	5,360.2	452	3.6	179	10,630
July	11,751	623	10	379	23,310
August	5,038	341	11	163	9,990
September	4,690	373	69	156	9,300
Water year 1939-40	55,555.5	636	2.7	152	110,200

Peak discharge.- May 22 (11 p.m.) 662 sec.-ft.; June 29 (4 p.m.) 770 sec.-ft.); Aug. 18 (2 p.m.) 708 sec.-ft.

a No gage-height record; discharge interpolated.
f Gage-height record incomplete; discharge computed on basis of partial gage-height record.
g Computed from graph based on two or more daily gage readings.

Pecos River at Pecos, Tex.

Location.- Water-stage recorder, lat. 31°26', long. 103°28', 70 feet upstream from Texas & Pacific Ry. Co. bridge, 1.7 miles east of Pecos, Reeves County, and about 11 miles upstream from Toyah Creek. Datum of gage is 2,554.0 feet above mean sea level (general adjustment of 1929). Prior to Sept. 24, 1939, staff gage at railway bridge 70 feet downstream at same datum. Station 10 miles downstream from that discontinued July 18, 1926, published as Pecos River above Barstow, Tex.

Drainage area.- 22,100 square miles (contributing area).

Records available.- August 1939 to September 1940. January 1898 to June 1907 at flume of Barstow Irrigation Co. (old Margueretta Canal Co.), 6.4 miles upstream, published as Pecos River near Pecos, Tex. April 1914 to August 1915 at site 7 miles downstream, published as Pecos River near Barstow, Tex. March 1922 to July 1926 at site about 10 miles upstream, published as Pecos River above Barstow, Tex.

Extremes.- Maximum discharge during period Aug. 16, 1939, to Sept. 30, 1940, 528 second-feet (regulated) June 30 (gage height, 5.79 feet); minimum daily, 10 second-feet (regulated) Mar. 13, 14.

1898-1907, 1914-15, 1922-26, 1939-40: Maximum gage height, about 18 feet Oct. 5, 1904, present site and datum, according to information from local residents (discharge not determined); minimum discharge not determined, affected by diversions.

Flood of August 1893 reached approximately the same stage as that of Oct. 5, 1904, according to information from local residents.

Remarks.- Records excellent except those for period Aug. 16-24, 1939, when staff gage was used, which are good. Staff gage read twice daily. Flow regulated to large extent by reservoirs upstream from Orla. Several diversions for irrigation between Orla and this station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 25 to Mar. 11, Apr. 5 to May 29, Aug. 20 to Sept. 11)

1.8	9.0	2.2	24	3.4	142
1.9	12	2.4	36	4.6	327
2.0	15	2.6	51	5.8	528
2.1	19	3.0	91		

Discharge, in second-feet, 1939-40

1939

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1											-	142
2											-	156
3											-	159
4											-	141
5											-	171
6											-	149
7											-	150
8											-	143
9											-	110
10											-	143
11											-	194
12											-	208
13											-	208
14											-	208
15											-	216
16											78	224
17											70	231
18											83	224
19											116	224
20											135	224
21											124	224
22											110	190
23											101	138
24											98	125
25											107	134
26											107	131
27											105	125
28											104	118
29											105	98
30											113	99
31											118	-

Discharge, in second-feet, of Pecos River at Pecos, Tex., 1939-40--Continued

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	99	59	35	18	13	255	188	96	109	255	84
2	91	102	58	35	18	14	247	110	59	35	208	86
3	76	104	59	35	17	15	255	134	20	68	190	86
4	71	103	56	35	17	15	255	129	14	38	176	88
5	67	105	56	35	17	15	287	125	50	54	178	88
6	62	107	54	36	21	14	279	119	21	54	156	92
7	51	104	52	35	26	12	186	102	13	70	158	87
8	54	104	50	35	25	12	158	97	61	99	158	65
9	64	102	49	35	29	12	165	110	78	68	101	41
10	71	105	49	35	18	12	162	110	53	56	56	20
11	62	86	48	35	18	12	125	95	38	105	63	85
12	55	71	48	35	21	11	129	69	41	160	59	167
13	55	55	46	35	20	10	146	57	118	155	68	55
14	61	51	45	35	19	10	170	42	162	178	87	29
15	89	47	45	35	19	11	247	31	172	192	88	57
16	104	45	44	35	19	11	271	29	189	201	66	87
17	68	47	45	35	14	11	224	26	200	208	50	110
18	56	58	46	55	15	12	182	21	201	208	45	107
19	44	51	45	31	16	13	189	19	201	271	295	82
20	30	49	45	26	16	14	194	15	224	311	71	56
21	23	44	43	24	14	15	194	15	247	335	26	43
22	23	43	45	23	14	15	195	15	172	359	22	56
23	31	45	45	20	15	16	224	20	141	351	19	60
24	33	42	37	20	14	15	183	20	91	359	14	80
25	42	41	37	20	14	31	159	16	76	384	19	78
26	83	40	36	20	15	173	190	22	70	418	28	64
27	86	36	36	20	15	239	239	18	50	418	34	65
28	107	39	37	20	16	263	239	20	40	344	67	65
29	96	40	36	19	17	287	208	17	29	295	120	61
30	97	42	35	19	-	335	154	35	259	279	132	55
31	98	-	35	20	-	319	-	90	-	255	100	-

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 16-31, 1939	1,674	155	70	105	3,320
September	5,005	231	98	167	9,930
Water year	-	-	-	-	-
October 1939	2,045	107	23	66.0	4,060
November	2,007	107	36	66.9	3,980
December	1,418	59	35	45.7	2,810
Calendar year	-	-	-	-	-
January 1940	913	36	19	29.4	1,810
February	517	29	14	17.8	1,030
March	1,957	355	10	63.1	3,880
April	6,111	287	125	204	12,120
May	1,916	188	15	61.8	3,800
June	3,186	259	13	106	6,320
July	6,437	418	35	208	12,770
August	3,109	295	14	100	6,170
September	2,195	167	20	73.2	4,350
Water year 1939-40	31,811	418	10	86.9	63,100

Pecos River below Barstow, Tex.

Location.- Water-stage recorder, lat. 31°25', long. 103°15', 20 feet downstream from Grandfalls-Big Valley diversion dam, 6 miles downstream from Toyah Creek, and 8½ miles southeast of Barstow, Ward County. Datum of gage is 2,512.2 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army). Prior to Aug. 30, 1939, staff gage at same site and datum.

Drainage area.- 25,980 square miles (contributing area).

Records available.- August 1939 to December 1940 (discontinued).

Extremes.- Maximum discharge during period Aug. 19, 1939, to Dec. 31, 1940, 1,600 second-feet Oct. 14, 1940 (gage height, 11.04 feet), from rating curve extended above 1,100 second-feet; minimum daily, 17 second-feet (regulated) Aug. 25, 1940.

Remarks.- Records good. Staff gage read twice daily. Flow regulated to large extent by reservoirs above Orla. Several diversions between Orla and this station for irrigation. Some water from drains and wasteways returns to river between this station and that at Pecos.

Discharge, in second-feet, 1939-40

1939

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	152	11	-	210	21	a122	274
2	-	188	12	-	186	22	a124	280
3	-	197	13	-	221	23	a126	208
4	-	190	14	-	179	24	128	164
5	-	184	15	-	147	25	133	157
6	-	205	16	-	253	26	136	168
7	-	177	17	-	316	27	134	164
8	-	195	18	-	337	28	133	162
9	-	158	19	118	316	29	136	154
10	-	160	20	a120	293	30	140	137
						31	144	-

a No gage-height record; discharge interpolated.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	147	125	86	58	45	37	303	157	105	295	232	116
2	131	124	86	58	43	34	271	131	102	107	219	110
3	133	128	84	59	43	34	265	137	68	79	208	110
4	118	124	83	59	42	36	286	141	46	94	171	107
5	f112	129	81	62	41	36	473	141	45	70	161	109
6	f103	137	79	64	41	36	467	140	67	91	220	109
7	105	136	77	61	45	34	359	114	42	86	298	113
8	102	133	74	58	48	32	239	100	47	116	1,040	98
9	122	137	74	58	48	32	231	112	89	124	839	74
10	122	134	73	62	49	32	210	107	86	92	442	52
11	129	129	75	62	41	32	188	139	70	90	246	36
12	124	113	70	62	43	31	152	109	58	163	182	142
13	140	96	70	58	43	30	168	96	71	153	188	154
14	117	90	69	57	43	30	186	84	133	151	180	65
15	117	84	69	58	42	30	228	70	154	174	174	58
16	138	82	66	59	42	30	337	61	166	182	150	90
17	127	84	66	58	41	30	302	58	154	190	85	120
18	104	89	67	58	38	30	225	55	149	190	158	141
19	101	97	67	59	38	31	220	51	157	216	172	120
20	83	84	67	53	39	32	228	48	378	270	205	103
21	f71	82	67	50	38	33	234	44	305	293	67	74
22	a74	77	65	51	36	34	231	45	305	305	30	44
23	f77	74	67	48	36	34	239	52	229	305	29	26
24	74	73	65	45	37	36	182	48	172	305	23	27
25	70	73	64	45	36	33	135	48	133	305	17	28
26	91	65	59	46	36	82	152	45	120	318	26	28
27	108	75	58	46	36	196	164	48	105	318	33	44
28	118	73	58	45	36	245	170	45	85	394	84	57
29	122	81	58	44	37	277	171	45	75	347	105	100
30	115	78	57	43	-	330	136	46	84	305	145	79
31	120	-	58	44	-	386	-	73	-	293	151	-

Peak discharge.- Aug. 8 (7 p.m.) 1,110 sec.-ft.
a No gage-height record; discharge interpolated.
f Discharge computed on basis of partial gage-height record.

Discharge, in second-feet, of Pecos River below Barstow, Tex., 1939-40--Continued

1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	60	37									
2	56	61	36									
3	51	55	36									
4	43	59	36									
5	63	60	36									
6	48	58	36									
7	43	55	36									
8	45	67	35									
9	45	54	35									
10	72	54	35									
11	483	52	35									
12	333	49	34									
13	277	47	36									
14	1,120	46	35									
15	551	45	34									
16	507	43	34									
17	348	42	34									
18	195	42	34									
19	143	41	34									
20	117	40	33									
21	99	40	33									
22	86	40	33									
23	f78	40	32									
24	f70	40	32									
25	67	39	34									
26	66	39	39									
27	80	38	37									
28	96	38	38									
29	104	38	34									
30	100	38	33									
31	81	-	32									

Peak discharge.- Oct. 14 (2 a.m.) 1,600 sec.-ft.
f Discharge computed on basis of partial gage-height record.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 19-31, 1939	1,694	144	118	130	3,360
September	6,132	337	137	204	12,160
Water year	-	-	-	-	-
October 1939	3,415	147	70	110	6,770
November	3,006	137	65	100	5,960
December	2,159	86	57	69.6	4,280
Calendar year	-	-	-	-	-
January 1940	1,689	64	43	54.5	3,350
February	1,182	49	35	40.8	2,340
March	2,335	386	30	75.3	4,630
April	7,172	473	136	239	14,230
May	2,590	157	44	83.5	5,140
June	3,800	378	42	127	7,540
July	6,421	394	70	207	12,740
August	6,260	1,040	17	202	12,420
September	2,534	154	26	84.5	5,030
Water year 1939-40	42,563	1,040	17	116	84,430
October 1940	5,527	1,120	43	178	10,960
November	1,410	61	38	47.0	2,800
December	1,078	39	32	34.8	2,140
Calendar year 1940	41,998	1,120	17	115	83,320

Pecos River below Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°18', long. 102°46', at bridge on county road between Grandfalls and Imperial, 3 miles northwest of Imperial, Pecos County, 7.1 miles southeast of Grandfalls, Ward County, and about 10 miles downstream from Chacatori Draw. Datum of gage is 2,373.0 feet above mean sea level (general adjustment of 1929; levels by Corps of Engineers, U. S. Army). Prior to Oct. 6, 1939, staff gage at same site and datum.

Drainage area.- 27,820 square miles (contributing area).

Records available.- August 1939 to September 1940. December 1921 to July 1926 at site about 12 miles downstream, published as Pecos River near Buena Vista, Tex.

Extremes.- Maximum discharge during period Aug. 22, 1939, to Sept. 30, 1940, 700 second-feet (regulated) Aug. 10 (gage height, 6.02 feet); minimum daily, 17 second-feet (regulated) Sept. 17, 18, 1940.

1921-26, 1939-40: Maximum discharge, 2,640 second-feet Oct. 19, 1923 (gage height, 7.77 feet, site and datum then in use); minimum daily, 8.0 second-feet (regulated) July 27, 1925.

Flood of 1915 was the largest known, and that of September or October 1932 reached a stage of 18 feet, according to information from local residents.

Remarks.- Records good. Staff gage read once daily. Flow regulated to large extent by reservoirs above Orla. Many diversions between Orla and this station for irrigation.

Discharge, in second-feet, 1939-40

1939

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	45	11	-	36	21	-	63
2	-	41	12	-	34	22	49	68
3	-	37	13	-	32	23	a48	60
4	-	32	14	-	28	24	48	56
5	-	30	15	-	27	25	45	36
6	-	29	16	-	28	26	60	35
7	-	31	17	-	51	27	65	46
8	-	33	18	-	62	28	66	50
9	-	36	19	-	56	29	71	52
10	-	36	20	-	54	30	71	58
						31	55	-

a No gage-height record; discharge interpolated.

Note.- Discharge computed from graph based on one or more daily gage readings, Aug. 22, 24, Sept. 30.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	81	85	76	42	60	22	19	50	21	22	23
2	63	76	81	74	119	60	20	19	38	22	24	23
3	77	66	80	74	154	59	20	20	23	f25	20	23
4	82	63	83	74	168	58	23	19	22	g19	19	24
5	83	71	70	78	180	58	38	65	22	g30	20	23
6	60	69	50	77	188	58	42	58	73	g64	20	25
7	64	55	70	76	175	60	32	80	53	g50	20	20
8	72	61	77	77	85	89	28	48	40	g38	20	20
9	76	64	61	76	78	77	25	35	48	g33	348	24
10	78	65	62	74	76	74	23	29	50	g37	483	22
11	84	66	82	74	75	64	25	25	36	g46	62	20
12	89	81	82	75	74	61	25	30	38	g40	31	20
13	92	75	82	75	72	59	29	30	36	g36	32	19
14	100	58	83	74	70	59	27	22	36	g46	37	20
15	86	63	82	72	69	63	25	34	33	f36	46	19
16	37	53	82	72	68	60	22	68	52	35	34	f19
17	32	58	81	72	68	59	21	77	f23	37	25	f17
18	32	59	81	70	66	59	21	64	f20	36	25	17
19	31	54	81	58	65	58	21	48	19	35	27	25
20	30	68	81	46	63	56	22	45	22	f33	29	22
21	30	74	81	39	62	56	21	47	126	g42	28	18
22	29	74	82	37	62	56	20	53	30	g25	31	27
23	29	75	82	34	61	58	20	53	21	g20	25	23
24	29	72	82	32	61	58	20	51	19	g19	22	25
25	38	73	84	31	60	59	22	50	19	g19	22	19
26	82	70	84	30	60	60	22	48	19	g19	23	18
27	84	69	83	30	61	59	22	53	20	f19	22	19
28	92	70	81	30	60	78	20	51	20	19	22	26
29	112	75	80	29	60	130	20	51	23	20	22	62
30	106	82	78	29	-	109	19	50	20	24	22	56
31	90	-	78	29	-	38	-	49	-	26	22	-

Peak discharge.- Feb. 5 (9 p.m.) 200 sec.-ft.; June 21 (11:30 a.m.) 254 sec.-ft.; Aug. 10 (2 a.m.) 700 sec.-ft.

f Gage-height record incomplete; discharge computed on basis of partial gage-height record.

g Computed from graph based on one or more gage readings.

Monthly discharge, in second-feet, of Pecos River below Grandfalls, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 22-31, 1939	575	71	45	57.8	1,150
September	1,282	68	27	42.7	2,540
Water year	-	-	-	-	-
October 1939	2,050	112	29	66.1	4,070
November	2,040	82	53	68.0	4,050
December	2,471	85	50	79.7	4,900
Calendar year	-	-	-	-	-
January 1940	1,794	78	29	57.9	3,560
February	2,602	188	42	86.3	4,960
March	2,012	130	38	64.9	3,990
April	717	42	19	23.9	1,420
May	1,411	88	19	45.5	2,800
June	1,051	126	19	35.0	2,080
July	971	64	19	31.3	1,930
August	1,605	483	19	51.8	3,180
September	718	62	17	23.9	1,420
Water year 1939-40	19,542	483	17	52.8	38,360

Pecos River near Girvin, Tex.

Location.- Water-stage recorder, lat. 31°05', long. 102°22', at bridge on U. S. Highway 67, about half a mile downstream from bridge of Panhandle & Santa Fe Ry. Co., 2.1 miles east of Girvin, Pecos County, and about 6½ miles downstream from Comanche Creek. Datum of gage is 2,269.7 feet above mean sea level (unadjusted). Prior to Sept. 26, 1939, staff gage at site 40 feet upstream from highway bridge at same datum, but with different control.

Drainage area.- 29,560 square miles (contributing area).

Records available.- August 1939 to September 1940.

Extremes.- Maximum discharge during period, 469 second-feet (regulated) Aug. 11, 1940 (gage height, 4.15 feet); minimum daily, 30 second-feet (regulated) July 31.
Flood of September 1932 reached a stage of 17 feet, according to information from local residents.

Remarks.- Records good except those below 100 second-feet, which are affected considerably by aquatic growth, and are fair. Staff gage read once daily. Flow regulated to large extent by reservoirs above Orla. Many diversions above station for irrigation. Some water from a drain and two wasteways returns to river between this station and that below Grandfalls.

Discharge, in second-feet, 1939-40

1939

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	76	11	-	45	21	-	63
2	-	69	12	-	44	22	-	63
3	-	63	13	-	42	23	-	70
4	-	59	14	-	45	24	-	67
5	-	55	15	-	45	25	-	62
6	-	81	16	-	42	26	-	e66
7	-	47	17	-	42	27	-	65
8	-	45	18	-	42	28	78	55
9	-	45	19	-	44	29	71	63
10	-	45	20	-	59	30	75	67
						31	78	-

e Gage-height record incomplete; discharge computed on basis of partial gage-height record.
Note.- Discharge computed from graph based on one daily gage reading from Aug. 28 to Sept. 25.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	114	99	100	54	78	117	40	64	41	32	38
2	72	103	101	99	54	78	70	39	61	39	33	41
3	86	94	103	97	74	78	54	39	60	37	34	39
4	84	91	99	97	138	78	50	39	59	35	33	39
5	86	85	101	97	166	77	48	40	49	37	34	38
6	91	84	101	99	177	77	52	43	43	37	34	37
7	97	88	87	101	205	77	60	72	42	36	47	37
8	83	86	78	100	205	77	60	87	57	52	44	37
9	130	77	91	100	162	86	53	92	69	61	38	37
10	109	82	97	100	104	99	51	72	57	53	36	35
11	93	84	100	98	98	96	47	59	69	48	349	37
12	92	85	103	95	94	92	44	53	58	47	302	37
13	99	87	101	95	93	86	43	48	58	52	122	36
14	103	94	103	95	93	82	45	46	49	55	88	35
15	105	91	103	94	89	80	46	52	50	50	67	35
16	114	80	103	95	91	83	46	93	47	51	63	35
17	97	84	103	94	89	86	43	63	46	53	63	34
18	66	76	103	94	88	84	42	92	49	48	57	35
19	57	78	101	93	87	84	41	82	50	46	49	33
20	54	78	100	92	86	85	42	76	47	46	45	33
21	53	76	101	83	85	80	40	64	43	45	45	36
22	50	87	103	76	85	78	40	71	42	44	46	40
23	56	91	103	70	83	78	41	86	84	44	45	37
24	77	93	101	66	83	79	40	68	66	49	45	39
25	55	93	106	63	82	79	41	67	46	39	44	42
26	61	91	107	60	80	79	41	66	40	35	41	38
27	65	89	106	59	82	79	41	64	37	32	39	38
28	93	89	106	58	80	79	40	61	36	31	39	35
29	98	94	105	57	80	80	41	63	62	31	65	34
30	105	95	103	56	-	108	40	64	42	31	46	35
31	127	-	101	55	-	130	-	64	-	30	40	-

Peak discharge.- Aug. 11 (6 p.m.) 469 sec.-ft.

Monthly discharge, in second-feet, of Pecos River near Girvin, Tex., 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 28-31, 1939	299	-	-	-	-
September	1,646	76	42	54.9	3,260
Water year	-	-	-	-	-
October 1939	2,622	130	80	84.6	5,200
November	2,639	114	76	88.0	5,230
December	3,119	107	78	101	6,190
Calendar year	-	-	-	-	-
January 1940	2,638	101	55	85.1	5,230
February	2,975	205	54	103	5,900
March	2,611	130	77	84.2	5,180
April	1,459	117	40	48.6	2,890
May	1,964	93	39	63.4	3,900
June	1,572	84	36	52.4	3,120
July	1,335	61	30	43.1	2,650
August	2,055	349	32	66.3	4,080
September	1,102	42	33	36.7	2,190
Water year 1939-40	26,091	349	30	71.3	51,760

Pecos River near Sheffield, Tex.

Location.- Water-stage recorder, lat. 30°39', long. 101°45', at bridge on U. S. Highway 290, 3½ miles southeast of Sheffield, Pecos County, and about 4 miles upstream from Liveoak Creek. Datum of gage is 2,026.3 feet above mean sea level (general adjustment of 1929). Prior to Apr. 30, 1925, gage at site three-quarters of a mile upstream at datum 2.90 feet higher. Prior to Nov. 9, 1939, staff gage at same site and datum.

Drainage area.- 31,660 square miles (contributing area).

Records available.- October 1921 to April 1925, October 1939 to September 1940.

Extremes.- Maximum discharge during period Oct. 12, 1939, to Sept. 30, 1940, 2,870 second-feet June 24 (gage height, 7.52 feet), by slope-area method; minimum daily, 34 second-feet July 31, Aug. 1, 3, 4.

1921-25, 1939-40: Maximum discharge, that of June 24, 1940; minimum, 15 second-feet Aug. 15, 1923.

Maximum stage known, about 23.5 feet in September 1916, according to information furnished by local residents, site and datum then in use.

Remarks.- Records good except those above 600 second-feet, which are fair. Staff gage read twice daily. Flow regulated to large extent by reservoirs above Orla. Many diversions between Orla and this station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	104	111	113	74	93	118	45	68	87	34	72
2	-	120	109	111	74	91	138	45	66	76	35	59
3	-	118	109	111	79	91	122	45	63	65	34	53
4	-	109	111	111	79	91	91	44	62	60	34	51
5	-	107	113	109	95	91	80	43	62	56	35	74
6	-	100	111	109	154	91	91	42	59	52	63	55
7	-	95	111	109	179	91	74	45	59	50	290	51
8	-	93	111	109	193	93	71	46	52	49	138	50
9	-	93	102	111	211	93	77	254	48	48	62	48
10	-	102	91	111	201	93	79	116	45	45	62	48
11	-	89	102	111	148	102	76	120	45	65	51	48
12	100	89	109	111	122	113	69	91	63	68	51	49
13	98	91	111	111	116	107	68	80	56	65	358	46
14	98	93	113	109	111	104	65	71	53	56	261	48
15	98	95	111	109	109	100	63	65	55	53	148	48
16	104	104	113	109	113	96	63	59	59	60	104	48
17	109	104	116	109	111	95	62	90	49	60	86	45
18	113	96	116	107	107	98	59	151	45	55	79	44
19	107	95	116	107	104	102	58	119	79	59	77	44
20	84	89	113	107	102	102	58	69	263	58	76	44
21	71	87	113	107	102	102	55	109	154	53	69	42
22	66	89	113	109	100	102	53	218	98	50	62	43
23	65	86	113	100	98	98	51	250	72	50	58	42
24	124	93	113	93	96	96	50	118	902	49	58	44
25	56	100	118	87	96	96	49	118	194	48	58	45
26	79	100	118	84	95	98	49	87	118	45	94	42
27	76	102	118	80	95	96	49	79	80	48	76	42
28	69	100	118	79	95	98	49	76	82	41	58	42
29	63	111	116	77	95	98	48	72	538	37	366	39
30	65	115	116	76	-	98	46	69	127	35	169	39
31	91	-	116	76	-	98	-	66	-	34	74	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 12-31	1,736	124	56	86.8	3,440
November	2,969	120	86	99.0	5,890
December	3,465	118	91	112	6,870
Calendar year	-	-	-	-	-
January	3,162	113	76	102	6,270
February	3,353	211	74	116	6,650
March	3,019	113	91	97.4	5,990
April	2,081	138	46	69.4	4,130
May	2,922	254	42	94.3	5,800
June	3,716	902	45	124	7,370
July	1,679	87	34	54.2	3,330
August	3,220	366	34	104	6,390
September	1,445	74	39	48.2	2,870
Water year 1939-40	-	-	-	-	65,000

Peak discharge.- June 24 (12:30 p.m.) 2,870 sec.-ft.; June 29 (5 a.m.) 962 sec.-ft.; Aug. 29 (9 p.m.) 2,600 sec.-ft.

Diversions from Pecos River above Gallinas River

El Llano de la Presa acequia near San Jose, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°25', long. 105°29', in SE¼ sec. 30, T. 14 N., R. 14 E., 400 feet downstream from head gate, a quartsr of a mile south of community of San Juan, and 1¼ miles northwest of San Jose.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 7.8 second-feet May 3, 1940; no flow at times.
Remarks.- Records good October, November 1939, March to October 1940; others poor. Acequia diverts water from right bank of Pecos River for irrigation near San Jose. No diversion between station and head.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.9	0	0.39	24
November	0	0	0	0
December	.6	0	.02	1.4
January 1940	.5	0	.09	5.6
February	.5	0	.05	2.8
March	1.0	0	.22	13
April	3.6	0	1.69	101
May	7.8	1.2	2.86	176
June	4.0	1.1	2.33	139
July	4.5	1.0	2.72	167
August	3.9	0	1.15	71
September	4.7	0	1.74	104
Water year 1939-40	7.8	0	1.11	805
October 1940	.6	0	.24	14
November	.1	0	.00	.2
December	0	0	0	0
Calendar year 1940	7.e	0	1.09	794

Del Agua Caliente acequia at head, near San Jose, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°25', long. 105°29', in SE¼ sec. 30, T. 14 N., R. 14 E., 500 feet downstream from head gate, a quarter of a mile south of community of San Juan, and 1¼ miles northwest of San Jose.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 7.9 second-feet July 31, Aug. 1, 1940; no flow at times.
Remarks.- Records good October 1939, April to September 1940; others poor. Acequia diverts water from left bank of Pecos River for irrigation near San Jose. No diversions between station and head.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.0	0	0.22	14
November	.3	0	.10	5.8
December	.2	0	.09	5.6
January 1940	.3	0	.07	4.6
February	.2	0	.01	.6
March	.3	0	.04	2.6
April	3.8	0	1.47	87
May	3.2	.7	2.19	134
June	6.2	1.6	4.10	244
July	7.9	2.4	4.66	287
August	7.9	0	2.65	163
September	5.5	0	2.87	171
Water year 1939-40	7.9	0	1.54	1,120
October 1940	.5	0	.05	2.8
November	.1	0	.03	1.6
December	0	0	0	0
Calendar year 1940	7.9	0	1.51	1,100

Diversions from Pecos River above Gallinas River

Del Agua Caliente acequia at end, near San Jose, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°24', long. 105°28', in SE¼ sec. 32, T. 14 N., R. 14 E., 150 feet upstream from outlet to Ancon de Sarracino acequia, and 0.1 mile east of San Jose.
Records available.- July 1939 to September 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 4.8 second-feet Apr. 21; no flow at times.
Remarks.- Records good. Discharge represents unused water and tributary inflow wasted to Ancon de Sarracino acequia.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	0.8	0.1	0.34	21
November	.1	0	.03	2.0
December	.2	0	.02	1.0
January 1940	.3	0	.01	.8
February	0	0	0	0
March	.5	0	.02	1.2
April	4.8	0	1.30	78
May	3.9	.4	1.99	122
June	4.3	.6	2.42	144
July	4.7	0	2.03	125
August	4.5	0	1.52	93
September	4	0	1.91	114
Water year 1939-40	4.8	0	.97	702

Ancon de Sarracino acequia at San Jose, N. Mex.

Location.- Water-stage recorder, lat. 35°24', long. 105°28', in SE¼ sec. 32, T. 14 N., R. 14 E., at San Jose, 150 feet downstream from Del Agua Caliente acequia, 700 feet downstream from head gate, and 800 feet downstream from U. S. Highway 85.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 12 second-feet Aug. 20, Sept. 15, 1939, Apr. 16, 21, 22, May 4, 1940; no flow at times.
Remarks.- Records good October to December 1939 and fair April to July 1940; others poor. Discharge represents diversion from left bank of Pecos River and waste return from Del Agua Caliente acequia. Water is used for irrigation near San Jose. No diversion between station and head.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	3.9	0.1	1.59	98
November	2.5	.6	1.46	87
December	1.6	0	.75	46
January 1940	1.8	.1	.75	46
February	4.9	0	.95	55
March	5.5	0	1.44	88
April	12	2.9	6.97	415
May	12	3.2	7.46	459
June	7.0	2.7	5.40	322
July	7.3	1.4	4.97	306
August	8.2	.5	3.55	218
September	6.7	.6	3.23	192
Water year 1939-40	12	0	3.21	2,330
October 1940	2.6	.3	1.44	88
November	1.2	.2	.61	36
December	.6	.1	.31	19
Calendar year 1940	12	0	3.09	2,240

Diversions from Pecos River above Gallinas River

Ribera ditch at Ribera, N. Mex.

Location.- Measuring section, lat. 35°22'40", long. 105°27'20", in SE¼ sec. 4, T. 13 N., R. 14 E., 25 feet downstream from head gate and 0.5 mile northwest of Ribera.
Records available.- August 1939 to December 1940 (discharge measurements only).
Remarks.- Discharge represents water diverted from left bank of Pecos River for irrigation near Ribera.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940	
Oct. 5	3.22	Jan. 10	5.74	July 25	13.8
11	2.84	17	5.25	Aug. 1	13.9
18	2.17	31	5.03	8	0
25	6.99	Feb. 14	3.59	15	0
Nov. 1	5.89	21	3.57	22	0
8	5.78	28	1.97	29	0
15	5.11	Mar. 20	0	Sept. 5	0
22	5.98	28	.0	Oct. 30	3.36
29	5.12	Apr. 4	19.0	Dec. 2	2.19
Dec. 6	5.00	18	16.3	9	6.19
14	4.91	May 2	15.4	16	0
20	5.11	9	17.3	23	7.90
28	3.02	16	15.7	30	9.65
1940		30	8.42		
Jan. 4	6.68	June 27	*3.0		
		July 11	13.2		

* Estimated.

Los Trigos ditch near Ribera, N. Mex.

Location.- Water-stage recorder, lat. 35°21', long. 105°26', in E½ sec. 15, T. 13 N., R. 14 E., 300 feet downstream from head gate, three-quarters of a mile south of community of Ssn Miguel, and 2 miles south of Ribera.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 9.4 second-feet Sept. 20, 1940; no flow Jan. 20-25, Mar. 9 to Apr. 2, 1940.
Remarks.- Records fair except those for January to March 1940, which are poor. Ditch diverts water from left bank of Pecos River for irrigation near Pueblo. Diversion between station and head irrigates about 1 acre.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	3.7	0.5	1.97	121
November	4.2	.4	2.56	152
December	4.2	1	2.32	142
January 1940	1	0	.45	27
February	.8	.1	.33	19
March	.7	0	.14	8.3
April	6.4	0	3.92	233
May	8.8	1.5	5.90	363
June	7.4	1.0	5.22	311
July	7.8	.3	4.94	304
August	7.8	1.2	3.68	226
September	9.4	.3	3.74	222
Water year 1939-40	9.4	0	2.93	2,130
October 1940	2.9	.1	1.06	65
November	4.3	.1	2.69	160
December	4.3	1.0	2.72	167
Calendar year 1940	9.4	0	2.90	2,110

Diversions from Pecos River above Gallinas River

West Pueblo community ditch near Ribera, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°20', long. 105°26', in SW¼ sec. 23, T. 13 N., R. 14 E., 300 feet downstream from head gate, a quarter of a mile north of community of Pueblo, and 3 miles south of Ribera.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 12 second-feet May 12, 13, 1940; no flow at times.
Remarks.- Records good. Ditch diverts water from right bank of Pecos River for irrigation near Pueblo. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	11	7.3	8.45	519
November	8.6	6.0	7.55	449
December	7.3	1.6	5.63	346
January 1940	2.1	0	.66	41
February	5.9	.3	2.62	151
March	7.6	0	3.57	220
April	10	4.8	8.27	492
May	12	3.5	7.65	470
June	11	1.2	7.36	438
July	7.3	.2	3.83	235
August	8.1	0	4.20	258
September	9.1	4.2	5.87	349
Water year 1939-40	12	0	5.47	3,970
October 1940	7.1	5.8	6.42	395
November	-	-	5.92	352
December	7.1	1.6	5.59	344
Calendar year 1940	12	0	5.16	3,740

La Fragua ditch near Sena, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°19', long. 105°24', in NW¼ sec. 36, T. 13 N., R. 14 E., 150 feet downstream from head gate and 1½ miles northwest of Sena.
Records available.- July 1939 to December 1940.
Extremes.- 1939-40: Maximum daily discharge, 11 second-feet May 20, 1940; no flow Mar. 27 to Apr. 3, 1940.
Remarks.- Records good. Ditch diverts water from left bank of Pecos River for irrigation near Sena. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	6.2	1.8	3.63	223
November	6.4	3.0	4.39	261
December	6.6	.7	3.39	208
January 1940	3.7	.5	1.64	101
February	3.9	.4	1.70	98
March	6.8	0	2.91	179
April	7.3	0	4.27	254
May	11	3.7	8.29	510
June	10	5.5	9.02	537
July	9.5	5.4	7.82	481
August	9.5	1.9	6.14	377
September	9.2	1.5	6.93	412
Water year 1939-40	11	0	5.02	3,640
October 1940	7.6	4.0	5.73	352
November	7.4	3.9	5.59	333
December	7.3	.6	4.36	268
Calendar year 1940	11	0	5.37	3,900

Diversions from Pecos River above Gallinas River

Gonzales ditch at Sena, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°18', long. 105°24', in SW¼ sec. 31, T. 13 N., R. 15 E., 150 feet downstream from spillway, 1,200 feet downstream from head gate, and 0.7 mile northwest of Sena.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 6.3 second-feet May 6, 1940; no flow at times.
Remarks.- Records good. Ditch diverts water from right bank of Pecos River for irrigation near community of Gonzales. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	4.6	0.1	0.78	48
November	3.4	.3	1.91	113
December	2.1	.2	1.05	65
January 1940	.7	.2	.43	26
February	1.6	.2	.50	29
March	4.3	0	1.99	123
April	4.7	2.0	2.78	165
May	6.3	2.3	3.72	229
June	4.8	1.5	3.22	191
July	3.8	.8	2.46	151
August	2.8	0	.82	50
September	4.9	0	1.08	64
Water year 1939-40	6.3	0	1.73	1,250
October 1940	3.7	0	.46	28
November	4.8	.1	1.63	97
December	3.1	.1	.71	44
Calendar year 1940	6.3	0	1.65	1,200

South ditch near Villanueva, N. Mex.

