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# SURFACE WATER SUPPLY *of the* UNITED STATES 1937

PART 8

WESTERN GULF OF MEXICO BASIN

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### SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the water year ending September 30, 1937. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of stream flow have been made at about 7,200 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1937, 3,380 gaging stations were being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at 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. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 8.

### 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 a rate of flow of 1 cubic foot per second, or the rate of discharge of water flowing in a channel when the cross-sectional area is 1 square foot and the 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 flowing 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", equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours.

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

"Control" is a term used to designate the natural section or reach of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

### 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 gage heights 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 gaging stations, equipped with water-stage recorder and measuring cable and car, are shown on plate 1.

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

The data presented for each gaging station in the area covered by this report usually 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 shifting-control method or by use of slope 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. Information under "Extremes" gives 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, and also the minimum discharge if useful; and the minimum gage height except when 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 represents the lowest discharge unless otherwise qualified.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage height except for stations on streams subject to sudden or rapid fluctuation. 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.

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

#### ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description gives a statement under "Remarks" in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are



A. ARTIFICIAL CONTROL, RECORDER HOUSE, AND MEASURING CABLE ON OLENTANGY RIVER, DELAWARE, OHIO.



B. RECORDER HOUSE AND MEASURING CABLE ON KAWEAH RIVER, THREE RIVERS, CALIF.

TYPICAL RIVER-MEASUREMENT STATIONS.





in error not more than 5 percent; "good", not more than 10 percent; "fair", not more than 15 percent; and "poor", over 15 percent.

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

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

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 increased data and 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 indicated below.

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

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

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

Augusta, Maine, Statehouse.  
 Boston, Mass., 945 Post Office Building.  
 Hartford, Conn., 203 Federal Building.  
 Albany, N. Y., 528 Federal Building.  
 Trenton, N. J., 228 Federal Building.

Harrisburg, Pa., 490 Education Building.  
 Charlottesville, Va., University of Virginia.  
 South Charleston, W. Va., Naval Ordnance Plant.  
 Asheville, N. C., 220 Post Office Building.  
 Columbia, S. C., 119 United States Courthouse.  
 Atlanta, Ga., Georgia School of Technology.  
 Ocala, Fla., Post Office Building.  
 Montgomery, Ala., Post Office Building.  
 Chattanooga, Tenn., 442 Post Office Building.  
 Louisville, Ky., Federal Building.  
 Columbus, Ohio, Engineering Experiment Station, Ohio State University.  
 Indianapolis, Ind., 319 Federal Building.  
 Urbana, Ill., 14 Post Office Annex.  
 Madison, Wis., 337N State Capitol.  
 St. Paul, Minn., 808 New Post Office Building.  
 Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.  
 St. Louis, Mo., 906 Customhouse, 1114 Market Street.  
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines  
 and Metallurgy.  
 Topeka, Kans. 305 Federal Building.  
 Fort Smith, Ark., Post Office Building.  
 Austin, Tex., State Highway Building.  
 Santa Fe, N. Mex., 3 United States Courthouse.  
 Tucson, Ariz., 210 Post Office Building.  
 Denver, Colo., 230 Customhouse.  
 Salt Lake City, Utah, 303 Federal Building.  
 Idaho Falls, Idaho, 228 Federal Building.  
 Boise, Idaho, 429 Federal Building.  
 Helena, Mont., 412 Federal Building.  
 Tacoma, Wash., 406 Federal Building.  
 Portland, Oreg., 606 Post Office Building.  
 San Francisco, Calif., 208 Federal Office Building.  
 Los Angeles, Calif., 512 Eighth and Figueroa Building.  
 Honolulu, Hawaii, 225 Federal 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, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28.....	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)...	1898.
W 35 to 39....	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52....	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.— The reports which contain records after 1901 are given in the table on page 5.

Numbers of water-supply papers containing results of stream measurements, 1899-1937  
(For basins included see p. 3)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	35	b 35, 36	36	36	36	c 35, 37	37	37	d 37, 39	38, e 39	39, f 39	39	39	39
1900 g...	47, h 49	49	49	49	49	49	50	50	50	50	51	51	51	51
1901 i...	66, 75	66, 75	66, 75	66, 75	k 66, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902 j...	82, 83	b 82, 83	82, 83	m 82, 83	k 82, 83, 85	85	k 85, 84	84	85	85	85	85	85	85
1903 k...	97	b 97, 98	98	98	k 98, 99, n 100	99	k 98, 99	99	100	100	100	100	100	100
1904 l...	o 124, p 126, q 127	q 126, 127	128	129	k 128, 130	130, r 131	k 128, 131	132	133	133, s 134	134	135	135	135
1905 m...	o 166, p 166, q 167	q 167, 168	169	170	171	172	k 169, 173	174	175, t 177	176, s 177	177	178	178	178
1906 n...	o 201, p 202, q 203	q 203, 204	205	206	207	208	k 206, 207	208	211, t 212	212, s 213	213	214	214	214
1907 o...	261	262	263	264	265	266	267	268	269	270, s 271	271	272	272	272
1908 p...	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1909 q...	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1910 r...	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1911 s...	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1912 t...	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1913 u...	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1914 v...	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1915 w...	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1916 x...	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1917 y...	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1918 z...	531	532	533	534	535	536	537	538	539	540	541	542	543	544
1919 aa...	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1920 ab...	591	592	593	594	595	596	597	598	599	600	601	602	603	604
1921 ac...	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1922 ad...	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1923 ae...	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1924 af...	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1925 ag...	701	702	703	704	705	706	707	708	709	710	711	712	713	714
1926 ah...	715	716	717	718	719	720	721	722	723	724	725	726	727	728
1927 ai...	729	730	731	732	733	734	735	736	737	738	739	740	741	742
1928 aj...	743	744	745	746	747	748	749	750	751	752	753	754	755	756
1929 ak...	757	758	759	760	761	762	763	764	765	766	767	768	769	770
1930 al...	771	772	773	774	775	776	777	778	779	780	781	782	783	784
1931 am...	785	786	787	788	789	790	791	792	793	794	795	796	797	798
1932 an...	799	800	801	802	803	804	805	806	807	808	809	810	811	812
1933 ao...	813	814	815	816	817	818	819	820	821	822	823	824	825	826

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 Kings and Kern Rivers and south Pacific slope basins.

f 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.

g Monthly discharge for 1900 in 22d Annual Report, part 4.

h Wasatch and Schuykill 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 Red and Saginaw Rivers only.

p Great Salt Lake.

q Susquehanna River to Yedkin River, inclusive.

r Platte and Kansas Rivers.

s The Great Basin in California, except Truckee and Carson River Basins.

t Below junction with Gila River.

u Rogue, Umpqua, and Siletz Rivers only.

The foregoing table gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1937. 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 from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report in the same relative order as the regular gaging stations. An index of the records obtained prior to 1904 has been published in Water-Supply Paper 119.

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, Surface water supply of the southern Pacific slope of.
597a	1927	California, Surface water supply of Sacramento River Basin.
636d	1927	California, Surface water supply of San Joaquin River Basin.
636e	1927	California, Surface water supply of Pacific slope basins in.
637a	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.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
469	1921	Wyoming, Surface waters of, and their utilization.
DRAINAGE BASIN		
395	1914	Colorado River (Colo., Utah, etc.) and its utilization, 1916.
617	1927	Colorado River, upper (Colo., Utah), and its utilization, 1929.
517	1920	Great Salt Lake Basin, Water powers of, 1924.
618	1926	Green River (Wyo., Utah) and its utilization, 1930.
198	1906	Kennebec River Basin (Maine), Water resources of, 1907.
		Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (W. Va., Va., N. C.), Surface water supply of, 1925.
279	1909	Penobscot River Basin (Maine), Water resources of, 1912.
192	1906	Potomac River Basin (W. Va., Va., Md., etc.), 1907.
358	1913	Rio Grande Basin (N. Mex., Tex., etc.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont. and Canada), Water supply of, 1920.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of, 1905.

In addition to the records noted above, records of discharge have been published 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.
Georgia....	1920	Bull. 33, Water powers of Georgia.....	Geological Survey of Georgia.
Illinois....	1937	Stream flow data of Illinois.....	Division of Waterways.
Do.....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Indiana....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do... ..	<sup>a</sup> 1930	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.....	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.
Kansas.....	<sup>b</sup> 1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	<sup>c</sup> 1924	.....do.....	Do.
Do.....	<sup>d</sup> 1928	.....do.....	Do.
Kentucky...	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Minnesota...	1912	Water resources investigation of Minnesota.	State Drainage Commission.
Missouri...	1926	Reports of Bureau of Geology and Mines, Vol. 20, 2d series, Water Resources of Missouri.	Missouri Bureau of Geology and Mines.
Nebraska...	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation and Drainage.
Do.....	<sup>e</sup> 1928	2d hydrographic report.....	Do.
New Jersey.	1923	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	<sup>f</sup> 1934	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.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	<sup>g</sup> 1924	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	<sup>h</sup> 1930	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	<sup>i</sup> 1936	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	<sup>j</sup> 1932	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee..	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	<sup>k</sup> 1930	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.....	<sup>l</sup> 1923	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

a Includes records for the years 1927-30.

b Includes records for the years 1895-1919.

c Includes records for the years 1919-24.

d Includes records for the years 1924-28.

e Includes records for the years 1914-28.

f Includes records for the years 1928-34.

g Includes records for the years 1914-24.

h Includes records for the years 1924-30.

i Includes records for the years 1930-36.

j Includes records for the years 1928-32.

k Includes average weekly discharge for the years 1920-30.

l Includes records for the 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, 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 following table contains a list of gaging stations for the area covered by this report at which records of discharge were collected during the water year October 1936 to September 1937 by agencies other than the Geological Survey. The records for these stations are not contained in publications of the Geological Survey.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Operated by	Remarks
Alamito Creek.....	Near Presidio, Tex...	1932-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Arrey Canal.....	Near Arrey, N. Mex...	1918, 1920-37	Bureau of Reclamation...	Unpublished.
Brushy Creek.....	At Kluck farm, near Riesel, Tex.	1937	Soil Conservation Service.	Do.
Devils River.....	Near Del Rio, Tex....	*1931-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
East Side canal....	At Mesilla Dam near Mesilla Park, N. Mex.	1916-18, 1920-37	Bureau of Reclamation...	Unpublished.
Elephant Butte Reservoir.	Elephant Butte, N. Mex.	1915-37	....do.....	Do.
Goodenough Springs	Near Comstock, Tex..	*1931-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Leasburg Canal....	At head, at Selden, N. Mex.	1917-18, 1920-37	Bureau of Reclamation...	Unpublished.
Pecos River.....	Near Comstock, Tex..	*1931-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Pinto Creek.....	Near Del Rio, Tex...	*1931-37	....do.....	Do.
Rio Alamo.....	Nier, Tamaulipas, Mexico.	1923-37	International Boundary Comm., Mexican Section.	Do.
Rio Escondido.....	At Villa Fuente, Coahuila, Mexico.	1922-37	....do.....	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 1932-37 published in water bulletins of International Boundary Commission.
Rio Grande.....	Below Brownsville, Tex.	1934-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Do.....	Near Del Rio.....	*1931-37	....do.....	Do.
Do.....	Eagle Pass, Tex....	*1931-37	....do.....	Do.
Do.....	Near El Paso, Tex..	*1931-37	....do.....	Do.
Do.....	Below old Fort Quitman, Tex.	*1931-37	....do.....	Do.
Do.....	At Johnson ranch, Tex.	1936-37	....do.....	Do.
Do.....	Langtry, Tex.....	*1931-37	....do.....	Do.
Do.....	La Nutria, 9.5 miles above Candelaria, Tex.	1935-37	....do.....	Do.
Do.....	Laredo, Tex.	*1926-37	International Boundary Commission, Mexican Section.	Do.
Do.....	Leasburg Dam, at Selden, N. Mex.	1919-37	Bureau of Reclamation ..	Unpublished.
Do.....	Matamoras Tamaulipas, Mexico.	†1926-37	International Boundary Commission, Mexican Section.	Published in water bulletins of International Boundary Commission.
Do.....	At Percha Dam, near Arrey, N. Mex.	1922-37	Bureau of Reclamation...	Unpublished.
Do.....	Above Presidio, Tex.	*1926-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Do.....	Below Presidio, Tex.	*1926-37	....do.....	Do.
Do.....	Rio Grande City,	1932-37	....do.....	Do.
Do.....	Roma, Tex.....	*1924-37	....do.....	Do.
Do.....	At Tornillo Bridge, near Fabens, Tex.	*1931-37	....do.....	Do.

\*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.

## Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Operated by	Remarks
Rio Grande.....	Zapata, Tex.....	1932-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Rio Salado.....	Near Guerrero, Tamaulipas, Mexico.	1923-37	International Boundary Commission, Mexican Section.	Do.
Rio San Diego.....	Jimenez, Coahuila, Mexico.	1924-37	.....do.....	Records for 1924-28 published in report of International Water Commission, United States and Mexico, U.S. Section; records for 1932-37 published in water bulletins of International Boundary Commission.
Rio San Juan.....	Santa Rosalia, Tamaulipas, Mexico	1923-37	.....do.....	Published in water bulletins of International Boundary Commission.
Rio San Rodrigo...	Near El Moral, Coahuila, Mexico.	1922-37	.....do.....	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 1932-37 published in water bulletins of International Boundary Commission.
San Felipe Creek..	Near Del Rio, Tex...	1931-37	International Boundary Commission, U. S. Section.	Published in water bulletins of International Boundary Commission.
Terlingua Creek...	Near Terlingua, Tex.	1932-37	.....do.....	Do.
West Side canal...	At Hesilla Dam, near Hesilla Park, N. Mex.	1916-18 1920-37	Bureau of Reclamation ..	Unpublished.

## COOPERATION

The work in the several States was done under cooperative agreements as follows: In Colorado, with the State engineer, M. C. Hinderlider; in New Mexico, with the State engineer, T. M. McClure, the Interstate Stream Commission, T. M. McClure, secretary, and the Middle Rio Grande Conservancy District, W. C. Oestreich, chief engineer; and in Texas, with the Board of Water Engineers, consisting of C. S. Clark, chairman, A. H. Dunlap, and J. W. Pritchett.

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 for the operation of gaging stations in the Rio Grande Basin in Colorado and New Mexico were allocated by the Public Works Administration from appropriations made, under the National Industrial Recovery Act, to the Rio Grande Joint Investigation, sponsored by the National Resources Committee.

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

Assistance in collecting records was also rendered by the following organizations: In New Mexico, by the Agua Pura Co., the Alamogordo Community Ditch, the town of Alamogordo, the New Mexico Power Co., and the Tularosa Community Ditch; in Texas, by Dallas County, the City of Corpus Christi, the City of Houston, the San Antonio Public Service Co., Tarrant County Water Control and Improvement District No. 1, and the West Texas Utilities Co.

The data for the stations in the several States were collected and prepared for publication under the 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 New Mexico, Berkeley Johnson; and in Texas, C. E. Ellsworth.



## SABINE RIVER BASIN

Sabine River near Gladewater, Tex.

Location.- Water-stage recorder, lat. 32°32', long. 94°57', at Gladewater-Tyler highway bridge 1 mile southwest of Gladewater, Gregg County. Zero of gage is 243.85 feet above mean sea level (Texas Reclamation Department datum).

Drainage area.- 2,846 square miles.

Records available.- October 1932 to September 1937.

Extremes.- Maximum discharge during year, 8,770 second-feet Mar. 17 (gage height, 27.20 feet); minimum, 16 second-feet about Aug. 18 (gage height, 3.81 feet).  
1932-37: Maximum discharge, 16,000 second-feet June 24, 1935 (gage height, 33.98 feet); minimum, 9.8 second-feet Aug. 26, 27, 1934, Sept. 8, 1936.  
Maximum stage known, 39.4 feet January 1932.

Remarks.- Records good except those for Nov. 24 to Dec. 21, July 5 to Aug. 19 which were computed on basis of indicated range of stage on gage-height graph, rainfall data, and records for station at Logansport and are poor. Several small diversions above station for oil-field operations and municipal supply.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	427	1,560	119	1,990	4,810	819	4,480	1,020	122	47	132	32
2	1,190	1,940		2,470	4,810	797	5,090	943	101	42	112	90
3	1,940	2,260		2,940	4,910	753	5,540	456	85	38	90	85
4	2,790	2,410		3,360	4,990	841	5,810	357	78	35	76	128
5	3,590	2,210		3,810	4,910	1,170	5,850	311	81	31	58	161
6	4,260	1,520	2,080	4,180	4,600	1,400	5,580	273	146	29	47	140
7	4,770	709		4,290	3,820	2,040	4,880	245	316	36	40	131
8	5,090	324		3,970	2,760	2,650	4,070	221	599	40	34	104
9	5,130	229		3,210	1,700	3,240	3,490	203	379	33	30	87
10	4,700	195		2,110	1,080	3,650	3,180	186	357	28	26	79
11	3,460	178	489	1,470	819	4,200	3,090	184	379	28	22	72
12	1,350	160		1,360	709	4,700	3,000	182	412	40	20	63
13	456	151		1,540	643	5,200	2,780	174	379	70	19	82
14	167	145		1,920	599	5,650	2,180	172	293	55	18	63
15	128	138		2,350	577	6,180	1,420	167	234	96	17	59
16	110	136	105	2,650	533	6,540	929	161	205	76	16	68
17	99	131		2,940	500	6,770	665	169	207	58	38	78
18	91	123		3,300	478	6,710	577	227	180	36	45	68
19	97	114		3,650	522	6,380	500	232	165	26	74	58
20	91	108		4,000	665	5,940	456	221	148	19	67	49
21	80	103	105	4,600	731	5,420	577	225	124	20	50	44
22	73	98		4,950	731	4,950	753	221	124	25	39	38
23	72	97		5,350	709	4,460	929	180	169	28	32	36
24	89	306		5,650	687	4,000	1,150	149	212	25	36	33
25	103	289		5,900	643	3,240	1,380	134	180	21	41	35
26	151	105	278	6,030	643	2,230	1,540	123	137	26	36	32
27	201		5,940	709	1,630	1,880	119	108	50	42	28	28
28	218		467	5,390	797	1,630	1,800	232	86	80	41	26
29	357		973	5,500	-	1,990	1,770	278	73	116	36	26
30	753		1,360	5,170	-	2,730	1,470	232	56	138	32	26
31	1,170	-	1,610	4,910	-	3,650	-	160	-	140	36	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				43,203	5,130	72	1,394	85,690				
November.....				15,772	2,410	-	526	31,280				
December.....				25,126	-	-	811	49,840				
Calendar year 1936.....				194,005	5,130	10	530	384,800				
January.....				116,890	6,030	1,560	3,771	231,800				
February.....				50,145	4,990	478	1,791	99,460				
March.....				111,560	6,770	753	3,599	221,300				
April.....				76,576	5,850	456	2,553	151,900				
May.....				7,857	1,020	119	253	16,580				
June.....				6,135	599	56	204	12,170				
July.....				1,552	140	19	50.1	3,080				
August.....				1,392	132	16	44.9	2,760				
September.....				2,001	161	26	66.7	3,970				
Water year 1936-37.....				458,209	6,770	16	1,255	908,800				

## Sabine River at Logansport, La.

Location.- Chain gage, lat. 31°58', long. 94°00', on Houston East & West Texas (Southern Pacific) Railway bridge in Logansport, De Soto Parish. Zero of gage is 147.5 feet above mean sea level.

Drainage area.- 4,858 square miles.

Records available.- July 1903 to December 1906, October 1923 to September 1937.

Average discharge.- 14 years (1923-37), 2,876 second-feet.

Extremes.- Maximum discharge observed during year, 11,800 second-feet Jan. 29 (gage height, 24.6 feet); minimum discharge, 24 second-feet Oct. 1, 2.

1903-6, 1923-37: Maximum discharge, 41,100 second-feet Feb. 23, 1932 (gage height, 35.6 feet, from graph based on gage readings); minimum, 23 second-feet Aug. 25-27, 1934.

Maximum stage known, 39.4 feet, present datum, occurred during May 1884.

Remarks.- Records fair. Small diversions above station. Gage read once daily. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	276	254	1,430	10,800	4,120	5,600	1,800	220	184	220	126
2	24	332	262	3,160	10,500	4,400	4,560	1,840	246	164	220	117
3	26	519	276	4,620	10,000	4,020	4,230	1,750	274	154	184	126
4	28	1,000	290	4,940	9,600	3,420	4,990	1,480	274	135	154	220
5	32	1,330	290	4,500	9,180	3,320	6,480	1,200	318	117	135	302
6	285	1,600	446	4,480	8,690	4,450	7,200	980	302	109	117	334
7	1,280	1,900	694	4,460	8,200	5,240	7,460	842	274	117	105	334
8	1,900	2,080	896	4,400	7,780	5,720	7,520	710	274	135	97	334
9	2,280	1,690	1,030	4,340	7,320	6,090	7,520	646	438	109	90	318
10	2,640	1,260	1,330	4,660	6,870	6,350	7,390	586	710	97	82	318
11	2,920	886	1,660	6,700	6,350	6,420	7,260	546	980	97	79	302
12	3,160	674	1,840	8,440	5,840	6,160	7,060	474	980	117	79	260
13	3,560	464	1,930	9,320	4,320	5,960	6,740	456	842	144	79	220
14	3,520	304	1,930	9,320	2,750	5,840	6,220	438	698	154	76	196
15	3,080	290	2,050	9,460	1,940	5,780	5,480	438	626	164	76	164
16	2,370	290	2,140	9,320	1,540	6,160	4,670	438	546	154	62	135
17	1,470	290	2,210	9,180	1,380	6,480	3,870	438	510	135	72	126
18	738	290	2,490	8,200	1,330	6,740	2,950	384	438	126	79	109
19	482	262	2,680	7,850	1,260	7,060	2,150	366	402	126	79	101
20	380	234	2,880	8,200	1,460	7,390	1,660	334	334	117	72	93
21	304	234	2,920	8,690	2,520	7,650	1,480	318	318	117	65	86
22	248	220	2,720	9,250	3,370	7,990	1,480	318	302	101	72	79
23	234	206	2,190	9,810	3,270	8,340	1,660	318	274	101	72	79
24	206	234	1,360	10,200	2,750	8,620	1,730	510	246	93	72	79
25	206	220	930	10,500	2,590	8,970	1,600	566	220	86	79	79
26	194	206	714	11,000	2,310	9,180	1,480	438	196	79	93	79
27	194	206	634	11,400	2,230	9,320	1,480	366	184	93	101	79
28	182	194	554	11,700	3,080	9,320	1,510	334	196	101	101	86
29	182	194	574	11,800	-	9,180	1,630	302	208	101	109	79
30	182	206	674	11,600	-	8,550	1,730	246	196	101	144	72
31	220	-	842	11,200	-	7,350	-	232	-	164	135	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						32,351	3,520	24	1,044	64,170		
November.....						19,091	2,080	194	603	55,880		
December.....						41,660	2,920	234	1,344	82,630		
Calendar year 1936.....						317,048	4,830	24	866	628,800		
January.....						244,090	11,800	1,430	7,874	484,100		
February.....						139,210	10,800	1,260	4,972	276,100		
March.....						205,590	9,320	3,320	6,852	407,800		
April.....						126,790	7,520	1,480	4,226	261,600		
May.....						20,074	1,840	232	648	39,520		
June.....						12,016	980	184	401	23,350		
July.....						3,792	184	79	122	7,520		
August.....						3,200	220	62	105	6,350		
September.....						5,022	334	72	167	9,960		
Water year 1936-37.....						851,886	11,800	24	2,334	1,690,000		

## Sabine River near Ruliff, Tex.

Location.- Staff gage, lat. 30°17', long. 93°42', on Kansas City Southern Railway bridge  $1\frac{1}{2}$  miles east of Ruliff, Newton County, and 5 miles below mouth of Cypress Creek. Zero of gage is 4.7 feet above mean sea level (Kansas City Southern Railway datum).

Drainage area.- 9,448 square miles.

Records available.- October 1924 to September 1937.

Average discharge.- 13 years, 7,539 second-feet.

Extremes.- Maximum discharge during year, 30,400 second-feet Jan. 23-30; maximum gage height, 12.68 feet Jan. 27, 28; minimum discharge, 549 second-feet Oct. 8, 9.  
1924-37: Maximum discharge observed, 76,600 second-feet May 24, 25, 1935 (gage height, 16.10 feet); minimum, 362 second-feet Nov. 15-17, 1932.

Remarks.- Records fair. No diversions of consequence above station. Gage read twice daily.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	606	1,000	1,140	5,220	29,300	8,020	19,700	4,290	1,390	1,140	700	1,050
2	558	960	1,500	6,540	28,200	7,080	20,700	4,290	1,340	1,240	687	1,050
3	587	878	2,150	8,020	27,100	6,580	20,700	5,100	1,290	1,240	636	1,000
4	606	840	2,700	9,790	26,000	5,910	20,700	6,380	1,290	1,240	636	960
5	606	804	3,060	11,000	26,000	5,760	20,700	6,060	1,290	1,190	606	1,090
6	577	804	3,060	12,100	24,900	5,910	20,700	8,550	1,500	1,050	606	1,340
7	577	804	2,790	13,400	24,900	6,220	22,800	8,280	2,970	960	667	1,750
8	549	840	2,620	14,200	24,900	6,540	23,800	7,080	3,850	918	667	2,010
9	549	878	3,450	15,000	24,900	6,700	21,800	5,760	4,070	878	700	2,620
10	558	1,080	4,860	15,000	23,800	6,700	18,700	4,620	4,510	840	700	2,700
11	1,240	1,450	5,760	15,800	22,800	7,080	15,800	3,850	4,740	878	667	2,300
12	1,810	1,810	6,380	16,800	21,800	7,530	14,200	3,150	4,620	878	636	1,880
13	2,150	2,010	7,300	16,800	19,700	8,020	13,400	2,880	3,850	840	606	1,620
14	2,450	2,080	8,280	15,800	18,700	8,550	13,400	2,620	2,790	878	636	1,390
15	2,620	1,940	8,280	17,700	16,800	8,550	13,400	2,370	2,220	1,000	667	1,240
16	2,680	1,750	7,530	18,700	15,000	9,130	13,400	2,150	2,010	1,140	700	1,140
17	3,060	1,560	6,220	21,800	12,800	10,200	12,800	2,010	2,010	1,090	700	1,050
18	3,240	1,340	5,350	24,900	10,600	11,500	11,500	1,880	2,010	1,050	734	1,000
19	3,330	1,240	4,620	27,100	8,830	13,400	10,600	1,810	2,010	878	734	960
20	3,330	1,090	4,180	28,200	7,080	15,000	9,450	1,750	1,940	804	667	918
21	2,970	1,000	3,960	28,200	6,060	14,200	8,550	1,690	1,810	804	667	878
22	2,450	960	3,960	29,300	5,910	14,200	7,300	1,620	1,690	769	667	840
23	1,940	918	3,960	30,400	6,540	12,800	6,380	1,560	1,690	769	700	769
24	1,560	918	3,960	30,400	7,770	13,400	5,620	1,500	1,690	769	700	734
25	1,340	918	4,070	30,400	9,130	14,200	4,980	1,450	1,560	804	700	769
26	1,190	960	4,180	30,400	9,790	14,200	4,620	1,500	1,450	1,050	769	918
27	1,090	1,190	4,070	30,400	9,790	15,000	4,620	1,500	1,340	1,090	840	960
28	1,240	1,240	3,850	30,400	8,630	16,800	4,740	1,390	1,240	960	1,140	918
29	1,340	1,190	3,430	30,400	-	17,700	4,740	1,390	1,190	878	1,390	1,090
30	1,190	1,190	3,240	30,400	-	18,700	4,620	1,390	1,140	769	1,340	1,140
31	1,090	-	3,960	29,300	-	19,700	-	1,450	-	700	1,190	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	49,519	3,330	549	1,597	98,220
November.....	35,612	2,080	804	1,187	70,640
December.....	135,850	8,280	1,140	4,318	265,600
Calendar year 1936.....	991,724	10,600	549	2,710	1,967,000
January.....	645,870	30,400	5,220	20,770	1,277,000
February.....	477,930	29,300	5,910	17,070	948,000
March.....	335,360	19,700	5,760	10,820	665,800
April.....	394,420	23,800	4,620	13,150	782,300
May.....	101,520	8,550	1,390	3,268	201,000
June.....	66,500	4,740	1,140	2,217	131,900
July.....	29,494	1,240	700	951	58,500
August.....	23,435	1,390	606	755	46,490
September.....	36,084	2,700	754	1,269	75,640
Water year 1936-37.....	2,529,394	30,400	549	6,382	4,620,000

## Neches River near Rockland, Tex.

Location.- Staff gage, lat. 31°01'45", long. 94°23'50", half a mile above Texas & New Orleans Railroad bridge 1 mile north of Rockland, Tyler County. Zero of gage is 91.3 feet above mean sea level.

Drainage area.- 3,539 square miles.

Records available.- October 1923 to September 1937.

Average discharge.- 14 years, 2,345 second-feet.

Extremes.- Maximum discharge observed during year, 7,190 second-feet Jan. 24 (gage height, 13.7 feet); minimum, 24 second-feet Aug. 18-20.

1923-37: Maximum discharge observed, 48,500 second-feet May 22, 1935 (gage height, 28.90 feet); minimum observed, 3.0 second-feet Oct. 15, 1931.

Remarks.- Records good except those for period of missing gage heights, June 29 to July 3, which were interpolated and are fair. Discharge computed from graph drawn on basis of twice-daily gage readings. No diversions above station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

-0.8	27	1.0	330	6.0	2,490
-1.5	56	1.5	481	8.0	3,550
0	125	2.0	664	10.0	4,730
.5	215	4.0	1,500	12.0	6,000

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	80	258	2,090	4,370	1,980	4,150	1,030	176	161	56	63
2	52	91	305	2,290	4,310	1,280	4,130	908	197	139	53	61
3	49	141	447	2,390	4,250	947	4,070	865	167	117	41	60
4	50	215	415	2,450	4,070	1,320	4,250	744	167	95	39	88
5	53	215	415	2,640	3,950	1,320	4,370	704	205	92	37	150
6	60	215	802	2,840	3,950	1,460	4,310	625	195	89	36	195
7	102	225	947	2,840	3,720	1,830	4,250	625	205	85	35	385
8	141	215	1,410	2,950	3,550	1,980	4,070	587	270	82	35	461
9	125	195	1,500	3,440	3,000	2,180	3,720	551	205	78	33	415
10	125	176	2,280	3,720	2,450	2,280	3,890	481	258	76	33	344
11	118	186	1,980	4,250	2,640	2,230	3,770	515	270	72	30	270
12	107	195	2,080	5,610	2,430	2,180	3,330	447	293	68	28	236
13	88	195	1,460	8,140	2,530	2,180	3,060	415	270	66	27	176
14	81	205	1,070	6,490	2,530	3,440	2,580	344	305	65	26	150
15	81	205	865	6,840	2,480	3,950	2,280	330	281	61	26	118
16	92	195	704	6,420	2,480	4,070	2,180	281	281	61	27	95
17	95	195	625	6,000	2,480	4,370	1,980	258	305	58	26	78
18	91	186	587	5,610	2,480	4,130	1,690	215	305	76	25	66
19	87	176	551	5,220	2,740	3,770	1,500	186	258	78	24	57
20	62	176	515	6,280	3,350	3,720	1,410	176	256	80	27	52
21	78	176	551	6,280	3,830	3,440	1,370	167	226	80	30	49
22	74	167	587	6,280	3,770	3,330	1,410	158	228	77	29	47
23	69	167	587	6,910	3,770	3,160	1,410	135	215	76	40	44
24	68	247	587	6,980	3,720	3,160	1,370	125	215	73	81	41
25	74	247	625	6,350	3,280	3,110	1,240	150	195	81	88	39
26	102	195	625	6,350	2,840	3,060	1,200	236	186	78	66	61
27	82	186	664	6,070	2,480	3,160	1,240	226	186	77	61	66
28	77	186	744	5,350	2,330	3,110	1,110	205	228	73	110	69
29	84	195	704	5,090	-	3,280	1,110	186	205	71	91	48
30	84	205	744	4,730	-	3,950	1,070	186	183	68	76	47
31	78	-	1,090	4,490	-	4,130	-	186	-	66	66	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				2,603	141	49	84.0	5,160				
November.....				5,654	247	80	188	11,210				
December.....				26,724	2,280	258	862	53,010				
Calendar year 1936.....				383,439	11,000	49	1,048	760,500				
January.....				151,340	6,980	2,080	4,862	300,200				
February.....				89,740	4,370	2,350	3,205	178,000				
March.....				87,407	4,370	947	2,820	173,400				
April.....				77,500	4,370	1,070	2,583	153,700				
May.....				12,243	1,030	125	395	24,280				
June.....				6,882	305	167	229	13,650				
July.....				2,517	161	58	81.2	4,990				
August.....				1,402	110	24	45.2	2,790				
September.....				4,051	461	59	135	8,040				
Water year 1936-37.....				468,063	6,980	24	1,282	928,400				

## Neches River at Evadale, Tex.

Location.- Staff gage, lat. 30°21', long. 94°05', at highway bridge 200 feet upstream from Gulf, Colorado & Santa Fe Railway bridge at Evadale, Jasper County. Zero of gage is 8.3 feet above mean sea level (general adjustment of 1929).

Drainage area.- 7,908 square miles.

Records available.- July 1904 to December 1906, October 1923 to September 1937.

Average discharge.- 14 years (1923-37), 6,169 second-feet.

Extremes.- Maximum discharge observed during year, 19,300 second-feet Jan. 26-31; maximum gage height observed, 15.42 feet Jan. 28 and 29; minimum discharge, 243 second-feet Aug. 13.

1904-6, 1923-37: Maximum discharge, 83,800 second-feet June 1, 1929 (gage height, 22.20 feet); minimum, about 148 second-feet Sept. 10, 1925.

Maximum stage known, 26.2 feet in 1884, from records of Gulf, Colorado & Santa Fe Railway Co. (discharge about 175,000 second-feet, from rating curve extended above 72,000 second-feet).

Remarks.- Records good. Discharge for periods of material change in stage computed from graphs drawn on basis of twice-daily gage readings. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	397	432	740	3,530	16,700	7,500	9,750	3,460	686	740	363	513
2	380	432	884	4,620	15,100	6,620	10,300	3,390	659	884	363	471
3	380	414	1,010	5,870	17,000	5,870	10,800	3,660	659	945	347	432
4	363	414	1,040	6,900	15,500	5,190	11,200	4,210	740	855	347	397
5	347	414	1,300	8,000	14,600	4,800	11,800	4,050	1,010	713	315	580
6	351	432	1,500	8,600	13,800	4,540	12,800	3,460	1,150	607	300	513
7	363	558	1,610	8,600	13,800	4,540	12,800	3,010	1,460	535	285	797
8	380	582	2,300	8,600	13,100	4,620	12,100	2,730	1,920	513	285	945
9	432	582	2,950	8,820	12,800	4,990	11,200	2,560	2,900	471	285	1,080
10	582	582	8,820	8,820	12,100	5,410	10,300	2,400	3,660	432	285	1,190
11	740	633	3,980	8,820	11,200	5,750	9,750	2,250	3,530	432	270	1,220
12	686	633	4,900	9,040	10,600	5,990	9,510	2,060	2,460	414	256	1,150
13	582	633	5,870	9,750	9,510	5,990	9,270	1,970	1,740	432	256	1,010
14	513	633	5,990	10,800	7,650	6,110	9,040	1,970	1,460	492	256	884
15	471	607	5,520	12,800	8,000	6,490	8,820	1,870	1,300	513	256	713
16	471	607	4,620	14,200	7,600	7,350	8,800	1,700	1,190	513	270	659
17	451	582	3,800	15,300	7,050	5,820	9,180	1,530	1,080	492	285	826
18	432	582	2,950	16,500	6,760	10,300	7,500	1,420	1,080	492	300	492
19	414	582	2,460	17,600	6,360	10,800	6,620	1,340	1,110	471	285	432
20	414	558	2,160	17,600	6,230	11,200	5,750	1,220	1,080	451	285	414
21	397	558	1,920	18,100	6,900	10,800	5,090	1,190	977	451	270	380
22	397	558	1,780	18,100	6,190	10,600	4,620	1,110	945	451	285	363
23	397	535	1,700	18,700	9,270	10,300	4,290	1,040	884	451	315	331
24	380	582	1,650	18,700	10,300	10,600	4,130	977	855	471	331	331
25	380	607	1,610	18,700	10,800	10,300	3,960	945	884	471	363	331
26	380	686	1,610	19,300	10,600	10,000	3,800	914	826	471	363	363
27	451	826	1,610	19,300	9,510	9,510	3,660	855	740	492	363	363
28	513	797	1,610	19,300	8,600	9,270	3,530	826	686	471	471	363
29	535	740	1,850	19,300	-	8,820	3,390	797	633	432	555	347
30	492	713	2,250	19,300	-	9,040	3,390	740	607	397	471	331
31	451	-	2,670	19,300	-	9,270	-	713	-	380	492	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	13,902					740	331	448	27,570			
November.....	17,494					826	414	583	34,700			
December.....	78,234					5,990	740	2,556	157,200			
Calendar year 1936.....	1,002,448					15,500	331	2,739	1,988,000			
January.....	413,070					19,300	3,530	13,320	819,300			
February.....	304,520					18,700	6,230	10,880	604,000			
March.....	241,390					11,200	4,540	7,787	478,800			
April.....	235,950					12,800	3,390	7,865	468,000			
May.....	60,367					4,210	713	1,947	119,700			
June.....	38,911					3,660	607	1,297	77,180			
July.....	16,355					945	380	527	32,400			
August.....	10,153					535	256	328	20,140			
September.....	18,021					1,220	331	601	35,740			
Water year 1936-37.....	1,449,347					19,300	256	3,971	2,875,000			

## Angelina River at Horger, Tex.

Location.- Chain gage, lat.  $31^{\circ}01'$ , long.  $94^{\circ}10'$ , on Zavalla-Jasper highway bridge, a quarter of a mile east of Horger, Jasper County, and 20 miles above mouth. Zero of gage is 68.4 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,435 square miles.

Records available.- March 1928 to September 1937.

Extremes.- Maximum discharge observed during year, 9,840 second-feet Jan. 25, 26 (gage height, 19.6 feet); minimum observed, 13 second-feet Sept. 22.

1928-37: Maximum discharge, 48,800 second-feet, Feb. 24, 1932 (gage height, 36.35 feet, from graph based on gage readings); minimum, that of Sept. 22, 1937.

Maximum discharge known, about 82,000 second-feet August 1915, revised, (gage height, 39.5 feet), from rating curve extended above 47,000 second-feet.

Remarks.- Records fair except those below 100 second-feet, which are poor. Discharge for periods of material change in stage computed from graph drawn on basis of once or twice daily gage readings. There is a possibility of backwater at times from Neches River. No diversions above station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1 to Dec. 10)

0.3	13	2.5	232	8.0	2,630
.5	22	3.0	350	10.0	3,790
1.0	57	3.5	455	13.0	5,610
1.5	103	4.0	635	16.0	7,500
2.0	160	6.0	1,680	19.0	9,450

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	65	82	224	2,960	7,370	2,520	5,860	1,680	173	216	87	114	
2	65	82	250	3,670	7,440	2,300	5,980	1,930	166	187	87	114	
3	65	98	430	4,090	7,500	2,140	5,980	1,780	201	160	82	148	
4	65	125	595	4,390	7,370	2,080	5,800	1,430	241	154	82	173	
5	69	142	895	4,630	7,110	2,080	5,980	1,330	345	136	78	208	
6	73	160	940	5,050	6,790	2,240	5,110	1,230	1,360	130	78	270	
7	98	154	940	5,240	6,110	2,580	4,870	1,130	1,680	120	73	310	
8	130	160	1,280	4,810	5,730	3,250	4,930	985	1,830	114	73	290	
9	114	166	1,580	4,150	5,610	3,190	4,930	895	985	114	73	250	
10	120	166	1,880	5,240	5,240	3,130	4,870	805	485	136	69	224	
11	114	160	2,360	6,230	4,090	2,960	4,870	760	360	224	69	201	
12	125	142	2,460	7,560	3,610	2,960	4,930	760	330	216	69	173	
13	130	125	2,190	8,020	3,490	3,020	4,990	675	290	173	69	166	
14	130	125	1,780	8,670	3,490	3,670	4,750	555	290	130	69	154	
15	130	130	1,380	9,120	3,250	5,730	4,270	455	290	125	69	142	
16	120	136	985	9,450	2,960	6,480	3,610	405	290	120	73	130	
17	114	136	805	9,450	2,680	5,670	2,800	310	290	120	78	108	
18	103	136	675	9,380	2,410	5,490	2,300	224	270	120	87	69	
19	103	130	635	9,450	2,740	5,980	2,030	224	270	130	98	45	
20	98	130	555	9,520	4,270	5,980	1,880	310	250	136	98	22	
21	92	130	520	9,520	5,860	5,360	1,780	330	232	136	92	16	
22	92	142	485	9,640	6,730	5,180	1,630	330	232	142	87	13	
23	92	154	455	9,640	6,040	5,360	1,580	310	224	148	78	20	
24	87	154	430	9,710	4,990	5,110	1,530	270	216	142	125	38	
25	87	154	430	9,840	4,150	4,930	1,430	216	232	142	180	55	
26	87	154	405	9,940	3,730	4,870	1,280	187	250	136	180	69	
27	87	148	380	9,540	3,490	4,990	1,330	194	270	114	154	73	
28	87	154	380	9,580	2,800	5,110	1,330	232	250	108	136	69	
29	87	173	635	8,860	-	5,240	1,530	232	241	98	125	65	
30	82	201	940	8,080	-	5,550	1,480	201	224	92	114	65	
31	82	-	1,790	7,630	-	5,920	-	187	-	92	114	-	
Month				Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet	
October.....				2,993		130		65		96.5		5,940	
November.....				4,249		201		82		142		8,430	
December.....				29,689		2,460		224		968		58,890	
Calendar year 1936.....				333,806		7,170		62		912		662,100	
January.....				232,860		9,840		2,960		7,512		461,900	
February.....				137,050		7,500		2,410		4,895		271,800	
March.....				151,070		6,480		2,080		4,228		260,000	
April.....				105,840		5,980		1,280		3,528		209,900	
May.....				20,562		1,830		187		663		40,780	
June.....				12,987		1,680		166		433		25,760	
July.....				4,311		224		92		139		8,560	
August.....				2,946		180		69		95.0		5,840	
September.....				3,793		310		13		126		7,520	
Water year 1936-37.....				688,350		9,840		13		1,888		1,365,000	

## West Fork of Trinity River at Fort Worth, Tex.

Location.- Water-stage recorder, lat.  $32^{\circ}46'$ , long.  $97^{\circ}20'$ , in old pump house of Fort Worth Power & Light Co.'s plant in Fort Worth, Tarrant County, 150 feet above Paddock viaduct and a quarter of a mile below mouth of Clear Fork of Trinity River. Zero of gage is 519.2 feet above mean sea level.

Drainage area.- 2,431 square miles.

Records available.- October 1920 to September 1937.

Average discharge.- 17 years, 394 second-feet.

Extremes.- Maximum discharge during year, 4,000 second-feet June 7 (gage height, 5.35 feet); no flow at times.

1920-37: Maximum discharge, 85,000 second-feet, Apr. 25, 1922, by slope-area method, (gage height, 25.95 feet), data furnished by City Engineer of Fort Worth; no flow at times.

Remarks.- Records good. Considerable water diverted above station for municipal use.

Flow partly regulated by Bridgeport, Eagle Mountain, and Lake Worth Reservoirs (combined capacity, 527,000 acre-feet).

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,290	1,160	56	53	78	198	691	29	9.2	2.9	8.4	0
2	1,430	1,140	182	53	72	120	691	27	12	2.9	213	0
3	1,800	1,190	314	51	75	82	677	25	30	1.5	378	156
4	1,920	1,040	160	51	75	304	512	25	345	1.5	469	401
5	1,980	1,040	152	51	72	300	328	25	508	1.5	394	488
6	1,920	1,090	190	51	69	177	128	25	1,310	1.1	118	634
7	1,980	1,100	113	51	69	234	100	25	1,500	.9	35	870
8	1,800	1,120	99	64	67	202	211	25	888	.7	15	288
9	1,800	1,070	95	64	64	113	78	22	1,400	.7	8.0	113
10	1,800	1,100	92	56	58	85	64	25	682	108	3.8	46
11	1,740	1,100	85	51	56	82	61	61	239	106	1.5	27
12	1,740	1,100	78	69	56	82	61	37	102	38	.7	15
13	1,560	1,090	75	168	56	530	58	29	53	15	.3	9.2
14	1,320	1,080	69	230	56	916	58	41	33	5.8	.3	144
15	1,200	895	69	168	56	638	58	25	27	2.9	.5	331
16	722	482	69	117	53	309	53	18	76	2.9	.3	304
17	322	244	69	102	53	239	48	15	101	2.9	.1	120
18	140	168	75	95	51	284	44	14	61	2.1	.1	46
19	78	124	64	89	53	244	41	14	33	1.5	.1	25
20	53	109	58	92	61	225	52	12	35	.9	0	15
21	48	95	58	92	87	136	67	8.0	20	.7	0	10
22	44	75	56	92	96	132	51	10	15	.5	0	4.8
23	114	82	56	75	332	156	44	14	10	.3	0	1.1
24	239	75	56	78	501	273	41	8.0	9.2	.1	0	.7
25	1,430	64	56	99	566	482	33	8.0	6.9	.1	.1	.9
26	1,200	64	58	128	641	600	31	8.0	5.8	.1	.1	.5
27	1,040	58	67	95	713	670	31	8.0	4.9	.1	.1	.3
28	1,150	53	117	89	442	663	31	8.0	4.8	.1	.1	.1
29	1,190	56	75	85	-	691	29	6.9	4.8	0	.1	.1
30	1,170	61	67	85	-	763	31	9.2	3.8	0	.1	.1
31	1,150	-	61	85	-	691	-	9.2	-	0	0	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							35,370	1,980	44	1,141	70,160	
November.....							18,125	1,190	53	604	35,950	
December.....							2,891	314	56	93.3	5,730	
Calendar year 1936.....							127,480.8	7,770	0	548	252,900	
January.....							2,729	230	51	88.0	5,410	
February.....							4,628	713	51	165	9,180	
March.....							10,621	916	82	343	21,070	
April.....							4,403	691	29	147	8,730	
May.....							616.3	61	6.9	19.9	1,220	
June.....							7,529.3	1,500	3.8	251	14,930	
July.....							301.7	108	0	9.73	598	
August.....							1,644.7	469	0	55.1	3,280	
September.....							3,830.8	670	0	128	7,600	
Water year 1936-37.....							92,689.8	1,980	0	254	183,800	

## TRINITY RIVER BASIN

## West Fork of Trinity River at Grand Prairie, Tex.

Location.- Water-stage recorder, lat. 32°46', long. 96°59', 440 feet below Grand Prairie-Sowers-Irving highway bridge 1 mile northeast of Grand Prairie, Dallas County. Zero of gage is 412.99 feet above mean sea level.

Drainage area.- 2,886 square miles.

Records available.- March 1925 to September 1937.

Average discharge.- 12 years, 464 second-feet.

Extremes.- Maximum discharge during year, 4,910 second-feet June 7 (gage height, 19.10 feet); minimum, 12 second-feet Sept. 29.

1925-37: Maximum discharge, 15,400 second-feet Jan. 23, 1932 (gage height, 25.96 feet, former site); minimum, 3.2 second-feet June 6, 1925.

Maximum stage known, about 29 feet in April 1922.

Remarks.- Records good except those for Oct. 1-6, which were computed on basis of records for station at Fort Worth and are fair. Many small diversions above gage. Largest diversion is by City of Fort Worth. Regulation same as that for West Fork of Trinity River at Fort Worth.

Rating tables, water year 1936-37 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used June 12 to Aug. 15)

Oct. 1 to Nov. 17

Nov. 18 to Sept. 30

2.7	60	8.0	1,200	2.0	10	3.0	108	10.0	1,790
3.0	102	10.0	1,740	2.2	20	3.5	201	12.0	2,340
3.5	182	12.0	2,340	2.4	36	4.0	300	14.0	2,940
4.0	270	15.0	3,290	2.6	55	6.0	745		
6.0	680			2.8	79	8.0	1,260		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,500	1,200	90	100	127	398	721	49	22	30	19	14
2	1,400	1,200	101	87	122	226	745	48	22	26	20	20
3	1,500	1,200	370	85	115	161	721	45	23	24	168	18
4	1,800	1,170	362	83	113	209	697	41	100	25	352	102
5	1,890	1,060	226	82	113	558	502	43	404	23	425	372
6	1,800	1,090	270	82	110	367	341	43	2,380	20	330	469
7	1,860	1,120	260	83	110	300	192	41	3,010	18	140	721
8	1,890	1,120	192	90	105	341	152	41	2,600	20	67	570
9	1,770	1,120	157	111	102	260	237	55	1,020	22	37	248
10	1,770	1,090	148	111	98	178	133	48	1,400	30	26	127
11	1,770	1,120	140	93	90	140	104	316	518	210	21	70
12	1,710	1,120	133	90	85	140	96	111	214	142	19	47
13	1,710	1,120	123	217	86	140	94	78	106	90	18	33
14	1,500	1,120	113	422	86	1,130	92	52	59	47	17	26
15	1,310	1,060	113	491	83	2,090	94	51	44	36	16	88
16	1,120	792	113	290	82	815	94	50	181	30	17	300
17	582	410	111	209	79	414	86	40	286	26	15	254
18	302	270	108	180	76	352	80	33	100	23	14	125
19	172	201	111	167	75	383	72	33	85	20	15	63
20	112	163	110	157	76	310	71	29	94	18	14	40
21	82	142	94	165	80	280	108	28	86	18	15	30
22	64	131	83	159	110	201	125	26	56	20	16	24
23	89	110	93	146	99	223	86	23	44	71	21	20
24	242	105	90	129	364	459	72	25	39	44	20	18
25	771	113	90	136	513	372	66	22	35	25	16	18
26	3,100	96	90	159	604	502	58	23	34	20	18	17
27	1,340	94	100	182	673	604	52	24	31	16	18	17
28	1,150	90	109	155	715	673	53	23	30	16	13	13
29	1,330	85	148	140	-	673	53	20	34	18	15	12
30	1,230	86	122	134	-	770	52	21	42	18	16	14
31	1,170	-	102	131	-	820	-	22	-	19	14	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	37,936		3,100		64		1,294		75,240			
November.....	19,798		1,200		85		660		39,270			
December.....	4,481		370		90		145		8,890			
Calendar year 1936.....	145,123		6,840		17		397		287,800			
January.....	4,826		491		82		159		9,770			
February.....	5,088		713		75		182		10,090			
March.....	14,486		2,090		140		467		28,730			
April.....	6,049		745		52		202		12,000			
May.....	1,504		316		20		48.5		2,980			
June.....	13,099		3,010		22		437		25,980			
July.....	1,165		210		16		37.6		2,310			
August.....	1,925		425		14		62.1		3,820			
September.....	3,890		721		12		130		7,720			
Water year 1936-37.....	114,347		3,100		12		313		226,800			



## Trinity River at Dallas, Tex.

Location.- Water-stage recorder, lat. 32°47', long. 96°48', at Commerce Street viaduct in Dallas, Dallas County. Zero of gage is 368.05 feet above mean sea level.

Drainage area.- 6,001 square miles.

Records available.- July 1903 to December 1906, October 1920 to July 1930, and October 1932 to September 1937, October 1898 to December 1899 (gage heights only), at site 2 miles upstream, July 1930 to September 1932, at site 6 miles downstream.

Average discharge.- 17 years (1920-37), 1,327 second-feet.

Extremes.- Maximum discharge during year, 17,000 second-feet Oct. 1 (gage height, 32.58 feet); minimum, 58 second-feet July 29 to Aug. 1.

1898-99, 1903-8, 1920-37: Maximum discharge, 76,700 second-feet May 20, 1935 (gage height, 42.10 feet); minimum, 6.8 second-feet Sept. 11, 1924.

Maximum stage known, 52.6 feet May 26, 1908, from records of U. S. Weather Bureau (discharge, about 184,000 second-feet, from rating curve extended above 76,000 second-feet); practically no flow at times in 1917 and 1918.

Remarks.- Records good. Discharge for Oct. 18-20, Jan. 17-26, Jan. 31 to Feb. 12, May 18 to July 2, Aug. 24-26 computed from graph drawn on basis of once-daily gage readings furnished by U. S. Weather Bureau. Only known diversions are for municipal supply. Flow partly regulated by storage in Bridgeport, Eagle Mountain, Lake Worth, Mountain Creek (completed and gates closed Mar. 24, 1937), and Lake Dallas Reservoirs (combined capacity, 777,000 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,800	2,220	242	675	2,580	810	1,120	242	117	68	56	290
2	6,110	2,180	304	585	2,080	535	1,120	233	123	66	61	280
3	6,390	2,260	764	555	1,360	356	1,120	233	115	65	101	290
4	4,260	3,550	1,000	555	712	811	1,080	208	248	65	311	300
5	3,440	3,220	645	540	393	2,360	928	168	622	72	406	622
6	3,170	3,170	983	525	467	1,610	692	172	1,010	63	393	872
7	3,020	3,170	1,080	555	570	1,280	435	170	3,600	61	229	1,160
8	3,070	3,550	656	615	552	1,750	333	170	2,160	59	131	1,040
9	2,970	3,880	448	690	451	1,040	394	167	3,000	60	96	692
10	2,920	3,820	372	551	368	675	311	168	3,780	81	80	658
11	2,870	3,880	348	422	356	518	260	739	1,440	230	1,140	836
12	2,870	3,820	335	468	333	467	251	336	1,160	216	748	798
13	2,870	3,500	315	1,460	344	500	242	766	675	178	270	762
14	2,720	2,280	297	4,980	344	1,800	233	541	333	110	174	762
15	2,470	1,640	288	6,490	344	4,490	233	233	208	89	89	780
16	1,600	1,320	288	3,450	322	3,020	224	200	592	76	80	1,000
17	848	1,000	288	1,850	311	1,360	216	181	1,700	73	282	1,040
18	472	664	272	1,520	311	1,160	194	156	894	69	798	910
19	315	486	272	1,440	300	1,160	178	125	344	67	357	817
20	228	410	279	1,440	311	1,000	183	123	280	82	179	780
21	198	315	264	1,620	300	910	224	119	300	189	171	762
22	181	279	256	1,620	333	762	322	117	200	280	892	745
23	110	272	256	1,520	311	838	393	137	152	200	1,460	728
24	2,480	256	249	1,520	495	2,460	393	120	111	130	2,620	728
25	4,110	264	242	1,990	762	1,530	368	96	83	86	4,700	728
26	8,860	242	256	2,880	817	1,080	333	102	79	73	2,940	355
27	9,840	242	336	2,780	928	1,080	280	113	75	65	1,300	197
28	9,580	234	709	2,630	1,000	1,080	270	107	78	60	675	185
29	6,030	249	725	2,680	-	1,080	260	111	79	56	467	153
30	2,340	242	778	2,580	-	1,160	251	115	89	56	393	126
31	1,850	-	760	2,580	-	1,200	-	115	-	56	344	-
Month					Second-foot-days		Maximum	Minimum	Mean		Run-off in acre-feet	
October.....					114,002		14,800	181	3,677		226,100	
November.....					53,214		3,880	234	1,774		105,500	
December.....					14,297		1,080	242	461		28,360	
Calendar year 1936.....					368,753		22,800	25	1,008		731,400	
January.....					53,766		6,490	422	1,734		106,800	
February.....					17,755		2,580	300	634		35,220	
March.....					39,882		4,490	356	1,287		79,100	
April.....					12,841		1,120	178	428		25,470	
May.....					6,601		766	96	213		13,090	
June.....					23,647		3,780	75	788		46,900	
July.....					3,101		280	56	100		6,150	
August.....					21,943		4,700	56	708		43,520	
September.....					19,396		1,160	126	647		38,470	
Water year 1936-37.....					380,455		14,800	56	1,042		754,500	

## TRINITY RIVER BASIN

Trinity River near Oakwood, Tex.

Location.-- Water-stage recorder, lat. 31°39', long. 95°47', at Palestine-Oakwood highway bridge, 1½ miles above International-Great Northern Railroad bridge and 6 miles northeast of Oakwood, Leon County. Zero 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 1937. October 1923 to July 1932 at site 1½ miles downstream.

Average discharge.-- 14 years, 4,355 second-feet.

Extremes.-- Maximum discharge during year, 41,400 second-feet Oct. 4 (gage height, 43.80 feet); minimum, 92 second-feet Aug. 7.

1923-37: Maximum discharge, 84,400 second-feet May 23, 1930 (gage height, about 46.8 feet, present site and datum); minimum, 22 second-feet Aug. 18, 1934.

Maximum stage known, about 52.2 feet June 4, 1908, present site and datum.

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 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,400	13,100	884	12,700	10,600	1,600	4,850	1,330	324	208	134	1,180
2	15,200	13,000	1,060	12,900	8,670	1,690	4,620	1,130	311	186	120	1,000
3	23,100	12,300	1,660	10,500	7,720	1,770	4,290	1,000	311	162	110	816
4	39,600	10,900	2,240	6,440	7,480	2,680	5,190	932	474	178	102	662
5	39,600	8,150	3,650	3,720	6,760	7,180	6,990	894	618	182	99	541
6	35,400	6,360	5,340	2,670	5,570	9,950	6,730	856	751	182	96	490
7	30,800	5,970	8,280	2,290	4,140	12,300	5,480	794	706	165	92	520
8	26,800	5,620	10,600	2,350	3,030	14,300	4,250	750	893	157	99	552
9	24,200	5,080	12,500	2,670	2,550	14,900	3,200	706	2,490	153	235	728
10	22,500	4,710	13,700	4,140	2,820	15,600	2,470	684	4,580	165	337	1,750
11	21,000	4,620	14,500	5,540	2,200	16,500	2,180	662	5,270	178	324	1,660
12	19,300	4,660	15,100	7,060	2,060	16,700	2,000	640	4,570	182	248	1,460
13	16,600	4,660	14,800	9,220	1,920	15,200	1,860	640	4,160	178	169	1,100
14	12,000	4,570	11,800	11,000	1,770	11,700	1,690	927	3,400	165	134	908
15	7,000	4,470	6,470	12,500	1,660	8,350	1,520	1,590	2,240	165	397	884
16	4,200	4,240	3,160	13,300	1,600	8,560	1,410	1,520	1,600	262	772	816
17	3,420	3,590	2,150	13,800	1,550	10,300	1,390	1,790	1,150	278	414	772
18	3,010	2,640	1,850	14,200	1,400	11,500	1,330	1,860	794	242	260	750
19	2,480	2,120	1,600	14,500	1,550	12,300	1,310	1,600	678	218	179	772
20	1,800	1,800	1,460	14,200	1,550	12,200	1,310	1,330	1,600	182	124	884
21	1,260	1,490	1,390	13,400	1,520	10,300	1,410	1,000	1,860	161	102	908
22	864	1,250	1,350	11,800	1,490	7,020	1,650	728	1,410	145	376	858
23	706	1,180	1,260	11,500	1,490	4,710	1,770	520	1,180	138	490	750
24	810	1,230	1,200	12,000	1,440	3,480	2,060	414	1,080	130	278	728
25	2,520	1,080	1,180	12,600	1,360	2,910	2,180	366	860	150	186	706
26	4,430	956	1,130	12,600	1,280	3,410	2,000	350	640	292	697	706
27	6,650	908	1,430	12,400	1,280	4,920	1,830	366	460	350	1,320	684
28	8,940	908	2,480	12,500	1,410	5,620	1,740	374	350	298	2,740	662
29	10,600	932	6,730	12,700	-	5,770	1,690	366	292	248	3,210	640
30	11,800	932	9,630	12,800	-	5,620	1,550	344	242	191	2,600	480
31	12,700	-	11,400	12,200	-	5,180	-	337	-	157	1,660	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						421,710	39,600	706	13,600	836,400		
November.....						135,406	15,100	908	4,447	264,000		
December.....						171,844	15,100	884	5,543	340,800		
Calendar year 1936.....						1,141,956	39,600	61	3,120	2,265,000		
January.....						312,300	14,500	2,290	10,070	619,400		
February.....						87,460	10,600	1,280	3,124	173,500		
March.....						284,220	16,700	1,600	8,523	524,100		
April.....						61,920	6,990	1,310	2,731	162,500		
May.....						25,772	1,860	337	864	55,100		
June.....						45,294	5,270	242	1,510	89,540		
July.....						6,068	350	130	196	12,040		
August.....						18,603	3,210	92	600	36,900		
September.....						25,547	1,860	480	852	50,670		
Water year 1936-37.....						1,595,144	39,600	92	4,370	3,164,000		

## Trinity River at Riverside, Tex.

**Location.**— Chain gage, lat. 30°52', long. 95°24', on International-Great Northern Railroad bridge at Riverside, Walker County. Zero of gage is 93.7 feet above mean sea level (International-Great Northern railroad datum).

**Drainage area.**— 15,510 square miles.

**Records available.**— January 1903 to December 1906, October 1923 to September 1937.

**Average discharge.**— 14 years (1923-37), 6,238 second-feet.

**Extremes.**— Maximum discharge observed during year, 25,300 second-feet Oct. 13 (gage height, 24.6 feet); minimum observed, 110 second-feet Aug. 11.

1903-6, 1923-37: 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 Nov. 11-15, Dec. 18-25, Sept. 28-30 which were computed on basis of hydrographic comparison with stations at Oakwood and Romayor, and are fair. Discharge computed from graph based on once-daily gage readings. No diversions except for municipal supply. Flow partly regulated by reservoirs above Dallas. Gage-height record furnished by U. S. Weather Bureau.

Correction of mean discharge for water year 1934-35

Mean discharge for water year 1934-35 is 9,102 second-feet (superseding erroneous figure published in Water-Supply Paper 768, page 25).

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

-0.1	110	3.0	1,300	16.0	13,430
.4	190	4.0	1,970	20.0	18,630
.8	295	6.0	3,530	24.0	24,330
1.3	465	8.0	5,230		
2.0	750	12.0	8,930		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,190	12,500	1,350	8,130	14,700	1,690	6,980	1,970	430	500	325	3,960
2	8,130	12,700	1,300	11,700	15,100	1,750	6,350	1,900	430	395	295	4,040
3	10,700	13,000	1,420	12,800	14,000	1,900	6,000	1,690	395	360	235	3,200
4	12,900	14,000	1,690	14,500	11,600	2,180	6,440	1,550	430	325	210	2,560
5	15,100	14,200	2,180	14,700	10,100	4,550	7,170	1,350	500	265	210	2,180
6	17,600	12,800	3,280	9,880	8,930	7,640	7,460	1,180	700	235	155	1,900
7	19,800	12,300	4,550	6,530	8,430	10,600	7,460	1,120	1,060	235	125	1,550
8	21,800	10,700	6,170	4,210	6,980	13,400	8,030	1,060	1,550	210	125	1,420
9	23,000	7,460	8,630	3,700	5,910	15,600	7,250	1,000	1,650	210	140	1,550
10	23,900	6,620	10,900	4,580	4,720	16,600	6,170	950	1,480	235	125	1,240
11	24,600	6,000	12,500	5,140	3,700	16,900	4,980	900	2,320	235	110	900
12	25,100	5,400	13,800	6,980	3,200	17,500	3,780	850	3,960	235	125	1,420
13	25,300	4,800	14,900	9,120	2,960	18,100	3,120	800	4,720	235	265	2,110
14	24,900	4,700	15,800	11,500	2,800	19,000	2,640	750	5,140	235	360	1,820
15	24,500	5,000	15,800	13,600	2,640	19,900	2,320	750	4,640	265	360	1,420
16	22,500	5,320	14,000	14,700	2,400	20,400	2,250	850	4,040	265	265	1,180
17	18,600	5,140	10,600	15,600	2,250	17,700	2,180	1,240	2,960	265	170	1,060
18	13,200	5,080	7,460	16,600	2,110	14,700	1,970	1,620	2,180	235	414	950
19	6,170	4,890	5,060	17,300	2,110	12,500	1,830	1,830	1,830	265	700	900
20	4,210	3,440	3,200	17,300	2,110	10,800	1,690	1,900	1,550	295	580	900
21	3,530	2,800	2,040	17,500	2,180	11,500	1,690	1,760	1,420	325	395	850
22	2,800	2,400	1,420	17,500	2,480	13,200	1,690	1,550	1,760	325	325	850
23	2,110	1,970	1,350	17,500	2,800	13,200	1,830	1,240	2,480	295	295	900
24	1,620	1,760	1,350	17,100	2,560	11,900	1,970	950	2,400	235	265	1,000
25	1,240	1,420	1,690	16,300	2,180	9,560	2,180	700	2,040	210	325	900
26	1,300	1,420	1,830	15,900	2,040	5,570	2,400	580	1,830	170	700	900
27	2,800	1,550	1,760	14,300	1,830	4,640	2,560	540	1,550	170	500	850
28	4,800	1,620	1,480	13,800	1,760	5,230	2,480	465	1,300	170	500	800
29	6,080	1,480	1,620	14,700	-	5,910	2,250	465	1,000	210	1,420	780
30	9,350	1,360	2,320	14,200	-	6,890	2,110	430	650	360	2,640	750
31	11,100	-	3,280	14,300	-	7,080	-	430	-	360	3,530	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				390,930		25,300	1,240	12,610	775,400			
November.....				183,810		14,200	1,350	6,127	364,600			
December.....				174,760		15,800	1,300	5,637	346,600			
Calendar year 1936.....				1,450,573		25,300	100	3,963	2,877,000			
January.....				392,330		17,500	3,700	12,660	778,200			
February.....				144,560		15,100	1,750	5,164	286,800			
March.....				338,100		20,400	1,690	10,910	670,600			
April.....				117,240		8,030	1,690	3,908	232,500			
May.....				34,380		1,970	430	1,109	68,180			
June.....				58,305		5,140	395	1,944	115,600			
July.....				8,330		500	170	269	16,520			
August.....				16,189		3,530	110	522	32,110			
September.....				44,850		4,040	750	1,495	86,980			
Water year 1936-37.....				1,903,804		25,300	110	5,216	3,776,000			

## Trinity River at Romayor, Tex.

Location.- Chain gage, lat. 30°27', long. 94°15', on Gulf, Colorado & Santa Fe Railway bridge, a quarter of a mile west of Romayor, Liberty County. Gage readings indicate distance from base of rail to water surface. Zero of gage (base of rail) is 89.36 feet above mean sea level (Texas Reclamation Department datum).

Drainage area.- 17,190 square miles.

Records available.- May 1924 to September 1937.

Average discharge.- 13 years, 6,712 second-feet.

Extremes.- Maximum discharge observed during year, 23,000 second-feet Oct. 14-17 (gage height, -31.2 feet); minimum observed, 245 second-feet Aug. 13-15.  
1924-37: 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, -53.48 feet).

Remarks.- Records poor. Discharge for Oct. 24-26, Nov. 6-8, Mar. 5-14, June 22 to July 1, Aug. 30 to Sept. 6 computed on basis of records for station at Riverside. During changing stages discharge computed from graph based on one or more daily gage readings. No diversions of consequence except for municipal supply. Regulation same as that for Trinity River at Dallas.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1, May 13 to June 9, July 2 to Aug. 29 Sept. 13-14, 17-30)

-52.4	245	-50.6	790	-48.0	2,150	-42.0	7,360	-34.0	18,100
-51.8	405	-50.0	1,050	-46.0	3,550	-40.0	9,600	-31.0	23,400
-51.2	585	-49.0	1,550	-44.0	5,300	-37.0	13,400		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	495	8,900	1,550	6,700	13,700	2,090	6,400	2,390	585	1,120	295	3,000
2	751	9,960	1,490	8,020	14,300	1,970	7,030	2,150	555	915	320	3,300
3	4,630	10,900	1,490	11,300	14,600	1,850	7,800	1,910	555	720	320	3,600
4	8,020	12,000	1,550	13,100	13,800	1,790	13,700	1,850	555	650	307	3,600
5	10,600	12,400	1,750	13,100	12,900	2,100	15,800	1,790	615	525	295	3,400
6	12,200	13,000	1,790	11,700	12,100	6,000	12,400	1,730	650	465	295	3,100
7	14,600	13,300	5,180	10,200	9,720	8,600	9,960	1,670	790	435	295	2,510
8	17,200	11,500	5,600	7,910	8,460	11,000	9,120	1,550	960	405	270	1,970
9	19,000	8,810	5,020	5,800	7,380	15,000	8,460	1,340	1,000	405	270	1,670
10	20,300	6,700	11,200	4,750	6,300	14,400	7,580	1,240	1,290	375	257	1,610
11	21,000	6,200	14,400	8,050	5,110	15,400	6,500	1,140	1,490	345	257	1,610
12	21,700	6,100	13,700	12,100	4,210	17,000	5,300	1,100	1,490	345	257	1,550
13	22,600	5,900	12,900	16,100	3,790	18,000	4,570	1,050	2,210	345	245	1,100
14	23,000	5,200	14,200	16,100	3,390	19,000	4,120	1,000	3,870	332	245	960
15	23,000	4,660	14,000	13,800	3,070	20,800	3,230	960	4,210	332	245	1,490
16	23,000	4,750	14,400	12,500	2,930	21,600	2,790	915	4,210	332	320	1,670
17	23,000	4,840	14,000	13,600	2,790	20,300	2,650	870	3,550	332	405	1,340
18	20,100	4,840	12,200	14,800	2,650	18,400	2,450	870	2,580	320	405	1,100
19	12,000	4,750	8,870	14,900	2,680	15,200	2,270	1,140	2,270	320	405	960
20	7,440	4,660	4,190	18,800	2,510	12,800	2,150	1,440	1,910	320	405	960
21	4,750	4,480	3,070	19,800	2,510	11,700	1,970	1,490	1,670	320	495	915
22	3,870	3,350	2,720	19,800	2,510	11,100	1,910	1,550	1,480	307	685	915
23	3,120	2,580	2,450	20,500	3,310	10,900	1,910	1,550	1,250	360	495	870
24	2,500	2,270	2,270	20,500	3,310	10,900	1,850	1,340	1,600	375	555	870
25	2,100	2,210	2,030	19,500	2,930	10,600	1,850	1,140	2,000	435	685	870
26	1,800	1,910	1,910	17,800	2,650	9,840	1,910	1,050	2,300	405	685	960
27	1,730	1,730	1,850	15,500	2,390	8,670	2,150	960	2,200	360	555	1,050
28	1,610	1,670	1,850	15,000	2,210	6,600	2,210	790	1,950	360	495	870
29	2,810	1,610	1,790	15,400	-	5,500	2,390	685	1,730	307	435	830
30	5,120	1,610	1,790	15,000	-	5,400	2,450	585	1,400	295	900	790
31	7,360	-	3,920	14,400	-	6,200	-	585	-	295	2,000	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	341,406	23,000	495	11,010	677,200
November.....	182,790	13,300	1,610	6,093	362,600
December.....	185,110	14,400	1,490	5,971	367,200
Calendar year 1936.....	1,534,393	25,000	295	4,192	3,044,000
January.....	428,310	20,500	4,750	13,750	945,600
February.....	168,090	14,600	2,210	6,003	333,400
March.....	338,610	21,600	1,790	10,920	671,600
April.....	154,880	15,800	1,850	5,163	307,200
May.....	39,830	2,390	585	1,285	79,000
June.....	52,925	4,210	555	1,764	105,000
July.....	13,167	1,120	295	424	26,100
August.....	14,098	2,000	245	455	27,960
September.....	49,440	3,600	790	1,648	95,060
Water year 1936-37.....	1,966,646	23,000	245	5,388	3,901,000

## Big Sandy Creek near Bridgeport, Tex.

Location.- Water-stage recorder, lat. 33°13', long. 97°41', at bridge on State Highway 24, about 1.9 miles above confluence with Turkey Creek, about 4.4 miles above confluence with West Fork of Trinity River, and 5 miles east of Bridgeport, Wise County. Zero 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 1937.

Extremes.- Maximum discharge during period, 2,330 second-feet Oct. 26 (gage height, 8.76 feet); no flow at times.

Maximum stage known in recent years, about 12.0 feet in September 1932.

Remarks.- Records fair except those for Dec. 4-25, 28, Apr. 3-5, Apr. 26 to May 6, May 12, 13, June 9-12, July 10-12, which were estimated on basis of fragmentary gage-height record and weather records and are poor. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	-	31	17	24	32	15	16	9.0	0.2	0	0	77	
2	-	28	28	24	25	15	16	8.3	.1	0	0	7.7	
3	-	22	15	21	24	15	15	7.7	0	0	0	.6	
4	-	20	}	20	22	82	16	7.0	.8	0	0	0	
5	-	19		20	22	192	16	6.3	3.4	0	0	.8	
6	-	18	}	20	23	55	14	5.7	.7	0	0	5.3	
7	-	18		21	22	93	14	5.0	.2	0	0	2.2	
8	-	18	}	21	21	68	12	4.8	22	0	0	.6	
9	11	18		18	19	32	11	5.0	165	0	0	.2	
10	8.5	18	15	18	22	11	4.7	36	8.3	0	0	0	
11	6.6	18	}	18	17	20	11	4.4	10	9.1	0	0	
12	5.7	17		20	18	18	11	4.4	10	9.1	0	0	
13	5.0	16	}	21	19	53	12	46	1.8	0	0	0	
14	4.6	16		23	18	455	12	6.7	.5	0	0	0	
15	4.1	15	16	24	17	291	12	3.8	.1	0	0	0	
16	4.0	15	}	21	16	64	11	2.6	2.0	0	0	0	
17	3.6	15		21	16	37	10	1.7	2.7	0	0	0	
18	3.2	14	}	21	16	30	9.6	1.3	.5	0	0	0	
19	3.2	14		20	16	26	9.3	1.0	.1	0	0	0	
20	2.9	14	}	21	17	21	11	.6	0	53	0	0	
21	2.3	14		21	16	19	181	.5	0	315	0	0	
22	109	13	}	17	15	18	208	.4	0	36	143	0	
23	586	14		16	15	19	32	.4	0	6.4	482	0	
24	896	14	}	39	15	25	16	.5	0	.7	210	0	
25	907	14		101	14	20	13	.3	0	.1	26	0	
26	1,890	13	}	133	14	17	12	.2	0	0	6.0	0	
27	1,140	13		451	148	15	16	12	.1	0	0	.4	0
28	180	13	}	80	141	15	15	11	.1	0	0	.1	0
29	63	14		48	136	-	15	10	0	0	0	0	0
30	43	17	}	37	76	-	17	9.7	.2	0	0	0	0
31	34	-		28	44	-	17	-	.7	-	0	134	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet		
October 9-31.....						5,912.7	1,890	2.3	257		11,730		
November.....						503	31	13	16.8		998		
December.....						1,076	451	-	34.7		2,130		
Calendar year .....													
January.....						1,286	148	15	41.5		2,550		
February.....						517	32	14	18.5		1,030		
March.....						1,802	455	15	58.1		3,570		
April.....						753.6	208	9.3	25.1		1,490		
May.....						181.0	-	0	5.64		359		
June.....						250.8	165	0	8.26		497		
July.....						428.6	315	0	13.8		850		
August.....						1,001.5	482	0	32.3		1,990		
September.....						94.6	77	0	3.15		188		
The period.....											27,380		

## Clear Fork of Trinity River at Fort Worth, Tex.

Location.- Water-stage recorder, lat. 32°44', long. 97°21', on old masonry pier 300 feet downstream from Texas & Pacific Railway bridge at Fort Worth, Tarrant County, and 3 miles above confluence with West Fork of Trinity River. Zero of gage is 532.83 feet above mean sea level.

Drainage area.- 522 square miles.

Records available.- March 1924 to September 1937.

Average discharge.- 13 years, 72.5 second-feet.

Extremes.- Maximum discharge during year, 3,780 second-feet June 7 (gage height, 7.28 feet); no flow at times.

1924-37: 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, data furnished by city engineer of Fort Worth.

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

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	106	32	45	56	21	89	27	6.3	0.8		0
2	69	92	140	45	50	23	82	23	14	0		0
3	53	69	243	42	50	25	79	21	11	0		0
4	39	66	124	42	50	150	76	21	30	0		0
5	34	66	106	42	50	172	72	21	25	0		0
6	27	66	116	45	50	96	66	19	543	0		0
7	30	66	86	45	48	149	60	17	725	0		4.4
8	34	60	78	60	45	124	60	17	120	0		9.7
9	23	56	76	56	45	79	53	17	575	0		5.3
10	17	60	72	45	42	66	50	16	257	18		.6
11	14	63	72	42	37	66	48	65	66	114		0
12	12	60	69	53	37	63	45	30	37	35		0
13	8.5	56	66	156	37	517	48	25	27	12		0
14	8.5	53	66	199	39	717	45	34	19	5.3		0
15	7.4	50	66	153	39	444	45	21	16	2.7		0
16	6.3	48	66	110	37	215	42	14	32	.3		0
17	7.4	45	66	99	34	180	39	12	100	1.2		0
18	7.4	45	60	92	34	195	34	11	48	.2		0
19	7.4	45	56	82	34	161	34	9.7	23	0		0
20	7.4	45	56	85	34	127	39	9.7	32	0		0
21	6.3	45	53	89	32	113	48	8.5	12	0		0
22	3.5	37	56	82	30	110	39	6.3	12	0		0
23	21	30	56	66	25	120	34	6.3	9.7	1.0		0
24	168	30	56	76	27	138	27	7.4	7.4	.2		0
25	1,140	27	56	96	25	134	25	7.4	6.3	0		0
26	665	30	56	110	25	99	25	6.3	5.3	0		0
27	222	30	66	76	25	99	23	6.3	5.3	0		0
28	184	30	116	69	21	92	21	6.3	3.5	0		0
29	161	30	66	63	-	92	23	5.3	2.7	0		0
30	130	32	53	60	-	116	23	5.3	1.6	0		0
31	113	-	48	63	-	106	-	5.3	-	0		-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,322.1	1,140	3.5	107	6,590		
November.....						1,538	106	27	51.3	3,050		
December.....						2,396	243	32	77.3	4,750		
Calendar year 1936.....						25,252	7,760	0	69.0	50,090		
January.....						2,388	199	42	77.0	4,740		
February.....						1,058	56	21	37.8	2,100		
March.....						4,809	717	21	155	9,540		
April.....						1,394	89	21	46.5	2,760		
May.....						501.1	65	5.3	16.2	994		
June.....						3,072.1	875	1.6	102	6,090		
July.....						190.7	114	0	6.15	378		
August.....						0	0	0	0	0		
September.....						20.0	9.7	0	.67	40		
Water year 1936-37.....						20,689	1,140	0	56.7	41,030		

## Elm Fork of Trinity River near Carrollton, Tex.

**Location.**— Water-stage recorder, lat. 32°57'55", long. 96°56'40", at Dallas-Denton highway Bridge 40 feet above Carrollton Dam, 0.3 mile below mouth of Denton Creek, and 2.3 miles northwest of Carrollton, Dallas County. Zero of gage is 432.23 feet above mean sea level.

**Drainage area.**— 2,535 square miles.

**Records available.**— November 1923 to September 1937.

**Average discharge.**— 13 years (1924-37), 669 second-feet.

**Extremes.**— Maximum discharge during year, 10,500 second-feet Oct. 26 (gage height, 7.28 feet); minimum, 87 second-feet July 19 (gage height, 0.55 foot), caused by regulation. 1923-37: Maximum discharge, 82,100 second-feet May 19, 1935 (gage height, 13.00 feet); no flow at times.

**Remarks.**— Records good. Discharge for Jan. 21-25 computed from graph based on once-daily gage readings furnished by U. S. Weather Bureau. No diversion above station. Flow is materially regulated by Lake Dallas reservoir (capacity 214,000 acre-feet).

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 27 to Sept. 30)

0.6	102	1.8	805	5.0	4,860
.8	180	2.2	1,150	6.0	7,100
1.0	278	2.6	1,550	7.0	9,700
1.2	390	3.0	1,980		
1.4	515	4.0	3,220		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,030	1,030	159	548	2,270	258	284	237	146	106	99	273
2	2,930	998	210	515	1,600	241	278	222	134	106	99	273
3	1,980	2,280	450	496	946	185	273	199	138	102	99	273
4	1,550	2,330	390	482	414	372	273	155	142	96	99	273
5	1,450	2,150	374	470	408	1,050	252	167	142	93	96	273
6	1,450	2,150	680	470	402	534	204	167	151	93	146	333
7	1,450	2,270	450	470	396	696	189	167	146	96	120	379
8	1,450	2,760	289	496	367	872	180	167	204	96	120	328
9	1,400	2,760	237	515	300	482	176	172	3,360	96	124	328
10	1,400	2,760	218	344	289	350	176	310	880	109	171	643
11	1,400	2,760	199	316	268	311	172	331	681	113	1,830	718
12	1,400	2,760	189	328	258	294	176	167	772	138	419	718
13	1,400	2,000	180	1,150	258	289	176	470	342	109	359	718
14	1,400	740	178	3,890	252	454	180	232	204	99	146	710
15	1,210	420	172	3,380	258	966	180	194	159	96	134	710
16	167	414	172	1,610	247	672	176	167	512	96	134	710
17	120	396	172	1,170	247	608	172	155	656	96	649	710
18	116	278	172	1,080	247	548	172	138	232	93	843	702
19	116	268	172	1,040	252	522	167	151	208	93	300	702
20	113	208	167	1,270	252	489	167	146	232	113	268	695
21	113	151	167	1,260	252	456	204	142	199	298	378	695
22	340	146	163	1,250	258	432	242	142	178	358	1,270	695
23	1,680	151	163	1,230	258	466	390	138	159	142	1,850	695
24	3,340	151	176	1,190	252	1,540	333	138	109	116	3,620	695
25	5,130	151	180	1,710	237	537	311	138	102	109	3,920	607
26	9,970	151	189	2,390	232	367	284	138	102	102	2,000	232
27	7,620	151	287	2,210	247	311	263	138	102	96	870	227
28	4,540	151	718	2,510	252	289	252	138	106	96	470	213
29	1,810	151	548	2,390	-	284	247	138	106	99	414	159
30	725	151	725	2,330	-	284	242	138	106	99	333	155
31	671	-	622	2,330	-	289	-	138	-	99	322	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	64,471	9,970	113	2,080	127,900
November.....	33,237	2,760	146	1,108	65,820
December.....	9,166	725	159	296	18,180
Calendar year 1936.....	212,529	14,800	84	581	421,600
January.....	40,840	3,890	316	1,317	81,000
February.....	11,919	2,270	232	426	25,640
March.....	15,448	1,540	185	498	30,640
April.....	6,791	390	167	226	13,470
May.....	5,640	470	138	182	11,190
June.....	10,708	3,360	102	357	21,240
July.....	3,653	358	93	118	7,250
August.....	21,682	3,920	96	699	43,010
September.....	14,842	718	155	495	29,440
Water year 1936-37.....	238,398	9,970	93	653	472,900

## East Fork of Trinity River near Rockwall, Tex.

Location.- Chain gage, lat. 32°55'25", long. 96°30'20", on Dallas-Rockwall highway bridge 3 miles southwest of Rockwall, Rockwall County. Zero of gage is 404.2 feet above mean sea level.

Drainage area.- 831 square miles.

Records available.- November 1923 to September 1937.

Average discharge.- 14 years, 387 second-feet.

Extremes.- Maximum discharge year, 8,100 second-feet Jan. 16 (gage height, 15.70 feet, from graph based on gage readings); no flow at times.  
1923-37: 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 except those below 200 second-feet, which are fair. Daily discharge computed from graph drawn on basis of twice-daily gage readings during periods of material change in stage. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,660	215	106	271	430	170	222	89	12	2.7	0	29
2	329	202	124	222	372	156	202	78	10	.7	0	30
3	101	300	189	215	327	144	196	72	8.9	.3	0	27
4	78	859	287	208	311	383	229	78	11	.2	0	40
5	62	591	378	176	319	1,250	372	67	15	.2	0	21
6	50	345	829	176	303	1,120	491	72	20	.1	0	18
7	43	202	1,180	252	287	1,060	257	72	17	.1	0	20
8	36	182	1,100	558	279	1,160	196	67	24	.1	0	83
9	32	163	573	1,030	264	1,030	292	62	92	.1	0	156
10	27	156	271	1,210	236	508	271	57	393	.1	0	48
11	25	156	229	1,040	208	257	176	171	150	0	0	25
12	24	150	202	490	196	250	156	282	57	.1	0	16
13	21	150	176	1,030	202	236	144	137	34	.1	0	12
14	18	137	163	1,640	208	372	137	206	23	.1	0	8.9
15	15	130	156	3,620	196	724	316	286	18	0	0	6.8
16	11	124	150	7,090	182	594	681	95	15	0	0	5.6
17	13	118	150	4,970	176	390	474	62	32	.2	0	4.7
18	9.7	118	150	2,280	163	311	150	48	21	.2	0	4.5
19	8.6	112	144	1,140	170	295	118	40	26	.1	0	4.5
20	7.8	112	130	796	170	271	112	34	18	.1	0	3.8
21	6.8	112	124	706	176	229	253	30	15	.1	140	3.1
22	5.4	112	118	706	176	196	663	27	8.0	.1	45	2.7
23	66	112	118	594	163	189	576	28	14	.1	72	2.7
24	547	106	112	525	144	1,500	916	26	6.0	5.2	631	2.6
25	923	106	112	1,060	144	1,780	204	32	3.1	2.3	1,030	1.9
26	1,120	130	106	1,390	137	1,310	130	36	1.7	.9	1,320	1.7
27	1,540	124	206	1,620	137	488	112	27	1.4	.4	1,690	1.2
28	3,710	112	754	1,480	150	271	106	22	.8	.2	192	1.1
29	2,990	106	816	773	-	236	101	18	.5	.1	87	.9
30	624	101	510	542	-	229	101	16	8.0	.1	45	.8
31	257	-	311	470	-	236	-	13	-	0	36	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					15,360.3	3,710	5.4	495	30,470			
November.....					5,643	869	101	188	11,190			
December.....					9,973	1,180	106	322	19,780			
Calendar year 1936.....					50,278.6	3,710	0	137	99,720			
January.....					58,470	7,090	176	1,241	76,300			
February.....					6,226	430	137	222	12,560			
March.....					17,375	1,780	144	560	34,460			
April.....					8,654	916	101	288	17,160			
May.....					2,350	286	13	75.8	4,660			
June.....					1,055.4	393	.5	35.2	2,090			
July.....					15.0	5.2	0	.48	30			
August.....					5,288	1,690	0	170	10,450			
September.....					582.5	156	.9	19.4	1,160			
Water year 1936-37.....					110,972.2	7,090	0	304	220,100			



## San Jacinto River near Humble, Tex.

Location.- Chain gage, lat. 30°01'35", long. 95°15'30", at highway bridge, 1,160 feet above Houston, East & West Texas (Southern Pacific) Railway bridge, about half a mile below Spring Creek, and 2½ miles north of Humble, Harris County. Zero 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 1937.

Extremes.- Maximum discharge observed during year, 6,480 second-feet Mar. 15 (gage height, 9.40 feet); minimum observed, 15 second-feet Aug. 2.  
1928-37: Maximum discharge, about 111,000 second-feet May 31, 1929 (gage height, 33.0 feet, present site and datum) by slope-area method; minimum, 14 second-feet Sept. 8-10, 1931.

Remarks.- Records fair. Discharge for period of missing gage heights, Nov. 26-29, interpolated. Discharge for periods of material change in stage computed from graph drawn on basis of twice-daily gage readings. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	41	123	1,050	1,600	181	2,790	133	62	49	33	64
2	111	49	143	910	1,200	181	2,050	118	57	48	23	59
3	106	60	242	990	990	181	1,600	108	64	49	51	55
4	92	70	303	845	725	134	1,360	99	69	46	28	74
5	88	74	283	605	635	193	1,360	95	97	42	34	78
6	78	78	752	495	578	196	1,440	90	97	46	51	82
7	126	84	990	468	522	207	1,440	86	97	49	44	78
8	232	78	785	440	468	214	1,360	76	97	49	41	78
9	524	68	660	468	440	207	1,120	72	92	51	37	95
10	415	62	2,050	725	415	193	1,050	76	88	64	37	116
11	345	59	2,250	1,200	345	181	845	72	80	76	39	153
12	263	55	1,290	1,600	303	193	695	68	76	74	31	140
13	178	60	845	2,780	283	927	605	72	72	64	76	113
14	116	66	578	3,860	283	3,340	495	70	68	57	72	86
15	95	70	415	4,420	283	6,310	415	64	60	53	57	82
16	84	60	303	5,160	283	4,840	368	64	68	55	46	74
17	70	55	263	3,860	263	3,490	324	60	64	74	41	66
18	59	51	232	2,250	229	2,890	283	64	64	76	160	60
19	48	49	210	1,440	242	2,450	263	68	60	66	111	55
20	44	46	196	1,600	242	1,440	249	72	57	55	72	48
21	41	41	190	2,350	238	610	235	68	60	55	64	44
22	37	42	175	2,150	232	655	224	72	60	51	59	41
23	30	43	163	2,450	221	605	221	68	57	36	64	41
24	26	55	160	2,150	210	665	207	64	60	51	133	41
25	30	59	160	2,050	204	910	193	60	60	46	283	55
26	37	63	160	2,050	204	785	181	66	57	60	303	59
27	41	67	166	1,960	196	695	169	68	53	37	193	55
28	42	71	181	1,960	187	655	158	72	57	59	113	49
29	44	77	214	2,780	-	1,520	148	72	49	55	86	46
30	42	90	238	2,560	-	4,140	143	68	49	46	86	41
31	41	-	476	2,250	-	3,720	-	60	-	33	74	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,423	415	26	110	6,790		
November.....						1,848	90	41	61.6	3,670		
December.....						15,156	2,250	123	489	50,060		
Calendar year 1936.....						298,757	17,800	26	816	592,600		
January.....						59,866	5,160	440	1,931	118,700		
February.....						12,010	1,600	187	429	23,820		
March.....						43,068	6,310	181	1,389	85,420		
April.....						21,981	2,780	143	735	43,600		
May.....						2,365	133	60	78.3	4,690		
June.....						2,050	97	49	68.3	4,070		
July.....						1,672	76	33	55.9	3,320		
August.....						2,522	303	23	81.4	5,000		
September.....						2,128	153	41	70.9	4,220		
Water year 1936-37.....						168,089	6,310	23	461	333,400		

## 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 above Texas & New Orleans Railroad bridge and 3½ miles above mouth of Whiteoak Bayou. Zero of gage is 4.10 feet below mean sea level.

Drainage area.- 326 square miles.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period May to September 1936, 9,500 second-feet May 27 (gage height, 32.5 feet, from graph based on gage readings); minimum not determined.

Maximum discharge during water year 1936-37, 792 second-feet Apr. 1 (gage height, 15.84 feet); minimum not determined.

Maximum stage known, 54.4 feet, present site and datum, Dec. 9, 1935 (discharge, 40,000 second-feet; figure of discharge 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, from rating curve extended above 15,300 second-feet at Capitol Avenue Bridge, 2 miles downstream; stage-discharge relation materially affected by bridge interference; figure of discharge furnished by W. E. White, assistant engineer, City of Houston).

Remarks.- Records good except those estimated and those below 80 second-feet, which are poor. No diversion above station.

Rating table, May 1936 to Sept. 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used June 4, 1937 to Sept. 30, 1937)

8.0	4.4	12.0	24.4	13.5	137	20.0	2,100	29.0	5,950
9.0	11.2	12.8	27	14.0	280	22.0	2,850	30.0	7,250
10.0	16.4	13.0	29	16.0	860	24.0	3,730	32.0	9,050
11.0	20.4	13.2	53	18.0	1,420	26.0	4,730		

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	†3,680	19	22	16
2								-	†3,220	173	19	21
3								-	†2,850	401	18	56
4								-	†2,490	311	16	61
5								-	†2,200	331	14	39
6								-	†1,960	322	12	
7								-	†1,680	208	11	
8								-	†1,450	161	11	
9								-	†1,250	131	11	
10								-	†1,080	97	11	
11								-	†906	66	11	†29
12								-	†736	46	11	
13								-	†593	40	11	
14								-	†436	36	11	
15								-	†294	28	10	
16								-	†151	27	9.4	†150
17								-	†29	26	9.0	
18								-	†26	140	8.9	
19								-	24	137	9.9	
20								-	23	69	9.2	
21								-	22	39	9.0	
22								-	20	65	9.4	
23								-	20	175	35	†22
24								-	20	91	28	
25								*3,360	20	66	25	
26								*5,630	20	40	23	
27								*9,140	20	29	20	
28								*7,790	20	27	18	
29								*5,970	19	†27	17	
30								*5,000	18	†28	16	
31								†4,280	-	25	14	-

\*Computed from graph drawn on basis of gage readings made twice daily or oftener.

†Gage height missing; discharge computed on basis of weather records and known gradual fall in stage.

‡Estimated on basis of weather records and fragmentary gage-height record.

Discharge, in second-feet, of Buffalo Bayou at Houston, Texas, 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	} 21	7.0	17	146	160	110	736	12	15.0	7.5	6.6	3.6
2		6.8	18	114	134	9.7	736	10	15.0	7.0	6.2	5.6
3		7.0	22	146	111	9.2	579	8.8	15.1	7.0	5.9	4.4
4		7.9	20	146	86	9.6	465	7.7	15.5	8.1	7.0	14
5		7.5	17	123	69	161	322	7.0	44	13	7.0	7.8
6		7.1	21	86	53	302	203	6.4	10	8.7	7.0	6.6
7	25	7.0	33	75	49	508	143	6.1	12	8.6	6.6	4.0
8	64	7.0	33	86	36	465	97	5.7	19	7.8	6.6	5.2
9	77	6.9	64	80	32	365	72	15.4	12	26	6.2	33
10	108	7.1	439	111	29	251	56	15.0	12	17	5.9	33
11	83	11	436	146	27	160	44	15.0	12	11	5.6	24
12	49	12	522	228	26	111	36	15.0	11	13	5.6	15
13	33	11	342	240	124	89	33	15.0	10	9.0	5.6	8.4
14	28	9.7	166	280	122	157	32	15.0	10	8.4	5.6	8.4
15	25	8.7	77	285	120	123	30	15.0	13	8.1	27	7.8
16	21	8.1	44	262	118	146	29	15.0	10	8.4	7.8	7.2
17	15	8.1	39	211	116	134	28	14.9	8.6	8.0	8.2	6.6
18	14	8.0	28	143	116	103	26	14.8	8.2	7.8	14	6.0
19	11	7.8	26	131	116	75	26	14.5	88	8.7	15	5.6
20	9.7	7.8	25	100	115	64	25	14.6	9.4	12	6.6	5.6
21	8.9	7.6	23	108	114	58	25	5.0	9.0	10	6.6	6.0
22	8.4	7.2	21	194	114	49	24	15.7	9.4	84	5.0	4.8
23	8.1	7.2	19	302	114	42	23	14.8	9.8	49	4.8	4.8
24	8.0	8.5	16	274	114	154	22	4.5	8.8	9.4	4.8	5.6
25	8.0	9.7	12	203	113	151	21	4.5	8.6	8.7	29	7.2
26	7.9	10	11	157	113	245	19	4.5	7.8	8.8	15	7.2
27	7.8	11	11	154	112	222	18	4.6	9.2	8.8	5.2	4.8
28	7.6	11	12	166	111	151	16	4.7	9.0	8.2	4.8	4.0
29	7.5	14	12	166	-	123	15	4.8	8.4	7.5	3.6	6.0
30	7.5	19	34	208	-	166	14	4.9	8.4	7.0	3.8	7.8
31	7.1	-	68	194	-	442	-	5.0	-	7.0	3.7	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 25-31, 1936.....						41,170	9,140	3,360	5,881	81,660		
June.....						25,277	3,680	18	843	50,140		
July.....						3,374	401	19	109	6,690		
August.....						458.8	35	8.9	14.8	910		
September.....						1,190	-	-	39.7	2,360		
The period.....										141,800		
October 1936 .....						778.3	108	7.1	25.1	1,540		
November.....						268.5	19	6.8	8.95	533		
December.....						2,621	522	11	84.5	5,200		
Calendar year .....												
January 1937 .....						5,265	302	75	170	10,440		
February.....						1,055	160	11	37.7	2,090		
March.....						5,055.5	508	9.2	163	10,030		
April.....						3,915	736	14	130	7,770		
May.....						175.9	12	4.5	5.67	349		
June.....						445.7	88	5.0	14.9	884		
July.....						413.5	84	7.0	13.3	820		
August.....						252.3	29	3.6	8.14	500		
September.....						374.4	72	3.6	12.5	743		
Water year 1936-37 .....						20,620.1	736	3.6	56.5	40,900		

†Estimated on basis of weather records and fragmentary gage-height record.

## 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 below Texas and New Orleans Railroad bridge and 2 miles above confluence with Little Whiteoak Bayou. Zero of gage is 4.10 feet below mean sea level.

Drainage area.- 87.0 square miles.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year, 887 second-feet July 23 (gage height, 29.35 feet); minimum, 0.4 second-foot July 2, 3 (gage height, 18.80 feet).  
Maximum stage known, 51.5 feet, present datum, Dec. 9, 1935 (discharge, 14,750 second-feet; figure of discharge furnished M. J. McCall, engineer for Harris County).  
Discharge for flood of May 31, 1929, 9,360 second-feet (gage height, 47.0 ±0.5 feet, present site and datum), based on current-meter measurement at a stage 1 foot below crest made at bridge 1 block below gage; figure of discharge furnished by W. E. White, assistant engineer, City of Houston.

Remarks.- Records good except those for Oct. 1-5, June 19-21, Aug. 20-24, which were computed on basis of records for Brays and Buffalo Bayous at Houston and range in stage and are fair. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.8	1.4	120	53	2.3	220	1.5	0.5	0.5	5.2	1.1
2	.9	.8	1.1	62	40	2.4	112	1.3	.5	.4	5.8	1.1
3	.8	.9	9.8	42	31	2.4	72	1.2	.5	.4	5.2	6.5
4	.7	.9	2.9	26	26	2.6	53	1.1	25	.5	6.2	2.2
5	.6	.9	1.5	21	21	138	42	1.0	58	.5	5.9	1.5
6		.6	.9	53	24	16	196	36	1.0	7.6	.5	6.2
7	57	.9	68	28	14	226	29	.9	1.7	.5	6.9	1.0
8	74	.9	26	33	12	127	22	.9	1.0	.5	7.3	24
9	22	.9	13	24	10	54	19	.9	.8	9.8	5.9	7.1
10	8.3	1.3	402	43	8.0	31	15	.8	.7	4.2	6.2	1.8
11	2.9	2.1	453	67	5.6	21	13	.8	.6	1.3	6.2	1.3
12	1.7	1.1	221	58	4.2	15	5.9	.7	.6	3.1	6.6	.9
13	1.3	1.0	65	89	3.7	11	4.2	.7	.6	1.3	4.8	.8
14	1.1	.9	36	78	3.2	192	3.4	.7	.6	1.3	1.7	.7
15	1.1	.9	25	62	2.9	426	2.9	.7	4.6	1.0	5.0	.7
16	1.0	.9	18	58	2.4	256	2.7	.7	2.1	1.0	3.4	.7
17	1.0	.9	13	39	2.3	120	2.4	.6	1.0	.9	6.6	.7
18	1.4	1.0	9.4	32	2.1	72	2.3	.6	.9	16	21	.7
19	5.2	1.1	6.8	37	2.3	59	2.1	.6	1.1	5.0	10	.6
20	4.5	1.1	4.2	33	2.3	50	2.0	.6	.7	1.9	7.6	.6
21	2.1	1.1	3.2	37	2.3	38	2.7	.6	.6	1.3	6.2	.7
22	1.6	.9	2.4	58	2.3	26	2.1	.6	.6	72	2.1	.7
23	1.0	1.1	2.0	156	2.1	19	2.3	.5	.7	464	1.6	.7
24	.9	1.4	1.7	96	2.0	136	2.1	.5	11	23	1.4	.7
25	.9	1.1	1.4	60	2.0	262	1.9	.6	11	7.3	15	8.4
26	1.0	1.1	1.3	60	2.3	106	1.6	.5	2.1	2.7	3.9	4.1
27	5.6	1.1	2.3	57	2.3	64	1.4	.6	32	1.9	4.8	1.0
28	1.9	1.2	1.7	58	2.1	57	1.7	.6	9.7	1.9	1.5	.9
29	.9	4.1	1.6	72	-	43	1.5	.5	.7	2.9	9.4	.9
30	2.3	5.9	16	54	-	240	1.7	.5	.5	3.7	5.8	.9
31	1.1	-	25	52	-	374	-	.5	-	5.2	1.3	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				206.4		74	0.6	6.66	409			
November.....				39.2		5.9	.6	1.31	78			
December.....				1,500.4		453	1.3	48.4	2,980			
Calendar year .....												
January.....				1,742		156	21	56.2	3,460			
February.....				279.4		53	2.0	9.98	554			
March.....				3,368.7		426	2.3	109	6,680			
April.....				679.9		220	1.4	22.7	1,350			
May.....				23.3		1.5	.5	.75	46			
June.....				178.0		58	.5	5.93	353			
July.....				656.5		464	.4	20.5	1,260			
August.....				221.6		39	1.3	7.15	440			
September.....				73.7		24	.6	2.46	146			
Water year 1936-37.....				8,949.1		464	.4	24.5	17,760			

## Brays Bayou at Houston, Tex.

Location.- Water-stage recorder, lat. 29°42'06", long. 95°24'06", in southwest section of Houston, Harris County, at Old Main Street Bridge, three-quarters of a mile above Harris Gulley, and about 15 miles above confluence with Buffalo Bayou. Zero of gage is 3.90 feet below mean sea level.

Drainage area.- 98.2 square miles.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year, 1,270 second-feet Dec. 10 (gage height, 34.88 feet); minimum, 0.2 second-foot Aug. 12-14 and Sept. 18 (gage height, 27.96 feet).  
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, about 12 miles below gage; figure of discharge furnished by W. E. White, assistant engineer, City of Houston).

Remarks.- Records good except those for June 17-21, which were computed on basis of weather records and records of Buffalo Bayou at Houston and are poor. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	1.1	1.5	526	162	3.2	16	1.5	0.6	1.0	0.3	0.5
2	5.9	1.1	5.5	281	90	2.7	10	1.4	.6	1.0	.3	.5
3	11	1.6	10	106	51	2.7	7.0	1.4	.6	1.3	.3	3.6
4	7.6	1.4	5.9	49	33	3.2	7.4	1.3	13	.9	1.4	1.6
5	5.6	1.0	3.5	65	23	639	5.6	1.2	27	.5	.4	2.0
6	4.3	1.0	13	72	17	505	4.3	1.0	4.9	.5	.4	10
7	13	1.0	27	63	14	357	3.7	1.1	4.9	.4	.4	28
8	35	1.0	12	49	12	127	3.0	1.1	7.8	.4	.4	4.9
9	27	.9	6.0	76	9.0	51	2.5	1.0	3.0	3.6	.3	1.4
10	13	1.3	811	258	7.0	25	2.5	1.0	1.2	2.0	.3	.9
11	6.6	2.5	316	192	5.6	15	2.7	1.0	.9	1.0	.3	.5
12	4.0	2.1	102	192	5.2	11	2.7	1.0	.7	1.2	.2	.4
13	2.7	1.3	39	162	5.2	9.8	2.7	1.0	.7	.9	.2	.4
14	2.1	1.1	19	105	4.6	28	3.0	1.0	.4	.7	.2	.4
15	2.0	1.0	11	180	4.3	43	3.0	.9	1.8	.7	3.2	.3
16	1.8	.9	7.4	72	3.7	24	3.2	.9	.9	.7	1.0	.3
17	1.6	.9	5.6	41	4.9	14	3.2	.9	.8	.7	.6	.3
18	1.4	1.0	4.0	37	4.6	11	3.0	.8	.8	10	.6	.2
19	1.3	1.0	3.2	41	4.3	9.4	3.0	.8	32	6.3	.9	.3
20	1.3	.9	2.5	79	4.3	7.4	3.0	.9	2.0	2.3	.9	.4
21	1.2	.9	2.1	70	3.5	5.2	3.7	.8	.9	1.2	.8	.3
22	1.2	.9	2.1	124	3.2	5.2	2.5	.9	.9	5.9	.5	.4
23	1.1	1.0	2.1	326	3.2	4.3	2.3	1.0	1.6	4.9	.6	.3
24	1.2	1.1	1.8	192	3.2	137	2.1	.9	1.0	2.1	.6	.5
25	1.3	1.0	1.6	107	2.7	63	1.6	.8	.8	.9	7.7	14
26	1.2	1.0	1.8	100	3.5	28	1.5	.7	.6	.5	7.0	2.7
27	1.1	.9	4.0	61	4.0	26	1.5	.7	.7	.4	.6	.6
28	1.3	1.0	3.0	194	3.2	16	1.5	.7	.8	.4	.4	.4
29	1.2	5.0	2.7	116	-	12	1.5	.6	.8	.3	.4	.3
30	1.2	3.5	97	73	-	24	1.6	.6	.8	.4	.4	.3
31	1.2	-	136	150	-	27	-	.6	-	.3	.6	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				166.9	35	1.1	5.38	331				
November.....				40.4	5.0	.9	1.35	80				
December.....				1,661.3	811	1.5	53.6	3,300				
Calendar year .....												
January.....				4,159	526	37	134	8,250				
February.....				491.2	162	2.7	17.5	974				
March.....				2,236.1	639	2.7	72.1	4,440				
April.....				111.3	16	1.5	3.71	221				
May.....				29.5	1.5	.6	.95	59				
June.....				113.5	32	.4	3.78	226				
July.....				53.4	10	.3	1.72	106				
August.....				32.4	7.7	.2	1.05	64				
September.....				76.9	28	.2	2.56	153				
Water year 1936-37.....				9,171.9	811	.2	25.1	16,180				

## Brazos River at Seymour, Tex.

Location.- Chain gage, lat. 33°34', long. 99°16', at new highway bridge three-quarters of a mile above Wichita Valley Railway bridge and 1 mile southwest of courthouse in Seymour, Baylor County. Prior to May 14, 1937, water-stage recorder at same datum at abandoned highway bridge 30 feet upstream.

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

Records available.- November 1923 to September 1937.

Average discharge.- 13 years (1924-37), 497 second-feet.

Extremes.- Maximum discharge observed during year, 34,800 second-feet Aug. 22 (gage height, 8.62 feet); no flow at times.

1923-37: 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, occurred sometime prior to 1916.

Remarks.- Figures of daily discharge not sufficiently accurate for publication; monthly records poor. Discharge for Oct. 1-11, Oct. 21 to Dec. 5, Apr. 22 to May 13, May 22 to June 12 estimated on basis of fragmentary gage-height record and records for Brazos River at Palo Pinto and Clear Fork of Brazos River near Crystal Falls. No diversions above station.

Monthly discharge, water year October 1936 to September 1937

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October.....	-	-	161	9,870
November.....	-	-	30.0	1,790
December.....	70	-	21.4	1,310
Calendar year 1936....	31,200	-	526	382,200
January.....	116	2.9	22.8	1,400
February.....	49	4.0	13.4	743
March.....	608	3.6	142	8,760
April.....	432	5.2	69.1	4,110
May.....	-	0	2.68	177
June.....	-	0	553	32,910
July.....	292	0	22.6	1,390
August.....	27,300	0	1,596	98,120
September.....	292	0	66.1	3,940
Water year 1936-37....	27,300	0	227	164,500

## Brazos River near Palo Pinto, Tex.

Location.— Water-stage recorder, lat. 32°51'45", long. 98°18'10", at Palo Pinto-Graford highway bridge, 300 feet below Dark Valley Creek and 6.5 miles north of Palo Pinto, Palo Pinto County. Zero of gage is 831.19 feet above mean sea level.

Drainage area.— 22,760 square miles, of which about 9,240 square miles is probably noncontributing.

Records available.— November 1933 to September 1937. January 1924 to November 1933, at site near Mineral Wells, records equivalent.

Extremes.— Maximum discharge during year, 29,200 second-feet Aug. 23 (gage height, 10.90 feet); minimum, 0.4 second-foot Aug. 21, 22.

1933-37: 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 occurred in 1876, from information furnished by Corps of Engineers, U. S. Army. Stage was several feet higher than that for any subsequent flood. A stage of about 24.0 feet occurred in June 1930.

Remarks.— Records good except those for periods of missing gage heights, Oct. 1-4, Aug. 30 to Sept. 4, which were computed on basis of records for station at Glen Rose and U. S. Weather Bureau gage-height records for station near Mineral Wells and are poor. No large diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,000	688	153	107	104	36	101	133	21	40	70	1,200
2	10,000	611	200	104	98	36	91	121	17	32	50	925
3	7,600	482	271	98	98	36	82	95	25	26	38	702
4	5,600	418	321	98	95	54	75	98	40	22	31	528
5	5,060	397	293	95	91	121	68	68	1,000	17	28	399
6	1,840	350	250	95	85	133	62	56	2,950	13	80	287
7	1,150	327	215	91	85	145	56	50	4,780	10	46	245
8	1,060	293	191	88	82	145	50	40	3,600	9.1	36	360
9	848	277	186	80	75	169	42	34	2,880	13	34	515
10	714	266	176	66	75	338	40	30	1,800	22	26	488
11	603	255	171	70	72	298	38	26	1,290	22	20	482
12	540	240	167	70	68	250	36	23	753	13	13	424
13	494	235	157	75	65	298	34	23	562	10	10	338
14	436	225	157	91	62	2,150	32	34	430	6.6	7.0	260
15	410	210	149	88	56	2,880	31	26	397	5.0	5.4	205
16	380	200	145	85	54	1,580	31	344	327	3.4	4.6	181
17	350	195	141	85	52	812	25	549	784	2.6	2.8	271
18	333	191	135	82	50	515	25	535	758	1.8	1.5	260
19	310	191	129	80	48	424	22	225	604	2.7	1.0	215
20	288	181	125	80	50	350	25	235	668	76	.7	171
21	267	171	121	80	46	298	28	195	1,410	7.7	.5	141
22	267	167	117	95	40	250	30	137	590	1,140	1.6	117
23	1,630	157	114	91	38	225	69	101	362	652	14,400	98
24	4,950	157	111	82	37	191	408	75	245	266	14,700	80
25	7,420	153	107	101	36	171	362	56	176	170	8,660	70
26	3,750	145	113	114	36	153	338	44	133	430	5,330	58
27	2,880	145	195	129	36	137	260	36	101	333	3,790	54
28	2,520	141	145	129	36	125	235	30	75	225	2,580	44
29	1,860	145	137	125	-	121	200	24	62	157	1,900	36
30	1,200	153	125	121	-	117	153	22	52	111	1,460	30
31	896	-	111	111	-	111	-	22	-	65	1,500	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	81,556		16,000		267		2,631		161,800			
November.....	7,756		688		141		259		15,380			
December.....	5,126		321		107		165		10,170			
Calendar year 1936.....	554,027.7		44,000		0		1,514		1,099,000			
January.....	2,908		129		66		93.7		5,760			
February.....	1,770		104		36		63.2		3,510			
March.....	12,669		2,880		36		409		25,130			
April.....	3,047		408		22		102		6,040			
May.....	3,275		549		22		106		6,500			
June.....	26,862		4,780		17		995		53,280			
July.....	3,925.9		1,140		1.8		127		7,780			
August.....	54,827.2		14,700		.5		1,769		108,700			
September.....	9,184		1,200		30		306		18,220			
Water year 1936-37.....	212,902.1		16,000		.5		583		422,300			

## BRAZOS RIVER BASIN

Brazos River near Glen Rose, Tex.