Location.- Water-stage recorder, lat. 35°16', long. 105°23', in NE¼ sec. 18, T. 12 N., R. 15 E., 200 feet downstream from head gate and 1½ miles northwest of Villanueva.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 14 second-feet May 18, 1940; no flow Mar. 21 to Apr. 2.
Remarks.- Records fair. Ditch diverts water from right bank of Pecos River for irrigation near Villanueva. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	4.8	0.1	1.38	85
November	3.4	.4	2.39	142
December	4.2	2.0	2.95	181
January 1940	4.8	3.0	3.83	236
February	5.2	.8	2.96	170
March	5.3	0	1.51	93
April	12	0	7.68	457
May	14	3.3	10.2	627
June	11	4.9	8.65	515
July	9.6	2.0	5.37	330
August	11	.1	3.57	219
September	5.4	.2	2.40	143
Water year 1939-40	14	0	4.41	3,200
October 1940	4.7	0.1	1.68	103
November	5.0	1.0	3.17	188
December	4.5	1.6	3.16	194
Calendar year 1940	14	0	4.51	3,280

Diversions from Pecos River above Gallinas River

North ditch at Villanueva, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°16', long. 105°22', on line between sections 8 and 17, T. 12 N., R. 15 E., 30 feet upstream from wagon bridge, 1,600 feet downstream from head gate, and 1.0 mile northwest of Villanueva.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 5.4 second-feet Sept. 11, 1939; no flow at times.
Remarks.- Records good. Ditch diverts water from the left bank of Pecos River for irrigation at Villanueva. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.6	0	0.75	46
November	2.2	.5	1.06	63
December	1.5	.3	.89	55
January 1940	.5	.1	.32	20
February	1.0	0	.26	15
March	.1	0	.01	.4
April	4.7	.7	2.19	130
May	3.7	1.5	2.60	160
June	4.6	0	3.10	184
July	4.5	0	2.94	181
August	4.5	0	.74	46
September	2.6	0	.73	43
Water year 1939-40	4.7	0	1.30	945
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	4.7	0	1.07	779

El Cerrito community ditch near Villanueva, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°16', long. 105°19', in NW¼ sec. 14, T. 12 N., R. 15 E., 300 feet downstream from head gate, half a mile west of community of El Cerrito, and 2 miles east of Villanueva.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 11 second-feet Sept. 21, 1940; no flow at times.
Remarks.- Records fair. Ditch diverts water from right bank of Pecos River for irrigation near El Cerrito. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.8	0.6	1.05	65
November	2.5	1.2	1.90	113
December	1.9	0	1.17	72
January 1940	2	0	1.23	76
February	.8	.2	.43	25
March	3.6	0	1.18	72
April	10	0	5.00	298
May	6.8	4.8	6.11	375
June	6.3	1.7	3.18	189
July	5.6	.7	1.75	108
August	5.9	1.6	2.76	170
September	11	.5	3.00	179
Water year 1939-40	11	0	2.40	1,740
October 1940	3.4	.9	1.77	109
November	1.0	.2	.44	26
December	.6	.1	.25	15
Calendar year 1940	11	0	2.26	1,648

Diversions from Pecos River above Gallinas River

Tecolotito community ditch near Anton Chico, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°14', long. 105°10', in E½ sec. 30, T. 12 N., R. 17 E. (projected), in Anton Chico Grant, 200 feet downstream from head gate, half a mile west of community of Tecolotito, and 3 miles northwest of Anton Chico.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge during water year, 20 second-feet Sept. 9-13, 19, 20, 1940; no flow at times.
Remarks.- Records fair. Ditch diverts water from right bank of Pecos River for irrigation near Anton Chico. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	10	0	8.77	540
November	13	0	9.68	576
December	17	4	12.3	755
January 1940	17	2.5	11.2	692
February	17	7.7	12.1	696
March	18	0	6.45	396
April	17	16	16.3	972
May	15	8.5	11.9	734
June	16	11	13.7	815
July	13	.1	8.83	543
August	14	0	9.34	574
September	20	10	15.8	938
Water year 1939-40	20	0	11.3	8,230
October 1940	13	11	12.2	748
November	16	6.7	12.8	764
December	19	8	15.9	978
Calendar year 1940	20	0	12.2	8,860

Hormigoso community ditch near Anton Chico, N. Mex.

Location.- Water-etage recorder and Parshall flume, lat. 35°13', long. 105°10', in NW¼ sec. 5, T. 11 N., R. 17 E. (projected), in Anton Chico Grant, three-quarters of a mile downstream from head gate and 1½ miles northwest of Anton Chico.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 32 second-feet July 15, 22, 1940; no flow at times.
Remarks.- Records good. Ditch diverts water from left bank of Pecos River for irrigation between Anton Chico and Delia. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	28	11	15.6	960
November	12	5.6	9.65	574
December	10	0	5.16	318
January 1940	10	-	4.77	293
February	10	0	4.07	234
March	0	0	0	0
April	24	0	13.1	778
May	29	20	26.3	1,620
June	31	13	27.6	1,640
July	32	14	23.2	1,430
August	29	0	7.37	453
September	31	13	23.9	1,420
Water year 1939-40	32	0	13.4	9,720
October 1940	19	9.4	14.0	862
November	11	0	5.99	357
December	-	0	5.81	357
Calendar year 1940	32	0	13.0	9,440

Gallinas River near Montezuma, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°39', long. 105°19', in Las Vegas Grant, 2 miles west of Montezuma, and 6 miles northwest of Las Vegas, San Miguel County.

Drainage area.- 84 square miles (revised).

Records available.- October 1930 to September 1940 in reports of Geological Survey. March 1915 to December 1931 (1915-26, no winter records) in reports of State engineer.

Average discharge.- 14 years (1926-40), 17.3 second-feet.

Extremes.- Maximum discharge during year, 1,610 second-feet Aug. 5 (gage height, 5.3 feet), from rating curve extended above 350 second-feet by logarithmic plotting; minimum daily, 1.3 second-feet July 19.
1930-40: Maximum discharge, that of Aug. 5, 1940; minimum daily, 0.8 second-foot Aug. 15-18, 21, 25, 26, 30, 1934, Jan. 20, 1938.

Remarks.- Records fair except those for periods of ice effect and those above 350 second-feet, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	5.5	b3.9	5.2	4.2	8.0	28	22	23	2.4	4.5	9.0
2	8.0	5.2	b3.9	4.5	2.9	7.6	31	22	19	2.3	3.9	8.5
3	8.0	5.2	4.8	4.2	4.5	b6.7	27	24	16	2.3	3.6	9.0
4	7.6	5.2	4.2	3.9	5.2	b4.5	24	27	14	19	3.2	6.7
5	7.2	5.2	4.2	4.2	4.8	b7.2	25	28	14	13	154	5.8
6	7.2	5.2	3.9	3.6	4.2	12	23	27	12	6.7	83	5.5
7	7.2	5.2	3.9	*b3.2	4.5	11	23	28	9.4	5.5	41	4.8
8	13	5.2	b3.9	3.9	*4.8	13	21	32	7.2	4.8	29	4.5
9	15	5.2	3.9	4.2	b3.9	22	20	35	6.2	5.2	22	3.2
10	11	6.2	3.2	3.9	b4.2	28	22	30	7.2	3.9	15	3.6
11	9.8	5.8	3.2	3.6	b4.5	28	24	29	8.0	3.6	12	6.2
12	8.5	5.2	3.2	3.6	3.2	22	24	28	7.6	4.2	21	5.8
13	8.5	4.8	2.9	2.9	b3.0	18	24	26	6.7	3.9	12	5.2
14	8.5	4.5	b2.6	b2.9	b3.0	16	26	25	6.2	3.2	9.8	3.9
15	8.0	4.2	b2.9	b2.9	3.9	16	31	23	5.5	2.9	9.0	3.6
16	8.0	6.2	b3.6	b2.9	3.6	17	34	25	5.8	2.6	8.0	2.6
17	7.6	b5.8	3.6	b3.5	b3.2	17	30	25	7.2	1.6	15	2.6
18	7.2	b4.8	3.2	b4.0	b2.5	19	26	26	5.2	1.5	14	3.6
19	6.7	b4.8	b2.9	b2.5	b3.0	20	25	25	4.8	1.3	15	8.5
20	6.7	b4.5	b2.6	b2.5	3.6	18	26	23	4.5	1.5	23	9.4
21	6.7	b4.2	b3.0	b2.7	4.2	18	32	21	5.8	1.6	36	25
22	6.2	b3.9	b3.0	b2.8	4.5	20	31	23	6.2	2.6	57	28
23	6.2	b3.2	b3.0	*b2.9	4.8	22	33	25	6.7	4.8	36	22
24	5.2	*b2.9	b2.3	b2.9	5.2	24	32	24	6.7	4.2	27	18
25	5.8	b3.9	b2.3	b3.0	4.8	28	31	21	5.8	3.6	22	17
26	6.7	b3.9	b2.3	b3.5	6.7	30	31	18	4.2	3.2	17	14
27	6.7	b2.6	b2.3	b4.0	6.2	30	34	18	3.2	2.9	14	12
28	6.2	b2.4	b2.3	4.8	7.6	30	30	31	3.2	2.9	12	10
29	6.2	b3.0	b2.5	4.5	7.6	27	28	63	2.9	2.1	11	9.8
30	5.8	b3.5	b4.0	4.5	-	24	25	48	2.6	4.8	11	9.0
31	5.8	-	b4.5	4.2	-	25	-	30	-	5.2	9.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	239.7	15	5.2	7.73	475
November	137.4	6.2	2.4	4.58	273
December	102.0	4.8	2.3	3.29	202
Calendar year 1939	6,161.1	96	2.3	16.9	12,220
January	111.9	5.2	2.5	3.61	222
February	128.3	7.6	2.5	4.42	254
March	589.0	30	4.5	19.0	1,170
April	821	34	20	27.4	1,630
May	852	63	18	27.5	1,690
June	236.8	23	2.6	7.89	470
July	129.3	19	1.3	4.17	256
August	750.8	154	3.2	24.2	1,490
September	276.8	28	2.6	9.23	549
Water year 1939-40	4,375.0	154	1.3	12.0	8,680

Peak discharge.- July 4 (6:30 p.m.) 236 sec.-ft.; Aug. 5 (7:30 p.m.) 1,610 sec.-ft.; Aug. 22 (8:30 p.m.) 497 sec.-ft.
* Winter discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Gallinas River at Montezuma, N. Mex.

Location.- Water-stage recorder, lat. 35°39'15", long. 105°16'30", in Las Vegas Grant, at highway bridge, half a mile downstream from Montezuma and 5 miles northwest of Las Vegas, San Miguel County.

Drainage area.- 87 square miles (revised).

Records available.- August 1903 to December 1914 (prior to October 1904, gage heights only) and October 1930 to September 1940 in reports of Geological Survey. October 1904 to December 1931 in reports of State engineer (published as Gallinas River near Las Vegas, prior to 1930).

Average discharge.- 33 years (1905-11, 1913-40), 20.7 second-feet.

Extremes.- Maximum gage height during year, 5.03 feet Aug. 5 (discharge not determined); minimum daily discharge, 0.4 second-foot (regulated) July 2, 3.
1930-40: Maximum gage height, that of Aug. 5, 1940; no flow (result of regulation) Oct. 4-7, 1934.

Remarks.- Records fair except those for periods of no gage-height record, ice effect or uncertain stage-discharge relation, and those below 1.0 second-foot, all of which are poor. Flow regulated by reservoirs owned by Agua Pura Co. Several diversions above station for irrigation and municipal supply.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	3.0	2.6	3.0	1.9	7.8	20	20	21	0.6	1.0	4.9
2	8.6	3.0	2.4	3.0	2.4	7.3	22	19	17	.4	1.4	3.2
3	9.1	3.0	2.6	3.0	1.9	7.3	20	20	14	.4	1.4	4.6
4	9.1	3.2	2.4	2.6	1.9	6.4	17	22	11	6.0	1.6	4.2
5	8.6	3.2	2.4	2.6	1.9	3.2	17	24	9.6	15	e100	3.2
6	8.2	3.0	2.4	2.6	2.4	5.6	17	24	3.8	9.1	e110	2.4
7	8.6	3.0	2.2	1.9	2.2	6.8	16	25	6.4	4.6	40	2.2
8	11	3.0	2.2	2.2	2.4	9.1	14	31	8.2	2.2	26	1.9
9	14	3.2	2.4	2.6	2.2	15	14	31	6.4	1.0	17	1.6
10	13	2.6	3.2	2.6	1.4	17	14	29	4.6	.8	10	1.6
11	12	3.0	2.4	2.6	2.4	25	16	27	5.2	.8	9.1	1.9
12	11	3.0	1.9	3.0	3.0	19	17	25	7.8	1.2	14	2.2
13	10	3.2	3.2	3.2	2.4	15	19	24	6.4	1.0	14	2.2
14	9.1	3.2	2.2	2.4	2.4	10	25	23	4.6	2.4	8.2	1.9
15	7.3	3.2	1.6	1.9	3.0	14	33	21	3.8	1.9	7.3	1.9
16	6.4	4.9	2.2	1.6	2.6	14	35	22	3.6	1.2	5.6	2.4
17	6.4	4.6	2.2	2.2	1.9	14	33	23	3.8	1.0	10	2.4
18	6.4	3.0	2.2	2.4	1.6	16	31	23	4.2	.8	14	2.4
19	5.6	2.4	1.6	2.2	2.6	17	17	23	3.6	.8	11	2.4
20	4.6	2.4	1.6	1.6	2.2	14	30	20	3.2	.7	14	2.4
21	4.2	2.2	1.2	1.9	1.9	13	20	18	a3.5	.7	27	11
22	3.6	2.2	1.4	1.6	2.4	15	15	19	a3.5	.7	40	22
23	3.6	2.2	1.6	1.9	2.6	24	38	22	a3.5	.7	43	16
24	3.2	2.2	1.4	2.2	3.0	20	18	20	a3.5	.7	24	13
25	3.0	2.2	b1.3	2.2	3.2	25	27	22	a3.5	.7	19	12
26	3.2	2.2	b1.3	1.9	3.8	19	24	17	a3	.8	13	10
27	3.0	1.9	b1.3	2.6	4.9	21	12	15	a2.5	1.0	9.6	8.6
28	3.0	1.9	b1.4	1.9	7.3	24	14	21	a2	1.2	7.3	7.8
29	3.0	1.0	1.6	1.9	7.8	20	25	60	1.2	1.2	6.4	6.8
30	3.0	.7	2.2	1.9	-	18	25	52	.6	1.2	6.8	6.4
31	3.0	-	2.4	1.9	-	18	-	34	-	1.0	6.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	214.4	14	3.0	6.92	425
November	81.8	4.9	.7	2.73	162
December	65.0	3.2	1.2	2.03	125
Calendar year 1939	5,479.1	100	.6	15.0	10,870
January	71.1	3.2	1.6	2.29	141
February	81.6	7.8	1.4	2.81	162
March	460.5	25	3.2	14.9	913
April	645	38	12	21.5	1,280
May	776	60	15	25.0	1,540
June	175.0	21	.6	5.83	347
July	61.8	15	.4	1.99	123
August	617.7	110	1.0	19.9	1,230
September	165.5	22	1.6	5.52	328
Water year 1939-40	3,413.4	110	.4	9.33	6,780

a No gage-height record; discharge computed on basis of recorded range of stage and records for station near Montezuma.
b Stage-discharge relation affected by ice.
e Uncertain stage-discharge relation; discharge computed on basis of gage heights and record for station near Montezuma.

Diversions from Pecos River and drains between Gallinas River and Rio Ruidoso

Lower Colonias community ditch near Colonias, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 35°08', long. 104°52', in sec. 36, T. 11 N., R. 19 E. (projected), in Anton Chico Grant, half a mile downstream from head gate, and 2 miles northwest of Colonias.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 25 second-feet July 5, 1940; no flow at times.
Remarks.- Records good October 1939 to May 1940; others fair. Ditch diverts water from right bank of Pecos River for irrigation near Colonias. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	5.3	0	1.19	73
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	15	0	2.62	161
April	21	5.0	12.7	754
May	22	0	16.3	1,000
June	14	0	8.30	494
July	25	0	4.43	272
August	15	0	3.71	228
September	17	0	3.21	191
Water year 1939-40	25	0	4.38	3,170
October 1940	5.9	.2	2.93	180
November	2.9	0	.49	29
December	3.8	0	.68	42
Calendar year 1940	25	0	4.62	3,350

East ditch near Puerto de Luna, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 34°53', long. 104°39', in NE¼ sec. 31, T. 8 N., R. 22 E., 2 miles downstream from head gate and 3½ miles northwest of Puerto de Luna.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 17 second-feet many days March to June and August, 1940; no flow at times.
Remarks.- Records good. Ditch diverts water from left bank of Pecos River for irrigation near Puerto de Luna. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	17	0	7.73	475
April	17	12	14.6	871
May	17	2.2	12.2	753
June	17	4.8	12.8	764
July	15	1.6	11.8	727
August	17	0	4.60	283
September	15	1.9	10.9	649
Water year 1939-40	17	0	6.23	4,520
October 1940	8.3	3.6	6.87	422
November	4.1	.8	2.13	127
December	.8	0	.06	3.8
Calendar year 1940	17	0	6.99	5,070

Diversions from Pecos River and drains between Gallinas River and Rio Ruidoso

Fort Sumner Irrigation District canal at Fort Sumner, N. Mex.

Location.- Water-stage recorder and Cippoletti weir, lat. 34°29', long. 104°15', in SE¼ sec. 18, T. 3 N., R. 26 E., half a mile west of Fort Sumner and 2½ miles downstream from head gate.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 100 second-feet June 21, 1940; no flow at times.
Remarks.- Records good except those for period of no gage-height record, which are fair. Canal diverts water from left bank of Pecos River for irrigation of land in Fort Sumner irrigation district. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	80	3	69.7	4,280
November	58	0	2.3	137
December	77	0	19.6	1,210
January 1940	0	0	0	0
February	0	0	0	0
March	92	0	60.8	3,740
April	98	0	62.2	3,700
May	96	0	72.5	4,460
June	100	23	89.4	5,320
July	99	0	82.2	5,050
August	96	34	87.0	5,350
September	93	39	82.3	4,900
Water year 1939-40	100	0	52.5	38,150
October 1940	85	63	78.5	4,82[illegible]
November	82	0	2.73	163
December	0	0	0	0
Calendar year 1940	100	0	51.7	37,510

Fort Sumner Irrigation District canal at end, near Fort Sumner, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 34°21'20", long. 104°10'15", in E½ of sec. 36, T. 2 N., R. 26 E., at end of canal and 8 miles southeast of Fort Sumner.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 28 second-feet Mar. 24; no flow at times.
Remarks.- Records good. Discharge represents unused irrigation water returned to Pecos River.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March	28	0	13.0	798
April	18	0	6.98	416
May	27	0	5.13	315
June	23	0	4.23	252
July	2.0	0	.53	33
August	25	0	5.37	330
September	17	0	7.13	424
The period	-	-	-	2,570
October	27	.3	13.5	831
November	22	0	.91	54
December	0	0	0	0
The period	-	-	-	885

Diversion from Pecos River and drains between Gallinas River and Rio Ruidoso

Roger drain near Fort Sumner, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 34°24'20", long. 104°12'00", in NE¼ sec. 15, T. 2 N., R. 26 E., 600 feet upstream from mouth and 4⅛ miles southeast of Fort Sumner.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 2.1 second-feet Sept. 29; no flow at times.
Remarks.- Records poor. Discharge represents return flow to Pecos River from irrigated lands of Fort Sumner irrigation district.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 6-31	1.7	0	0.14	7.3
April	.8	0	.14	8.3
May	1.6	0	.10	6.0
June	.2	0	.01	.4
July	.9	0	.08	5.2
August	1.3	0	.21	13
September	2.1	0	.21	13
The period	-	-	-	53
October	.6	0	.09	5.8
November	0	0	0	0
December	0	0	0	0

West lateral at end, near Fort Sumner, N. Mex.

Location.- Water-stage recorder, lat. 34°24'20", long. 104°12'00", in SE¼ sec. 10, T. 2 N., R. 26 E., 50 feet upstream from mouth and 4⅛ miles southeast of Fort Sumner.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 13 second-feet Oct. 9; no flow at times.
Remarks.- Records good. Discharge represents unused irrigation water returned to Pecos River.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 1940	10	0	2.78	171
April	9.3	0	2.34	139
May	10	0	2.59	159
June	9.2	0	1.72	103
July	7.4	.1	1.98	122
August	11	0	4.80	295
September	10	0	4.07	242
The period	-	-	-	1,230
October	13	.7	6.83	420
November	.4	0	.02	1.2
December	0	0	0	0

Diversions from Pecos River and drains between Gallinas River and Rio Ruidoso

Upper drain near Fort Sumner, N. Mex.

Location.- Water-stage recorder and Cippoletti weir, lat. 34°24'20", long. 104°11'50", in NE¼ sec. 15, T. 2 N., R. 26 E., 1,000 feet upstream from mouth and 4½ miles southeast of Fort Sumner.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 19 second-feet Oct. 13; minimum daily, 2.0 second-feet Mar. 6, 7.
Remarks.- Records good. Discharge represents return flow to Pecos River from irrigated lands of Fort Sumner irrigation district.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 2-31, 1940.....	12	2.0	5.44	324
April.....	11	2.7	5.30	316
May.....	18	4.3	8.21	505
June.....	12	6.1	8.09	482
July.....	11	5.2	7.10	436
August.....	11	5.7	8.07	496
September.....	14	7.8	10.5	623
The period.....	-	-	-	3,180
October.....	19	6.5	12.9	794
November.....	12	3.5	4.63	276
December.....	3.5	3.0	3.21	197

Lower drain near Fort Sumner, N. Mex.

Location.- Water-stage recorder and Cippoletti weir, lat. 34°21'20", long. 104°10'40", in SE¼ sec. 35, T. 2 N., R. 26 E., 600 feet upstream from mouth and 8 miles southeast of Fort Sumner.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 4.1 second-feet Sept. 1 and Oct. 24; minimum daily, 0.6 second-foot July 25.
Remarks.- Records fair June and July; others good. Discharge represents return flow from irrigated lands of Fort Sumner irrigation district to Pecos River.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 9-31, 1940.....	3.2	0.8	1.57	71
April.....	3.2	1.4	1.82	108
May.....	3.1	1.0	1.61	99
June.....	1.8	1.0	1.52	90
July.....	3.8	.6	1.28	79
August.....	3.4	1.0	1.88	116
September.....	4.1	1.7	2.14	128
The period.....	-	-	-	691
October.....	4.1	1.5	2.04	126
November.....	2.3	1.3	1.65	98
December.....	1.5	1.2	1.35	83

Rio Ruidoso at Hondo, N. Mex.

Location.- Water-stage recorder, lat. 33°23', long. 105°17', in NW¼SW¼ sec. 4, T. 11 S., R. 17 E., a quarter of a mile upstream from confluence with Rio Bonito (which forms Rio Hondo) and half a mile southwest of Hondo.

Drainage area.- 307 square miles (contributing area).

Records available.- October 1930 to September 1940 in reports of Geological Survey. August 1930 to December 1931 in reports of State engineer.

Average discharge.- 10 years, 16.1 second-feet.

Extremes.- Maximum discharge during year, 1,730 second-feet July 18 (gage height, 6.75 feet), from rating curve extended above 128 second-feet on basis of velocity-area studies; minimum daily, 0.5 second-foot June 27, July 2.
1930-40: Maximum discharge, 5,680 second-feet May 31, 1937 (gage height, 13.4 feet), from rating curve extended above 128 second-feet on basis of velocity-area studies; no flow Aug. 15, 16, 1935.

Remarks.- Records fair. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	9.0	a1.7	2.9	5.8	17	26	14	19	0.6	0.8	1.7
2	3.7	9.4	a1.4	5.5	6.9	23	28	10	16	.5	.8	1.3
3	3.0	8.6	1.0	6.9	6.9	24	30	11	15	.6	.8	1.3
4	2.9	7.6	.9	7.2	7.2	22	24	10	12	41	.9	1.1
5	3.2	6.9	1.2	7.6	11	19	22	11	9.4	6.6	2.0	5.2
6	4.1	6.2	1.4	7.2	11	20	32	10	9.0	5.0	2.8	7.2
7	8.0	5.0	.9	6.9	11	19	32	9.0	6.6	5.5	3.4	3.4
8	15	2.7	.9	6.6	11	22	25	6.8	8.6	3.2	7.7	1.8
9	26	2.5	1.3	6.2	11	23	17	23	6.6	3.7	5.1	1.5
10	28	3.4	3.7	6.6	12	27	15	15	4.1	2.2	1.0	1.6
11	33	3.0	3.4	6.9	12	27	11	11	5.3	2.4	.9	.8
12	32	3.9	3.4	6.2	12	24	12	9.4	4.4	2.1	13	1.1
13	29	4.4	3.4	5.4	13	20	20	7.2	2.0	3.2	8.8	.9
14	f26	4.1	2.7	2.6	14	19	18	5.0	1.2	2.9	3.7	.9
15	f24	3.7	1.4	2.7	14	22	16	5.5	1.0	2.5	1.6	1.0
16	21	2.9	1.1	2.5	14	22	12	4.4	1.0	.9	1.3	1.2
17	19	3.0	1.0	3.2	13	24	20	8.3	1.0	1.1	2.4	1.2
18	16	2.7	.8	4.8	12	22	23	7.2	1.1	132	3.4	.9
19	15	1.7	2.9	5.0	12	22	16	13	1.3	13	.9	.9
20	15	1.8	4.8	5.5	13	24	12	13	2.5	8.7	.8	.9
21	15	2.0	3.4	6.2	13	24	14	12	3.2	8.3	.9	1.5
22	13	2.0	2.2	7.2	14	27	13	36	4.1	6.9	1.2	1.6
23	11	2.0	2.7	8.3	12	24	10	74	4.1	6.3	1.2	1.2
24	11	2.0	2.7	8.3	14	30	12	79	2.7	4.7	2.4	1.0
25	12	2.7	2.7	8.0	13	31	14	75	4.1	3.5	3.0	1.0
26	13	2.5	2.7	8.0	13	30	12	68	1.6	1.7	4.1	1.5
27	10	2.7	2.7	8.0	16	33	12	54	.5	1.2	2.7	2.4
28	7.6	2.7	3.4	7.6	15	33	20	47	.6	1.5	2.5	3.6
29	6.9	2.4	2.9	6.9	15	36	21	41	.7	3.2	2.2	3.9
30	8.3	a2.0	2.0	7.2	-	26	19	35	.6	2.0	1.6	3.9
31	8.6	-	2.2	7.6	-	29	-	26	-	1.3	1.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	444.7	33	2.9	14.3	882
November	113.5	9.4	1.7	3.78	225
December	68.9	4.8	.8	2.22	137
Calendar year 1939	4,084.5	104	.4	11.2	8,100
January	189.6	8.3	2.5	6.12	376
February	347.8	16	5.8	12.0	690
March	765	36	17	24.7	1,520
April	558	32	10	18.6	1,110
May	749.8	79	4.4	24.2	1,490
June	149.3	19	.5	4.98	296
July	278.3	132	.5	8.98	552
August	85.7	13	.0	2.76	170
September	57.3	7.2	.8	1.91	114
Water year 1939-40	3,807.9	132	.5	10.4	7,560

Peak discharge.- July 4 (8 p.m.) 710 sec.-ft.; July 18 (5:30 p.m.) 1,730 sec.-ft.
a No gage-height record; discharge interpolated.
f Computed on basis of partly estimated gage heights.

Rio Hondo at Diamond A Ranch, near Roswell, N. Mex.

Location.- Water-stage recorder, lat. 33°20', long. 104°50', in NE¼ sec. 20, T. 11 S., R. 21 E., at Diamond A Ranch headquarters, 8 miles upstream from Rocky Arroyo and 18 miles west of Roswell.
Drainage area.- 960 square miles (contributing area).
Records available.- May 1939 to September 1940 in reports of Geological Survey. May 1908 to August 1909 in reports of State engineer.
Extremes.- 1939: Maximum discharge during period May to September, 1,820 second-feet July 30 (gage height, 11.50 feet); no flow at times.
1939-40: Maximum discharge during water year, 1,860 second-feet July 19 (gage height, 11.62 feet), from rating curve extended above 200 second-feet on basis of slope-area determination at gage height 11.62 feet; no flow at times.
Remarks.- Records fair. Many diversions above station for irrigation.

Discharge, in second-feet, 1939-40

1939

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	0	78	0	11	0	30	0	21	0	16	22
2	0	42	0	12	0	39	0	22	0	2.2	14
3	0	111	0	13	.6	24	0	23	0	2.0	6.5
4	0	90	0	14	0	19	36	24	0	2.2	1.0
5	0	f32	0	15	102	57	1.0	25	0	0	0
6	0	132	0	16	6.1	35	63	26	0	0	0
7	0	132	0	17	0	31	102	27	0	.3	0
8	0	62	0	18	0	f21	36	28	0	0	0
9	0	39	0	19	0	f11	33	29	0	0	0
10	0	33	0	20	0	3.2	32	30	188	0	0
								31	51	0	-

Peak discharge.- July 30 (3:30 p.m.) 1,820 sec.-ft.; July 30 (9 p.m.) 662 sec.-ft.; Aug. 3 (5 a.m. 620 sec.-ft.; Aug. 6 (9 p.m.) 1,140 sec.-ft.
f Computed on basis of partly estimated gage heights.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0		0		0	0	0	6.0	0	0	0.7
2	0	0		0		0	0	0	.1	0	0	0
3	0	0		0		0	0	0	0	0	0	0
4	0	0		0		0	0	0	0	0	0	0
5	0	0		0		0	0	0	0	8.0	0	0
6	0	0		0		0	0	0	0	7.0	30	0
7	0	0		0		0	0	0	0	4.1	5.2	0
8	0	0		0		0	0	0	0	1.2	1.2	0
9	0	0		0		0	0	0	0	0	.1	0
10	3.1	0		0		0	0	0	0	.2	0	0
11	11	0		0		0	0	0	0	0	0	0
12	9.1	0		0		0	0	0	0	0	.4	0
13	6.0	0		1.1		0	0	0	0	0	79	0
14	4.5	0		0		.4	0	0	0	0	16	0
15	3.2	0		1.0		0	0	0	0	0	7.6	0
16	.9	.6		0		0	0	0	0	0	4.1	0
17	.6	.8		0		0	0	0	0	0	1.1	0
18	.2	0		0		0	0	0	0	155	0	0
19	0	0		0		0	0	0	0	262	0	0
20	0	0		0		0	0	0	0	24	0	0
21	0	0		0		.1	0	0	0	11	0	0
22	0	0		0		.4	0	0	0	f3	0	0
23	0	0		0		.3	0	0	0	f0	0	0
24	0	0		0		0	0	57	15	f0	0	0
25	0	0		0		0	0	80	10	0	0	0
26	0	0		0		0	0	79	5.2	0	0	0
27	0	0		0		0	0	66	0	0	0	0
28	0	0		.6		0	0	47	0	0	0	0
29	0	0		.5		0	0	34	0	0	0	0
30	0	0		0		0	.1	14	0	0	0	0
31	0	-		0		0	-	10	-	0	0	-

Peak discharge.- July 18 (1 p.m.) 420 sec.-ft.; July 19 (1 a.m.) 1,860 sec.-ft.; Aug. 13 (2 a.m.) 302 sec.-ft.
f Computed on basis of partly estimated gage heights.

Monthly discharge, in second-feet, of Rio Hondo at Diamond A Ranch, near Roswell, N. Mex. 1939-40--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 28-31, 1939	0	0	0	0	0
June	0	0	0	0	0
July	347.7	188	0	11.2	690
August	1,043.9	132	0	33.7	2,070
September	348.5	102	0	11.6	687
The period	-	-	-	-	3,450
October 1939	38.6	11	0	1.25	77
November	1.4	.8	0	.05	2.8
December	0	0	0	0	0
Calendar year 1939	-	-	-	-	-
January 1940	3.2	1.1	0	.10	6.3
February	0	0	0	0	0
March	1.2	.4	0	.04	2.4
April	.1	.1	0	0	.2
May	387	80	0	12.5	768
June	36.3	15	0	1.21	72
July	476.6	262	0	15.3	945
August	144.7	79	0	4.67	287
September	.7	.7	0	.02	1.4
Water year 1939-40	1,088.7	262	0	2.97	2,180

Rio Bonito at Hondo, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 33°23', long. 105°16', in NE¼NW¼ sec. 4, T. 11 S., R. 17 E., at Hondo, half a mile upstream from confluence with Rio Ruidoso (which forms Rio Hondo).