Location.-- Water-stage recorder, lat. 32°15'40", long. 97°41'50", a quarter of a mile above Glen Rose-Cleburne highway bridge, 2 miles above Paluxy Creek and 4 miles northeast of Glen Rose, Somervell County. Zero 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 noncontributing.

Records available.-- October 1923 to September 1937.

Average discharge.-- 14 years, 1,641 second-feet.

Extremes.-- Maximum discharge during year, 31,100 second-feet Oct. 1 (gage height, 11.9 feet, from graph based on once-daily gage readings); minimum, 8.0 second-feet Aug. 21.

1923-37: Maximum discharge, 97,600 second-feet May 18, 1935 (gage height, 23.68 feet); no flow at times.

Maximum stage known, about 30.0 feet May 8 or 9, 1922.

Remarks.-- Records good except those for Oct. 1-24, June 16-23, July 1-9, Aug. 30 to Sept. 9, which were computed from graph drawn on basis of once or twice-daily gage readings furnished by U. S. Weather Bureau and are fair. No large diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24,700	2,630	348	325	255	88	302	310	206	206	250	1,790
2	15,800	2,180	427	302	242	85	280	272	280	111	193	1,490
3	10,700	1,720	493	265	223	88	265	242	165	96	160	1,200
4	7,980	1,390	544	250	217	219	242	235	146	92	131	922
5	5,720	1,140	544	242	211	175	229	205	181	75	107	750
6	5,240	946	544	229	199	205	217	175	763	68	88	600
7	4,170	828	582	242	187	242	205	165	1,350	55	75	572
8	5,000	719	527	235	175	217	170	150	3,100	58	65	679
9	2,230	638	493	229	160	205	160	136	13,300	55	50	572
10	1,740	591	451	223	155	205	146	126	5,000	75	39	411
11	1,440	553	411	229	155	217	136	126	5,000	330	31	325
12	1,230	527	403	272	160	217	131	118	2,810	528	23	295
13	1,010	484	379	242	146	310	131	122	2,060	165	21	476
14	851	451	372	255	141	578	126	111	1,450	92	28	484
15	740	435	348	235	141	1,060	126	107	1,060	65	28	467
16	719	419	341	235	126	1,760	118	322	795	50	28	443
17	648	411	341	223	122	3,620	111	235	1,180	36	21	364
18	610	411	318	199	118	2,900	103	146	1,200	31	16	302
19	572	403	310	193	118	2,050	99	107	935	23	14	250
20	536	395	302	193	115	1,380	99	92	572	21	10	217
21	484	379	295	211	107	1,010	103	144	922	18	8.0	205
22	435	364	288	193	103	772	99	372	772	16	12	242
23	484	379	280	199	99	648	96	295	572	14	14	235
24	638	356	272	205	96	610	81	235	930	12	1,870	205
25	7,030	341	258	187	92	527	75	217	910	76	12,700	175
26	15,000	333	265	187	88	467	68	205	572	395	7,480	155
27	7,280	325	272	187	92	419	65	170	427	501	6,200	131
28	5,120	341	265	187	92	395	62	146	333	333	4,760	115
29	4,400	341	258	199	-	403	75	122	368	223	3,950	103
30	3,950	333	288	199	-	364	288	115	632	229	5,000	92
31	3,200	-	265	211	-	341	-	107	-	325	2,230	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	137,457		24,700		435		4,434		272,600			
November.....	20,713		2,630		325		690		41,080			
December.....	11,484		582		258		370		22,780			
Calendar year 1936.....	713,419.8		58,300		0		1,949		1,415,000			
January.....	6,993		325		187		226		13,870			
February.....	4,105		242		88		147		8,140			
March.....	21,780		3,620		88		703		43,200			
April.....	4,408		302		62		147		8,740			
May.....	5,630		372		92		182		11,170			
June.....	48,031		13,300		146		1,601		95,270			
July.....	4,377		528		12		141		8,680			
August.....	45,582.0		12,700		8.0		1,406		86,440			
September.....	14,267		1,790		92		476		28,300			
Water year 1936-37.....	322,827.0		24,700		3.0		884		640,300			



## 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, 2½ miles below mouth of Bosque River. Zero of gage is 357.10 feet above mean sea level (general adjustment of 1929).

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

Records available.- September 1898 to December 1911, October 1914 to September 1937.

Average discharge.- 36 years, 2,588 second-feet.

Extremes.- Maximum discharge during year, 47,700 second-feet Oct. 1 (gage height, 25.60 feet); minimum, 52 second-feet Aug. 20, 21.

1898-1911, 1914-37: 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; no flow Aug. 20, 21, 1918, and probably several days in August 1923.

A stage of 39.7 feet occurred Dec. 3, 1913, when levee on left bank was broken by flood.

Remarks.- Records good except those below 7,000 second-feet, which are fair. Most of the figures of discharge below 2,000 second-feet were computed from graph drawn on basis of twice-daily gage readings, one of which readings was furnished by U. S. Weather Bureau. Numerous small diversions above station do not appreciably affect flow except during low stages. Flow partly regulated by Lake Waco, on Bosque River near Waco (capacity 39,000 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40,400	3,970	2,180	950	1,360	461	950	260	2,010	438	268	2,540
2	24,100	4,580	7,050	920	3,410	461	860	256	422	573	256	2,240
3	18,200	4,200	10,100	1,390	1,290	1,920	802	462	1,860	516	332	2,060
4	10,700	3,510	5,040	2,520	1,110	1,940	866	1,540	1,690	402	284	2,100
5	7,080	2,390	4,350	890	2,840	3,930	2,330	443	2,090	312	228	1,460
6	7,430	1,830	14,100	830	1,140	4,450	687	430	2,580	276	197	1,530
7	6,210	1,700	9,020	1,140	1,010	2,430	655	384	11,800	264	172	2,630
8	4,110	1,540	3,160	2,660	950	2,330	615	348	3,380	309	139	860
9	3,350	2,970	5,120	920	1,980	3,100	610	308	5,720	452	128	775
10	2,620	1,210	1,960	830	950	1,040	515	352	10,800	412	110	1,710
11	2,090	1,210	1,860	1,900	1,130	1,080	515	901	4,280	2,210	97	748
12	3,600	1,180	4,690	5,350	2,620	2,630	2,110	895	4,240	380	89	525
13	1,650	1,250	1,420	2,620	720	1,220	540	2,010	2,900	1,920	77	452
14	1,500	2,800	1,320	3,740	714	5,690	515	720	3,210	640	73	380
15	1,400	1,010	3,160	2,290	665	1,910	492	792	1,740	515	71	402
16	1,300	2,530	1,080	4,130	1,710	2,290	498	425	1,620	348	79	520
17	1,170	950	2,310	1,280	704	2,350	416	332	1,620	242	71	458
18	1,040	950	1,110	1,210	692	4,590	394	280	2,220	184	67	488
19	2,670	830	2,450	2,980	709	3,560	402	332	1,460	169	62	443
20	888	821	1,010	2,790	1,510	4,230	454	376	1,350	160	54	434
21	778	2,260	802	1,140	637	2,240	2,330	336	1,180	148	54	340
22	694	704	1,110	1,580	7,600	2,000	898	276	920	136	59	300
23	784	1,700	2,700	2,940	2,180	3,250	470	236	950	125	254	260
24	4,160	2,390	720	2,760	515	1,320	380	200	920	118	346	246
25	6,090	802	720	2,790	506	1,180	376	336	802	108	1,220	264
26	21,600	709	1,150	2,010	479	1,210	328	368	802	97	11,000	260
27	19,100	692	10,000	2,940	520	2,920	364	320	1,080	85	7,400	259
28	8,220	635	5,960	2,030	555	1,010	348	296	802	85	5,720	225
29	6,020	692	1,300	2,920	-	950	300	284	620	202	4,000	194
30	5,230	680	1,420	1,540	-	1,140	304	272	510	416	3,450	181
31	4,780	-	2,830	2,850	-	2,640	-	1,220	-	340	3,010	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						218,944	40,400	694	7,063	434,300		
November.....						59,555	4,580	635	1,755	104,400		
December.....						110,202	14,100	720	3,555	218,600		
Calendar year 1936.....						1,235,742	158,000	36	3,376	2,461,000		
January.....						66,840	5,350	830	2,156	132,600		
February.....						40,226	7,600	479	1,437	79,790		
March.....						71,272	5,590	461	2,299	141,400		
April.....						21,314	2,330	300	710	42,290		
May.....						15,980	2,010	200	515	31,700		
June.....						75,578	11,800	422	2,519	149,900		
July.....						12,582	2,210	85	406	24,960		
August.....						39,367	11,000	54	1,270	78,080		
September.....						25,294	2,630	181	843	50,170		
Water year 1936-37.....						750,254	40,400	54	2,055	1,488,000		

## Brazos River near Bryan, Tex.

Location.- Water-stage recorder, lat. 30°37', long. 96°29', 2.4 miles below mouth of Little Brazos River and 9 miles southwest of Bryan, Brazos County. Zero of gage is 192.2 feet above mean sea level.

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

Records available.- September 1925 to September 1937. February 1918 to September 1925, at site near College Station, 7½ miles downstream; records equivalent.

Average discharge.- 16 years (1918-20, 1921-24, 1926-37), 6,045 second-feet.

Extremes.- Maximum discharge during year, 133,000 second-feet Oct. 1 (gage height, 41.96 feet); minimum, 391 second-feet Aug. 23, 24.

1925-37: Maximum gage height 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 which were estimated or partly-estimated from fragmentary gage-height record and gage-height record of U. S. Weather Bureau at Valley Junction and are poor. Discharge for Oct. 4-14, Feb. 24 to Mar. 2 computed from graph drawn on basis of twice-daily gage readings. Many small diversions above gage which do not appreciably affect flow except during low stages.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128,000	10,400	4,390	7,360	7,520	2,800	3,990	1,570	*775	1,320	*769	3,600
2	106,000	10,000	4,950	7,040	7,040	2,740	4,390	1,470	2,530	1,120	*792	3,220
3	59,000	9,780	11,000	5,950	7,680	2,740	3,600	1,370	5,370	1,010	*753	3,600
4	32,900	8,740	18,200	5,800	7,680	2,920	3,600	1,520	3,780	928	*827	3,100
5	22,400	9,340	14,800	5,800	6,250	5,700	3,220	1,270	2,800	1,000	*679	2,740
6	18,100	8,560	15,800	5,950	6,560	12,700	3,220	1,920	5,350	968	*655	2,620
7	18,500	7,840	31,000	*5,650	6,720	16,800	3,990	1,920	6,720	*838	*630	2,240
8	18,500	7,040	*32,200	*5,650	16,100	15,400	3,040	1,520	14,000	*745	*615	2,480
9	16,900	6,560	23,700	6,100	16,400	12,400	2,680	1,420	11,800	*661	*695	3,600
10	14,200	6,720	21,500	7,040	16,100	10,700	2,620	1,320	8,690	*655	*565	2,070
11	8,250	6,400	15,100	6,560	16,400	7,680	2,510	1,370	14,000	*685	*546	1,520
12	6,240	5,510	10,900	*14,800	15,230	6,100	2,340	1,470	8,000	1,590	*528	2,020
13	6,070	5,510	9,560	29,200	15,950	6,250	2,290	1,370	7,040	7,420	*528	1,720
14	5,600	5,510	9,340	24,400	15,950	6,400	3,100	2,340	7,360	6,720	*519	1,270
15	4,890	5,800	7,680	21,100	14,950	7,840	2,620	2,740	*6,720	5,370	*514	1,080
16	4,470	5,300	7,040	14,800	13,990	8,180	2,290	1,920	*6,100	3,660	*486	976
17	4,050	5,250	7,200	12,900	13,660	7,040	2,240	1,720	*4,670	3,040	450	860
18	3,790	5,510	6,400	9,780	14,390	6,880	2,120	1,570	3,730	3,340	434	789
19	3,530	4,670	6,400	8,000	3,860	7,520	2,020	1,270	3,040	3,730	430	810
20	3,410	4,530	6,250	7,360	3,470	7,200	1,920	1,110	3,340	3,340	427	789
21	3,790	4,530	6,250	8,940	3,540	7,360	1,920	1,010	2,860	2,020	418	757
22	3,050	4,530	6,100	8,360	3,600	6,400	1,920	1,060	2,560	1,320	418	721
23	2,720	5,250	5,800	7,840	3,730	5,370	3,220	1,080	2,840	1,070	403	*655
24	2,780	4,530	5,800	8,360	3,470	5,650	3,100	1,020	1,920	944	400	*610
25	6,750	5,250	6,100	7,360	4,250	5,250	2,510	944	1,720	868	400	555
26	14,200	5,800	*5,800	8,000	3,540	4,390	2,070	*875	1,670	*944	400	532
27	27,900	4,950	5,650	7,680	3,220	4,120	1,920	*838	1,570	*882	5,370	510
28	26,500	4,530	*16,000	8,180	3,040	4,530	1,770	*624	1,420	*810	6,720	480
29	14,800	4,250	18,600	8,180	-	4,530	1,670	*796	1,670	*727	5,950	490
30	11,100	4,120	11,800	8,940	-	3,750	1,620	*775	1,670	*650	4,810	486
31	10,400	-	8,540	7,520	-	3,600	-	*775	-	*697	3,990	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	608,390		128,000		2,720		19,630		1,207,000			
November.....	156,950		1,400		4,120		8,332		370,800			
December.....	359,850		32,200		4,390		11,610		713,800			
Calendar year 1936.....	2,703,605		128,000		336		7,387		5,363,000			
January.....	300,600		29,200		5,650		9,697		596,200			
February.....	144,090		7,680		3,040		5,146		285,800			
March.....	210,900		16,800		2,740		6,303		418,300			
April.....	79,520		4,390		1,620		2,651		157,700			
May.....	41,977		2,740		775		1,554		83,260			
June.....	145,015		14,000		775		4,834		287,600			
July.....	59,272		7,420		650		1,912		117,600			
August.....	40,861		6,720		400		1,318		81,050			
September.....	48,910		3,600		486		1,664		93,040			
Water year 1936-37.....	2,224,335		128,000		400		6,094		4,412,000			

\*Partly estimated.

†Estimated.

## Brazos River at Richmond, Tex.

Location.— Water-stage recorder, lat. 29°35', long. 95°45', on highway bridge in Richmond, Fort Bend County, about 1,500 feet downstream from Galveston, Harrisburg & San Antonio Railway bridge. Zero of gage is 40.8 feet above mean sea level.

Drainage area.— 44,050 square miles, of which about 9,240 square miles is probably noncontributing.

Records available.— January 1903 to June 1906, June 1931 to September 1937. October 1922 to September 1931, at site at Rosenberg, 7.8 miles upstream; records equivalent except for diversion by Richmond Irrigation Co.'s canal.

Extremes.— Maximum discharge during year, 77,100 second-feet Oct. 5 (gage height, 32.17 feet); minimum, 474 second-feet Aug. 23, 26, 27.  
1905-6; 1931-37: 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 (discharge 120,000 second-feet). Flood of December 1913 reached a stage of 45.4 feet, present datum (discharge not determined).

Remarks.— Records good. Discharge for Oct. 15, 16, Nov. 4-12, Feb. 18 to Apr. 11 and July 24 to Sept. 30 computed from graph drawn on basis of once-daily gage reading furnished by U. S. Weather Bureau. Considerable water diverted above station for irrigation and municipal supply. See records of Brazos Valley Irrigation Co.'s canal near Fulshear and Richmond Irrigation Co.'s canal near Richmond.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59,800	12,800	4,660	13,100	12,600	3,960	7,020	2,420	1,060	1,640	828	4,520
2	68,100	12,600	4,520	10,600	11,400	3,580	5,940	2,330	992	1,560	828	3,960
3	73,000	13,100	4,520	9,680	10,600	3,460	5,460	2,150	965	1,560	800	3,460
4	76,100	11,700	4,920	9,240	10,100	3,340	5,300	2,060	1,040	1,620	775	3,230
5	75,700	11,700	11,600	8,000	9,900	3,700	5,140	1,970	1,340	1,410	775	2,900
6	65,100	11,900	17,600	7,400	10,100	3,960	5,460	1,880	3,220	1,270	775	3,010
7	45,000	11,700	16,800	7,200	9,020	5,140	5,460	1,800	3,580	1,170	775	2,900
8	30,200	11,200	22,800	7,800	8,400	12,000	5,300	1,760	3,010	1,110	750	2,800
9	24,000	10,800	30,200	7,600	8,600	16,300	5,140	1,760	4,350	1,110	725	2,600
10	20,900	9,240	27,700	7,020	8,000	16,000	5,300	2,150	10,700	1,170	725	2,280
11	18,400	8,400	23,800	7,600	7,020	14,300	4,520	2,100	11,200	1,170	700	2,150
12	14,600	7,800	21,000	9,460	6,480	12,600	4,100	1,880	9,310	1,050	675	2,700
13	11,000	7,800	17,000	14,100	6,480	11,000	3,700	1,720	11,600	1,020	650	2,420
14	8,480	7,200	14,000	25,000	6,300	9,460	3,680	1,760	8,630	992	610	1,880
15	6,890	6,480	13,300	28,800	5,940	9,680	3,460	1,760	6,840	1,220	573	1,760
16	7,400	6,300	12,300	28,000	5,940	11,400	3,340	1,760	6,840	4,770	591	1,970
17	6,890	6,120	10,800	24,400	5,780	11,900	3,460	1,880	6,840	5,140	675	1,760
18	5,970	6,300	11,000	19,900	5,140	13,600	3,460	2,330	6,660	4,240	645	1,560
19	5,550	6,120	11,200	17,800	4,820	12,300	3,120	2,330	5,460	3,340	560	1,410
20	5,020	5,780	10,600	15,500	4,820	11,900	3,010	2,020	4,310	2,800	528	1,270
21	4,540	5,620	10,600	13,600	4,820	11,700	2,900	1,840	3,700	2,700	550	1,140
22	4,320	4,980	10,100	13,600	4,660	11,700	2,800	1,720	3,250	2,900	645	1,050
23	4,200	4,660	9,240	14,800	4,240	10,800	2,700	1,520	3,120	2,900	498	1,080
24	4,200	4,620	8,400	14,600	4,100	10,300	2,700	1,380	3,010	2,420	532	1,080
25	3,880	4,660	7,200	14,000	4,100	9,240	2,600	1,300	2,700	1,690	519	1,050
26	3,590	4,980	6,660	13,800	4,100	9,240	3,010	1,270	2,420	1,170	493	1,020
27	3,940	4,660	7,200	13,100	4,240	9,240	3,340	1,270	2,150	1,240	546	938
28	13,200	5,140	7,020	13,100	4,240	8,200	3,120	1,200	1,880	1,080	528	910
29	22,600	5,620	6,440	13,600	-	7,400	2,800	1,110	1,800	1,020	555	882
30	20,000	5,140	15,600	13,600	-	7,600	2,600	1,050	1,760	992	2,920	882
31	15,100	-	16,900	12,800	-	8,800	-	1,080	-	938	4,980	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	727,670					76,100	3,590	23,470	1,443,000			
November.....	235,020					13,100	4,520	7,934	466,200			
December.....	365,580					30,200	4,520	12,760	784,600			
Calendar year 1936.....	3,477,950					76,100	835	9,503	6,998,000			
January.....	428,600					28,800	7,020	13,930	850,100			
February.....	181,940					12,600	4,100	6,955	330,700			
March.....	293,800					16,300	3,340	9,477	582,700			
April.....	119,840					7,020	2,600	3,995	237,700			
May.....	54,560					2,420	1,060	1,760	108,200			
June.....	133,687					11,600	965	4,456	265,200			
July.....	58,312					5,140	938	1,881	115,700			
August.....	26,009					4,980	483	839	51,590			
September.....	60,572					4,520	882	2,019	120,100			
Water year 1936-37.....	2,725,590					76,100	483	7,467	5,406,000			

## 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.

Drainage area.- 2,220 square miles.

Records available.- February 1924 to September 1937.

Average discharge.- 13 years, 180 second-feet.

Extremes.- Maximum discharge during year, 3,400 second-feet Aug. 19 (gage height, 9.00 feet); no flow Aug. 12-18.

1924-37: Maximum discharge observed, about 47,000 second-feet Sept. 8, 1932 (gage height, 27.05 feet, at former site); no flow at times.

Maximum stage known, about 30.0 feet in 1876.

Remarks.- Records good except those for Oct. 1, Oct. 23 to Dec. 6, May 16 to June 21, which were computed on basis of fragmentary gage-height record and records for station at Fort Griffin and are fair. Small diversions above station for municipal supply and use in mining.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	342			20	21	15	14	8.2	12	4.1	0.6	4.1
2	134			20	20	15	14	8.2	12	3.7	.4	9.2
3	101		40	20	20	16	14	7.5	351	3.3	.4	56
4	54			20	21	16	14	8.2	343	3.3	.2	10
5	73			20	20	17	14	8.2	636	2.9	.2	6.9
6	65		27	20	21	21	14	8.2	292	2.6	.2	5.2
7	56		27	20	20	22	12	8.2	94	2.6	.2	13
8	51		25	20	19	38	12	8.2	129	2.6	.1	229
9	48		23	20	17	28	15	8.8	59	2.6	.1	16
10	46		23	20	17	21	15	8.8	13	12	.1	5.2
11	44		22	20	17	18	12	9.4	11	11	.1	19
12	42		22	20	17	17	11	28	10	5.6	0	16
13	42		22	20	17	19	11	54	8.8	3.7	0	6.9
14	40		22	20	17	25	11	296	8.8	2.2	0	4.1
15	39		22	20	17	38	11	99	8.2	1.7	0	3.7
16	38		22	20	17	25	12	39	7.5	1.4	0	2.9
17	38		21	20	17	19	12	20	401	1.4	0	1.8
18	36		21	20	17	21	11	13	77	1.2	0	1.8
19	36		21	20	17	19	11	10	13	1.3	384	1.8
20	35		21	20	16	18	13	8.8	7.5	1.3	972	1.8
21	31		21	20	15	16	14	8.2	5.6	1.4	76	2.2
22	42		20	20	16	16	15	8.2	4.8	1.4	371	2.6
23			20	20	15	16	12	7.5	4.8	183	550	2.9
24			20	20	15	14	11	6.9	4.8	40	452	2.9
25			20	20	16	15	11	6.9	4.8	11	56	13
26		367	20	19	15	15	10	6.2	4.5	18	19	97
27			20	19	15	14	11	6.2	4.1	14	18	19
28			20	18	15	14	13	5.6	3.7	5.2	9.4	7.5
29			20	18	-	13	10	121	3.7	2.9	6.9	8.2
30		58	20	18	-	13	8.2	21	4.1	1.2	4.8	4.5
31			20	20	-	14	-	15	-	.7	4.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,835	-	31	124	7,610		
November.....						960	-	-	32.0	1,900		
December.....						762	-	20	24.6	1,510		
Calendar year 1936.....						55,802.3	-	.3	152	110,700		
January.....						612	20	18	19.7	1,210		
February.....						487	21	15	17.4	966		
March.....						588	38	13	19.0	1,170		
April.....						368.2	15	8.2	12.3	730		
May.....						872.4	296	5.6	28.1	1,730		
June.....						2,518.7	636	3.7	84.0	5,000		
July.....						349.3	183	.7	11.3	693		
August.....						2,925.8	972	0	94.4	5,800		
September.....						574.2	229	1.8	19.1	1,140		
Water year 1936-37.....						14,852.6	-	0	40.7	28,460		

## Clear Fork of Brazos River at Fort Griffin, Tex.

Location.- Water-stage recorder, lat. 32°58', long. 99°13', at old Fort Griffin-Throckmorton highway bridge half a mile east of Fort Griffin, Shackelford County. Zero of gage is 1,174.55 feet above mean sea level.

Drainage area.- 3,974 square miles.

Records available.- December 1923 to September 1937.

Average discharge.- 13 years (1924-37), 295 second-feet.

Extremes.- Maximum discharge during year, 3,010 second-feet Aug. 21 (gage height, 9.65 feet); no flow July 7-19 and Aug. 1-20, 1923-37; 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 sometime in 1900.

Remarks.- Records good. Small diversions above station for municipal supply and irrigation, which materially affect low flow.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,050	82	36	26	26	13	8.7	11	35	1.7	0	16
2	1,200	67	42	27	25	14	7.3	10	26	1.2	0	13
3	392	58	41	29	26	14	6.6	8.7	21	.8	0	10
4	236	46	41	24	26	17	5.6	7.3	465	.4	0	33
5	190	42	46	25	28	22	4.7	6.6	772	.3	0	21
6	149	39	48	24	26	32	3.8	5.0	745	.2	0	13
7	127	35	46	24	26	52	2.9	5.0	327	0	0	10
8	111	39	51	24	25	39	6.6	4.3	143	0	0	14
9	97	41	42	24	25	35	14	2.9	143	0	0	28
10	87	41	38	24	24	38	12	2.7	105	0	0	57
11	79	41	35	23	21	31	17	2.9	56	0	0	82
12	62	42	32	23	23	30	17	3.8	35	0	0	46
13	56	43	31	24	19	168	17	870	24	0	0	28
14	58	42	30	24	17	66	15	129	15	0	0	18
15	59	41	30	25	18	52	12	94	9.2	0	0	12
16	56	40	30	27	18	42	9.2	283	11	0	0	8.7
17	52	38	30	28	19	38	8.2	159	424	0	0	5.6
18	50	38	29	28	17	32	7.8	80	1,400	0	0	4.7
19	46	36	29	26	17	39	10	51	290	0	0	3.3
20	44	36	29	24	17	33	13	37	112	118	0	2.5
21	41	34	29	25	16	20	13	27	61	45	1,680	1.7
22	134	32	29	26	16	23	44	24	39	19	1,110	1.3
23	247	32	28	24	17	28	51	20	25	9.2	1,210	.8
24	1,090	33	28	25	17	22	26	16	16	5.0	1,090	.4
25	1,570	31	28	24	22	14	17	13	11	3.1	655	.3
26	1,090	32	28	24	17	11	15	11	7.8	2.0	260	.2
27	470	32	30	25	14	8.2	15	8.2	5.6	1.2	118	.2
28	287	34	29	25	12	15	13	6.6	4.3	.5	65	.2
29	159	33	30	25	-	16	11	5.0	3.3	.3	42	.2
30	121	34	30	24	-	16	10	63	2.2	.2	28	.2
31	97	-	28	25	-	11	-	55	-	.1	20	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						10,467	2,050	41	338	20,760		
November.....						1,214	82	31	40.5	2,410		
December.....						1,053	51	28	34.0	2,090		
Calendar year 1936.....						92,577.7	12,100	0	253	183,600		
January.....						775	29	23	25.0	1,540		
February.....						572	26	12	20.4	1,130		
March.....						999.2	168	8.2	32.2	1,980		
April.....						413.4	51	2.9	13.5	820		
May.....						2,022.0	870	2.7	65.2	4,010		
June.....						5,353.4	1,400	2.2	178	10,680		
July.....						208.2	118	0	6.72	413		
August.....						6,468	1,680	0	209	12,830		
September.....						431.3	82	.2	14.4	865		
Water year 1936-37.....						29,976.5	2,050	0	82.1	59,460		

Clear Fork of Brazos River near Crystal Falls, Tex.

Location.- Water-stage recorder, lat.  $32^{\circ}54'$ , long.  $98^{\circ}50'$ , at Texas Co.'s pumping plant  $2\frac{1}{2}$  miles below Hubbard Creek and  $3\frac{1}{4}$  miles northeast of Crystal Falls, Stephens County.

Drainage area.- 5,658 square miles.

Records available.- July 1928 to September 1937.

Extremes.- Maximum discharge during year, 11,200 second-feet Oct. 1 (gage height, 17.5 feet); no flow at times.  
1928-37: 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.

Remarks.- Records good except those for Sept. 18-30, which were computed on basis of records for station at Fort Griffin and indicated range of stage on gage-height graph and are poor. Most of ordinary flow diverted above station for municipal supply and use in mining. Low-water flow partly regulated by dams upstream.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,490	117	49	32	27	3.1	18	8.3	32	0.5	0	127
2	2,010	98	74	32	24	0	16	6.9	36	0	0	168
3	896	74	66	29	24	0	14	6.9	27	0	0	74
4	332	60	54	29	24	0	12	4.7	24	0	0	52
5	244	52	52	29	29	3.9	11	4.7	698	0	0	32
6	207	46	52	27	32	121	8.3	3.9	761	0	0	135
7	171	44	54	24	29	177	6.9	3.1	1,070	0	0	215
8	140	39	52	27	31	8.9	5.1	434	0	0	0	270
9	125	36	54	24	24	60	3.9	2.3	192	0	0	102
10	113	41	54	22	24	46	3.1	1.5	160	0	0	41
11	102	44	46	22	24	92	3.1	1.0	117	0	0	39
12	88	44	41	22	27	54	5.5	1.0	66	0	0	102
13	78	44	39	22	27	370	12	303	39	0	0	57
14	71	44	34	22	24	226	16	717	27	0	0	39
15	71	44	34	22	24	117	16	172	18	0	0	27
16	71	44	34	22	18	68	16	117	9.7	0	0	16
17	68	46	32	24	16	52	14	258	8.3	0	0	9.7
18	66	44	32	27	16	49	12	164	637	0	0	9.7
19	63	44	32	27	20	46	9.7	88	1,000	0	0	8.3
20	60	44	29	29	20	41	11	57	239	2,540	0	8.3
21	57	41	29	27	16	44	71	41	109	132	0	6.9
22	195	41	29	34	14	41	36	29	60	88	1,800	6.9
23	2,760	41	29	32	14	39	49	20	41	39	1,440	5.5
24	3,330	44	29	29	14	39	39	14	32	22	1,190	5.5
25	1,830	44	29	29	12	36	52	14	20	11	1,040	4.7
26	1,790	41	32	32	18	32	32	9.7	11	9.7	694	4.7
27	1,050	39	34	27	57	22	20	6.9	6.9	5.5	239	4.7
28	453	44	34	27	49	18	16	3.9	3.9	2.3	125	4.7
29	287	49	34	27	-	16	11	3.1	3.1	.5	74	4.7
30	191	52	34	27	-	16	9.7	3.1	1.5	0	52	4.7
31	148	-	32	27	-	18	-	2.3	-	0	68	-
Month				Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet
October.....				22,557		5,490		57		728		44,740
November.....				1,485		117		36		49.5		2,950
December.....				1,259		74		29		40.6		2,500
Calendar year 1936.....				160,254.2		17,200		0		438		317,800
January.....				829		34		22		26.7		1,640
February.....				674		57		12		24.1		1,340
March.....				1,928.0		370		0		62.2		5,320
April.....				551.1		71		3.1		18.4		1,090
May.....				2,070.4		717		1.0		66.8		4,110
June.....				5,883.4		1,070		1.5		196		11,670
July.....				2,850.5		2,540		0		92.0		5,650
August.....				6,712		1,800		0		217		13,310
September.....				1,585.0		270		4.7		52.8		3,140
Water year 1936-37.....				48,384.4		5,490		0		133		95,960

Note.- Gate in dam 3 miles upstream from gage opened Feb. 26 and closed Feb. 28.

## North Bosque River near Clifton, Tex.

Location.- Staff gage, lat.  $31^{\circ}48'$ , long.  $97^{\circ}35'$ , a quarter of a mile above Gulf, Colorado & Santa Fe Railway bridge and 1.4 miles northwest of Clifton, Bosque County. Zero 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 1937.

Average discharge.- 14 years, 173 second-feet.

Extremes.- Maximum discharge during year, 19,500 second-feet Oct. 25 (gage height, 11.20 feet, from floodmarks); minimum, 3.1 second-feet Aug. 21.  
1923-37: Maximum discharge, 38,300 second-feet May 18, 1935 (gage height, 21.3 feet from floodmarks); no flow at times.

The flood of May 9, 1922, reached a stage of about 25 feet.

Remarks.- Records good except those below 200 second-feet, which are fair. Discharge for periods of material change in stage computed from graph drawn on basis of gage readings. During floods gage was read several times a day and peak stages were noted; at other times gage was read twice daily. Railway company pumps about 100,000 gallons a day from pool formed by dam a third of a mile below gage, which is control for this station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used June 19 to July 9)

0.5	2.0	0.6	40	1.2	166	1.8	590	3.0	2,000	5.0	5,590
.6	9.4	.9	62	1.4	275	2.0	790	3.5	2,750	6.0	7,760
.7	23	1.0	89	1.6	420	2.5	1,340	4.0	3,610		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	197	329	140	176	217	109	197	53	642	28	17	14
2	162	275	1,970	166	207	109	186	53	157	21	14	459
3	149	240	1,840	162	197	120	176	49	1,790	21	14	1,160
4	132	217	990	157	192	680	157	49	1,140	21	13	73
5	89	197	662	157	186	527	149	49	531	21	12	53
6	73	186	935	157	181	484	140	49	4,460	18	11	70
7	187	186	590	202	176	880	123	49	3,790	18	9.4	419
8	198	176	509	217	166	572	109	49	420	51	9.4	275
9	116	176	452	263	162	350	103	49	217	28	9.4	197
10	96	166	420	263	153	275	109	223	166	1,410	9.4	84
11	78	240	399	263	140	252	116	361	123	1,190	9.4	65
12	60	186	373	238	140	229	113	166	103	240	9.4	44
13	53	171	359	397	132	392	109	329	86	106	9.4	26
14	58	157	335	342	132	811	109	89	73	58	9.4	18
15	53	149	315	302	123	302	103	81	73	47	9.4	17
16	44	140	288	258	120	288	89	62	67	40	9.4	15
17	40	132	275	234	116	275	86	53	445	33	7.6	14
18	40	132	252	217	116	263	84	49	153	25	5.7	14
19	36	132	229	207	116	258	81	42	81	20	4.2	14
20	37	127	223	217	116	252	84	37	73	21	3.7	11
21	37	123	217	234	116	252	192	33	65	206	3.7	7.6
22	33	116	217	252	116	240	116	33	51	276	105	6.6
23	229	157	207	229	116	240	86	30	44	140	26	5.7
24	743	140	207	234	116	229	81	30	42	96	20	5.7
25	7,320	132	207	229	109	223	73	26	42	58	17	4.8
26	3,960	123	202	207	106	217	67	26	38	35	14	4.8
27	590	176	240	217	113	207	62	25	38	26	12	4.8
28	635	192	229	229	116	186	62	20	33	25	12	4.8
29	545	157	207	212	-	197	60	17	32	21	12	4.8
30	484	149	197	186	-	252	55	952	32	20	11	4.8
31	404	-	186	207	-	217	-	1,200	-	18	9.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						16,880	7,320	33	544	33,480		
November.....						5,179	329	116	173	10,270		
December.....						13,861	1,970	140	447	27,490		
Calendar year 1936.....						119,455.7	26,700	.4	326	236,900		
January.....						7,081	397	157	228	14,040		
February.....						3,996	217	106	143	7,930		
March.....						9,888	880	109	319	19,610		
April.....						3,277	197	55	109	6,500		
May.....						4,353	1,200	17	140	8,630		
June.....						15,317	4,460	32	510	30,380		
July.....						4,228	1,410	18	136	8,390		
August.....						438.3	105	3.7	14.1	869		
September.....						3,096.4	1,160	4.8	103	6,140		
Water year 1936-37.....						87,594.7	7,320	3.7	240	173,700		

## Leon River near Belton, Tex.

Location.- Water-stage recorder, lat. 31°04'15", long. 97°26'30", 1,500 feet above Temple-Belton highway bridge and 2 miles east of Belton, Bell County. Zero 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 1937.

Average discharge.- 14 years, 544 second-feet.

Extremes.- Maximum discharge during year, 11,300 second-feet Dec. 6 (gage height, 9.45 feet); minimum, 26 second-feet Sept. 29, 30.

1923-37: Maximum discharge, 51,100 second-feet Sept. 28, 1936 (gage height, 20.0 feet), by slope-area method; no flow at times.

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

Remarks.- Records good except those below 200 second-feet, which are fair. Several small pumping plants divert water above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,370	2,510	904	1,100	1,410	648	760	320	475	166	143	64
2	7,690	2,170	2,940	1,080	1,350	640	751	305	275	154	134	56
3	7,820	1,720	6,960	1,030	1,390	651	751	290	547	143	124	56
4	8,650	2,250	5,000	976	1,380	1,130	745	290	2,040	158	120	110
5	8,650	1,750	5,970	958	1,280	2,290	717	282	1,850	158	110	122
6	7,460	1,570	8,970	940	1,230	2,080	691	275	1,160	154	105	359
7	4,750	1,380	5,730	931	1,180	2,510	674	267	3,890	115	96	267
8	1,530	1,220	5,000	1,030	1,140	1,650	657	254	1,850	110	92	208
9	1,180	1,100	3,640	1,080	1,060	1,650	631	247	1,650	186	88	351
10	1,030	1,070	2,790	994	1,010	1,430	605	234	2,440	2,890	84	240
11	1,080	1,040	2,370	1,010	967	1,250	588	220	3,160	3,510	80	200
12	1,170	1,010	2,100	4,450	940	1,150	571	220	3,640	1,820	72	260
13	940	967	1,910	2,860	940	1,120	571	227	3,640	2,860	68	254
14	760	949	1,730	2,300	913	1,470	571	227	2,030	1,460	68	183
15	674	913	1,660	2,010	886	1,410	563	254	895	2,240	72	124
16	651	988	1,580	1,730	859	1,980	545	207	580	2,790	64	92
17	871	832	1,480	1,690	823	1,650	521	183	471	2,940	56	76
18	538	805	1,400	1,830	814	1,290	468	177	406	1,400	53	64
19	512	787	1,290	1,400	805	1,380	471	227	351	597	53	56
20	479	834	1,230	1,400	805	1,320	455	220	320	458	68	53
21	455	796	1,190	1,550	760	1,170	529	194	275	367	76	50
22	438	734	1,140	1,630	726	1,080	588	172	254	335	64	41
23	592	794	1,080	1,380	717	994	538	160	234	538	56	38
24	2,400	1,140	1,070	1,380	708	957	486	149	215	351	50	36
25	2,120	1,010	1,040	1,530	691	895	447	143	194	254	50	36
26	3,630	895	1,050	1,430	674	850	406	134	189	213	50	32
27	2,240	823	2,480	1,350	657	641	398	124	177	200	47	32
28	2,600	805	2,240	1,880	657	823	398	120	166	200	47	29
29	4,630	940	1,790	1,730	-	787	375	115	160	194	53	29
30	2,970	967	1,300	1,690	-	796	351	116	166	177	50	29
31	2,790	-	1,170	1,470	-	778	-	259	-	154	56	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	88,450		8,650		438		2,853		175,400			
November.....	54,609		2,510		734		1,154		66,560			
December.....	80,234		8,970		904		2,568		159,100			
Calendar year 1936.....	486,486		39,300		24		1,329		964,800			
January.....	47,389		4,450		931		1,529		93,990			
February.....	26,792		1,410		657		957		53,140			
March.....	38,870		2,510		651		1,254		77,100			
April.....	16,843		760		351		561		35,410			
May.....	6,611		320		115		213		13,110			
June.....	33,698		3,890		160		1,123		66,840			
July.....	27,232		3,510		110		878		54,010			
August.....	2,349		143		47		75.8		4,660			
September.....	3,545		359		29		118		7,030			
Water year 1936-37.....	406,622		8,970		29		1,114		806,400			



## Little River at Cameron, Tex.

Location.- Water-stage recorder, lat. 30°50', long. 96°57', at site of old McCowan Bridge, 2,100 feet above Cameron-Rockdale highway bridge and 2 miles southeast of Cameron, Milam County. Zero 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 1937.

Average discharge.- 20 years (1917-37), 1,818 second-feet.

Extremes.- Maximum discharge during year, 34,200 second-feet Oct. 1 (gage height, 34.48 feet); minimum, 106 second-feet Sept. 30 (gage height, 3.65 feet).  
1916-37: 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, 1915.  
Flood of 1852 reached a stage of about 52.4 feet.

Remarks.- Records good. Many small diversions for irrigation and municipal supply affect flow only during extremely low stages. Slight regulation caused by pumping above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25,800	5,940	2,850	3,540	4,380	1,830	2,130	859	2,060	395	352	297
2	16,200	5,000	2,850	3,210	4,080	1,790	2,100	821	3,700	384	328	378
3	11,500	4,430	3,620	3,130	4,000	1,750	2,020	793	2,410	362	304	471
4	9,400	4,040	6,440	2,970	3,960	1,870	1,930	783	878	341	268	494
5	9,200	4,380	8,900	2,850	3,870	3,620	1,900	745	3,540	328	273	366
6	9,480	4,600	9,320	2,770	3,700	7,860	1,830	745	4,210	317	258	317
7	10,300	3,960	12,000	2,730	3,540	7,860	1,710	726	3,210	308	249	304
8	11,800	3,500	12,900	2,770	3,420	7,550	1,640	707	2,650	298	244	359
9	9,350	3,170	13,000	3,330	3,230	6,160	1,660	707	4,340	295	232	498
10	4,490	2,890	9,620	3,750	3,130	4,820	1,620	859	3,010	311	221	384
11	2,810	2,770	7,450	3,700	2,930	4,000	1,450	859	2,530	1,270	214	456
12	2,450	2,890	6,120	7,650	2,770	3,580	1,410	650	3,050	6,740	203	403
13	2,410	2,850	5,350	10,100	2,730	3,330	1,410	631	3,540	6,700	196	341
14	2,290	2,650	4,910	10,100	2,690	3,290	1,370	612	3,910	4,150	193	348
15	1,980	2,530	4,560	8,250	2,650	3,420	1,370	612	3,660	2,930	193	334
16	1,790	2,410	4,300	6,430	2,570	3,700	1,370	593	2,060	2,180	191	292
17	1,640	2,290	4,130	5,400	2,450	3,660	1,330	612	1,070	2,850	191	238
18	1,560	2,180	3,960	5,040	2,370	3,870	1,260	574	821	3,330	201	201
19	1,450	2,140	3,750	4,820	2,330	3,640	1,180	536	726	2,970	184	179
20	1,370	2,100	3,460	4,470	2,330	3,290	1,140	536	668	1,350	176	163
21	1,300	2,060	3,290	4,470	2,290	3,290	1,140	536	821	783	172	152
22	1,260	2,060	3,170	4,690	2,180	3,130	1,330	536	669	650	170	144
23	1,180	2,020	3,090	4,650	2,060	2,810	1,490	517	574	593	181	137
24	1,490	2,020	2,970	4,380	2,020	2,650	1,330	487	574	612	174	133
25	4,150	2,490	2,890	4,130	1,980	2,730	1,180	468	536	669	165	127
26	6,700	2,770	2,810	4,300	1,940	2,610	1,110	445	494	574	154	119
27	6,020	2,450	3,460	4,210	1,900	2,370	1,030	422	464	490	143	115
28	5,800	2,180	8,600	4,650	1,830	2,290	954	411	441	445	146	111
29	4,910	2,100	7,550	5,220	-	2,250	935	399	418	418	144	109
30	5,170	2,330	5,530	4,950	-	2,180	916	392	411	383	139	107
31	6,160	-	4,260	4,600	-	2,180	-	392	-	373	139	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	181,210	25,800	1,180	5,845	359,400
November.....	89,200	5,940	2,020	2,973	176,900
December.....	177,910	13,900	2,650	5,739	352,900
Calendar year 1936.....	1,290,772	80,000	163	3,527	2,560,000
January.....	147,260	10,100	2,730	4,750	292,100
February.....	79,390	4,380	1,830	2,835	157,500
March.....	109,260	7,850	1,750	3,525	216,700
April.....	43,145	2,180	916	1,438	85,580
May.....	18,955	859	392	611	37,600
June.....	57,485	4,340	411	1,915	114,000
July.....	43,764	6,740	295	1,412	86,800
August.....	6,423	362	139	207	12,740
September.....	9,077	873	107	303	18,000
Water year 1936-37.....	963,059	25,800	107	2,639	1,910,000

## BRAZOS RIVER BASIN

Lampasas River at Youngsfort, Tex.

Location.- Water-stage recorder, lat. 30°57', long. 97°43', 300 feet above highway bridge and half a mile southeast of Youngsfort, Bell County.

Drainage area.- 1,242 square miles.

Records available.- February 1924 to September 1937.

Average discharge.- 13 years, 242 second-feet.

Extremes.- Maximum discharge during year, 15,900 second-feet July 10 (gage height, 14.50 feet, from floodmarks); minimum, 16 second-feet Sept. 28 (gage height, 2.87 feet).

1924-37: 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, Aug. 9 to Sept. 8, 1934.

Flood of Dec. 2, 1913, reached a stage of 33.6 feet; flood of September 1873 reached a stage of about 44.2 feet, present datum.

Remarks.- Records good except those estimated or partly estimated, which are poor.

Estimates based on fragmentary gage-height records, floodmarks, rainfall data, and records for stations on Leon River at Belton and San Gabriel River at Georgetown. One small diversion above station for municipal supply.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	894	652		920	423	495				†37	451
2	852	819	†865		912	410	468				35	138
3	748	869	†3,620		†890	404	449				35	146
4	666	1,850	†1,500		†869	1,080	456				32	72
5	596	1,000	†980		†847	2,020	404				32	48
6	542	912	†4,540		†826	1,650						
7	1,320	852	†2,090	†825	†804	1,640	386				32	40
8	740	795			†782	1,210					32	90
9	549	740			†761	950					32	69
10	495	755			†739	878					30	104
11	442	819			†718	835					30	63
12	410	755			†696	795		†145	†500		30	40
13	385	695			†675	787					30	22
14	367	666		†1,540	†653	940					30	26
15	354	658		1,060	†631	903					28	25
16	342	610		960	†610	779					28	23
17	325	590	†850	950	603	732					28	21
18	307	583		920	576	779	†310				28	21
19	285	569		886	†553	763					28	20
20	274	556		869	†530	852					28	20
21	259	556		912	†508	652					26	20
22	254	529		970	495	617		79	79		26	19
23	879	569		869	498	605		79	63		25	17
24	†2,010	894		894	475	617		79	54		25	17
25	†1,490	680		894	462	569					25	17
26	†2,110	576		835	436	529					26	17
27	†1,180	549	†1,880	903	436	535					25	17
28	†1,090	549		1,130	436	529		†80	†40		23	16
29	†1,450	†752		980	-	515					23	17
30	1,120	†695	†1,000	930	-	522					23	17
31	950	-		930	-	508					25	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				23,611	2,110	254	762	46,830				
November.....				22,276	1,850	529	743	44,180				
December.....				36,077	4,540	-	1,184	71,560				
Calendar year 1936.....				277,746	25,600	25	759	550,900				
January.....				27,957	-	-	902	55,450				
February.....				18,331	920	436	655	36,360				
March.....				25,026	2,020	404	807	49,640				
April.....				10,077	-	-	336	19,360				
May.....				5,842	-	-	124	7,620				
June.....				6,736	-	-	225	13,360				
July.....				12,400	-	-	400	24,600				
August.....				885	37	23	28.5	1,760				
September.....				1,643	451	16	54.8	3,260				
Water year 1936-37.....				188,861	-	16	517	374,600				

\*Estimated.

†Partly estimated.

## San Gabriel River at Georgetown, Tex.

**Location.**— Water-stage recorder, lat. 30°39'10", long. 97°39'20", 100 feet below Missouri-Kansas-Texas Railroad bridge, 1½ miles below confluence of North and South Forks of San Gabriel River, and 1½ miles northeast of Georgetown, Williamson County. Zero of gage is 643.34 feet above mean sea level.

**Drainage area.**— 415 square miles.

**Records available.**— July 1934 to September 1937. February 1924 to August 1925, at site 1 mile upstream; records equivalent, except those for extremely low flow.

**Extremes.**— Maximum discharge during year, 16,300 second-feet July 10 (gage height, 11.96 feet); minimum, 6.2 second-feet Aug. 23, caused by operation of swimming pool; minimum daily, 8.3 second-feet Sept. 17-19, 22, 24, 25, 28-30.

1924-25, 1934-37: Maximum discharge, 32,400 second-feet Sept. 18, 1936 (gage height, 17.70 feet); minimum, 1.4 second-feet Sept. 20, 1934.

Maximum stage known, 39.36 feet, present datum, September 1921 (discharge, 160,000 second-feet, by slope-area method).

**Remarks.**— Records good. Some small diversions, which have some affect on low flow.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used May 8-22, July 13 to Aug. 11, Sept. 3-19)

0.8	9.4	2.0	111	4.0	930
1.0	21	2.5	172	4.5	1,440
1.2	34	2.8	222	5.0	2,100
1.4	50	3.1	332	6.0	3,640
1.6	68	3.5	545		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	385	276	189	*337	*380	182	194	85	54	19	20	13
2	332	249	202	*296	*380	178	188	79	48	17	19	14
3	292	252	390	*264	375	179	183	77	43	17	19	14
4	268	405	260	*256	361	411	179	75	54	17	17	16
5	237	284	276	*252	342	1,250	169	74	55	17	17	17
6	218	268	1,740	*249	337	558	162	74	60	16	17	13
7	476	249	578	*260	328	645	160	72	48	16	19	13
8	268	231	485	*361	316	430	157	72	43	16	17	13
9	218	218	446	*351	296	366	149	68	52	19	16	13
10	200	237	415	*300	284	346	147	73	38	3,150	16	13
11	186	320	375	379	272	328	145	64	35	1,720	16	12
12	178	264	356	1,110	272	316	142	63	32	156	16	10
13	172	254	356	617	272	316	145	64	30	85	16	9.4
14	166	218	366	533	256	320	149	58	28	62	14	9.4
15	162	210	337	480	246	346	146	44	28	50	14	9.0
16	158	199	328	*458	231	296	149	54	27	44	15	8.7
17	151	197	320	*558	228	284	121	52	26	41	16	8.3
18	143	197	312	*480	228	284	121	50	26	38	14	8.3
19	139	196	312	*415	228	264	119	48	25	36	14	8.3
20	133	189	337	485	222	249	117	46	26	35	14	8.7
21	127	186	370	527	204	228	232	44	25	34	14	8.7
22	122	178	436	491	200	228	160	40	23	32	13	8.3
23	220	169	480	410	199	231	122	40	22	30	12	8.7
24	629	256	552	436	197	379	115	39	21	29	14	8.3
25	425	197	645	430	191	231	104	37	20	27	14	8.3
26	324	182	744	390	188	214	100	35	20	26	14	8.7
27	252	176	1,520	375	188	216	97	34	19	25	13	8.7
28	276	182	533	509	188	208	96	34	17	24	13	8.3
29	405	234	410	410	-	202	99	34	20	23	12	8.3
30	320	208	405	*395	-	208	88	34	20	22	12	8.3
31	288	-	366	*385	-	200	-	62	-	22	13	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						7,870	629	122	254	15,610		
November.....						6,881	405	176	229	13,650		
December.....						14,841	1,740	189	479	29,440		
Calendar year 1936.....						107,621	12,000	19	294	215,500		
January.....						13,189	1,110	249	425	26,160		
February.....						7,409	380	188	265	14,700		
March.....						10,093	1,250	178	326	20,020		
April.....						4,255	232	88	142	8,440		
May.....						1,725	85	34	55.6	3,420		
June.....						985	60	17	32.8	1,950		
July.....						5,865	3,150	16	189	11,630		
August.....						470	20	12	15.2	832		
September.....						314.7	17	6.3	10.5	624		
Water year 1936-37.....						73,897.7	3,150	8.3	202	146,600		

\*Partly estimated on basis of partial gage-height record.

## BRAZOS RIVER BASIN

Yegua Creek near Somerville, Tex.

Location.-- Water-stage recorder, lat. 30°19', long. 96°30', at highway bridge 760 feet below Gulf, Colorado & Santa Fe Railway bridge and 2 miles south of Somerville, Burleson County. Zero of gage is 199.29 feet above mean sea level.

Drainage area.-- 990 square miles.

Records available.-- May 1924 to September 1937.

Average discharge.-- 13 years, 321 second-feet.

Extremes.-- Maximum discharge during year, 1,330 second-feet Jan. 13 (gage height, 6.68 feet); no flow July 6 to Sept. 30.

1924-37: Maximum discharge observed, 33,600 second-feet May 30, 1929 (gage height, 16.7 feet, present datum), from rating curve extended above 16,700 second-feet; no flow at times.

Remarks.-- Records good except those for Jan. 18-30, May 22-24 which were computed on basis of partial gage-height record and are fair. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	15	52	122	221	28	56	14	0.3	0.3		
2	27	12	89	95	185	25	55	11	.2	.2		
3	20	11	306	65	131	25	53	9.1	.2	.2		
4	11	11	310	50	100	26	130	7.3	.3	.1		
5	8.0	11	180	44	80	39	131	6.0	.6	.1		
6	6.9	9.3	128	40	70	224	155	5.0	4.3	0		
7	361	8.0	140	42	64	561	137	4.4	7.1	0		
8	794	6.8	128	81	60	746	95	4.0	15	0		
9	409	5.8	92	213	56	690	59	3.6	46	0		
10	83	5.6	78	294	54	540	43	3.5	56	0		
11	43	8.6	65	255	50	362	36	3.4	50	0		
12	37	23	52	784	46	202	31	3.1	38	0		
13	23	22	42	1,090	44	119	27	2.9	25	0		
14	15	14	36	882	41	86	25	2.9	14	0		
15	11	9.3	31	866	39	112	24	3.2	6.4	0		
16	8.9	9.1	26	770	37	156	24	3.2	5.5	0		
17	7.1	12	24	770	36	136	23	2.8	3.6	0		
18	5.8	12	21	770	35	96	22	2.5	2.7	0		
19	5.0	11	19	642	35	82	21	2.3	2.2	0		
20	4.5	9.1	16	434	35	66	20	2.1	1.6	0		
21	3.7	8.4	15	270	34	55	22	1.9	1.3	0		
22	3.2	7.3	15	187	32	49	26	1.6	1.1	0		
23	2.8	7.8	15	133	31	46	25	1.3	1.0	0		
24	2.9	24	14	155	30	82	25	1.2	.9	0		
25	3.4	33	14	132	29	130	28	1.1	.8	0		
26	31	22	14	130	28	145	29	1.0	.6	0		
27	55	21	20	235	28	137	26	.9	.4	0		
28	65	26	53	540	28	78	23	.7	.5	0		
29	40	34	180	540	-	59	20	.6	.4	0		
30	27	54	267	360	-	54	16	.5	.4	0		
31	20	-	176	218	-	56	-	.4	-	0		
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				2,187.2		794	2.8	69.6	4,280			
November.....				2,463.1		54	5.6	15.4	3,290			
December.....				2,618		310	14	84.5	5,190			
Calendar year 1936.....				164,951.2		22,600	2.0	451	327,200			
January.....				11,199		1,090	40	361	22,210			
February.....				1,659		221	28	59.2	3,290			
March.....				5,212		746	25	168	10,540			
April.....				1,407		155	16	46.9	2,790			
May.....				107.5		14	.4	3.47	213			
June.....				288.5		56	.2	9.62	572			
July.....				.9		.3	0	.03	1.8			
August.....				0		0	0	0	0			
September.....				0		0	0	0	0			
Water year 1936-37.....				25,112.2		1,090	0	68.8	49,810			

## Navasota River near Easterly, Tex.

Location.-- Water-stage recorder, lat. 31°10'00", long. 96°18'00", at highway bridge 3,000 feet above Missouri Pacific Railroad bridge and 6 miles northeast of Easterly, Robertson County. Zero of gage is 276.42 feet above mean sea level.

Drainage area.-- 949 square miles.

Records available.-- March 1924 to September 1937.

Average discharge.-- 13 years, 425 second-feet.

Extremes.-- Maximum discharge during year, 7,290 second-feet Mar. 7 (gage height, 15.88 feet); minimum, 0.3 second-foot Aug. 9-12.  
1924-37: Maximum discharge, about 48,500 second-feet Sept. 5, 1932 (gage height, 21.9 feet), from rating curve extended above 12,000 second-feet; no flow at times.

Remarks.-- Records fair. Discharge for Oct. 1, Jan. 8-16 computed on basis of fragmentary gage-height record. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	137	99	895	804	77	114	36	5.4	4.3	0.7	0.6
2	110	83	130	349	552	76	116	33	5.4	3.8	.6	6.6
3	82	65	415	227	558	78	128	30	7.0	3.2	.6	82
4	26	276	632	170	762	253	205	33	13	2.8	.5	333
5	7.5	287	917	137	871	1,340	290	38	20	2.5	.5	506
6												
7	2.2	422	965	120	621	2,700	261	35	127	2.3	.4	438
8	93	287	1,350	112	396	6,580	248	33	442	1.8	.4	176
9	310	149	4,510	144	287	5,340	222	31	741	1.7	.4	196
10	594	85	5,470	227	235	4,050	142	29	702	3.4	.3	327
11	419	61	3,120	306	198	2,870	102	27	523	6.2	.3	342
12												
13	143	50	2,120	396	170	1,790	84	24	523	7.6	.3	131
14	67	40	979	761	151	796	75	21	230	7.0	.3	61
15	45	34	220	1,650	133	374	68	20	67	8.4	.4	33
16	35	30	112	4,260	122	576	64	20	36	8.2	.4	196
17	25	27	78	7,050	117	1,200	64	66	23	6.4	.4	12
18												
19	20	25	63	5,520	109	3,100	64	67	17	5.0	.6	8.8
20	17	23	55	3,580	103	3,720	62	42	15	4.0	.6	6.7
21	14	48	1,960	97	2,340	59	30	13	3.2	.6	.6	5.4
22	12	21	42	1,100	97	1,160	55	23	12	2.7	.7	4.7
23	11	21	39	607	105	462	49	20	11	2.4	1.5	4.1
24												
25	9.9	20	36	576	115	282	64	18	10	2.4	2.4	3.8
26	9.0	19	32	576	126	254	82	15	9.2	2.4	1.7	3.4
27	8.6	33	32	803	126	254	81	14	8.6	2.1	1.5	3.1
28	48	60	31	1,290	112	169	86	12	7.2	1.8	1.3	3.0
29	421	72	30	1,410	95	164	96	14	11	1.5	1.4	2.3
30												
31	932	101	30	1,190	87	148	83	12	12	1.3	1.2	2.6
32	1,290	129	258	965	82	136	60	9.4	9.0	1.2	1.1	2.5
33	1,240	98	594	940	80	120	49	7.8	7.0	1.0	.9	2.6
34	1,140	82	648	671	-	110	43	6.8	5.7	.9	.8	2.7
35	804	126	861	894	-	111	40	6.2	5.0	.8	.7	2.7
36	542	-	1,190	671	-	113	-	5.6	-	.7	.7	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						8,310.0	1,290	2.2	268	16,480		
November.....						2,884	422	19	96.1	5,720		
December.....						25,056	5,470	30	806	49,700		
Calendar year 1936.....						125,225.8	20,800	2.0	342	248,400		
January.....						39,737	7,050	112	1,262	78,820		
February.....						7,309	871	80	261	14,500		
March.....						40,743	6,580	76	1,314	80,810		
April.....						3,166	290	40	106	6,280		
May.....						778.8	87	5.6	25.1	1,640		
June.....						3,617.5	741	5.0	121	7,180		
July.....						103.0	8.4	.7	3.32	204		
August.....						24.2	2.4	.3	.76	48		
September.....						2,722.3	506	.8	90.7	5,400		
Water year 1936-37.....						134,450.6	7,050	.3	368	266,700		

## Brazos Valley Irrigation Co.'s canal near Fulshear, Tex.

Location.- Water-stage recorder, lat. 29°39', long. 95°54', 1 mile below point of diversion and 3 miles south of Fulshear, Fort Bend County.

Records available.- October 1931 to September 1937.

Extremes.- Maximum daily discharge during year, 208 second-feet May 20-22, 26-29, June 2, 14-19, June 26 to July 6; no flow for several months.  
1931-37: Maximum daily discharge, 278 second-feet July 9, 10, 1932; no flow for several months each year.

Remarks.- Records fair. Discharge for May 1-22, May 26 to July 11 computed from record of pumping furnished by American Rice Growers Cooperative Association. Station above all diversions from canal. Flow controlled by pumping plant. Canal diverts from left bank of Brazos River 18 miles above Richmond. Water used for irrigation near Sugarland. Discharge shown is water actually diverted from Brazos River into this canal by pumping.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								22	151	208	188	116
2								77	208	208	143	113
3								104	156	208	140	107
4								104	49	208	137	110
5								104	0	208	137	107
6								104	0	208	143	107
7								104	0	208	162	104
8								104	0	208	194	104
9								84	0	162	152	104
10								0	0	104	143	98
11								0	0	104	143	98
12								32	0	104	143	98
13								37	52	98	143	98
14								0	208	98	155	95
15								0	208	98	188	95
16								0	208	116	146	95
17								0	208	152	134	98
18								119	208	194	140	104
19								182	208	168	140	104
20								208	104	155	140	104
21								208	0	155	162	101
22								208	26	155	181	42
23								207	104	155	137	0
24								207	104	155	104	0
25								207	161	162	101	0
26								208	208	155	104	0
27								208	208	146	104	0
28								208	208	149	104	0
29								208	208	146	104	0
30								147	208	143	110	0
31								104	-	158	116	-
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 1936.....						11,131.4	272	0	30.4	22,090		
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.....						3,505	208	0	113	6,950		
June.....						3,493	208	0	113	6,750		
July.....						4,896	208	98	158	9,710		
August.....						4,338	194	101	140	8,600		
September.....						2,202	116	0	73.4	4,370		
Water year 1936-37.....						18,344	208	0	50.3	36,380		

Richmond Irrigation Co.'s canal near Richmond, Tex.

Location.- Water-stage recorder, lat. 29°34', long. 95°47', 600 feet below crossing of Richmond-Rosenberg highway, about 1½ miles below point of diversion, and 1½ miles west of Richmond, Fort Bend County.

Records available.- October 1931 to September 1937.

Extremes.- Maximum discharge not determined; no flow at times.

1931-37: Maximum discharge not determined; no flow at times.

Remarks.- Records fair except those for Apr. 27 to May 21, which were estimated and are poor. Station above all diversions from canal. Flow controlled by pumping plant. Canal diverts from right bank of Brazos River 6 miles above Richmond. Water used for irrigation south of Richmond.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0		198	98	98	16
2							0		198	98	98	0
3							0		198	104	94	0
4							0		162	102	98	0
5							0		94	102	98	0
6							0		102	102	98	0
7							0		102	98	98	0
8							0		95	94	94	20
9							0		102	98	94	78
10							0		106	98	94	59
11							0	40	105	98	94	49
12							0		88	98	94	58
13							0		76	98	94	57
14							0		98	98	94	35
15							0		105	98	94	27
16							0		102	105	94	9.5
17							0		102	108	94	0
18							0		98	105	94	0
19							0		98	102	94	19
20							0		98	102	94	70
21							0		102	98	94	52
22							0	0	98	98	94	33
23							0	12	98	102	94	0
24							0	102	98	98	94	0
25							0	98	98	98	94	0
26							0	98	98	98	94	0
27							40	88	98	102	47	0
28								136	107	98	23	0
29								174	98	98	26	0
30								198	102	98	29	0
31							-	198	-	98	27	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							C	0	0	0	0	
November.....							0	0	0	0	0	
December.....							0	0	0	0	0	
Calendar year 1936.....							0	0	0	0	0	
January.....							0	0	0	0	0	
February.....							0	0	0	0	0	
March.....							0	0	0	0	0	
April.....							160	-	0	5.3	317	
May.....							1,944	-	0	62.7	3,860	
June.....							3,326	198	76	111	6,600	
July.....							3,092	108	94	99.7	6,130	
August.....							2,619	98	23	84.5	5,190	
September.....							582.5	78	0	19.4	1,160	
Water year 1936-37.....							11,723.5	198	0	32.1	23,260	

## Colorado River at Ballinger, Tex.

Location.-- Water-stage recorder, lat. 31°43'50", long. 99°56'25", at Ballinger-Paint Rock highway bridge in Ballinger, Runnels County, and 2,000 feet above Elm Creek. Zero of gage is 1,593.94 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.-- December 1915 to September 1937.

Average discharge.-- 22 years, 422 second-feet.

Extremes.-- Maximum discharge during year, 9,110 second-feet Aug. 23 (gage height, 9.60 feet); minimum, 3.4 second-feet Aug. 13-19.

1915-37: 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 1864, present site and datum. A stage of about 32.0 feet occurred Aug. 6, 1906, present site and datum (affected by backwater from Elm Creek).

Remarks.-- Records good. Discharge for Oct. 1, 2, Mar. 16-23 computed from fragmentary gage-height record. Some small diversions for irrigation above station, which affect low flow.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	171	76	56	46	30	30	22	626	65	10	70
2	736	160	68	56	46	30	34	22	1,030	34	9.3	56
3	549	140	94	56	48	32	30	20	425	23	7.7	46
4	432	126	94	54	48	36	28	19	1,280	18	6.1	32
5	364	116	91	54	46	36	26	18	827	16	6.1	26
6	313	113	91	54	46	43	26	19	4,210	13	5.0	25
7	268	110	85	51	46	66	26	20	2,750	10	5.0	51
8	235	107	82	51	48	67	25	19	1,120	806	4.2	107
9	216	100	82	51	48	67	26	19	444	336	4.2	62
10	200	100	79	51	48	62	28	23	272	150	3.8	48
11	182	100	76	48	46	48	30	85	166	79	3.6	30
12	167	100	73	48	41	48	30	960	140	38	3.8	22
13	163	97	70	48	43	59	30	1,130	107	26	3.4	32
14	143	94	70	51	41	69	30	1,170	88	20	3.4	30
15	136	91	67	51	41	56	30	403	70	17	3.4	22
16	130	88	67	48	38	51	30	224	59	14	3.4	17
17	123	85	67	46	38	107	25	133	51	12	3.4	15
18	116	85	66	48	36	48	22	94	43	10	3.4	13
19	107	85	66	46	36	48	20	75	38	9.3	3.4	12
20	100	85	62	46	36	46	32	56	34	8.5	3.8	9.3
21	94	82	62	46	34	46	68	48	30	6.5	4.6	8.5
22	97	79	59	48	32	46	54	41	28	6.5	201	7.2
23	1,010	82	59	48	32	46	43	38	25	8.5	6,440	6.6
24	1,400	82	59	48	32	46	30	32	22	8.5	3,170	6.1
25	744	79	59	48	32	41	26	32	20	7.7	1,380	5.0
26	515	79	59	46	32	34	25	28	16	59	712	1,370
27	348	76	59	46	32	32	25	966	17	38	457	520
28	268	76	59	46	30	30	23	1,050	16	26	272	224
29	231	76	59	46	-	32	23	457	90	20	174	120
30	208	76	59	46	-	30	22	272	194	17	126	79
31	186	-	59	46	-	28	-	206	-	13	91	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10,671	1,400	94	351	21,560
November.....	2,940	171	76	98.0	5,830
December.....	2,196	94	59	70.8	4,360
Calendar year 1936.....	242,023.6	54,300	.5	661	480,100
January.....	1,530	56	46	49.4	3,030
February.....	1,122	48	30	40.1	2,230
March.....	1,451	107	28	46.8	2,880
April.....	897	68	20	29.9	1,760
May.....	7,691	1,170	18	248	15,250
June.....	14,240	4,210	16	476	28,240
July.....	1,918.5	606	7.7	61.9	5,810
August.....	13,124.2	6,440	3.4	423	26,030
September.....	3,069.7	1,370	5.0	102	6,090
Water year 1936-37.....	61,050.4	6,440	3.4	167	121,100



## Colorado River near San Saba, Tex.

Location.— Water-stage recorder, lat.  $31^{\circ}12'45''$ , long.  $98^{\circ}34'00''$ , at Red Bluff crossing, 5.7 miles below confluence with San Saba River and 9.2 miles east of San Saba, San Saba County. Zero of gage is 1,096.22 feet above mean sea level.

Drainage area.— 30,600 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.— August 1930 to September 1937. October 1915 to October 1922, at site near Chadwick, 1.6 miles upstream. October 1923 to December 1934, at site near Tow, 44 miles downstream.

Average discharge.— 12 years (1916-19, 1920-22, 1930-37), 1,952 second-feet.

Extremes.— Maximum discharge during year, 115,000 second-feet Oct. 1 (gage height, 45.9 feet); minimum, 109 second-feet Aug. 13-15.

1915-22, 1930-37: Maximum discharge, 219,000 second-feet Sept. 21, 1936 (gage height, 56.7 feet, from floodmarks), by slope-area method; minimum, 1.5 second-feet Aug. 22, 23, 1918.

Maximum stage known, about 57.5 feet, present datum, Sept. 25, 1900 (discharge, 234,000 second-feet, from rating curve extended above 120,000 second-feet on basis of slope-area measurement of flood of Sept. 21, 1936).

Remarks.— Records good. Discharge for Oct. 3 to Nov. 16, Dec. 12 to Feb. 11, May 31 to June 14 and Aug. 28-31 computed from graph drawn on basis of one or more daily gage readings. Diversions above station for irrigation and municipal supply. Flow partly regulated by storage in reservoirs on Pecan Bayou and Concho River.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100,000	2,140	1,380	1,110	978	599	526	346	11,300	220	142	548
2	50,800	2,000	2,090	912	912	576	521	356	6,750	220	136	978
3	10,800	2,140	3,960	912	855	571	515	342	4,510	325	130	554
4	8,110	2,100	2,220	912	824	744	515	333	8,740	369	130	452
5	5,340	1,800	1,490	1,040	818	861	510	328	14,700	328	128	406
6	4,640	1,640	1,520	1,010	812	868	521	323	7,560	278	122	408
7	4,810	1,560	1,640	1,010	806	806	522	319	14,300	255	122	369
8	8,080	1,490	1,600	945	787	720	532	310	16,800	232	122	261
9	5,760	1,490	1,520	912	912	708	504	310	9,010	220	122	274
10	3,740	1,420	1,520	874	945	673	488	314	3,600	220	117	388
11	3,080	1,480	1,460	861	880	768	472	980	2,310	257	117	398
12	2,660	1,460	1,420	874	806	799	472	1,100	1,580	1,560	111	291
13	2,320	1,420	1,250	861	726	799	472	1,080	945	818	109	236
14	2,140	1,380	1,240	861	684	768	452	1,680	845	462	109	232
15	2,050	1,380	1,210	880	655	690	442	1,490	708	427	109	216
16	1,960	1,350	1,210	874	644	638	437	1,600	684	412	455	193
17	1,860	1,350	1,170	1,010	638	621	532	1,420	684	351	483	182
18	1,760	1,350	1,170	1,010	632	610	462	1,040	537	310	240	164
19	1,760	1,350	1,170	1,010	627	610	422	684	442	278	171	188
20	1,720	1,350	1,140	945	621	604	358	499	403	261	162	152
21	1,600	1,380	1,010	912	610	588	427	403	365	240	142	145
22	1,600	1,350	912	861	599	588	543	345	328	337	130	142
23	2,100	1,350	912	849	673	696	483	314	305	356	125	142
24	2,840	1,420	1,040	837	744	726	417	282	278	500	125	152
25	5,560	1,490	1,240	837	744	690	403	253	269	360	1,840	152
26	10,300	1,460	1,280	837	732	621	393	236	261	248	4,440	148
27	4,580	1,420	1,240	837	702	582	393	224	248	200	1,960	145
28	3,280	1,420	1,140	837	638	548	388	216	244	175	1,210	142
29	3,280	1,460	1,010	837	-	537	374	212	236	165	812	148
30	3,080	1,380	978	978	-	526	360	224	232	148	821	562
31	2,460	-	945	1,010	-	526	-	4,880	-	145	593	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	264,090		100,000		1,600		8,519		523,800			
November.....	45,760		2,140		1,350		1,525		90,760			
December.....	45,117		3,960		912		1,391		85,620			
Calendar year 1936.....	1,420,299		202,000		40		3,881		2,817,000			
January.....	28,455		1,110		837		918		56,440			
February.....	21,004		978		599		750		41,660			
March.....	20,661		868		526		666		40,980			
April.....	13,946		582		360		465		27,660			
May.....	22,434		4,880		212		724		44,600			
June.....	109,172		15,800		232		3,639		216,500			
July.....	10,665		1,560		145		344		21,150			
August.....	15,525		4,440		109		501		30,790			
September.....	8,740		978		142		291		17,340			
Water year 1936-37.....	603,569		100,000		109		1,654		1,197,000			

## Colorado River at Austin, Tex.

Location.- Water-stage recorder, lat. 30°16', long. 97°45', at Congress Avenue viaduct in Austin, Travis County, 1 mile below mouth of Barton Creek. Zero of gage is 421.86 feet above mean sea level (general adjustment of 1929).

Drainage area.- 38,150 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.- February 1898 to September 1937.

Average discharge.- 39 years, 2,721 second-feet.

Extremes.- Maximum discharge during year, 98,200 second-feet Oct. 2 (gage height, 19.5 feet); minimum, 179 second-feet Sept. 1.

1898-1937: Maximum discharge, 481,000 second-feet June 15, 1935 (gage-height, 41.2 feet, from floodmarks on gage structure at downstream side of bridge pier, or 42.00 feet, from U. S. Weather Bureau wire-weight gage on downstream side of bridge at center of first span from left bank, both gages to same datum); minimum, 13 second-feet Aug. 18, 1918.

Maximum stage known, about 43.0 feet July 7, 1869.

Remarks.- Records good. Discharge for Sept. 2-9 computed from once-daily readings of U. S. Weather Bureau gage. About 36,000 acres irrigated above station. Low-water flow affected by diversions through pumping plant of the City of Austin. Flow partly regulated by storage in Buchanan Reservoir (capacity, 1,000,000 acre-feet; storage began May 20, 1937) and several smaller reservoirs on Pecan Bayou and Concho River.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79,000	7,660	3,110	2,680	2,790	1,660	1,960	1,060	640	561	864	191
2	96,600	6,400	3,110	2,580	2,810	1,660	1,880	984	660	552	1,140	197
3	70,700	5,600	3,110	2,530	2,770	1,620	1,880	956	2,320	552	1,040	310
4	28,400	5,060	3,720	2,420	2,730	1,680	1,820	914	6,240	552	670	228
5	13,400	5,990	6,100	2,360	2,640	1,680	1,720	888	5,100	543	472	265
6	9,600	5,900	5,500	2,280	2,610	10,000	1,660	828	3,660	590	424	253
7	9,770	4,780	7,120	2,300	2,400	8,170	1,580	828	1,320	736	876	234
8	10,300	4,360	6,410	2,490	2,380	6,700	1,540	804	1,510	758	792	344
9	8,650	4,000	4,780	2,530	2,340	4,920	1,470	816	1,210	780	758	440
10	10,800	3,770	4,120	2,510	2,260	3,660	1,460	888	1,060	864	714	393
11	7,870	3,660	3,880	2,600	2,150	3,220	1,470	970	852	7,620	561	351
12	6,010	3,880	3,770	2,810	2,130	2,900	1,430	884	736	5,020	448	291
13	5,600	4,000	3,560	3,330	2,210	2,770	1,380	828	630	2,380	393	265
14	5,020	3,660	3,560	3,110	2,090	2,750	1,350	758	570	1,490	386	246
15	4,420	3,440	3,440	2,960	1,940	3,110	1,400	1,090	570	1,040	386	234
16	4,280	3,330	3,330	2,790	1,840	3,110	1,400	1,340	780	804	424	317
17	4,150	3,220	3,220	2,660	1,720	2,880	1,380	1,740	714	725	400	317
18	4,150	3,110	3,110	2,640	1,660	2,640	1,340	1,740	552	650	386	379
19	4,020	3,000	3,110	2,620	1,600	2,530	1,290	1,820	464	640	386	416
20	3,760	3,000	2,980	2,700	1,680	2,470	1,240	1,760	543	590	372	379
21	3,520	2,960	2,900	2,730	1,600	2,360	1,460	1,540	736	570	337	317
22	2,520	2,920	2,790	2,730	1,680	2,300	1,600	1,310	725	552	304	284
23	3,400	2,920	2,750	2,700	1,640	2,320	1,490	984	703	534	337	272
24	3,380	2,920	2,700	2,640	1,540	2,400	1,360	747	630	525	436	269
25	6,700	3,000	2,510	2,560	1,520	2,490	1,330	472	570	516	455	269
26	6,900	3,000	2,510	2,580	1,520	2,490	1,450	516	561	610	386	234
27	10,100	3,000	3,290	2,580	1,560	2,380	1,340	552	552	650	379	234
28	11,900	2,940	4,510	2,620	1,640	2,280	1,220	472	570	640	365	234
29	7,220	2,920	3,770	2,810	-	2,150	1,130	472	552	650	304	215
30	9,360	3,110	3,220	2,940	-	3,020	1,080	516	561	736	253	197
31	8,660	-	2,960	2,930	-	1,980	-	590	-	747	215	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	456,260		96,600		2,380		14,780		908,900			
November.....	117,330		7,660		2,920		3,911		232,700			
December.....	114,930		7,120		2,610		3,707		228,000			
Calendar year 1936.....	2,528,697		166,000		154		6,909		5,016,000			
January.....	82,610		3,330		2,280		2,665		163,900			
February.....	57,150		2,610		1,520		2,041		113,400			
March.....	95,400		10,000		1,580		3,077		189,200			
April.....	44,120		1,960		1,080		1,471		87,510			
May.....	30,047		1,920		472		969		59,600			
June.....	36,561		6,240		464		1,220		72,580			
July.....	34,177		7,620		516		1,102		67,790			
August.....	15,663		1,240		215		505		31,070			
September.....	8,555		440		191		285		16,970			
Water year 1936-37.....	1,094,833		96,600		191		3,000		2,172,000			

## Evaporation at Austin, Tex.

Location.- Standard class A Weather-Bureau station, lat. 30°16', long. 97°44', in State Capitol grounds, at Austin, Travis County. Evaporation pan is 544 feet above mean sea level.

Records available.- June 1930 to September 1937. April 1916 to June 1930 at Hill ranch, 5 miles southeast of present site.

Equipment.- One standard class A Weather-Bureau 4-foot circular land pan with auxiliary equipment consisting of hook gage, rain gage, anemometer, and maximum and minimum thermometers.

Remarks.- Records fair. Observations made daily at 8:00 a.m. Monthly computations made by U. S. Weather Bureau.

## Evaporation at Austin, Tex., 1936-37

Month	Temperature			Mean relative humidity (percent)	Average wind velocity (miles per hour)	Rainfall (inches)	Evaporation (inches)
	Mean maximum	Mean minimum	Mean				
October.....	76.9 <sup>a</sup>	53.5 <sup>a</sup>	65.2 <sup>a</sup>	68	0.8	3.09	3.805
November.....	65.5 <sup>a</sup>	44.4 <sup>g</sup>	55.0 <sup>d</sup>	66	1.0	1.84	2.436
December.....	65.2 <sup>a</sup>	42.9	53.3	71	1.1	2.06	1.963
Calendar year 1936	78.6	55.5	67.0	64	1.3	40.96	61.232
January.....	55.6 <sup>b</sup>	38.7 <sup>d</sup>	47.2 <sup>c</sup>	83	1.4	2.67	1.057
February.....	65.7	43.1	54.4	57	1.8	.20	3.128
March.....	67.3 <sup>c</sup>	45.3 <sup>b</sup>	56.3 <sup>b</sup>	65	1.8	3.84	3.409
April.....	82.2 <sup>a</sup>	55.6 <sup>b</sup>	68.9 <sup>b</sup>	57	1.9	.67	5.966
May.....	88.2 <sup>a</sup>	64.1 <sup>a</sup>	76.2 <sup>a</sup>	57	1.7	2.62	7.981
June.....	92.2	71.5	81.8	64	1.3	5.26	7.067
July.....	96.4 <sup>a</sup>	75.5 <sup>a</sup>	85.0 <sup>a</sup>	60	1.3	.71	9.334
August.....	98.5	78.8	86.2	57	1.1	3.90	9.561
September.....	93.1 <sup>a</sup>	72.2 <sup>a</sup>	82.6 <sup>a</sup>	56	.7	2.36	6.869
Water year 1936-37	78.9	56.5	67.7	63	1.3	29.22	62.576

Note.- Figures of mean-minimum and monthly mean temperatures for December and of relative humidity for entire year are for U. S. Weather Bureau station located 2,500 feet away, 44 feet above ground, and 31 feet above evaporation pan. U. S. Weather Bureau office moved to present location Oct. 8, 1936. Distance and elevation to site of U. S. Weather Bureau office prior to Oct. 8, 1936, as previously published were slightly in error. Superior letters following figures indicate number of days of missing record: a, 1 day; b, 2 days; c, 3 days; etc.

## Colorado River at Smithville, Tex.

Location.— Water-stage recorder, lat. 30°01', long. 97°10', 1,200 feet above highway bridge at Smithville, Bastrop County. Zero of gage, 270.14 feet above mean sea level.

Drainage area.— 39,850 square miles, of which about 11,800 square miles is probably non-contributing.

Records available.— July 1930 to September 1937.

Extremes.— Maximum discharge during year, 95,000 second-feet Oct. 3 (gage height, 24.72 feet); minimum, 303 second-feet Sept. 30.

1930-37: Maximum discharge, 305,000 second-feet, June 18, 1935 (gage height, 42.5 feet, from floodmarks), by slope-area method; minimum, 78 second-feet Nov. 2, 1934.

Maximum stage known, about 47.4 feet, sometime in December 1913.

Remarks.— Records good. Discharge for Oct. 11 to Nov. 25, Dec. 1 to Jan. 20, Mar. 2-14, Apr. 14-22 computed from graph drawn on basis of once-daily gage readings furnished by U. S. Weather Bureau. Diversions above station for irrigation and municipal uses. Regulation same as that for Colorado River at Austin.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76,100	8,700	3,640	3,320	3,240	1,560	2,300	1,350	6,450	720	720	401
2	81,800	7,740	3,900	3,080	2,860	1,560	2,230	1,270	3,760	704	746	372
3	93,400	6,660	4,280	2,790	2,860	1,560	2,160	1,210	2,120	680	856	348
4	75,700	5,760	4,280	2,580	2,930	1,900	2,090	1,170	6,440	664	1,090	325
5	23,000	5,400	4,120	2,510	2,860	4,560	2,020	1,130	12,600	648	998	406
6	13,200	6,300	5,240	2,510	2,790	5,970	1,960	1,080	5,760	640	762	410
7	12,000	5,940	6,300	2,510	2,650	9,500	1,900	1,040	4,760	628	598	356
8	11,300	5,240	6,480	2,580	2,580	7,740	1,840	998	3,080	664	526	392
9	10,600	4,760	6,480	2,720	2,580	6,840	1,840	980	2,160	822	796	356
10	9,320	4,440	5,240	2,790	2,440	5,400	1,780	962	1,720	682	639	356
11	10,400	4,280	4,760	2,860	2,370	4,440	1,720	926	1,560	926	814	410
12	8,300	4,120	4,280	3,640	2,300	3,800	1,670	862	1,560	4,080	788	446
13	7,020	4,280	4,120	4,120	2,250	3,480	1,670	1,020	1,190	5,310	664	414
14	6,140	4,600	3,880	4,120	2,300	3,400	1,670	1,010	1,040	2,930	570	376
15	5,820	4,280	3,800	3,880	2,300	3,320	1,670	944	935	1,960	518	348
16	5,500	3,880	3,640	3,560	2,300	3,400	1,620	873	856	1,510	508	340
17	5,180	3,720	3,400	3,320	2,160	3,640	1,560	1,200	822	1,170	498	329
18	4,860	3,560	3,320	3,160	2,020	3,480	1,510	1,480	969	962	516	329
19	4,700	3,480	3,160	3,000	1,860	3,160	1,460	1,780	935	848	503	368
20	4,550	3,400	3,080	3,000	1,900	3,000	1,410	1,780	605	762	488	372
21	4,250	3,400	2,930	3,160	1,900	2,790	1,360	1,640	704	720	488	423
22	4,110	3,320	2,860	3,240	1,840	2,720	1,510	1,720	704	680	478	419
23	4,110	3,320	2,860	3,160	1,560	2,580	1,780	1,560	690	648	464	388
24	4,110	3,320	2,790	3,080	1,560	3,240	1,780	1,330	926	622	432	364
25	5,340	3,400	2,790	3,000	1,510	3,680	1,670	1,060	999	604	426	344
26	6,140	3,400	2,650	2,930	1,460	2,660	1,510	899	830	592	528	329
27	6,480	3,480	2,720	2,860	1,460	2,860	1,460	754	771	580	610	316
28	7,400	3,480	2,720	2,930	1,460	2,720	1,510	696	737	634	498	310
29	10,200	3,480	4,280	3,320	-	2,580	1,510	720	728	672	473	306
30	7,740	3,560	4,280	3,080	-	2,580	1,410	664	728	680	464	303
31	9,100	-	3,720	3,080	-	2,510	-	672	-	672	469	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						539,870	93,400	4,110	17,420	1,071,000		
November.....						134,700	8,700	3,320	4,490	267,200		
December.....						122,420	6,480	2,650	3,949	242,800		
Calendar year 1936.....						2,600,771	138,000	394	7,106	5,159,000		
January.....						95,890	4,120	2,510	3,093	190,200		
February.....						62,380	3,240	1,460	2,228	123,700		
March.....						113,020	9,500	1,560	3,646	224,200		
April.....						51,680	2,300	1,360	1,719	102,300		
May.....						35,080	1,840	664	1,131	69,540		
June.....						67,259	12,600	704	2,242	133,400		
July.....						34,614	5,310	560	1,117	69,660		
August.....						19,134	1,090	428	617	37,950		
September.....						10,958	446	303	365	21,730		
Water year 1936-37.....						1,286,885	93,400	303	3,526	2,553,000		

## Colorado River near Eagle Lake, Tex.

**Location.**— Water-stage recorder, lat. 29°35', long. 96°25', at Lakeside Irrigation Co.'s pumping plant, 1.2 miles below San Antonio & Aransas Pass Railway bridge, and 5 miles southwest of Eagle Lake, Colorado County. Zero of gage is 139.56 feet above mean sea level.

**Drainage area.**— 40,940 square miles, of which about 11,800 square miles is probably non-contributing.

**Records available.**— September 1930 to September 1937. January 1903 to December 1911 and May 1918 to November 1930 at site at Columbus, 18 miles upstream; records equivalent.

**Extremes.**— Maximum discharge during year, 123,000 second-feet Oct. 2 (gage height, 24.40 feet); minimum, 396 second-feet Sept. 30.

1930-37: Maximum discharge, 177,000 second-feet June 19, 1935 (gage height, 29.45 feet); minimum not determined.

Maximum stage known, about 32.0 feet, present site and datum, in December 1913.

**Remarks.**— Records good. Discharge for June 15 to July 13 computed from graph drawn on basis of once-daily gage readings furnished by Lakeside Irrigation Co.; that for Oct. 18-23, July 20, 21 computed from partial gage-height record. Figures of daily discharge include flow of Lakeside Irrigation Co.'s canal. Diversions above station for irrigation and municipal supply. Regulation same as that for Colorado River at Austin. Lakeside Irrigation Co. furnished records of pumpage diverted through canal.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109,000	8,810	3,430	3,920	2,220	1,880	2,830	1,510	512	851	755	613
2	120,000	9,050	3,500	3,800	3,160	1,860	2,570	1,380	1,580	858	807	720
3	102,000	7,890	3,640	3,160	3,090	1,910	2,450	1,340	5,370	844	832	659
4	95,100	6,860	3,920	3,020	2,860	1,970	2,390	1,590	2,520	766	844	551
5	93,200	6,160	4,200	2,900	2,960	2,580	2,390	1,250	4,470	760	914	529
6	41,300	5,670	3,920	2,830	2,960	5,670	2,270	1,280	11,300	740	1,090	430
7	22,700	5,670	4,920	2,830	2,960	6,680	2,150	1,200	6,090	721	1,160	474
8	19,500	5,990	3,990	2,760	2,900	7,260	2,030	1,130	5,020	721	969	546
9	15,200	5,520	5,670	2,830	2,760	7,890	1,970	1,090	3,810	745	806	632
10	13,200	5,070	6,160	2,830	2,640	6,500	1,910	987	2,900	719	728	500
11	11,500	4,770	5,220	2,960	2,640	5,830	1,910	912	2,280	869	774	530
12	12,100	4,770	4,620	2,960	2,570	4,770	1,850	901	1,950	906	909	437
13	10,400	4,340	4,340	3,090	2,510	4,060	1,790	967	1,760	922	909	450
14	8,610	4,340	4,060	3,940	2,450	3,640	1,790	1,380	1,600	4,260	901	520
15	7,670	4,480	4,060	4,200	2,390	3,430	1,790	1,530	1,420	3,820	838	544
16	7,050	4,340	3,920	4,340	2,450	3,290	1,790	1,200	1,260	2,720	779	516
17	6,900	4,200	3,780	3,920	2,390	3,220	1,730	1,030	1,120	2,090	750	284
18	6,160	4,060	3,640	3,800	2,390	3,360	1,730	1,010	1,050	1,680	682	448
19	5,830	3,780	3,500	3,360	2,330	3,360	1,680	1,010	982	1,440	621	435
20	5,520	3,640	3,360	3,360	2,270	3,160	1,680	1,420	1,080	1,170	643	422
21	5,370	3,640	3,290	3,290	2,180	2,960	1,660	1,770	1,050	1,040	600	428
22	5,220	3,500	3,220	3,160	2,090	2,830	1,620	1,870	907	989	614	460
23	4,920	3,450	3,160	3,290	2,030	2,760	1,620	1,800	838	939	637	466
24	4,770	3,430	3,090	3,220	2,030	2,830	1,620	1,710	826	882	597	506
25	4,770	3,360	3,020	3,160	1,970	3,500	1,680	1,660	923	838	618	513
26	4,770	3,360	2,960	3,220	1,910	4,060	1,730	1,500	1,040	600	588	474
27	5,860	3,290	2,960	3,160	2,030	3,430	1,680	1,210	1,040	754	552	435
28	7,250	3,360	2,900	3,220	1,850	2,960	1,560	1,000	981	760	546	422
29	9,280	3,360	3,020	3,780	-	2,860	1,560	658	910	740	695	409
30	11,200	3,450	3,920	3,500	-	4,060	1,740	650	900	766	650	462
31	8,570	-	4,340	3,560	-	3,290	-	777	-	782	600	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	784,720		120,000		4,770		25,310		1,556,000			
November.....	1,570		9,050		3,290		4,780		284,800			
December.....	121,730		6,160		2,900		3,927		241,400			
Calendar year 1937.....	3,095,280		120,000		580		8,457		6,139,000			
January.....	102,570		4,340		2,760		3,309		203,400			
February.....	70,060		3,220		1,850		2,502		139,000			
March.....	117,920		7,890		1,850		3,804		253,900			
April.....	57,190		2,830		1,560		1,906		113,400			
May.....	38,952		1,900		760		1,257		77,280			
June.....	68,069		11,300		812		2,270		135,100			
July.....	36,912		4,260		719		1,191		73,210			
August.....	23,448		1,160		545		756		46,510			
September.....	14,951		720		402		498		29,650			
Water year 1936-37.....	1,880,112		120,000		402		4,329		3,134,000			

## Elm Creek at Ballinger, Tex.

Location.— Water-stage recorder, lat.  $31^{\circ}45'00''$ , long.  $99^{\circ}56'50''$ , 1,000 feet above city water-supply storage dam in Ballinger, Runnels County, and  $1\frac{1}{4}$  miles above confluence with Colorado River. Zero of gage is 1,617.72 feet above mean sea level.

Drainage area.— 458 square miles.

Records available.— April 1932 to September 1937.

Extremes.— Maximum discharge during year, 2,580 second-feet June 6 (gage height, 5.50 feet); no flow at times.

1932-37: 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 above 15,000 second-feet; no flow at times.

Remarks.— Records good above 100 second-feet and poor below. Discharge for Nov. 15-19, Jan. 25 to Feb. 8, Mar. 24-31, Aug. 28 to Sept. 10 computed from fragmentary gage-height record and rainfall data. Low-water flow affected by diversions through Ballinger city pumping plant.

Rating tables, water-year 1936-37 (gage height, in feet, and discharge, in second-feet)

Oct. 1-3, May 5 to Sept. 30

3.8	0	4.3	410
3.9	11	4.4	544
4.0	74	4.5	693
4.1	169	4.7	1,005
4.2	284	5.0	1,550

Oct. 4 to May 4

3.1	0	4.0	80
3.2	.5	4.1	175
3.5	2.5	4.2	288
3.8	4.7	4.3	410
3.9	17	4.4	544

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	7.0	4.5	4.4	2.9	2.2	0.2	0	0	0	0
2	7.0	9.5	8.0	4.5	4.4	3.0	2.1	.2	15	0	0	5.8
3	4.5	4.8	9.5	4.5	4.4	3.1	2.0	0	11	0	0	4.5
4	6.3	4.8	9.5	4.5	4.4	3.4	1.9	0	510	0	0	2.5
5	4.6	5.1	9.5	4.5	4.4	4.0	1.8	0	45	0	0	1.5
6	4.2	5.6	6.3	4.5	4.3	6.3	1.7	0	1,570	0	0	1.0
7	3.4	5.6	7.0	4.5	4.3	22	1.4	0	323	0	0	1.3
8	3.1	4.5	7.0	4.3	4.3	27	.9	0	33	210	0	19
9	3.0	4.5	7.0	4.2	4.3	17	.8	0	7.0	45	0	1.0
10	2.6	5.1	6.3	4.2	4.2	13	.8	0	2.5	16	0	.2
11	2.4	6.3	5.6	4.2	4.1	11	.7	0	1.5	4.5	0	0
12	2.2	6.3	6.3	4.4	4.0	9.5	.8	0	.6	1.5	0	0
13	2.2	7.0	6.3	4.6	3.7	9.2	.9	0	.4	1.0	0	0
14	2.1	6.3	6.3	4.6	3.5	10	.9	0	.2	.4	0	0
15	2.1	6.3	6.3	4.5	3.4	27	1.0	0	.1	0	0	0
16	2.1	6.3	6.3	4.7	3.3	17	1.0	0	0	0	0	0
17	1.9	6.3	5.1	4.6	3.3	10	.9	0	0	0	0	0
18	2.0	6.3	4.4	4.7	3.3	6.3	.7	0	0	0	0	0
19	2.2	6.3	4.1	4.7	3.4	5.0	.7	0	0	0	0	0
20	2.2	5.6	4.6	4.7	2.9	3.6	1.2	0	0	0	0	0
21	2.2	4.7	4.8	4.5	2.1	3.6	1.5	0	0	0	0	0
22	2.3	4.5	4.8	4.4	2.3	3.5	1.7	0	0	0	0	0
23	194	4.6	4.8	4.5	2.5	3.3	1.5	0	0	0	0	0
24	521	4.6	5.1	4.5	2.6	3.1	1.1	0	0	0	0	0
25	72	4.7	6.3	4.5	2.6	2.9	1.0	0	0	0	0	0
26	33	4.8	7.0	4.5	2.7	2.7	.9	0	0	0	0	0
27	22	5.1	7.0	4.5	2.8	2.5	.8	0	0	0	0	0
28	13	6.3	7.0	4.5	2.8	2.4	.7	0	0	0	0	0
29	13	6.3	8.0	4.5	-	2.3	.6	0	0	0	340	0
30	11	6.3	4.6	4.5	-	2.2	.4	0	0	0	0	0
31	11	-	4.4	4.4	-	2.1	-	0	-	0	-	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						965.6	521	1.9	31.1	1,920		
November.....						175.4	11	4.5	5.85	348		
December.....						196.5	9.5	4.4	6.34	390		
Calendar year 1936.....						15,870.1	6,450	0	43.4	31,480		
January.....						139.4	4.8	4.2	4.50	276		
February.....						98.7	4.4	2.1	3.52	196		
March.....						241.0	27	2.1	7.77	478		
April.....						34.6	2.2	.4	1.15	69		
May.....						.4	.2	0	.01	.8		
June.....						2,519.3	1,570	0	64.0	5,000		
July.....						278.4	210	0	8.98	552		
August.....						1,360	-	0	43.9	2,700		
September.....						36.8	19	0	1.23	73		
Water year 1936-37.....						6,046.1	1,570	0	16.6	12,000		

## South Concho River at Christoval, Tex.

Location.- Water-stage recorder, lat. 31°13', long. 100°30', at Panhandle & Santa Fe Railway bridge in Christoval, Tom Green County. Zero 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 1937.

Extremes.- Maximum discharge during year, 13,000 second-feet May 10 (gage height, 11.00 feet); minimum, 8.8 second-feet Aug. 12-23.

1930-37: Maximum discharge, 80,100 second-feet Sept. 17, 1936 (gage height, 20.6 feet), by slope-area method; 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 2.5 feet higher than flood of Sept. 17, 1936, at point 0.5 mile downstream from gage.

Remarks.- Records fair. Low flow materially affected by diversions to irrigation canal 600 feet upstream. See miscellaneous discharge measurements of canal at end of this paper.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	34	36	33	36	27	32	20	26	13	15	13
2	66	34	35	33	37	28	29	19	26	13	15	17
3	64	33	35	33	37	27	30	19	26	14	15	13
4	64	32	35	33	37	29	29	19	26	14	15	12
5	64	31	34	34	37	30	29	19	25	14	15	11
6	64	31	33	40	38	30	28	20	26	13	15	11
7	63	31	32	41	38	32	27	20	24	12	15	12
8	62	27	30	41	38	34	22	19	18	12	15	12
9	62	26	29	40	33	33	22	21	14	14	15	12
10	60	27	29	41	31	34	22	2,090	13	18	15	12
11	59	33	30	41	33	35	22	88	13	15	13	13
12	57	34	29	40	34	35	22	34	13	14	8.8	13
13	56	34	29	40	36	35	22	64	13	14	8.8	13
14	55	34	30	37	37	35	22	32	13	14	8.8	13
15	54	34	31	35	36	31	22	24	13	14	8.8	13
16	53	33	32	35	36	29	21	23	13	14	8.8	13
17	52	33	33	35	34	30	21	24	12	13	8.8	13
18	52	34	34	35	33	30	21	24	12	13	8.8	13
19	49	35	34	35	31	30	21	24	12	13	8.8	13
20	48	33	34	36	30	31	22	24	12	14	8.8	13
21	47	33	35	36	27	31	21	24	13	15	8.8	13
22	44	33	36	35	26	32	21	25	13	15	8.8	13
23	44	35	35	36	30	31	21	25	13	16	8.8	13
24	44	35	36	36	26	31	20	24	13	16	9.6	14
25	42	35	36	36	27	32	20	26	13	16	11	87
26	40	35	36	36	26	32	20	26	13	16	11	82
27	38	35	37	36	27	33	20	26	13	16	11	19
28	36	36	36	36	27	33	20	26	13	16	11	15
29	37	36	35	36	-	33	20	27	14	16	11	12
30	37	36	35	37	-	33	20	27	14	16	11	12
31	36	-	34	36	-	33	-	27	-	16	12	-
Month		Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet		
October.....		1,621		70		36		52.5		3,220		
November.....		992		36		26		33.1		1,970		
December.....		1,035		37		29		33.4		2,050		
Calendar year 1936.....		77,109.5		24,100		3.0		211		153,000		
January.....		1,134		41		33		36.6		2,250		
February.....		921		38		26		32.9		1,830		
March.....		979		35		27		31.6		1,940		
April.....		689		32		20		23.0		1,370		
May.....		2,910		2,090		19		93.9		5,770		
June.....		482		26		12		16.1		956		
July.....		449		18		12		14.5		891		
August.....		356.2		15		8.8		11.5		707		
September.....		475		87		11		15.8		942		
Water year 1936-37.....		12,043.2		2,090		8.8		33.0		23,900		

## South Concho River at San Angelo, Tex.

Location.- Water-stage recorder, lat. 31°26'45", long. 100°25'30", at highway bridge half a mile south of San Angelo, Tom Green County, and 1 mile above confluence with North Concho River. Zero of gage is 1,802.94 feet above mean sea level.

Drainage area.- 2,687 square miles, of which about 152 square miles is probably non-contributing.

Records available.- October 1931 to September 1937.

Extremes.- Maximum discharge during year, 14,000 second-feet June 2 (gage height, 6.37 feet); no flow at times.

1931-37: 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, 23.7 feet, Aug. 6, 1906, not affected by backwater.

Remarks.- Records good except those below 100 second-feet, which are fair. Discharge for Nov. 28 to Dec. 1 computed on basis of records of gate openings at Nasworthy dam. Several diversions above station for irrigation, municipal supply, and power. Flow partly regulated by reservoirs above station (combined capacity, about 11,000 acre-feet), the largest of which is Lake Nasworthy (capacity, 10,500 acre-feet), 6.5 miles upstream.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	612	18	39	274	18	11	209	8.0	142	11	0	0.2
2	520	17	170	154	22	11	26	15	2,580	9.4	0	3.1
3	490	14	297	28	113	15	17	14	300	4.5	0	4.0
4	430	15	285	26	241	18	17	11	527	2.6	0	1.0
5	404	14	285	26	253	94	14	8.0	505	1.6	0	.4
6	430	14	274	28	241	276	12	8.0	520	.8	0	.3
7	417	15	274	26	146	253	9.2	14	583	.2	0	.3
8	391	15	158	30	20	241	9.2	12	1,410	0	0	.3
9	365	18	28	32	17	141	9.2	14	161	0	0	.3
10	365	20	25	37	15	20	11	2,280	17	.6	0	.3
11	378	25	26	152	15	14	14	460	15	2.6	0	.3
12	378	26	285	17	17	14	144	14	2.7	15	.3	
13	404	35	30	285	15	17	12	143	14	2.4	5.8	.3
14	279	32	30	263	17	18	11	227	11	1.7	0	35
15	300	32	32	163	18	20	60	9.2	9.2	1.0	.4	107
16	352	44	35	28	20	20	230	5.9	9.2	.9	.2	4.0
17	209	44	39	17	84	121	31	4.9	9.2	.1	0	1.0
18	265	46	145	17	265	255	15	3.2	11	0	130	.3
19	187	163	285	20	276	253	14	6.9	9.2	0	5.4	.3
20	58	285	285	24	276	143	18	1.7	12	0	.5	.3
21	17	274	321	26	253	18	18	.5	9.2	0	.2	.3
22	17	274	285	30	144	12	17	.2	7.0	0	.1	.3
23	24	285	163	32	20	8.0	17	2.1	6.0	0	.1	.3
24	22	274	32	136	14	6.0	30	4.9	4.1	0	.1	.6
25	22	205	28	265	12	8.0	106	4.9	3.3	1.5	.1	3.8
26	23	32	26	265	11	11	11	4.9	2.7	4.2	.5	2.5
27	23	28	26	265	12	12	9.2	3.2	3.3	1.6	.6	1.2
28	23	30	28	50	12	12	11	3.2	10	.4	.2	10
29	21	32	32	20	-	14	8.0	9.2	21	0	.2	5.9
30	20	35	86	17	-	96	7.0	21	14	0	.2	2.5
31	18	-	274	15	-	-	-	3,660	-	0	.2	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				7,464		612	17	241	14,800			
November.....				2,367		285	14	78.9	4,690			
December.....				4,070		321	25	151	8,070			
Calendar year 1936.....				242,314.2		54,400	0	662	480,600			
January.....				3,036		285	15	97.9	6,020			
February.....				2,567		276	11	91.7	5,090			
March.....				2,181.0		276	6.0	70.4	4,330			
April.....				986.8		230	7.0	32.9	1,960			
May.....				7,105.9		3,660	2.2	229	14,090			
June.....				6,939.4		2,560	2.7	231	15,760			
July.....				49.4		11	0	1.59	98			
August.....				159.8		130	0	5.15	317			
September.....				186.4		107	.2	6.21	370			
Water year 1936-37.....				37,110.7		3,660	0	102	73,600			



## Concho River near San Angelo, Tex.

Location.- Water-stage recorder, lat.  $31^{\circ}27'10''$ , long.  $100^{\circ}24'40''$ , half a mile below confluence of North Concho and South Concho Rivers and  $1\frac{1}{2}$  miles southeast of San Angelo, Tom Green County. Zero of gage is 1,776.8 feet above mean sea level. Prior to Oct. 15, 1936, staff gage at same site and datum.

Drainage area.- 4,492 square miles, of which about 275 square miles is probably non-contributing.

Records available.- September 1915 to September 1937.

Average discharge.- 22 years, 199 second-feet.

Extremes.- Maximum discharge during year, 20,900 second-feet June 2 (gage height, 21.22 feet); minimum, 1.8 second-feet Aug. 17 and Sept. 24.  
1915-37: 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).

Remarks.- Records good except those for Apr. 25-30, May 31 to June 7, Aug. 6-10, which were computed on basis of records for South Concho River at San Angelo and North Concho River near Carlsbad and are fair. Discharge for Oct. 1-15, Apr. 2-10 computed from graph drawn on basis of one or more gage readings daily. Many diversions above station for municipal supply and irrigation. 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 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	766	61	66	308	45	32	290	21	1,900	15	3.9	3.6	
2	632	60	242	280	49	35	112	20		14	3.9	5.1	
3	567	58	335	56	144	40	160	19		11	3.6	6.1	
4	514	57	332	48	294	51	160	19		9.7	3.4	4.2	
5	471	54	325	47	291	125	146	18		8.8	2.9	3.2	
6	451	52	318	48	284	340	85	19	1,410	8.1	2.9	3.4	
7	455	51	311	49	191	318	44	23		8.1	2.9	3.6	
8	447	51	196	51	42	510	26	22		7.4	2.9	3.2	
9	432	51	57	53	38	200	18	23		176	9.2	2.9	2.9
10	417	51	53	56	36	49	31	2,040		39	133	3.2	2.7
11	417	51	52	119	37	40	29	520	33	43	2.9	2.4	
12	420	53	53	315	39	39	25	182	30	18	8.3	2.3	
13	402	57	57	304	39	44	19	151	29	15	12	2.1	
14	398	58	58	298	41	40	19	272	27	13	3.2	16	
15	398	60	61	239	42	36	32	21	24	11	2.9	112	
16	387	66	64	51	45	39	290	16	24	9.7	2.9	5.4	
17	257	71	69	44	112	140	182	15	22	8.5	2.1	3.4	
18	304	72	186	43	325	310	39	13	21	7.8	126	2.4	
19	253	177	325	42	321	304	34	16	21	7.1	10	2.1	
20	126	328	318	44	310	183	39	13	22	5.7	3.9	1.9	
21	72	321	334	46	304	40	35	11	21	5.2	2.9	1.9	
22	74	315	308	53	206	33	33	9.7	18	5.4	2.9	2.3	
23	197	318	183	56	42	32	21	10	17	5.4	2.6	2.1	
24	357	311	54	142	34	29	19	12	18	5.7	2.6	104	
25	145	268	52	308	31	28	129	11	17	5.4	3.4	37	
26	94	64	52	298	31	29	33	21	15	7.8	4.2	7.8	
27	79	58	52	291	31	30	19	18	15	6.4	4.6	5.7	
28	74	61	53	99	31	32	19	13	29	5.2	4.2	7.8	
29	71	61	57	44	-	33	19	15	28	4.2	4.2	8.1	
30	66	63	133	42	-	34	19	93	18	5.6	4.2	4.6	
31	63	-	315	42	-	116	-	4,000	-	4.2	4.2	-	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....						9,806	766	63	316	19,450			
November.....						3,379	328	51	113	6,700			
December.....						5,071	335	52	164	10,060			
Calendar year 1936.....						449,740.2	131,000	.3	1,229	892,006			
January.....						3,896	315	42	126	7,730			
February.....						3,435	325	31	123	6,810			
March.....						3,111	340	28	100	6,170			
April.....						2,126	290	18	70.9	4,220			
May.....						7,656.7	4,000	9.7	247	15,190			
June.....						15,374	-	15	512	30,490			
July.....						423.6	133	4.2	13.7	840			
August.....						246.7	126	2.1	7.96	489			
September.....						369.3	112	1.9	12.3	752			
Water year 1936-37.....						54,894.3	-	1.9	150	108,900			

## Concho River near Paint Rock, Tex.

Location.- Staff gage, lat.  $31^{\circ}31'$ , long.  $99^{\circ}55'$ , 1,000 feet below Paint Rock-Ballinger highway bridge and a quarter of a mile north of Paint Rock, Concho County. Zero of gage is 1,574.43 feet above mean sea level (general adjustment of 1929). Prior to Oct. 1, 1936, at site 1.6 miles upstream; zero of gage, 1,587.59 feet above mean sea level (general adjustment of 1929).

Drainage area.- 5,538 square miles, of which about 275 square miles is probably non-contributing.

Records available.- September 1915 to September 1937.

Average discharge.- 22 years, 287 second-feet.

Extremes.- Maximum discharge during year, 16,100 second-feet June 2 (gage height, 20.10 feet, from graph based on gage readings); minimum, 8.3 second-feet Aug. 15 and Sept. 25 (gage height, 10.32 feet).