Drainage area.- 306 square miles (contributing area).

Records available.- October 1930 to September 1940 in reports of Geological Survey. August 1930 to December 1931 in reports of State engineer.

Average discharge.- 10 years, 7.15 second-feet.

Extremes.- Maximum discharge during year, 1,380 second-feet July 18 (gage height, 5.5 feet), from rating curve extended above 32 second-feet on basis of slope-area determination at gage height 19.0 feet; no flow at times.
1930-40: Maximum discharge, 9,270 second-feet May 31, 1937 (gage height, 19.0 feet), by slope-area method; no flow at times.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0						0	0	7.0	0	d4	2.7
2	0						0	0	2.9	0	d2	2.0
3	0						0	0	2.6	0	d25	1.2
4	0						0	0	1.1	14	d20	.8
5	0						0	0	.6	3.5	29	4.2
6	0						.5	0	d.2	2.7	9.4	5.8
7	0						0	0	d.1	1.4	9.8	3.1
8	1.5						0	0	d0	1.3	13	.8
9	.9						0	0	0	1.2	6.6	.1
10	.9						0	0	0	1.0	4.2	.3
11	1.0						0	0	0	.9	8.1	.2
12	1.0						0	0	0	.8	14	.2
13	1.0						0	0	0	.8	6.6	0
14	.9						0	0	0	.8	4.9	0
15	1.0						0	.3	0	d.5	3.9	0
16	1.0						0	0	0	d0	2.4	0
17	.8						.7	0	0	d2	1.6	0
18	.8						1.5	0	0	d135	7.0	0
19	.8						0	0	0	d10	3.5	0
20	.7						0	0	2.5	d3	1.4	0
21	.3						.1	0	32	d2	.8	3.0
22	0						0	14	17	d4	.6	2.5
23	0						0	33	11	d3	1.6	1.6
24	0						0	41	13	d3	2.4	1.0
25	0						0	39	5.8	d3	1.8	.8
26	0						0	38	2.7	d3	1.5	.6
27	0						0	33	2.0	d2	1.1	.6
28	0						0	28	d.5	d2	1.2	.4
29	0						0	20	d.2	d3	1.2	.5
30	0						0	17	0	d4	1.0	.9
31	0						-	13	-	d3	1.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	12.6	1.5	0	0.41	25
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1939	485.1	82	0	1.32	958
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	2.8	1.5	0	.09	5.6
May	276.3	41	0	8.91	548
June	101.2	32	0	3.37	201
July	210.9	135	0	6.80	418
August	190.7	29	.6	6.15	378
September	33.3	5.8	0	1.11	66
Water year 1939-40	827.8	135	0	2.26	1,640

Peak discharge.- June 21 (6:30 p.m.) 382 sec.-ft.; July 18 (3 a.m.) 1,380 sec.-ft.; July 18 (6 p.m.) 382 sec.-ft.; Aug. 3 (6:30 p.m.) 367 sec.-ft.
d Gage-height record doubtful; discharge computed on basis of partly estimated gage heights, weather records, and record for Rio Ruidoso at Hondo.

Diversions from Pecos River and drains between Rio Bonita and Rio Felix

Hagerman canal near Roswell, N. Mex.

Location.- Water-stage recorder, lat. 33°24'10", long. 104°26'20", in NE¼ sec. 31, T. 10 S., R. 25 E., 15 feet downstream from head gates and 5 miles east of Roswell.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 88 second-feet July 31, 1939; minimum daily, 1.0 second-foot Dec. 5, 1940.
Remarks.- Records good except those for March to July 1940, which are fair. Canal diverts water from right bank of the Rio Hondo for irrigation near Dexter and Hagerman. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	36	27	34.1	2,100
November	35	29	32.9	1,960
December	49	2	30.5	1,880
January 1940	38	25	34.1	2,100
February	40	25	28.6	1,660
March	46	28	36.3	2,230
April	43	32	36.3	2,160
May	56	24	34.0	2,090
June	52	29	37.0	2,200
July	51	32	38.0	2,330
August	38	32	34.4	2,110
September	35	29	32.6	1,940
Water year 1939-40	56	2	34.1	24,750
October 1940	32	24	28.1	1,730
November	26	1.1	9.82	585
December	29	1.0	21.4	1,320
Calendar year 1940	56	1.0	30.9	22,440

Roswell drain 1 near Roswell, N. Mex.

Location.- Measuring section, lat. 33°23'00", long. 104°25'30", in NW¼ sec. 5, T. 11 S., R. 25 E., 100 feet upstream from outlet to Hagerman canal and 4½ miles east of Roswell.
Records available.- August 1939 to December 1940 (discharge measurements only).
Remarks.- Discharge represents return flow to Hagerman canal from irrigated land near Roswell.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 4	0.44	Jan. 20	0.82	May 17	0.74	Sept.20	0.80
10	.39	27	.84	25	1.05	27	.80
17	.34	Feb. 3	.86	June 1	.97	Oct. 3	.97
24	.51	10	.85	13	.71	11	.68
31	.60	16	.76	21	.72	19	.81
Nov. 7	.55	23	.96	25	.75	27	.59
13	.65	Mar. 1	.94	July 9	.97	Nov. 2	.56
18	.86	8	.78	15	.73	9	.53
25	1.16	15	.64	26	.60	15	.62
Dec. 2	.88	22	.66	Aug. 2	.69	22	.64
9	1.06	28	.76	8	.64	29	.75
27	.82	Apr. 9.	.99	16	.68	Dec. 6	.72
		19	.96	22	.75	13	.98
1940		26	.81	30	.77	20	1.11
Jan. 6	.91	May 3	.75	Sept. 6	.64	28	.95
15	.87	11	.84	14	.66		

Diversions from Pecos River and drains between Rio Bonita and Rio Felix

Miles pump ditch near Dexter, N. Mex.

Location.- Water-stage recorder, lat. 33°12'00", long. 104°18'40", in SE¼ sec. 11, T. 13 S., R. 26 E., 10 feet downstream from pumping station, 1¼ miles downstream from Dexter bridge, and 3¼ miles east of Dexter.
Records available.- December 1939 to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 1.2 second-feet July 20; no flow at times.
Remarks.- Records poor. Discharge computed on basis of 3 discharge measurements and record of operation of 8-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 26-31, 1939.....	0	0	0	0
January 1940.....	0	0	0	0
February.....	0	0	0	0
March.....	.6	0	.03	2.0
April.....	.6	0	.07	4.4
May.....	.8	0	.09	5.6
June.....	.8	0	.14	8.1
July.....	1.2	0	.33	20
August.....	1.0	0	.16	9.7
September.....	0	0	0	0
The period.....	-	-	-	50
October 1940.....	0	0	0	0
November.....	0	0	0	0
December.....	0	0	0	0
Calendar year 1940.....	1.2	0	.07	50

Reins pump ditch near Dexter, N. Mex.

Location.- Water-stage recorder, lat. 33°11'45", long. 104°18'40", in NE¼ Sec. 14, T. 13 S., R. 26 E., 12 feet downstream from pumping station, 2 miles downstream from Dexter bridge, and 3¼ miles east of Dexter.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 3.2 second-feet Aug. 2, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 13 discharge measurements and record of operation of 7-inch centrifugal pump. Flow regulated by pumping plant which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939.....	1.0	0	0.22	13
November.....	0	0	0	0
December.....	0	0	0	0
January 1940.....	0	0	0	0
February.....	0	0	0	0
March.....	1.5	0	.29	18
April.....	1.8	0	.52	31
May.....	1.8	0	.15	9.1
June.....	2.5	0	.60	36
July.....	2.6	0	.94	58
August.....	3.2	0	.74	45
September.....	2.0	0	.23	13
Water year 1939-40.....	3.2	0	.31	223
October 1940.....	0	0	0	0
November.....	0	0	0	0
December.....	0	0	0	0
Calendar year 1940.....	3.2	0	.29	210

Diversions from Pecos River and drains between Rio Bonito and Rio Felix

Greenfield drain 1 near Dexter, N. Mex.

Location.- Measuring section, lat. 33°10'00", long. 104°18'30", in SE¼ sec. 23, T. 13 S., R. 26 E., 75 feet upstream from outlet to Pecos River, 2⅛ miles east of Greenfield, and 4 miles southeast of Dexter.
Records available.- August 1939 to December 1940 (discharge measurements only).
Remarks.- Discharge represents return flow to Pecos River from irrigated land near Greenfield.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	0.36	Jan. 10	1.06	May 13	1.99	Sept.12	e1.36
10	.38	17	1.03	27	1.e7	19	.37
16	.55	24	1.06	June 14	1.66	26	*.73
24	*1.69	Feb. 7	1.96	20	1.57	Oct. 3	.54
31	1.07	14	1.10	26	1.21	11	.57
Nov. 7	.97	28	*2.88	July 5	1.00	21	*1.48
13	.95	Mar. 16	*5.54	11	*1.57	28	1.04
20	.91	22	*2.16	18	*2.04	Nov. 5	.94
27	.94	27	2.26	25	.74	12	.80
Dec. 4	.98	Apr. 10	2.32	Aug. 2	.47	19	.88
11	.97	17	1.94	16	.97	28	.91
20	1.03	28	1.63	22	*1.50	Dec. 4	.94
		May 1	2.01	29	.65	10	.89
1940		13	1.77	Sept. 5	.51	17	.95
Jan. 3	1.13						

* Includes surface run-off.

Greenfield drain 2 near Dexter, N. Mex.

Location.- Measuring section, lat. 33°09'20", long. 104°19'00", in SW¼ sec. 26, T. 13 S., R. 26 E., 150 feet upstream from outlet to Pecos River, 2⅛ miles southeast of Greenfield, and 4⅛ miles southeast of Dexter.
Records available.- August 1939 to December 1940 (discharge measurements only).
Remarks.- Discharge represents return flow to Pecos River from irrigated lands near Greenfield.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	0.81	Jan. 24	1.69	May 27	*2.27	Sept.19	1.01
16	.65	31	*2.59	June 4	1.00	26	.74
24	.79	Feb. 7	*3.21	14	.91	Oct. 3	.77
31	.89	14	*2.30	20	.90	11	*1.41
Nov. 7	.94	28	*2.99	26	.85	21	*1.19
20	*1.34	28	*3.78	July 5	.00	28	.71
27	*1.41	Mar. 9	*2.41	11	*1.91	Nov. 5	.66
Dec. 4	*1.43	16	*2.31	18	1.08	12	.91
11	1.01	22	*2.36	25	.81	19	1.04
20	1.09	27	1.31	Aug. 2	.67	28	1.04
		Apr. 10	1.29	16	*2.25	Dec. 4	1.04
1940		17	1.07	22	1.46	10	.99
Jan. 3	1.17	22	1.13	29	1.33	17	.99
10	*1.86	May 1	.92	Sept. 5	.81	26	*1.07
17	*2.06	13	*4.80	12	*3.37		
		18	*3.82				

* Includes surface run-off.

Greenfield drain 3 near Dexter, N. Mex.

Location.- Measuring section, lat. 33°09'10", long. 104°19'00", in SW¼ sec. 26, T. 13 S., R. 26 E., 40 feet upstream from outlet to Pecos River, 2⅛ miles southeast of Greenfield, and 4⅛ miles southeast of Dexter.
Records available.- August 1939 to December 1940 (discharge measurements only).
Remarks.- Discharge represents return flow to Pecos River from irrigated lands near Greenfield.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	0.33	Jan. 10	0.56	May 13	*1.21	Sept. 5	0.50
10	.23	17	.58	18	1.12	12	.29
16	.31	24	.63	27	.78	19	.30
24	.28	31	.53	June 4	.83	26	.31
31	.25	Feb. 7	.57	14	*1.29	Oct. 3	.42
Nov. 7	.25	14	.57	20	.69	11	.38
13	*.71	22	.49	26	.74	21	.31
20	.49	28	.45	July 5	.85	28	.60
27	.47	Mar. 9	.43	11	.78	Nov. 5	.57
Dec. 4	.50	16	.46	18	.72	12	.80
11	.41	22	.47	25	.71	19	.50
20	.50	27	*.70	Aug. 2	.61	28	.41
		Apr. 10	*1.00	16	.54	Dec. 4	.42
1940		17	.75	22	.37	10	.44
Jan. 3	.51	22	.67	29	.39	17	.43
		May 1	.69			26	.51

* Includes surface run-off.

Rio Felix at old highway bridge, near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°07'30", long. 104°20'40", in SE¼ sec. 4, T. 14 S., R. 26 E., on downstream side of bridge 1½ miles northwest of Hagerman and 2½ miles upstream from mouth.

Drainage area.- 932 square miles (contributing area).

Records available.- April 1939 to September 1940. March 1932 to April 1939 at site 1 mile downstream, published as Rio Felix near Hagerman; records for periods of low flow not equivalent.

Extremes.- Maximum discharge during year, 12,500 second-feet May 22 (gage height, 16.45 feet), from rating curve extended above 850 second-feet on basis of flood flow of Pecos River near Lake Arthur; minimum daily, 0.4 second-foot, Sept. 21.
1939-40: Maximum discharge, that of May 22, 1940; minimum daily, that of Sept. 21, 1940.
Maximum stage known, 19.5 feet, from floodmarks, May 29, 1937 (discharge, 23,600 second-feet, by slope-area method).

Remarks.- Records fair. Diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	1.2	11	15	1.3	0.9	1.3	2.1	2.1	19	2.1	0.9
2	1.0	1.4	9.0	11	1.3	.7	1.3	1.8	2.1	2.4	2.1	1.1
3	1.0	1.2	8.0	8.0	1.3	.9	1.3	1.8	2.4	2.4	2.1	1.1
4	1.2	1.2	13	2.7	1.3	.9	1.3	1.6	2.1	2.1	1.8	.9
5	1.4	1.2	34	2.1	1.6	1.1	1.8	1.3	2.1	2.4	1.8	.9
6	1.2	1.2	34	2.1	1.3	1.1	1.8	1.1	2.7	2.4	2.1	.9
7	1.2	1.0	34	2.1	1.3	1.3	1.6	1.1	1.8	2.7	2.1	.9
8	1.2	1.0	22	1.8	1.1	.9	1.1	27	1.6	2.7	2.4	a.9
9	1.0	1.0	14	1.8	1.1	1.1	1.3	127	1.6	3.0	2.4	a.8
10	1.0	1.0	12	1.8	.9	1.1	1.6	19	1.6	4.0	2.1	a.8
11	1.2	1.0	9.0	2.1	.9	1.1	1.3	2.4	2.1	3.0	2.1	a.7
12	1.2	1.0	4.4	1.6	1.1	1.3	1.3	2.1	2.1	3.7	2.4	.7
13	1.2	1.0	1.6	1.6	1.1	1.3	1.3	2.1	2.1	3.3	2.4	.7
14	1.2	1.2	1.6	1.3	1.1	1.3	1.8	2.1	2.1	3.3	2.4	.6
15	6.8	1.2	1.6	1.8	.9	1.6	1.6	2.1	2.1	3.0	2.1	.6
16	1.2	1.0	1.6	1.8	1.1	1.3	1.6	1.8	1.3	3.3	2.4	.6
17	1.0	1.0	1.3	1.8	1.1	1.3	1.6	1.8	1.6	2.7	2.1	.6
18	.9	1.2	1.6	1.8	.9	1.3	1.6	2.4	2.4	2.7	1.8	.6
19	1.0	1.2	1.3	1.6	1.1	1.3	1.6	1.8	2.4	2.7	1.6	.6
20	1.0	1.2	1.3	1.6	1.1	1.3	1.6	1.6	2.1	2.4	1.6	.6
21	1.0	1.2	1.3	1.6	1.1	1.3	1.8	1.6	2.7	2.4	1.3	.4
22	1.0	1.0	1.6	1.8	1.1	1.1	1.6	2,020	3.0	1.6	1.3	.9
23	1.2	1.0	1.6	1.8	1.1	1.1	1.8	342	2.4	1.6	1.3	.9
24	1.2	1.0	1.6	1.6	1.1	1.1	1.8	21	1.6	1.6	1.1	.9
25	1.2	1.0	9.8	1.6	.9	1.1	2.1	1.8	1.6	1.8	1.1	.7
26	1.0	1.0	27	1.6	.9	1.1	1.8	1.3	1.8	1.3	.9	.7
27	1.0	10	22	1.6	.9	1.1	2.1	1.1	2.1	1.8	.9	.7
28	1.4	11	20	1.6	1.1	1.3	2.1	1.1	3.0	2.1	1.1	.9
29	1.6	11	23	1.6	.9	1.6	2.1	1.3	6.8	1.6	.9	.9
30	1.4	11	22	1.6	-	1.3	2.1	1.8	32	2.4	.9	.9
31	1.2	-	18	1.3	-	1.3	-	1.8	-	2.4	.9	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	41.1	6.8	0.9	1.33	82
November	71.6	11	1.0	2.39	142
December	364.2	34	1.3	11.7	722
Calendar year 1939	-	-	-	-	-
January	83.1	15	1.3	2.68	165
February	32.0	1.6	.9	1.10	63
March	36.5	1.6	.7	1.18	72
April	49.0	2.1	1.1	1.63	97
May	2,598.8	2,020	1.1	83.8	5,150
June	96.4	32	1.3	3.21	191
July	93.8	19	1.3	3.03	186
August	53.6	2.4	.9	1.73	106
September	23.4	1.1	.4	.78	46
Water year 1939-40	3,543.5	2,020	.4	9.68	7,020

Peak discharge.- May 8 (5:30 p.m.) 395 sec.-ft.; May 9 (2 p.m.) 428 sec.-ft.; May 22 (5 p.m.) 12,500 sec.-ft.
a No gage-height record; discharge interpolated.

Diversions from Pecos River between Rio Felix and Cottonwood Creek

Deason pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°08'30", long. 104°18'40", in SE¼ sec. 35, T. 13 S., R. 26 E., 25 feet downstream from pumping station and 2 miles northeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 3.4 second-feet Apr. 8, 9, 1940; no flow at times.
Remarks.- Records fair. Flow regulated by pumping plant (two 6-inch centrifugal pumps), which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	2.3	0	0.12	7.3
November	2.1	0	.07	4.2
December	0	0	0	0
January 1940	0	0	0	0
February	2.6	0	.11	6.5
March	2.2	0	.25	15
April	3.4	0	.70	42
May	2.1	0	.07	4.2
June	1.5	0	.11	6.7
July	2.5	0	.16	9.7
August	3.2	0	.37	23
September	3.2	0	.50	30
Water year 1939-40	3.4	0	.20	149
October 1940	0	0	0	0
November	.1	0	0	.2
December	0	0	0	0
Calendar year 1940	3.4	0	.19	137

Kiper-Stine-Turner-Hall pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°08'00", long. 104°18'50", in NW¼ sec. 2, T. 14 S., R. 26 E., at pumping station, 1¾ miles northeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 3.5 second-feet July 30, 1940; no flow at times.
Remarks.- Records fair except those for October to December 1940, which are poor. Discharge computed on basis of 13 discharge measurements and record of operation of 10-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.2	0	0.14	8.5
November	1.6	0	.30	18
December	.3	0	.02	1.0
January 1940	.3	0	.02	1.2
February	.3	0	.02	1.2
March	1.6	0	.19	12
April	2.3	0	1.10	65
May	2.0	0	.17	10
June	1.7	0	.48	28
July	3.5	0	.44	27
August	3.1	0	1.58	97
September	3.3	0	.61	36
Water year 1939-40	3.5	0	.42	305
October 1940	.1	0	.01	.8
November	.1	0	.00	.2
December	.1	0	.01	.4
Calendar year 1940	3.5	0	.39	279

Diversions from Pecos River between Rio Felix and Cottonwood Creek

McWhirt pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°07'50", long. 104°18'00", in NW¼ sec. 1, T. 14 S. R. 26 E., 25 feet downstream from pumping station and 2 miles northeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 6.8 second-feet July 13, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 23 discharge measurements, record of operation of 12-inch centrifugal pump, and records for Pecos River near Acme and near Lake Arthur. Flow regulated by pumping plant, which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	4.6	0	1.87	115
November	3.5	0	.90	53
December	.3	0	.02	1.2
January 1940	.6	0	.03	1.8
February	.3	0	.02	1.2
March	4.6	0	1.54	95
April	5.3	0	3.47	206
May	4.8	0	1.25	77
June	4.6	0	.56	33
July	6.8	0	2.95	181
August	5.1	0	1.25	77
September	5.4	0	1.69	101
Water year 1939-40	6.8	0	1.30	942
October 1940	4.5	0	.52	32
November	.4	0	.01	.8
December	3.0	0	.20	12
Calendar year 1940	6.8	0	1.13	818

Union Central Life Insurance Co. high pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°07'20", long. 104°18'10", in NE¼ sec. 11, T. 14 S., R. 26 E., at pumping station, 1.5 miles northeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 6.2 second-feet Apr. 30, May 31, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 9 discharge measurements and record of operation of 10-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation. Pumping plant also serves Union Central Life Insurance Co. low pump ditch.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	5.8	0	1.13	69
November	2.6	0	.55	33
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	3.0	0	.97	60
April	6.2	0	1.22	72
May	6.2	0	.84	51
June	6.0	0	1.23	73
July	4.8	0	.98	60
August	6.1	0	.79	49
September	5.8	0	1.74	104
Water year 1939-40	6.2	0	.79	571
October 1940	4.4	0	.63	39
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	6.2	0	.70	508

Diversions from Pecos River between Rio Felix and Cottonwood Creek

Union Central Life Insurance Co. low pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°07'20", long. 104°18'10", in NE¼ sec. 11, T. 14 S., R. 26 E., at pumping station, 1.5 miles northeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 7.2 second-feet Sept. 1, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 13 discharge measurements and record of operation of 10-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation. Pumping plant also serves Union Central Life Insurance Co. high pump ditch.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	6.4	0	0.61	50
November	2.9	0	.11	6.7
December	0	0	0	0
January 1940	.3	0	.02	1.2
February	2.4	0	.12	7.1
March	3.2	0	1.15	71
April	4.6	0	1.39	83
May	2.8	0	.31	19
June	3.6	0	.71	42
July	3.4	0	.53	33
August	7.1	0	1.10	68
September	7.2	0	1.23	73
Water year 1939-40	7.2	0	.62	454
October 1940	2.5	0	.95	59
November	.2	0	.01	.8
December	.2	0	.01	.4
Calendar year 1940	7.2	0	.63	458

Kirkland pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°06'30", long. 104°17'00", in NW¼ sec. 18, T. 14 S., R. 27 E., 40 feet downstream from pumping station and 2⅝ miles east of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 2.0 second-feet Aug. 2, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 3 discharge measurements, record of operation of 8-inch centrifugal pump, and records for Pecos River near Acme and near Lake Arthur. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	1.5	0	.15	8.9
May	1.8	0	.15	9.3
June	1.6	0	.34	20
July	0	0	0	0
August	2.0	0	.21	13
September	1.6	0	.11	6.5
Water year 1939-40	2.0	0	.08	58
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	2.0	0	.08	58

Diversions from Pecos River between Rio Felix and Cottonwood Creek

Eccles pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°05'10", long. 104°17'30", in SW¼ sec. 24, T. 14 S., R. 26 E., 140 feet downstream from pumping station and 3 miles southeast of Hagerman. Prior to Feb. 7, 1940, at site on right bank of Pecos River 2,000 feet downstream.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 5.0 second-feet Mar. 16, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 8 discharge measurements and record of operation of 12-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	.2	0	.01	.8
March	5.0	0	1.50	92
April	3.3	0	.86	51
May	4.4	0	.88	54
June	3.2	0	.67	40
July	4.8	0	1.25	77
August	4.8	0	.99	61
September	2.4	0	.25	15
Water year 1939-40	6.0	0	.54	391
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	5.0	0	.54	391

Buffalo Valley pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°03'00", long. 104°16'20", in NW¼ sec. 6, T. 15 S., R. 27 E., 15 feet downstream from pumping station and 5 miles southeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 10 second-feet July 10, 1940; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 26 discharge measurements and record of operation of 15-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	7.7	0	1.03	63
November	6.4	0	1.56	93
December	.7	0	.05	2.8
January 1940	2.6	0	.12	7.5
February	.6	0	.04	2.4
March	7.2	0	4.72	290
April	6.5	0	3.83	228
May	7.8	0	2.95	181
June	9.5	0	3.40	202
July	10	0	3.49	215
August	9.8	0	5.63	346
September	7.8	0	3.02	180
Water year 1939-40	10	0	2.49	1,810
October 1940	4.8	0	1.11	68
November	.6	0	.02	1.2
December	.6	0	.04	2.4
Calendar year 1940	10	0	2.37	1,720

Diversions from Pecos River between Rio Felix and Cottonwood Creek

Haroldale pump ditch near Hagerman, N. Mex.

Location.- Water-stage recorder, lat. 33°02'20", long. 104°16'10", in SE¼ sec. 6, T. 15 S., R. 27 E., 10 feet downstream from pumping station and 6 miles southeast of Hagerman.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 9.9 second-feet Sept. 10, 1940; no flow at times.
Remarks.- Records good. Flow regulated by pumping plant (15-inch centrifugal pump), which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.8	0	0.09	4.8
November	3.6	0	.36	21
December	.5	0	.01	.6
January 1940	.6	0	.02	1.2
February	.6	0	.02	1.2
March	4.2	0	1.79	110
April	8.6	0	3.56	212
May	7.3	0	1.14	70
June	5.4	0	1.50	89
July	9.2	0	3.84	236
August	6.9	0	2.64	156
September	9.9	0	2.57	153
Water year 1939-40	9.9	0	1.45	1,050
October 1940	2.8	0	.09	5.6
November	.1	0	.00	.2
December	0	0	0	0
Calendar year 1940	9.9	0	1.42	1,030

Haven pump ditch near Lake Arthur, N. Mex.

Location.- Water-stage recorder, lat. 32°59'10", long. 104°19'30", in NE¼ sec. 27, T. 15 S., R. 26 E., 20 feet downstream from pumping station, 500 feet downstream from county highway bridge over Pecos River, and 2¾ miles east of Lake Arthur.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge, 1.7 second-feet June 12; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 24 discharge measurements and record of operation of 10-inch deep well turbine pump. Flow regulated by pumping plant, which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	1.0	0	0.10	6.3
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	1.2	0	.16	8.9
March	1.2	0	.42	26
April	1.2	0	.33	19
May	1.4	0	.48	30
June	1.7	0	.76	45
July	1.6	0	.87	54
August	1.6	0	.82	50
September	1.2	0	.68	40
Water year 1939-40	1.7	0	.39	279
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	1.7	0	.38	273

Diversions from Pecos River between Rio Felix and Cottonwood Creek

Evans pump ditch near Lake Arthur, N. Mex.

Location.- Water-stage recorder, lat. 32°58'40", long. 104°21'20", in SE¼ sec. 29, T. 15 S., R. 26 E., 30 feet downstream from pumping station and 1¾ miles southeast of Lake Arthur.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge during water-year, 4.4 second-feet Mar. 5-7, Aug. 1, Sept. 8, 9, 1940; no flow many periods.
Remarks.- Records fair. Discharge computed on basis of 23 discharge measurements, record of operation of 10-inch centrifugal pump, and records for Pecos River near Lake Arthur. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939.....	2.4	0	0.28	17
November.....	0	0	0	0
December.....	0	0	0	0
January 1940.....	0	0	0	0
February.....	4.0	0	1.17	67
March.....	4.4	0	2.45	151
April.....	3.8	0	.86	51
May.....	4.0	0	1.08	66
June.....	4.0	0	2.13	127
July.....	4.2	0	1.87	115
August.....	4.4	0	1.73	107
September.....	4.4	0	2.26	134
Water year 1939-40.....	4.4	0	1.15	835
October 1940.....	1.1	0	.04	2.2
November.....	0	0	0	0
December.....	0	0	0	0
Calendar year 1940.....	4.4	0	1.13	820

Lawrence Ranch pump ditch near Lake Arthur, N. Mex.

Location.- Water-stage recorder, lat. 32°57'30", long. 104°21'40", in lot 12, sec. 2, T. 16 S., R. 26 E., 60 feet downstream from pumping station and 3 miles south of Lake Arthur.
Records available.- February to December 1940 (discontinued).
Extremes.- Maximum daily discharge during period, 5.3 second-feet June 13; no flow at times.
Remarks.- Records fair. Discharge computed on basis of 20 discharge measurements and record of operation of 12-inch centrifugal pump. Flow regulated by pumping plant, which diverts water from right bank of Pecos River for irrigation. Pumping plant installed February 1940; discharge represents total diversion during 1940.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February 24-29, 1940.....	0	0	0	0
March.....	0	0	0	0
April.....	4.2	0	1.31	78
May.....	4.3	0	2.19	135
June.....	5.3	0	2.85	169
July.....	4.8	0	3.33	205
August.....	4.4	.7	2.98	183
September.....	2.8	0	1.71	102
The period.....	-	-	-	872
October.....	2.4	0	0.23	14
November.....	0	0	0	0
December.....	0	0	0	0
Calendar year.....	-	-	-	-

Cottonwood Creek near Lake Arthur, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 32°55'00", long. 104°22'00", in SW¼SE¼ sec. 15, T. 16 S., R. 26 E., 1½ miles upstream from mouth and 6 miles (revised) south of Lake Arthur.

Drainage area.- 199 square miles (contributing area).

Records available.- March 1932 to September 1940.

Extremes.- Maximum discharge during year, 77 second-feet June 29 (gage height, 5.61 feet); no flow Aug. 18, 19, Sept. 14.

1932-40: Maximum discharge, 1,100 second-feet June 13, 1935, from rating curve extended above 15 second-feet by logarithmic plotting; maximum gage height, 13.5 feet May 30, 1937 (present datum, from floodmarks; backwater from Pecos River); no flow May 19-22, 24, 1936, July 10, 11, 1938, July 18, 27, 28, 1939, Aug. 18, 19, Sept. 14, 1940.

Remarks.- Records good except those for June, which are poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	2.9	4.4	4.6	5.1	5.3	4.7	4.9	4.0	12	1.7	0.2
2	1.5	2.9	4.8	4.8	5.3	4.9	3.6	4.2	3.2	7.6	1.2	.1
3	1.5	3.0	4.5	4.8	5.7	5.0	2.7	4.6	1.9	5.3	.5	.1
4	1.4	3.0	4.5	4.9	5.6	4.8	3.3	3.3	1.8	5.4	.6	.8
5	1.4	3.0	4.8	5.2	5.3	4.9	5.4	2.2	4.0	4.3	.7	.1
6	1.5	3.0	4.8	5.2	5.2	4.8	7.7	1.7	2.8	3.2	.1	.1
7	1.6	3.3	4.6	5.0	5.4	4.6	6.8	1.5	.8	2.1	.3	.1
8	1.7	3.3	5.0	5.2	5.1	4.7	4.7	2.5	.8	2.0	.4	.1
9	1.7	3.4	5.4	5.2	5.5	4.8	3.3	5.5	2.1	2.4	.6	.1
10	1.7	3.5	5.3	5.3	5.4	4.9	2.4	3.9	2.0	1.4	.1	.2
11	1.7	3.6	5.3	6.9	5.4	5.0	3.8	1.3	1.9	1.8	.1	.1
12	a1.7	3.6	5.2	7.4	5.1	4.6	3.5	1.3	2.0	2.7	.1	.2
13	a1.8	3.5	5.2	6.5	5.1	4.5	2.4	1.9	2.2	.9	.1	.1
14	a1.8	3.8	5.3	6.3	5.2	4.5	2.1	5.2	1.7	1.7	.8	0
15	a1.9	3.9	5.4	6.6	5.2	4.6	2.9	5.1	1.9	.9	.1	.3
16	1.9	4.0	5.4	7.5	5.0	4.6	3.4	4.8	1.2	.6	.1	.2
17	1.8	4.0	5.4	7.3	5.0	4.6	2.9	.8	.9	.7	.1	1.0
18	1.9	4.3	5.4	7.2	5.2	4.6	3.8	2.2	.9	.8	0	.5
19	2.0	4.4	5.6	7.0	5.2	4.7	2.6	4.4	1.1	.8	0	.2
20	a2.1	4.4	5.7	7.0	5.2	4.8	2.9	4.0	3.5	.6	.7	.3
21	2.2	4.0	5.9	5.3	5.2	4.7	3.1	1.6	15	.5	.4	.9
22	a2.4	3.9	6.0	4.6	5.3	4.6	2.7	4.4	1.4	1.3	.1	1.5
23	2.5	4.0	6.6	4.5	5.4	4.6	2.6	5.1	1.6	1.3	.1	.6
24	2.6	4.1	6.3	4.3	5.2	4.6	3.4	5.0	4.5	1.3	.4	.4
25	2.6	4.3	6.8	4.1	5.2	4.7	5.9	4.9	11	1.2	.5	.3
26	2.5	4.3	6.9	4.4	5.5	4.7	5.5	1.6	2.2	.5	.9	.6
27	2.7	4.3	6.6	4.6	5.4	4.9	5.4	1.1	1.7	1.1	.2	.1
28	2.8	4.3	4.4	4.8	5.4	4.7	5.2	1.3	3.2	1.3	.2	.1
29	2.8	4.4	4.4	5.0	5.5	4.5	5.1	1.5	59	.8	1.4	.1
30	2.8	4.3	4.4	5.0	-	4.6	5.0	2.8	26	1.4	4.8	1.4
31	2.9	-	4.5	5.2	-	4.6	-	1.8	-	1.8	1.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	62.8	2.9	1.4	2.03	125
November	112.7	4.4	2.9	3.76	224
December	164.8	6.9	4.4	5.32	327
Calendar year 1939	1,882.3	12	0	5.16	3,730
January	171.7	7.5	4.1	5.54	341
February	153.3	5.7	5.0	5.29	304
March	146.4	5.3	4.5	4.72	290
April	118.8	7.7	2.1	3.96	236
May	96.4	5.5	.8	3.11	191
June	166.3	59	.8	5.54	330
July	69.7	12	.5	2.25	138
August	18.4	4.8	0	.59	36
September	10.8	1.5	0	.36	21
Water year 1939-40	1,292.1	59	0	3.53	2,560

a No gage-height record; discharge interpolated.