1915-37: Maximum discharge, 301,000 second-feet Sept. 17, 1936 (gage height, 43.4 feet, from floodmarks, present site and datum), 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 except during flood periods, when it was usually read twice daily. Many diversions above station for irrigation and municipal supply. Low-water flow materially affected by diversions and storage above station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

10.3	7.0	12.1	196	15.0	3,800
10.6	27.5	12.4	330	16.0	5,900
11.0	88	12.8	610	17.0	8,190
11.5	100	13.2	1,030		
11.9	146	14.0	2,100		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,460	154	125	331	96	78	85	54	808	77	19	15
2	1,130	148	170	348	96	80	288	53	6,170	58	18	20
3	955	142	287	280	101	81	144	48	3,120	48	17	21
4	900	132	397	128	121	86	91	49	1,130	44	16	18
5	800	132	403	107	330	107	74	50	1,130	42	15	16
6	750	132	390	104	354	117	70	49	2,490	35	15	17
7	900	131	390	101	330	348	68	50	1,260	32	14	36
8	700	127	384	100	270	330	66	48	2,310	31	14	22
9	655	124	282	100	120	330	67	50	640	30	13	16
10	655	130	140	102	96	266	69	60	292	39	11	14
11	456	129	120	105	90	127	65	1,810	133	131	10	14
12	456	126	116	116	86	100	62	570	97	136	9.6	12
13	570	126	115	354	64	90	66	1,200	86	74	9.6	10
14	570	127	114	360	84	86	66	800	78	55	9.0	10
15	378	129	117	354	84	84	59	355	74	46	8.3	10
16	529	129	118	265	84	82	57	119	70	42	12	10
17	492	137	119	140	84	82	225	78	67	36	18	55
18	390	136	119	107	89	92	162	65	64	33	17	40
19	436	138	129	100	298	315	93	58	62	30	38	28
20	366	170	192	99	330	309	94	51	58	29	99	21
21	242	390	362	98	320	254	95	49	56	28	71	18
22	178	397	416	98	309	116	80	50	56	31	47	14
23	312	403	348	100	266	87	72	46	57	28	36	12
24	390	390	257	105	118	76	65	42	51	30	27	10
25	410	378	138	112	87	70	59	54	45	26	21	8.3
26	263	356	118	336	80	66	104	45	42	18	17	120
27	200	172	115	354	76	64	91	42	44	23	14	58
28	178	136	111	348	76	66	67	42	43	22	13	39
29	169	132	111	198	-	66	62	61	269	22	13	28
30	166	129	109	114	-	69	57	60	134	23	13	23
31	162	-	117	100	-	72	-	1,620	-	20	14	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					16,218	1,460	182	583	32,170			
November.....					5,562	403	124	185	11,030			
December.....					6,429	416	109	207	12,750			
Calendar year 1936.....					559,132.7	154,000	0	1,530	1,109,000			
January.....					5,684	360	98	183	11,270			
February.....					4,559	354	76	163	9,040			
March.....					4,198	348	64	135	8,320			
April.....					2,723	288	57	90.8	5,400			
May.....					7,708	1,810	42	249	15,290			
June.....					20,936	6,170	42	698	41,530			
July.....					1,319	136	18	42.5	2,620			
August.....					668.5	99	8.3	21.6	1,330			
September.....					735.3	120	8.3	24.5	1,460			
Water year 1936-37.....					76,738.8	6,170	8.3	210	152,200			

## Middle Concho River near Tankersly, Tex.

Location.- Water-stage recorder, lat. 31°22'35", long. 100°36'50", at Twelvemile Bridge, 3 miles northeast of Tankersly, Tom Green County, and 9½ miles above mouth of Spring Creek. Zero of gage is 1,919.5 feet above mean sea level.

Drainage area.- 1,280 square miles, of which about 152 square miles is probably non-contributing.

Records available.- February 1930 to September 1937.

Extremes.- Maximum discharge during year, 15,800 second-feet May 31 (gage height, 21.90 feet); no flow at times.

1930-37: 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 sometime in April 1922.

Remarks.- Records good except those above 10,000 second-feet, which are poor. Small diversions for irrigation above station, which affect low flow.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

2.0	0.9	4.0	265
2.2	3.2	4.5	490
2.4	6.3	5.0	595
2.6	11.2	6.0	1,050
2.8	19	7.0	1,580
3.0	31	8.0	1,770
3.2	52	9.0	2,270
3.4	89	10.0	2,820
3.6	141	11.0	3,400

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	203	28	19	14	13	11	11	5.4	252	1.1	0	4.2
2	147	27	23	15	11	11	10	9.0	3,080	1.1	0	4.1
3	117	24	24	15	10	11	9.8	16	421	.9	0	.3
4	94	23	22	14	11	15	10	16	224	.8	0	0
5	81	23	22	14	13	17	10	16	299	.7	0	0
6	101	23	20	14	13	30	9.5	14	125	.6	0	0
7	82	23	20	14	12	34	9.2	13	873	.6	0	0
8	84	22	19	14	12	26	7.6	8.7	226	.5	0	0
9	51	22	16	14	13	22	7.6	4.8	78	.6	0	0
10	47	22	18	13	13	20	9.2	6.0	47	1.5	0	0
11	45	22	18	13	12	18	8.4	7.1	36	1.7	0	0
12	42	22	17	13	12	17	8.2	4.5	30	.8	0	0
13	39	22	17	9.8	13	19	6.5	55	24	.5	0	0
14	37	22	17	10	13	16	7.1	21	21	.2	0	0
15	36	21	17	20	14	15	7.4	10	17	.1	0	0
16	36	21	17	10	15	15	7.4	7.8	15	0	0	0
17	34	21	17	12	14	15	7.1	6.7	13	0	0	0
18	34	21	16	15	13	14	7.1	5.8	12	0	0	0
19	32	22	16	9.0	12	14	6.9	4.9	10	0	0	0
20	30	21	16	9.0	11	13	14	4.3	9.0	0	0	0
21	29	20	16	9.8	10	13	12	3.9	7.6	0	127	0
22	30	20	16	12	11	13	12	3.3	6.1	0	82	0
23	42	20	16	12	9.5	14	10	3.3	4.6	0	11	0
24	41	19	16	13	8.7	12	8.4	3.2	3.8	0	4.2	0
25	60	19	16	12	8.7	10	7.4	1.7	2.8	0	2.0	0
26	44	19	16	12	10	10	6.9	1.4	2.2	0	1.0	0
27	36	19	16	14	11	10	6.9	1.6	2.3	0	.3	0
28	33	19	16	14	12	11	6.5	1.7	2.9	0	0	0
29	31	19	16	13	-	11	6.3	2.6	2.2	0	0	0
30	30	19	16	13	-	11	5.8	109	1.4	0	0	0
31	28	-	15	13	-	11	-	2,680	-	0	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,726	203	28	55.7	3,420		
November.....						845	28	19	21.5	1,280		
December.....						545	24	15	17.6	1,080		
Calendar year 1936.....						74,548.3	25,600	0	204	147,800		
January.....						399.6	20	9.0	12.9	793		
February.....						331.9	15	8.7	11.9	558		
March.....						479	34	10	15.5	950		
April.....						255.2	14	5.8	8.51	506		
May.....						3,055.7	2,680	1.4	98.6	6,060		
June.....						5,647.9	3,080	1.4	188	11,200		
July.....						11.7	1.7	0	.38	23		
August.....						227.5	127	0	7.34	451		
September.....						8.6	4.2	0	.29	17		
Water year 1936-37.....						13,333.1	3,080	0	36.5	26,440		

## Spring Creek near Tankersly, Tex.

Location.- Water-stage recorder, lat. 31°21'30", long. 100°32'05", 2½ miles above confluence with Middle Concho River and 6½ miles east of Tankersly, Tom Green County. Zero of gage is 1,874.6 feet above mean sea level.

Drainage area.- 734 square miles.

Records available.- February 1930 to September 1937.

Extremes.- Maximum discharge during year, 2,800 second-feet June 7 (gage height, 7.90 feet); no flow Aug. 29-31 and Sept. 6-28.  
1930-37: Maximum discharge, 23,900 second-feet Sept. 17, 1936 (gage height, 20.3 feet); no flow at times.

Remarks.- Records good. Several small diversions above station for irrigation.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 22 to Nov. 30)

1.1	0	2.2	50.8
1.3	1.5	2.4	83.0
1.5	4.1	2.6	135
1.7	8.0	3.0	260
1.8	11.8	4.0	585
1.9	18.2	4.5	765
2.0	27.2	5.0	983

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	43	41	24	35	16	11	2.3	18	1.2	0.6	0.2
2	83	43	54	25	37	12	8.6	2.2	14	1.1	.6	.3
3	81	39	51	25	37	9.6	8.3	2.1	21	1.0	.7	.1
4	78	39	42	25	35	15	8.6	2.1	65	1.0	.7	.1
5	76	41	39	26	35	22	8.6	2.0	28	1.0	.6	.1
6	74	42	38	25	37	33	7.6	2.1	18	.9	.5	0
7	69	42	37	24	42	28	4.6	2.2	840	.8	.5	0
8	67	42	37	25	41	20	3.8	4.9	130	.7	.4	0
9	67	42	37	26	33	15	3.4	7.6	57	.7	.4	0
10	64	42	37	30	28	13	3.1	7.6	42	2.5	.3	0
11	63	42	37	32	26	14	3.1	9.3	35	1.6	.2	0
12	63	42	37	33	24	12	3.4	9.3	27	1.0	.2	0
13	60	41	37	30	20	14	3.1	160	25	1.0	.2	0
14	60	41	37	29	18	13	3.1	51	24	1.0	.2	0
15	60	39	37	28	18	12	2.8	24	22	.8	.2	0
16	60	38	38	27	23	13	4.6	17	15	.8	.1	0
17	60	39	37	29	24	14	2.8	14	11	.7	.1	0
18	63	38	36	29	21	14	2.5	11	9.0	.7	.1	0
19	60	37	36	29	24	12	2.5	10	7.3	.7	.1	0
20	57	37	38	30	25	12	2.7	9.6	5.6	.8	.1	0
21	55	37	38	30	21	11	2.3	9.0	4.1	.8	.2	0
22	54	37	37	33	19	11	2.2	7.6	3.0	.9	.1	0
23	78	39	36	33	20	14	2.5	5.6	2.5	.8	.1	0
24	58	39	36	34	19	12	2.7	4.0	1.3	.9	.1	0
25	51	37	32	32	17	9.6	2.8	3.8	.9	.9	.1	0
26	46	37	27	30	15	8.6	3.1	3.1	.6	.8	.1	0
27	44	38	28	30	15	7.8	3.8	2.7	1.1	.7	.1	0
28	46	39	29	32	15	7.8	3.7	2.5	.6	.7	.1	0
29	46	41	29	33	-	8.0	3.0	2.5	1.0	.7	0	.1
30	46	41	27	33	-	11	2.6	3.8	1.2	.6	0	.2
31	43	-	24	33	-	12	-	13	-	.6	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,917	85	43	61.8	3,800		
November.....						1,194	43	37	39.8	2,370		
December.....						1,126	54	24	36.3	2,230		
Calendar year 1936.....						25,718.3	6,300	0	70.3	51,010		
January.....						904	34	24	29.2	1,790		
February.....						724	42	15	25.9	1,440		
March.....						426.4	33	7.8	13.8	846		
April.....						126.9	11	2.2	4.23	252		
May.....						407.9	160	2.0	13.2	809		
June.....						1,430.2	840	.6	47.7	2,840		
July.....						28.4	2.5	.6	.92	56		
August.....						7.7	.7	0	.25	15		
September.....						1.1	.3	0	.04	2.2		
Water year 1936-37.....						8,293.6	840	0	22.7	16,450		

## North Concho River near Carlsbad, Tex.

Location.- Water-stage recorder, lat.  $31^{\circ}36'$ , long.  $100^{\circ}40'$ , just above State Sanatorium Dam and 2 miles above Carlsbad, Tom Green County. Zero of gage is 2,000.8 feet above mean sea level (general adjustment of 1929). Prior to Feb. 8, 1937, staff gage at same site and datum.

Drainage area.- 1,529 square miles, of which about 123 square miles is probably noncontributing.

Records available.- March 1924 to September 1937.

Average discharge.- 13 years, 69.0 second-feet.

Extremes.- Maximum discharge during year, 41,400 second-feet June 1 (gage height, 13.85 feet), from rating curve extended above 5,000 second-feet on basis of three measurements by slope-area method; no flow Sept. 21-30.

1924-37: Maximum discharge, 94,600 second-feet Sept. 26, 1936 (gage height, 16.0 feet, from highest floodmarks ever known), by slope-area method; no flow at times.

Remarks.- Records good except those for Nov. 1-30, which were interpolated or computed from partial gage-height record and are fair, and those above 5,000 second-feet, which are poor. Discharge for Oct. 1 to Feb. 7 computed from graph drawn on basis of once-daily gage readings (to half tenths Nov. 1-30). Discharge Mar. 6-16 and Apr. 20-22 computed on basis of partial gage-height record. Diversions by pumping above station affect low-water flow (pump capacity, 40 second-feet). Low-water flow partly regulated by small reservoir above gage.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	23	25	16	16	15	14	10	4,630	5.9	0.4	0.4
2	79	23	35	16	16	15	14	10	2,220	5.9	.4	.4
3	64	23	25	16	16	16	14	10	122	5.3	.5	.4
4	54	22	23	16	16	19	14	9.6	128	4.7	.4	.4
5	51	22	23	16	16	22	13	9.6	78	4.7	.3	.4
6	51	22	23	16	16	26	13	9.5	120	4.1	.4	.4
7	37	22	23	16	16	28	13	9.5	28	3.5	.4	.3
8	37	22	23	16	15	26	13	9.5	22	4.1	.3	.3
9	36	22	22	16	15	23	13	8.6	19	54	.2	.2
10	36	21	22	16	15	23	13	7.8	15	22	.2	.2
11	36	21	20	16	15	23	13	7.8	15	12	.2	.2
12	35	21	20	16	15	23	13	7.0	14	9.7	.1	.1
13	33	21	20	16	15	23	13	10	12	7.3	.1	.1
14	33	21	19	16	15	23	13	9.5	12	5.9	.1	.1
15	32	21	19	16	15	23	13	9.5	11	5.3	.1	.1
16	30	20	19	16	15	23	12	10	9.7	4.7	.1	.1
17	30	20	19	16	15	25	12	10	9.7	4.1	.1	.1
18	29	20	19	16	15	28	12	9.5	9.7	4.1	.1	.1
19	28	20	18	16	15	28	11	9.5	8.9	3.5	.2	.1
20	28	20	18	16	15	28	11	9.5	8.9	3.0	.4	.1
21	26	20	16	16	15	28	11	8.6	8.1	3.0	.9	0
22	33	19	16	16	15	28	11	8.6	8.1	3.5	2.2	0
23	31	19	16	16	15	26	11	8.6	8.1	3.0	4.7	0
24	109	19	16	16	15	26	11	7.8	7.3	1.8	4.7	0
25	54	19	16	16	15	23	11	7.8	6.6	1.4	4.7	0
26	37	19	16	16	15	20	11	8.6	6.6	1.6	4.1	0
27	32	19	16	16	15	19	11	12	6.6	1.2	4.1	0
28	28	19	16	16	15	18	11	12	6.6	.8	3.5	0
29	26	19	16	16	-	16	11	10	5.9	.8	3.5	0
30	23	19	16	16	-	15	11	10	5.9	.8	2.6	0
31	23	-	16	16	-	14	-	9.5	-	.5	.6	0
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,336	109	23	43.1	2,650		
November.....						618	23	19	20.6	1,230		
December.....						611	35	16	19.7	1,210		
Calendar year 1936.....						124,933.7	62,900	0	341	247,800		
January.....						496	16	16	16.0	984		
February.....						427	16	15	15.2	847		
March.....						693	28	14	22.4	1,370		
April.....						367	14	11	12.2	728		
May.....						289.9	12	7.0	9.35	575		
June.....						7,562.7	4,630	5.9	252	15,000		
July.....						192.2	54	.5	6.20	381		
August.....						40.6	4.7	.1	1.31	81		
September.....						4.5	.4	0	.15	8.9		
Water year 1936-37.....						12,637.9	4,630	0	34.6	25,060		

## Pecan Bayou at Brownwood, Tex.

Location.- Water-stage recorder, lat. 31°44'10", long. 96°58'30", at Fort Worth & Rio Grande Railway bridge, 1 mile north of Brownwood, Brown County, and 10 miles below Brownwood Reservoir. Zero of gage is 1,318.58 feet (revised) above mean sea level.

Drainage area.- 1,614 square miles.

Records available.- May 1917 to June 1918, October 1923 to September 1937.

Average discharge.- 12 years (1924-28, 1929-37), 227 second-feet.

Extremes.- Maximum discharge during year, 3,070 second-feet Oct. 1 (gage height, 4.18 feet); minimum, 0.1 second-foot at times caused by seepage through control.

1917-18, 1923-37: Maximum discharge, 52,700 second-foot 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 on basis of data furnished by engineers of Brown County Water Improvement District 1).

Remarks.- Records good except those for Jan. 1 to Feb. 9 (computed on basis of gate openings at Brownwood dam 10 miles upstream), and those below 10 second-feet which are poor. Discharge for Nov. 19-23, Dec. 29-31, Feb. 10 computed on basis of fragmentary gage-height record. Seepage past control dam, ranging from 0.1 to 0.2 second-foot, was included in figures of daily discharge during several periods. Flow regulated by storage in Brownwood Reservoir (capacity, 140,000 acre-feet).

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,500	292	305			0.6	0.1	0.1	14	0.1	3.7	33
2	1,700	292	196			258	.1	.1	1.9	.1	2.8	7.4
3	1,200	280	138			187	.1	.1	7.4	16	1.9	7.4
4	910	267	143			7.4	.1	.1	607	6.0	1.9	6.0
5	701	273	292		125	6.0	.1	.1	11	6.0	1.3	6.0
6	841	280	317			4.7	.1	.1	837	4.7	.9	6.0
7	1,330	290	317			4.7	.1	.1	26	4.7	.6	6.0
8	900	273	317			1.9	.1	.1	3.7	4.7	.4	4.7
9	665	280	317		75	.4	.1	.1	.9	6.0	.2	4.7
10	533	311	317		8.9	.6	.1	71	.9	168	.2	4.7
11	452	298	317		7.4	1.3	.1	232	.2	103	.2	4.7
12	396	286	317		7.4	1.3	.1	134	.1	6.0	.2	4.7
13	356	296	317		7.4	3.7	.1	74	.1	6.0	.2	3.7
14	330	286	317		6.0	11	.1	1.2	86	4.7	.2	3.7
15	311	286	317		7.4	1.3	244	.1	154	4.7	.2	3.7
16	296	286	311		6.0	.6	12	.1	4.7	3.7	.2	3.7
17	280	286	311		6.0	.6	.5	.1	.3	3.7	.2	2.8
18	267	286	311		6.0	.4	.1	.1	.1	3.7	.2	1.9
19	267	286	273		6.0	.2	.1	.1	.1	3.7	54	1.3
20	267	356	138		3.7	.1	10	.1	.1	28	7.4	1.9
21	267	343	138		3.7	.1	2.8	.1	.1	166	6.0	1.9
22	273	330	147		4.7	.1	.4	.1	.1	7.4	6.0	.2
23	410	330	298		4.7	.1	.1	.1	.1	6.0	6.0	.2
24	370	305	311		4.7	.2	.1	.1	.1	4.7	4.7	.2
25	350	298	311		4.7	.1	.1	2.1	.1	4.7	4.7	.2
26	324	292	305		3.7	.1	.1	6.0	.1	4.7	4.7	.2
27	305	298	280		3.7	.1	.1	.1	2.6	4.7	3.7	.2
28	305	305	202		3.7	.1	.1	.1	5.8	4.7	3.7	.2
29	298	298	158		-	.1	.1	.1	.1	3.7	3.7	.2
30	292	305	138		-	.1	.1	.1	.1	3.7	128	.2
31	292	-	159		-	.1	-	304	-	3.7	286	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					17,990	2,500	267	580	35,680			
November.....					8,874	356	267	296	17,600			
December.....					8,005	317	129	258	15,880			
Calendar year 1936.....					125,610.6	15,900	.1	343	249,200			
January.....					3,875	-	-	125	7,690			
February.....					1,180.8	-	3.7	42.2	2,340			
March.....					493.0	258	.1	15.9	978			
April.....					272.1	244	.1	9.07	540			
May.....					826.6	834	.1	26.7	1,640			
June.....					1,764.7	837	.1	58.8	3,500			
July.....					597.5	168	.1	19.3	1,190			
August.....					534.1	286	.2	17.2	1,060			
September.....					121.7	33	.2	4.06	241			
Water year 1936-37.....					44,534.5	2,500	.1	122	88,540			

## San Saba River at Menard, Tex.

Location.- Staff gage, lat. 30°55', long. 99°48', 1,000 feet above highway bridge in Menard, Menard County, and half a mile below mouth of Las Moras Creek. Zero of gage is 1,865.05 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,151 square miles.

Records available.- September 1915 to September 1937.

Average discharge.- 22 years, 60.9 second-feet.

Extremes.- Maximum discharge during year, 375 second-feet June 4 (gage height, 3.60 feet, from graph based on gage readings); minimum, 3.0 second-feet Aug. 6 and 7, result of regulation.

1915-37: Maximum discharge, 68,600 second-feet Sept. 16, 1936 (gage height, 21.2 feet, from floodmarks), by slope-area method; no flow at times.

Maximum stage known, 23.7 feet June 5 or 6, 1899.

Remarks.- Records good. Discharge for periods of material change in stage computed from graph drawn on basis of twice-daily gage readings. Low-water flow during irrigation season regulated by diversions to Noyes canal 4 miles above Menard. About 4,300 acres above gage and 7,700 acres below have been declared irrigated. (See records of Noyes canal at Menard.)

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	300	87	100	71	62	35	32	28	29	7.4	5.6	8.9
2	250	84	118	71	62	35	32	28	32	7.4	5.9	23
3	215	80	105	71	62	35	33	28	57	6.7	4.8	34
4	198	77	96	71	60	38	32	28	160	9.9	4.1	35
5	188	79	94	71	58	41	32	26	75	8.2	3.4	33
6	169	79	89	71	60	43	30	27	59	7.8	3.2	35
7	142	77	89	71	59	42	29	32	55	7.4	4.1	35
8	112	74	80	69	58	38	29	28	48	7.0	8.2	36
9	105	72	80	69	60	35	29	36	52	13	7.4	32
10	98	75	79	69	59	35	30	57	49	26	7.4	28
11	94	75	79	69	58	35	32	53	47	43	5.9	23
12	94	75	79	69	58	35	31	52	47	26	5.6	8.2
13	94	72	79	69	58	35	30	57	45	19	6.3	5.2
14	94	71	77	67	58	35	31	52	45	18	7.0	5.0
15	94	72	74	67	58	35	29	39	45	16	7.4	4.8
16	94	74	75	64	58	36	28	26	45	13	7.8	4.3
17	94	79	75	67	58	36	30	26	34	12	8.5	4.3
18	89	79	74	67	55	36	30	26	21	12	8.5	4.1
19	84	80	74	67	58	40	31	23	13	11	8.5	4.8
20	84	84	74	67	58	38	41	24	13	8.5	8.9	9.9
21	84	84	74	67	58	36	42	24	12	7.4	9.4	9.4
22	94	86	72	67	46	36	34	24	12	5.6	11	8.9
23	96	89	72	64	38	38	32	25	12	9.4	11	8.2
24	100	94	69	64	37	35	31	30	10	9.4	8.9	7.4
25	98	96	69	64	34	33	31	24	7.8	8.5	8.2	6.7
26	91	96	69	62	33	32	32	23	7.0	9.4	8.2	7.4
27	86	96	69	62	35	34	32	23	11	7.0	8.9	8.2
28	96	100	69	62	35	32	32	26	7.0	4.5	9.9	7.4
29	124	103	69	62	-	32	31	34	7.0	6.3	8.9	7.0
30	103	100	71	62	-	33	29	42	6.7	6.3	8.5	7.4
31	91	-	71	62	-	33	-	36	-	6.3	7.8	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				3,743		300	84	121	7,480			
November.....				2,469		103	71	33.0	4,840			
December.....				2,464		118	69	79.5	4,890			
Calendar year 1936.....				102,140.0		28,300	.4	279	202,600			
January.....				2,075		71	62	66.9	4,120			
February.....				1,493		62	33	53.5	2,960			
March.....				1,112		45	32	35.9	2,210			
April.....				947		42	23	31.6	1,830			
May.....				1,009		57	23	32.5	2,000			
June.....				1,063.5		160	6.7	35.4	2,110			
July.....				359.4		43	4.5	11.6	715			
August.....				229.2		11	3.2	7.39	455			
September.....				451.5		36	4.1	15.0	896			
Water year 1936-37.....				17,435.6		300	3.2	47.8	34,590			





## Noyes canal at Menard, Tex.

Location.- Staff gage, lat. 30°55', long. 99°48', 1,000 feet above highway bridge in Menard, Menard County, and 4 miles below head gates.

Records available.- March 1924 to September 1937.

Average discharge.- 13 years, 14.5 second-feet.

Extremes.- Maximum discharge during year, 38 second-feet July 4, 5 (gage height, 1.79 feet); no flow at times.

1924-37: Maximum discharge, about 58 second-feet Feb. 2, 1931 (gage height, 2.70 feet, from graph based on gage readings); no flow at times.

Remarks.- Records good. Discharge computed from twice-daily gage readings except that for days of material change in stage, which was computed from graph drawn on basis of twice-daily gage readings. Canal diverts water for irrigation from right bank of San Saba River 4 miles above Menard; of the land thus irrigated 10 acres is above gaging station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	22	24	18	18	31	24	21
2					0	22	24	20	20	32	24	15
3					0	24	24	18	11	33	24	0
4					0	24	24	18	2.8	36	24	0
5					0	24	24	18	0	33	24	0
6					0	25	24	18	0	33	22	0
7					0	25	24	17	0	33	24	0
8					0	24	24	15	0	32	21	0
9					0	25	22	9.7	0	33	21	0
10					0	24	22	.1	0	36	21	0
11					0	24	22	0	0	38	21	6.6
12					0	24	24	0	0	35	21	17
13					0	24	24	0	0	35	20	20
14					0	24	24	0	0	33	18	20
15					0	24	24	6.9	0	33	20	21
16					0	24	22	17	0	33	21	21
17					0	24	21	17	5.8	32	21	20
18					0	24	22	17	17	33	21	20
19					0	27	22	17	25	33	21	24
20					0	25	24	17	25	33	21	22
21					0	24	22	17	27	32	21	21
22					8.9	24	21	17	28	32	21	21
23					18	24	21	16	28	32	21	21
24					20	24	20	9.9	29	32	21	18
25					22	24	20	17	28	31	21	21
26					22	24	20	17	28	28	21	22
27					22	24	21	17	25	27	20	22
28					22	24	20	18	29	27	20	22
29					-	24	20	18	31	25	20	20
30					-	25	20	24	31	25	21	20
31					-	25	-	18	-	25	21	-
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 1936.....						3,166.3	-	0	8.65	6,280		
January.....						0	0	0	0	0		
February.....						134.9	22	0	4.82	268		
March.....						749	27	22	24.2	1,490		
April.....						670	24	20	22.3	1,350		
May.....						432.6	24	0	14.0	858		
June.....						408.6	31	0	13.6	810		
July.....						966	38	25	31.8	1,960		
August.....						662	24	18	21.4	1,310		
September.....						435.6	24	0	14.5	864		
Water year 1936-37.....						4,478.7	38	0	12.3	8,890		

## Llano River near Junction, Tex.

Location.- Water-stage recorder, lat. 30°30', long. 99°44', 100 feet north of Kerrville-Junction road, 3 miles below confluence of North Llano and South Llano Rivers, and 3½ miles east of Junction, Kimble County. Zero of gage is 1,630.32 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,762 square miles.

Records available.- September 1915 to September 1937.

Average discharge.- 22 years, 232 second-feet.

Extremes.- Maximum discharge during year not determined; minimum, 48 second-feet Aug. 10, 11.

1915-37: Maximum discharge, 319,000 second-feet June 14, 1935 (gage height, 43.3 feet, from floodmarks), by slope-area method; minimum, 13 second-feet Aug. 23-28, 1918 (gage height, 1.32 feet).

Remarks.- Records good except those for Oct. 28 to Dec. 7, which were estimated on basis of records for Llano River at Castell and North Llano River near Junction and are poor. About 2,500 acres above station and 1,300 acres below have been declared irrigated. Diversions slightly reduce low-water flow. Some regulation by power plant on South Llano River.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	600	}	200	174	137	126	112	95	98	64	57	53	
2	539			170	137	126	112	95	90	62	55	53	
3	498			166	137	126	112	95	252	62	55	60	
4	458			166	137	126	108	92	137	62	55	70	
5	426			166	133	141	108	92	126	60	55	68	
6	406	}	193	162	130	145	108	92	108	60	53	62	
7	413			158	130	145	105	92	188	57	53	60	
8	387			154	130	141	105	92	193	57	53	60	
9	368			154	130	133	105	92	137	57	51	60	
10	350			154	130	133	105	92	116	57	48	60	
11	331	}	193	154	130	133	102	92	105	60	48	62	
12	319			149	130	130	102	92	98	60	49	64	
13	300			149	130	126	102	92	60	49	60		
14	288			149	130	126	102	92	84	60	49	60	
15	282			149	130	126	102	90	81	57	49	53	
16	276	}	193	141	130	126	102	90	81	57	49	53	
17	265			141	126	126	98	90	78	57	49	53	
18	260			141	126	126	95	87	76	57	49	53	
19	249			137	126	122	95	84	73	57	51	53	
20	244			137	126	119	175	84	70	57	53	53	
21	244	}	193	137	126	119	149	81	70	57	53	51	
22	238			137	122	116	126	81	68	57	53	51	
23	238			137	122	116	116	81	68	57	53	53	
24	249			137	122	119	108	81	68	57	53	53	
25	324			137	122	116	105	81	68	57	51	53	
26	276	}	188	137	122	116	102	81	68	57	55	53	
27	265			137	126	112	102	78	64	60	55	53	
28	600			179	137	126	112	98	76	64	60	53	53
29				179	137	-	112	98	78	64	60	53	53
30				179	137	-	112	98	123	64	57	53	53
31			174	137	-	112	-	126	-	57	53	-	
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....					11,493	-	238	371	22,800				
November.....					7,650	-	-	255	15,170				
December.....					5,957	-	174	192	11,620				
Calendar year 1936.....					156,883	59,700	48	429	311,100				
January.....					4,578	174	137	148	9,080				
February.....					3,603	137	122	129	7,150				
March.....					3,864	145	112	125	7,660				
April.....					3,257	175	95	109	6,460				
May.....					2,789	126	76	90.0	5,530				
June.....					2,949	252	64	98.3	5,850				
July.....					1,816	64	57	58.6	3,600				
August.....					1,615	57	48	52.1	3,200				
September.....					1,718	84	51	57.3	3,410				
Water year 1936-37.....					51,289	-	48	141	101,700				

## Llano River near Castell, Tex.

Location.- Staff gage, lat. 30°43', long. 98°53', 4 miles above mouth of Hickory Creek and 4.5 miles (revised) east of Castell, Llano County.

Drainage area.- 3,514 square miles.

Records available.- November 1923 to September 1937.

Average discharge.- 13 years (1924-37), 414 second-feet.

Extremes.- Maximum discharge during year, 3,720 second-feet Oct. 25 (gage height, 5.15 feet, from graph based on gage readings); minimum, 33 second-feet Aug. 17.  
1923-37: Maximum discharge, 388,000 second-feet, June 14, 1935 (gage height, 37.0 feet, from floodmarks), by slope-area method; minimum, 6.4 second-feet Aug. 26, 1934 (gage height, 0.05 foot).

Remarks.- Records good. Discharge computed from graph drawn on basis of twice-daily gage readings except for Oct. 1, 22-24, Jan. 11, May 15, 16, July 25, 26, for which periods it was computed on basis of fragmentary gage-height record. Small diversions above station, which slightly reduce low-water flow.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,280	930	380	239	228	180	152	127	285	59	42	68
2	1,100	830	517	250	228	180	152	120	208	57	40	60
3	945	980	542	250	228	180	152	120	170	55	38	61
4	860	1,040	442	239	218	293	144	120	190	56	39	144
5	780	880	420	239	218	527	136	120	545	56	40	152
6	740	830	442	250	218	272	136	120	299	56	39	104
7	780	665	420	250	208	260	136	144	250	58	38	84
8	665	600	380	250	208	260	127	120	218	52	36	84
9	630	570	362	239	208	239	127	120	218	57	35	73
10	600	600	362	239	199	208	127	120	228	68	39	68
11	570	630	344	250	190	199	136	120	180	73	39	63
12	515	600	328	260	190	190	127	112	152	90	38	205
13	490	542	272	260	190	199	136	112	136	84	37	328
14	465	515	272	260	190	190	144	104	112	73	35	215
15	442	490	328	250	190	180	144	102	104	73	35	127
16	442	465	313	239	180	180	144	100	97	68	35	90
17	420	465	313	239	180	180	127	97	90	63	33	78
18	400	442	285	239	190	180	127	90	90	58	36	68
19	400	442	285	228	180	180	127	90	84	57	38	63
20	362	420	272	239	180	170	127	84	78	55	37	59
21	344	420	272	239	180	161	204	84	78	52	37	57
22	362	400	272	239	170	161	320	84	73	50	36	54
23	442	400	272	228	170	161	228	78	73	48	38	53
24	848	400	272	228	170	208	180	78	73	48	38	51
25	2,010	400	272	218	170	190	161	73	63	47	38	50
26	1,400	380	272	218	170	180	152	73	61	47	39	49
27	700	362	272	228	180	170	144	73	62	47	73	51
28	1,430	420	260	250	180	161	136	78	62	46	73	49
29	2,080	442	260	239	-	161	136	90	60	44	56	49
30	1,760	400	260	228	-	152	136	84	61	44	45	48
31	1,220	-	250	228	-	152	-	1,380	-	42	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	25,482	2,080	344	822	50,540
November.....	16,960	1,040	362	565	33,640
December.....	10,213	542	250	329	20,260
Calendar year 1936.....	543,818	93,000	42	939	682,000
January.....	7,452	260	218	240	14,780
February.....	5,411	228	170	193	10,730
March.....	6,304	527	152	203	12,500
April.....	4,525	320	127	151	8,980
May.....	4,417	1,380	73	142	8,760
June.....	4,400	545	60	147	8,730
July.....	1,783	90	42	57.5	3,540
August.....	1,269	73	33	40.9	2,520
September.....	2,708	328	48	90.3	5,370
Water year 1936-37.....	90,924	2,080	33	249	180,400

## COLORADO RIVER BASIN

Pedernales River near Spicewood, Tex.

Location.- Staff gage, lat. 30°25'15", long. 98°04'50", in Travis County, 5.4 miles above confluence with Colorado River and 8 miles southeast of Spicewood, Burnet County. Zero of gage is 624.8 feet above mean sea level.

Drainage area.- 1,294 square miles.

Records available.- November 1923 to September 1937.

Average discharge.- 13 years (1924-37), 232 second-feet.

Extremes.- Maximum discharge during year, 10,000 second-feet July 11 (gage height, 11.20 feet, from floodmarks); minimum, 11 second-feet Aug. 26, 30, Sept. 30.

1923-37: Maximum discharge, 155,000 second-feet May 28, 1929 (gage height, 40.4 feet, from floodmarks), by slope-area method; no flow at times.

A flood in 1869 reached about the same stage as that of May 28, 1929.

Remarks.- Records good. Discharge for periods of material change in stage computed from graphs drawn on basis of gage readings. Gage read twice daily except during floods, when several readings each day were usually made. No diversions for irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	578	369	274	336	218	336	168	94	48	29	18
2	760	518	369	274	320	204	320	156	196	47	27	33
3	665	478	420	274	320	204	320	150	3,100	44	26	66
4	578	478	478	274	304	218	304	146	5,300	41	26	41
5	536	456	439	274	304	2,480	289	143	1,240	37	24	29
6	496	439	578	274	289	1,410	274	139	478	37	23	37
7	1,620	420	665	245	289	1,130	259	135	320	35	23	296
8	910	403	518	259	289	810	259	135	274	34	20	119
9	578	403	439	274	274	620	245	131	218	36	20	76
10	496	386	420	304	259	578	245	426	168	139	18	89
11	468	420	420	274	259	518	231	204	150	2,190	18	73
12	420	439	366	439	259	478	231	168	135	370	17	55
13	403	420	366	498	259	478	245	146	119	192	16	176
14	386	403	403	439	259	700	231	125	107	148	16	139
15	369	386	403	403	245	735	245	113	98	115	16	78
16	352	369	366	366	245	620	231	109	91	98	16	55
17	336	352	369	369	231	539	218	104	85	85	16	50
18	320	352	369	352	231	498	204	94	82	73	16	39
19	304	352	336	352	231	478	204	91	78	64	16	33
20	274	336	320	336	245	456	192	85	75	57	16	29
21	274	336	320	336	231	439	296	82	68	55	16	29
22	259	320	320	336	231	420	259	76	63	50	15	26
23	259	320	320	336	218	403	231	76	61	46	14	21
24	499	369	320	320	218	518	218	73	60	44	13	16
25	665	403	320	320	218	456	192	70	57	41	12	16
26	518	336	320	336	204	403	179	66	48	38	12	16
27	458	320	675	320	204	386	168	63	50	35	15	15
28	403	320	578	336	218	369	179	60	47	35	13	16
29	536	352	369	386	-	352	179	66	47	34	12	14
30	456	420	320	352	-	369	179	76	50	31	12	13
31	420	-	269	336	-	369	-	91	-	29	15	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					16,078	1,620	259	519	31,890			
November.....					11,886	578	320	396	23,580			
December.....					12,624	675	289	407	25,040			
Calendar year 1936.....					274,474	39,100	31	750	544,400			
January.....					10,288	498	245	332	20,410			
February.....					7,190	336	204	257	14,260			
March.....					17,859	2,480	204	576	35,420			
April.....					7,163	336	168	239	14,210			
May.....					3,767	426	60	122	7,470			
June.....					10,919	3,300	47	364	21,660			
July.....					4,330	2,190	29	140	8,590			
August.....					548	29	12	17.7	1,090			
September.....					1,714	296	13	57.1	3,400			
Water year 1936-37.....					104,366	3,300	12	286	207,000			

## Guadalupe River near Spring Branch, Tex.

Location.- Water-stage recorder, lat. 29°51'40", long. 98°23'00", at New Braunfels-Blanco highway bridge 4 miles southeast of Spring Branch, Comal County. Zero of gage is 947.37 feet above mean sea level.

Drainage area.- 1,432 square miles.

Records available.- June 1922 to September 1937.

Average discharge.- 15 years, 288 second-feet.

Extremes.- Maximum discharge during year, 6,240 second-feet June 1 (gage height, 10.88 feet); minimum, 58 second-feet Sept. 27.  
1922-37: Maximum discharge, 121,000 second-feet July 3, 1932 (gage height, 42.10 feet); minimum, about 4.7 second-feet Aug. 18, 1923.  
Maximum stage known, between 45 and 50 feet in 1900.

Remarks.- Records excellent. Several small diversions for irrigation above gage. Slight regulation during low-water periods caused by operation of power plants upstream.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,620	830	575	465	440	325	333	221	3,980	161	93	166
2	2,210	805	565	460	425	321	333	215	1,810	156	91	121
3	1,970	755	590	450	421	321	333	209	1,340	150	89	73
4	1,850	770	585	440	421	342	325	206	2,460	145	86	67
5	1,680	902	575	440	412	624	314	206	1,760	140	86	75
6	1,680	780	600	440	412	672	303	203	659	143	62	80
7	1,580	730	595	440	412	490	307	200	595	145	80	91
8	1,460	705	590	445	412	475	303	203	485	138	78	86
9	1,330	680	565	445	402	435	300	191	420	143	75	116
10	1,180	675	560	430	389	410	296	197	378	230	75	98
11	1,100	755	550	435	376	410	289	194	349	300	75	82
12	1,020	730	555	557	371	401	289	186	321	224	71	143
13	950	680	540	500	376	406	293	183	296	168	69	89
14	920	660	545	490	376	445	296	186	272	166	67	75
15	890	645	540	475	371	420	300	186	258	153	69	73
16	830	625	525	455	363	410	296	177	254	145	69	71
17	805	605	525	455	355	406	289	174	248	138	67	69
18	780	605	515	455	355	406	275	163	242	133	67	67
19	755	600	495	445	355	396	275	158	233	128	67	67
20	705	590	490	445	359	392	275	153	221	126	65	65
21	705	585	490	450	346	374	293	150	215	123	63	63
22	680	565	490	450	338	370	268	148	206	121	62	63
23	680	575	485	445	338	370	264	148	197	114	62	62
24	830	590	475	445	338	374	261	135	194	111	62	62
25	805	585	470	445	334	361	248	138	191	109	62	60
26	805	560	475	445	329	349	245	135	183	104	62	58
27	705	550	510	435	329	341	239	130	174	102	60	56
28	730	550	535	440	325	341	239	133	172	100	58	58
29	967	570	500	440	-	341	239	140	169	100	58	58
30	1,020	595	490	445	-	341	230	225	163	98	58	58
31	920	-	475	455	-	337	-	344	-	95	60	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	35,062	2,620	680	1,131	69,540
November.....	19,852	902	550	662	39,380
December.....	16,455	600	470	531	32,640
Calendar year 1936.....	312,228	32,000	103	853	619,300
January.....	14,062	557	430	454	27,890
February.....	10,480	440	325	374	20,790
March.....	12,406	672	321	400	24,610
April.....	9,560	333	230	285	16,960
May.....	5,637	344	130	162	11,180
June.....	18,645	3,980	163	622	36,980
July.....	4,429	300	95	143	8,760
August.....	2,188	93	58	70.6	4,340
September.....	2,372	166	56	79.1	4,700
Water year 1936-37.....	150,138	3,980	56	411	297,800

## Guadalupe River above Comal River, at New Braunfels, Tex.

Location.- Water-stage recorder, lat. 29°42'55", long. 98°06'40", at New Braunfels, Comal County, 1.1 miles above confluence with Comal River. Zero of gage is 586.56 feet above mean sea level.

Drainage area.- 1,666 square miles.

Records available.- December 1927 to September 1937. March 1898 to December 1899 and January 1915 to December 1927, at site 1 mile below confluence with Comal River.

Extremes.- Maximum discharge during year, 5,600 second-feet June 2; maximum gage height, 6.76 feet June 4, affected by backwater from Comal River; minimum discharge, 75 second-feet Sept. 30 (gage height, 1.39 feet).  
1927-37: Maximum discharge, 101,000 second-feet June 15, 1935 (gage height, 32.95 feet); minimum, 12 second-feet Sept. 1, 1934 (gage height, 0.90 foot).  
Maximum stage known, about 38 feet sometime in 1869 and in December 1913.

Remarks.- Records good. Discharge adjusted for effect of backwater from Comal River June 4. Discharge interpolated Feb. 25-28. Small diversions above station for irrigation. Slight regulation during low water caused by operation of small power plants upstream.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used June 16 to Sept. 30)

1.5	82	2.5	495
1.7	110	3.0	995
1.9	153	4.0	2,415
2.1	228	5.0	3,865

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,850	984	608	487	520	379	471	270	1,730	259	123	82
2	2,490	938	589	479	504	372	463	259	3,460	249	121	99
3	2,200	880	580	463	495	386	455	254	1,630	238	117	188
4	1,980	805	599	455	495	423	447	249	2,080	228	117	117
5	1,820	903	599	455	495	580	431	244	2,340	220	116	95
6	1,700	903	599	455	495	968	415	238	1,620	211	123	88
7	1,760	826	608	463	495	805	408	233	1,100	211	119	101
8	1,620	773	608	479	495	723	401	233	880	203	110	102
9	1,490	743	599	463	479	673	386	233	773	203	107	104
10	1,370	743	599	463	463	626	379	228	683	215	104	112
11	1,290	753	590	455	455	599	379	228	626	292	100	136
12	1,200	826	563	479	447	569	379	228	580	401	100	127
13	1,160	773	563	599	465	590	379	220	538	306	100	115
14	1,080	723	563	546	455	590	366	211	495	269	96	150
15	1,060	693	563	520	447	608	386	211	479	233	96	102
16	1,020	673	546	504	439	580	386	211	455	215	102	92
17	972	654	538	495	431	572	372	211	439	207	102	91
18	938	636	529	495	423	563	365	199	423	194	98	90
19	903	626	512	495	415	563	343	194	408	190	95	90
20	869	617	495	497	415	546	350	186	393	183	94	88
21	837	599	487	495	415	529	372	179	372	176	94	86
22	805	589	487	495	401	512	372	173	357	173	90	85
23	773	569	487	495	393	512	337	166	337	166	87	83
24	837	599	479	495	401	520	324	170	324	163	86	82
25	995	617	479	495	396	512	318	160	312	153	85	82
26	938	589	487	495	391	495	299	153	305	148	85	81
27	880	563	538	495	387	479	299	156	286	146	83	78
28	837	563	538	504	383	471	293	153	275	138	85	77
29	869	572	554	504	-	479	293	156	275	136	83	77
30	1,160	589	520	512	-	479	280	176	270	130	82	77
31	1,080	-	495	520	-	471	-	500	-	126	85	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	39,753	2,850	773	1,282	76,850
November.....	21,541	984	563	711	42,330
December.....	16,971	608	479	547	33,660
Calendar year 1936.....	348,860	32,100	117	953	691,900
January.....	15,242	599	455	492	30,230
February.....	12,485	520	383	446	24,760
March.....	17,174	968	372	554	34,060
April.....	11,168	471	280	372	22,150
May.....	6,692	500	153	215	13,270
June.....	24,245	3,460	270	808	49,090
July.....	6,371	401	126	206	12,640
August.....	3,064	123	82	99.5	6,120
September.....	2,977	158	77	99.2	5,900
Water year 1936-37.....	177,503	3,460	77	483	352,100

## Guadalupe River at Victoria, Tex.

**Location.**— Water-stage recorder, lat. 28°47', long. 97°01', at Victoria-Goliad highway bridge in Victoria, Victoria County, and 1,300 feet above Galveston, Harrisburg & San Antonio Railway bridge. Zero of gage is 29.23 feet above mean sea level.

**Drainage area.**— 5,676 square miles.

**Records available.**— November 1934 to September 1937.

**Extremes.**— Maximum discharge during year, 17,200 second-feet Oct. 4 (gage height, 26.77 feet); minimum, 496 second-feet Sept. 28, 29, caused by regulation; minimum daily, 532 second-feet Sept. 28, 29.

1934-37: Maximum discharge, 179,000 second-feet July 3, 1936 (gage height, 31.22 feet); minimum, 354 second-feet Nov. 13, 1934.

**Remarks.**— Records good. Flow not materially affected by many small diversions above station. Low-water flow partly regulated by diurnal operation of power plants upstream.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1-3)

3.5	532	11.0	3,280	23.0	11,250
4.0	640	13.0	4,280	24.0	12,350
5.0	910	15.0	5,370	25.0	13,700
6.0	1,245	17.0	6,520	26.0	15,400
7.0	1,610	19.0	7,840	27.0	17,700
9.0	2,400	21.0	9,400		

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,060	*1,960	1,690	1,640	*1,540	1,280	2,880	1,100	850	942	688	640
2	10,900	*1,960	1,770	1,500	*1,460	1,280	2,160	1,100	883	1,010	688	688
3	14,300	*1,960	1,770	1,390	*1,420	1,240	1,730	1,070	4,030	1,040	735	740
4	16,700	*1,960	1,650	1,320	*1,420	1,320	1,670	*1,100	5,780	1,070	664	717
5	8,920	1,960	1,570	*1,350	*1,390	*1,940	*1,650	*1,040	4,320	680	786	688
6	4,580	1,920	1,690	*1,350	*1,390	*3,720	1,320	*1,100	6,160	974	910	714
7	4,120	1,850	1,650	*1,350	*1,390	7,240	1,240	1,100	8,350	974	850	664
8	4,490	1,840	1,650	*1,350	*1,390	9,580	1,280	942	9,680	910	766	782
9	5,990	1,800	1,770	1,350	*1,390	10,500	1,240	974	9,600	1,010	740	618
10	5,930	1,800	1,730	1,350	*1,390	5,090	1,210	974	3,750	974	729	596
11	4,120	1,960	1,610	1,350	1,390	2,530	1,320	974	*2,490	942	618	640
12	3,280	1,850	1,570	1,350	1,350	2,240	1,280	910	*2,080	974	618	740
13	2,960	1,840	1,540	1,460	1,390	*2,000	1,240	1,010	*1,920	910	618	618
14	2,740	1,840	1,540	1,460	1,350	*2,000	1,240	1,070	*1,800	1,010	596	786
15	2,660	1,840	1,540	1,390	1,320	*1,960	1,210	1,070	*1,610	1,180	574	823
16	2,530	1,800	1,460	*1,420	1,320	*2,000	1,240	974	*1,540	1,140	574	640
17	2,490	1,770	1,500	*1,420	1,320	*1,880	1,240	910	*1,420	1,040	768	664
18	2,360	1,770	1,570	*1,460	1,320	*1,770	1,210	974	*1,350	910	664	640
19	2,520	1,690	1,500	*1,460	1,320	*1,770	1,240	910	*1,280	850	759	640
20	2,240	1,690	1,450	*1,420	1,320	*1,690	1,240	942	*1,280	880	740	688
21	2,200	1,570	1,460	*1,420	1,320	*1,610	1,280	910	*1,350	942	740	640
22	*2,160	1,610	1,460	*1,390	1,320	*1,540	*1,210	880	*1,180	942	640	640
23	*2,040	1,730	1,420	*1,420	1,320	*1,540	*1,210	880	*1,040	850	574	552
24	*2,040	1,500	1,420	*1,390	1,280	*1,540	*1,220	880	*1,210	850	664	574
25	*1,920	1,570	1,420	*1,390	1,280	2,040	*1,240	850	*1,100	850	688	552
26	*1,840	1,570	1,390	*1,390	1,280	3,500	*1,240	850	*1,070	880	618	577
27	*1,920	1,610	1,350	*1,390	1,280	3,770	*1,210	910	*1,100	850	688	664
28	*1,920	1,570	1,420	*1,420	1,280	2,240	*1,180	850	*974	822	740	583
29	*1,920	1,540	1,390	*1,460	-	1,840	*1,180	822	*1,100	850	598	532
30	*1,960	1,610	1,460	*1,390	-	1,880	1,140	822	*1,040	850	593	574
31	*1,960	-	1,610	*1,420	-	3,320	-	850	-	714	596	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	134,570		16,700		1,840		4,341		266,900			
November.....	53,000		1,960		1,500		1,767		105,100			
December.....	47,990		1,770		1,350		1,549		95,190			
Calendar year 1936.....	1,295,268		129,000		690		3,539		2,569,000			
January.....	43,520		1,540		1,320		1,404		86,320			
February.....	37,940		1,540		1,280		1,355		75,250			
March.....	87,850		10,500		1,240		2,834		174,200			
April.....	40,950		2,880		1,140		1,365		51,220			
May.....	29,748		1,100		822		960		59,000			
June.....	31,087		9,850		850		2,733		162,600			
July.....	29,020		1,180		714		936		57,560			
August.....	21,244		910		574		685		42,140			
September.....	19,584		823		532		653		38,840			
Water year 1936-37.....	627,403		16,700		532		1,719		1,244,000			

\*Action of intakes faulty; discharge computed from graph drawn on basis of once-daily gage readings by U. S. 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 in New Braunfels, Comal County, and 1.1 miles above confluence with Guadalupe River. Zero of gage is 552.80 feet (revised) above mean sea level (general adjustment of 1929).

Records available.— December 1927 to September 1937.

Extremes.— Maximum gage height during year, 12.85 feet June 4 (discharge not determined); minimum discharge, 262 second-feet Sept. 9 (gage height, 2.78 feet, caused by regulation); minimum daily, 333 second-feet Aug. 22, 23, 31, Sept. 11-13, 29, 30.  
1927-37: 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, caused by regulation); minimum daily, 246 second-feet Apr. 3 and Oct. 30, 1930.  
Maximum stage known, 35.4 feet December 1913 (probably some backwater from Guadalupe River).

Remarks.— Records good except those above 1,000 second-feet, which are fair. Discharge for Oct. 1-3, June 1, 2 adjusted for effect of backwater from Guadalupe River. Discharge for Aug. 27 to Sept. 7 computed on basis of gage-height record. Flow partly regulated by steam-power plant half a mile upstream. Entire flow of river comes from Comal Springs, about one mile upstream, except during periods of local rain.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	383	362	362	351	347	358	369	387	390	365	351	336
2	380	362	358	347	351	362	369	380	646	369	347	336
3	376	362	358	347	351	362	369	380	920	365	351	336
4	376	358	354	347	351	365	369	380	2,170	369	351	336
5	376	362	358	351	351	390	369	380	538	365	344	336
6	369	362	358	351	351	380	369	376	416	365	347	336
7	380	358	358	351	351	369	369	372	398	365	344	336
8	369	358	358	351	351	362	369	372	398	362	344	336
9	369	362	354	347	351	365	372	369	398	362	340	336
10	365	365	354	347	351	362	372	362	387	362	340	336
11	365	362	354	347	351	362	372	365	376	362	340	333
12	369	362	354	347	351	362	376	362	376	362	340	333
13	369	362	354	354	351	362	372	362	380	362	340	333
14	362	362	354	358	347	362	376	362	376	362	336	336
15	365	362	351	347	351	362	376	362	376	358	336	340
16	362	358	351	347	351	362	376	358	365	358	344	344
17	362	362	354	347	351	358	376	362	376	362	340	344
18	362	362	351	344	351	358	372	362	376	362	340	340
19	358	358	351	344	351	362	369	358	372	358	336	340
20	358	358	351	344	351	362	380	354	372	358	336	340
21	358	358	351	344	351	362	383	358	369	358	336	340
22	354	358	354	344	351	362	383	358	372	351	333	340
23	365	358	351	347	351	362	383	358	372	354	333	340
24	362	362	351	351	351	365	380	358	372	354	336	340
25	362	358	351	351	351	369	376	358	369	358	344	340
26	358	362	354	351	351	365	376	351	369	354	344	336
27	362	362	354	351	351	365	380	358	365	354	344	336
28	362	362	351	347	351	365	383	358	369	354	340	336
29	358	365	354	347	-	362	383	358	369	351	340	333
30	362	358	351	347	-	365	387	358	369	351	336	333
31	362	-	351	351	-	369	-	1,010	-	351	333	-
Month						Second-foot-days	Maximum	Minimum		Mean	Run-off in acre-feet	
October.....						11,340	383	354		366	22,490	
November.....						10,822	365	358		361	21,470	
December.....						10,970	362	351		354	21,760	
Calendar year 1936.....						133,729	912	322		365	265,300	
January.....						10,800	358	344		348	21,420	
February.....						9,820	351	347		351	19,480	
March.....						11,298	390	358		364	22,410	
April.....						11,255	387	369		375	22,320	
May.....						11,948	1,010	351		385	23,700	
June.....						14,101	2,170	365		470	27,970	
July.....						11,143	369	351		359	22,100	
August.....						10,568	351	333		341	20,980	
September.....						10,117	344	333		337	20,070	
Water year 1936-37.....						134,180	2,170	333		368	266,200	



## 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. Zero of gage is 285.1 feet above mean sea level.

Drainage area.- 1,249 square miles.

Records available.- June 1915 to September 1937.

Average discharge.- 22 years, 446 second-feet.

Extremes.- Maximum discharge during year, 13,700 second-feet June 5 (gage height, 32.26 feet); minimum, 68 second-feet Sept. 25, caused by regulation; minimum daily, 99 second-feet Sept. 25, caused by regulation.  
1915-37: 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 measurement of 125,000 second-feet; no flow July 29, 1923, March 31, 1925, June 24, 1926, caused by regulation; minimum daily discharge, 40 second-feet Sept. 16, 1917. Maximum stage known, about 44.0 feet in December 1913.