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Woods pump ditch near Artesia, N. Mex.

Location.- Water-stage recorder, lat. 32°50'10", long. 104°19'30", in NW¼ sec. 18, T. 17 S., R. 27 E., at pumping station, 400 feet upstream from State Highway 83 and 4½ miles east of Artesia.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 4.6 second-feet June 26, 1940; no flow at times.

Remarks.- Records poor July to October 1939, others fair. Discharge computed on basis of 21 discharge measurements made during 1940 irrigation season, record of operation of 8-inch centrifugal pump, and records for Pecos River near Artesia. Pump diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
July 23-31, 1939	1.7	0	0.19	3.4
August	2.8	0	.40	25
September	3.8	0	.49	29
The period	-	-	-	57
October 1939	0.8	0	0.04	2.4
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	4.0	0	.80	49
April	3.4	0	.53	32
May	2.9	0	.14	8.7
June	4.6	0	.71	42
July	3.4	0	.63	39
August	4.1	0	.83	51
September	3.4	0	.84	50
Water year 1939-40	4.6	0	.38	274

Note.- No flow Oct. 1 to Dec. 31, 1940.

Carlsbad project main canal near Carlsbad, N. Mex.

Location.- Water-stage recorder and timber control, lat. 32°29'20", long. 104°15'00", in SW¼ sec. 12, T. 21 S., R. 26 E., 100 feet downstream from head gates at Avalon Dam, and 5 miles north of Carlsbad.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 490 second-feet July 13, 1940; no flow at times.

Remarks.- Records good. Canal diverts water from left bank of Pecos River for irrigation of 25,000 acres under Carlsbad project of Bureau of Reclamation. No diversions above station.

Cooperation.- Supplemental staff gage readings, record of regulation, and result of one discharge measurement furnished by Bureau of Reclamation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	302	0	81.4	5,010
November	40	0	1.9	115
December	157	0	49.0	3,010
January 1940	56	0	14.6	899
February	154	0	19.5	1,120
March	422	98	227	13,980
April	466	233	317	18,860
May	317	0	133	8,170
June	319	56	210	12,520
July	490	103	391	24,030
August	484	100	343	21,100
September	460	0	294	17,470
Water year 1939-40	490	0	174	126,300
October 1940	170	0	47.4	2,910
November	13	0	.43	26
December	0	0	0	0
Calendar year 1940	490	0	167	121,100

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Drain A near Carlsbad, N. Mex.

Location.- Measuring section, lat. 32°23'30", long. 104°10'00", in NW¼ sec. 14, T. 22 S., R. 27 E., 150 feet upstream from outlet to Pecos River and 4 miles southeast of Carlsbad.

Records available.- August 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	3.25	Jan. 16	1.63	Apr. 30	3.12	Aug. 27	2.77
10	3.68	23	1.59	May 7	2.08	Sept. 3	3.38
17	2.98	30	1.45	14	2.70	10	3.39
24	2.56	Feb. 6	1.40	30	1.87	17	2.60
31	2.12	13	1.35	June 4	1.88	Oct. 10	2.82
Nov. 7	2.02	20	1.22	18	2.45	29	2.84
14	1.92	27	1.18	25	2.03	Nov. 5	2.54
21	1.98	Mar. 5	1.19	July 2	2.10	11	2.60
28	1.88	15	1.73	9	2.18	18	2.38
Dec. 5	1.66	19	1.32	15	1.82	25	2.38
19	2.62	26	1.72	23	2.52	Dec. 5	2.28
26	2.72	Apr. 2	1.88	30	3.10	9	2.28
1940		9	2.64	Aug. 6	3.81	16	1.95
Jan. 2	2.39	17	2.92	14	2.85	28	1.72
9	1.87	23	2.36	20	2.47		

Drain B near Carlsbad, N. Mex.

Location.- Measuring section, lat. 32°23'00", long. 104°09'30", in SE¼ sec. 14, T. 22 S., R. 27 E., 500 feet upstream from outlet to Pecos River and 4½ miles southeast of Carlsbad.

Records available.- August 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	2.77	Jan. 16	1.30	Apr. 30	3.35	Aug. 20	3.12
10	4.28	23	1.10	May 7	3.45	27	3.64
17	2.84	30	1.04	14	4.19	Sept. 3	5.44
24	2.32	Feb. 6	1.01	30	1.39	10	3.63
31	2.00	13	.98	June 4	1.36	17	4.45
Nov. 7	1.96	20	.81	14	1.83	Oct. 11	3.37
14	1.74	27	.84	18	1.98	29	3.55
21	1.63	Mar. 5	.74	25	1.63	Nov. 5	2.68
28	1.56	15	1.62	July 2	1.47	11	2.54
Dec. 5	1.50	19	.62	9	1.30	18	2.45
19	2.59	26	.62	15	1.89	25	2.09
26	2.31	Apr. 2	.84	23	4.73	Dec. 5	1.92
1940		9	2.57	30	3.94	9	1.85
Jan. 2	1.80	17	1.39	Aug. 6	4.63	16	1.72
9	1.49	23	2.07	14	3.82	28	1.39

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Dickson Farms Co. canal near Carlsbad, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 32°23'00", long. 104°08'20", in NE¼ sec. 24, T. 22 S., R. 27 E., a quarter of a mile downstream from head gate and 6 miles southeast of Carlsbad.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 14 second-feet Mar. 23-25, July 23, 1940; no flow at times.

Remarks.- Records good. Canal diverts water for irrigation from left bank of Pecos River at Public Utilities Power Dam. No diversions above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	12	0	5.31	326
November	12	0	1.70	101
December	4.8	0	.25	15
January 1940	0	0	0	0
February	0	0	0	0
March	14	0	3.04	187
April	12	0	5.84	347
May	11	.1	3.78	232
June	12	.3	6.08	362
July	14	0	6.55	402
August	13	7.0	9.94	611
September	11	.2	7.66	456
Water year 1939-40	14	0	4.19	3,040
October	.4	.2	.30	18
November	.3	.1	.21	13
December	5.7	.1	.47	29
Calendar year 1940	14	0	3.66	2,660

Drain C near Carlsbad, N. Mex.

Location.- Measuring section, lat. 32°22'30", long. 104°09'10", in SE¼ sec. 24, T. 22 S., R. 27 E., 300 feet upstream from outlet to Pecos River, 2½ miles northeast of Otis, and 6 miles southeast of Carlsbad.

Records available.- August 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	1.76	Jan. 23	1.17	May 14	0.86	Sept.10	1.61
10	1.58	30	1.04	30	1.02	17	1.43
17	1.88	Feb. 6	1.14	June 4	.88	Oct. 11	1.94
24	2.23	13	1.08	14	.79	26	2.60
31	1.68	20	1.00	18	1.14	29	1.64
Nov. 7	1.74	27	1.03	25	1.09	Nov. 5	1.41
14	1.63	Mar. 5	.85	July 2	.93	11	1.69
21	1.48	15	.89	9	.82	18	1.71
28	1.58	19	.83	15	1.11	25	1.80
Dec. 5	1.36	26	.86	23	1.25	Dec. 5	1.57
19	1.19	Apr. 2	1.53	30	1.68	9	1.73
26	1.22	9	1.80	Aug. 6	1.13	16	1.51
1940		17	1.59	14	2.04	28	1.54
Jan. 2	1.12	23	1.38	20	1.69		
9	1.15	30	2.23	27	1.48		
16	1.20	May 7	.97	Sept.3	1.72		

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Drain E near Loving, N. Mex.

Location.- Measuring section, lat. 32°21'20", long. 104°07'00", in SW¼ sec. 29, T. 22 S., R. 28 E., 75 feet upstream from outlet to Pecos River, 3 miles east of Otis, and 5 miles north of Loving.

Records available.- August 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	4.44	Jan. 23	0.69	May 14	2.14	Sept. 10	2.71
10	3.20	30	.82	30	1.64	17	4.62
17	2.15	Feb. 6	.73	June 4	1.49	Oct. 11	1.99
24	1.60	13	.75	14	2.33	26	1.85
31	1.28	20	.71	18	1.86	29	1.64
Nov. 7	1.14	27	.72	25	1.72	Nov. 5	1.92
14	1.14	Mar. 5	.82	July 2	2.73	11	1.70
21	1.05	15	1.16	9	4.19	18	1.57
28	1.03	19	.89	15	3.45	25	1.46
Dec. 5	.97	26	1.54	23	2.98	Dec. 5	1.46
19	1.18	Apr. 2	1.65	30	5.51	9	1.42
26	1.39	9	3.56	Aug. 6	3.47	16	1.30
1940		17	3.48	14	12.7	28	1.18
Jan. 2	.88	23	3.45	20	6.91		
9	.88	30	2.68	27	4.29		
16	.87	May 7	3.36	Sept. 3	4.39		

Cass Draw drain near Loving, N. Mex.

Location.- Measuring section, lat. 32°20'00", long. 104°06'50", in NW¼ sec. 5, T. 23 S., R. 28 E., an eighth of a mile upstream from outlet to Pecos River and 3 miles northwest of Loving.

Records available. August 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940		1940	
Oct. 3	6.65	Jan. 30	4.31	May 14	5.11	Sept. 3	8.46
10	6.46	Feb. 6	4.26	30	4.48	10	8.83
17	6.10	13	4.15	June 4	4.11	17	8.17
24	5.84	20	4.04	14	4.70	Oct. 11	8.41
31	5.62	27	4.07	18	4.77	26	7.50
Nov. 7	5.51	Mar. 5	3.76	25	*10.9	29	6.63
14	5.10	15	4.72	July 2	5.58	Nov. 5	6.39
21	5.31	19	4.92	9	4.51	11	6.44
28	5.04	26	4.88	15	5.65	18	6.30
Dec. 5	4.95	Apr. 2	3.85	23	7.51	25	6.46
19	*25.4	10	5.76	30	6.52	Dec. 5	5.94
1940		17	6.08	Aug. 6	8.85	9	5.71
Jan. 2	4.61	23	7.98	14	8.92	16	5.56
16	4.86	30	5.69	20	7.46	28	5.28
23	4.69	May 7	5.17	27	9.71		

*Includes run-off from precipitation.

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Harroun canal near Loving, N. Mex.

Location.- Water-stage recorder, lat. 32°18'50", long. 104°03'30", in S½ sec. 11, T. 23 S., R. 28 E., 200 feet downstream from head gate and 3 miles northeast of Loving.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 79 second-feet Sept. 8, 10, 1939, Aug. 8, 9, 14, 1940; minimum daily, 22 second-feet, Dec. 25, 1939.

Remarks.- Records good. Canal diverts water from left bank of Pecos River for irrigation, and for industrial use at United States Potash Co. refinery. No diversion above station.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	56	53	54.6	3,360
November	57	54	56.4	3,360
December	58	22	41.6	2,560
January 1940	46	34	43.9	2,700
February	50	40	46.9	2,700
March	66	49	52.1	3,210
April	68	48	60.0	3,570
May	52	48	49.0	3,010
June	67	49	54.6	3,250
July	78	55	69.5	4,270
August	79	68	75.2	4,630
September	73	65	67.7	4,030
Water year 1939-40	79	22	56.0	40,650
October 1940	68	58	61.9	3,810
November	64	60	62.3	3,710
December	72	59	66.2	4,070
Calendar year 1940	79	34	59.2	42,960

United States Potash Co. waste ditch near Loving, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 32°18'10", long. 104°01'30", in N½ sec. 18, T. 23 S., R. 29 E., three-quarters of a mile southeast of United States Potash Co. refinery and 4½ miles northeast of Loving. Prior to Feb. 7, 1940, water-stage recorder and rectangular weir at same site.

Records available.- August 1939 to December 1940 (discontinusd).

Extremes.- 1939-40: Maximum daily discharge, 15 second-feet (estimated) May 22, 1940; minimum daily, 1.4 second-feet Dec. 25, 1939.

Remarks.- Records good. Discharge represents waste inflow to Salt Lake from refinery.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	4.1	3.1	3.74	230
November	4.6	3.5	3.94	234
December	4.5	1.4	3.96	244
January 1940	4.4	3.6	4.01	247
February	4.2	3.3	3.78	218
March	4.1	3.5	3.75	231
April	4.4	3.1	3.77	225
May	15	3.7	4.61	283
June	12	3.8	4.95	295
July	5.1	2.4	4.09	252
August	5.4	4.3	4.81	296
September	4.8	4.0	4.44	264
Water year 1939-40	15	1.4	4.16	3,020
October 1940	5.3	4.1	4.53	278
November	5.0	4.1	4.57	272
December	4.9	1.9	4.45	273
Calendar year 1940	15	1.9	4.32	3,130

Diversions from Pecos River and drains between Cottonwood Creek and Black River

North Salt Lake near Loving, N. Mex.

Location.- Water-stage recorder, lat. 32°19'40", long. 103°59'30", in SE¼SW¼ sec. 4, T. 23 S., R. 29 E., at mouth of Surprise Spring, 6¾ miles northeast of Loving. Datum of gage is 2,943.94 feet above mean sea level (general adjustment of 1929).

Records available.- October 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum mean daily gage height recorded, 1.40 feet May 24, 1940; minimum mean daily recorded, 0.87 foot May 8, 1940.

Remarks.- Records of mean daily gage height show fluctuation of North Salt Lake, which is fed by United States Potash Co. waste ditch (through West Salt Lake), Surprise Spring, and flood run-off. Lake has no outlet except overflow to West and South Salt Lakes. Low point on divide between North Salt Lake and West Salt Lake at elevation 2,945.0 feet; between West Salt Lake and South Salt Lake, 2,945.1 feet.

Monthly gage height, in feet, October 1939 to December 1940

Month	Maximum	Minimum	Last day of month	Change during month
September 1939.....	-	-	1.04	-
October.....	-	1.00	1.13	+0.09
November.....	1.32	1.04	1.31	+.18
December.....	-	-	-	-
January 1940.....	-	-	1.30	-
February.....	-	-	1.15	-.15
March.....	-	-	1.08	-.07
April.....	1.20	.91	.97	-.11
May.....	1.40	.87	1.24	+.27
June.....	1.36	1.05	1.35	+.11
July.....	1.33	.97	.98	-.37
August.....	1.23	.93	1.12	+.14
September.....	1.21	1.05	1.11	-.01
Water year 1939-40..	1.40	.87	-	+.07
October 1940.....	1.34	1.07	1.24	+.13
November.....	1.36	1.14	1.24	.00
December.....	1.30	1.19	1.28	+.04
Calendar year 1940..	1.40	.87	-	-

South Salt Lake near Loving, N. Mex.

Location.- Water-stage recorder, lat. 32°17'50", long. 103°59'30", in NW¼ sec. 21, T. 23 S., R. 29 E., 6 miles east of Loving. Datum of gage is 2,943.30 feet above mean sea level (general adjustment of 1929).

Records available.- October 1939 to December 1940 (discontinued).

Extremes.- 1939-40; Maximum mean daily gage height recorded, 1.88 feet June 29, July 2, 1940; minimum mean daily recorded, 0.60 foot Oct. 6, 1939.

Remarks.- Records of mean daily gage heights show fluctuation of South Salt Lake, which is fed by overflow from North Salt Lake and flood run-off. Lake has no outlet.

Monthly gage height, in feet, October 1939 to December 1940

Month	Maximum	Minimum	Last day of month	Change during month
September 1939.....	-	-	0.63	-
October.....	1.01	0.60	.92	+0.29
November.....	1.01	.74	1.01	+.09
December.....	-	1.01	-	-
January 1940.....	-	-	1.35	-
February.....	-	1.37	-	-
March.....	-	1.03	1.09	-
April.....	1.31	.92	.93	-.16
May.....	1.86	.90	1.78	+.85
June.....	1.88	1.31	1.78	0
July.....	1.88	1.26	1.26	-.52
August.....	1.30	.96	.96	-.30
September.....	-	.83	.83	-.13
Water year 1939-40..	1.88	.60	-	+.20
October 1940.....	1.38	.84	1.34	+.51
November.....	1.54	-	1.53	+.19
December.....	1.75	1.50	1.64	+.11
Calendar year 1940..	1.88	.83	-	-

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Harroun canal wasteway 1 near Loving, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 32°17'20", long. 104°02'00", in NE¼ sec. 24, T. 23 S., R. 28 E., at outlet to Pecos River 4 miles east of Loving. Prior to Dec. 16, 1939, at site a quarter of a mile upstream in NW¼ sec. 19, T. 23 S., R. 29 E.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 66 second-feet Dec. 28, 1940; no flow at times.

Remarks.- Records good. Discharge repreeents waste water returned to Pecos River.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939.....	50	21	29.6	1,820
November.....	57	24	32.3	1,920
December.....	56	20	36.5	2,250
January 1940.....	43	26	40.2	2,470
February.....	42	22	28.3	1,630
March.....	24	0	7.18	442
April.....	28	0	1.83	109
May.....	47	0	37.3	2,300
June.....	24	0	7.38	439
July.....	64	0	26.8	1,650
August.....	64	0	17.1	1,050
September.....	22	0	7.72	460
Water year 1939-40.....	64	0	22.8	16,540
October 1940.....	50	22	36.7	2,260
November.....	64	26	30.2	1,800
December.....	66	28	51.7	3,180
Calendar year 1940.....	66	0	24.5	17,790

Harroun canal wasteway 2 near Malaga, N. Mex.

Location.- Water-stage recorder and Cippoletti weir, lat. 32°15', long. 104°02', in S½ sec. 31, T. 23 S., R. 29 E., half a mile downstream from waste gate, half a mile north of Community of Jalisco (Harroun), and 4 miles northeast of Malaga.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 16 second-feet Nov. 23, 24, 1940; no flow at times.

Remarks.- Records fair. Discharge represente unused water returned to Pecos River.

Revisions.- Revised figures of discharge for period July to September 1939, superseding those published in Water-Supply Paper 878, are given herein.

Monthly discharge, in sscond-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
July 14-31, 1939.....	10	0	3.73	133
August.....	6.4	0	2.67	164
September.....	8.9	.1	2.27	135
The period.....	-	-	-	432
October 1939.....	6.5	1.0	3.70	228
November.....	4.0	0	.90	54
December.....	.2	0	.01	.4
January 1940.....	0	0	0	0
February.....	6.0	0	2.21	127
March.....	12	0	2.11	130
April.....	8.6	.1	1.18	70
May.....	.2	0	.02	1.4
June.....	5.4	0	.42	25
July.....	4.7	0	.72	44
August.....	6.3	0	1.02	63
September.....	5.4	0	.59	35
Water year 1939-40.....	12	0	1.07	776
October 1940.....	.1	0	.05	2.8
November.....	16	0	5.10	303
December.....	14	0	2.54	156
Calendar year 1940.....	16	0	1.32	957

Diversions from Pecos River and drains between Cottonwood Creek and Black River

Harroun canal wasteway 3 near Malaga, N. Mex.

Location.- Water-stage recorder, lat. 32°13', long. 104°01', in NW¼ sec. 17, T. 24 S., R. 29 E., half a mile upstream from outlet to Pecos River and 3½ miles east of Malaga.

Records available.- July 1939 to December 1940 (discontinued).

Extremes.- 1939-40: Maximum daily discharge, 25 second-feet Mar. 23; no flow at times.

Remarks.- Records fair. Discharge represents waste water returned from Harroun canal to Pecos River.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	7.8	0	2.64	162
November	9.8	0	3.10	185
December	0	0	0	0
January 1940	0	0	0	0
February	13	0	2.48	142
March	25	3.5	12.9	795
April	21	.9	7.88	469
May	8.8	0	.93	57
June	16	2.5	9.18	546
July	16	0	2.70	166
August	11	0	1.26	77
September	10	.2	3.43	204
Water year 1939-40	25	0	3.86	2,800
October 1940	16	.8	6.51	400
November	14	0	4.75	282
December	17	0	4.37	269
Calendar year 1940	25	0	4.69	3,410

Drain D near Loving, N. Mex.

Location.- Measuring section, lat. 32°18'00", long. 104°03'10", in SE¼ sec. 14, T. 23 S., R. 28 E., 150 feet upstream from outlet to Pecos River and 3 miles northeast of Loving.

Records available.- September 1939 to December 1940 (discharge measurements only).

Remarks.- Discharge represents return flow to Pecos River from irrigated lands in Carlsbad project of Bureau of Reclamation.

Discharge measurements, in second-feet, September 1939 to December 1940

1939		1940		1940		1940	
Sept. 12	2.12	Jan. 2	0.58	Apr. 23	0.98	Aug. 14	3.22
19	2.09	9	.48	30	1.15	20	2.03
29	3.52	16	.46	May 7	1.09	27	1.70
Oct. 3	2.04	23	.49	14	.89	Sept. 3	2.75
10	1.92	30	.43	30	.90	17	2.54
17	1.82	Feb. 6	.42	June 4	1.00	Oct. 11	1.74
24	1.54	13	.38	14	1.14	26	1.49
31	1.21	20	.37	18	1.26	29	1.60
Nov. 7	1.18	27	.32	25	1.35	Nov. 5	1.35
14	1.20	Mar. 5	.29	July 2	1.21	11	1.21
21	1.08	15	.47	8	1.64	18	1.25
28	.99	19	.43	15	2.85	25	1.23
Dec. 5	.90	26	.67	23	1.92	Dec. 5	1.25
19	.70	Apr. 10	2.07	30	2.29	9	1.13
26	.68	17	.94	Aug. 6	2.49	16	.94
						28	.93

Black River above Malaga, N. Mex.

Location.- Water-stage recorder and Cippoletti weir, lat. 32°13'50", long. 104°08'50", in SW¼ sec. 12, T. 24 S., R. 27 E., 0.5 mile upstream from Black River diversion dam and 4¼ miles west of Malaga.
Drainage area.- 343 square miles (contributing area).
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 3,280 second-feet Oct. 13 (gage height, 5.50 feet), from rating curve extended above 34 second-feet (capacity of Cippoletti weir) by logarithmic plotting based on computation of flow over dam at gage height 5.12 feet; minimum daily, 2.4 second-feet Oct. 10.
Remarks.- Records good except those for periods of no gage-height record, those above 35 second-feet, and those for December, all of which are poor. Diversions for irrigation upstream from station. Practically all normal flow diverted for irrigation at Black River diversion dam 0.5 mile downstream.
Cooperation.- Gage-height record and flood data furnished by Soil Conservation Service.

Discharge, in second-feet, March to December 1940

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
1	-	5.0	8.5	8.8	10	11	9.5	4.0	4.0	6.4		
2	-	5.5	8.8	8.8	a9	9.2	9.8	3.7	4.0	5.8		
3	4.5	5.8	8.8	8.8	a8	8.2	10	3.7	4.0	5.5		
4	4.7	6.7	8.8	8.8	a7.5	7.9	10	3.7	4.5	5.3		
5	4.5	10	8.8	8.5	a7	8.5	9.8	3.7	4.7	5.3		
6	4.2	7.6	8.8	8.5	a6.5	9.2	9.5	3.5	4.2	5.0		
7	4.2	7.3	8.5	8.5	a6.5	9.2	9.2	3.0	4.5	5.0		
8	4.5	7.3	186	e.2	6.4	9.5	9.2	2.8	5.5	5.0		
9	4.5	7.0	62	7.9	a6.5	9.5	8.8	2.8	5.8	4.5		
10	4.5	6.7	12	7.6	a6.5	8.5	8.5	2.4	5.8	4.0		
11	4.5	6.4	9.5	7.3	a7	8.8	7.9	2.6	5.3	3.7		
12	4.7	6.4	9.2	7.6	a8	9.8	7.0	5.5	5.3	3.7		
13	4.5	6.4	10	7.6	8.2	14	5.3	516	4.7	3.5		
14	4.5	6.7	11	7.9	8.2	17	4.5	73	4.7	4.0		
15	4.5	6.7	11	7.9	8.2	9.5	4.2	22	4.7	4.5		
16	4.5	6.7	11	7.9	8.2	11	4.0	12	4.7	4.5		
17	4.5	7.0	9.8	7.9	8.2	42	3.7	7.9	4.7	4.7		
18	4.5	7.0	8.2	a8	8.5	36	3.7	6.1	4.7	5.5		
19	4.5	7.0	7.9	a8	8.2	12	3.7	5.0	4.7	6.7		
20	4.5	7.0	10	a40	7.9	10	3.7	4.7	5.0	7.3		
21	4.5	7.3	9.2	a15	7.6	11	3.7	4.5	5.0	7.6		
22	4.5	8.2	502	a10	7.6	11	4.0	4.0	5.5	7.0		
23	4.5	8.5	43	a9	7.6	11	4.0	3.7	5.3	7.0		
24	4.5	7.9	18	8.2	7.3	12	4.0	4.0	5.5	7.0		
25	4.5	8.2	13	a8	7.3	25	4.0	3.7	5.5	7.0		
26	4.5	8.2	11	a9	7.3	44	4.0	4.0	5.5	6.7		
27	4.5	7.9	9.8	a9	7.3	16	3.7	4.5	5.8	6.7		
28	4.5	7.9	9.2	a8.5	7.3	12	4.0	4.5	6.1	7.0		
29	4.2	7.9	15	a30	11	9.8	4.0	4.2	6.4	7.0		
30	4.5	8.2	23	a13	12	9.2	4.0	4.2	6.4	7.0		
31	4.5	-	11	-	12	9.2	-	4.0	-	7.6		

Peak discharge.- May 8 (9 p.m.) 2,350 sec.-ft.; May 22 (10 a.m.) 2,800 sec.-ft.; May 22 (12 p.m.) 2,170 sec.-ft.; Aug. 17 (9 p.m.) 408 sec.-ft.; Oct. 13 (3:30 a.m.) 3,280 sec.-ft.
a No gage-height record; discharge computed on basis of weather records, and records for station at Malaga.

Monthly discharge, in second-feet, 1940

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
March 5-31	130.0	4.7	4.2	4.48	258
April	216.4	10	5.0	7.21	429
May	1,162.8	582	7.9	37.5	2,310
June	314.2	40	7.3	10.5	623
July	248.8	12	6.4	8.03	493
August	431.0	44	7.9	13.9	855
September	181.4	10	3.7	6.05	360
The period	-	-	-	-	5,330
October	733.4	516	2.4	23.7	1,450
November	152.5	6.4	4.0	5.08	302
December	177.5	7.6	3.5	5.73	352

Black River at Malaga, N. Mex.

Location.- Water-stage recorder, lat. 32°14'10", long. 104°04'00", in NE¼ sec. 10, T. 24 S., R. 28 E., 150 feet downstream from old highway bridge, three-quarters of a mile north of Malaga, and 1½ miles upstream from mouth.
Drainage area.- 360 square miles (contributing area).
Records available.- May 1914 to June 1915 (published as Black River near Malaga), July 1939 to December 1940 (discontinued) in reports of Geological Survey. May to December 1914 in reports of State engineer.
Extremes.- 1939: Maximum discharge during period July to September, 968 second-feet Aug. 20 (gage height, 7.96 feet), from rating curve extended above 55 second-feet by logarithmic plotting based on comparison with peak flows at station above Malaga, and Pecos River near Malaga; minimum daily, 7 second-feet July 17.
1939-40: Maximum discharge during water-year, 2,800 second-feet May 22 (gage height, 13.0 feet), from rating curve extended above 55 second-feet; minimum daily, 3.3 second-feet Mar. 1, 5.
1940: Maximum discharge during period October to December, 2,910 second-feet Oct. 13 (gage height, 13.25 feet), from rating curve extended above 55 second-feet; minimum daily, 4.6 second-feet Dec. 23, 24, 27, 31.
Remarks.- Records fair except those for periods of no or incomplete gage-height record, and those above 100 second-feet, all of which are poor. Many diversions above station for irrigation; none between station and mouth.

Discharge, in second-feet, 1939-40

1939

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	15	9.3	11	14	a11	10	21	a15	a52	9.1
2	-	17	6.9	12	10	a12	20	22	a8	a11	12
3	-	26	10	13	19	29	20	23	10	7.8	20
4	-	11	6.0	14	62	28	26	24	7.3	9.8	15
5	-	17	10	15	22	40	26	25	7.3	15	6.9
6	-	11	11	16	8.9	23	12	26	8.9	8.7	7.6
7	-	19	15	17	a7	87	25	27	16	12	7.3
8	-	21	14	18	a8	47	23	28	15	16	14
9	a90	14	11	19	125	28	28	29	19	17	21
10	59	11	9.3	20	a20	109	12	30	14	12	28
								31	16	8.4	-

Peak discharge.- July 9 (9 p.m.) 815 sec.-ft.; July 19 (6 a.m.) 715 sec.-ft.; Aug. 17 (7 p.m.) 426 sec.-ft.; Aug. 20 (9 p.m.) 968 sec.-ft.
a No gage heights or gage-height record fragmentary; discharge computed on basis of 2 discharge measurements and partly estimated gage heights.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	6.6	5.9	4.6	4.1	3.3	8.4	6.6	15	a15	8.2	8.9
2	12	6.6	5.8	4.5	4.1	3.4	8.2	5.4	11	a20	15	8.9
3	15	6.4	6.7	4.5	4.0	3.4	15	5.6	6.9	25	13	9.3
4	9.5	6.2	8.9	4.3	3.9	3.4	26	15	5.6	12	10	10
5	15	6.2	9.1	4.3	4.0	3.3	28	20	19	6.6	11	22
6	15	6.2	9.1	4.3	4.0	3.4	17	9.5	14	5.6	8.4	33
7	36	6.4	9.3	4.2	4.0	12	6.2	11	11	5.6	8.9	26
8	32	6.2	9.3	4.3	4.1	15	6.7	145	8.0	5.4	8.9	11
9	30	6.0	9.3	4.2	4.0	6.9	8.4	109	6.9	8.0	10	7.5
10	14	6.0	9.5	4.3	4.0	5.0	16	8.9	6.4	17	56	7.6
11	32	5.9	9.3	a4.3	4.0	4.3	10	6.2	8.2	19	27	8.7
12	35	5.9	9.5	a4.3	5.6	16	9.5	5.6	11	7.8	16	12
13	18	5.8	9.3	a4.3	6.9	17	16	5.2	5.8	6.7	13	15
14	17	5.6	9.3	a4.2	8.3	7.1	11	8.7	5.4	6.9	40	41
15	54	5.8	9.3	a4.2	4.3	14	10	7.8	5.6	7.6	24	35
16	31	5.6	9.5	a4.2	4.1	29	8.7	22	5.4	7.8	20	36
17	12	5.6	9.5	4.2	4.0	18	5.4	22	5.6	7.3	14	30
18	9.5	5.6	9.6	4.1	4.0	19	5.4	14	12	9.3	54	16
19	9.3	5.8	9.3	4.1	4.0	19	20	6.6	6.7	12	12	10
20	9.8	5.8	9.5	4.1	3.9	9.3	8.0	5.4	a90	11	7.8	8.9
21	9.3	5.5	9.5	4.2	3.7	18	5.2	5.3	50	12	7.5	8.4
22	9.3	5.4	9.8	4.2	3.7	14	4.7	669	38	13	8.4	9.3
23	9.1	5.4	10	3.9	3.7	15	4.8	58	21	21	19	14
24	8.4	5.4	6.7	3.9	3.6	8.7	5.9	9.5	16	14	17	25
25	7.5	5.4	5.6	4.0	3.6	6.0	16	6.6	17	11	40	20
26	7.1	5.3	5.0	4.0	3.6	6.7	11	5.9	18	10	52	17
27	6.9	5.3	4.8	4.0	3.5	12	11	5.6	18	7.1	15	12
28	6.7	5.2	4.7	4.1	3.4	24	8.7	5.4	a17	6.7	10	16
29	6.7	5.3	4.7	4.1	3.4	17	9.5	5.3	a45	13	20	26
30	6.6	5.8	4.7	4.1	-	7.8	7.1	6.4	a30	15	13	22
31	6.6	-	4.6	4.1	-	11	-	7.1	-	8.4	11	-

Peak discharge.- May 8 (10 p.m.) 1,980 sec.-ft.; May 22 (11 a.m.) 2,800 sec.-ft.; Aug. 18 (2 a.m.) 168 sec.-ft.
a No gage-height record; discharge Jan. 11-16, interpolated; June 20, June 28 to July 2, computed on basis of weather records, and records for Black River above Malaga and Pecos River near Malaga.

Discharge, in second-feet, of Black River at Malaga, N. Mex., 1939-40--Continued

1940

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	21	8.0	6.0	11	11	6.9	5.4	21	15	6.7	4.8
2	14	7.6	6.0	12	32	6.9	5.4	22	22	6.7	4.8
3	13	7.3	6.0	13	d620	6.7	5.3	23	19	6.6	4.6
4	10	7.3	5.9	14	122	6.7	5.2	24	18	6.4	4.6
5	9.8	7.3	5.9	15	26	6.7	5.3	25	26	6.4	4.7
6	8.9	7.3	5.8	16	d12	6.7	5.4	26	20	6.2	4.7
7	7.6	7.3	5.6	17	d10	6.6	5.3	27	27	6.2	4.6
8	7.6	7.3	5.6	18	d9	6.7	5.2	28	28	6.2	4.7
9	7.8	7.1	5.6	19	8.2	6.7	5.2	29	17	6.2	4.7
10	8.4	6.9	5.4	20	8.9	6.7	5.0	30	9.1	6.2	4.7
								31	8.0	-	4.6

Peak discharge.- Oct. 13 (5 a.m.) 2,910 sec.-ft.; Oct. 13 (11:30 p.m.) 370 sec.-ft.
d Gage-height record incomplete; discharge computed on basis of partly estimated gage heights.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 9-31, 1939	581.4	125	7	25.3	1,150
August	745.7	109	7.8	24.1	1,480
September	451.4	28	7.3	15.0	895
The period	-	-	-	-	3,520
October 1939	508.3	54	6.6	15.4	1,010
November	174.0	6.6	5.2	5.80	345
December	246.8	10	4.6	7.96	490
Calendar year 1939	-	-	-	-	-
January 1940	130.1	4.6	3.9	4.20	258
February	118.5	6.9	3.4	4.09	235
March	352.0	29	3.3	11.4	698
April	327.8	28	4.7	10.9	650
May	1,221.6	669	5.2	39.4	2,420
June	531.5	90	5.4	17.7	1,050
July	346.8	25	5.4	11.2	688
August	570.1	54	7.5	18.4	1,130
September	526.5	41	7.5	17.5	1,040
Water year 1939-40	5,054.0	669	3.3	13.8	10,110
October 1940	1,176.3	620	7.6	37.9	2,330
November	204.5	8.0	6.2	6.82	406
December	162.0	6.0	4.6	5.23	321
Calendar year 1940	5,667.7	669	3.3	15.5	11,330

Livingston pump ditch near Malaga, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 32°12', long. 104°00', in SE¼ sec. 20, T. 24 S., R. 29 E., 125 feet downstream from pump and 4½ miles southeast of Malaga.
Records available.- July 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum daily discharge during water year, 7.7 second-feet Aug. 26; no flow at times.
1940: No flow during period October to December.
1939-40: Maximum daily discharge, 7.9 second-feet Sept. 6, 1939; no flow at times.
Remarks.- Records good. Flow regulated by pumping plant (12-inch centrifugal pump) which diverts water from left bank of Pecos River for irrigation.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	7.3	0	2.57	153
May	7.2	0	1.00	61
June	0	0	0	0
July	7.1	0	2.00	123
August	7.7	0	3.68	226
September	6.1	0	.20	12
Water year 1939-40	7.7	0	.79	575
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	7.7	0	.79	575

Delaware River near Red Bluff, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 32°01', long. 104°03', sec. 23, T. 26 S., R. 28 E., at bridge on U. S. Highway 285, 3¼ miles upstream from mouth and 4 miles south of Red Bluff. Datum of gage is 2,900.7 feet above mean sea level (general adjustment of 1929).

Drainage area.- 967 square miles.

Records available.- October 1937 to September 1940. April 1912 to September 1913 at site 3 miles upstream (published as Delaware River near Malaga, N. Mex.). May 1914 to June 1915 at site 2½ miles downstream (published as Delaware River near Angeles, Tex.).

Extremes.- Maximum discharge during year, 457 second-feet Sept. 1 (gage height, 3.32 feet); no flow July 25-27.
1912-13, 1914-15, 1937-40: Maximum discharge, 34,600 second-feet June 27, 1938 (gage height, 18.00 feet, from floodmarks), by slope-area method; no flow at times.

Remarks.- Records good except those for periods of faulty or no gage-height records or ice effect, which are fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	2.0	3.7	3.3	3.6	2.1	1.4	0.6	2.0	2.6	1.3	55
2	1.3	1.9	3.4	3.3	3.8	2.1	1.2	.7	1.0	1.6	.4	101
3	1.3	2.0	3.1	3.4	4.6	2.3	1.2	.8	.6	.9	.2	26
4	1.2	2.1	3.1	3.4	4.3	2.3	1.2	.8	f.4	.7	.2	8.0
5	1.2	2.3	3.1	3.4	3.7	2.4	5.2	.7	.4	.7	f.1	3.8
6	1.2	2.5	3.1	3.8	3.3	2.3	4.1	.6	.3	.7	f16	2.1
7	2.4	2.5	3.1	4.0	2.9	2.2	2.8	.6	.3	.6	55	a1.3
8	23	2.6	3.0	4.0	2.6	2.3	2.3	.9	.2	.5	13	a.7
9	8.2	2.6	3.0	4.0	2.9	2.3	1.9	7.6	.4	.3	5.0	a.4
10	3.7	2.5	3.0	3.8	3.0	2.3	1.6	1.9	.6	.2	10	a.4
11	2.9	2.4	3.0	3.6	2.9	2.4	1.2	1.4	.6	.2	17	a.4
12	2.5	2.4	2.8	3.6	2.8	2.3	1.2	1.1	.6	.1	3.1	a.4
13	2.4	2.6	2.8	3.4	2.5	2.2	1.2	1.0	.5	.2	4.0	a.4
14	2.3	2.8	2.9	3.3	2.6	2.2	1.2	.9	.5	.2	5.2	a.4
15	2.2	2.9	2.9	3.4	2.6	2.2	1.2	.8	.5	.1	3.4	a.4
16	2.1	2.9	3.0	3.3	2.5	2.3	.8	.8	.5	.1	.9	a.4
17	2.1	3.1	3.0	3.6	2.6	2.1	.6	.8	.4	.1	.6	a.5
18	2.1	3.0	3.0	3.0	2.6	1.9	.e	.7	.3	.2	4.3	a.5
19	2.1	2.9	2.9		2.8	2.1	1.1	9.4	38	.3	.8	a.5
20	2.0	2.9	2.9		2.9	2.3	1.0	2.0	8.4	.2	.5	f.6
21	2.0	2.8	2.9		3.0	2.3	.7	1.3	2.3	.2	.4	.6
22	2.0	2.8	2.9		3.1	2.3	.6	22	1.6	.1	.3	.6
23	2.0	2.9	2.9		3.1	2.2	.6	3.5	.9	.1	.3	2.0
24	2.3	2.9	2.8	b3.0	2.8	2.2	.7	5.1	11	.1	.2	8.1
25	2.0	3.3	3.7		2.8	2.4	.7	2.4	39	0	32	.9
26	2.0	3.6	3.e		2.6	2.3	.7	1.3	9.4	0	9.0	.7
27	1.9	3.6	3.7		2.5	2.2	.7	.8	3.3	0	8.0	.6
28	1.9	3.6	3.3		2.3	1.8	.6	.7	1.6	.2	2.9	.6
29	1.9	4.0	2.8	f3.7	2.3	1.7	.5	18	13	.1	1.2	.6
30	1.9	3.8	3.7	4.0	-	1.7	.5	18	6.5	.1	.7	.7
31	2.0	-	3.1	3.8	-	1.6	-	4.6	-	1.0	.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	89.3	23	1.2	2.88	177
November	84.2	4.0	1.9	2.81	167
December	96.4	3.8	2.8	3.11	191
Calendar year 1939	3,605.7	1,480	.4	9.88	7,160
January	105.1	4.0	-	3.39	208
February	86.0	4.6	2.3	2.97	171
March	67.3	2.4	1.6	2.17	133
April	39.6	5.2	.5	1.32	79
May	111.8	22	.6	3.61	222
June	145.1	39	.2	4.84	288
July	12.4	2.6	0	.40	25
August	196.8	55	.1	6.35	390
September	218.6	101	.4	7.29	434
Water year 1939-40	1,252.6	101	0	3.42	2,480

Peak discharge.- Sept. 1 (7:00 p.m.) 457 sec.-ft.
a No gage-height record; discharge computed on basis of recorded range of stage and records for Pecos River near Angeles.
b Stage-discharge relation affected by ice.
f Computed on basis of partly estimated gage-height record.

Seepage below east side of Red Bluff Dam near Orla, Tex.

Location.- Staff gage and 1-foot wooden Parshall flume, lat. 31°54', long. 103°54', 50 feet east of Pecos River, 300 feet south of base of Red Bluff Dam and 4½ miles north of Orla, Reeves County.

Records available.- October 1939 to December 1940 (discontinued).

Extremes.- Maximum daily discharge during period 0.7 second-foot Mar. 17-28; minimum daily, 0.1 second-foot Sept. 11 to Oct. 15.

Remarks.- Staff gage read occasionally. During period of this record maximum elevation of Red Bluff Reservoir was 2,811.1 feet and minimum elevation was 2,794.8 feet. Elevation of top of Taintor gates, 2,842.0 feet.

Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 23-31, 1939	0.3	0.3	0.30	5.4
November	.3	.3	.30	18
December	.5	.3	.40	25
January 1940	.5	.5	.50	31
February	.6	.6	.60	35
March	.7	.6	.64	39
April	.6	.3	.47	28
May	.4	.2	.36	22
June	.4	.2	.32	19
July	.4	.2	.27	17
August	.2	.2	.20	12
September	.2	.1	.13	7.9
The period	-	-	-	259
October 1940	.2	.1	.15	9.3
November	.2	.2	.20	12
December	.3	.2	.21	13
Calendar year 1940	.7	.1	.34	245

Note.- Discharge computed on basis of 2 to 7 staff-gage readings per month. Gage not read during September 1940.

Seepage below west side of Red Bluff Dam near Orla, Tex.

Location.- Staff gage and 6-inch wooden Parshall flume, lat. 31°54', long. 103°54', 200 feet from west bank of Pecos River, 800 feet south of base of Red Bluff Dam, and 4½ miles north of Orla, Reeves County.

Records available.- October 1939 to December 1940 (discontinued).

Extremes.- Maximum daily discharge during period 0.03 second-foot, Feb. 18-20; no flow at times.

Remarks.- Staff gage read occasionally. During period of this record maximum elevation of Red Bluff Reservoir was 2,811.1 feet and minimum elevation was 2,794.8 feet. Elevation of top of Taintor gates, 2,842.0 feet.

Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 17-31, 1939	0.02	0.02	0.02	0.6
November	.02	.02	.02	1.2
December	.02	.02	.02	1.2
January 1940	.02	.02	.02	1.2
February	.03	.01	.02	1.2
March	.02	.02	.02	1.2
April	.02	.01	.02	1.1
May	.02	0	.01	.7
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The period	-	-	-	8.4
October 1940	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	.03	0	.01	5.4

Note.- Discharge computed on basis of 3 to 7 staff-gage readings per month, October 1939 to May 1940.

Salt (Screwbean) Draw near Orla, Tex.

Location.- Water-stage recorder and wooden low-water control, lat. 31°53', long. 103°57', at bridge on U. S. Highway 285, 157 feet upstream from Panhandle & Santa Fe Ry. Co. bridge, 2.7 miles southwest of Red Bluff Dam, 4.1 miles northwest of Orla, Reeves County, and 5 miles upstream from mouth. Prior to Sept. 10, 1939, staff gage at same site and datum.

Drainage area.- 455 square miles (contributing area).

Records available.- August 1939 to December 1940 (discontinued).

Extremes.- Maximum discharge during period, 2,500 second-feet Aug. 18, 1940 (gage height, 13.32 feet), from rating curve extended above 1,500 second-feet; no flow at times. Floods have reached a stage of 18 or 19 feet, according to information from local residents.

Remarks.- Records fair. Staff gage read twice daily Aug. 16 to Sept. 9, 1939. No diversions.

Discharge, in second-feet, 1939-40

Day	1939			1940							
	Aug.	Sept.	Oct.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-		0	0	0.1	1.2	0	0.4	0	0	0.1
2	-		0	0	0	.2	0	9.8	0	0	0
3	-		0	0	0	0	0	.4	0	0	0
4	-		0	0	0	0	0	.2	0	0	0
5	-		0	0	0	0	0	.1	0	0	0
6	-		0	0	0	0	0	0	0	0	.1
7	-		3.3	0	0	0	0	0	0	0	.1
8	-		43	.4	0	0	0	0	0	.1	.1
9	-		7.3	0	0	0	0	0	0	.2	.1
10	-		1.1	0	0	0	0	0	0	.4	.1
11	-		.4	0	0	0	0	0	3.1	.3	.2
12	-		.2	0	0	0	0	0	393	.2	.2
13	-		0	0	0	0	0	0	37	.1	.2
14	-		0	0	0	0	38	0	4.4	.1	.2
15	-		0	0	0	0	24	0	1.5	.1	.2
16	60		0	0	0	0	3.5	0	.5	.1	.2
17	143		0	0	0	0	83	0	.4	.1	.2
18	70		0	0	0	0	527	0	.3	.1	.2
19	4.9		0	0	0	0	12	0	.3	.1	.2
20	2.0		0	0	0	0	4.0	0	.2	.1	.2
21	1.0		0	0	0	0	2.2	0	.2	.1	.1
22	.4		0	393	0	0	1.5	0	.1	.1	.1
23	.2		0	17	1.3	0	1.0	0	.1	.1	.1
24	0		0	2.4	.2	0	.8	0	.1	.1	.1
25	0		0	.8	0	0	.8	0	.1	.1	.1
26	0		0	.4	0	0	2.2	0	.1	.2	0
27	0		0	.2	0	0	1.2	0	.1	.2	0
28	.1		0	.1	.9	0	.6	0	0	.3	0
29	0		0	1.7	473	0	.5	0	0	.3	0
30	0		0	2.2	7.0	0	.4	0	0	.2	0
31	0		0	.4	-	0	.4	-	0	-	0

Peak discharges.- Aug. 17, 1939 (10 p.m.) 726 sec.-ft.; May 22 (1:30 p.m.) 1,760 sec.-ft.; June 29 (4 p.m.) 1,440 sec.-ft.; Aug. 18, 1940 (12:45 a.m.) 2,500 sec.-ft.; Oct. 12, 1940 (11 a.m.) 1,240 sec.-ft.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 16-31, 1939	271.6	143	0	17.0	539
September	0	0	0	0	0
Water year	-	-	-	-	-
October 1939	55.3	43	0	1.78	110
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January 1940	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	418.6	393	0	13.5	830
June	482.5	473	0	16.1	957
July	1.4	1.2	0	.05	2.8
August	703.1	527	0	22.7	1,390
September	10.9	9.8	0	.36	22
Water year 1939-40	1,671.8	527	0	4.57	3,310
October 1940	441.5	393	0	14.2	876
November	3.7	.4	0	.12	7.3
December	3.1	.2	0	.10	6.1
Calendar year 1940	2,064.8	527	0	5.64	4,090

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

John Camp pump near Orla, Tex.

Location.- Six-inch centrifugal pump, lat. 31°53', long. 103°49', SW¼ sec. 2, T.W.P. 2, Blk. 56, Texas & Pacific R. R. Co. survey, 5 miles (airline) below Red Bluff Dam and 5.2 miles east of Orla, Reeves County.
Records available.- March to December 1940 (discontinued).
Remarks.- Records fair. Discharge computed on basis of two discharge measurements and record of operation of pump. Pump diverts water from right bank of Pecos River for irrigation.
Cooperation.- Records of time of pump operation furnished by operator, Mr. Bill Bond.

Monthly discharge, in second-feet, 1940

Month	Mean	Run-off in acre-feet
March 21-31	0.06	1.4
April	.15	8.7
May	0	0
June	.02	1.4
July	.01	.4
August	.07	4.4
September	.02	1.4
The period	-	17.7

Note.- No flow Oct. 1 to Dec. 31.

Joe B. Neel pump near Riverton, Tex.

Location.- Six-inch centrifugal pump, lat. 31°45', long. 103°43', in E½ sec. 37, Blk. 1, H. & G. N. R. R. Co. survey, 3 miles east of Riverton and 16 miles (airline) below Red Bluff Dam.
Records available.- March to September 1940 (discontinued).
Remarks.- Pump diverts water from right bank of Pecos River for irrigation.
Cooperation.- Records of time of pump operation furnished by Mr. Joe B. Neel, owner.

Monthly discharge, in second-feet, 1940

Month	Mean	Run-off in acre-feet
March	0.15	9.3
April	.11	6.3
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
The period	-	16

Note.- No current meter measurements. Operating capacity estimated to be 850 gallons per minute by Texas Board of Water Engineers. No pumping after April.

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

M. R. Estes pump near Mentone, Tex.

Location.- Sixteen-inch propeller type, electrically driven pump, lat. 31°42', long. 103°37', in subdivision 10, sec. 81, Blk. 33, Houston & Texas Central R. R. Co. survey, 2 miles west of Mentone.
Records available.- June to December 1940 (discontinued).
Remarks.- Pump diverts water from left bank of Pecos River. Water used for irrigation.
Cooperation.- Discharge records furnished by Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Mean	Run-off in acre-feet
June 7-30	1.64	78
July	1.35	83
August	.78	48
September	1.43	85
The period	-	294
October	1.59	98
November	0	0
December	0	0

Note.- Discharge records based on current-meter ratings of pump and amount of electrical energy consumed each month. Operation of pump began June 7, 1940.

Reeves County Water Improvement District No. 2 canal near Mentone, Tex.
(Formerly published as Farmers Independent canal near Porterville, Tex.)

Location.- Water-stage recorder, lat. 31°38', long. 103°32', about the center of sec. 11, Blk. 3, H. & G. N. Railroad Co. survey, Reeves County, 2½ miles below the head gates and about 6 miles southeast of Mentone, Loving County. Station about 2½ miles downstream from site of former station.
Records available.- February 1922 to July 1925 at site 2½ miles upstream, August 1939 to September 1940.
Extremes.- 1939-40: Maximum discharge during period, 89 second-feet May 22, (gage height, 3.66 feet); no flow at times.
1922-25, 1939-40: Maximum mean daily discharge, 160 second-feet June 14, 1922; no flow at times.
Remarks.- Records fair. Canal diverts water from right bank of Pecos River for irrigation near Pecos.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 15-31, 1939	54	31	40.2	1,360
September	59	26	49.4	2,940
October 1939	37	13	24.5	1,510
November	13	0	7.42	441
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	12	0	3.91	240
April	48	10	29.2	1,740
May	42	0	20.4	1,250
June	0	0	0	0
July	59	0	28.0	1,720
August	53	0	24.9	1,530
September	46	2.6	19.8	1,180
Water year 1939-40	59	0	13.2	9,610

Note.- These records include measured flow of canal plus water diverted 1,000 ft. above gage.

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

Ward County Water Improvement District No. 3 canal near Barstow, Tex.

Location.- Water-stage recorder and wooden control, lat. 31°36', long. 103°30', about a quarter of a mile downstream from head gates and 11.8 miles northwest of Barstow, Ward County.
Records available.- August 1939 to September 1940.
Extremes.- Maximum discharge during period, 102 second-feet May 23, 1940 (gage height, 3.45 feet); no flow at times.
Remarks.- Records fair. Canal diverts water from left bank of Pecos River for irrigation near Barstow. No diversions above station.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 15-31, 1939.....	63	26	43.5	1,470
September.....	63	-	35.0	2,080
October 1939.....	47	-	15.6	961
November.....	34	-	8.36	497
December.....	.5	.3	.39	24
January 1940.....	2.0	-	.98	60
February.....	1.8	.2	1.02	59
March.....	70	0	13.7	840
April.....	63	0	31.5	1,880
May.....	59	0	12.5	771
June.....	33	0	11.6	690
July.....	64	0	31.6	1,950
August.....	80	0	24.3	1,490
September.....	50	.6	15.7	932
Water year 1939-40.....	80	0	14.0	10,150

Ward County Irrigation District No. 1 canal near Barstow, Tex.
(Formerly published as Barstow canal near Barstow, Tex.)

Location.- Water-stage recorder, lat. 31°33', long. 103°29', SW¼ sec. 56, Blk. 33, Houston & Texas Central R. R. Co. survey, about half a mile downstream from head gates and former site, and 7.9 miles northwest of Barstow.
Records available.- February 1922 to September 1925, August 1939 to September 1940.
Extremes.- 1939-40: Maximum discharge during period, 318 second-feet Sept. 1, 1939 (gage height, 3.50 feet), from rating curve extended above 231 second-feet; minimum daily, 0.2 second-foot Mar. 20, 23-30, 1940.
1922-25, 1939-40: Maximum discharge, 499 second-feet Aug. 30, 1923 (gage height, 7.42 feet, site and datum then in use); no flow at times.
Remarks.- Records good. Canal diverts water from left bank of Pecos River for irrigation near Barstow. No diversions above station.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 15-31, 1939.....	276	50	167	5,640
September.....	311	69	143	8,520
October 1939.....	101	22	53.6	3,300
November.....	46	13	37.0	2,200
December.....	7.8	.6	2.75	169
January 1940.....	-	7.1	8.56	526
February.....	-	-	3.77	217
March.....	77	.2	4.10	252
April.....	199	48	110	6,550
May.....	113	12	43.5	2,670
June.....	143	3.6	51.7	3,080
July.....	180	6.6	70.2	4,320
August.....	172	7.0	35.1	2,160
September.....	77	1.4	36.1	2,150
Water year 1939-40.....	199	.2	38.0	27,590

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

Drainage into Soda Lake near Barstow, Tex.

Location.- Staff gage, lat. 31°29', long. 103°24', in S½ sec. 199, Blk. 34, Houston & Texas Central R. R. survey, about 200 feet upstream from Soda Lake and 2 miles north of Barstow.
Records available.- October 1939 to December 1940 (discontinued), miscellaneous measurements only.
Remarks.- Measurements represent drainage into Soda Lake from irrigation on a small area lying north of Ward County Irrigation District No. 1 canal.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940	
Oct. 25	0.50	Feb. 23	0.10	Aug. 5	0
Nov. 17	.50	Apr. 11	.20	27	.01
Dec. 21	.20	May 16	.20	Sept.18	0
		27	.20	Oct. 25	.26
1940		June 27	.10	Nov. 18	.10
Feb. 1	.08	July 15	0	Dec. 19	.05

Reeves County Water Improvement District No. 2 canal wasteway near Pecos, Tex.

Location.- Water-stage recorder, lat. 31°29', long. 103°29', NE¼ sec. 65, Blk. 4, H. & G. N. Railroad Co. Survey, 300 feet upstream from outlet to Pecos River, about half a mile south of Sullivan Bridge and 3½ miles north of Pecos.
Records available.- November 1939 to December 1940 (discontinued).
Extremes.- Maximum gage height during period Nov. 29, 1939, to Dec. 31, 1940, 2.96 feet sometime during period May 5-12 (affected by backwater, discharge not determined); no flow at times.
Remarks.- Records fair. Flow represents waste return to the Pecos River from Reeves County Water Improvement District No. 2 canal, which diverts water several miles upstream.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 1939	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	2.5	0	.49	30
April	-	0	2.08	124
May	-	-	-	-
June	0	0	0	0
July	7.0	0	1.28	79
August	-	-	-	-
September	3.6	0	.76	45
October	4.4	0	.67	41
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	-	-	-	-

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

John T. Yarborough pump near Pecos, Tex.

Location.- Twelve-inch centrifugal pump, lat. 31°26', long. 103°28', in SW¼ sec. 44, Blk. 33, Houston & Texas Central Railroad Co. survey, Ward County, about a quarter of a mile downstream from gaging station on Pecos River at Pecos and 1¼ miles east of Pecos, Reeves County.
Records available.- June to December 1940 (discontinued).
Remarks.- Records fair. Pump diverts water from left bank of Pecos River for irrigation nearby.
Cooperation.- Records collected in cooperation with the Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Mean	Run-off in acre-feet
January 1940	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	1.03	61
July	.7e	48
August	1.81	111
September	.79	47
The period	-	267
October 1940	0	0
November	0	0
December	0	0
Calendar year 1940	-	267

Ward County Irrigation District No. 1, lateral No. 1 wasteway near Pecos, Texas.

Location.- Water-stage recorder and wooden control, lat. 31°26', long. 103°26', in SW¼ sec. 41, Blk. 33, Houston & Texas Central R. R. Co. survey, 300 feet above outlet to Pecos River, 1 mile south of U. S. Highway 80, and 3½ miles east of Pecos.
Records available.- November 1939 to December 1940 (discontinued).
Extremes.- Maximum discharge during period not determined; no flow at times.
Remarks.- Records fair. Discharge represents waste return to Pecos River.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 1939	-	0	0.23	14
January 1940	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	12	0	2.25	134
May	-	0	.82	51
June	-	0	1.24	74
July	-	0	.42	26
August	3.2	0	.33	20
September	.5	0	.12	7.3
The period	-	-	-	326
October 1940	11	0	.58	36
November	1.9	0	.23	13
December	0	0	0	0
Calendar year 1940	-	0	.50	361

Diversions from Pecos River and drains between Salt (Screwbean) Draw and Rock Quarry Draw

Barstow drainage ditch No. 1 near Barstow, Tex.

Location.- Staff gage, lat. 31°26', long. 103°24', in sec. 39, Blk. 33, Houston & Texas Central R. R. Co. survey, half a mile upstream from outlet into Pecos River and 2 miles southwest of Barstow.
Records available.- September 1939 to December 1940 (discontinued), miscellaneous measurements only.
Remarks.- Records represent drainage into Pecos River from irrigation on lands of Ward County irrigation district No. 1.

Discharge measurements, in second-feet, October 1939 to December 1940

1939		1940		1940	
Sept.25	5.01	Mar. 6	2.84	Aug. 27	2.08
Oct. 18	4.76	Apr. 11	4.42	Sept.18	1.34
Dec. 7	4.51	May 16	2.94	Oct. 10	1.26
21	4.04	27	3.56	26	4.99
1940		June 27	3.14	Nov. 19	3.30
Feb. 1	3.59	July 18	1.78	Dec. 19	2.12
		Aug. 5	1.68		

Rock Quarry Draw near Barstow, Tex.

Location.- Water-stage recorder, lat. 31°25', long. 103°21', in SW¼ sec. 33, Blk. 33, Houston & Texas Central R. R. Co. survey, about 1,000 feet downstream from outlet of Barstow drainage ditch, a quarter of a mile upstream from outlet to Pecos River, half a mile downstream from wasteway of lateral No. 3, 1 mile downstream from wasteway of main canal of Ward County irrigation district No. 1, and 3.8 miles southeast of Barstow.
Records available.- November 1939 to December 1940 (discontinued).
Extremes.- 1939-40: Maximum discharge during period not determined; maximum gage height, 10.56 feet Oct. 13, 1940 (backwater); minimum discharge not determined (backwater).
Remarks.- Records good except those above 40 second-feet, which are poor. Discharge represents water returned to Pecos River from several drainage ditches and two wasteways.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November 18-31, 1939....	27	15	21.8	563
December.....	24	12	13.6	837
January 1940.....	18	10	12.3	758
February.....	11	7.9	9.72	559
March.....	37	6.8	9.36	576
April.....	151	12	32.6	1,940
May.....	14	9.6	11.3	695
June.....	19	5.4	8.62	513
July.....	75	5.8	21.6	1,330
August.....	19	7.4	9.58	589
September.....	10	6.4	7.73	460
The period.....	-	-	-	8,820
October.....	-	-	-	-
November.....	20	11	14.2	847
December.....	11	5.8	7.55	465

Diversions from Pecos River and drains between Rock Quarry Draw and Toyah Creek

Barstow drainage ditch below confluence of ditches 2, 3 and 4 near Barstow, Tex.

Location.- Staff gage, lat. 31°25'30", long. 103°21'00", in SW¼ sec. 33, Blk. 33, Houston & Texas Central R. R. Co. survey, about 800 feet upstream from outlet into Rock Quarry Draw, about 1,800 feet upstream from gaging station on Rock Quarry Draw near Barstow, and 3½ miles southeast of Barstow, Ward County.
Records available.- September 1939 to December 1940 (discontinued), miscellaneous measurements only.
Remarks.- Records represent drainage into Pecos River from irrigation on lands of Ward County Irrigation District No. 1.

Discharge measurements, in second-feet, September 1939 to December 1940

1939		1940	
Sept. 25	25.0	May 3	13.7
Oct. 18	19.8	27	10.6
Nov. 18	14.3	June 21	14.3
Dec. 7	13.2	July 15	7.23
21	10.7	Aug. 5	8.51
		27	7.39
1940		Sept. 18	7.44
Jan. 31	9.63	Oct. 9	6.45
Feb. 28	7.49	25	16.3
Mar. 22	6.31	Nov. 19	11.1
Apr. 11	15.6	Dec. 3	8.88

Ward County Irrigation District No. 1 canal wasteway below Barstow, Tex.

Location.- Water-stage recorder and wooden control, lat. 31°26', long. 103°19', in sec. 30, Blk. 33, Houston & Texas Central R. R. Co. survey, at heading of abandoned flume across Sand Draw and 5.7 miles southeast of Barstow.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 4.8 second-feet Apr. 29 (gage height, 0.95 foot); no flow at times.
Remarks.- Records poor. Flow represents waste return to Pecos River.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 22-31	0	0	0	0
April	.8	0	.04	2.4
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	-	0	0	0
September	-	0	0	0
The period	-	-	-	2.4
October	-	0	.003	.2
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	-	-	-	-

Madera Canyon near Toyahvale, Tex.

Location.- Water-stage recorder, lat. 30°52', long. 103°58', in Jeff Davis County, 11 miles upstream from Aguja Canyon and 12 miles southwest of Toyahvale, Reeves County.

Drainage area.- 54 square miles.

Records available.- July 1932 to September 1940.

Extremes.- Maximum discharge during year, 1,200 second-feet June 24 (gage height, 4.22 feet), from rating curve extended above 300 second-feet; no flow at times.
1932-40: Maximum gage height, 8.00 feet Sept. 29, 1932, from floodmarks (discharge not determined); no flow at times.

Remarks.- Records good except those above 300 second-feet, which are poor. No diversions.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0							0	8.1	4.9	2.1
2	0	0							0	7.8	2.4	1.8
3	0	0							0	7.1	1.5	1.6
4	0	0							0	5.9	1.1	1.4
5	0	0							0	c6.1	1.0	1.2
6	0	0							0	c4.6	144	1.0
7	0	0							0	c3.8	32	1.0
8	0	0							0	c3.1	20	.9
9	0	0							0	2.4	15	.8
10	0	0							0	2.3	11	.8
11	0	0							0	2.0	9.4	.7
12	0	0							0	1.7	114	.6
13	0	0							0	1.6	65	.6
14	0	0							0	1.3	40	.6
15	0	0							0	1.1	28	.6
16	0	0							0	1.0	22	.6
17	0	0							0	1.1	18	.6
18	0	0							0	1.2	19	.6
19	0	0							0	1.1	14	.6
20	0	0							.2	.9	11	.5
21	0	0							0	.8	8.7	.4
22	0	0							0	.7	7.4	.2
23	0	0							.4	.6	5.6	0
24	5.2	0							232	.6	5.4	0
25	1.6	0							44	.5	9.3	0
26	.8	0							23	.4	7.1	0
27	.4	0							16	.4	5.1	0
28	.3	0							12	.3	4.1	0
29	.2	.1							12	.3	3.6	0
30	.1	.1							9.8	.6	2.9	0
31	0	-							-	2.8	2.6	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	8.6	5.2	0	0.28	17
November	.2	.1	0	.01	.4
December	0	0	0	0	0
Calendar year 1939	256.3	40	0	.70	508
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	349.4	232	0	11.6	693
July	71.2	8.1	.3	2.30	141
August	635.1	144	1.0	20.5	1,260
September	19.2	2.1	0	.64	38
Water year 1939-40	1,083.7	232	0	2.96	2,150

Peak discharge.- June 24 (5 a.m.) 1,200 sec.-ft.; Aug. 6 (4 a.m.) 930 sec.-ft.; Aug. 12 (12 m.) 338 sec.-ft.

c Computed on basis of partly estimated gage-height record.

Toyah Creek near Pecos, Tex.

Location.- Water-stage recorder and low-water wooden control, lat. 31°17', long. 103°28', in NW¼ sec. 8, Blk. 51, Texas & Pacific R. R. Co. survey, at bridge on U. S. Highway 285, 0.8 mile upstream from Toyah Lake and 10 miles southeast of Pecos. Prior to Sept. 7, 1939, staff gage at same site and datum, but with different control.

Drainage area.- 1,024 square miles (contributing area).

Records available.- August 1939 to December 1940 (discontinued).

Extremes.- Maximum discharge during period, 282 second-feet June 25 (gage height, 7.97 feet); no flow at times.

Remarks.- Records good. Several diversions above station for irrigation. Flood flow materially affected by spread-out dams above station. Staff gage read occasionally Aug. 18 to Sept. 6, 1939.

Discharge, in second-feet, 1939-40

1939

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	a1.9	11	-	1.6	21	a2.6	0.9
2	-	1.8	12	-	f1.6	22	a2.6	.3
3	-	a1.8	13	-	1.6	23	2.5	.2
4	-	a1.7	14	-	1.6	24	a2.3	.2
5	-	a1.7	15	-	1.6	25	2.1	.1
6	-	a1.6.	16	-	1.5	26	a2.1	.1
7	-	1.6	17	-	1.5	27	a2.1	.2
8	-	1.5	18	2.7	1.6	28	2.1	.1
9	-	1.6	19	2.7	1.6	29	a2.0	.1
10	-	1.6	20	a2.7	1.6	30	2.0	.1
						31	a2.0	-

a No gage-height record; discharge interpolated.
f Computed on basis of partly estimated gage-height record.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.1	0.6	a0.1	0.1
2	.1	.3	.3	.4	.5	.4	.4	.4	.1	.5	a.1	.2
3	.1	.3	.4	.4	.5	.4	.5	.3	.1	.3	a0	.1
4	.1	.3	.4	.4	.5	.5	.5	.3	.2	.3	a0	.1
5	.1	.3	.4	.4	.5	.5	1.7	.2	.4	.3	a0	0
6	.1	.3	.4	.4	.5	.5	1.4	.3	.3	.3	1.6	0
7	.1	.4	.5	.4	.5	.4	.8	.5	.2	.3	.7	0
8	.2	.4	.5	.3	.5	.4	.8	.3	.2	.2	.2	0
9	.2	.4	.4	.3	.5	.5	.7	.5	.2	.2	.2	0
10	.1	.4	.3	.3	.5	.5	.7	.4	.2	.2	.2	0
11	.1	.4	.3	.3	.5	.5	.6	.3	.2	.2	.1	0
12	.2	.4	.3	.3	.5	.5	.7	.3	.2	.2	.2	0
13	.1	.4	.3	.3	.5	.5	.8	.3	.2	.1	.3	0
14	.2	.3	.3	.3	.5	.5	.7	.3	.2	.1	.2	0
15	.1	.3	.3	.4	.5	.4	.6	.4	.2	.1	.2	0
16	.1	.4	.3	.4	.5	.4	.6	.4	.2	0	.2	0
17	.2	.4	.3	.4	.5	.5	.5	.3	.2	.1	.2	0
18	.2	.4	.3	.4	.5	.5	.7	.1	.2	.1	.2	0
19	.2	.3	.3	.4	.5	.5	.8	.3	.1	0	.2	0
20	.2	.3	.3	.4	.5	.5	.6	.5	1.9	0	.2	0
21	.2	.3	.3	.5	.5	.5	.8	.6	.4	0	.1	0
22	f.2	.3	.3	.6	.5	.4	.7	.8	.2	0	.1	0
23	f.2	.3	.3	.5	.5	1.0	.6	.6	.2	f0	.1	0
24	.3	.3	.3	.5	.5	.5	.6	.5	.2	f0	.1	0
25	.2	.4	.4	.5	.5	28	.6	.4	79	f0	.1	0
26	.2	.3	.4	.5	.5	4.7	.6	.5	56	0	.1	0
27	.2	.3	.4	.5	.5	1.6	.5	.5	4.6	0	.1	0
28	.2	.3	.4	.5	.5	.9	.5	.4	1.4	.1	0	0
29	.2	.3	.4	.5	.5	.7	.4	.2	.8	c.1	0	0
30	.2	.3	.3	.5	-	.5	.4	.3	.8	a.1	0	0
31	.2	-	.3	.5	-	.5	-	.2	-	a.1	0	-

Peak discharge.- Mar. 25 (3 a.m.) 46 sec.-ft.; June 25 (8 p.m.) 282 sec.-ft.
a No gage-height record; discharge estimated on basis of recorded range in stage.
f Computed on basis of partly estimated gage-height record.