Remarks.- Records good except those for Oct. 18 to Nov. 3, Dec. 5-8, Sept. 1-21, which were computed on basis of records for Blanco River at Wimberley and Plum Creek near Luling and are fair. Low-water flow regulated by operation of several small power plants above station. Most of ordinary flow from large springs near San Marcos.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	671	275	292	300	408	356	390	269	4,580	224	148	
2	603	273	269	300	399	356	365	276	1,740	216	163	
3	535	271	292	292	382	374	365	269	670	209	162	
4	484	269	348	284	374	422	356	269	3,410	216	150	
5	450	262		284	374	3,790	348	269	11,100	209	160	
6		262	390	284	365	6,240	332	269	4,070	209	164	
7	424	262		284	374	1,930	324	262	727	209	154	
8	1,340	262		300	382	1,050	316	264	552	209	140	
9	603	264	276	316	390	718	308	254	450	202	137	
10	467	276	269	316	382	603	300	246	408	216	170	
11	399	356	262	292	374	569	308	246	374	216	149	170
12	374	308	254	300	365	535	300	239	348	409	149	
13	348	292	254	393	374	535	300	232	324	386	159	
14	340	284	246	484	382	518	308	239	316	276	152	
15	332	262	262	450	382	518	308	224	300	239	152	
16	316	246	262	424	382	518	316	216	292	224	170	
17	308	239	254	399	382	501	308	202	284	209	187	
18		239	254	399	382	467	292	191	284	202	158	
19		239	246	399	382	467	292	183	269	194	155	
20		232	246	399	390	450	284	181	262	193	149	
21		239	246	390	382	433	375	177	262	198	167	
22		232	246	399	374	416	408	166	254	209	157	142
23		239	246	390	374	401	518	167	254	159	135	141
24	285	262	239	374	374	1,820	316	158	246	174	153	140
25		254	262	374	374	707	284	137	239	172	149	99
26		254	262	390	374	467	284	158	239	171	146	119
27		246	276	362	374	424	276	128	232	166	140	118
28		232	414	390	365	399	276	147	232	160	148	134
29		316	390	450	-	390	284	128	232	174	140	124
30		348	340	433	-	399	276	142	232	162	134	154
31		-	316	416	-	450	-	172	-	157	176	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						13,114	1,340	-	423	26,010		
November.....						7,978	356	232	266	15,820		
December.....						9,083	-	239	293	18,020		
Calendar year 1936.....						269,903	61,200	53	737	535,300		
January.....						11,517	484	284	365	22,450		
February.....						10,616	408	365	379	21,060		
March.....						27,223	6,240	356	878	54,000		
April.....						9,712	518	276	324	19,260		
May.....						6,470	276	128	209	12,630		
June.....						33,132	11,100	232	1,104	65,720		
July.....						6,559	409	157	212	13,010		
August.....						4,773	187	134	154	9,470		
September.....						4,721	-	99	157	9,360		
Water year 1936-37.....						144,696	11,100	99	396	287,000		

## Blanco River at Wimberley, Tex.

Location.- Water-stage recorder, lat. 29°59', long. 98°04', 800 feet below mouth of Cypress Creek and a quarter of a mile south of Wimberley, Hays County.

Drainage area.- 378 square miles.

Records available.- August 1924 to September 1926, June 1928 to September 1937.

Average discharge.- 11 years, 102 second-feet.

Extremes.- Maximum discharge during year, 1,910 second-feet July 11 (gage height, 3.39 feet); minimum, 19 second-feet Sept. 30 (gage height, 0.33 foot).  
1924-26, 1928-37: 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 excellent except those for Oct. 1-9, which were computed on basis of weather records and miscellaneous local information and are poor. No diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	202	117	114	98	172	114	176	79	133	43	29	22
2	185	114	112	103	168	109	175	74	168	41	29	21
3	172	114	100	100	168	109	172	69	303	41	29	22
4	168	109	103	98	168	130	166	69	165	39	29	22
5	162	112	98	95	165	662	159	69	210	37	31	50
6	152	112	103	95	165	398	155	66	130	37	35	51
7	142	114	106	95	165	298	152	65	109	37	29	27
8	266	112	103	103	165	282	146	64	98	35	24	24
9	182	109	103	106	162	274	139	62	89	37	27	24
10	165	112	103	103	155	266	139	60	62	44	26	21
11	152	130	100	120	149	262	139	69	74	495	24	50
12	146	130	100	228	149	254	136	60	69	98	24	32
13	139	117	100	165	149	254	136	57	66	64	24	39
14	136	114	103	182	149	274	139	53	62	51	24	33
15	133	112	103	175	142	262	133	53	60	44	24	29
16	126	112	100	172	139	250	130	51	57	41	26	27
17	120	112	100	175	136	247	123	49	55	39	27	26
18	114	112	100	175	133	243	120	47	53	37	22	24
19	114	112	95	172	130	235	117	47	51	37	22	22
20	109	112	92	172	133	224	120	44	49	35	22	22
21	103	114	92	175	126	220	162	44	49	35	22	21
22	100	109	92	172	120	213	142	43	47	35	22	21
23	98	112	89	172	120	213	117	43	49	35	22	22
24	117	120	89	172	120	220	112	41	49	35	22	22
25	130	114	87	175	120	210	106	39	47	35	22	22
26	120	109	89	168	117	196	103	39	47	35	22	22
27	109	100	114	172	117	192	100	37	44	35	21	22
28	109	100	120	182	114	189	92	39	47	33	22	22
29	142	100	108	178	-	192	89	41	47	31	22	21
30	139	109	103	172	-	188	87	137	43	29	21	19
31	120	-	103	175	-	182	-	114	-	29	24	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					4,372	266	98	141	8,670			
November.....					3,375	130	100	112	6,690			
December.....					3,122	120	87	101	6,190			
Calendar year 1936.....					66,352	6,640	22	181	131,600			
January.....					4,665	228	95	150	9,260			
February.....					4,016	172	114	143	7,970			
March.....					7,361	662	109	237	14,600			
April.....					3,983	178	87	133	7,900			
May.....					1,875	187	37	60.5	3,750			
June.....					2,552	303	43	85.1	5,060			
July.....					1,699	495	29	64.8	3,370			
August.....					769	35	21	24.8	1,550			
September.....					852	92	19	28.4	1,690			
Water year 1936-37.....					38,641	662	19	106	76,640			

## Plum Creek near Luling, Tex.

Location.- Water-stage recorder, lat. 29°42', long. 97°37', at highway bridge 2 miles above Galveston, Harrisburg and San Antonio Railway bridge and 3 miles northeast of Luling, Caldwell County. Zero of gage is 326.5 feet above mean sea level.

Drainage area.- 356 square miles.

Records available.- March 1930 to September 1937.

Extremes.- Maximum discharge during year, 4,820 second-feet June 4 (gage height, 16.77 feet); minimum, 2.6 second-feet Sept. 14, 15.

1930-37: 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, 0.8 second-foot July 19, 1934.

Flood of December 1913 reached about 25.7 feet, present site and datum.

Remarks.- Records fair except those for Oct. 1 to Nov. 2, June 8-11, which were computed on basis of fragmentary gage-height records and records for San Marcos River at Ottine and Blanco River at Wimberley and are poor. No diversions above station. Slight regulation during low-water from oil field operations.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		20	48	28	35	27	47	13	1,170	9.3	4.7	5.1
2		15	33	27	28	27	40	12	263	7.9	5.1	3.8
3		12	94	26	25	30	40	12	412	7.9	5.1	3.8
4		12	102	25	22	100	38	12	2,360	7.7	4.9	4.4
5		12	45	23	22	2,520	36	12	3,610	8.2	5.1	4.4
6		12	286	23	22	1,860	34	12	469	7.9	6.0	4.2
7		12	176	24	21	555	33	12	106	7.9	5.3	4.2
8		12	51	26	22	269	31	12	51	11	5.1	4.2
9		11	34	36	22	107	31	11	31	7.4	5.3	4.4
10		14	31	37	21	74	31	11	25	9.3	4.9	4.0
11		43	29	31	19	64	31	11	23	8.8	4.9	18
12		31	27	33	19	58	33	10	21	9.3	4.7	19
13		26	25	48	19	52	34	10	19	7.9	4.9	3.6
14		19	25	46	20	49	35	11	18	7.7	5.1	3.2
15		16	27	49	21	56	36	10	17	7.1	5.8	3.2
16		15	28	41	22	64	36	10	15	6.6	7.1	3.2
17		14	27	34	23	48	35	9.7	15	6.6	6.6	3.2
18		14	26	34	23	46	34	9.3	15	6.6	6.3	3.6
19		13	25	39	25	45	33	9.7	14	6.0	5.8	3.6
20		13	24	35	26	43	32	8.9	13	6.0	9.5	3.8
21		13	23	33	27	40	60	8.9	12	5.8	10	3.4
22		13	23	35	27	40	32	8.6	12	5.8	5.8	3.6
23		14	23	34	26	40	26	8.2	12	5.3	5.5	3.6
24		21	23	31	26	97	22	7.9	11	5.3	6.3	3.6
25		27	25	29	27	109	19	7.1	11	5.5	6.3	3.4
26		24	27	30	27	49	17	7.1	10	5.3	7.4	3.4
27		20	36	29	27	41	16	7.7	9.3	5.1	6.5	3.4
28		18	192	52	26	47	16	7.7	12	5.1	5.3	3.4
29		23	54	120	-	42	15	7.7	11	5.1	4.9	3.1
30		57	36	45	-	69	14	7.4	10	5.3	4.9	3.1
31		-	32	36	-	85	-	34	-	5.1	22	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,740	-	-	88.4	5,430
November.....	566	67	11	18.9	1,120
December.....	1,607	286	23	51.8	3,190
Calendar year 1936.....	83,350.0	43,900	6.3	228	165,300
January.....	1,137	120	23	36.7	2,260
February.....	670	35	19	23.9	1,330
March.....	6,751	2,520	27	215	15,390
April.....	937	60	14	31.2	1,860
May.....	330.9	34	7.1	10.7	656
June.....	8,777.3	3,610	9.3	293	17,410
July.....	215.6	11	5.1	6.95	428
August.....	196.9	22	4.7	6.35	391
September.....	140.9	19	3.1	4.70	279
Water year 1936-37.....	24,069.6	3,610	3.1	65.9	47,740

## 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 above Scared Dog Creek and 3.4 miles southwest of Falls City, Karnes County.

Drainage area.- 2,067 square miles.

Records available.- April 1925 to September 1937.

Average discharge.- 12 years, 299 second-feet.

Extremes.- Maximum discharge during year, 14,600 second-feet June 2 (gage height, 16.65 feet); minimum, 145 second-feet Sept. 27 (gage height, 1.28 feet).  
1925-37: 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 (month of occurrence as given in Water-Supply Paper 808 corrected).  
Maximum stage known, 28.36 feet in October (correction) 1913.

Remarks.- Records good. Discharge interpolated June 24-28. Flow partly regulated by storage in Medina Reservoir (capacity, 254,000 acre-feet). Medina Canal diverts above gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,830	655	669	442	366	280	335	233	2,220	325	206	270
2	5,060	676	561	425	356	275	335	228	11,900	320	206	224
3	2,840	676	528	448	340	275	325	224	10,500	310	211	177
4	2,070	697	522	600	356	275	315	219	2,570	310	206	169
5	1,770	823	516	607	366	325	315	219	2,770	310	206	165
6	1,520	823	535	587	361	436	300	219	4,070	315	206	165
7	1,570	760	535	554	361	414	290	219	3,110	315	198	169
8	1,620	690	496	516	361	335	290	219	2,220	315	198	173
9	1,670	554	478	484	361	295	285	211	1,870	320	194	169
10	1,380	535	490	466	345	285	285	211	1,380	330	194	165
11	1,200	580	490	460	335	280	398	211	1,150	376	194	165
12	1,100	795	484	448	330	310	419	211	1,020	448	189	161
13	1,020	732	494	425	330	340	398	211	940	335	185	161
14	956	683	475	376	340	392	376	211	872	345	185	161
15	900	600	460	361	335	503	350	224	795	300	189	165
16	851	574	466	361	340	408	285	215	753	285	202	161
17	823	561	478	361	340	392	266	211	704	280	194	161
18	795	554	484	361	330	381	161	211	620	275	194	161
19	767	548	478	356	330	361	252	206	567	280	189	161
20	739	522	472	361	320	371	252	202	496	275	181	165
21	739	496	448	361	315	376	247	194	442	266	181	165
22	690	490	430	361	321	371	403	189	414	256	177	165
23	634	484	425	361	478	366	376	189	398	252	177	161
24	620	496	425	366	490	361	305	185	385	247	177	161
25	620	522	448	371	454	381	275	185	372	247	181	161
26	607	496	454	356	414	350	247	189	359	247	181	153
27	600	496	466	340	315	345	247	185	346	242	173	149
28	607	496	613	340	290	356	252	185	333	237	169	149
29	620	522	725	356	-	356	247	181	320	219	169	153
30	627	648	503	356	-	350	242	219	320	215	165	153
31	634	-	454	366	-	356	-	219	-	211	165	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						42,469	6,830	600	1,370	84,240		
November.....						18,184	823	494	606	36,070		
December.....						15,495	725	425	500	30,730		
Calendar year 1936.....						291,970	15,400	185	798	579,100		
January.....						12,933	607	340	417	25,650		
February.....						9,980	490	290	356	19,800		
March.....						10,901	505	275	352	21,620		
April.....						9,173	419	242	306	18,190		
May.....						6,435	233	181	208	12,760		
June.....						54,016	11,900	320	1,801	107,100		
July.....						9,008	448	211	291	17,870		
August.....						5,842	211	165	188	11,590		
September.....						5,038	270	149	168	9,990		
Water year 1936-37.....						199,474	11,900	149	547	395,600		

## Cibolo Creek near Falls City, Tex.

Location.- Water-stage recorder, lat. 29°01', long. 97°56', 200 feet downstream from Cestohowa Bridge, 6 miles above confluence with San Antonio River, and 6 miles north-east of Falls City, Karnes County.

Drainage area.- 831 square miles.

Records available.- November 1930 to September 1937.

Extremes.- Maximum discharge during year, 15,000 second-feet June 5 (gage height, 28.2 feet, from floodmarks); minimum, 13 second-feet Sept. 12-19, 22, 23.  
1930-37: Maximum discharge, about 28,800 second-feet June 14, 1935 (gage height, 33.0 feet, from floodmarks), from rating curve extended above 14,000 second-feet; minimum, 6.8 second-feet, Oct. 31, Nov. 1, 1931, May 24, 1933.

Remarks.- Records good except that for June 5 (computed on basis of fragmentary gage-height record) and those for June 10-27 (computed on basis of indicated range of stage on water-stage recorder graph and rainfall data), which are fair. No large diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	27	34	34	30	25	28	20	5,100	25	17	468
2	82	27	33	32	30	24	27	20	3,600	24	17	152
3	63	27	33	30	30	25	27	19	3,050	23	17	49
4	50	25	33	29	29	28	27	19	765	24	17	25
5	43	25	33	29	29	40	25	19	6,560	26	16	17
6	39	25	33	29	29	46	24	19	994	26	16	15
7	163	25	33	29	27	46	23	17	298	27	16	15
8	288	25	32	29	27	53	23	17	164	27	16	15
9	136	25	33	29	27	42	25	17	113	27	16	15
10	65	27	31	29	26	37	24	17	100	30	15	14
11	46	30	30	29	26	33	24	17	83	40	15	14
12	37	55	28	29	25	30	24	17	74	33	16	13
13	33	62	28	30	25	29	24	17	66	29	17	13
14	31	47	28	31	25	96	24	18	59	29	16	13
15	30	39	28	31	25	102	24	17	54	27	17	13
16	29	33	28	31	25	62	24	17	50	25	21	13
17	28	31	28	31	25	48	24	17	46	25	27	13
18	27	30	28	31	25	39	23	16	42	26	20	13
19	27	30	28	31	26	34	23	16	38	23	17	13
20	27	30	27	30	26	30	23	15	35	22	16	14
21	27	29	27	30	25	28	25	15	31	21	15	14
22	26	29	27	30	25	27	74	15	29	20	15	13
23	25	29	27	30	25	26	71	15	28	20	15	13
24	27	33	28	30	25	30	46	15	27	19	14	14
25	27	31	28	30	25	130	33	15	27	19	14	14
26	27	30	28	30	25	73	28	15	27	19	14	15
27	27	30	29	30	25	45	25	14	27	19	14	16
28	29	30	30	30	25	33	24	14	26	18	14	14
29	29	37	30	30	-	31	23	14	26	17	14	14
30	29	40	33	30	-	36	21	15	25	17	14	14
31	29	-	34	30	-	30	-	23	-	17	120	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				1,687	288	25	53.8	3,310				
November.....				983	82	25	32.1	1,910				
December.....				930	34	27	30.0	1,840				
Calendar year 1936.....				51,579	13,100	17	141	102,300				
January.....				933	34	29	30.1	1,850				
February.....				737	30	25	26.3	1,460				
March.....				1,368	130	24	45.8	2,990				
April.....				860	74	21	28.7	1,710				
May.....				521	23	14	16.8	1,030				
June.....				21,564	6,560	25	71.9	42,770				
July.....				743	40	17	24.0	1,470				
August.....				608	120	14	19.6	1,210				
September.....				1,060	468	13	35.3	2,100				
Water year 1936-37.....				31,944	6,560	13	67.5	63,350				

## Nueces River at Laguna, Tex.

Location.- Water-stage recorder, lat. 29°26', long. 100°00', half a mile below Sycamore Creek and 1 mile northeast of Laguna, Uvalde County. Zero 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 1937.

Average discharge.- 14 years, 170 second-feet.

Extremes.- Maximum discharge during year, 755 second-feet Oct. 1 (gage height, 3.78 feet); minimum, 19 second-feet Sept. 29, 30.  
1923-37: Maximum discharge, 213,000 second-feet June 14, 1935 (gage height, 26.0 feet, from floodmarks), by slope-area method; minimum, 7.8 second-feet Nov. 3-15, 18, 1934.  
Flood of Sept. 21, 1923, reached a stage of 26.5 feet (discharge, 226,000 second-feet, by slope-area method). Flood of June 1913 reached a stage 2 or 3 feet higher.

Remarks.- Records excellent. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	711	331	202	141	113	94	110	78	51	53	43	25
2	638	318	197	141	110	94	110	76	49	51	43	25
3	588	306	197	137	110	94	108	76	49	51	41	36
4	559	325	197	137	108	94	108	74	224	49	41	38
5	530	410	202	137	108	96	106	74	280	49	40	30
6	509	370	202	133	108	105	105	74	149	49	41	27
7	516	344	197	137	105	105	102	74	122	49	40	27
8	480	325	192	137	105	108	102	71	108	49	38	27
9	445	312	192	133	105	108	102	71	96	53	38	25
10	424	306	186	133	105	105	102	71	88	53	36	25
11	403	306	181	133	105	102	99	67	81	51	36	25
12	384	306	176	133	102	105	99	67	76	51	36	25
13	370	295	170	133	102	129	99	67	71	51	34	24
14	364	280	170	129	102	202	96	67	69	51	32	24
15	351	274	181	129	99	153	96	64	69	51	30	24
16	338	268	181	125	99	133	96	64	67	49	30	24
17	325	268	181	125	99	122	96	62	64	49	30	24
18	318	261	181	122	99	122	96	62	64	51	30	24
19	306	255	176	122	99	119	94	62	62	51	28	22
20	293	249	176	122	96	119	96	60	62	51	28	22
21	280	237	176	119	94	116	96	60	60	49	28	22
22	286	230	170	119	94	113	94	60	60	49	28	22
23	344	230	165	116	94	113	91	58	58	49	28	22
24	325	224	165	116	94	113	91	56	58	49	27	20
25	331	224	161	116	94	113	88	56	56	47	27	20
26	312	218	161	116	94	113	86	53	56	47	27	20
27	293	213	157	116	94	113	86	51	56	47	27	20
28	312	213	153	113	94	110	84	51	53	45	27	20
29	344	213	153	113	-	110	84	56	53	45	27	19
30	357	213	149	113	-	110	84	56	53	45	25	19
31	338	-	145	113	-	110	-	53	-	43	25	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						12,374	711	280	399	24,540		
November.....						8,322	410	213	277	16,510		
December.....						5,492	202	145	177	10,890		
Calendar year 1936.....						117,672	26,400	47	322	235,400		
January.....						3,909	141	113	126	7,750		
February.....						2,331	113	94	101	5,620		
March.....						3,543	202	94	114	7,030		
April.....						2,905	110	84	96.8	5,760		
May.....						1,991	78	51	64.2	3,950		
June.....						2,464	280	49	82.1	4,890		
July.....						1,527	53	43	49.3	3,030		
August.....						1,011	43	25	32.6	2,010		
September.....						727	38	19	24.2	1,440		
Water year 1936-37.....						47,096	711	19	129	93,420		

Nueces River near Uvalde, Tex.

Location.- Staff gage, lat. 29°11', long. 99°54', at Tom Nunn crossing, 4½ miles below Texas and New Orleans (Southern Pacific) Railroad bridge and 7 miles southwest of Uvalde, Uvalde County.

Drainage area.- 1,930 square miles.

Records available.- October 1927 to September 1937.

Extremes.- Maximum discharge during year, 765 second-feet Oct. 1 (gage height, 2.35 feet, from graph based on gage readings); minimum, 15 second-feet Sept. 6-30.  
1927-37: Maximum discharge, 616,000 second-feet June 14, 1935 (gage height, 36.9 feet, from floodmarks by slope-area method; minimum not determined, probably 0.2 second-foot Feb. 12-22, 1929.

Remarks.- Records good. Gage read twice daily Oct. 1 to Nov. 14 and once daily thereafter. No diversions. Some of the flow of Nueces River and its tributaries enters the Balcones fault a few miles above station. At low stages the greater part of the upriver flow enters this fault.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	710	290	174	100	71	46	51	30	24	19	19	16
2	585	280	170	97	71	44	49	30	24	19	19	16
3	550	270	167	97	71	44	49	30	24	19	19	16
4	515	260	163	97	71	44	49	29	56	19	19	16
5	480	285	160	97	71	44	49	29	34	19	19	16
6	490	300	157	94	68	44	49	29	25	19	19	15
7	450	312	154	94	68	44	49	29	24	19	19	15
8	450	306	151	91	66	44	46	29	24	19	19	15
9	420	300	145	91	63	44	46	27	24	19	19	15
10	402	290	139	91	61	44	46	27	22	19	19	15
11	366	280	133	89	58	44	46	27	22	19	18	15
12	348	270	130	89	58	44	46	27	22	19	18	15
13	330	270	130	86	56	44	46	27	22	19	18	15
14	318	260	127	86	56	46	44	27	22	19	18	15
15	306	250	125	86	56	49	41	25	22	19	18	15
16	295	240	122	86	53	51	41	25	22	19	18	15
17	285	230	119	84	53	56	41	25	22	19	18	15
18	275	220	116	84	51	58	41	25	21	19	18	15
19	265	215	113	81	51	61	39	25	21	19	18	15
20	255	210	111	81	51	63	39	25	21	19	18	15
21	245	205	111	81	51	63	39	25	21	19	18	15
22	235	200	111	81	49	61	39	25	20	19	18	15
23	235	196	108	78	49	58	37	25	20	19	18	15
24	260	193	108	78	49	56	34	25	20	19	18	15
25	290	189	105	78	46	56	34	25	19	19	18	15
26	306	185	105	76	46	53	34	25	19	19	18	15
27	324	182	102	76	46	53	34	25	19	19	18	15
28	318	182	105	76	46	53	34	24	19	19	16	15
29	306	182	102	73	-	53	32	24	19	19	16	15
30	300	178	102	73	-	51	32	24	19	19	16	15
31	295	-	100	73	-	51	-	24	-	19	16	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						11,199	710	235	361	22,210		
November.....						7,230	312	178	241	14,340		
December.....						3,955	174	100	128	7,860		
Calendar year .....												
January.....						2,644	100	73	85.3	5,240		
February.....						1,606	71	46	57.4	3,190		
March.....						1,566	63	44	50.5	3,110		
April.....						1,256	51	32	41.9	2,490		
May.....						813	30	24	26.4	1,620		
June.....						695	56	19	23.1	1,370		
July.....						589	19	19	19.0	1,170		
August.....						560	19	16	18.1	1,110		
September.....						455	16	15	15.2	902		
Water year 1936-37.....						32,581	710	15	89.3	64,610		

## Nueces River at Cotulla, Tex.

Location.- Water-stage recorder, lat. 28°28', long. 99°16', at Cotulla-Laredo highway bridge in Cotulla, La Salle County, a third of a mile above International-Great Northern Railroad bridge. Zero 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 1937. July 1915 to June 1918, at site near Cotulla, 4 miles upstream.

Average discharge.- 14 years (1923-37), 367 second-feet.

Extremes.- Maximum discharge during year, 4,120 second-feet Oct. 1 (gage height, 13.73 feet); no flow at times.

1923-37: 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. The flow at low water is regulated above station principally by diversion by pumping, most of it being so diverted, but partly, also, by storage in small reservoirs. Some of the flow of Nueces River and its tributaries enters the Balcones fault, which crosses the basin just north of Uvalde in an east-west course. At low stages the greater part of the headwater flow enters this fault.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July		
1	4,120	306	203	101	59	20	30	5.0	0	0		
2	4,040	306	205	97	63	20	30	4.0	157	0		
3	3,820	306	203	93	68	21	31	4.0	849	0		
4	3,060	306	196	93	66	24	28	3.0	1,640	0		
5	2,100	298	194	91	61	25	25	3.0	1,680	0		
6	1,440	290	190	93	59	27	24	2.0	1,010	0		
7	920	273	188	97	56	33	23	2.0	318	0		
8	635	264	188	95	54	48	22	1.0	147	0		
9	545	264	188	91	53	49	21	1.0	76	0		
10	500	282	184	91	51	57	20	.8	47	1.4		
11	470	290	177	88	50	57	19	.5	35	.9		
12	440	282	169	89	48	53	18	.3	27	.3		
13	410	282	162	93	43	50	17	1.5	17	1.5		
14	391	282	158	93	40	48	16	2.5	15	1.5		
15	364	273	154	91	38	45	15	1.5	9.2	.2		
16	346	264	160	84	35	45	14	1.5	6.6	.3		
17	330	255	158	84	34	43	13	1.5	5.2	1.4		
18	322	255	149	80	37	41	12	1.5	4.6	1.5		
19	308	241	144	78	37	39	11	1.5	2.9	1.8		
20	298	228	137	82	35	36	10	.8	1.5	2.4		
21	290	222	132	84	31	34	10	0	4.2	.2		
22	273	217	130	80	31	31	9.0	0	2.7	.3		
23	264	218	130	78	31	29	9.0	0	1.5	.6		
24	255	220	120	75	30	28	8.0	0	1.2	0		
25	255	217	106	71	28	27	8.0	0	0	0		
26	264	213	99	70	26	31	7.0	0	0	0		
27	282	205	101	71	24	32	7.0	0	0	0		
28	298	203	101	71	23	31	6.0	0	0	0		
29	290	201	108	68	-	30	6.0	0	0	0		
30	298	200	110	61	-	29	5.0	0	0	0		
31	298	-	106	57	-	28	-	0	-	0		
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	27,924		4,120		285		901		55,390			
November.....	7,653		306		200		255		15,200			
December.....	4,750		205		99		153		9,420			
Calendar year 1936.....	223,687.8		13,300		0		611		443,700			
January.....	2,569		101		57		83.5		5,140			
February.....	1,211		68		23		43.2		2,400			
March.....	1,111		57		20		35.8		2,200			
April.....	474.0		31		5.0		15.8		940			
May.....	38.9		5.0		0		1.25		77			
June.....	6,057.6		1,680		0		202		12,020			
July.....	14.3		2.4		0		.46		28			
August.....	0		0		0		0		0			
September.....	0		0		0		0		0			
Water year 1936-37.....	51,832.8		4,120		0		142		102,800			

Note.- Discharge for period of missing gage heights, Apr. 7 to May 11, computed on basis of records for Nueces River near Uvalde and Frio River near Derby and weather records; that for May 12 to June 1, June 10 to Sept. 30 computed from graph constructed on basis of once-daily readings of gage by U. S. Weather Bureau.



## Nueces River near Three Rivers, Tex.

Location.- Water-stage recorder, lat. 28°26'10", long. 98°11'10", 100 feet below San Antonio, Uvalde & Gulf (Missouri Pacific) Railroad bridge, half a mile below mouth of Frio River, and 2 miles southeast of town of Three Rivers, Live Oak County. Zero of gage is 101.08 feet above mean sea level.

Drainage area.- 15,600 square miles.

Records available.- July 1915 to September 1937.

Average discharge.- 20 years (1915-18, 1920-37), 784 second-feet.

Extremes.- Maximum discharge during year, 8,860 second-feet Oct. 5 (gage height, 29.97 feet); minimum, 3.7 second-feet Sept. 5 6 (gage height, 1.43 feet).  
1915-37: Maximum discharge, about 85,000 second-feet Sept. 18, 1919 (gage height, 46.0 feet); no flow at times.

Remarks.- Records good. About 10,000 acres irrigated above station. Some of the flow of the Nueces River and its tributaries enters the Balcones fault, which crosses the basin just north of Uvalde in an east-west course. At low stages the greater part of the headwater flow enters this fault.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,160	516	405	227	172	102	108	38	48	20	8.3	7.2
2	7,370	516	394	229	172	108	110	36	56	18	7.7	6.7
3	7,460	516	383	227	172	118	110	32	1,660	16	6.9	5.7
4	8,400	528	383	225	170	116	108	32	545	15	6.7	4.6
5	8,580	540	383	223	158	112	100	32	538	17	6.2	4.1
6	6,710	551	383	217	158	112	96	31	482	41	8.8	124
7	5,000	551	372	212	160	112	94	32	764	32	33	643
8	4,160	540	361	208	164	110	94	29	689	24	17	850
9	3,780	516	350	206	158	104	92	30	1,140	26	9.0	528
10	3,750	505	350	206	154	122	90	32	1,420	64	6.4	318
11	3,840	516	339	204	146	116	88	31	1,240	204	5.2	190
12	3,970	482	328	206	142	104	84	28	1,040	383	5.0	88
13	3,860	471	339	206	138	102	84	433	426	200	5.0	53
14	3,540	482	328	208	134	92	82	348	212	158	4.8	47
15	2,900	505	318	206	130	82	80	156	150	138	4.8	**4
16	1,490	505	318	208	124	78	77	138	116	108	5.0	*31
17	1,100	516	307	206	122	73	73	154	90	73	5.0	*30
18	970	516	296	208	120	106	69	168	75	47	5.5	*29
19	898	505	296	208	120	341	68	124	60	35	318	27
20	804	482	286	210	116	225	64	96	50	32	1,070	24
21	758	471	286	206	110	174	64	69	42	26	1,800	23
22	689	460	286	200	110	154	60	53	37	22	2,790	19
23	620	438	282	192	106	138	54	42	32	18	2,030	15
24	597	438	273	188	108	128	57	37	29	16	123	13
25	551	416	267	190	108	122	51	31	26	14	44	11
26	516	416	259	192	108	120	48	26	24	12	53	9.3
27	482	405	254	190	106	116	46	23	20	11	24	8.6
28	471	405	250	186	104	110	42	22	17	11	26	8.3
29	460	405	244	182	-	106	40	30	16	9.9	17	8.0
30	471	405	236	178	-	108	39	48	18	9.6	11	7.7
31	494	-	227	172	-	106	-	80	-	9.0	8.3	-
Month	Second-foot-days					Maximum		Minimum		Mean		Run-off in acre-feet
October.....	92,851					8,580		460		2,995		184,200
November.....	14,518					551		405		484		26,800
December.....	9,783					405		227		316		19,400
Calendar year 1936.....	461,622					26,500		39		1,261		915,700
January.....	6,326					229		172		204		12,550
February.....	3,790					172		104		135		7,520
March.....	3,819					341		73		123		7,570
April.....	2,272					110		39		75.7		4,510
May.....	2,461					433		22		79.4		4,580
June.....	11,082					1,660		16		369		21,940
July.....	1,809.5					383		9.0		58.4		3,590
August.....	8,464.6					2,790		4.8		273		16,790
September.....	3,177.2					850		4.1		106		6,300
Water year 1936-37.....	160,333.3					8,580		4.1		439		318,000

\*Gage height missing; discharge computed from graph constructed on basis of once-daily readings of gage by U. S. Weather Bureau.

## Nueces River at Calallen, Tex.

Location.- Staff gage, lat. 27°52'40", long. 97°37'35", at old pump house for city of Corpus Christi, half a mile northwest of Calallen, Nueces County, and half a mile above tidewater and breakwater dam.

Drainage area.- 16,920 square miles.

Records available.- August 1915 to September 1937 (1918-38, gage heights only).

Extremes.- Maximum gage height observed during year, 9.00 feet Oct. 7-9; minimum, 2.80 feet May 6, 12.

1915-37: Maximum gage height observed, 12.40 feet June 19 and 27, 1935; no flow Aug. 23-29, 1918 (only period of no flow on record).

Remarks.- Discharge not computed. Gage-height record furnished by City of Corpus Christi. Gage read twice daily.

Gage height, in feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.10	4.60	3.85	3.70	3.70	3.50	3.55	3.32	4.02	3.40	3.12	3.45
2	8.48	4.28	3.80	3.70	3.68	3.50	3.58	3.35	3.52	3.38	3.13	3.48
3	8.72	3.85	3.92	3.70	3.70	3.55	3.52	3.15	3.42	3.38	3.25	3.42
4	8.85	3.70	4.00	3.70	3.68	3.52	3.60	3.00	3.45	3.48	3.00	3.32
5	8.88	3.80	4.00	3.68	3.70	3.55	3.52	3.00	3.70	3.52	3.15	3.60
6	8.88	4.10	4.00	3.70	3.68	3.55	3.45	2.95	3.62	3.50	3.15	3.58
7	9.00	3.85	4.00	3.70	3.70	3.55	3.40	2.98	3.55	3.55	3.18	3.58
8	9.00	4.08	3.95	3.68	3.68	3.55	3.40	3.00	3.52	3.55	3.15	3.58
9	8.98	3.80	3.95	3.70	3.68	3.52	3.40	3.15	3.58	3.55	3.10	3.60
10	8.72	3.80	3.95	3.70	3.68	3.55	3.40	3.02	3.55	3.52	3.15	3.60
11	8.20	3.80	3.95	3.70	3.68	3.55	3.40	3.00	3.75	3.52	3.18	3.58
12	7.60	3.80	3.95	3.70	3.68	3.52	3.40	2.98	3.72	3.42	3.08	3.60
13	7.20	3.80	3.95	3.70	3.68	3.55	3.50	3.32	3.75	3.42	3.10	3.58
14	7.05	3.80	3.95	3.70	3.55	3.55	3.48	3.20	3.72	3.45	3.12	3.60
15	7.00	3.80	3.95	3.70	3.52	3.55	3.48	3.15	3.75	3.42	3.40	3.58
16	6.88	3.90	3.95	3.70	3.52	3.52	3.45	3.15	3.72	3.42	3.65	3.60
17	6.58	4.05	3.95	3.70	3.52	3.52	3.42	3.80	3.60	3.45	3.65	3.58
18	6.60	4.08	3.95	3.70	3.52	3.52	3.48	3.80	3.45	3.48	3.65	3.60
19	4.72	4.05	3.95	3.68	3.52	3.55	3.45	3.60	3.52	3.50	3.62	3.60
20	4.55	4.05	3.95	3.70	3.52	3.55	3.42	3.62	3.62	3.48	3.48	3.58
21	4.55	4.08	3.95	3.68	3.55	3.55	3.42	3.62	3.52	3.48	3.40	3.58
22	4.42	4.10	3.95	3.70	3.50	3.55	3.42	3.60	3.52	3.45	3.40	3.58
23	4.55	4.18	3.95	3.70	3.52	3.52	3.42	3.60	3.48	3.45	3.40	3.58
24	4.48	4.20	3.95	3.70	3.52	3.55	3.42	3.55	3.48	3.50	3.65	3.50
25	4.38	4.20	3.95	3.68	3.48	3.55	3.45	3.42	3.48	3.38	3.90	3.45
26	4.25	4.22	3.92	3.70	3.55	3.52	3.35	3.40	3.48	3.30	3.82	3.50
27	4.98	4.20	3.95	3.70	3.52	3.55	3.32	3.40	3.48	3.30	3.78	3.45
28	5.05	4.20	3.88	3.70	3.55	3.55	3.32	3.35	3.48	3.28	3.70	3.38
29	5.05	4.20	3.70	3.70	-	3.55	3.32	3.35	3.42	3.30	3.48	3.25
30	5.05	4.02	3.70	3.70	-	3.55	3.32	3.40	3.40	3.25	3.48	3.18
31	5.02	-	3.70	3.70	-	3.52	-	3.40	-	3.18	3.45	-

## Frio River at Concan, Tex.

Location.- Water-stage recorder, lat. 29°29', long. 99°42', half a mile below Concan post office, Uvalde County. Zero of gage is 1,203.71 feet above mean sea level (general adjustment of 1929).

Drainage area.- 485 square miles.

Records available.- October 1923 to September 1937.

Average discharge.- 12 years (1924-29, 1930-37), 130 second-feet.

Extremes.- Maximum discharge during year, 778 second-foot Oct. 1 (gage height, 2.81 feet); minimum, 24 second-foot Aug. 20.  
1923-37: Maximum discharge, 182,000 second-foot, July 1, 1932 (gage height, 34.44 feet, from floodmarks) by slope-area method; minimum, 8.1 second-foot, Aug. 2, 3, 1928.

Remarks.- Records excellent. No diversions above gage.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	707	356	209	130	123	100	107	78	58	58	39	27
2	642	343	209	127	123	100	107	75	61	55	41	26
3	595	318	204	130	125	100	103	72	61	50	41	26
4	564	362	196	130	120	103	97	72	275	50	39	30
5	532	343	192	130	120	196	94	72	192	50	39	32
6	506	324	184	130	120	123	94	72	120	50	39	29
7	525	307	184	130	120	123	94	72	107	48	39	32
8	480	295	184	130	120	120	94	69	100	70	37	37
9	440	295	180	133	116	116	94	69	91	64	37	32
10	414	307	180	133	116	113	97	69	87	61	37	30
11	398	307	173	133	113	113	97	69	87	61	37	29
12	376	295	173	130	113	113	97	69	87	58	36	29
13	356	284	173	130	113	169	97	69	84	55	34	29
14	343	263	166	130	113	133	97	69	81	56	34	29
15	336	263	158	130	110	127	97	69	81	52	34	29
16	318	258	162	130	107	127	97	69	81	50	34	29
17	307	258	158	130	107	120	94	69	81	50	34	30
18	295	248	154	130	107	120	94	69	75	50	32	30
19	284	244	151	130	107	116	91	69	72	48	30	30
20	278	244	151	130	103	113	91	69	72	48	30	30
21	267	234	151	130	97	110	91	69	69	45	29	29
22	263	230	151	130	97	110	87	69	69	45	30	29
23	343	230	147	130	97	113	84	66	66	45	30	29
24	343	230	147	127	97	113	81	64	66	43	30	29
25	330	221	147	127	100	113	81	61	64	43	29	29
26	313	217	144	127	100	110	81	61	64	43	29	29
27	301	209	140	123	100	110	81	61	64	43	29	27
28	318	209	137	123	100	107	81	61	64	43	29	26
29	362	209	140	123	-	107	61	61	64	43	29	26
30	369	209	137	123	-	107	78	61	61	41	29	26
31	369	-	133	123	-	107	-	61	-	41	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	12,265	707	283	396	24,330
November.....	8,112	362	209	270	16,090
December.....	5,115	209	133	165	10,150
Calendar year 1936.....	76,469	13,100	43	209	151,700
January.....	3,992	133	123	129	7,920
February.....	3,082	123	97	110	6,110
March.....	3,852	196	100	118	7,240
April.....	2,782	107	78	92.1	5,480
May.....	2,105	76	61	67.9	4,180
June.....	2,604	275	58	86.8	5,160
July.....	1,558	70	41	50.3	3,090
August.....	1,043	41	27	33.6	2,070
September.....	874	37	26	29.1	1,730
Water year 1936-37.....	47,164	707	26	129	93,550

## NUECES RIVER BASIN

Frio River near Derby, Tex.

Location.— Water-stage recorder, lat. 28°44', long. 99°09', at International-Great Northern Railroad bridge, 900 below mouth of Leona River and 4 miles south of Derby, Frio County. Zero of gage is 449.3 feet above mean sea level.

Drainage area.— 3,493 square miles.

Records available.— August 1915 to September 1937.

Average discharge.— 22 years, 191 second-feet.

Extremes.— Maximum discharge during year, 3,540 second-feet Oct. 1 (gage height, 7.72 feet); minimum, 9.6 second-feet Aug. 30 and Sept. 2.

1915-37: 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 periods of missing gage heights, which are poor. Diversions for irrigation above station. Some of the flow of the Frio River and its tributaries enters the Balcones fault, which crosses the Nueces River Basin just north of Uvalde in an east-west course. At low stages all of the headwater flow, except that of a few of the tributaries, enters this fault.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

0.3	6.1	1.0	106	4.0	1,390
.4	14.2	1.5	226	5.0	1,830
.6	24.4	2.0	375	6.0	2,270
.6	37.2	2.5	610		
.8	68	3.0	876		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,270	178	96	65	54	43	49	32	16	14	14	11
2	1,440	152	96	65	54	43	48	32	16	14	13	9.8
3	1,030	188	94	63	54	44	46	31		15	13	12
4	850	170	90	62	54	46	46	30	320	13	13	12
5	736	155	86	62	52	46	46	30		13	13	16
6	643	143	86	63	52	48	46	30		16	12	16
7	566	141	82	62	50	49	46	29		20	12	16
8	599	134	82	60	62	58	45	29	82	20	12	15
9	665	136	81	60	60	54	45	28	55	20	12	13
10	469	134	81	60	54	52	44	34	40	20	11	13
11	387	132	79	60	54	50	44	27	31	19	11	13
12	340	134	79	60	54	158	44	24	26	19	11	14
13	305	143	79	60	60	82	43	24	22	19	11	16
14	275	141	75	60	58	55	43	24	19	18	11	19
15	255	129	73	58	50	50	42	24	18	18	11	15
16	234	119	75	58	50	49	42	26	17	18	11	14
17	216	110	75	58	50	49	42	28	17	17	11	14
18	200	106	75	60	52	48	41	28	17	17	11	13
19	182	104	75	60	54	48	41	28	17	17	11	14
20	168	102	73	60	54	48	40	28	16	17	11	14
21	152	102	73	60	50	48	36	26	16	16	11	16
22	138	98	72	57	48	48	36	24	16	16	11	16
23	132	94	70	57	48	48	36	23	16	16	11	15
24	123	92	70	57	44	49	35	22	15	16	11	15
25	125	90	72	57	44	49	34	21	15	15	11	14
26	138	92	72	55	43	50	34	19	16	15	11	13
27	145	92	70	54	44	50	34	18	16	15	11	13
28	150	90	68	54	43	50	33	17	15	15	11	13
29	141	90	68	54	-	49	33	16	15	14	11	13
30	143	92	68	55	-	49	32	16	14	14	9.8	13
31	160	-	66	55	-	49	-	16	-	14	11	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						13,378	2,270	123	432	26,530		
November.....						3,713	188	90	124	7,360		
December.....						2,401	96	66	77.5	4,760		
Calendar year 1936.....						84,287	11,500	10	230	167,200		
January.....						1,633	65	54	59.1	3,640		
February.....						1,448	62	43	51.7	2,870		
March.....						1,659	158	43	53.5	3,290		
April.....						1,227	49	32	40.9	2,430		
May.....						784	34	16	25.3	1,560		
June.....						2,165	-	14	72.1	4,290		
July.....						508	20	13	16.4	1,010		
August.....						354.8	14	9.8	11.4	704		
September.....						421.8	19	9.8	14.1	837		
Water year 1936-37.....						29,890.6	2,270	9.8	81.9	59,280		

Note.— Discharge for periods of missing gage heights, Mar. 14 to Apr. 4, Apr. 6 to May 11, May 14 to June 26, July 1 to Aug. 14, computed on basis of recorded range in stage, weather records, and records for stations at Concan and at Callham.

## Frio River at Calliham, Tex.

Location.- Water-stage recorder, lat. 28°29'30", long. 98°20'45", at Calliham-Whitsett Highway bridge, 1 mile north of Calliham, McMullen County, and 9.7 miles below mouth of San Miguel Creek. Zero 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 1937.

Extremes.- Maximum discharge during year, 5,390 second-feet Oct. 4 (gage height, 21.53 feet); minimum, 4.3 second-feet Sept. 3 (gage height, 2.69 feet).  
1924-26, 1932-37: 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. Diversions for irrigation above station. Some of the flow of the Frio River and its tributaries enters the Balcones fault, which crosses the Nueces River Basin just north of Uvalde in an east-west course. At low stages all of the headwater flow, except that of a few of the tributaries, enters this fault.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

2.7	4.5	3.9	191	12.0	2,340
2.9	12.5	4.2	320	15.0	3,170
3.1	29	5.0	560	18.0	4,120
3.3	55	6.0	810	21.0	5,190
3.6	111	9.0	1,560		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	758	156	107	80	60	52	58	27	20	12	7.8	5.8
2	1,770	156	107	80	60	54	57	25	293	11	7.5	4.8
3	4,070	156	107	77	60	54	55	25	710	11	7.5	4.3
4	5,210	187	107	73	63	55	52	25	226	12	6.5	4.8
5	3,280	182	109	73	61	57	50	24	379	12	7.5	5.5
6	1,840	185	109	71	61	58	50	25	392	11	26	190
7	1,310	176	105	68	61	60	48	23	399	11	17	174
8	898	168	100	68	60	60	46	24	264	10	7.8	71
9	685	148	98	68	61	68	44	27	522	12	6.2	34
10	585	151	98	68	60	84	44	27	424	29	5.5	22
11	598	156	94	68	58	73	43	24	185	55	5.2	19
12	610	143	92	66	53	71	43	23	116	50	4.8	15
13	497	143	92	66	57	68	43	41	86	60	4.8	23
14	439	140	88	66	58	63	43	33	65	52	4.8	32
15	399	138	86	66	57	60	42	65	50	34	5.2	16
16	362	143	86	68	54	55	40	58	40	25	5.8	15
17	328	145	86	68	52	52	40	40	53	20	6.2	17
18	295	140	84	69	54	111	39	32	29	17	5.6	14
19	264	130	84	71	55	107	40	37	25	15	5.2	14
20	235	125	84	71	57	86	40	33	21	13	6.2	15
21	210	121	82	73	58	79	38	29	18	12	6.8	13
22	195	118	82	69	55	69	33	26	16	12	6.8	12
23	179	118	84	68	52	65	32	23	15	11	6.2	11
24	158	113	84	69	52	61	33	20	14	11	5.5	10
25	148	109	84	69	52	61	32	18	13	10	5.2	10
26	140	107	80	68	52	60	32	17	12	9.7	5.2	9.7
27	135	103	79	68	52	58	30	15	11	9.7	5.5	9.7
28	130	100	80	68	54	55	28	20	9.7	9.2	5.5	10
29	140	100	80	66	-	54	27	17	12	9.2	5.5	9.7
30	153	103	80	63	-	52	28	28	15	8.7	5.5	9.2
31	158	-	80	61	-	55	-	23	-	7.8	6.5	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				26,177	5,210	130	844	51,920				
November.....				4,130	135	100	138	8,190				
December.....				2,818	109	79	90.9	5,590				
Calendar year 1936.....				146,125	20,900	20	399	289,800				
January.....				2,147	80	61	69.3	4,260				
February.....				1,594	63	52	56.9	3,160				
March.....				2,017	111	52	65.1	4,000				
April.....				1,230	68	27	41.0	2,440				
May.....				874	65	15	28.2	1,730				
June.....				4,414.7	710	9.7	147	8,760				
July.....				582.3	60	7.8	18.8	1,150				
August.....				217.2	26	4.8	7.01	431				
September.....				799.5	190	4.3	26.6	1,590				
Water year 1936-37.....				47,000.7	5,210	4.3	129	93,220				

## Atascosa River at Whitsett, Tex.

Location.- Water-stage recorder, lat. 28°39', long. 98°18', 0.9 mile west of Whitsett, Live Oak County, and 4 miles below mouth of La Parita Creek.

Drainage area.- 1,171 square miles.

Records available.- September 1924 to May 1926, May 1932 to September 1937.

Extremes.- Maximum discharge during year, 990 second-feet June 3 (gage height, 11.36 feet); no flow at times.

1924-26, 1932-37: 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. No diversions above station.

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

3.6	0	5.2	108
4.0	3.7	5.6	153
4.2	10.5	6.0	204
4.4	21.5	7.0	344
4.8	54	8.0	484

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	17	23	15	15	9.2	13	5.6	13	5.0	0.9	0
2	17	15	20	16	14	10	13	4.7	348	4.5	.7	0
3	13	13	18	15	14	11	12	4.2	464	4.0	.6	0
4	12	12	17	15	15	13	11	3.7	105	4.5	.4	0
5	12	12	18	16	14	13	10	3.7	73	27	3.0	0
6	11	12	17	15	14	14	9.2	3.7	148	25	8.6	0
7	172	13	17	15	14	17	9.2	3.5	99	14	.6	0
8	470	13	15	16	14	17	8.8	3.5	50	13	.2	0
9	108	12	15	15	13	15	7.6	3.3	37	21	.1	0
10	38	12	16	15	13	14	7.3	2.8	33	31	0	0
11	23	15	14	15	12	14	7.3	2.6	28	177	0	0
12	18	15	14	15	12	14	7.3	2.4	24	175	0	0
13	16	15	14	17	11	13	6.0	30	20	42	0	0
14	15	14	14	17	11	13	8.0	141	18	25	0	0
15	14	13	15	17	11	13	8.8	55	16	17	.3	0
16	13	13	15	17	10	13	9.7	23	15	13	.4	.1
17	12	14	15	17	10	14	8.0	11	13	12	.3	.8
18	12	14	15	16	10	14	7.3	7.6	12	9.2	1.1	.5
19	11	14	14	16	11	14	6.9	5.6	10	12	.4	.4
20	10	14	14	17	11	13	6.5	5.0	10	9.2	.2	.2
21	10	14	14	17	11	12	8.4	4.0	9.7	7.6	.1	.2
22	9.7	13	14	15	11	12	9.2	3.7	8.8	6.5	0	.2
23	8.8	14	14	15	11	12	15	3.0	8.0	5.0	0	.2
24	9.7	14	14	15	10	13	11	2.2	7.3	4.5	0	.2
25	11	15	14	15	10	14	8.4	1.9	6.5	3.3	0	.2
26	13	15	14	15	10	12	8.0	1.7	6.5	3.0	6.2	.2
27	13	15	15	15	10	11	6.9	1.6	5.6	2.6	12	.2
28	14	15	15	15	9.7	10	7.3	1.7	5.3	2.4	1.7	.2
29	15	17	15	15	-	12	7.3	25	5.0	2.2	.4	.2
30	17	25	17	14	-	13	5.9	39	5.3	1.6	.1	.2
31	17	-	15	15	-	14	-	25	-	1.1	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,157.2	470	8.8	37.3	2,300		
November.....						429	25	12	14.3	851		
December.....						481	23	14	15.5	954		
Calendar year 1936.....						62,463.9	-	6.3	17.1	123,900		
January.....						482	17	14	15.5	956		
February.....						331.7	15	9.7	11.8	558		
March.....						403.2	17	9.2	13.0	800		
April.....						256.3	15	5.9	8.88	528		
May.....						430.7	141	1.6	13.9	854		
June.....						1,604.0	464	5.0	53.5	3,180		
July.....						680.2	177	1.1	21.9	1,350		
August.....						38.3	12	0	1.24	76		
September.....						4.0	.8	0	.13	7.9		
Water year 1936-37.....						6,307.6	470	0	17.3	12,510		

## Rio Grande at Thirtymile Bridge, near Creede, Colo.

Location.- Water-stage recorder, lat.  $37^{\circ}44'$ , long.  $107^{\circ}16'$ , in sec. 13, T. 40 N., R. 4 W., above the mouth of Squaw Creek, three-quarters of a mile below Rio Grande Reservoir and 30 miles southwest of Creede.

Drainage area.- 183 square miles.

Records available.- June 1909 to September 1913, October 1933 to September 1937 in reports of Geological Survey; June 1909 to September 1937 in reports of State engineer.

Average discharge.- 24 years (1910-23, 1926-37), 229 second-feet.

Extremes.- Maximum discharge during year, 1,080 second-feet June 18 (gage height, 3.37 feet); minimum daily, 2 second-feet Oct. 1 to Jan. 31.  
1909-37: Maximum discharge, 7,500 second-feet June 28, 1927 (gage height, 7.03 feet); minimum daily, 1 second-foot at times when reservoir was about empty and gates were closed.

Remarks.- Records excellent except those for period of ice effect, Oct. 24 to Apr. 10, which were computed on basis of reservoir gate openings and are good. Flow regulated by Rio Grande Reservoir, just above station (capacity, 45,800 acre-feet).

Rating table, Apr. 10 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)

0.1	0	1.2	66	2.4	388
.2	3	1.4	94	2.6	484
.4	9	1.6	134	2.8	602
.6	17	1.8	182	3.0	744
.8	26	2.0	240	3.2	910
1.0	42	2.2	308	3.4	1,090

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2						3	284	397	616	484	88
2	2						3	312	339	629	434	75
3	2						3	316	294	559	402	76
4	2						3	319	179	534	397	80
5	2						3	196	143	501	393	70
6	2						3	434	147	518	375	67
7	2						3	643	335	602	363	80
8	2						3	683	469	670	368	70
9	2						3	371	319	707	406	62
10	2						3	397	420	663	388	57
11	2						15	565	559	602	316	53
12	2						22	596	495	650	287	53
13	2						39	240	464	629	397	50
14	2						76	42	501	636	439	49
15	2						166	12	602	577	444	48
16	2						156	14	677	518	444	45
17	2						156	16	833	552	402	45
18	2						156	17	964	616	380	44
19	2						156	19	919	670	359	44
20	2						156	19	816	616	350	42
21	2						156	21	629	565	327	42
22	2						159	147	643	546	316	43
23	2						240	367	714	540	327	44
24	2						280	776	737	554	342	43
25	2						276	622	663	554	304	39
26	2						276	546	518	577	312	39
27	2						199	479	253	534	346	38
28	2						294	479	425	512	434	54
29	2						335	656	650	506	616	67
30	2						250	616	622	501	323	116
31	2						-	490	-	495	123	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	62	2	2	2.0	123
November.....	60	-	-	2.0	119
December.....	62	-	-	2.0	123
Calendar year 1936.....	68,271	1,100	2	187	135,400
January.....	62	-	-	2.0	123
February.....	70	-	-	2.5	139
March.....	93	-	-	3.0	184
April.....	3,593	335	3	120	7,130
May.....	10,594	776	12	342	21,010
June.....	15,725	964	143	524	31,190
July.....	17,909	707	495	578	35,520
August.....	11,618	616	123	376	23,040
September.....	1,723	116	59	57.4	3,420
Water year 1936-37.....	61,571	964	2	169	122,100

## 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, 3 miles southeast of Creede.

Drainage area.- 705 square miles.

Records available.- April 1907 to September 1913 and October 1933 to September 1937 in reports of Geological Survey; April 1907 to September 1937 in reports of State engineer.

Average discharge.- 30 years, 645 second-feet.

Extremes.- Maximum discharge during year, 2,250 second-feet May 29 (gage height, 2.97 feet); minimum daily discharge recorded, 62 second-feet Nov. 27, 29, Dec. 2, 1907-37; Maximum discharge, 9,750 second-feet June 28, 1927 (gage height, 7.65 feet); minimum not determined.

Remarks.- Records excellent except those for period of ice effect, Nov. 4 to Mar. 12, which were computed on basis of 20 discharge measurements, gage heights, and weather records and are good. Diversions for irrigation above station. Flow regulated by three reservoirs (total capacity, 117,600 acre-feet).