Discharge, in second-feet, of Toyah Creek near Pecos, Tex., 1939-40--Continued

1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.8	1.0									
2	0	.8	1.0									
3	0	.8	1.0									
4	0	.9	1.0									
5	0	.8	1.0									
6	0	.8	.9									
7	0	1.0	.9									
8	0	2.5	.9									
9	.1	1.5	.9									
10	7.2	1.4	1.0									
11	20	1.3	.9									
12	97	1.2	.8									
13	173	1.0	1.0									
14	98	.9	.9									
15	18	.9	1.0									
16	6.6	.9	1.0									
17	7.9	.9	1.0									
18	2.0	.9	.9									
19	1.6	1.0	.8									
20	1.4	1.0	.8									
21	1.4	1.0	.8									
22	1.4	1.0	.8									
23	1.3	1.2	.8									
24	1.2	1.6	.8									
25	1.2	1.5	.8									
26	1.0	1.4	.8									
27	1.0	1.2	.9									
28	1.0	1.2	.9									
29	1.0	1.3	.9									
30	1.0	1.2	.9									
31	1.0	-	.9									

Peak discharge.- Oct. 13 (9 a.m.) 173 sec.-ft.; Oct. 13 (9 p.m.) 250 sec.-ft.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 18-31, 1939	32.5	2.7	2.0	2.32	64
September	34.9	1.9	.1	1.16	69
The period	-	-	-	-	-
October 1939	5.1	.2	.1	.16	10
November	10.1	.4	.3	.34	20
December	10.7	.5	.3	.33	21
Calendar year 1939	-	-	-	-	-
January 1940	12.9	.6	.3	.42	26
February	14.3	.5	.5	.50	29
March	48.7	28	.4	1.67	97
April	20.5	1.7	.4	.68	41
May	11.8	.8	.1	.38	23
June	149.2	79	.1	4.97	296
July	4.5	.6	0	.15	8.9
August	5.8	1.6	0	.19	12
September	.5	.2	0	.02	1.0
Water year 1939-40	294.3	79	0	.80	585
October 1940	445.3	173	0	14.4	883
November	33.9	2.5	.8	1.13	67
December	28.0	1.0	.8	.90	56
Calendar year 1940	775.6	173	0	2.12	1,540

Toyah Creek below Toyah Lake, near Pecos, Tex.

Location.- Water-stage recorder, lat. 31°21', long. 103°24', in SW¼ sec. 8, Blk. C-7, Public School Lands, at bridge on county road between Pecos and Grandfalls, at lower end of Toyah Lake, 6 miles upstream from mouth, and 7.4 miles southeast of Pecos. Prior to Nov. 27, 1939, staff gage at same site and datum.

Drainage area.- 3,709 square miles (contributing area).

Records available.- August 1939 to September 1940.

Extremes.- Maximum discharge during period, 5,850 second-feet Aug. 7, 1940 (gage height, 4.17 feet); no flow at times.
Flood of September 1932 reached a stage of 7.7 feet, according to information from local residents.

Remarks.- Records good. Several diversions above station for irrigation. Flood flow materially affected by use of spread-out dams above station. Staff gage read occasionally Aug. 18 to Nov. 26.

Discharge, in second-feet, 1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0		0		0	.1
2							0		0		0	.1
3							0		0		0	0
4							0		0		0	0
5							13		0		0	0
6							28		0		0	0
7							12		0		3,410	0
8							4.3		0		1,970	0
9							3.1		0		456	0
10							2.6		0		178	0
11							.2		0		90	0
12							0		0		58	0
13							0		0		54	0
14							0		0		50	0
15							0		0		48	0
16							0		0		37	0
17							0		0		22	0
18							0		0		8.7	0
19							0		0		4.9	0
20							0		16		3.3	0
21							0		89		2.6	0
22							0		36		1.6	0
23							0		17		.8	0
24							0		1.0		.4	0
25							0		.5		.5	0
26							0		.1		.4	0
27							0		.1		.1	0
28							0		0		0	0
29							0		0		0	0
30							0		0		0	0
31							-		-		-	-

Peak discharge.- Aug. 7 (3 p.m.) 5,850 sec.-ft.

Monthly discharge, in second-feet, 1939-40

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 18-31, 1939	0	0	0	0	0
September	0	0	0	0	0
Water year	-	-	-	-	-
October 1939	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year	-	-	-	-	-
January 1940	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	63.2	28	0	2.11	125
May	0	0	0	0	0
June	159.7	89	0	5.32	317
July	0	0	0	0	0
August	6,396.3	3,410	0	206	12,690
September	.2	.1	0	.01	.4
Water year 1939-40	6,619.4	3,410	0	18.1	13,130

Seepage investigations on laterals in Toyah Creek Basin, Reeves County, Tex.

A series of discharge measurements was made on each of several laterals in Reeves County Water Improvement District No. 1 in Toyah Creek Basin in the vicinity of Balmorhea, Tex., to determine seepage gains or losses. The investigations were made during periods of constant discharge and the determinations of gain or loss represent normal conditions. All diversions from each lateral were measured.

Discharge measurements of laterals in Toyah Creek Basin, Reeves County, Tex., July and August 1940, to determine seepage gains or losses

Date	Stream or diversion	Location	Distance below initial point (miles)	Discharge, in second-feet			
				Main stream	Diversion	Gain or loss in section	Total gain or loss
July 2	North lateral	Crossing of U.S. Highway 290, in SW¼ sec. 258, Blk. 13, H. & G. N. R. R. survey.	0	0.70	-	-	-
2	....do.....	Northeast corner of sec. 258.	.9	.52	-	-0.18	-0.18
2	....do.....	Mid-point of northwest line of sec. 260, 1 mile northwest of Balmorhea.	2.2	.50	-	-.02	-.20
2	....do.....	Corner of secs. 39, 51 and 94.	2.9	.49	-	-.01	-.21
2	Delivery ditch	60 feet below above location.	2.9	-	*0.1	-	-
2	North lateral	Center of sec. 94, 1 mile northeast of Balmorhea, Tex.	4.0	.16	-	-.23	-.44
Aug. 28	....do.....	Crossing of U. S. Highway 290, in SW¼ sec. 258, Blk. 13, H. & G. N. R. R. survey.	0	.52	-	-	-
28	....do.....	Just below county road crossing on northeast border of NW¼, sec. 258.	.4	.45	-	-.07	-.07
28	....do.....	Northeast corner of sec. 258.	.9	.40	-	-.05	-.12
28	....do.....	SE¼ sec. 259, near line between secs. 259 and 260.	1.7	.32	-	-.08	-.20
28	....do.....	Just downstream from county road crossing at north corner of sec. 260.	2.5	.32	-	0	-.20
28	Delivery ditch	10 feet below above location.	2.5	-	*.02	-	-
28	North lateral	Corner of secs. 39, 51 and 94.	2.9	.30	-	0	-.20
28	Delivery ditch	4 feet below above location.	2.9	-	*.03	-.06	-.26
28	North lateral	Center of sec. 94, 1 mile north of Balmorhea, Tex.	4.0	.21	-	-	-
28	Humphreys - Mayer lateral.	SE¼ sec. 77, Blk. 13, H. & G.N. R. R. survey 50 feet below head gate.	0	3.36	-	-	-
28	....do.....	Southeast corner of SW¼ sec. 92, 20 feet above confluence with drainage ditch.	.5	2.95	-	.41	-.41
28	....do.....	Southwest corner of SE¼ sec. 92, 50 feet below confluence with drainage ditch.	.5	3.57	-	*+.62	+.21
28	....do.....	SE¼ sec. 92, 20 feet above line between Helms and Mayer tracts.	.7	3.48	-	-.09	+.12
29	Back lateral.	SE¼ sec. 98, Blk. 13, H. & G. N. R. R. survey 50 feet below boundary line between Pacy and Mott tracts.	0	4.34	-	-	-
29	....do.....	SE¼ sec. 117, 1,000 feet downstream from southwest corner.	1.1	4.57	-	+.23	+.23
29	....do.....	SW¼ sec. 128, 650 feet upstream from southeast corner.	1.7	4.37	-	-.20	+.03
29	....do.....	SE¼ sec. 128, 650 feet downstream from southwest corner.	2.2	4.34	-	-.03	.00
Sept. 6	Greasy Row lateral.	Southwest corner of NW¼ sec. 117, Blk. 13, H. & G. N. R. R. survey, 50 feet below head gate.	0	.60	-	-	-
6	Delivery ditch	Southeast corner of NW¼ sec.117, and ½ mile below head gate, 4 feet above following measurement.	.5	-	.01	-	-
6	Greasy Row lateral.	Southeast corner of NW¼ sec.117, and ½ mile below head gates.	.5	.60	-	-.01	-.01
6	Delivery ditch	Southwest corner of NW¼ sec.128, 1 mile below head gate.	1.0	-	.01	-	-
6	Greasy Row lateral.	Southeast corner of NW¼ sec.128.	1.5	.56	-	-.03	-.02
Aug. 29	Halbert corner lateral.	SW¼ sec. 116, 20 feet below county road crossing in H. & G. N. R. R. survey.	0	4.28	-	-	-
29	Delivery ditch	30 feet above location given below.	.7	-	.03	-	-
29	Halbert corner lateral.	15 feet below southwest corner of SW¼ sec. 129 along boundary between secs. 129 and 116.	.7	4.32	-	+.07	+.07
29	....do.....	Southwest corner of NW¼ sec. 129, 10 feet above right angle turn in lateral.	1.2	3.82	-	-.50	-.43
29	Delivery ditch	10 feet below the above location.	1.2	-	.03	-	-
29	....do.....	NW¼ sec. 129, on boundary line between lands of Pardoe & Guitar and C. M. Hanaker estate.	1.4	-	.15	-	-
29	Halbert corner lateral.	Southeast corner of NW¼ sec. 129, 200 feet above boundary line between C. M. Hanaker estate and H. R. Hanaker.	1.6	4.22	-	+.58	+.15
29	Ikens estate lateral.	Near Southwest corner of SW¼ sec. 116, Blk. 13, H. & G. N. R. R. survey.	0	5.50	-	-	-
29	....do.....	In SW¼ sec. 116 on boundary between Senham and B. L. Co. properties.	.2	4.54	-	-.96	-.96

*Increase due to inflow from drainage ditch.

Salt Draw near Pecos, Tex.

Location.- Water-stage recorder and concrete control, lat. 31°19', long. 103°29', in SW¼ sec. 39, Blk, 6, H & G. N. Railroad Co. Survey, 88 feet upstream from bridge on U. S. Highway 285, 2 miles above Toyah Lake, and 7½ miles south of Pecos, Reeves County. Prior to Sept. 14, 1939, staff gage at same site and datum.

Drainage area.- 1,882 square miles (contributing area).

Records available.- August 1939 to December 1940 (discontinued).

Extremes.- Maximum discharge during period, 19,900 second-feet Aug. 6, 1940 (gage height, 11.46 feet, from floodmark), from rating curve extended above 2,950 second-feet on basis of two slope-area determinations at gage heights 9.06 and 11.46 feet.
Maximum flood known, that of Aug. 6, 1940, according to information furnished by local residents.

Remarks.- Records fair except those for periods of partial or no gage-height record, which are poor. Staff gage read occasionally Aug. 18 to Sept. 14, 1939. Flood flow affected by spread-out dams used for irrigation.

Discharge, in second-feet, 1939-40

1939

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	a0.6	11	-	0.6	21	a0.5	a0.2
2	-	.6	12	-	.5	22	a.5	.2
3	-	}	13	-	.4	23	.5	.2
4	-	a.6	14	-	.3	24	a.5	a.2
5	-	}	15	-	f.2	25	.5	a.2
6	-	.6	16	-	f.2	26	a.5	.2
7	-	a.6	17	-	a.2	27	a.6	.2
8	-	a.6	18	0.5	a.2	28	.6	.2
9	-	.6	19	.5	.2	29	a.6	.2
10	-	a.6	20	a.5	a.2	30	.6	.2
						31	a.6	-

a No gage-height record; discharge interpolated or estimated on basis of preceding and following record.
f Computed on basis of partly estimated gage-height record.
Note.- Gage-heights from Sept. 12-14 affected by work at gage; discharge interpolated.

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2
2	.2	.2	.3	.3	.3	.4	.3	.3	.2	.2	.2	.2
3	.2	.2	.3	.3	.3	.4	.3	.3	.2	.2	.2	.2
4	.2	.2	.3	.3	.3	.4	.6	.3	.2	.2	.2	.2
5	.2	.2	.3	.3	.3	.4	4.0	.3	.2	.2	.2	.2
6	.2	.2	.3	.3	.3	.4	.9	.3	.2	.2	g2,200	.2
7	.2	f.2	.3	.3	.3	.4	.5	.3	.2	.2	g6,760	.2
8	.3	g.2	.3	.3	.3	.4	.4	.2	.2	.2	g169	.2
9	.7	f.2	.3	.3	.3	.4	.4	.5	.2	.2	4.0	.2
10	.3	g.2	.3	.3	.3	.4	.4	.4	.2	.2	2.1	.2
11	.2	g.2	.3	.3	.3	.4	.4	.3	.2	.2	f1.6	.2
12	.2	g.2	.3	.3	.4	.4	.4	.3	.2	.2	f1.7	.2
13	.2	g.2	.3	.3	.4	.4	.4	.3	.2	.2	95	.2
14	.3	g.2	.3	.3	.4	.4	.4	.3	.2	.2	20	.2
15	f.2	f.2	.3	.3	.4	.4	.4	.3	.2	.1	50	.2
16	f.3	.2	.3	.3	.4	.4	.4	.3	.2	.1	3.0	.2
17	f.3	.2	.3	.3	.4	.4	.4	.3	.2	.1	1.1	.2
18	g.3	.2	.3	.3	.4	.4	.4	.3	.2	.1	30	.2
19	f.3	.2	.3	.3	.4	.4	.4	.3	2.1	.1	5.5	.2
20	.3	.2	.3	.3	.4	.4	.4	.3	6.9	.1	.7	.2
21	.3	.2	.3	.3	.4	.4	.4	.3	1.0	.1	.4	.2
22	.3	.2	.3	.3	.4	.4	.4	1.0	.3	.1	.4	.2
23	.3	.2	.3	.3	.4	9.4	.4	.9	.3	.1	.3	.2
24	.3	.2	.3	.3	.4	8.4	.3	.4	.2	.1	.3	.2
25	.3	.2	.3	.3	.4	.7	.3	.3	.2	.1	.2	.2
26	.3	.2	.3	.3	.4	.5	.3	.3	.2	.1	.2	.2
27	.2	.2	.3	.3	.4	.4	.3	.3	.2	.2	.2	.2
28	.2	.3	.3	.3	.4	.4	.3	.3	.2	.9	.2	.2
29	.2	.4	.3	.3	.4	.4	.3	.3	.2	.4	.2	.3
30	.2	.4	.3	.3	-	.4	.3	.3	.2	.2	.2	.3
31	.2	-	.3	.3	-	.3	-	.3	-	.2	.2	-

Peak discharge.- Aug. 6 (11 p.m.) 19,900 sec.-ft.; Aug. 13 (1:30 p.m.) 282 sec.-ft.; Aug. 13 (4 a.m.) 235 sec.-ft.
f Computed on basis of partly estimated gage-height record.
g Computed from once-daily gage reading or from graph based on one or more daily gage readings.

Discharge, in second-feet, of Salt Draw near Pecos, Tex., 1939-40--Continued

1940

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	0.3	0.3	0.4	11	56	0.4	0.3	21	a0.3	0.4	0.3
2	.3	.3	.4	12	277	.4	.3	22	a.3	.4	.4
3	.2	.3	.4	13	115	.4	.4	23	a.3	.4	.4
4	.2	.3	.4	14	671	.4	.4	24	a.3	.5	.4
5	.2	.3	.4	15	22	.4	.4	25	.3	.5	.3
6	.2	.3	.4	16	3.9	.4	.4	26	.3	.4	.4
7	.2	.6	.4	17	a.8	.4	.3	27	.3	.4	.4
8	.2	1.1	.4	18	a.4	.4	.3	28	.3	.4	.4
9	.2	.6	.3	19	a.4	.4	.3	29	.3	.4	.4
10	4.1	.5	.3	20	a.3	.4	.3	30	.3	.4	.4
								31	.3	-	.4

Peak discharge.- Oct. 11 (8 a.m.) 214 sec.-ft.; Oct. 12 (4 p.m.) 745 sec.-ft.; Oct. 14 (10 a.m.) 1,320 sec.-ft.

a No gage-height record; discharge computed on basis of known range of stage.

Monthly discharge, in second-feet, 1939-40

Month	Second-feet-days	Maximum	Minimum	Mean	Run-off in acre-feet
August 18-31, 1939	7.5	0.6	0.5	0.54	15
September	11.0	.6	.2	.37	22
Water year	-	-	-	-	-
October 1939	8.1	.7	.2	.26	16
November	6.5	.4	.2	.22	13
December	9.4	.4	.3	.30	19
Calendar year	-	-	-	-	-
January 1940	9.3	.3	.3	.30	18
February	10.5	.4	.3	.36	21
March	29.7	9.4	.3	.96	59
April	15.4	4.0	.3	.51	31
May	10.9	1.0	.2	.35	22
June	15.6	6.9	.2	.52	31
July	5.9	.9	.1	.19	12
August	9,347.5	6,760	.2	302	18,540
September	6.2	.3	.2	.21	12
Water year 1939-40	9,475.0	6,760	.1	25.9	18,790
October 1940	1,156.2	671	.2	37.8	2,290
November	12.8	1.1	.3	.43	25
December	11.4	.4	.3	.37	23
Calendar year 1940	10,631.4	6,760	.1	29.0	21,080

Barilla Creek near Pecos, Tex.

Location.- Staff-gage, lat. 31°13', long. 103°24', NW¼ sec. 36, Blk. 51, Texas & Pacific R. R. Co. Survey, 390 feet downstream from U. S. Highway 285, 7.2 miles upstream from Toyah Lake, and 14.8 miles southeast of Pecos, Reeves County.

Drainage area.- 733 square miles (contributing area).

Records available.- January to December 1940 (discontinued).

Extremes.- Maximum discharge for period not determined; no flow at times.

Remarks.- Records poor.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February 16-29, 1940	0	0	0	0
March	0	0	0	0
April	.1	0	.003	.2
May	0	0	0	0
June	10	0	.33	20
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The period	-	-	-	20
October 1940	10	0	.32	20
November	0	0	0	0
December	0	0	0	0
Calendar year	-	-	-	-

Diversions from Pecos River and drains below Toyah Creek

Grandfalls-Big Valley canal near Barstow, Tex.

Location.- Water-stage recorder and wooden control, lat. 31°25', long. 103°15', 150 feet downstream from head gates, 300 feet downstream and to left of gaging station on Pecos River below Barstow, and 8½ miles southeast of Barstow, Ward County. Prior to Nov. 7, 1925, at site 75 feet downstream, at datum 0.30 foot lower.
Records available.- March 1922 to November 1925, September 1939 to September 1940 (area now irrigated much smaller than that in former period).
Extremes.- Maximum gage height during period, 4.00 feet June 20 (discharge not determined); no flow at times.
1922-25, 1939-40: Maximum discharge not determined; no flow at times.
Remarks.- Records good. Canal diverts water from left bank of Pecos River for irrigation of about 300 acres. No diversions above gage.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
September 1939.....	60	0	7.23	430
October.....	0	0	0	0
November.....	0	0	0	0
December.....	0	0	0	0
January 1940.....	0	0	0	0
February.....	0	0	0	0
March.....	0	0	0	0
April.....	56	0	9.00	536
May.....	40	0	4.12	253
June.....	35	0	3.23	192
July.....	40	0	13.2	809
August.....	35	0	9.34	574
September.....	61	0	9.52	566
Water year 1939-40....	61	0	4.04	2,930

E. W. Fate pump near Grandfalls, Tex.

Location.- Eight-inch centrifugal pump, lat. 31°22', long. 103°42', in SE¼ sec. 8, Blk. 33, Houston & Texas Central R. R. Co. survey, 300 feet upstream from Crystal Water Bridge and 15½ miles west of Grandfalls, Ward County.
Records available.- May to December 1940 (discontinued).
Remarks.- Records fair except those for May and June, which are poor. Pump diverts water from left bank of Pecos River. Water used for irrigation in immediate vicinity.
Cooperation.- Record of time of pump operation furnished by owner, E. W. Fate.

Monthly discharge, in second-feet, 1940

Month	Mean	Run-off in acre-feet
May.....	0.23	14
June.....	.30	18
July.....	.59	36
August.....	0	0
September.....	0	0
The period.....	-	68
October.....	.26	16
November.....	0	0
December.....	0	0
Calendar year 1940...	-	84

Note.- Pump was installed in April 1939, but there was no pumping in 1940 until May.

Diversions from Pecos River and drains below Toyah Creek

Pecos County Water Improvement District No. 2
upper diversion canal near Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°18', long. 102°55', in SW¼ sec. 100, Blk. 8, H. & G. N. Railroad Co. survey, at bridge on State Highway 82, 4.7 miles southwest of Grandfalls, Ward County and 15 miles downstream from head gates. Prior to Oct. 4, 1939, staff gage at same site and datum. Station is 11 miles downstream from that discontinued July 28, 1925.
Records available.- August 1939 to September 1940. March 1922 to July 1925 at site 11 miles upstream, published as Imperial High-Line canal near Grandfalls.
Extremes.- Maximum discharge during period, 118 second-feet Aug. 9 (gage height, 3.07 feet); no flow at times.
1922-25, 1939-40: Maximum gage height, 6.85 feet Sept. 18, 1923, site and datum then in use (discharge not determined); no flow at times.
Remarks.- Records good. Canal diverts water from right bank of Pecos River into Imperial Reservoir for irrigation near Imperial and Buena Vista. No diversion above gage. Staff gage read occasionally Aug. 21 to Sept. 7, and twice daily Sept. 7 to Oct. 4, 1939.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 21-31, 1939.....	0	0	0	0
September.....	0	0	0	0
October 1939.....	0	0	0	0
November.....	0	0	0	0
December.....	0	0	0	0
January 1940.....	52	0	1e.0	1,110
February.....	0	0	0	0
March.....	0	0	0	0
April.....	0	0	0	0
May.....	0	0	0	0
June.....	13	0	.85	51
July.....	103	0	10.9	668
August.....	118	0	44.0	2,700
September.....	73	0	8.99	535
Water year 1939-40.....	118	0	6.98	5,060

Ward County Water Improvement District No. 2 canal near Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°22', long. 102°57', along line between W. H. Stewart and J. C. Russell surveys, 3¼ miles downstream from head gates and 7.8 miles northwest of Grandfalls, Ward County.
Records available.- August 1939 to September 1940. Flow passing the station Grandfalls-Big Valley canal near Barstow, March 1922 to November 1925, served practically the same irrigated area as that of this canal (water diverted from Pecos River about 16.5 miles upstream).
Extremes.- Maximum discharge during period, 152 second-feet July 29 (gage height, 4.20 feet); no flow at times.
1922-25, 1939-40: Maximum discharge, 425 second-feet Aug. 3, 1925 (gage height, 5.25 feet, site and datum then in use), from rating curve extended above 183 second-feet; no flow at times.
Remarks.- Records fair. Canal diverts water from left bank of Pecos River for irrigation near Grandfalls. No diversion above gage.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 21-31, 1939.....	124	114	119	2,590
September.....	121	23	90.3	5,380
October 1939.....	106	-	25.3	1,550
November.....	106	60	84.0	5,000
December.....	75	-	9.96	612
January 1940.....	-	0	.31	19
February.....	0	0	0	0
March.....	104	0	11.9	734
April.....	133	56	81.4	4,940
May.....	106	3.3	35.6	2,190
June.....	84	3.8	50.7	3,020
July.....	146	0	94.3	5,800
August.....	108	24	58.4	3,590
September.....	75	28	57.3	3,410
Water year 1939-40....	146	0	42.4	30,760

Diversions from Pecos River and drains below Toyah Creek

Pecos County Water Improvement District No. 2 canal near Imperial, Tex.

Location.- Water-stage recorder and sharp crested weir, lat. 31°16', long. 102°46', just north of south line of sec. 11, Blk. 9, H. & G. N. Railroad Co. survey, about 5 miles downstream from Pecos County Water Improvement District No. 2 reservoir (Imperial Reservoir), and about 5 miles west of Imperial, Pecos County. Prior to July 12, 1940, water-stage recorder at site about 1 mile downstream at different datum.
Records available.- April to September 1940.
Extremes.- Maximum discharge for period, 128 second-feet Apr. 1 (gage height, 3.88 feet, datum then in use); no flow at times.
Remarks.- Records fair. This canal is formed by the confluence of Pecos County Water Improvement District No. 2 upper and lower diversion canals which divert water from the right bank of the Pecos River for irrigation near Imperial and Buena Vista. No diversions above gage.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	-	-	-	-
February	-	-	-	-
March	-	-	-	-
April	91	62	69.3	4,130
May	69	.9	27.1	1,670
June	-	0	12.3	732
July	89	0	41.9	2,580
August	116	0	49.1	3,020
September	41	0	27.0	1,600
The period	-	-	-	13,730

Pecos County Water Improvement District No. 2
lower diversion canal near Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°19', long. 102°54', in NW¼ sec. 100, Blk. 8, H. & G. N. Railroad Co. survey, at bridge on State Highway 82, 3.2 miles south of Grandfalls, Ward County, and 4.7 miles downstream from head gates. Prior to Oct. 3, 1939, staff gage at same site and datum. Station is about 1.7 miles downstream from that discontinued July 14, 1925.
Records available.- August 1939 to December 1940 (discontinued). March 1922 to July 1925 published as Imperial Low-Line canal near Grandfalls.
Extremes.- Maximum discharge during period, 143 second-feet Aug. 9, 1940 (gage height, 4.22 feet); no flow at times.
1922-25, 1939-40: Maximum discharge, 254 second-feet Sept. 18, 1923 (gage height, 4.25 feet, from silt marks in well, site and datum then in use), from rating curve extended above 162 second-feet.
Remarks.- Records good. Staff gage read twice daily from Sept. 7 to Oct. 3, 1939. Canal diverts water from right bank of Pecos River. Water used for irrigation near Imperial and Buena Vista. No diversion above gage.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
August 21-31, 1939	0	0	0	0
September	72	0	40.3	2,400
October 1939	40	0	29.5	1,810
November	0	0	0	0
December	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	25	0	.81	50
April	96	59	73.6	4,380
May	66	0	26.4	1,630
June	64	0	12.6	749
July	98	0	35.6	2,190
August	143	0	35.6	2,190
September	0	0	0	0
Water year 1939-40	143	0	17.9	13,000
October 1940	-	0	.23	14
November	0	0	0	0
December	0	0	0	0
Calendar year 1940	143	0	15.4	11,200

Note.- No gage-height record for several days in August, September and October, 1939, July, August, and October 1940; discharge computed on basis of information furnished by canal operator or records for Pecos County Water Improvement District No. 2 canal near Imperial.

Diversions from Pecos River and drains below Toyah Creek

Pecos County Water Improvement District No. 3 canal near Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°16', long. 102°50', in NW¼ sec. 5, Blk. 9, H. & G. N. Railroad Co. survey at head gates, 5.6 miles south of Grandfalls, Ward County, and about 6¾ miles upstream from gaging station on Pecos River below Grandfalls. Prior to Oct. 3, 1939, staff gage at same site and datum.
Records available.- October 1939 to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 415 second-feet Oct. 12, 1940 (gage height, 5.34 feet); no flow at times.
Remarks.- Records fair. Canal diverts water from right bank of Pecos River for irrigation near Imperial and Buena Vista.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1939.....	92	8.8	38.1	2,340
November.....	23	e.8	11.2	666
December.....	19	10	14.8	912
January 1940.....	14	8.4	11.3	696
February.....	7.8	2.6	4.06	233
March.....	186	0	8.90	547
April.....	238	18	85.2	5,070
May.....	124	0	27.0	1,660
June.....	274	0	66.4	3,950
July.....	143	0	37.9	2,330
August.....	375	10	56.5	3,480
September.....	55	0	20.1	1,200
Water year 1939-40....	375	0	31.8	23,080
October 1940.....	375	0	88.8	5,460
November.....	36	2.4	7.38	439
December.....	2.1	0	.64	39
Calendar year 1940....	375	0	34.6	25,100

Pecos County Water Improvement District No. 3 canal near Imperial, Tex.

Location.- Water-stage recorder, lat. 31°18', long. 102°45', in S½ sec. 15, Blk. 9, H. & G. N. Railroad Co. survey, near the line between sections 14 and 15, 100 feet downstream from bridge on highway between Grandfalls and Imperial, a quarter of a mile southeast of gaging station on Pecos River below Grandfalls, and 2.8 miles northwest of Imperial, Pecos County.
Records available.- March to September 1940.
Extremes.- Maximum discharge for period, 175 second-feet Aug. 11 (gage height, 3.52 feet), from rating curve extended above 60 second-feet; no flow at times.
Remarks.- Records fair. Canal diverts water from right bank of Pecos River for irrigation near Imperial and Buena Vista. No diversion above gage.
Cooperation.- Gage-height record collected in cooperation with Red Bluff Water Power Control District.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	-	-	-	-
February.....	-	-	-	-
March 7-31.....	e6	0	19.0	940
April.....	85	0	54.5	3,240
May.....	53	0	21.0	1,290
June.....	59	0	22.6	1,340
July.....	85	0	38.7	2,380
August.....	148	1.1	46.1	2,830
September.....	63	.3	20.7	1,230
The period.....	-	-	-	13,250

Diversions from Pecos River and drains below Toyah Creek

Pecos County Water Improvement District No. 3 canal below Buena Vista, Tex.

Location.- Water-stage recorder, lat. 31°12', long. 102°28', in southwest corner of sec. 44, Blk. 9, H. & G. N. Railroad Co. survey about 9½ miles east of Buena Vista, Pecos County, and about 19½ miles below gaging station on Pecos County Water Improvement District No. 3 canal near Imperial.
Records available.- February to December 1940 (discontinued).
Extremes.- Maximum discharge for period, 84 second-feet (regulated) Mar. 11 (gage height, 7.14 feet), from rating curve extended above 35 second-feet; no flow at times.
Remarks.- Records fair. Canal diverts water from right bank of Pecos River for irrigation near Imperial and Buena Vista. Many diversions above station for irrigation. Records obtained in connection with study by Soil Conservation Service of consumptive use of water.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February	0	0	0	0
March	47	0	7.94	488
April	26	0	5.81	346
May	23	0	2.69	165
June	10	0	.72	43
July	23	0	5.96	366
August	6.9	0	.96	59
September	15	0	.96	57
The period	-	-	-	1,520
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
The period	-	-	-	1,520

Note.- No gage-height record or record fragmentary for 2 days in April and August, 11 days in July, and 3 days in September; discharge determined on basis of records for station near Imperial, or of partial gage-height record.

Ward County Water Improvement District No. 2
lateral No. 2 wasteway below Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°17', long. 102°49', in sec. 35, Blk. 1, Houston & Texas Central R. R. Co. survey, 1 mile upstream from outlet into Pecos River and 4.3 miles southeast of Grandfalls, Ward County.
Records available.- December 1939 to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 40 second-feet Oct. 14 (gage height, 1.38 feet), from rating curve extended above 20 second-feet.
Remarks.- Records good. Discharge represents waste return from irrigation to Pecos River.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 8-31, 1939	0	0	0	0
January 1940	0	0	0	0
February	0	0	0	0
March	17	0	.98	60
April	9.7	0	1.68	100
May	17	0	1.46	90
June	19	0	2.46	146
July	3.9	0	.80	49
August	11	0	2.24	138
September	18	0	3.75	223
The period	-	-	-	806
October 1940	21	0	2.06	127
November	0	0	0	0
December	21	0	1.29	0
Calendar year 1940	21	0	1.29	933

Diversions from Pecos River and drains below Toyah Creek

Ward County Water Improvement District No. 2 canal wasteway below Grandfalls, Tex.

Location.- Water-stage recorder, lat. 31°18', long. 102°46', near line of M. H. Short survey and sec. 36, Blk. 4, Houston & Texas Central R. R. Co. survey, 4.7 miles southeast of Grandfalls, Ward County.
Records available.- December 1939 to December 1940 (discontinued).
Extremes.- Maximum gage height during period, 5.31 feet May 7 (discharge not determined); no flow at times.
Remarks.- Records poor. Discharge represents waste return from irrigation to Pecos River.