Rating table, Mar. 13 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Apr. 12 to May 4)

0.2	66	1.2	358	2.2	1,120
.4	94	1.4	478	2.4	1,340
.6	134	1.6	612	2.6	1,630
.8	186	1.8	763	2.8	1,940
1.0	262	2.0	935		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	129	66			105	94	760	1,210	1,110	954	328
2	154	120	62			108	101	1,030	1,140	1,090	909	271
3	149	76	78			90	103	1,150	1,090	1,010	900	251
4	146	104	76			100	101	1,170	935	900	892	239
5	141	120	80			100	99	1,240	816	900	874	232
6	149	118	82			95	107	1,080	736	863	874	224
7	146	116	72			90	101	1,510	908	926	857	239
8	146	102	78			85	94	1,780	1,100	1,010	792	232
9	139	96	62			85	99	1,570	1,060	1,050	808	217
10	132	98	92			85	119	1,420	955	1,040	784	202
11	124	94	88			80	156	1,420	1,230	1,020	696	192
12	120	100	86			80	220	1,810	1,260	1,070	585	179
13	118	104	92	*77		90	303	1,700	1,130	1,090	532	170
14	111	113	98			91	478	1,450	1,160	1,050	635	164
15	109	111	100			101	696	1,370	1,190	1,010	627	161
16	109	122	82			88	800	1,350	1,330	900	696	156
17	109	115	76			88	688	1,400	1,510	892	728	153
18	107	111	84			93	565	1,320	1,690	964	680	148
19	111	100	86			90	578	1,120	1,720	1,090	665	146
20	132	88	84			88	572	1,080	1,520	1,240	650	146
21	132	90	84			94	650	1,090	1,340	1,080	642	144
22	122	80	74			94	944	1,170	1,220	1,040	642	144
23	120	71	74			96	832	1,400	1,320	1,030	650	148
24	118	64	70		*76	91	792	1,810	1,320	1,010	532	148
25	122	76	74			88	808	1,580	1,260	1,030	498	141
26	122	71	80			91	973	1,340	1,150	1,160	491	136
27	120	62	80			86	992	1,290	883	1,130	518	134
28	111	69	76			87	673	1,410	752	1,070	599	139
29	111	62	74			91	784	1,780	1,060	1,060	752	156
30	124	66	70			80	720	1,800	1,130	1,030	768	262
31	129	-	64			86	-	1,440	-	954	452	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,945	162	107	127	7,820		
November.....						2,650	129	62	95.0	5,662		
December.....						2,464	100	62	79.5	4,890		
Calendar year 1936.....						155,164	2,600	62	424	307,800		
January.....						2,236	-	-	72.1	4,440		
February.....						2,167	-	-	77.4	4,300		
March.....						2,816	108	60	90.8	5,590		
April.....						14,242	992	94	475	28,250		
May.....						42,840	1,810	70	1,562	84,970		
June.....						34,995	1,720	736	1,166	69,410		
July.....						31,839	1,240	883	1,027	63,150		
August.....						21,682	954	452	699	43,010		
September.....						5,602	328	134	187	11,110		
Water year 1936-37.....						167,678	1,810	62	469	332,600		

\*Average at two discharge measurements.



## Rio Grande near Del Norte, Colo.

Location.- Water-stage recorder, lat. 37°41', long. 106°28', in sec. 30, T. 40 N., R. 5 E., 6 miles west of Del Norte. Zero 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, April 1908 to September 1913, and October 1933 to September 1937 in reports of Geological Survey; July 1889 to September 1937 in reports of State engineer. July 1889 to September 1907, at site 4 miles downstream (records equivalent).

Average discharge.- 48 years, 965 second-feet.

Extremes.- Maximum discharge during year, 3,920 second-feet May 18 (gage height, 3.80

feet); minimum daily discharge observed, 128 second-feet Dec. 4.

1889-1937: Maximum discharge, about 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 period of ice effect, Dec. 4 to Apr. 12, which were computed on basis of eight discharge measurements, gage heights, and weather records and are fair. Small diversions for irrigation above station. Flow regulated by three main reservoirs above station (total capacity, 117,600 acre-feet) and several small ones.

Rating table, Apr. 13 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)

0.4	130	1.4	556	2.4	1,460	3.4	3,060
.6	170	1.6	696	2.6	1,720	3.6	3,480
.8	236	1.8	854	2.8	2,010	3.8	3,920
1.0	322	2.0	1,040	3.0	2,320		
1.2	428	2.2	1,240	3.2	2,670		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	289	270	193				210	1,260	2,510	1,690	1,110	536
2	284	252	146				250	1,650	2,440	1,720	1,090	428
3	270	187	143				300	2,120	2,440	1,580	1,100	389
4	266	172	126				250	2,190	2,260	1,380	1,050	372
5	257	241	160			*178	220	2,540	1,960	1,320	1,080	362
6	270	261	175				260	2,070	1,750	1,270	1,060	357
7	275	244	163				300	2,340	1,650	1,240	1,040	372
8	270	225	193				250	2,820	2,000	1,320	982	372
9	270	187	218				270	3,100	2,060	1,340	944	337
10	261	196	172				250	2,860	1,780	1,340	926	317
11	244	202	134				325	2,960	2,100	1,430	846	299
12	237	205	163				500	3,140	2,340	1,420	719	294
13	229	202	194				667	3,350	2,150	1,420	631	281
14	225	218	178				890	3,250	2,120	1,320	682	268
15	222	218	160			*164	1,220	3,310	2,080	1,310	704	260
16	218	214	163				1,690	3,400	2,240	1,160	742	248
17	211	222	172				1,690	3,630	2,400	1,090	821	244
18	206	229	163				1,160	3,630	2,630	1,130	797	240
19	208	229	160				1,280	3,250	2,670	1,170	764	236
20	244	208	163				1,180	3,120	2,510	1,350	726	232
21	266	205	157				1,300	2,980	2,460	1,220	734	229
22	252	208	151				1,720	2,880	2,370	1,140	704	232
23	244	193	146			*190	1,370	3,080	2,470	1,130	719	240
24	244	163	140				1,260	3,210	2,420	1,120	653	244
25	241	175	137				1,640	2,960	2,320	1,110	570	240
26	244	190	151				1,980	2,510	2,260	1,220	549	232
27	233	184	137				1,340	2,390	1,980	1,340	576	229
28	225	181	134				1,280	2,470	1,500	1,270	631	226
29	218	193	137				1,230	2,840	1,660	1,270	711	244
30	241	175	140				1,220	3,190	1,730	1,250	872	367
31	266	-	137				-	2,820	-	1,150	749	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							7,629	289	205	246	15,130	
November.....							6,249	270	163	208	12,390	
December.....							4,896	218	126	158	9,710	
Calendar year 1936.....							238,144	3,350	140	651	472,300	
January.....							4,960	-	-	160	9,840	
February.....							4,760	-	-	170	9,440	
March.....							5,890	-	-	190	11,680	
April.....							27,502	1,980	210	917	54,550	
May.....							87,210	3,630	1,250	2,813	175,000	
June.....							65,240	2,670	1,500	2,175	129,400	
July.....							40,220	1,720	1,090	1,297	79,780	
August.....							25,282	1,110	549	816	50,160	
September.....							8,926	536	225	298	17,700	
Water year 1936-37.....							288,764	3,630	-	791	572,800	

\*Discharge measurement.

## Rio Grande near Monte Vista, Colo.

Location.— Water-stage recorder, lat. 37°37', long. 106°09', in sec. 24, T. 39 N., R. 7 E., 2 miles north of Monte Vista. Zero 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 1937 in reports of Geological Survey; May 1926 to September 1937 in reports of State engineer.

Extremes.— Maximum discharge during year, 1,600 second-feet May 30 (gage height, 3.06 feet); minimum daily, 8.8 second-feet Apr. 10.  
1926-37: Maximum discharge, 18,500 second-feet June 30, 1927 (gage height, 7.85 feet); minimum daily, 4 second-feet Apr. 18, 1928.

Remarks.— Records good except those for periods of ice effect, Nov. 3, 4, Nov. 24 to Mar. 3, which were computed on basis of eight discharge measurements and weather records and are fair. Diversions for irrigation above station. Flow regulated by three main reservoirs (total capacity, 117,600 acre-feet) and several small ones.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	39	166	*182		230	68	256	858	665	143	21
2	89	132	182			235	38	350	732	642	182	19
3	86	162	186			230	34	525	778	543	150	14
4	80	174	174			223	26	507	778	459	112	14
5	61	203	178			210	83	581	628	375	136	24
6	53	238	174			199	92	402	477	284	102	21
7	55	243	166			261	23	489	375	158	132	31
8	51	234	186			214	13	695	519	143	75	39
9	48	216	174			214	10	794	519	125	19	26
10	51	212	174			266	8.8	665	365	115	16	23
11	61	207	194			275	16	650	365	150	12	23
12	64	212	203			218	58	710	501	166	18	21
13	61	207	203			181	96	906	413	125	108	21
14	64	220	203			185	220	858	360	99	66	21
15	64	225	203			192	408	842	465	72	61	21
16	66	220	203		*175	158	628	906	562	75	72	23
17	69	225	203			210	668	1,020	568	66	75	36
18	61	229	216			188	402	1,150	600	108	53	39
19	53	229	207			162	289	930	600	132	39	30
20	48	225	203			136	194	802	574	129	30	26
21	48	207	207			136	203	650	588	122	27	23
22	51	203	203			138	483	568	658	99	36	21
23	51	194	194			141	453	620	718	132	69	41
24	48	170	225			165	321	680	770	174	78	51
25	48	178	190			127	360	680	725	150	72	78
26	48	178	190			136	413	477	748	162	58	75
27	46	182	180			130	447	418	966	186	58	69
28	41	182	170			124	628	574	658	158	58	66
29	26	186	165			133	413	842	614	162	75	69
30	19	186	170			100	312	1,370	710	150	92	83
31	26	-	168			98	-	1,150	-	132	66	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,731	96	19	55.8	3,430		
November.....						5,918	243	39	197	11,740		
December.....						5,860	225	165	189	11,620		
Calendar year 1936.....						74,850	1,350	7.0	205	148,500		
January.....						3,937	-	-	127	7,810		
February.....						4,676	-	-	167	9,270		
March.....						5,625	275	98	181	11,160		
April.....						7,397.8	658	8.8	247	14,670		
May.....						22,087	1,370	256	712	43,770		
June.....						18,103	966	360	603	35,910		
July.....						6,258	665	66	202	12,410		
August.....						2,270	162	12	73.2	4,500		
September.....						1,069	83	14	35.6	2,120		
Water year 1936-37.....						84,911.8	1,370	8.8	233	168,400		

\*Discharge measurement.

Rio Grande at Alamosa, Colo.

Location.— Water-stage recorder, lat.  $37^{\circ}29'$ , long.  $105^{\circ}53'$ , in sec. 4, T. 37 N., R. 10 E., a quarter of a mile northwest of Alamosa. Zero of gage is 7,533.86 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 1937 in reports of Geological Survey; May 1912 to September 1937 in reports of State engineer.

Average discharge.- 25 years, 345 second-feet.

Extremes.- Maximum discharge during year, 998 second-feet May 31 (gage height, 3.90 feet); minimum daily, 10 second-feet Nov. 2.  
1912-37: 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 good except those for periods of ice effect, Nov. 29 to Mar. 2, Mar. 5, 6, which were computed on basis of seven discharge measurements, gage heights, and weather records and are fair. Diversions for irrigation above station. During irrigation season low-water flow is water returned from irrigated lands above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	11	246	180	145	290	145	29	734	172	24	17
2	74	10	222	166	145	280	111	15	563	159	19	17
3	46	14	201	143	145	254	82	14	472	150	18	17
4	42	35	202	135	145	240	70	31	578	96	18	16
5	39	93	204	140	145	280	59	29	549	68	18	15
6	40	121	199	145	155	320	56	35	397	58	21	15
7	38	179	218	145	160	217	56	18	276	46	29	16
8	36	169	223	145	170	244	56	24	206	38	28	16
9	34	193	229	145	180	249	53	86	230	30	27	16
10	29	195	186	145	185	240	49	166	228	29	24	16
11	27	195	170	145	190	235	46	121	147	27	24	15
12	25	206	177	145	200	252	44	105	110	30	21	15
13	24	206	164	145	205	249	42	125	125	34	20	17
14	23	208	170	145	210	249	38	135	97	34	17	17
15	23	222	177	145	215	226	36	219	91	54	16	17
16	23	229	182	145	220	235	174	244	44	53	15	17
17	22	227	202	145	225	249	379	302	58	51	19	17
18	21	229	201	145	230	268	376	412	54	50	17	17
19	21	235	201	145	235	244	212	550	57	50	19	17
20	21	235	201	145	210	208	154	362	47	48	17	17
21	19	229	195	147	220	188	79	266	37	47	17	17
22	15	225	206	147	235	185	55	175	34	46	17	17
23	14	229	218	147	240	194	110	108	33	42	17	17
24	13	218	206	147	250	184	150	96	51	40	17	17
25	13	208	201	147	250	202	61	105	92	44	18	17
26	12	206	206	145	260	175	37	105	100	44	17	17
27	13	223	159	145	270	190	29	66	139	48	17	17
28	15	229	186	145	280	183	89	42	235	53	16	17
29	14	233	197	145	-	183	156	82	125	34	15	17
30	13	244	186	145	-	184	58	238	104	32	14	20
31	12	-	166	145	-	154	-	828	-	31	17	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						856	74	12	27.0	1,660		
November.....						5,476	244	10	183	10,660		
December.....						6,131	246	164	198	12,160		
Calendar year 1956.....						34,646	341	10	94.7	66,710		
January.....						4,544	180	135	147	9,010		
February.....						5,720	280	145	204	11,550		
March.....						7,032	320	154	227	13,820		
April.....						3,022	379	29	101	6,990		
May.....						5,343	828	14	172	10,800		
June.....						5,993	734	33	200	11,890		
July.....						1,735	172	27	56.0	3,440		
August.....						594	29	14	19.2	1,180		
September.....						500	20	15	16.7	992		
Water year 1956-57 .....						46,926	828	10	129	93,080		

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 above mouth of Trinchera Creek and 5 miles north of La Sauses.

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during year, 984 second-feet June 1 (gage height, 4.72 feet); minimum daily, 11 second-feet Aug. 25, 26.

1936-37: Maximum discharge, that of June 1, 1937; minimum daily, 3 second-feet July 23-30, 1936.

Remarks.— Records good except those for period of ice effect, Dec. 4 to Mar. 1, which were computed on basis of six discharge measurements and weather records and are fair. Storage and several diversions for irrigation above station. During irrigation season low-water flow is water returned from irrigated lands.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	102	327	206	160	360	221	223	956	190	26	21
2	140	102	318	204	160	364	204	176	856	195	30	22
3	128	112	283	185	160	367	184	199	755	228	29	26
4	120	94	261	170	165	328	180	230	744	242	56	28
5	117	128	265	150	170	340	190	270	759	249	32	26
6	122	179	222	170	175	370	193	312	714	212	28	32
7	120	216	196	175	185	456	180	355	654	170	24	27
8	122	259	224	175	190	410	178	323	555	158	23	34
9	126	272	232	175	195	379	159	373	492	132	24	21
10	123	278	232	175	200	373	141	482	502	121	21	38
11	118	278	232	175	214	367	133	519	458	105	18	36
12	115	281	230	175	220	373	162	523	364	90	16	34
13	114	287	228	175	225	376	197	509	326	70	15	35
14	112	287	218	170	230	365	283	551	320	57	15	39
15	106	294	226	170	240	373	373	616	275	52	13	37
16	104	307	237	170	245	346	475	670	197	42	12	38
17	102	316	261	170	255	349	717	692	137	42	12	40
18	101	318	254	170	260	364	836	744	100	35	12	38
19	101	318	259	170	265	358	797	805	63	31	15	36
20	102	322	256	170	240	326	670	809	77	26	15	33
21	104	331	261	170	270	298	598	725	77	22	14	34
22	104	325	250	170	290	277	555	641	80	21	13	32
23	102	322	243	168	310	270	526	597	80	21	12	32
24	102	311	237	170	320	262	537	544	70	24	12	29
25	104	298	232	170	335	257	456	509	67	22	11	28
26	106	283	226	170	330	270	376	540	88	20	11	28
27	104	281	220	165	335	247	351	576	154	20	15	28
28	102	294	226	165	360	264	323	523	126	42	14	29
29	104	303	224	165	-	262	379	475	240	40	13	30
30	106	305	212	160	-	259	323	598	230	41	15	36
31	104	-	206	160	-	252	-	809	-	33	18	-
Month				Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet
October.....				3,463		140		101		112		6,870
November.....				7,805		331		94		260		15,480
December.....				7,498		327		196		242		14,570
Calendar year .....												
January.....				5,333		206		150		172		10,580
February.....				6,704		360		160		239		13,300
March.....				10,282		436		247		352		20,390
April.....				10,878		836		133		363		21,580
May.....				15,906		809		176		513		31,650
June.....				10,556		956		63		352		20,940
July.....				2,747		249		20		38.6		5,450
August.....				584		56		11		18.8		1,160
September.....				947		40		21		31.6		1,880
Water year 1936-37.....				82,703		956		11		227		164,000

## Rio Grande near Lobatos, Colo.

Location.- Water-stage recorder, lat.  $37^{\circ}05'$ , long.  $105^{\circ}45'$ , in sec. 22, T. 33 N., R. 11 E., 6 miles north of Colorado-New Mexico State line and 10 miles east of Lobatos. Zero 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 1937 in reports of Geological Survey; June 1899 to September 1937 in reports of State engineer.

Average discharge.- 38 years, 772 second-feet.

Extremes.- Maximum discharge during year, 4,370 second-feet May 19 (gage height, 4.90 feet); minimum daily, 22 second-feet Aug. 25, 27.  
1899-1937: Maximum daily discharge, 13,100 second-feet June 8, 1905; minimum daily, 6 second-feet July 19, 20, 22, Aug. 3, 4, 1934.

Remarks.- Records excellent except those for period of ice effect, Dec. 5 to Mar. 8, which were computed on basis of eight discharge measurements, gage heights, and weather records and are good. Diversions for irrigation above station. Flow regulated by many reservoirs on headwaters.

Rating table, Mar. 8 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)

0.6	17	1.6	376	2.6	1,190	3.6	2,370
.8	44	1.8	508	2.8	1,400	3.8	2,650
1.0	96	2.0	658	3.0	1,620	4.0	2,940
1.2	172	2.2	822	3.2	1,850	4.5	3,720
1.4	266	2.4	1,000	3.4	2,100	5.0	4,540

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	241	241	415	340	208	432	402	1,470	2,500	982	58	31
2	257	279	506	320	211	462	389	1,380	2,510	937	46	36
3	252	257	435	330	212	519	362	1,640	2,590	1,130	49	39
4	236	257	332	282	213	507	389	2,100	2,540	1,040	61	41
5	231	231	320	287	211	497	414	1,750	2,330	955	61	41
6	241	320	300	258	217	543	427	2,720	2,070	848	51	42
7	241	382	280	277	225	657	427	3,020	1,850	658	49	61
8	257	428	275	277	248	670	402	2,750	1,650	530	42	49
9	252	455	270	276	220	698	364	2,900	1,550	421	41	61
10	252	455	260	264	252	588	353	3,380	1,530	341	39	63
11	252	455	260	260	291	580	395	3,530	1,410	271	34	66
12	241	455	260	270	287	588	722	3,560	1,310	223	31	66
13	220	462	260	265	277	603	1,120	3,530	1,210	190	28	66
14	206	470	300	260	286	619	1,550	3,690	1,180	155	27	63
15	197	470	340	255	293	603	1,910	3,900	1,070	134	31	63
16	184	477	420	250	322	573	2,300	4,120	928	106	31	63
17	188	484	470	245	334	558	2,900	4,180	805	85	28	61
18	188	484	455	240	334	573	3,030	4,170	722	82	28	61
19	197	484	465	235	351	588	2,520	4,220	666	66	30	58
20	215	484	465	230	349	537	2,440	4,100	588	61	33	54
21	201	484	465	230	299	494	2,290	3,830	588	51	31	51
22	215	477	470	230	379	460	2,480	3,380	603	38	26	51
23	226	470	490	230	369	460	2,690	3,660	619	34	38	51
24	226	448	520	230	387	427	2,590	3,030	598	34	27	46
25	220	422	470	230	395	414	2,000	2,790	603	41	22	44
26	215	408	450	230	377	434	1,740	2,440	772	42	24	44
27	231	408	380	225	431	402	1,900	2,010	1,200	36	22	41
28	231	422	340	220	435	408	2,230	1,810	1,240	36	25	39
29	226	435	400	220	-	421	2,180	1,680	1,170	61	26	46
30	231	441	320	215	-	421	1,800	2,060	1,090	58	24	58
31	231	-	340	210	-	427	-	2,270	-	56	26	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7,001	257	184	226	13,890
November.....	12,445	484	231	415	24,680
December.....	11,733	520	260	378	23,270
Calendar year 1936.....	141,649	2,300	8	387	281,000
January.....	7,871	340	210	254	15,610
February.....	8,433	435	208	301	16,730
March.....	16,163	698	402	521	32,060
April.....	44,736	3,030	353	1,491	88,730
May.....	91,270	4,220	1,380	2,944	181,000
June.....	39,480	2,590	588	1,316	78,310
July.....	9,702	1,130	34	313	19,240
August.....	1,089	61	22	35.1	2,160
September.....	1,556	66	31	51.9	3,090
Water year 1936-37.....	251,479	4,220	22	689	498,800

## Rio Grande below Taos Junction Bridge, near Taos, N. Mex.

Location.- Water-stage recorder, lat.  $36^{\circ}19'$ , long.  $105^{\circ}46'$ , in sec. 15, T. 24 N., R. 11 E., 2 miles below bridge on Taos-Taos Junction highway and about 12 miles south-west of Taos.

Drainage area.- 9,730 square miles, revised (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- October 1930 to September 1937 in reports of Geological Survey; July 1925 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 5,860 second-feet May 17-20; maximum gage height, 7.69 feet May 20; minimum daily discharge, 242 second-feet Aug. 15, 16, 24. 1930-37: Maximum discharge, 8,950 second-feet May 25, 1932 (gage height, 8.56 feet, former site and datum); minimum daily, 140 second-feet (estimated) Aug. 21, 1931.

Remarks.- Records good. Discharge for Jan. 18-26, Jan. 28 to Feb. 5, Feb. 8-11, computed on basis of weather records and records for stations at Embudo and Otowi Bridge. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	425	470	672	518	490	720	656	2,570	3,900	1,850	316	300
2	444	464	640	553	490	753	656	2,540	4,060	1,720	310	290
3	464	464	624	518	490	920	640	2,420	4,220	1,630	310	270
4	470	477	568	511	490	774	664	2,800	4,220	1,760	300	270
5	458	477	539	504	490	738	648	3,260	4,140	1,590	285	280
6	464	470	511	497	490	720	648	3,580	3,820	1,460	300	285
7	464	525	504	504	1,760	850	664	4,080	3,500	1,340	300	321
8	458	600	464	511	672	1,210	632	4,220	3,100	1,140	285	310
9	464	640	464	539	630	1,020	624	4,140	2,870	980	280	310
10	464	664	525	511	600	1,160	640	4,480	2,640	840	265	295
11	451	664	525	532	590	1,140	656	4,990	2,570	774	265	290
12	444	664	539	497	584	1,040	792	4,820	2,340	696	265	295
13	438	672	553	518	576	970	1,330	4,990	2,270	592	275	285
14	425	680	546	484	796	930	2,340	4,990	2,070	546	256	280
15	413	688	568	484	940	890	2,800	5,530	1,980	490	242	275
16	413	696	600	484	688	870	3,180	5,860	1,810	419	242	275
17	413	696	616	484	616	840	3,500	5,860	1,630	383	251	275
18	407	704	640	480	600	840	4,060	5,860	1,460	348	256	270
19	413	704	600	480	616	820	3,980	5,860	1,350	332	251	270
20	425	696	616	480	606	810	3,660	5,860	1,270	321	251	260
21	438	704	640	480	592	774	3,500	5,860	1,180	316	246	256
22	432	696	616	470	546	729	3,580	5,150	1,120	300	246	260
23	432	696	624	480	616	704	3,820	4,920	1,150	295	246	260
24	451	680	624	450	712	648	3,900	4,650	1,140	280	242	256
25	477	664	648	440	820	656	3,500	4,480	1,110	280	251	251
26	477	632	656	430	860	640	2,940	4,140	1,270	280	260	251
27	444	616	616	425	864	624	2,870	3,660	1,760	348	270	251
28	451	616	584	430	696	632	3,100	3,340	2,270	338	260	256
29	451	632	584	430	-	624	3,340	3,260	2,130	338	285	256
30	451	648	576	460	-	656	3,100	3,500	2,020	316	305	300
31	464	-	484	490	-	648	-	3,820	-	326	371	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						13,785	470	407	445	27,340		
November.....						18,719	704	464	624	37,180		
December.....						17,966	672	464	580	36,640		
Calendar year 1936.....						238,387	3,020	179	651	472,900		
January.....						15,044	553	425	485	29,840		
February.....						18,722	1,760	490	669	37,130		
March.....						25,380	1,210	624	819	50,340		
April.....						66,420	4,060	624	2,214	131,700		
May.....						134,280	5,860	2,340	4,331	266,300		
June.....						70,560	4,220	1,110	2,345	139,500		
July.....						22,648	1,850	280	731	44,920		
August.....						8,487	371	242	274	16,830		
September.....						8,293	321	251	276	16,450		
Water year 1936-37.....						420,074	5,860	242	1,151	833,100		

## Rio Grande at Embudo, N. Mex.

Location.- Water-stage recorder, lat. 36°12', long. 105°57', in SW $\frac{1}{4}$  sec. 23, T. 23 N., R. 9 E., a quarter of a mile below depot at Embudo and about 2 $\frac{1}{2}$  miles below Embudo Creek.

Drainage area.- 10,400 square miles, revised (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, and October 1930 to September 1937 in reports of Geological Survey; January 1889 to December 1903 and September 1912 to December 1931 in reports of State engineer.

Average discharge.- 24 years (1889-93, 1894-1903, 1912-16, 1930-37), 1,010 second-feet.

Extremes.- Maximum discharge during year, 6,690 second-feet May 17 (gage height, 8.47 feet); minimum daily, 223 second-feet Aug. 25.  
1930-37: Maximum discharge, 6,360 second-feet May 25, 1932 (gage height, 9.35 feet); minimum daily, 174 second-feet Aug. 21, 1931.

Remarks.- Records good. Discharge for Feb. 12-15 computed on basis of weather records, and records for stations below Taos Junction Bridge and at Otowi Bridge. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	560	724	505	476	766	700	2,530	4,300	2,100	332	372
2	520	570	706	560	468	850	766	2,200	4,440	1,850	324	324
3	530	560	645	545	495	1,010	772	2,260	4,580	1,810	313	310
4	545	560	640	535	500	826	778	2,700	4,720	1,900	313	306
5	525	560	612	555	510	784	742	5,180	4,440	1,760	310	316
6	530	560	540	525	535	766	724	3,500	4,160	1,630	296	316
7	530	606	550	535	1,720	862	754	4,020	3,760	1,460	313	392
8	525	694	535	535	539	1,260	712	4,160	3,240	1,340	296	372
9	525	712	490	565	535	1,010	712	4,160	3,000	1,190	288	356
10	530	754	565	545	535	1,190	736	4,580	2,620	1,040	271	328
11	520	754	570	545	545	1,190	826	5,150	2,700	1,010	264	320
12	515	748	580	555	560	1,120	1,040	5,150	2,490	812	257	315
13	510	742	596	601	560	1,010	1,500	5,300	2,360	784	296	310
14	495	754	565	560	750	1,010	2,420	5,300	2,260	689	260	299
15	481	760	606	535	500	978	3,060	5,600	2,150	618	241	288
16	472	760	667	515	923	945	3,760	6,050	1,950	530	241	288
17	468	778	678	535	645	912	4,300	6,370	1,760	463	247	288
18	458	778	672	535	612	912	4,720	6,210	1,680	414	250	285
19	465	778	645	520	650	880	4,580	6,210	1,460	384	257	278
20	500	772	656	540	618	856	4,020	6,210	1,380	360	254	268
21	530	772	684	525	585	856	3,760	5,900	1,300	340	244	260
22	510	754	656	505	580	820	3,890	5,450	1,190	328	235	260
23	500	760	672	495	601	826	4,300	4,860	1,190	313	232	288
24	510	730	672	500	736	724	4,160	4,720	1,190	299	226	271
25	550	706	672	515	880	742	3,630	4,580	1,220	285	223	264
26	555	678	684	495	945	724	2,940	4,160	1,460	285	260	257
27	520	672	682	505	700	689	2,850	3,630	2,050	316	254	250
28	525	667	623	505	712	689	3,240	3,240	2,530	360	260	247
29	530	684	623	476	-	672	3,500	3,240	2,480	384	271	257
30	540	669	590	481	-	706	3,120	3,760	2,260	352	388	328
31	560	-	515	481	-	700	-	4,160	-	336	525	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						15,972	560	458	515	31,680		
November.....						20,662	778	550	695	41,360		
December.....						19,315	724	490	623	38,310		
Calendar year 1936.....						272,469	3,240	196	744	540,500		
January.....						16,324	601	476	527	32,380		
February.....						19,005	1,720	468	679	37,700		
March.....						27,285	1,260	672	580	54,120		
April.....						75,042	4,720	700	2,435	144,800		
May.....						138,540	6,370	2,200	4,469	274,800		
June.....						76,410	4,720	1,190	2,547	151,600		
July.....						25,942	2,100	285	837	51,460		
August.....						8,741	525	223	282	17,340		
September.....						9,011	392	247	300	17,870		
Water year 1936-37.....						450,449	6,370	223	1,234	893,500		

## RIO GRANDE BASIN

Rio Grande at Otowi Bridge, near San Ildefonso, N. Mex.

Location.— Water-stage recorder, lat. 35°52', long. 106°09', in San Ildefonso Pueblo Grant, at Denver & Rio Grande Western Railroad bridge 2 miles southwest of San Ildefonso and 3 miles below Tesuque Creek. Zero of gage is 5,488.48 feet above mean sea level.

Drainage area.— 14,300 square miles, revised (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, and October 1930 to September 1937 in reports of Geological Survey; February 1895 to December 1905 and June 1909 to December 1931 in reports of State engineer.

Extremes.— Maximum discharge during year, 10,800 second-feet May 12, 14 (gage height, 10.06 feet); minimum daily, 545 second-feet Jan. 11.  
1930-37: Maximum discharge, about 21,900 second-feet Aug. 20, 1935 (gage height, 12.01 feet); minimum daily, 128 second-feet June 21, 1934.

Remarks.— Records good. Discharge for Nov. 22, Dec. 31, Jan. 1, Feb. 9, 10, 12-15, Mar. 20, 21 computed on basis of records for station at Cochiti. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	718	1,410	828	620	563	1,650	1,740	6,500	6,660	3,110	995	1,720
2	718	1,450	855	640	568	1,780	2,500	6,340	6,830	2,810	925	1,580
3	690	1,410	745	615	590	2,200	2,620	6,500	7,000	2,630	813	1,580
4	718	1,370	745	563	615	2,000	2,350	7,000	6,660	2,520	684	1,670
5	690	1,370	718	590	640	2,050	1,740	7,880	6,340	2,550	678	1,490
6	718	1,410	665	590	690	1,820	1,650	8,610	5,860	2,080	666	1,350
7	718	1,340	615	581	1,120	2,300	1,780	9,180	5,240	1,870	813	2,020
8	718	970	640	586	2,840	2,910	1,780	9,580	4,790	2,130	1,150	1,630
9	690	882	590	615	1,300	2,560	2,250	9,980	4,360	1,870	1,150	1,480
10	690	882	640	576	980	2,720	2,720	10,200	4,080	1,720	1,150	1,540
11	665	882	665	545	615	2,620	3,600	10,600	3,680	1,580	1,230	1,260
12	665	882	665	550	665	2,500	4,590	10,600	3,420	1,580	1,350	1,220
13	665	882	690	615	630	2,200	5,280	10,400	3,290	1,310	1,440	1,080
14	855	882	718	615	600	2,300	6,600	10,400	3,170	1,070	1,480	950
15	855	882	718	590	1,690	2,150	7,410	10,200	2,990	995	1,530	936
16	855	882	772	576	2,720	1,960	8,850	9,980	2,810	855	1,580	901
17	855	882	828	615	1,690	2,050	8,440	9,980	2,570	890	1,620	845
18	855	910	828	615	1,450	2,200	7,880	10,200	2,350	995	1,620	732
19	855	910	772	615	1,370	2,050	8,240	10,200	2,180	960	1,720	726
20	882	910	772	615	1,260	1,990	7,520	9,780	2,020	1,150	1,580	719
21	970	910	800	615	1,090	1,930	7,520	9,580	1,620	1,580	1,580	700
22	970	890	800	581	1,090	1,870	7,700	8,610	1,440	1,480	1,400	719
23	970	682	772	572	1,090	1,960	8,060	7,880	1,440	1,440	1,270	824
24	1,160	882	772	563	1,000	1,740	7,540	7,700	1,670	1,400	1,230	804
25	1,340	882	772	615	1,200	1,690	7,000	7,520	2,180	1,630	1,270	764
26	1,340	898	772	581	1,700	1,650	6,500	6,830	3,270	1,620	1,270	936
27	1,260	800	772	572	1,610	1,650	6,860	6,180	3,550	1,530	1,400	945
28	1,230	800	718	572	1,530	1,650	7,170	5,860	3,810	1,580	1,400	950
29	1,260	800	690	568	-	1,650	7,540	5,860	3,550	1,720	1,440	892
30	1,260	828	690	572	-	1,650	7,000	6,660	3,420	1,270	1,770	1,610
31	1,200	-	650	568	-	1,650	-	6,830	-	1,110	2,610	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	28,035	1,340	665	904	55,610
November.....	29,846	1,450	800	995	59,200
December.....	22,677	855	590	732	44,980
Calendar year 1936.....	540,261	8,560	495	1,476	1,072,000
January.....	18,306	640	545	591	36,310
February.....	32,906	2,840	563	1,175	65,270
March.....	65,100	2,910	1,650	2,055	125,200
April.....	161,430	8,850	1,650	5,361	320,200
May.....	263,620	10,600	5,860	8,504	522,900
June.....	112,250	7,000	1,440	3,742	222,600
July.....	50,735	3,110	855	1,637	100,600
August.....	40,814	2,610	666	1,317	80,950
September.....	34,861	2,020	700	1,162	69,150
Water year 1936-37.....	858,580	10,600	545	2,352	1,705,000



## 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 above mouth of 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 1937 in reports of Geological Survey; January 1925 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, about 12,200 second-feet May 15 (gage height, 8.37 feet); minimum daily, 486 second-feet Oct. 8.  
1930-37: Maximum discharge, about 20,500 second-feet Aug. 20, 1935 (gage height, 8.97 feet); minimum daily, 1 second-foot Aug. 10-12, 1934.

Remarks.- Records good except those for periods of missing gage heights, Jan. 3, 4, 6-8, Apr. 16-19, Apr. 23 to May 1, May 5-21, June 26-30, July 1, 2, Sept. 16, 17, which were computed on basis of partial gage-height record and records for stations at Otowi and San Felipe and are fair. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	560	1,280	710	495	531	1,560	1,670	7,000	7,560	2,800	1,010	1,320
2	560	1,290	839	531	531	1,600	2,170	6,750	7,560	2,500	898	1,260
3	600	1,150	720	540	540	1,900	2,540	6,750	7,750	2,300	839	1,260
4	600	1,080	670	550	531	1,930	2,360	7,150	7,150	2,150	600	1,370
5	522	1,180	720	590	550	1,930	1,640	8,000	6,750	1,980	504	1,400
6	486	1,140	620	580	600	1,850	1,360	8,300	6,170	1,830	550	1,190
7	531	1,170	540	580	690	2,300	1,540	9,500	5,440	1,870	540	1,430
8	522	898	820	580	2,340	2,940	1,640	10,000	4,750	1,850	1,170	1,420
9	513	710	560	610	1,350	2,940	1,900	10,200	4,270	1,700	1,050	1,540
10	590	660	560	570	934	2,810	2,280	10,600	4,120	1,620	1,030	1,230
11	600	660	580	531	839	2,610	3,200	11,000	3,670	1,560	1,070	1,220
12	495	700	590	522	862	2,250	4,120	11,000	3,390	1,520	1,190	1,170
13	513	680	590	580	1,180	2,150	5,090	10,700	3,090	1,280	1,220	1,040
14	680	762	550	590	1,250	2,250	6,750	10,700	2,880	1,020	1,290	886
15	650	761	560	580	1,610	2,040	8,210	10,700	2,740	934	1,430	806
16	650	806	630	580	2,610	1,840	9,500	10,500	2,610	794	1,490	820
17	700	958	650	570	1,700	1,950	9,200	10,500	2,400	730	1,580	740
18	710	934	620	550	1,430	2,040	8,400	10,500	2,250	934	1,600	700
19	660	922	600	580	1,350	1,900	8,300	10,500	2,250	839	1,640	690
20	710	874	610	580	1,350	1,650	7,990	10,300	2,130	730	1,560	600
21	730	762	630	560	1,140	1,600	7,560	9,900	1,640	1,440	1,530	560
22	740	762	660	530	1,170	1,520	7,780	9,340	1,420	1,360	1,430	560
23	730	775	700	531	1,084	1,700	7,990	8,660	1,420	1,300	1,170	620
24	946	784	610	522	994	1,600	7,360	8,430	1,470	1,370	1,120	660
25	1,140	700	660	540	1,040	1,430	6,950	8,210	1,960	1,460	1,050	670
26	1,130	690	670	540	1,370	1,500	6,360	7,360	3,000	1,530	1,090	762
27	1,040	690	680	504	1,630	1,540	6,750	6,170	3,400	1,360	1,180	773
28	1,010	773	590	504	1,530	1,520	7,500	5,800	3,700	1,420	1,320	751
29	1,030	775	610	495	-	1,470	7,800	5,800	3,400	1,490	1,300	773
30	1,100	710	570	551	-	1,460	7,400	7,150	3,100	1,180	1,430	1,140
31	982	-	600	540	-	1,500	-	7,150	-	1,080	1,780	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						22,410	1,140	486	723	44,450		
November.....						26,002	1,290	660	867	51,670		
December.....						19,519	839	540	630	36,720		
Calendar year 1936.....						496,914	8,210	335	1,355	983,600		
January.....						17,156	610	495	553	34,030		
February.....						33,492	2,840	531	1,196	66,430		
March.....						59,290	2,940	1,430	1,913	117,600		
April.....						163,710	9,500	1,360	5,457	324,700		
May.....						275,120	11,000	5,800	8,875	545,700		
June.....						113,280	7,750	1,420	3,775	224,600		
July.....						45,701	2,600	730	1,474	90,550		
August.....						36,661	1,750	504	1,183	72,720		
September.....						29,341	1,540	550	978	56,200		
Water year 1936-37.....						841,662	11,000	486	2,306	1,669,000		

## Rio Grande at San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°26', long. 106°26', in San Felipe Grant, at steel highway bridge, 2,000 feet below mouth of Tonque Arroyo, half a mile above San Felipe Pueblo, Sandoval County, and about 12 miles northeast of Bernalillo. Zero of gage is 5,110.38 feet above mean sea level (general adjustment of 1929).

Drainage area.- 16,100 square miles, revised (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.).

Records available.- October 1930 to September 1937 in reports of Geological Survey; March 1925 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, about 35,600 second-feet June 26 (gage height, 11.13 feet); minimum daily, 534 second-feet Dec. 8.  
1930-1937: Maximum discharge, about 42,100 second-feet Aug. 21, 1935; maximum gage height, that of June 26, 1937; minimum daily discharge, 34 second-feet July 7, 1934.

Remarks.- Records for October to January and July to September good; others fair. Discharge for Oct. 1-7, Jan. 24 to Feb. 4, May 11-21, May 31 to June 6, Aug. 1-3, computed on basis of weather records and records for stations at Cochiti and Isleta. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*680	1,320	770	666	*580	1,690	1,560	7,080	*8,200	3,210	*1,150	1,910
2	*690	1,330	820	639	*589	1,710	2,050	6,440	*9,000	2,880	*1,000	1,630
3	*680	1,330	740	800	*590	1,910	2,450	6,650	*8,000	2,530	*900	1,630
4	*680	1,260	770	720	*600	1,960	2,550	6,860	*8,000	2,570	831	1,710
5	*700	1,210	750	657	614	2,000	1,840	7,300	*7,000	2,470	897	1,720
6	*740	1,260	693	598	598	1,840	1,400	5,490	*6,400	2,300	659	1,660
7	*730	1,330	550	639	639	2,120	1,560	9,610	5,480	2,130	550	1,600
8	711	1,060	534	666	2,560	2,570	1,810	10,000	4,950	2,010	1,110	1,720
9	630	790	558	630	1,470	2,390	2,100	10,300	4,750	2,000	1,120	1,690
10	657	750	582	639	842	2,240	2,610	10,900	4,000	1,680	1,090	1,320
11	666	842	657	606	800	2,470	3,330	*11,200	3,330	1,610	1,150	1,280
12	657	919	630	550	800	2,300	4,140	*11,200	3,330	1,820	1,430	1,250
13	606	908	614	582	1,150	2,190	5,300	*11,000	3,210	1,520	1,540	1,100
14	831	941	693	614	1,320	2,170	7,080	*11,000	2,980	1,220	1,600	886
15	941	996	666	630	1,660	2,150	9,250	*11,000	2,820	974	1,910	820
16	952	996	711	606	2,910	2,010	11,500	*10,800	2,630	810	1,550	897
17	820	985	780	598	2,010	1,930	11,200	*10,800	2,410	711	1,880	974
18	875	919	760	639	1,520	2,080	10,600	*10,800	2,300	810	1,690	684
19	842	908	740	606	1,430	2,050	10,600	*10,800	2,080	853	1,810	711
20	864	875	740	630	1,430	1,790	9,250	*10,600	2,340	780	1,760	622
21	952	864	711	657	1,160	1,610	8,990	*10,400	2,030	1,500	1,690	648
22	875	875	790	639	1,220	1,580	9,250	10,300	1,820	1,580	1,640	648
23	864	864	770	590	1,370	1,690	9,510	8,740	1,910	1,460	1,330	711
24	1,050	853	730	*580	1,220	1,710	8,490	9,610	1,960	1,500	1,280	842
25	1,220	810	730	*600	1,110	1,350	7,530	10,600	3,120	1,620	1,350	790
26	1,350	750	790	*600	1,460	1,430	6,650	8,740	12,000	1,790	1,390	952
27	1,290	740	810	*590	1,790	1,430	6,650	8,000	6,040	1,760	1,480	953
28	1,150	711	730	*580	1,560	1,420	7,760	7,760	4,780	1,890	1,490	864
29	1,140	606	702	*560	-	1,420	8,240	8,740	3,850	2,030	1,610	875
30	1,200	740	693	*580	-	1,460	8,000	8,740	3,720	1,690	1,690	1,140
31	930	-	657	*590	-	1,460	-	*7,400	-	1,300	2,320	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						26,973	1,350	606	870	53,500		
November.....						28,742	1,330	606	958	57,010		
December.....						21,871	820	534	706	43,380		
Calendar year 1936.....						563,203	9,780	486	1,539	1,117,000		
January.....						19,281	800	550	622	38,260		
February.....						34,993	2,910	590	1,280	69,410		
March.....						58,130	2,570	1,350	1,875	115,300		
April.....						183,250	11,500	1,400	6,108	363,500		
May.....						291,660	11,200	6,440	9,408	578,500		
June.....						134,470	12,000	1,820	4,482	266,700		
July.....						52,908	3,210	711	1,707	104,900		
August.....						42,877	2,320	550	1,383	85,050		
September.....						34,277	1,910	622	1,143	67,990		
Water year 1936-37.....						929,442	12,000	534	2,546	1,844,000		

\*Gage-height record partial or doubtful Oct. 1-7, Aug. 1-3; stage-discharge relation affected by ice Jan. 24 to Feb. 4; stage-discharge relation uncertain May 11-21, May 31 to June 6; discharge for these periods computed on basis of weather records and records for stations at Cochiti and near Isleta.

## Rio Grande near Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}56'$ , long.  $106^{\circ}41'$ , in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 8 N., R. 2 E., at Atchison, Topeka & Santa Fe Railway bridge,  $1\frac{1}{2}$  miles northeast of Isleta. Zero of gage is 4,889.30 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 11,200 second-feet Sept. 27 (gage height, 4.65 feet); minimum daily discharge, 130 second-feet July 23. Maximum discharge during water year 1936-37, 14,200 second-feet June 27 (gage height, 5.23 feet); minimum daily discharge, 298 second-feet July 21 and Aug. 8.

Remarks.- Records good. Discharge for March 17, 18, 1937 computed on basis of record for San Felipe. Diversions for irrigation above station.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	542	806	986
2									-	577	1,740	773
3									-	550	1,760	710
4									-	710	1,900	640
5									-	958	2,330	680
6									-	862	828	1,030
7									-	1,110	478	762
8									-	910	394	604
9									-	1,030	442	850
10									-	1,150	568	568
11									-	1,670	586	680
12									-	4,610	568	784
13									773	1,880	730	1,070
14									1,180	751	680	740
15									874	651	762	680
16									534	518	1,450	622
17									400	650	970	559
18									316	428	670	700
19									364	456	700	1,170
20									595	407	828	1,740
21									720	255	2,670	1,080
22									559	180	2,450	1,480
23									346	130	1,200	1,980
24									376	134	595	1,350
25									577	152	370	898
26												
27									650	435	245	1,160
28									604	502	270	6,900
29									839	322	414	5,140
30									839	577	478	2,860
31									613	670	1,100	1,550
									-	700	1,440	-

Discharge, in second-feet, of Rio Grande near Isleta, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,000	1,940	970	710	934	1,570	1,230	7,020	7,540	3,680	1,110	2,320
2	850	1,570	986	710	784	1,440	1,700	7,080	8,420	2,950	862	1,150
3	910	1,470	1,020	613	910	1,230	3,000	6,340	8,120	3,100	840	946
4	1,180	1,440	946	577	784	1,660	3,730	7,600	8,120	2,540	502	898
5	817	1,540	934	542	934	1,570	3,190	7,020	7,420	2,590	421	1,400
6	773	1,370	946	528	986	1,900	1,900	8,120	7,140	2,060	428	1,700
7	898	1,270	898	710	946	1,500	1,470	7,600	6,010	1,600	322	862
8	828	1,150	773	761	1,520	1,700	1,540	8,720	5,520	1,540	298	1,740
9	817	839	670	817	3,430	2,770	2,020	8,320	4,760	1,740	795	2,020
10	773	751	631	922	1,700	2,360	2,910	8,940	3,050	1,420	577	1,100
11	828	946	640	751	1,320	2,720	4,780	9,630	3,630	1,540	559	922
12	680	934	828	622	1,030	2,080	6,060	9,940	3,580	1,900	680	1,350
13	526	970	828	534	1,020	1,320	6,620	8,320	3,730	1,200	1,180	1,100
14	622	946	910	550	1,540	2,190	6,670	9,320	3,780	934	946	958
15	700	1,080	795	660	1,570	2,410	7,190	9,630	3,290	850	1,350	839
16	690	1,100	680	740	2,820	2,140	8,120	10,200	2,190	680	1,250	886
17	680	1,200	740	730	3,630	2,800	8,420	9,320	2,280	518	1,180	1,150
18	922	1,110	839	700	2,500	2,300	6,960	10,600	1,900	400	1,370	839
19	680	958	886	784	1,900	2,410	8,420	12,200	1,440	470	1,250	690
20	690	1,000	874	850	1,900	2,630	8,420	11,800	1,540	376	1,440	751
21	910	1,000	862	730	1,630	2,020	7,310	10,600	1,230	298	1,350	494
22	946	986	828	680	1,400	1,600	7,080	10,200	970	1,070	1,500	510
23	1,070	1,180	828	660	1,630	1,740	6,740	8,120	1,050	1,070	1,230	470
24	1,080	970	886	550	1,470	2,450	5,570	9,630	1,200	970	762	526
25	1,350	898	806	542	1,110	1,630	5,620	9,020	1,350	1,150	740	660
26	1,500	934	795	568	1,270	1,670	6,060	7,830	4,650	1,580	839	784
27	1,600	970	817	690	2,020	1,540	5,790	8,960	9,340	1,370	806	958
28	1,250	886	910	650	2,020	1,370	5,900	7,830	4,450	1,320	806	839
29	986	922	922	795	-	1,200	6,290	8,720	4,400	1,570	1,110	898
30	1,110	751	828	1,070	-	1,400	6,850	9,320	4,030	2,100	1,130	1,110
31	1,500	-	828	970	-	1,270	-	8,120	-	1,140	1,270	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 13-30, 1936	11,159	1,180	316	620	22,130
July	24,157	4,610	180	779	47,910
August	30,422	2,670	245	981	60,340
September	40,046	6,900	559	1,335	79,430
The period					209,800
October 1936	29,176	1,600	526		57,870
November	33,061	1,940	751	1,103	65,620
December	25,996	1,020	631	839	51,560
Calendar year					
January 1937	21,714	1,070	526	700	43,070
February	44,703	3,650	784	1,597	88,680
March	58,470	2,770	1,200	1,886	116,000
April	157,440	8,420	1,230	5,248	312,300
May	277,070	12,200	6,340	8,938	549,600
June	126,130	9,340	970	4,204	250,200
July	45,728	3,680	298	1,475	90,700
August	28,703	1,500	298	926	56,930
September	30,870	2,320	470	1,029	61,230
Water year 1936-37	879,084	12,200	298	2,408	1,744,000

## Rio Grande near Bernardo, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}25'$ , long.  $106^{\circ}48'$ , in  $\frac{1}{4}$  sec. 12, T. 2 N., R. 1 E., at bridge on U. S. Highway 60,  $2\frac{1}{4}$  miles east of Bernardo and  $3\frac{1}{4}$  miles above mouth of Rio Puerco is 4,723.98 feet above mean sea level (general adjustment of 1929).

Records available. June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936; 6,240 second-feet July 12; maximum gage height, 4.14 feet Sept. 27; minimum daily discharge, 36 second-feet July 26.

Maximum discharge during water year 1936-37 not determined, but occurred May 17, following breaks in levee above station; maximum daily discharge, 12,500 second-feet (estimated) May 19; maximum gage height, 5.41 feet May 15; minimum daily discharge, 91 second-feet Aug. 13.

Remarks.- Records for June to September 1936 good; those for October 1936 to May 17, 1937, August and September 1937 fair; others poor. Several diversions for irrigation above station.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									1,820	240	136	822
2									1,460	181	343	616
3									1,440	204	856	415
4									1,360	230	1,430	383
5									1,340	281	1,560	326
6									904	340	1,390	375
7									640	502	570	551
8									802	413	299	407
9									640	768	204	276
10									304	960	168	312
11									401	864	199	326
12									304	2,940	194	561
13									644	2,380	168	627
14									883	745	199	649
15									841	512	275	616
16									489	464	397	447
17									297	354	693	423
18									162	368	445	391
19									115	326	305	415
20									82	225	361	474
21									92	204	976	771
22									154	154	2,560	720
23									166	85	1,220	1,200
24									111	61	878	1,210
25									100	39	484	878
26									121	36	251	836
27									88	38	176	2,280
28									164	55	168	4,200
29									199	49	267	2,430
30									519	51	340	1,260
31									-	152	660	-

Discharge, in second-feet, of Rio Grande near Bernardo, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	920	1,040	672	892	594	1,660	1,340	7,730	8,360	*3,600	794	1,000
2	794	1,410	768	906	594	1,760	1,210	6,640	6,040	2,640	768	1,070
3	744	1,340	892	794	561	1,860	1,430	5,860	6,820	2,620	660	732
4	780	1,260	920	720	780	1,820	2,400	5,590	7,780	2,640	383	756
5	892	1,100	768	606	808	2,040	2,930	5,960	8,220	2,000	293	920
6	720	1,070	768	522	850	1,760	2,290	6,240	8,360	1,780	245	1,460
7	720	1,010	892	531	1,090	1,820	1,640	7,230	6,950	1,420	185	1,620
8	744	1,020	696	708	1,020	1,730	1,410	8,110	6,040	1,190	172	1,410
9	672	1,240	720	756	1,820	2,150	1,820	8,640	5,300	1,640	128	1,970
10	672	660	696	768	1,660	2,370	2,320	9,330	2,960	2,040	125	1,620
11	649	594	694	732	1,240	2,400	3,140	9,690	*3,500	1,500	118	1,090
12	816	696	696	696	980	2,580	4,700	10,000	*3,200	1,960	105	808
13	649	694	744	684	878	2,490	5,960	10,000	*3,000	1,960	91	836
14	522	649	768	550	1,020	2,610	5,330	11,200	*2,600	1,600	132	696
15	531	720	744	649	1,300	2,290	5,960	11,600	2,360	760	204	594
16	561	822	756	864	1,510	2,040	7,920	11,600	1,960	538	368	502
17	594	1,010	768	935	2,290	2,000	8,440	11,200	1,570	496	540	376
18	594	995	794	908	2,070	1,800	8,980	*11,500	1,360	418	415	464
19	708	1,020	878	732	1,760	1,850	8,640	*12,500	1,250	*350	827	512
20	672	864	850	744	1,660	2,120	8,310	*12,000	*1,140	254	649	368
21	594	836	836	822	1,640	1,660	8,380	*11,000	*1,160	*210	766	361
22	708	822	732	638	1,510	1,430	7,850	*10,000	*1,000	155	744	240
23	768	732	780	594	1,600	1,220	8,240	*9,500	708	155	794	368
24	836	594	780	531	1,490	1,340	8,640	*8,500	496	200	766	306
25	906	439	892	561	1,340	1,580	8,980	*10,000	670	175	423	281
26	1,170	455	822	531	1,190	1,280	7,980	*8,500	1,630	279	299	333
27	1,120	431	756	512	1,430	1,170	6,640	*8,000	9,120	496	305	391
28	1,010	439	850	583	1,800	1,120	6,690	*7,500	6,430	*600	347	474
29	995	474	822	522	-	1,820	6,810	*8,000	4,540	*700	299	415
30	920	572	768	583	-	1,640	7,850	*9,000	4,080	720	493	447
31	864	-	794	708	-	1,600	-	*9,500	-	920	696	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
June 1936.....					16,432	1,820	82	548	32,590			
July.....					14,201	2,940	36	458	28,170			
August.....					18,152	2,560	136	586	36,000			
September.....					25,176	4,200	275	839	49,940			
The period.....									146,700			
October 1936.....					23,645	1,170	522	763	46,090			
November.....					24,998	1,410	431	833	49,580			
December.....					24,306	920	672	784	48,210			
January 1937.....					21,181	935	512	683	42,010			
February.....					36,505	2,290	561	1,304	72,410			
March.....					57,000	2,610	1,120	1,839	113,100			
April.....					164,230	8,980	1,210	5,474	326,700			
May.....					282,120	12,500	5,590	9,101	569,600			
June.....					118,632	9,120	496	3,954	235,300			
July.....					35,716	3,600	155	1,152	70,840			
August.....					12,914	794	91	417	25,610			
September.....					22,408	1,970	240	747	44,450			
Water year 1936-37.....					823,655	12,500	91	2,257	1,634,000			

\*Stage-discharge relation affected by break in levee above station; discharge computed on basis of records for stations near Isleta and at San Acacia.

## Rio Grande at San Acacia, N. Mex.

Location.— Water-stage recorders at right and left banks, lat. 34°15', long. 106°53', in NE¼ sec. 1, T. 1 S., R. 1 W., 0.2 mile below San Acacia Diversion Dam and one-half mile east of San Acacia. Zero of gage is 4,662.56 feet above mean sea level (general adjustment of 1929).

Records available.— April 1936 to September 1937 in reports of Geological Survey; February to December 1925 and January 1926 to September 1927 (gage heights and discharge measurements only) in reports of State engineer.