Monthly discharge, in second-feet, 1939-40

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 8-31, 1939.....	0	0	0	0
January 1940.....	0	0	0	0
February.....	0	0	0	0
March.....	8.5	0	.39	24
April.....	6.6	0	.94	56
May.....	13	0	1.09	67
June.....	4.1	0	.46	28
July.....	5.8	0	.93	57
August.....	13	0	1.71	105
September.....	4.0	0	.92	55
The period.....	-	-	-	392
October 1940.....	6.0	0	.54	33
November.....	0	0	0	0
December.....	0	0	0	0
Calendar year 1940....	13	0	.58	425

Pecos County Water Improvement District No. 3 canal wasteway below Buena Vista, Tex.

Location.- Water-stage recorder, lat. 31°11', long. 102°28', in N½ sec. 1, Blk. 2, Houston & Texas Central R. R. Co. survey, 74 feet downstream from waste gate and 10 miles east of Buena Vista, Pecos County.
Records available.- March to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 24 second-feet (regulated) May 2 (gage height, 2.02 feet); no flow at times.
Remarks.- Records good. Discharge represents waste return from irrigation to Pecos River.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 27-31.....	0	0	0	0
April.....	11	0	1.69	100
May.....	5.9	0	.71	44
June.....	2.6	0	.14	8.5
July.....	3.9	0	.49	30
August.....	.5	0	.10	6.3
September.....	4.9	0	.26	15
October.....	0	0	0	0
November.....	0	0	0	0
December.....	0	0	0	0
The period.....	-	-	-	204

Diversions from Pecos River and drains below Toyah Creek

Pecos County Water Improvement District No. 2
west lateral wasteway near Buena Vista, Tex.

Location.- Water-stage recorder, lat. 31°12', long. 102°36', in N½ sec. 90, Blk. 10, H. & G. N. Railroad Co. survey, about 150 feet downstream from Buena Vista-Fort Stockton highway and 1 mile southwest of Buena Vista, Pecos County.
Records available.- February to December 1940 (discontinued).
Extremes.- Maximum discharge for period, 37 second-feet Sept. 12 (gage height, 9.07 feet), from rating curve extended above 8.8 second-feet.
Remarks.- Records fair below and poor above 10 second-feet. Records obtained in connection with study by Soil Conservation Service of consumptive use of water.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February	8.9	0	1.18	68
March	0	0	0	0
April	10	0	1.70	101
May	9.1	0	.88	54
June	5.1	0	.27	16
July	1.2	0	.11	6.7
August	28	0	4.22	259
September	35	0	2.07	123
The period	-	-	-	628
October	.3	0	.03	1.6
November	0	0	0	0
December	0	0	0	0
Calendar year	-	-	-	-

Pecos County Water Improvement District No. 2
east lateral wasteway below Buena Vista, Tex.

Location.- Water-stage recorder and low-water wooden control, lat. 31°11', long. 102°28', in S¼ sec. 3, Blk. 2, Houston & Texas Central R. R. Co. survey, and 8.2 miles east of Buena Vista, Pecos County.
Records available.- January to December 1940 (discontinued).
Extremes.- Maximum gage height during period, 1.70 feet Feb. 2 (discharge not determined); no flow at times.
Remarks.- Records fair. Discharge represents waste return from irrigation.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 25-31	0	0	0	0
February	6.0	0	.86	50
March	0	0	0	0
April	1.4	0	.12	7.1
May	1.3	0	.22	13
June	1.1	0	.11	6.5
July	1.1	0	.12	7.1
August	2.7	0	.40	25
September	1.8	0	.17	10
The period	-	-	-	119
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Calendar year	-	-	-	-

Diversions from Pecos River and drains below Toyah Creek

Drainage from Powell Lake below Buena Vista, Tex.

Location.- Water-stage recorder and wooden control, lat. 31°09', long. 102°28', in sec. 6, Blk. 212, Mrs. P. Morgan survey, 1½ miles downstream from Powell Lake, 3¾ miles upstream from its outlet into Pecos River, and 11 miles southeast of Buena Vista, Pecos County.
Records available.- January to December 1940 (discontinued).
Extremes.- Maximum discharge during period, 9.2 second-feet Nov. 9 (gage height, 4.93 feet), from rating curve extended above 2.1 second-feet by logarithmic plotting; no flow at times.
Remarks.- Records poor. Discharge represents waste return to Pecos River from irrigation, possibly some drainage from irrigated lands, and occasionally run-off from storms.

Monthly discharge, in second-feet, 1940

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 18-31	0.4	0.1	0.25	6.9
February	5.5	.1	1.18	68
March	.1	0	.05	2.8
April	.1	0	.01	.6
May	3.3	0	.47	29
June	.4	0	.03	1.8
July	0	0	0	0
August	1.3	0	.13	8.1
September	0	0	0	0
The period	-	-	-	117
October	.4	0	.03	1.8
November	6.8	0	.63	37
December	.1	0	.05	3.2
The period	-	-	-	159

Note.- Discharge for 4 days in March and 11 days in November interpolated.

Seepage investigations on canals in Comanche Creek Basin, Pecos County, Tex.

A series of discharge measurements was made on each of several canals and laterals in Pecos County Water Improvement District No. 1 in Comanche Creek Basin in the vicinity of Fort Stockton, Tex., to determine seepage gains or losses. The investigations were made during periods of constant discharge and the determinations of gain or loss represent normal conditions. All diversions from each canal were measured.

Discharge measurements of canals in Comanche Creek Basin, Pecos County, Tex., November and December 1939, to determine seepage gains or losses

Date	Stream or diversion	Location	Distance below initial point (miles)	Discharge in second-feet			
				Main stream	Diversion	Gain or loss in section	Total gain or loss
Dec. 14	High-line canal	At head gates, Fort Stockton.	0	41.0	-	-	-
14	7-D canal.....	1½ miles below head gates just above old Fort Stockton-Sheffield highway.	1.2	-	13.8	-	-
14	High-line canal	2⅝ miles below head gates, in water tract 42, sec. 8.	2.5	27.6	-	+0.4	+0.4
Nov. 24	....do.....	1.2 miles below head gates and just below crossing of old Fort Stockton-Sheffield highway and diversion of 7-D canal.	-	28.3	-	-	-
24	Lateral 2.....	Southwest corner water tract 25, sec. 8.	-	-	11.1	-	-
24	High-line canal	2.8 miles below head gates in water tract 13, sec. 7, just below Fort Stockton-Buena Vista highway.	0	12.4	-	-	-
24	Lateral 3.....	Water tract 8, sec. 7, at upstream side of Grandfalls-Fort Stockton highway.	1.1	-	5.3	-	-
24	High-line canal	Downstream side of Grandfalls-Fort Stockton highway in water tract 64, sec. 1.	1.1	6.8	-	-.3	-.3
24	....do.....	Water tract 7, sec. 2, 9.2 miles below head gates at end of concrete lined canal in water tract 23, sec. 11.	6.4	6.3	-	-.4	-.8
Dec. 14	7-D canal.....	Head gates, just below point of diversion from High-line canal.	0	13.8	-	-	-
14	....do.....	Just below siphon under Comanche Creek.	.1	13.5	-	-.3	-.3
14	Delivery ditch.	In water tract 3, sec. 2.....	1.4	-	6.4	-	-
14	....do.....	In water tract 1, sec. 2.....	1.5	*6.4	-	-.7	-1.0
14	Lateral 2.....	Head gate in water tract 25, sec. 8.	0	12.1	-	-	-
14	Minear delivery ditch.	¼ mile below head gate in water tract 24, sec. 6.	.2	-	5.4	-	-
14	Lateral 2.....	2,000 ft. below head gate in water tract 8, sec. 8.	.4	6.7	-	0	0
14	....do.....	1 mile below head gate.....	1.0	6.7	-	0	0
14	Delivery ditch.	Barker's house in water tract 63, sec. 10.	2.4	6.3	-	-.4	-.4
14	Lateral 3.....	Head gate in water tract 8, sec. 7.	0	6.2	-	-	-
14	....do.....	End of concrete lined section in water tract 24, sec. 5.	1.8	6.2	-	0	0

* Lower delivery ditch carried all water remaining in canal at that point.

Devils River near Juno, Tex.

Location.- Water-stage recorder, lat. 29°58', long. 101°09', 500 feet southeast of Walter Baker Ranch house, 2 miles upstream from Phillips Creek, and 13½ miles southwest of Juno, Val Verde County.

Drainage area.- 2,733 square miles.

Records available.- May 1925 to September 1940.

Average discharge.- 15 years, 225 second-feet.

Extremes.- Maximum discharge during year, 2,580 second-feet May 9 (gage height, 6.16 feet); minimum, 72 second-feet Mar. 31, Apr. 1-5.
1925-40: Maximum discharge, 370,000 second-feet Sept. 1, 1932 (gage height, 31.3 feet, from floodmarks), by slope-area method; minimum, 48 second-feet June 4-6, 1930.

Remarks.- Records good except those above 200 second-feet, which are fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	88	91	86	81	76	72	76	105	91	86	86
2	91	88	91	86	81	76	74	76	105	91	86	84
3	93	88	91	84	84	76	72	76	103	89	86	84
4	93	88	91	86	82	76	72	76	103	89	86	82
5	91	89	91	84	81	76	84	76	101	89	86	82
6	91	89	91	86	79	76	220	76	99	89	89	82
7	91	91	91	86	79	76	127	79	99	89	88	82
8	93	91	89	84	79	76	115	77	97	89	88	81
9	107	89	89	84	82	76	107	609	103	89	88	79
10	103	95	89	84	81	76	101	326	95	89	86	79
11	101	105	89	84	79	76	95	129	89	89	86	77
12	101	95	89	84	79	76	89	117	89	89	86	79
13	99	93	88	84	79	74	88	113	89	93	107	79
14	97	93	88	84	77	74	86	109	86	91	99	79
15	95	93	88	84	79	74	84	105	86	91	97	79
16	95	95	88	84	82	76	82	101	86	91	95	79
17	95	93	88	84	81	76	82	99	86	91	95	79
18	95	93	88	86	79	76	81	97	96	91	97	79
19	91	91	88	84	79	76	81	95	89	91	95	79
20	91	91	88	84	77	76	79	93	86	89	91	79
21	91	91	88	84	77	76	79	93	86	89	91	79
22	91	91	89	86	77	74	79	105	86	88	89	81
23	91	91	88	84	79	74	77	99	86	88	89	81
24	91	91	88	84	77	77	77	95	93	86	89	82
25	93	91	95	82	76	76	79	93	89	84	88	81
26	93	89	89	82	76	74	79	91	88	84	86	81
27	91	89	88	82	76	74	79	91	88	84	86	81
28	89	91	88	82	76	74	79	95	86	84	84	81
29	89	93	88	82	76	74	76	112	97	86	84	81
30	88	93	86	82	-	74	76	103	91	86	86	81
31	88	-	86	82	-	72	-	105	-	86	86	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,897	107	88	93.5	5,750
November	2,748	105	88	91.6	5,450
December	2,759	95	86	89.0	5,470
Calendar year 1939	36,958	1,820	79	101	73,320
January	2,604	86	82	84.0	5,160
February	2,290	84	76	79.0	4,540
March	2,333	76	72	75.3	4,630
April	2,671	220	72	89.0	5,300
May	3,687	609	76	119	7,310
June	2,784	105	86	92.8	5,520
July	2,745	91	84	88.5	5,440
August	2,775	107	84	89.5	5,500
September	2,418	86	77	80.6	4,800
Water year 1939-40	32,720	609	72	89.4	64,870

Peak discharges.- Apr. 6 (4 a.m.) 392 sec.-ft.; May 9 (5:30 p.m.) 2,580 sec.-ft.

Las Moras Springs at Brackettville, Tex.

Location.- Lat. 29°18'30", long. 100°25'00", at Brackettville, Kinney County, 550 feet upstream from bridge on Brackettville-Fort Clark road and 1,000 feet downstream from head of springs.

Records available.- December 1895 to August 1938 (occasional discharge measurements published as miscellaneous measurements), September 1938 to September 1940 (discharge measurements only).

Remarks.- Discharge measurements represent total flow of springs. Flow partly regulated during summer months by dam at recreational center 400 feet upstream. Diversions above station for domestic use by U. S. Army (about 1 second-foot, for Fort Clark) and city of Brackettville.

Discharge measurements, in second-feet, 1939-40

Oct. 31	42.2	May 30	26.1
Dec. 15	26.1	June 24	19.9
Jan. 25	19.1	July 24	33.5
Mar. 15	15.0	Aug. 22	21.4
Apr. 27	12.4	Sept.19	11.8

Mimbres River near Mimbres, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 32°52', long. 107°59', in SE¼NW¼ sec. 33, T. 16 S., R. 11 W., 1 mile downstream from Bear Canyon and 1½ miles northwest of Mimbres.

Drainage area.- 183 square miles.

Records available.- October 1930 to September 1940 in reports of Geological Survey. May 1921 to December 1931 in reports of State engineer.

Average discharge.- 17 years (1921-24, 1926-40), 12.2 second-feet.

Extremes.- Maximum discharge during year, 1,090 second-feet July 19 (gage height, 4.76 feet), from rating curve extended above 310 second-feet by logarithmic plotting; minimum daily, 2.8 second-feet Aug. 30.

1930-40: Maximum discharge, 2,060 second-feet July 17, 1933, from rating curve extended above 120 second-feet by logarithmic plotting; maximum gage height, 4.89 feet Aug. 6, 1939; minimum daily discharge, 1.4 second-feet July 11, 12, 1933.

Remarks.- Records good. Discharge partly regulated by Bear Canyon Reservoir (capacity about 700 acre-feet). Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	9.9	9.4	7.4	7.4	54	27	13	6.4	5.5	11	14
2	8.0	9.9	9.4	7.4	152	44	26	11	6.4	4.5	9.0	16
3	8.3	9.4	9.4	7.0	70	41	24	12	6.4	8.2	8.6	15
4	8.3	9.9	9.9	7.0	45	36	22	11	6.0	36	52	14
5	8.0	9.9	9.9	7.4	34	30	22	11	5.2	12	46	18
6	8.0	9.4	9.9	7.7	27	29	20	11	4.5	8.0	58	23
7	50	9.4	9.4	7.4	20	26	20	10	3.8	7.4	34	18
8	105	9.9	9.4	7.4	18	25	18	9.9	3.1	6.4	26	17
9	29	9.9	9.9	7.4	16	24	18	10	3.8	6.0	30	16
10	18	9.4	9.4	7.7	16	27	17	10	3.8	5.2	30	14
11	14	9.4	9.0	7.7	13	56	17	9.4	4.3	4.3	17	13
12	11	9.4	8.7	7.7	13	54	18	10	4.0	3.5	12	13
13	10	9.9	9.0	7.7	12	45	16	9.9	4.7	4.0	26	13
14	9.9	9.4	9.0	7.4	11	39	15	9.9	4.5	4.7	15	13
15	9.9	9.9	9.0	7.7	9.9	36	16	9.9	5.0	3.1	11	14
16	9.4	9.9	9.0	7.4	12	31	16	10	12	2.9	9.3	13
17	9.4	9.9	9.0	7.4	11	29	16	10	11	4.0	8.0	13
18	9.9	9.4	8.7	7.4	9.9	29	16	9.4	6.7	5.0	7.6	13
19	9.9	9.4	8.7	7.7	9.0	28	16	9.4	6.0	97	7.3	14
20	9.9	9.9	8.7	7.7	9.0	28	16	8.0	6.4	39	7.4	14
21	9.9	9.9	8.7	7.7	8.7	28	16	8.3	8.3	16	6.7	15
22	9.9	9.9	9.0	7.4	10	29	15	9.0	10	8.0	6.4	15
23	9.9	9.9	8.7	7.4	45	30	16	8.7	15	7.3	6.4	14
24	9.9	10	8.7	7.4	47	30	16	9.4	9.0	7.3	6.4	13
25	10	9.9	8.7	7.4	42	29	14	9.4	8.3	5.8	6.4	14
26	9.9	9.9	8.3	7.4	52	29	14	9.4	8.0	5.8	5.2	12
27	9.9	9.4	8.3	7.4	49	28	15	9.0	7.7	5.8	3.3	11
28	9.9	9.4	8.0	7.4	47	30	14	8.7	7.7	34	3.1	11
29	9.9	9.9	7.7	7.0	54	31	16	7.7	7.0	9.0	2.9	11
30	9.9	9.4	7.7	7.0	-	29	14	7.4	6.0	20	2.8	9.0
31	9.9	-	7.7	7.0	-	28	-	7.0	-	13	8.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	462.9	105	8.0	14.9	918
November	291.1	10	9.4	9.70	577
December	276.3	9.9	7.7	8.91	548
Calendar year 1939	3,375.8	146	2.4	9.25	6,700
January	230.1	7.7	7.0	7.42	456
February	869.9	152	7.4	30.0	1,730
March	1,032	56	24	33.3	2,050
April	526	27	14	17.5	1,040
May	298.8	13	7.0	9.64	593
June	201.0	15	3.1	6.70	399
July	398.7	97	2.9	12.9	791
August	482.9	58	2.8	15.6	958
September	423.0	23	9.0	14.1	839
Water year 1939-40	5,492.7	152	2.8	15.0	10,900

Peak discharge.- Oct. 7 (6 p.m.) 280 sec.-ft.; Oct. 7 (10 p.m.) 578 sec.-ft.; July 4 (6 p.m.) 768 sec.-ft.; July 19 (7:20 p.m.) 1,090 sec.-ft.; Aug. 4 (4 p.m.) 333 sec.-ft.; Aug. 6 (4 a.m.) 515 sec.-ft.

Mimbres River near Faywood, N. Mex.

Location.- Water-stage recorder, lat. 32°36', long. 107°53', in sec. 7, T. 20 S., R. 10 W., 6 miles northeast of Faywood Hot Springs, 10 miles northeast of Faywood, and 12 miles upstream from San Vicente Arroyo.

Drainage area.- 485 square miles.

Records available.- April 1908 to December 1914 and October 1930 to September 1940 in reports of Geological Survey. April 1908 to December 1931 in reports of State engineer.

Average discharge.- 24 years (1908-10, 1912-17, 1919-24, 1926-27, 1929-40), 22.5 second-feet.

Extremes.- Maximum discharge during year, 5,520 second-feet June 21 (gage height, 6.05 feet), from rating curve extended above 320 second-feet; minimum daily, 0.3 second-foot Nov. 3, 4.
1930-40: Maximum discharge not determined, maximum gage height, 10.0 feet Aug. 4, 1939; no flow at times.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	2.6	8.5	7.6	8.5	70	6.8	3.7	3.7	a8	253	f10
2	2.6	1.9	8.5	8.5	203	52	6.4	3.7	3.7	a5	33	a20
3	2.3	.3	8.5	9.8	161	48	a5	3.4	3.4	9.3	33	12
4	2.3	.3	8.5	9.8	93	50	4.6	3.4	3.1	190	117	3.8
5	2.6	.7	9.2	10	78	39	5.5	2.6	3.1	64	152	2.4
6	2.3	1.0	8.5	11	54	39	5.9	2.6	3.1	25	114	17
7	2.3	1.2	9.2	10	41	31	5.9	2.3	2.8	18	71	a7
8	65	1.8	9.2	8.1	31	29	6.8	3.1	2.8	a10	59	a5
9	41	2.4	9.2	8.1	23	32	8.5	3.7	2.6	a7	42	3.5
10	25	2.0	9.8	9.2	18	38	12	4.6	2.6	a5	40	3.5
11	15	2.0	9.8	9.2	18	48	8.5	5.1	2.3	a4	34	3.2
12	12	2.0	9.2	a10	17	58	7.6	3.9	2.6	a3	30	3.2
13	11	1.8	8.1	a11	17	52	6.8	3.7	2.8	a2	a20	3.2
14	9.8	3.9	7.6	a11	18	52	5.5	3.7	3.1	1.3	f25	3.2
15	9.2	4.2	7.6	a12	16	43	4.6	3.1	3.1	a2	a15	3.0
16	8.5	4.2	7.6	13	14	39	3.9	3.1	3.1	a3	a10	3.0
17	8.1	5.9	7.6	13	14	38	3.9	3.4	2.6	a4	a7	3.0
18	7.6	5.9	7.6	14	14	35	4.6	3.7	2.8	24	a5	3.0
19	7.6	6.4	7.6	13	14	29	4.2	5.1	2.6	61	3.5	3.0
20	6.8	6.8	7.6	12	13	29	5.1	6.6	2.6	140	3.5	3.0
21	5.9	7.6	7.6	11	12	28	4.6	2.8	426	f20	3.2	3.0
22	5.9	6.8	6.8	10	12	26	4.2	63	170	8.7	3.2	125
23	6.4	8.1	5.9	9.8	31	24	5.1	38	73	21	3.2	9.2
24	5.9	8.1	5.5	8.1	83	23	4.2	25	20	28	3.5	5.8
25	5.1	7.6	5.1	6.4	68	16	3.9	19	16	20	3.5	4.8
26	3.4	8.1	4.6	5.9	66	12	4.6	18	15	a10	3.2	4.5
27	2.8	8.5	4.6	6.4	70	10	4.6	14	14	a6	3.2	5.0
28	2.6	8.5	5.9	6.4	68	10	4.2	10	13	35	3.5	5.0
29	2.6	9.2	7.2	7.2	63	9.2	3.9	4.2	a10	67	3.8	5.0
30	3.1	8.5	7.6	8.1	-	9.2	3.7	3.9	17	90	4.0	5.4
31	3.1	-	7.6	8.5	-	8.5	-	3.7	-	115	3.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	290.4	65	2.3	9.37	576
November	138.3	9.2	.3	4.61	274
December	237.8	9.8	4.6	7.67	472
Calendar year 1939	6,265.0	2,000	.2	17.2	12,430
January	298.1	14	5.9	9.62	591
February	1,338.5	203	8.5	46.2	2,650
March	1,026.9	70	8.5	33.1	2,040
April	165.1	12	3.7	5.50	327
May	276.1	63	2.3	8.91	548
June	832.5	426	2.3	27.8	1,650
July	1,006.3	190	1.3	32.5	2,000
August	1,104.8	253	3.2	35.6	2,190
September	287.7	125	2.4	9.59	571
Water year 1939-40	7,002.5	426	.3	19.1	13,890

Peak discharge.- June 21 (10 p.m.) 5,520 sec.-ft.; June 22 (2 p.m.) 1,090 sec.-ft.; June 23 (2 p.m.) 1,330 sec.-ft.; July 4 (10 p.m.) 3,670 sec.-ft.; Aug. 1 (7 p.m.) 4,830 sec.-ft.; Sept. 22 (7 p.m.) 3,270 sec.-ft.

a No gage-height record; discharge computed on basis of weather records and records for station near Mimbres.

f Gage-height record incomplete; discharge computed from partly estimated gage height, weather records, and records for station near Mimbres.

Bear Canyon near Mimbres, N. Mex.

Location.- Water-stage recorder and concrete Parshall flume, lat. 32°53', long. 108°00', in SE sec. 29, T. 16 S., R. 11 W., 100 feet downstream from bridge on State Highway 167, 200 feet downstream from Bear Canyon Dam, and 2 miles northwest of Mimbres.

Records available.- October 1937 to September 1940.

Extremes.- Maximum discharge during year, 38 second-feet Feb. 2 (gage height, 2.00 feet), from rating curve extended above 21 second-feet by logarithmic plotting; no flow Aug. 19-29.
1937-40: Maximum gage height, 2.50 feet Aug. 6, 1939 (discharge not determined); no flow during extended periods.

Remarks.- Records fair except those for periods of no gage-height record, which are poor. Flow regulated by Bear Canyon Reservoir (capacity, 700 acre-feet). One diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.7	0.7	0.6	0.8	15	2.0	0.4	0.3	0.3	0.2	12
2	.2	.7	.7	.6	19	13	1.7	.4	.3	.2	.2	12
3	.2	.7	.8	.6	19	9.8	1.1	.4	.4	.1	.2	12
4	.2	.8	.8	.6	13	7.6	.6	.4	.4	.1	.2	12
5	.2	.8	.8	.6	all	6.0	.6	.4	.4	.2	.2	12
6	.2	.8	.8	.6	a9	5.1	.7	.4	.4	.3	.3	11
7	.5	.8	.8	.6	a7	4.8	.6	.4	.4	.3	.3	11
8	25	.8	.8	.6	4.8	4.0	.5	.4	.4	.3	.3	11
9	11	.8	.8	.6	4.6	4.2	.4	.5	.4	.3	.3	10
10	4.7	.8	.8	.7	4.7	5.0	.4	.5	.4	.3	.4	10
11	a3	.8	.8	.7	3.0	15	.4	.5	.3	.3	.3	9.8
12	1.4	.8	.8	.8	4.0	14	.4	.5	.3		.4	9.5
13	1.1	.6	.8	.8	3.2	10	.5	.5	.3		.4	9.4
14	.9	.6	.8	.8	1.7	7.8	.4	.4	.3		.3	9.0
15	.9	.5	.8	.8	1.4	6.3	.4	.4	.3		.3	8.9
16	.9	.5	.8	.9	3.9	5.1	.4	.4	.3	a.2		8.4
17	.9	.5	.7	.9	2.4	4.1	.3	.4	.3		a.1	8.6
18	.8	.5	.7	1.0	1.5	3.5	.3	.3	.3			8.6
19	.8	.6	.7	.9	1.5	3.2	.3	.3	.2		0	8.5
20	.8	.6	.7	.8	1.4	3.0	.3	.3	.2		0	8.5
21	.8	.6	.7	.8	1.5	3.0	.3	.3	.3		0	8.2
22	.8	.6	.6	.8	1.9	3.1	.4	.2	.3	.1	0	8.2
23	.8	.6	.6	.8	27	3.4	.4	.2	.3	.1	0	7.8
24	.8	.6	.6	.8	30	3.5	.4	.2	.3	.1	0	6.8
25	.8	.6	.6	.8	23	3.6	.4	.2	.3	.1	0	6.2
26	.8	.7	.6	.8	21	3.6	.4	.2	.3	.1	0	6.0
27	.8	.7	.6	.8	20	3.4	.4	.3	.3	.2	0	5.6
28	.8	.6	.6	.8	18	3.4	.4	.3	.3	.2	0	5.1
29	.8	.7	.6	.8	17	3.2	.4	.3	.3	.2	0	4.6
30	.8	.7	.6	.8	-	2.9	.5	.3	.3	.2	.1	2.6
31	.8	-	.6	.8	-	2.4	-	.3	-	.2	5.0	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	60.5	23	0.2	1.95	120
November	20.1	.8	.5	.67	40
December	22.1	.8	.6	.71	44
Calendar year 1939	374.9	30	0	1.03	744
January	23.3	1.0	.6	.75	46
February	276.3	30	1.4	9.53	548
March	181.5	15	2.4	5.85	360
April	16.1	2.0	.3	.54	32
May	11.0	.5	.2	.35	22
June	9.6	.4	.2	.32	19
July	6.2	.3	.1	.20	12
August	9.7	5.0	0	.31	19
September	263.3	12	2.6	8.78	522
Water year 1939-40	899.7	30	0	2.46	1,780

a No gage-height record; discharge interpolated.

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Rio Tularosa near Tularosa, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 33°07', long. 105°57', in SW¼SW¼ sec. 15, T. 14 S., R. 10 E., 200 feet upstream from diversion dam for Tularosa Community ditch and 3 miles northeast of Tularosa.

Records available.- December 1912 to December 1914 and October 1931 to September 1940 in reports of Geological Survey. December 1912 to December 1914 and October 1916 to July 1917 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,980 second-feet July 23 (gage height, 3.24 feet), from rating curve extended above 20 second-feet on basis of slope-area determinations at gage heights 3.4 and 8.5 feet; minimum daily, 3 second-feet May 5, June 2, 16.

1931-40: Maximum discharge, 9,640 second-feet Sept. 3, 1938 (gage height, 8.50 feet, from floodmarks), by slope-area method; minimum daily, 1 second-foot July 31, Aug. 1, 1934.

Remarks.- Records poor. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	11	11	12	13	12	9	6	9	4	a10	11
2	9	10	12	12	22	13	10	6	3	5	a10	10
3	8	11	f12	12	15	13	16	5	6	85	f25	9
4	7	12	11	11	14	14	16	6	10	18		8
5	7	11	11	14	13	12	16	3	10	13	a10	8
6	6	12	11	14	13	12	15	6	10	10		8
7	17	10	11	12	13	12	12	11	10	9	f15	8
8	15	11	10	12	12	12	12	11	10	7	a50	5
9	12	12	9	12	12	12	17	11	11	6	a15	6
10	11	11	10	13	12	11	17	11	6	6	12	10
11	11	11	10	12	13	10	16	10	6	6	14	11
12	11	11	10	14	13	12	17	10	6	6	32	9
13	12	11	9	14	13	12	17	6	6	6	16	10
14	12	11	9	11	10	12	16	5	5	6	14	9
15	13	11	10	9	10	11	14	6	6	5	13	10
16	14	11	10	9	11	12	13	8	3	6	13	7
17	13	11	11	9	13	12	14	7	4	9	12	6
18	12	11	11	8	14	12	13	6	9	12	11	6
19	12	11	11	6	11	12	8	6	10	10	11	6
20	12	11	11	9	12	12	13	6	10	12	11	8
21	12	12	10	12	12	11	6	11	10	14	11	8
22	12	10	11	13	12	12	7	35	10	10	11	9
23	12	11	11	9	15	12	15	14	43	81	10	8
24	11	12	10	12	13	9	15	12	7	26	10	6
25	11	14	12	14	12	8	14	11	6		6	7
26	11	12	11	14	12	8	14	11	5	a10	6	6
27	11	12	7	14	12	12	13	11	4		10	7
28	11	11	9	13	13	12	13	11	5	f15	11	7
29	10	11	7	13	12	14	8	10	9	f10	11	7
30	10	11	10	13	-	12	6	9	5	f25	10	7
31	10	-	12	13	-	12	-	9	-	f20	11	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	344	17	6	11.1	682
November	337	14	10	11.2	668
December	320	12	7	10.3	635
Calendar year 1939	4,539	320	3	12.4	9,010
January	365	14	6	11.8	724
February	372	22	10	12.8	738
March	362	14	8	11.7	718
April	392	17	6	13.1	778
May	290	35	3	9.4	575
June	254	43	3	8.5	504
July	472	85	4	15.2	936
August	421	50	6	13.6	835
September	237	11	5	7.9	470
Water year 1939-40	4,166	85	3	11.4	8,260

Peak discharge.- July 3 (7 p.m.) 1,300 sec.-ft.; July 23 (1 p.m.) 1,980 sec.-ft.
a No gage-height record; discharge estimated.
f Gage-height record incomplete; discharge computed from partly estimated gage heights and weather records.

Alamogordo-La Luz ditch at La Luz, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat. 32°58'50", long. 105°56'15", in SW¼ sec. 25, T. 15 S., R. 10 E., a quarter of a mile upstream from La Luz and half a mile downstream from head gate.

Records available.- October 1934 to September 1940.

Extremes.- Maximum daily discharge during year, 10 second-feet Oct. 10; minimum daily, 0.5 second-foot Feb. 23.
1934-40: Maximum daily discharge recorded, 11 second-feet Oct. 21, 22, 1934, Sept. 11, 12, 1935, Feb. 16-22, 28, 29, 1936; no flow at times.

Remarks.- Records fair. Ditch diverts water from left bank of Rio La Luz for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.2	7.1	5.3	6.6	6.2	2.1	3.2	4.0	2.7	2.1	4.7	2.8
2	5.9	7.2	4.8	6.6	9.9	5.1	3.6	3.4	3.2	1.9	3.4	2.9
3	5.9	7.2	4.7	6.2	7.4	5.6	3.0	3.0	2.8	2.0	3.8	2.9
4	5.6	7.4	4.5	6.1	5.8	5.6	2.9	3.3	2.7	2.4	3.7	2.9
5	5.0	7.4	4.5	6.7	.7	5.8	3.6	3.2	2.8	2.3	2.9	2.9
6	5.0	7.6	4.5	6.4	.8	5.4	4.0	2.9	2.8	1.9	2.6	2.7
7	6.4	7.4	4.3	6.1	1.2	5.8	4.2	2.7	2.7	2.0	2.9	1.9
8	10	7.6	3.4	5.8	3.6	5.8	4.2	3.6	3.2	1.6	2.6	1.8
9	7.4	7.6	4.8	5.8	6.1	5.1	3.7	3.8	3.4	1.4	2.7	1.8
10	7.1	7.6	4.7	5.4	6.1	6.1	3.8	3.9	3.2	1.0	2.4	1.8
11	7.1	7.6	4.7	5.9	6.2	6.1	4.2	3.6	2.9	1.3	4.6	2.1
12	6.6	7.1	4.8	5.8	5.9	6.2	4.2	3.7	2.4	1.4	2.9	2.2
13	6.7	7.1	4.8	5.8	5.8	6.1	4.0	3.0	3.3	1.4	4.0	2.2
14	6.2	6.6	5.1	5.8	5.9	6.1	4.7	2.8	2.7	1.7	3.2	2.2
15	6.2	6.7	4.1	5.8	6.2	6.2	4.1	3.3	2.2	1.4	2.3	2.0
16	6.4	6.6	4.6	6.2	6.2	6.1	4.1	3.3	2.9	1.5	2.7	1.9
17	6.7	6.4	5.3	6.2	5.9	5.8	4.2	3.2	3.8	1.7	2.1	1.8
18	6.7	6.4	5.3	6.1	6.2	5.6	3.8	3.2	2.2	3.3	2.2	2.0
19	6.6	6.4	5.1	5.8	5.4	5.1	4.2	4.1	1.9	2.4	5.5	2.3
20	6.6	6.2	5.0	6.6	1.1	5.1	4.0	3.4	2.6	2.2	3.4	4.2
21	6.9	6.2	5.3	6.4	1.2	5.3	3.8	3.6	3.2	2.4	3.2	4.8
22	7.2	6.1	5.4	6.1	1.1	5.8	4.0	7.4	4.0	2.6	3.0	5.9
23	7.9	6.1	4.7	6.9	.5	5.9	5.0	5.1	3.8	2.3	2.8	4.0
24	7.9	6.4	5.0	6.4	.8	5.9	4.7	4.7	2.1	2.2	2.7	4.0
25	7.6	7.1	5.9	5.6	1.0	5.6	4.4	4.8	2.8	2.0	5.5	3.8
26	7.8	6.6	6.2	5.4	.9	5.1	4.4	4.4	2.2	1.9	3.2	3.6
27	7.8	5.9	5.8	5.8	1.0	5.0	4.7	3.8	2.3	2.2	2.8	3.3
28	7.8	5.6	5.3	6.2	1.0	4.5	4.5	3.2	2.0	3.0	2.4	3.3
29	7.8	5.8	5.8	4.4	.9	3.8	4.7	2.6	2.6	3.4	2.2	3.7
30	7.6	5.6	5.8	5.4	-	2.9	4.1	2.9	3.0	3.7	2.5	3.8
31	7.2	-	5.9	4.0	-	3.0	-	2.8	-	4.1	2.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	213.8	10	5.0	6.90	424
November	202.6	7.6	5.6	6.75	402
December	155.4	6.2	3.4	5.01	308
Calendar year 1939	1,768.7	10	.7	4.85	3,510
January	184.3	6.9	4.0	5.95	366
February	111.0	9.9	.5	3.83	220
March	163.6	6.2	2.1	5.28	324
April	122.0	5.0	2.9	4.07	242
May	113.7	7.4	2.6	3.64	224
June	84.4	4.0	1.9	2.81	167
July	66.7	4.1	1.0	2.15	132
August	97.7	5.5	2.1	3.15	194
September	87.5	5.9	1.8	2.92	174
Water year 1939-40	1,601.7	10	.5	4.38	3,180

Alamogordo water supply near Alamogordo, N. Mex.

Location.- Water-stage recorder and rectangular contracted weir, lat. 32°52'35", long. 105°55'50", in NW¼ sec. 33, T. 16 S., R. 10 E., at lower end of pipe line, about a mile downstream from Alamo Canyon, and 2 miles southeast of Alamogordo.

Records available.- October 1932 to September 1940.

Extremes.- Maximum discharge during year, 1.8 second-feet May 22 (gage height, 0.43 foot); minimum daily, 0.9 second-foot Apr. 8, 9, 11, 12, 15, 17.
1932-40: Maximum discharge, 6.2 second-feet July 8, 1936 (gage height, 0.89 foot, site and datum then in use); no flow July 7, 1933.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Water is diverted from Alamo Creek for municipal supply of Alamogordo by pipe line having one intake on Alamo Creek just above former gaging station at Wood Ranch and a second intake at Fleming Springs in Duncan Arroyo, which is tributary to Alamo Creek about 2 miles below first intake.

Discharge, in second-feet, water year October 1939 to September 1940

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	a1.5	1.4	1.4
2	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.6		1.4	1.4
3	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.6		1.4	1.4
4	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.6		1.4	1.4
5	a1.4	1.4	1.4	1.5	1.4	1.4	1.5	1.5	1.6	a1.4	1.4	1.4
6	a1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.6		1.4	1.4
7	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6		1.4	1.4
8	1.4	1.4	1.4	1.5	1.5	1.5	.9	1.5	1.6		1.4	1.4
9	1.4	1.4	1.4	1.5	1.5	1.5	.9	1.5		1.4	1.4	1.4
10	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5		1.4	1.4	1.4
11	1.4	1.4	1.4	1.5	1.5	1.5	.9	1.5	a1.6	1.4	1.4	1.4
12	1.4	1.4	1.4	1.5	1.5	1.5	.9	1.6		1.4	1.4	1.4
13	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
14	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
15	1.4	1.4	1.4	1.5	1.5	1.5	.9	1.6		1.4	1.4	1.4
16	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
17	1.4	1.4	1.4	1.4	1.5	1.5	.9	1.6		1.4	1.4	1.4
18	1.4	1.4	1.4	1.4	1.5	1.5	1.0	1.5		1.4	1.4	1.4
19	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5		1.4	1.4	1.4
20	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5		1.4	1.4	1.4
21	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5		1.4	1.4	1.4
22	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
23	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	a1.5	1.4	1.4	1.4
24	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
25	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
26	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
27	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
28	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6		1.4	1.4	1.4
29	1.4	1.4	1.4	1.5	1.5	1.5	1.3	1.5		1.4	1.4	1.4
30	1.4	1.4	1.5	1.4	-	1.5	1.5	1.5		1.4	1.4	1.4
31	1.4	-	1.5	1.5	-	1.5	-	1.6	-	1.4	1.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October	43.4	1.4	1.4	1.40	86
November	42.0	1.4	1.4	1.40	83
December	43.6	1.5	1.4	1.41	86
Calendar year 1939	530.7	1.7	.9	1.45	1,050
January	46.1	1.5	1.4	1.49	91
February	43.4	1.5	1.4	1.50	86
March	46.0	1.5	1.4	1.48	91
April	40.7	1.5	.9	1.36	81
May	47.9	1.6	1.5	1.55	95
June	46.5	-	-	1.55	92
July	43.5	-	-	1.40	86
August	43.4	1.4	1.4	1.40	86
September	42.0	1.4	1.4	1.40	83
Water year 1939-40	528.5	-	-	1.44	1,050

a No gage-height record; discharge interpolated.

In addition to the records of stream flow obtained at gaging stations in the western Gulf of Mexico basins and reported in the preceding pages, measurements of flow were made at other points, as indicated in the following table:

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940

Calcasieu River Basin

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Nov. 28	Calcasieu River.	Gulf of Mexico..	Lat. 30°14'35", long. 93°12'40", in SE¼ sec. 30, T. 9 S., R. 8 W., Louisiana meridian, at foot of Ford Street in northern outskirts of Lake Charles, La.	1,600
29	....do.....	....do.....	....do.....	2,300
Dec. 11	Clear Creek.....	Calcasieu River.	Lat. 30°31'10", long. 93°03'10", in NE¼ sec. 23, T. 6 S., R. 7 W., just above mouth of Mud Creek, 75 feet above bridge on State Highway 7, and half a mile west of Reeves, La.	1.6
11	....do.....	....do.....	Same location as above, but just below mouth of Mud Creek.	2.1
11	Mud Creek.....	Clear Creek....	Same location as above, but just above mouth.	.6

Sabine River Basin

Oct. 16	Little Cow Creek	Sabine River....	500 feet above bridge on State Highway 87, ¼ mile south of Burkeville, Tex.	30.2
Nov. 11	....do.....	....do.....	....do.....	60.2
Dec. 7	....do.....	....do.....	....do.....	36.6
Jan. 5	....do.....	....do.....	....do.....	50.8
Mar. 8	....do.....	....do.....	....do.....	36.4
July 11	....do.....	....do.....	....do.....	29.8
Aug. 13	....do.....	....do.....	....do.....	45.2
23	....do.....	....do.....	....do.....	35.6
Oct. 16	....do.....	....do.....	Just below McGraw Creek, 2 miles southeast of Burkeville, Tex.	47.2
Nov. 11	....do.....	....do.....	....do.....	91.3
Dec. 7	....do.....	....do.....	....do.....	53.4
Mar. 8	....do.....	....do.....	....do.....	56.1
July 11	....do.....	....do.....	....do.....	56.5
Jan. 5	McGraw Creek....	Little Cow Creek	1 mile above mouth, 2 miles southeast of Burkeville, Tex.	33.0
Aug. 13	....do.....	....do.....	....do.....	27.9
23	....do.....	....do.....	....do.....	17.9
Oct. 14	Quicksand Creek.	Sabine River....	At bridge on U. S. Highway 190, 0.7 mile above mouth, near Bon Weir, Tex.	13.8
Nov. 10	....do.....	....do.....	....do.....	15.3
Dec. 6	....do.....	....do.....	....do.....	18.7
Jan. 5	....do.....	....do.....	....do.....	26.6
15	....do.....	....do.....	....do.....	27.5
Mar. 8	....do.....	....do.....	....do.....	26.3
Apr. 19	....do.....	....do.....	....do.....	29.1
May 31	....do.....	....do.....	....do.....	23.4
July 11	....do.....	....do.....	....do.....	24.0
Aug. 23	....do.....	....do.....	....do.....	35.3

Neches River Basin

Dec. 1	Procella Creek..	Angelina River..	At bridge on State Highway 35, 8 miles north of Lufkin, Tex.	5.97
Feb. 9	....do.....	....do.....	....do.....	60.8
19	....do.....	....do.....	....do.....	7.13
Apr. 24	....do.....	....do.....	....do.....	*1.5
July 10	....do.....	....do.....	....do.....	*.3
Aug. 6	....do.....	....do.....	....do.....	*.7

* Estimated.

Brazos River Basin

Oct. 23	Clear Fork of Brazos River.	Brazos River....	1 mile above Mulberry Creek, near Hawley, Tex.	*0.60
Nov. 16	....do.....	....do.....	....do.....	2.26
Dec. 12	....do.....	....do.....	....do.....	2.91
Jan. 22	....do.....	....do.....	....do.....	*4.5
Feb. 22	....do.....	....do.....	....do.....	5.89
Sept.24	....do.....	....do.....	....do.....	10.2
Oct. 23	Mulberry Creek..	Clear Fork of Brazos River.	1 mile above mouth, near Hawley, Tex.....	*.10
Nov. 16	....do.....	....do.....	....do.....	0
Dec. 20	....do.....	....do.....	....do.....	0
Jan. 22	....do.....	....do.....	....do.....	0
Feb. 22	....do.....	....do.....	....do.....	*1.0
Sept.24	....do.....	....do.....	....do.....	0
Oct. 10	Bosque River....	Brazos River....	1 mile above mouth, near Bosqueville, Tex.	†4.83

* Estimated.
† Furnished by U. S. Soil Conservation Service, Waco, Tex.

Colorado River Basin

Feb. 6	Colorado River..	Gulf of Mexico..	5 miles above Marshall Ford Dam, 15 miles northwest of Austin, Tex.	*1,540
7	....do.....	....do.....	....do.....	*1,780
8	....do.....	....do.....	....do.....	*1,490
8	....do.....	....do.....	....do.....	*1,270

* Flow regulated by power plant at Buchanan Dam.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940--Continued

Colorado River Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Feb. 14	Colorado River..	Gulf of Mexico..	5 miles above Marshall Ford Dam, 15 miles northwest of Austin, Tex.	*1,260
14	....do.....	....do.....	....do.....	*1,200
20	....do.....	....do.....	....do.....	*2,150
20	....do.....	....do.....	....do.....	*1,760
27	....do.....	....do.....	....do.....	*802
Mar. 4	....do.....	....do.....	....do.....	*885
July 3	....do.....	....do.....	Bay City, Tex.....	†77,100
4	....do.....	....do.....	....do.....	†82,600
4	....do.....	....do.....	....do.....	†71,200
5	....do.....	....do.....	....do.....	†33,700
5	....do.....	....do.....	....do.....	†29,200
6	....do.....	....do.....	....do.....	†17,700
17	Barton Creek....	Colorado River..	Above Barton Springs, Austin, Tex.....	40.0
Nov. 1	Barton Springs..	Barton Creek....	Austin, Tex.....	ab16.5
9	....do.....	....do.....	....do.....	ab12.4
14	....do.....	....do.....	....do.....	ab16.0
24	....do.....	....do.....	....do.....	bc17.9
Dec. 2	....do.....	....do.....	....do.....	bc15.6
9	....do.....	....do.....	....do.....	bc14.5
13	....do.....	....do.....	....do.....	bc14.2
29	....do.....	....do.....	....do.....	ab15.6
Jan. 10	....do.....	....do.....	....do.....	bc12.3
12	....do.....	....do.....	....do.....	bc13.0
15	....do.....	....do.....	....do.....	bcd76.8
15	....do.....	....do.....	....do.....	bcd61.2
15	....do.....	....do.....	....do.....	bcd50.3
15	....do.....	....do.....	....do.....	bcd34.1
15	....do.....	....do.....	....do.....	bcd27.5
15	....do.....	....do.....	....do.....	bcd25.0
Feb. 5	....do.....	....do.....	....do.....	bc15.3
22	....do.....	....do.....	....do.....	bc17.3
Mar. 2	....do.....	....do.....	....do.....	bc12.9
13	....do.....	....do.....	....do.....	bc15.6
22	....do.....	....do.....	....do.....	bc14.3
30	....do.....	....do.....	....do.....	bc14.7
Apr. 11	....do.....	....do.....	....do.....	ab14.9
20	....do.....	....do.....	....do.....	ab15.9
30	....do.....	....do.....	....do.....	ab23.8
May 11	....do.....	....do.....	....do.....	ab17.7
20	....do.....	....do.....	....do.....	ab17.8
27	....do.....	....do.....	....do.....	ab17.2
June 4	....do.....	....do.....	....do.....	ab16.7
12	....do.....	....do.....	....do.....	ab18.9
26	....do.....	....do.....	....do.....	bc31.9
July 17	....do.....	....do.....	....do.....	a47.3
29	....do.....	....do.....	....do.....	ab35.9
Aug. 13	....do.....	....do.....	....do.....	ab37.8
23	....do.....	....do.....	....do.....	ab27.3
23	....do.....	....do.....	....do.....	ab28.8
30	....do.....	....do.....	....do.....	ab16.5
Sept. 7	....do.....	....do.....	....do.....	ab23.4
13	....do.....	....do.....	....do.....	ab24.8
28	....do.....	....do.....	....do.....	ab23.9
June 30	Rabbs Creek.....	Colorado River..	Lat. 30°01'50", long. 96°54'40", 1½ miles south of Warda, Tex.	**e55.000
30	Buckner Creek...	....do.....	Lat. 29°53'07", long. 96°53'55", 1.8 miles above mouth and 2 miles southwest of La Grange, Tex.	**f106,000

* Flow regulated by power plant at Buchanan Dam.
† Furnished by Corps of Engineers, U. S. Army, Galveston, Tex.
** Crest of flood; computed by slope-area method.
a Includes flow of Old Mill Spring.
b Barton Creek dry above springs.
c Old Mill Spring not flowing.
d Not natural flow of springs; includes waste from swimming pool.
e Drainage area, 92.8 square miles.
f Drainage area, 184 square miles.

Lavaca River Basin

June 30	Youngs Branch...	Lavaca River....	Lat. 29°33'50", long. 97°06'40", 2 miles east of Moulton, Tex.	*a8,900
30	Rocky Creek.....	....do.....	Lat. 29°23'10", long. 96°59'00", at Texas & New Orleans R. R. bridge, 3½ miles southwest of Hallettsville, Tex.	*b74,700
30	West Fork of Navidad River.	....do.....	Lat. 29°38'20", long. 96°55'00", just below Mulberry Creek, 2½ miles south of Schulenburg, Tex.	*c124,000

* Crest of flood; computed by slope-area method.
a Drainage area, 6.8 square miles.
b Drainage area, 116 square miles.
c Drainage area, 106 square miles.

Guadalupe River Basin

Oct. 4	San Marcos River	Guadalupe River.	San Marcos, Tex.....	106
Nov. 6	....do.....	....do.....	....do.....	98.1
Dec. 6	....do.....	....do.....	....do.....	108
Jan. 17	....do.....	....do.....	....do.....	122
Feb. 19	....do.....	....do.....	....do.....	121
Mar. 21	....do.....	....do.....	....do.....	*111

* Flow regulated by power plant above.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940--Continued

Guadalupe River Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Apr. 23	San Marcos River	Guadalupe River.	San Marcos, Tex.	108
May 20	....do.....	....do.....	....do.....	101
June 18	....do.....	....do.....	....do.....	97.2
July 24	....do.....	....do.....	....do.....	75.3
Aug. 22	....do.....	....do.....	....do.....	102

Nueces River Basin

May 23	Nueces River....	Gulf of Mexico..	500 feet below West Nueces River, 11½ miles northwest of Uvalde, Tex.	*60.9
June 17	....do.....	....do.....	....do.....	*36.3
July 17	....do.....	....do.....	....do.....	0
Aug. 13	....do.....	....do.....	....do.....	0
Dec. 13	Schwandners Spring.	West Nueces River.	16.3 miles northwest of Laguna, Tex.....	2.58
Jan. 26	....do.....	....do.....	....do.....	2.75
Apr. 24	....do.....	....do.....	....do.....	2.75
May 29	....do.....	....do.....	....do.....	4.27
June 22	....do.....	....do.....	....do.....	3.36
July 22	....do.....	....do.....	....do.....	3.86
Aug. 20	....do.....	....do.....	....do.....	4.29
Sept.20	....do.....	....do.....	....do.....	3.06
Dec. 13	Live Oak Creek..	....do.....	Lat. 100°06'40", long. 29°28'30", 7½ miles northwest of Laguna, Tex.	1.54
Jan. 26	....do.....	....do.....	....do.....	1.48
Apr. 24	....do.....	....do.....	....do.....	1.00
May 29	....do.....	....do.....	....do.....	6.74
June 22	....do.....	....do.....	....do.....	2.28
July 22	....do.....	....do.....	....do.....	2.05
Aug. 20	....do.....	....do.....	....do.....	14.6
Sept.20	....do.....	....do.....	....do.....	.76

* West Nueces River not flowing at time of these measurements.

Rio Grande Basin

Oct. 5	Allen Creek.....	Costilla Creek..	Lat. 36°58', long. 105°15', above Costilla dam and reservoir, 16 miles east of Costilla, N. Mex.	0.41
May 17	....do.....	....do.....	....do.....	.74
25	....do.....	....do.....	....do.....	2.02
June 6	....do.....	....do.....	....do.....	.73
July 7	....do.....	....do.....	....do.....	a.20
Aug. 1	....do.....	....do.....	....do.....	a.20
9	....do.....	....do.....	....do.....	.41
25	....do.....	....do.....	....do.....	.33
Sept.26	....do.....	....do.....	....do.....	.84
May 15	Cerro ditch.....	Latir Creek.....	Lat. 36°30', long. 105°33', in SW¼ sec. 15, T. 30 N., R. 13 E., 50 feet below head and 6 miles northwest of Cerro, N. Mex.	3.20
15	....do.....	....do.....	....do.....	7.96
15	....do.....	....do.....	....do.....	5.08
15	....do.....	....do.....	....do.....	10.5
15	....do.....	....do.....	....do.....	1.53
Nov. 7	Bee Line ditch..	Rio Lucero.....	Lat. 36°28', long. 105°34', E½ sec. 21, T. 26 N., R. 13 E., at head, 3½ miles south of town of Arroyo Seco, N. Mex.	a.20
Mar. 25	....do.....	....do.....	....do.....	0
Apr. 8	....do.....	....do.....	....do.....	a.05
May 9	....do.....	....do.....	....do.....	a.2
27	....do.....	....do.....	....do.....	a4.4
July 9	....do.....	....do.....	....do.....	0
30	....do.....	....do.....	....do.....	0
Nov. 7	Santa Fe Creek..	Rio Grande.....	Lat. 35°41', long. 105°50', sec. 24, T. 17 N., R. 10 E., above upper reservoir, 6½ miles east of Santa Fe, N. Mex.	2.29
14	....do.....	....do.....	....do.....	1.07
Dec. 22	....do.....	....do.....	....do.....	.90
Apr. 5	....do.....	....do.....	....do.....	12.6
12	....do.....	....do.....	....do.....	12.7
29	....do.....	....do.....	....do.....	16.6
May 31	....do.....	....do.....	....do.....	18.9
June 11	....do.....	....do.....	....do.....	8.9
July 8	....do.....	....do.....	....do.....	2.71
July 25	....do.....	....do.....	....do.....	2.02
Aug. 14	....do.....	....do.....	....do.....	3.47
27	....do.....	....do.....	....do.....	5.07
Sept.30	....do.....	....do.....	....do.....	5.73
Oct. 12	San Jose River..	Rio Puerco.....	Lat. 35°04', long. 107°45', NW¼ sec. 25, T. 10 N., R. 9 W., at highway bridge, 8 miles southeast of Grants, N. Mex.	7.84
Nov. 15	....do.....	....do.....	....do.....	7.18
Dec. 5	....do.....	....do.....	....do.....	7.74
Jan. 3	....do.....	....do.....	....do.....	11.2
26	....do.....	....do.....	....do.....	9.63
Feb. 14	....do.....	....do.....	....do.....	8.16
Mar. 12	....do.....	....do.....	....do.....	8.83
Apr. 2	....do.....	....do.....	....do.....	8.73
17	....do.....	....do.....	....do.....	5.00
July 2	....do.....	....do.....	....do.....	7.33
Aug. 14	....do.....	....do.....	....do.....	6.68
Sept. 6	....do.....	....do.....	....do.....	8.64
26	....do.....	....do.....	....do.....	14.5
Mar. 19	Pecos River.....	Rio Grande.....	Lat. 35°08', long. 104°52', SE¼ sec. 36, T. 11 N., R. 19 E. (projected) in Anton Chico Grant, 1 mile northwest of Colonias, N. Mex.	27.0

a Estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940--Continued

Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Dec. 18	Pecos River.....	Rio Grande.....	Lat. 33°34'10", long. 104°22'25", in SW¼ SW¼ sec. 35, T. 8 S., R. 25 E., at bridge on U. S. Highway 70, 15 miles northeast of Roswell, N. Mex.	7.21
18	....do.....	....do.....	Lat. 33°22', long. 104°24', SE¼NE¼ sec. 9, T. 11 S., R. 25 E., just above mouth of Rio Hondo, 6 miles east of Roswell, N. Mex.	22.9
18	....do.....	....do.....	Lat. 33°12', long. 104°20', NE¼ sec. 10, T. 13 S., R. 26 E., 2½ miles northeast of Dexter, N. Mex.	54.3
18	Rio Hondo.....	Pecos River.....	Lat. 33°22', long. 104°24', E½ sec. 9, T. 11 S., R. 25 E., at mouth, 6 miles east of Roswell, N. Mex.	10.4
Nov. 21	Rio Felix.....	....do.....	Lat. 33°07', long. 104°20', W½ sec. 3, T. 14 S., R. 26 E., ½ mile below State Highway 2, 1.5 miles north of Hagerman, N. Mex.	6.21
Dec. 6	....do.....	....do.....	....do.....	39.8
18	....do.....	....do.....	Lat. 33°09', long. 104°19', S½ sec. 25, T. 13 S., R. 26 E., 2 miles north of Hagerman, N. Mex.	7.73
18	Walnut Draw.....	....do.....	Lat. 32°58', long. 104°22', lot 2, sec. 2, T. 16 S., R. 26 E., 3 miles south of Lake Arthur, N. Mex.	2.32
17	Cottonwood Creek	....do.....	NE¼ sec. 7, T. 16 S., R. 25 E., at Worley Farm, 10 miles southwest of Lake Arthur, N. Mex.	1.10
17	....do.....	....do.....	Lot 16, sec. 4, T. 16 S., R. 25 E., 7 miles southwest of Lake Arthur, N. Mex.	2.44
17	....do.....	....do.....	¼ mile south of west ¼ corner, sec. 2, T. 16 S., R. 25 E., 6½ miles southwest of Lake Arthur, N. Mex.	3.24
17	....do.....	....do.....	SW¼ sec. 1, T. 16 S., R. 25 E., 5½ miles southwest of Lake Arthur, N. Mex.	2.85
17	....do.....	....do.....	Lot 15, T. 16 S., R. 26 E., 300 feet above highway bridge and 3½ miles south of Lake Arthur, N. Mex.	3.49
17	Hill ditch.....	Cottonwood Creek	SE¼NW¼NE¼ sec. 7, T. 16 S., R. 25 E., at head, 10 miles southwest of Lake Arthur, N. Mex.	0
17	Upper Meyer ditch.	....do.....	SW¼ sec. 5, T. 16 S., R. 25 E., at head, 9 miles southwest of Lake Arthur, N. Mex.	.78
17	Glen O'Bannon ditch.	....do.....	SE¼ sec. 5, T. 16 S., R. 25 E., 8½ miles southwest of Lake Arthur, N. Mex.	0
17	North ditch.....	....do.....	Lot 14, sec. 3, T. 16 S., R. 25 E., at head, 7 miles southwest of Lake Arthur, N. Mex.	†.10
17	South ditch.....	....do.....	....do.....	1.70
17	Meyer middle ditch.	....do.....	....do.....	0
17	Buck-Terry ditch	....do.....	SW¼ sec. 2, T. 16 S., R. 25 E., at head, 6 miles southwest of Lake Arthur, N. Mex.	2.94
17	Hersey-Norton ditch.	....do.....	SW¼ sec. 2, T. 16 S., R. 25 E., at head, 5¾ miles southwest of Lake Arthur, N. Mex.	0
17	Shapland ditch..	....do.....	....do.....	0
17	Buck ditch.....	....do.....	SW¼ sec. 1, T. 16 S., R. 25 E., 5½ miles southwest of Lake Arthur, N. Mex.	0
17	Hipper-Norton ditch.	....do.....	Lot 13, sec. 6, T. 16 S., R. 26 E., 4½ miles southwest of Lake Arthur, N. Mex.	0
17	Robertson ditch.	....do.....	Lot 13, sec. 6, T. 16 S., R. 26 E., at head, 4½ miles southwest of Lake Arthur, N. Mex.	1.12
17	North Overton ditch.	....do.....	Lot 6, sec. 6, T. 16 S., R. 26 E., at head, 4¼ miles southwest of Lake Arthur, N. Mex.	1.11
17	South Overton ditch.	....do.....	....do.....	0
17	North Williams ditch.	....do.....	Lot 9, sec. 6, T. 16 S., R. 26 E., 4 miles southwest of Lake Arthur, N. Mex.	0
17	South Williams ditch.	....do.....	....do.....	1.30
17	Baker-Crawford ditch.	....do.....	Lot 15, sec. 5, T. 16 S., R. 26 E., 3¾ miles southwest of Lake Arthur, N. Mex.	0
17	Manda ditch.....	....do.....	....do.....	.36
17	Baker-Brown ditch.	....do.....	....do.....	0
Nov. 18	Rock Quarry Draw	Pecos River.....	100 feet above Barstow drainage ditches 2, 3, and 4, near Barstow, Tex.	*10.9
Dec. 7	....do.....	....do.....	....do.....	*.88
21	....do.....	....do.....	....do.....	*.91
Jan. 31	....do.....	....do.....	....do.....	*1.60
Feb. 28	....do.....	....do.....	....do.....	*†.5
Mar. 22	....do.....	....do.....	....do.....	*†.8
Apr. 11	....do.....	....do.....	....do.....	*2.20
May 3	....do.....	....do.....	....do.....	*†.8
27	....do.....	....do.....	....do.....	*†.8
June 21	....do.....	....do.....	....do.....	*.53
July 15	....do.....	....do.....	....do.....	*†.6
Aug. 5	....do.....	....do.....	....do.....	*.68
27	....do.....	....do.....	....do.....	*.67
Sept. 18	....do.....	....do.....	....do.....	*†.5

* Represents waste from Barstow Irrigation District 1 canal.
† Estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940--Continued

Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from	Locality	Discharge (sec.-ft.)
Nov. 24	Comanche Springs	Comanche Creek..	200 feet above diversion dam, at Ft. Stockton, Tex.	39.8
24	....do.....	....do.....	....do.....	41.1
24	....do.....	....do.....	....do.....	40.6
Dec. 14	....do.....	....do.....	....do.....	41.0
Jan. 11	....do.....	....do.....	....do.....	42.8
Feb. 26	....do.....	....do.....	....do.....	46.3
Nov. 24	....do.....	....do.....	At main canal, ½ mile below diversion dam, at Ft. Stockton, Tex.	40.5
24	....do.....	....do.....	....do.....	41.1
24	....do.....	....do.....	....do.....	40.4
Jan. 30	....do.....	....do.....	....do.....	43.7
Mar. 20	....do.....	....do.....	....do.....	43.3
Apr. 26	....do.....	....do.....	....do.....	42.6
May 28	....do.....	....do.....	....do.....	42.3
June 28	....do.....	....do.....	....do.....	42.4
July 19	....do.....	....do.....	....do.....	40.6
Aug. 23	....do.....	....do.....	....do.....	41.2
Sept.19	....do.....	....do.....	....do.....	40.2
Oct. 30	Mud Springs (Mud Creek).	Sycamore Creek..	16 miles northwest of Brackettville, Tex.	3.37
Dec. 15	....do.....	....do.....	....do.....	4.50
Jan. 25	....do.....	....do.....	....do.....	3.54
Mar. 15	....do.....	....do.....	....do.....	1.84
Apr. 26	....do.....	....do.....	....do.....	1.27
May 30	....do.....	....do.....	....do.....	2.05
June 24	....do.....	....do.....	....do.....	2.03
July 24	....do.....	....do.....	....do.....	2.72
Aug. 22	....do.....	....do.....	....do.....	2.81
Sept.19	....do.....	....do.....	....do.....	2.02
Oct. 30	Pinto Springs...	Pinto Creek.....	7⅞ miles northwest of Brackettville, Tex.	7.70
Dec. 15	....do.....	....do.....	....do.....	8.83
Jan. 25	....do.....	....do.....	....do.....	7.19
Mar. 15	....do.....	....do.....	....do.....	4.45
Apr. 26	....do.....	....do.....	....do.....	5.06
May 30	....do.....	....do.....	....do.....	5.98
June 27	....do.....	....do.....	....do.....	6.14
July 24	....do.....	....do.....	....do.....	7.81
Aug. 22	....do.....	....do.....	....do.....	6.85
Sept.19	....do.....	....do.....	....do.....	4.92

Mimbres River Basin

Oct. 5	Grijalva ditch*.	Bear Canyon.....	S½ sec. 29, T. 16 S., R. 11 W., just below Bear Canyon Dam, 100 feet above bridge on State Highway 167, 2 miles northwest of Mimbres, N. Mex.	0.72
12	....do.....	....do.....	....do.....	.15
19	....do.....	....do.....	....do.....	.09
26	....do.....	....do.....	....do.....	.06
Nov. 2	....do.....	....do.....	....do.....	.07
9	....do.....	....do.....	....do.....	.04
16	....do.....	....do.....	....do.....	.06
23	....do.....	....do.....	....do.....	.06
Dec. 1	....do.....	....do.....	....do.....	.04
7	....do.....	....do.....	....do.....	.04
14	....do.....	....do.....	....do.....	.04
Jan. 4	....do.....	....do.....	....do.....	.04
11	....do.....	....do.....	....do.....	†.05
18	....do.....	....do.....	....do.....	†.02
25	....do.....	....do.....	....do.....	†.01
Mar. 14	....do.....	....do.....	....do.....	†.10
28	....do.....	....do.....	....do.....	.32
Apr. 4	....do.....	....do.....	....do.....	.74
June 19	....do.....	....do.....	....do.....	.60
26	....do.....	....do.....	....do.....	.38
July 3	....do.....	....do.....	....do.....	.73
22	....do.....	....do.....	....do.....	.63
29	....do.....	....do.....	....do.....	.57
Aug. 5	....do.....	....do.....	....do.....	.59
12	....do.....	....do.....	....do.....	.49
19	....do.....	....do.....	....do.....	.51
26	....do.....	....do.....	....do.....	.61
Sept. 3	....do.....	....do.....	....do.....	1.35
9	....do.....	....do.....	....do.....	1.98
16	....do.....	....do.....	....do.....	1.77
23	....do.....	....do.....	....do.....	1.56
30	....do.....	....do.....	....do.....	1.45

* Previously published as "Unnamed diversion."
† Estimated.

Tularosa Valley*

1938				
Oct. 17	La Luz ditch.....	Alamogordo-La Luz ditch.	SW¼ sec. 25, T. 15 S., R. 10 E., at head, ¼ mile above La Luz, N. Mex.	0.66
Nov. 6	....do.....	....do.....	....do.....	.60
1939				
Jan. 14	....do.....	....do.....	....do.....	.94
26	....do.....	....do.....	....do.....	.59
Feb. 18	....do.....	....do.....	....do.....	.89
Mar. 19	....do.....	....do.....	....do.....	1.11
May 9	....do.....	....do.....	....do.....	.98

* Includes discharge measurements of La Luz ditch from October 1938 to September 1940.

Miscellaneous discharge measurements in western Gulf of Mexico basins during the water year October 1939 to September 1940--Continued

Tularosa Valley--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
1939				
June 8	La Luz ditch.....	Alamogordo-La Luz ditch.	SW¼ sec. 25, T. 15 S., R. 10 E., at head, ¼ mile above La Luz, N. Mex.	0.89
20	....do.....	....do.....	....do.....	.78
July 20	....do.....	....do.....	....do.....	.74
Aug. 2	....do.....	....do.....	....do.....	.87
23	....do.....	....do.....	....do.....	.59
Sept. 9	....do.....	....do.....	....do.....	.83
24	....do.....	....do.....	....do.....	1.00
Oct. 20	....do.....	....do.....	....do.....	.92
Nov. 13	....do.....	....do.....	....do.....	1.02
Dec. 3	....do.....	....do.....	....do.....	.84
1940				
Jan. 2	....do.....	....do.....	....do.....	.99
13	....do.....	....do.....	....do.....	.97
29	....do.....	....do.....	....do.....	1.00
Feb. 18	....do.....	....do.....	....do.....	1.03
Mar. 22	....do.....	....do.....	....do.....	1.04
Apr. 7	....do.....	....do.....	....do.....	.95
May 9	....do.....	....do.....	....do.....	.90
27	....do.....	....do.....	....do.....	.93
June 13	....do.....	....do.....	....do.....	1.05
22	....do.....	....do.....	....do.....	.80
July 19	....do.....	....do.....	....do.....	.52
Aug. 10	....do.....	....do.....	....do.....	.84
Sept. 8	....do.....	....do.....	....do.....	.89
18	....do.....	....do.....	....do.....	.69