Extremes.— Maximum discharge during period ending Sept. 30, 1936, about 27,400 second-feet Aug. 5 (gage height, 8.35 feet); minimum daily discharge, 10 second-feet July 30. Maximum discharge during water year 1936-37, 18,600 second-feet May 28; maximum gage height, 5.60 feet June 27 (right-bank gage); minimum daily discharge, 15 second-feet Aug. 12.

Remarks.— Records fair except those for periods of missing or partial gage-height record, which are poor.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	6,160	1,390	158	19	1,020
2							-	5,010	1,290	78	163	718
3							-	8,100	1,160	78	533	481
4							-	6,390	1,000	145	1,550	340
5							-	6,160	956	138	4,380	559
6							-	5,750	842	173	2,250	331
7							-	5,750	704	213	1,850	376
8							-	6,390	598	231	1,550	394
9							-	6,390	494	331	1,840	133
10							-	5,660	257	506	331	76
11							-	4,500	183	1,390	183	328
12							-	3,860	163	2,520	105	677
13							-	3,410	195	3,750	188	1,760
14							-	2,910	585	1,160	70	704
15							-	3,000	559	520	167	637
16							-	3,270	611	1,430	64	442
17							4,550	3,340	358	349	429	340
18							4,970	3,790	86	299	416	285
19							5,390	2,550	37	292	195	292
20							6,860	2,700		189	269	264
21							6,390	2,700	} *30	88	1,960	416
22							5,390	2,610		42	6,080	1,270
23							5,390	2,320		38	2,460	1,510
24							5,390	2,520		368	21	994
25							5,840	2,820		138	20	413
26							6,390	1,850	109	21	173	704
27							7,850	1,890	90	22	50	4,870
28							7,850	1,790	70	21	62	6,860
29							6,620	1,550	90	20	88	3,650
30							7,100	1,200	153	10	138	1,720
31							-	1,140	-	13	569	-

\*Discharge computed on basis of partly estimated gage heights.

†Gage height missing; discharge interpolated.

Discharge, in second-feet, of Rio Grande at San Acacia, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	1,060	794	844	896	1,400	1,240	5,610	9,610	3,660	1,100	792
2	1,050	1,570	1,070	880	716	1,680	1,080	6,620	7,820	2,960	820	1,370
3	775	1,520	927	809	796	2,040	1,240	6,080	8,500	4,230	†640	730
4	775	1,420	945	598	880	2,410	2,350	6,640	6,920	5,680	†530	712
5	822	1,020	858	†598	768	2,770	3,320	6,030	6,650	2,890	†220	706
6	738	1,090	866	598	716	2,240	2,220	6,100	5,700	1,940	†120	1,060
7	644	992	920	510	728	1,910	1,480	7,490	6,170	1,420	†130	1,260
8	674	1,040	766	587	866	1,910	1,520	7,980	4,780	1,240	†90	766
9	587	1,080	720	587	*1,740	2,610	1,750	7,640	4,890	1,380	†50	1,840
10	668	656	832	609	2,160	2,930	1,940	9,290	4,700	1,670	†30	1,320
11	656	543	764	†650	1,220	2,350	2,860	10,600	3,500	*2,340	†20	980
12	668	521	865	692	1,090	2,350	3,610	9,760	3,180	1,970	†15	632
13	668	836	836	668	944	2,160	3,940	10,200	2,930	*1,840	60	692
14	491	576	830	587	1,020	2,140	4,940	10,600	2,660	*1,140	24	796
15	330	554	866	609	1,520	2,140	5,570	11,100	2,540	927	70	532
16	554	716	796	768	1,950	1,860	6,420	10,200	1,960	*695	196	398
17	810	880	976	782	3,550	1,860	7,160	9,990	1,680	*475	626	230
18	824	992	866	*680	2,700	1,740	8,030	9,650	1,600	*230	415	453
19	866	*1,110	852	500	1,740	2,360	6,990	9,600	1,470	241	538	862
20	866	*982	838	728	1,720	2,370	7,100	10,100	1,560	110	526	364
21	521	938	866	810	1,700	2,060	7,730	10,400	1,380	106	643	386
22	609	1,000	838	782	1,610	1,530	7,670	10,100	1,200	72	760	218
23	692	945	680	692	1,400	1,190	6,360	8,820	512	42	721	536
24	740	762	928	620	1,110	1,230	7,140	9,290	356	63	790	327
25	880	535	1,140	620	1,150	1,500	7,490	10,100	454	62	*410	287
26	1,220	498	1,000	543	1,040	1,330	7,580	7,540	1,750	89	*360	394
27	1,170	546	965	510	1,300	1,350	6,700	6,650	10,600	526	338	407
28	1,480	546	960	556	1,520	1,270	6,130	12,100	6,020	932	509	484
29	1,500	559	902	565	-	1,690	5,440	8,960	4,600	1,020	196	389
30	976	674	888	620	-	1,620	6,160	8,980	4,140	860	312	620
31	1,060	-	824	880	-	1,460	-	10,400	-	796	637	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April 17-30, 1936.....					85,980	7,850	4,550	6,141	170,500			
May.....					117,470	8,100	1,140	3,789	235,000			
June.....					12,606	1,390	30	428	25,000			
July.....					13,264	3,750	10	420	26,510			
August.....					28,139	6,080	19	908	55,810			
September.....					33,507	6,860	76	1,117	66,460			
The period.....									577,100			
October 1936.....					25,594	1,480	330	826	50,760			
November.....					25,993	1,570	498	866	51,560			
December.....					27,198	1,140	680	877	53,950			
Calendar year.....												
January 1937.....					20,182	880	500	651	40,030			
February.....					38,550	3,550	716	1,377	76,460			
March.....					59,440	2,930	1,180	1,917	117,900			
April.....					143,160	8,030	1,080	4,772	284,000			
May.....					273,620	12,100	5,610	8,826	542,700			
June.....					119,632	10,600	356	3,988	237,500			
July.....					39,686	4,230	42	1,277	78,520			
August.....					11,496	1,100	15	371	22,800			
September.....					20,523	1,840	218	684	40,710			
Water year 1936-37.....					804,974	12,100	15	2,205	1,597,000			

\*Discharge computed on basis of partly estimated gage heights.

†Gage height missing; discharge computed on basis of three discharge measurements and records for station at San Marcial.

‡Gage height missing; discharge interpolated.



## Rio Grande at San Marcial, N. Mex.

Location.- Water-stage recorder, lat. 33°41', long. 106°58', in Pedio Armendaris Grant 34, at Atchison, Topeka & Santa Fe Railway bridge, 1.1 miles below San Marcial, Socorro County.

Drainage area.- 24,700 square miles (revised), excluding areas of closed basins.

Records available.- January 1895 to September 1937 in reports of Geological Survey;

January 1895 to December 1931 in reports of State engineer. Records prior to January 1922, at 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 above present site.

Average discharge.- 40 years (1897-1937), 1,557 second-feet.

Extremes.- Maximum discharge during year, 30,000 second-feet May 29 (gauge height, 9.32 feet at gage on downstream side of railroad bridge); minimum daily discharge, 44 second-feet Aug. 16.

1895-1937: Maximum discharge, about 50,000 second-feet Oct. 11, 1904 (figures superseded that previously published as maximum); no flow at times.

Remarks.- Records good except those for Jan. 27-30, which were estimated and are fair. Diversions for irrigation above station. Records furnished by International Boundary Commission, U. S. Section (formerly known as U. S. Boundary Commission).

Data obtained by International Boundary Commission engineers provided the basis for estimates of the flow by passing the gaging station, which is made up of seepage from the river. The following table shows the seepage by months for the period June 1936 to April 1937.

Estimated seepage, in acre-feet, June 1936 to April 1937

June	91	December	338
July	50	January	228
September	44	February	350
October	211	March	339
November	294	April	360

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,260	874	467	752	577	1,910	1,350	6,650	10,800	3,710	903	362
2	992	1,190	630	798	613	1,820	1,090	6,550	8,920	3,320	1,240	502
3	779	1,340	987	780	492	1,560	1,030	6,190	8,560	2,980	1,040	992
4	692	1,200	999	711	596	1,560	1,380	5,800	8,520	4,360	996	835
5	631	1,090	977	610	504	1,680	2,980	5,660	8,020	4,120	507	660
6	616	1,030	806	511	733	2,550	2,810	5,850	7,480	2,460	312	468
7	630	1,010	824	457	747	1,760	1,950	6,500	6,920	2,090	189	597
8	599	819	874	310	795	1,780	1,450	6,710	6,110	1,590	213	1,240
9	596	860	791	448	954	1,560	1,340	7,280	6,250	1,360	208	1,320
10	577	981	824	645	2,160	2,450	1,350	7,640	4,550	1,410	131	1,630
11	578	631	829	547	2,330	2,740	1,720	8,350	3,920	1,610	81	1,500
12	560	389	760	568	1,200	2,360	2,680	9,500	3,420	2,020	61	1,150
13	538	421	770	646	960	2,580	3,640	9,440	2,960	1,930	54	823
14	521	518	725	709	828	2,590	4,200	9,160	2,630	1,840	53	725
15	482	509	738	615	910	2,350	4,810	9,810	2,480	1,420	54	1,070
16	448	551	724	504	1,450	1,880	5,580	10,000	2,330	961	44	642
17	631	750	582	582	2,560	6,680	9,210	2,030	1,500	715	50	428
18	545	792	677	723	3,040	1,830	7,400	9,550	1,740	495	223	289
19	478	963	674	687	1,960	1,450	7,260	9,300	1,490	357	302	232
20	475	868	778	550	1,660	1,850	7,540	10,100	1,270	248	309	355
21	584	783	814	526	1,680	2,030	6,860	9,850	1,160	204	412	299
22	478	746	850	453	1,530	1,540	6,560	9,730	1,180	159	423	242
23	573	845	865	317	1,430	1,360	5,760	9,850	1,140	131	479	245
24	680	728	801	327	1,100	1,360	6,460	8,810	825	93	500	282
25	790	600	816	356	1,120	1,410	7,030	9,090	493	82	705	342
26	868	480	760	264	1,110	1,640	7,160	9,360	485	125	632	147
27	1,120	470	795	640	1,130	1,340	6,070	7,990	2,040	105	463	165
28	952	380	803	720	1,240	1,300	5,460	13,500	9,240	213	327	177
29	1,180	427	820	900	-	1,640	5,730	25,100	7,850	457	307	233
30	882	471	841	870	-	1,870	5,920	19,300	4,430	783	268	304
31	835	-	791	627	-	1,520	-	12,200	-	861	239	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	21,422	1,260	448	691	42,490
November.....	22,597	1,340	380	753	44,820
December.....	24,560	999	467	792	48,710
Calendar year 1936.....	437,026.8	8,710	0	1,194	866,900
January.....	18,123	900	264	585	35,950
February.....	36,759	3,040	492	1,277	70,930
March.....	57,050	2,740	1,300	1,840	113,200
April.....	131,240	7,540	1,030	4,375	260,300
May.....	294,200	25,100	5,660	9,490	583,500
June.....	128,233	10,800	485	4,274	254,300
July.....	42,207	4,360	82	1,362	83,720
August.....	11,725	1,240	44	378	23,260
September.....	18,256	1,630	147	609	36,210
Water year 1936-37.....	806,372	25,100	44	2,206	1,597,000

## Rio Grande below Elephant Butte Dam, N. Mex.

Location.- Water-stage recorder, lat. 33°09', long. 107°11' in sec. 25, T. 13 S., R. 4 W. (surveys by Bureau of Reclamation), in Pedro Armendaris Grant, 300 feet below Elephant Butte Dam.

Records available.- October 1916 to September 1937.

Average discharge.- 21 years, 1,169 second-feet.

Extremes.- Maximum daily discharge during year, 2,670 second-feet July 17, 19; maximum daily gage height, 6.94 feet July 17 and Aug. 2; minimum daily discharge 9.2 second-feet Jan. 27.

1916-37: Maximum daily discharge, 3,200 second-feet July 29 to Aug. 3, 1917; no flow at times.

Remarks.- Records good. Discharges for periods at missing gage heights, Feb. 18-20, Mar. 1 estimated. Considerable water diverted above station; amount not known. Flow controlled by Elephant Butte dam, which forms reservoir that had a capacity of 2,636,000 acre-feet when constructed. Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	312	12	12	11	14	14	1,670	1,450	1,540	1,690	2,620	2,120
2	137	13	12	11	14	142	1,870	1,520	1,430	1,530	2,630	2,200
3	11	14	12	11	15	749	2,000	1,590	1,510	1,290	2,600	2,180
4	12	14	12	11	205	675	1,960	1,640	1,300	1,660	2,540	2,260
5	12	172	12	12	603	369	1,970	1,640	1,610	1,810	2,500	2,260
6	12	516	12	12	394	247	1,970	1,580	1,610	1,820	2,440	1,920
7	12	506	12	12	368	343	1,960	1,580	1,680	1,800	2,500	1,610
8	12	464	12	12	209	353	1,880	1,500	1,770	1,860	2,800	1,470
9	12	395	12	12	209	412	1,870	1,450	1,860	2,130	2,500	1,340
10	12	377	12	12	209	553	1,870	1,430	1,870	2,350	2,560	1,060
11	12	312	12	12	209	553	1,870	1,450	1,980	2,350	2,600	789
12	12	118	11	12	209	591	1,880	1,440	2,060	2,250	2,640	1,070
13	153	12	118	12	209	721	1,880	1,490	2,090	2,230	2,580	1,070
14	486	12	504	12	209	806	1,960	1,550	2,090	2,250	2,650	1,000
15	462	12	453	12	209	673	2,090	1,720	2,050	2,340	2,650	942
16	462	12	397	12	198	469	2,210	1,830	1,910	2,390	2,650	904
17	369	12	358	12	116	475	1,900	1,870	1,920	2,670	2,560	891
18	389	12	175	11	12	285	2,320	1,790	1,950	2,640	2,250	895
19	162	14	11	13	11	471	2,290	1,750	2,150	2,670	2,220	895
20	14	13	12	13	10	819	2,270	1,750	2,150	2,560	2,200	881
21	13	14	11	13	10	855	2,340	1,800	2,130	2,500	2,070	965
22	12	15	11	10	10	989	2,190	1,870	2,080	2,460	2,070	990
23	12	15	11	11	11	1,140	1,900	1,800	2,050	2,450	2,110	956
24	12	14	11	11	11	1,420	1,740	1,780	2,080	2,440	2,090	886
25	12	14	11	12	11	1,460	1,750	1,630	2,130	2,540	1,800	850
26	12	14	11	11	11	1,420	1,750	1,560	1,920	2,550	1,900	797
27	12	14	11	9.2	11	1,560	1,660	1,560	1,300	2,390	1,790	797
28	12	14	11	15	11	1,560	1,520	1,320	1,950	2,320	1,870	797
29	13	12	12	14	-	1,540	1,510	891	1,860	2,320	1,870	797
30	12	12	12	12	-	1,550	1,440	1,660	1,750	2,590	1,870	797
31	12	-	12	12	-	1,660	-	1,700	-	2,580	1,960	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,219	486	11	104	6,380		
November.....						3,150	516	12	105	6,250		
December.....						2,295	504	11	74.0	4,550		
Calendar year 1936 .....						376,640	2,580	10	1,029	747,100		
January.....						367.2	15	9.2	11.8	728		
February.....						3,718	603	10	153	7,370		
March.....						24,874	1,660	14	802	49,340		
April.....						57,490	2,340	1,440	1,916	114,000		
May.....						49,541	1,870	891	1,598	96,260		
June.....						55,760	2,150	1,300	1,859	110,600		
July.....						59,210	2,670	1,280	2,233	137,300		
August.....						71,790	2,650	1,790	2,316	142,400		
September.....						36,889	2,260	789	1,213	72,180		
Water year 1936-37.....						377,803.2	2,670	9.2	1,035	749,400		

## 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 below Continental Reservoir and 15 miles west of Creede.

Drainage area.- 49 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; May 1929 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 313 second-feet May 4 (gage height, 3.41 feet); minimum daily discharge recorded, 9.4 second-feet Aug. 29, 30, Sept. 16-28, probably less during period of no record.  
1929-37: Maximum discharge, that of May 4, 1937; no flow June 22, 23, 1935.

Remarks.- Records good except those for periods of missing gage heights, Oct. 5 to Dec. 31, Apr. 1-15, which were computed on basis of one discharge measurement and gate openings at Continental Reservoir, and are fair. No records for Jan. 1 to Mar. 31. Flow regulated by Continental Reservoir (capacity, 26,700 acre-feet).

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14						10	90	50	25	22	16
2	14						10	117	47	23	18	16
3	16						10	196	45	28	19	14
4	15						10	278	40	26	19	14
5	15						10	246	34	27	18	15
6	12						10	184	34	29	16	14
7	12						10	141	36	23	16	20
8	12						10	159	35	19	24	25
9	12						10	184	37	20	25	24
10	12						10	160	37	21	21	23
11	11						10	115	35	23	16	22
12	11						10	81	34	25	14	16
13	11						10	27	30	25	14	16
14	11						10	75	26	25	14	16
15	11						18	72	26	25	13	16
16	11						45	63	26	32	13	9.4
17	11						49	59	26	39	14	9.4
18	10						52	59	26	39	16	9.4
19	10						53	59	26	34	16	9.4
20	10						82	51	26	26	16	9.4
21	10						128	42	35	30	24	9.4
22	10						138	39	42	37	27	9.4
23	10						126	38	38	37	19	9.4
24	10						117	38	38	37	18	9.4
25	10						108	38	38	37	22	9.4
26	10						118	42	39	37	24	9.4
27	10						152	41	41	37	24	9.4
28	10						163	42	40	37	16	9.4
29	10						102	43	40	37	9.4	11
30	10						75	46	41	36	9.4	14
31	10						-	49	-	34	12	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							351	16	10	11.3	696	
November.....							300	-	-	10	595	
December.....							310	-	-	10	615	
Calendar year 1936.....							10,482	190	-	28.6	20,800	
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							1,666	163	10	55.5	3,300	
May.....							2,874	278	27	92.7	5,700	
June.....							1,068	50	26	35.6	2,120	
July.....							930	39	19	30.0	1,840	
August.....							548.8	27	9.4	17.7	1,090	
September.....							414.2	25	9.4	13.8	822	
Water year 1936-37.....												

## South Fork of Rio Grande at South Fork, Colo.

Location.— Water-stage recorder, lat.  $37^{\circ}40'$ , long.  $106^{\circ}39'$ , in sec. 4, T. 39 N., R. 3 E.,  $1\frac{1}{4}$  miles above mouth and  $1\frac{1}{2}$  miles southwest of village of South Fork. Zero 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 and May 1936 to September 1937 in reports of Geological Survey; August 1910 to December 1920 and May 1936 to September 1937 in reports of State engineer. Records for 1910-20, at site 1 mile downstream.

Extremes.— Maximum discharge during year, 1,950 second-feet May 17 (gage height, 5.46 feet); minimum daily discharge, 36 second-feet Sept. 28 or may have been less during period of ice effect.  
1910-20, 1936-37: Maximum discharge, about 5,000 second-feet Oct. 5, 1911; minimum daily discharge, 20 second-feet Jan. 1, 2, 8, 17, 23-25, 1915.

Remarks.— Records excellent except those for periods of ice effect, Nov. 4-14 and Nov. 24 to Apr. 2, which were computed on basis of 10 discharge measurements and weather records and are fair. A few small diversions for irrigation and several small storage reservoirs above station.

Rating table, Apr. 3 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)

1.0	30	1.8	106	2.6	290	4.0	914
1.2	43	2.0	140	2.8	360	4.5	1,210
1.4	60	2.2	182	3.0	440	5.0	1,570
1.6	81	2.4	232	3.5	657	5.5	1,990

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	72	43				67	353	1,040	472	79	58
2	67	60	40				75	464	1,080	452	76	49
3	63	59	42				70	572	1,060	368	78	49
4	61	71	44				67	639	995	311	85	51
5	59	76	41			*49	68	675	896	281	77	50
6	66	71	40				73	598	778	257	87	53
7	63	68	47				68	603	737	232	79	59
8	68	61	43				70	737	783	214	71	55
9	70	61	44				76	891	794	196	68	50
10	64	68	45				86	931	768	216	72	46
11	59	65	45				124	966	826	260	68	43
12	56	64	45				160	985	869	214	61	45
13	64	69	44				196	1,120	842	187	59	42
14	62	67	43				272	1,270	809	173	56	40
15	50	67	45		*46		392	1,380	773	162	56	40
16	50	69	44				505	1,490	804	142	56	40
17	49	70	41				448	1,670	874	129	56	41
18	48	69	45				350	1,640	908	119	56	40
19	48	66	45				376	1,580	863	109	58	39
20	69	63	46				388	1,550	853	102	52	39
21	62	64	46				456	1,470	949	96	50	38
22	56	60	50				501	1,410	1,050	92	48	39
23	62	55	50				428	1,360	1,050	89	48	41
24	58	49	50				336	1,240	966	87	45	40
25	61	47	48				356	1,020	920	85	44	38
26	62	44	47				476	947	920	88	55	37
27	58	44	46				531	815	778	94	57	37
28	57	45	50				428	826	639	94	56	36
29	60	44	37				336	914	554	92	47	39
30	73	42	37				314	1,010	460	89	49	93
31	74	-	43				-	1,050	-	79	87	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,870	74	48	60.3	3,710		
November.....						1,850	76	42	61.0	3,630		
December.....						1,376	50	37	44.4	2,750		
Calendar year .....												
January.....						1,364	-	-	44	2,710		
February.....						1,288	-	-	46	2,560		
March.....						1,612	-	-	52	3,200		
April.....						8,093	531	67	270	16,050		
May.....						32,066	1,670	355	1,035	65,640		
June.....						25,638	1,080	460	865	50,850		
July.....						5,891	472	79	180	11,070		
August.....						1,936	87	44	62.5	3,840		
September.....						1,365	93	36	45.5	2,710		
Water year 1936-37.....						84,039	1,670	-	230	166,700		

\*Discharge measurement.

## Pinos Creek near Del Norte, Colo.

Location.- Water-stage recorder, lat. 37°27', long. 106°35', in sec. 29, T. 39 N., R. 5 E., just below mouth of Bennett Creek and 8 miles southwest of Del Norte.

Drainage area.- 53 square miles.

Records available.- May 1936 to September 1937 in reports of Geological Survey; May 1919 to September 1924 and May 1936 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 259 second-feet May 17 (gage height, 2.68 feet); minimum daily discharge, 5 second-feet Nov. 29, probably less during period of no record.

1919-24, 1936-37: Maximum daily discharge, 2,400 second-feet June 3, 1922; minimum not determined.

Remarks.- Records good except those for periods of ice effect, which are fair. No records for Dec. 1 to Apr. 16. One small diversion above station.

Rating table, Apr. 17 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)

0	0	1.0	54	1.8	139
.2	5.6	1.2	72	2.0	164
.4	14	1.4	95	2.2	192
.6	26	1.6	115	2.4	220
.8	39				

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	11					-	45	133	47	12	9.0
2	14	13					-	59	135	48	13	7.9
3	14	*12					-	74	134	40	13	12
4	12	*14					-	56	126	36	13	13
5	12	*16					-	91	114	34	15	10
6	13	14					-	81	106	33	19	10
7	14	16					-	88	103	30	14	16
8	14	*15					-	122	104	28	12	12
9	15	*15					-	139	100	28	11	10
10	14	*16					-	144	97	27	9.9	9.4
11	13	*16					-	144	96	33	9.0	8.3
12	12	*14					-	154	95	29	8.6	8.3
13	11	*12					-	164	92	27	8.6	8.3
14	10	*10					-	172	92	26	8.6	8.6
15	9.2	*10					-	179	89	24	8.6	8.3
16	9.2	*14					-	188	86	22	9.0	8.6
17	9.7	*16					46	203	83	21	11	9.0
18	9.2	14					46	202	82	20	13	8.3
19	9.2	16					43	202	80	19	9.9	7.9
20	12	*14					44	191	76	17	8.6	7.9
21	8.9	*12					58	177	76	16	8.3	7.9
22	7.6	15					67	174	72	14	7.5	7.1
23	7.9	14					56	168	71	14	7.5	7.9
24	7.6	*12					46	151	66	15	7.5	6.7
25	8.6	*11					44	134	64	15	7.1	5.6
26	9.2	*10					56	122	62	15	7.9	6.0
27	9.7	*8					69	119	66	16	9.0	7.1
28	11	*10					56	114	62	19	9.4	7.5
29	12	*5					43	135	62	18	7.5	8.6
30	11	*8					40	137	49	15	10	19
31	9.2	-					-	128	-	13	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	343.2	15	7.6	11.1	681
November.....	383	16	5	12.6	760
December.....	-	-	-	-	-
Calendar year .....					
January.....	-	-	-	-	-
February.....	-	-	-	-	-
March.....	-	-	-	-	-
April 17-30, .....	713	69	40	50.9	1,410
May.....	4,287	203	45	138	8,500
June.....	2,645	135	49	88.2	5,250
July.....	759	48	13	24.5	1,510
August.....	322.5	19	7.1	10.4	640
September.....	276.2	19	5.6	9.21	548
Water year .....					

\*Stage-discharge relation affected by ice; discharge computed on basis of three discharge measurements and weather records.

## 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.,  $\frac{1}{2}$  miles below mouth of East Fork and 6 miles south of Del Norte.

Drainage area.- 13.1 square miles.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during year, 42 second-feet May 19 (gage height, 0.68 feet); minimum daily discharge, 0.8 second-foot Sept. 1, or may have been less during period of no record.  
1936-37: Maximum discharge, 364 second-feet July 27, 1936 (gage height, 1.47 feet), by slope-area method; minimum daily discharge, that of Sept. 1, 1937.

Remarks.- Records fair. One small diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	1.8					-	10	12	2.1	1.6	†0.8
2	2.9	*1.0					-	12	12	1.6	1.9	.9
3	2.7	*1.0					-	14	12	1.6	1.2	1.9
4	2.7	*1.5					-	16	12	.9	1.4	2.4
5	3.1	*2.0					-	15	12	1.2	2.1	1.9
6	3.5	*3.0					-	13	11	1.4	3.0	2.6
7	3.1	*3.0					-	14	11	3.0	1.6	3.0
8	2.7	*3.0					-	17	11	3.9	1.2	2.4
9	2.5	*2.5					-	17	10	3.9	†1.2	1.9
10	2.7	*2.5					-	18	9.0	3.9	†1.2	1.9
11	2.5	*2.5					-	17	7.0	4.4	†1.2	1.2
12	2.5	*2.0					-	21	5.2	3.5	†1.2	1.6
13	2.2	*2.0					-	27	5.2	3.5	†1.4	1.6
14	1.8	*2.0					-	21	5.2	3.5	†1.4	†1.6
15	1.8	*1.5					-	22	5.2	3.5	†1.4	†1.6
16	1.7	*1.5					-	24	5.2	3.5	1.4	†1.6
17	1.7	*1.5					7.0	29	5.2	3.5	1.4	1.6
18	1.5	*1.5					7.5	32	4.8	3.0	1.4	1.6
19	2.0	*1.0					7.0	34	4.8	3.0	1.4	1.4
20	2.0	*1.0					7.5	23	4.4	3.5	1.4	1.4
21	2.0	*1.0					8.5	18	3.9	3.5	1.4	1.2
22	1.8	*1.5					9.5	16	2.1	3.5	1.4	1.6
23	2.0	*1.5					7.5	15	2.1	3.5	1.4	1.6
24	2.0	*1.5					9.5	13	2.1	3.5	.9	1.6
25	2.4	*1.5					9.5	13	2.1	3.0	1.6	1.6
26	1.8	*2.0					8.5	12	2.6	2.4	1.9	1.6
27	1.7	*2.0					10	12	3.0	2.4	2.1	1.6
28	1.7	*2.0					9.5	12	3.0	3.5	1.4	1.4
29	1.7	*2.0					10	12	2.6	3.9	1.2	2.1
30	2.0	*1.5					9.0	12	2.1	3.0	2.1	3.5
31	1.7	-					-	12	-	1.4	1.9	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							69.3	3.5	1.5	2.24	137	
November.....							54.3	3.0	1.0	1.61	108	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 17-30.....							120.5	10	7.0	8.61	239	
May.....							543	34	10	17.5	1,080	
June.....							189.8	12	2.1	6.35	376	
July.....							92.0	4.4	.9	2.97	182	
August.....							47.3	3.0	.9	1.53	94	
September.....							52.7	3.5	.8	1.76	105	
Water year .....												

\*Stage-discharge relation affected by ice; discharge computed on basis of five discharge measurements and weather records.

†Gage height missing; discharge estimated.

## 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 below North Fork and 9 miles southwest of Monte Vista.

Drainage area.— 33.6 square miles.

Records available.— May 1935 to September 1937 in reports of Geological Survey; April 1919 to September 1924 and May 1935 to September 1937 in reports of State engineer.

Extremes.— Maximum discharge during year, 138 second-feet July 1 (gage height, 2.60 feet); minimum daily discharge recorded, 3.1 second-feet Sept. 27-29, probably less during period of no record.  
1935-37: Maximum discharge, 156 second-feet Aug. 11, 1935 (gage height, 2.65 feet); minimum not determined.

Remarks.— Records good except those estimated, which are fair. No records for Dec. 1 to Apr. 12. Diversions for irrigation above station.

Rating table, Apr. 13 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Apr. 13 to May 8)

0.2	1.5	0.8	21	1.4	52
.4	6.4	1.0	29	1.6	65
.6	13	1.2	40	1.8	79

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.4	7.3					-	28	37	20	4.6	4.8
2	7.3	5.8					-	34	35	*18	4.1	4.6
3	7.3	4.3					-	37	38	*16	3.8	4.3
4	7.3	7.0					-	40	35	*14	4.3	5.6
5	6.7	8.0					-	44	35	*12	5.4	4.8
6	7.3	*8					-	40	31	12	6.4	5.1
7	7.3	*7					-	41	30	12	5.4	9.1
8	8.0	*7					-	56	29	11	4.6	6.7
9	8.0	*7					-	69	28	10	4.6	5.4
10	8.0	*7					-	69	27	9.8	4.3	4.8
11	7.0	*7					-	64	27	13	4.1	4.8
12	6.4	6.4					-	67	27	12	4.1	4.8
13	5.8	7.0					35	68	27	10	4.3	5.1
14	5.5	7.3					*40	66	26	11	4.8	4.3
15	5.8	7.7					*45	68	25	9.8	4.8	3.8
16							*50	68	24	6.5	4.6	3.8
17	6.1	8.0					*48	70	24	7.9	4.8	3.8
18	4.6	8.4					*34	66	23	7.6	6.4	3.6
19	4.6	7.7					*33	64	23	7.0	5.4	3.3
20	6.4	7.3					32	61	23	6.7	5.1	3.3
21	6.1	8.0					*30	56	23	6.4	4.8	3.3
22	4.9	6.7					41	54	21	6.1	4.8	3.6
23	6.4	5.2					39	51	21	6.1	4.8	3.6
24	8.0	6.1					31	48	21	6.1	4.8	3.3
25	10	6.1					30	44	21	6.1	8.2	3.3
26	8.4	4.6					38	39	21	5.9	6.1	3.3
27	9.1	5.5					42	36	20	5.6	6.4	3.1
28	11	6.1					38	35	19	7.0	5.4	3.1
29	11	5.8					32	41	18	7.6	5.4	3.1
30	8.4	5.8					28	39	18	6.4	7.9	5.9
31	8.0	-					-	37	-	5.1	7.3	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							224.9	11	4.6	7.25	446	
November.....							203.1	8.4	4.3	6.77	403	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 13-30 .....							666	50	28	37.0	1,320	
May.....							1,600	70	28	51.6	3,170	
June.....							776	38	18	25.9	1,540	
July.....							296.7	20	5.1	9.57	568	
August.....							161.8	8.2	3.8	5.22	321	
September.....							131.4	9.1	3.1	4.38	261	
Water year .....												

\*Gage height missing; discharge estimated.

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 1937 in reports of Geological Survey; June 1923 to September 1926 and May 1936 to September 1937 in reports of State engineer.

Extremes.— Maximum daily discharge during year, 50 second-feet May 10; minimum daily discharge, 2.2 second-feet Aug. 20-22 or may have been less during period of no record.

1923-26, 1936-37: Maximum discharge, 306 second-feet July 30, 1936 (gage height, 2.83 feet), by slope-area method; minimum daily discharge, that of Aug. 20-22, 1937.

Remarks.— Records good except those for periods of ice effect or of missing gage heights, which are fair. No diversion above station.

Rating table, Apr. 16 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Sept. 24-30)

1.3	1.6	2.0	28
1.4	2.4	2.2	44
1.6	7.0	2.4	60
1.8	16		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	7.1					-	28	31	11	6.0	2.5
2	7.8	5.6					-	29	31	11	5.4	2.5
3	7.8	4.7					-	32	31	9.8	4.4	3.4
4	7.1	*4.7					-	35	28	12	4.1	3.8
5	6.8	*5.0					-	40	26	9.0	4.1	3.4
6	6.8	*5.0					-	39	26	7.8	4.4	3.8
7	5.6	*5.0					-	435	24	7.4	3.8	3.7
8	5.5	*4.4					-	432	24	7.0	6.4	3.1
9	6.5	*7.0					-	442	23	7.4	3.5	3.0
10	6.5	*6.5					-	450	23	7.8	3.1	2.8
11	6.2	*5.0					-	448	23	9.4	3.0	2.7
12	6.2	*4.4					-	442	24	8.6	3.0	2.7
13	6.2	*4.4					-	45	23	8.2	3.7	2.5
14	5.9	*3.8					-	447	23	6.4	3.5	2.3
15	5.9	*4.0					-	48	22	6.0	3.2	2.4
16	5.6	*4.0						46	49	21	6.0	3.4
17	5.3	*3.6						32	49	21	5.4	3.5
18	5.3	*3.5						31	49	21	4.8	3.7
19	5.6	*3.5						28	50	20	4.4	3.0
20	6.5	*3.5						27	47	20	3.7	2.2
21	6.8	*3.5						33	42	20	3.7	2.2
22	6.5	*3.6						35	42	20	3.8	2.2
23	7.1	*4.0						30	42	18	3.8	2.4
24	5.9	*3.8						25	39	17	4.1	2.3
25	6.8	*4.0						27	38	16	5.7	2.4
26	6.8	*4.2						29	34	15	6.0	2.4
27	5.6	*4.0						30	32	15	5.7	2.7
28	6.5	*4.0						27	31	14	7.0	2.7
29	5.6	*4.2						27	35	12	9.4	3.0
30	6.5	*3.2						27	35	12	8.2	3.7
31	7.4	-						34	-	6.4	3.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						199.8	8.2	5.3	6.45	396		
November.....						133.4	7.1	3.2	4.45	285		
December.....						-	-	-	-	-		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 16-30.....						454	46	25	30.3	900		
May.....						1,240	50	28	40.0	2,460		
June.....						644	31	12	215	1,280		
July.....						216.9	12	3.7	7.00	430		
August.....						106.6	6.4	2.2	3.44	211		
September.....						54.1	3.8	2.3	2.80	167		
Water year .....												

\*Stage-discharge relation affected by ice; discharge computed on basis of three discharge measurements and weather records.

†Gage height missing; discharge estimated.



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 west of Saguache.

Drainage area.- 595 square miles.

Records available.- August 1910 to September 1912 and October 1933 to September 1937 in reports of Geological Survey; August 1910 to September 1912 and June 1914 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 389 second-feet Apr. 16 (gage height, 2.09 feet); minimum daily discharge not determined, occurred during period of ice effect. 1910-12, 1914-37: Maximum discharge, 748 second-feet June 15, 1921 (gage height, 3.45 feet, former datum), minimum daily discharge, 14 second-feet Oct. 1, 2, 1933.

Remarks.- Records good except those for period of ice effect, Nov. 20-30 (computed on basis of one discharge measurement and weather records) and those for May 14-18 (estimated), which are fair. No records for Dec. 1 to Apr. 6. Diversions for irrigation above station.

Rating table for period Apr. 7 to Sept. 30 (gage height, in feet, and discharge, in second-feet)

0.4	32	1.2	152
.6	41	1.4	204
.8	64	1.6	256
1.0	102	1.8	309

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	43					-	60	136	109	64	48
2	54	41					-	85	121	100	61	41
3	50	41					-	131	147	85	74	54
4	48	41					-	139	149	78	60	45
5	47	46					-	157	131	71	58	40
6	47	47					-	157	114	67	61	41
7	48	40					41	139	107	67	56	48
8	46	37					38	136	104	64	48	45
9	46	37					38	162	102	51	45	40
10	44	41					39	188	104	57	41	38
11							45	175	94	58	39	36
12	42	35					48	162	99	66	38	36
13	41	35					72	155	92	79	38	36
14	40	34					155	153	94	64	38	35
15	39	37					230	162	94	57	38	35
16							282	164	94	50	38	35
17	38	39					259	164	102	47	43	35
18	37	39					131	170	109	46	40	34
19	35	39					129	173	104	44	38	34
20	37	35					119	162	100	41	36	35
21	41	33					107	149	100	40	35	35
22	40	30					155	149	107	38	34	36
23	41	30					126	152	102	38	34	36
24	39	27					76	155	102	38	34	35
25	38	28					61	149	100	40	34	34
26	45	28					85	147	131	66	35	34
27	40	25					144	131	175	78	36	34
28	39	27					100	124	121	87	36	34
29	38	26					72	152	114	109	36	35
30	41	26					56	222	114	96	36	40
31	45	-					-	168	-	85	47	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,322	57	35	42.6	2,620
November.....	1,061	47	26	35.4	2,100
December.....	-	-	-	-	-
Calendar year .....					
January.....	-	-	-	-	-
February.....	-	-	-	-	-
March.....	-	-	-	-	-
April 7-30.....	2,609	282	38	109	5,170
May.....	4,692	222	60	151	9,310
June.....	3,351	173	89	112	6,650
July.....	2,014	109	38	65.0	3,990
August.....	1,351	74	34	43.6	2,680
September.....	1,142	54	34	38.1	2,270
Water year .....					

## RIO GRANDE BASIN

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., 1½ miles above Crestone and 3 miles above junction with South Crestone Creek.

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during year, 88 second-feet May 14 (gage height, 1.61 feet); minimum daily discharge, 2.5 second-feet Aug. 23-25.  
1936-37: Maximum discharge, 735 second-feet Aug. 6, 1936 (gage height, 4.33 feet) by slope-area method; minimum daily discharge, that of Aug. 23-25, 1937.

Remarks.— Records fair. No records for Dec. 1 to Mar. 31. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11						20	44	21	9.3	19
2	11	11						28	45	20	8.4	17
3	10	*13	†6.7					35	40	19	7.5	14
4	9.1	*14						38	36	17	6.7	13
5	9.1	10						42	30	16	6.2	12
6	8.8	9.1					†9	43	28	14	5.9	11
7	8.8	8.8						43	27	15	5.7	11
8	8.8	8.8						46	26	12	5.2	9.3
9	9.1	9.1						51	29	11	4.5	8.1
10	9.1	8.2						48	30	10	4.2	7.2
11	9.4	8.2					†14	44	35	10	3.8	6.9
12	9.4	7.9					†16	50	38	9.9	3.5	6.7
13	9.4	7.9					†20	59	36	9.3	3.5	6.2
14	9.7	7.9					†20	59	34	8.7	3.1	6.4
15	9.4	7.9					24	63	32	8.1	3.1	5.7
16	9.7	7.6					23	64	35	6.9	3.1	5.7
17	9.7	7.9					17	62	39	6.4	3.3	5.9
18	9.7	7.9					20	62	38	6.2	3.6	5.7
19	10	7.3					18	58	36	5.2	3.5	5.2
20	11	7.3					16	53	35	4.5	3.3	5.2
21	11	7.3					22	52	34	4.2	3.1	5.0
22	10	7.3					25	53	34	3.6	2.8	5.0
23	10	7.3					20	52	31	3.6	2.5	5.0
24	10	9.1					16	45	29	3.6	2.5	4.7
25	10	8.8					15	41	29	4.0	2.5	4.5
26	11	9.1					22	36	30	3.8	4.0	4.3
27	10	8.8					25	42	28	4.3	8.4	3.8
28	10	8.5					20	39	25	6.2	11	3.8
29	10	*9.2					17	43	22	12	11	4.2
30	11	*7.6					17	50	22	15	16	6.4
31	11	-					-	46	-	11	26	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				306.2		11	8.8	9.88	607			
November.....				262.8		14	7.3	8.76	521			
December.....				-		-	-	-	-			
Calendar year .....												
January.....				-		-	-	-	-			
February.....				-		-	-	-	-			
March.....				-		-	-	-	-			
April.....				475		25	-	15.8	942			
May.....				1,487		64	20	47.3	2,910			
June.....				978		45	22	32.8	1,940			
July.....				297.5		21	3.6	9.60	590			
August.....				187.2		26	2.5	6.04	371			
September.....				227.9		19	3.8	7.60	452			
Water year .....												

\*Stage-discharge relation affected by ice; discharge computed on basis of one discharge measurement and weather records.

†Gage height missing; discharge estimated.

‡Result of discharge measurement.

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. 28, T. 42 N., R. 6 E., 3 miles northwest of La Garita.

Drainage area.- 117 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; April 1919 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 182 second-feet Apr. 15 (gage height, 1.51 feet), from rating curve extended above 45 second-feet; minimum daily discharge, 2.0 second-feet Aug. 24 or may have been less during period of no record.  
1919-37: Maximum daily discharge, 500 second-feet Apr. 14, 1924; minimum daily discharge, 1 second-foot July 8-10, 13-22, Aug. 1-8, 1934, Sept. 21-24, 1935.

Remarks.- Records good except those for periods of ice effect or of missing gage heights, which are fair. No records for Dec. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	7.6					+8	19	29	12	+10	6.5
2	14	6.3					+8	24	30	11	+6.0	6.0
3	12	*4.5					+10	27	33	9.2	+5.0	5.4
4	11	*5					+10	27	33	7.7	4.6	5.8
5	9.8	*5					+10	30	32	6.5	4.6	10
6												
7	9.4	*6					+11	29	32	6.0	5.2	7.7
8	8.9	*6					12	28	28	6.2	4.3	10
9	8.9	*7					12	29	26	6.0	3.8	8.1
10	8.1	*7					19	34	24	5.7	3.3	5.4
11	7.6	*7					16	35	21	5.7	3.1	4.1
12	6.7	*8					23	30	20	7.3	2.7	3.4
13	6.3	*6					50	29	20	9.2	2.7	3.1
14	6.0	*7					74	29	19	10	2.7	2.9
15	6.0	6.0					76	30	17	+9	3.1	2.7
16	6.0	6.7					74	32	16	+7	3.1	2.7
17	6.0	6.0					93	32	15	+6	4.3	2.9
18	5.8	5.8					59	32	14	+5	5.7	3.1
19	5.8	5.5					35	33	13	+5	6.2	2.9
20	5.8	*5					40	32	12	+4	5.6	2.7
21	6.7	*5					40	30	11	+4	2.9	2.5
22	7.2	*6					39	29	10	+4	2.5	2.5
23	6.7	*4.5					44	27	10	+4	2.4	2.9
24	8.1	*3.5					34	28	9.2	+3	2.2	3.1
25	7.2	*3.5					23	29	9.6	+3	2.0	2.9
26	8.5	*3.5					21	29	9.6	+3	2.4	2.7
27	8.5	*3.5					29	30	16	+5	2.2	2.5
28	6.7	*3.5					34	27	23	+10	2.9	2.4
29	8.1	*3.5					26	26	13	+16	2.9	2.4
30	6.3	*3					20	33	10	+18	5.4	2.4
31	8.9	*3					19	42	10	+15	6.0	2.5
31	8.9	-					-	33	-	+13	7.7	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						250.9	15	5.8	8.09	498		
November.....						159.9	8	3	5.33	317		
December.....						-	-	-	-	-		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						969	93	8	32.3	1,920		
May.....						924	42	19	29.8	1,830		
June.....						565.4	33	9.2	18.8	1,120		
July.....						236.5	18	3	7.63	469		
August.....						125.5	10	2.0	4.05	249		
September.....						127.2	10	2.4	4.24	252		
Water year .....												

\*Stage-discharge relation affected by ice; discharge computed on basis of three discharge measurements and weather records.

+Gage height missing; discharge computed on basis of one discharge measurement and records for Saguache Creek near Saguache.

## RIO GRANDE BASIN

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 1937 in reports of Geological Survey; April 1919 to September 1937 in reports of State engineer.

Extremes.— Maximum gage height during year, 1.91 feet Apr. 15 (discharge not determined); minimum daily discharge, 1.5 second-feet Nov. 29, 30, probably less during period of no record.

1919-37: Maximum daily discharge, 316 second-feet May 10, 1924; minimum daily discharge, that of Nov. 29, 30, 1936, probably less during period of no record.

Remarks.— Records good except those for periods of ice effect or of missing gage heights, which are fair. No records for Dec. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	8.8					+3	66	23	14	+9	7.0
2	15	8.8					+3	63	31	13	+7	7.0
3	14	*4					+3	41	30	9.9	+11	8.3
4	12	*6					+3	40	26	8.3	+10	9.9
5	10	*10					+3	49	24	7.8	9.4	6.6
6	10	*3.5										
7	12	*3.5					+3	38	23	7.8	8.9	9.4
8	9.5	*3.5					3.2	31	21	7.8	7.8	8.9
9	9.5	*4.5					3.5	27	19	7.0	7.0	7.8
10	10	*6					3.0	29	19	7.0	6.6	7.8
							3.8	44	19	7.0	5.8	6.2
11	8.8	*4.5					6.2	37	19	8.3	4.6	5.4
12	6.7	*6					9.9	38	18	12	6.6	5.0
13	6.0	*6					14	41	17	9.9	5.0	4.6
14	6.0	*7					29	44	16	+10	5.0	3.8
15	6.0	8.8					78	46	16	+9	5.0	3.5
16	6.0	8.1					87	49	16	+8	9.9	3.5
17	6.0	7.4					40	44	16	+7	6.6	3.8
18	6.0	8.1					22	37	15	+7	8.9	3.5
19	5.6	6.7					31	40	14	+6	5.8	3.2
20	6.7	*6					28	36	13	+6	5.0	3.2
21	8.1	*3.5					31	34	13	+6	5.0	3.2
22	8.1	*3					38	30	13	+6	4.6	3.5
23	11	*2					31	29	13	+6	4.2	3.5
24	8.1	*2					21	29	14	+7	4.6	3.2
25	8.8	*2					34	30	13	+7	6.2	3.2
26	8.1	*2					51	29	16	+9	7.0	3.0
27	7.4	*2					36	28	19	+15	7.8	3.0
28	9.5	*2					27	35	13	+20	7.0	3.0
29	8.1	*1.5					38	43	13	+22	6.2	3.0
30	11	*1.5					56	30	14	+18	9.4	6.6
31	8.8	-					-	26	-	+13	8.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	277.8	15	5.6	8.96	551
November.....	144.7	10	1.5	4.82	287
December.....	-	-	-	-	-
Calendar year .....					
January.....	-	-	-	-	-
February.....	-	-	-	-	-
March.....	-	-	-	-	-
April.....	739.6	87	3.0	24.7	1,470
May.....	1,181	66	26	38.1	2,340
June.....	536	31	13	17.9	1,060
July.....	301.8	22	6	9.74	599
August.....	215.2	11	4.2	6.94	427
September.....	153.6	9.9	3.0	5.12	305
Water year .....					

\*Stage-discharge relation affected by ice; discharge computed on basis of three discharge measurements, gage heights, and weather records.

+Gage height missing; discharge computed on basis of one discharge measurement and records for Saguache Creek near Saguache.

## 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 above Terrace Reservoir dam and 15 miles northwest of Capulin.

Drainage area.- 107 square miles.

Records available.- September 1911 to June 1912 and October 1934 to September 1937 in reports of Geological Survey; April 1914 to October 1919, October 1923 to September 1927, and October 1934 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,400 second-feet May 17 (gage height, 3.95 feet); minimum not determined.  
1911-12, 1914-19, 1923-27, 1934-37: Maximum discharge, 4,250 second-feet Oct. 5, 1911; minimum not determined.

Remarks.- Records good. Discharge for periods of ice effect, Nov. 4-8, 21-30, Apr. 1-12, computed on basis of three discharge measurements and storage in Terrace Reservoir. No records for Dec. 1 to Mar. 31. No regulation or diversion.

Rating table for period Apr. 13 to Sept. 30 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Apr. 15 to May 17)

0.9	13	1.6	86	2.4	332	3.2	774
1.0	18	1.8	128	2.6	428	3.4	930
1.2	34	2.0	180	2.8	532	3.6	1,110
1.4	54	2.2	248	3.0	644		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	35					30	166	575	301	57	44
2	46	32					30	280	581	314	53	38
3	50	26	*17				30	409	537	256	53	38
4	44	44					45	449	506	223	52	40
5	40	57					50	516	433	206	54	40
6	43	50					40	454	385	186	68	41
7	37	43					25	464	394	161	54	61
8	44	34					40	665	454	148	60	45
9	49	31					40	747	438	136	50	40
10	44	35					40	700	449	130	46	37
11	38	35					40	713	501	164	44	34
12	37	34					40	747	470	146	39	36
13	37	32					106	812	433	130	38	32
14	33	32					172	922	444	124	39	30
15	34	34					237	948	423	113	40	30
16	33	36					310	998	438	106	50	30
17	32	38					260	966	480	100	48	30
18	31	37					177	1,000	480	96	48	29
19	32	40					180	966	449	92	46	29
20	38	35					183	906	433	82	40	28
21	40	34					288	835	428	77	38	27
22	37	31					323	842	414	72	37	28
23	40	26					288	797	409	68	35	28
24	36	25					183	632	375	65	34	23
25	36	23					183	470	366	57	36	27
26	36	23					280	414	370	54	43	25
27	32	34					385	418	319	65	44	25
28	28	30					288	438	272	81	45	25
29	26	29					193	501	276	70	38	30
30	36	22					161	490	268	67	41	43
31	32	-					-	522	-	61	70	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							1,167	50	26	37.6	2,310	
November.....							1,017	57	22	33.9	2,020	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							4,647	385	25	155	9,220	
May.....							20,085	1,000	166	648	39,840	
June.....							12,800	581	268	427	25,390	
July.....							3,951	314	54	127	7,840	
August.....							1,440	70	34	46.5	2,860	
September.....							1,019	61	25	34.0	2,020	
Water year .....												

\*Result of discharge measurement.

Alamosa Creek below Terrace Reservoir, Colo.

Location.- Water-stage recorder, 1st. 37°21', long. 106°17', in sec. 23, T. 36 N., R. 6 E., Half a mile below Terrace Reservoir and 11 miles northwest of Capulin.

Drainage area.- 116 square miles.

Records available.- April 1909 to June 1912 and October 1933 to September 1937 in reports of Geological Survey; April 1909 to November 1912, April to October 1915, February 1917 to October 1920, and April 1922 to September 1937 in reports of State engineer.

Average discharge.- 19 years (1909-10, 1915-18, 1922-37), 124 second-feet.

Extremes.- Maximum discharge during year, 1,040 second-feet May 23 (gage height, 4.33 feet); minimum daily discharge, 22 second-feet Sept. 30.  
1909-12, 1915, 1917-20, 1922-37: Maximum daily discharge, 1,450 second-feet June 16-18, 1917; minimum daily discharge, 4 second-feet July 10, 1934.

Remarks.- Records excellent. Discharge for period of ice effect, Dec. 1 to Apr. 12, computed on basis of records of gate openings at reservoir. No diversion above station. Flow regulated by Terrace Reservoir (capacity, 17,700 acre-feet).

Rating tables, water year 1936-37 except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 1 to Sept. 30)

Oct. 1 to Nov. 30

Apr. 13 to Sept. 30

1.7	28	1.6	16	2.2	100	2.8	254	3.4	486	4.0	824
1.8	33	1.8	36	2.4	146	3.0	320	3.6	588	4.2	954
		2.0	62	2.6	196	3.2	396	3.8	702	4.4	1,090

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												
2	32	31	30	30	30	30	30	303	289	280	100	120
3	35	31	30	30	30	30	30	303	327	286	111	111
4	34	31	30	30	30	30	30	303	389	280	115	107
5	34	31	30	30	30	30	30	303	392	270	144	107
6												
7	34	30	30	30	30	30	30	396	338	270	151	104
8	32	30	30	30	30	30	30	400	342	267	107	102
9	30	30	30	30	30	30	75	427	400	236	109	102
10	30	30	30	30	30	30	75	451	414	221	109	98
	30	30	30	30	30	30	40	440	414	153	113	88
11	30	30	30	30	30	30	40	436	422	104	151	88
12	30	30	30	30	30	30	40	380	496	166	153	88
13	30	30	30	30	30	30	64	380	496	196	153	88
14	30	30	30	30	30	30	88	380	496	270	153	86
15	30	30	30	30	30	30	118	449	431	270	153	82
16	30	30	30	30	30	30						
17	30	30	30	30	30	30	227	546	414	245	151	82
18	30	30	30	30	30	30	303	546	414	218	165	82
19	30	30	30	30	30	30	303	633	468	202	168	78
20	30	30	30	30	30	30	306	799	496	193	168	76
							276	850	491	188	168	75
21	30	30					233	696	491	186	160	73
22	30	30	30	30	30	30	233	806	468	186	153	71
23	30	30	30	30	30	30	239	908	463	170	134	61
24	30	30	30	30	30	30	239	1,030	463	156	129	40
25	30	30	30	30	30	30	239	969	458	153	124	40
26												
27	30	30	30	30	30	30	239	588	400	156	124	38
28	30	30	30	30	30	30	239	458	313	124	141	37
29	30	30	30	30	30	30	280	364	306	100	146	33
30	30	30	30	30	30	30	303	349	276	100	134	26
31	30	30	30	30	30	30	303	310	280	100	132	22
	30	-	30	30	30	-	30	286	-	100	127	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	953	34	30	30.7	1,890
November.....	904	31	30	30.1	1,790
December.....	930	30	30	30.0	1,840
Calendar year 1936.....	40,074	498	30	109	79,480
January.....	930	30	30	30.0	1,840
February.....	840	30	30	30.0	1,670
March.....	930	30	30	30.0	1,840
April.....	4,712	306	30	187	9,360
May.....	15,483	1,030	286	499	30,710
June.....	12,263	496	276	409	24,320
July.....	6,116	286	100	197	12,130
August.....	4,292	166	100	138	6,510
September.....	2,297	120	22	76.6	4,560
Water year 1936-37.....	50,649	1,030	22	139	100,400

La Jara Creek at Gallegos ranch, near Capulin, Colo.

Location.— Water-stage recorder, lat.  $37^{\circ}13'$ , long.  $106^{\circ}11'$ , in sec. 3, T. 34 N., R. 7 E., 2 miles above former station called "La Jara Creek near Capulin, Colo." (records not equivalent) and 12 miles southwest of Capulin.

Drainage area.— 73 square miles.

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during year, 653 second-feet Apr. 15 (gage height, 5.94 feet); minimum daily discharge, 3.5 second-feet Nov. 22, probably less during period of no records.

1936-37: Maximum discharge, that of Apr. 15, 1937; minimum discharge, that of Nov. 22, 1936.

Remarks.— Records excellent except those for period of ice effect, Oct. 31 to Nov. 30 (computed on basis of four discharge measurements and weather records), and those for period of missing gage heights, Apr. 1-12 (estimated), which are fair. Small diversions for irrigation above station. Flow regulated by La Jara Reservoir (capacity, 14,040 acre-feet).

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	8						131	18	13	18	17
2	13	8						128	24	15	18	14
3	11	8	*6.4					131	23	14	18	15
4	9.4	24						128	24	12	18	14
5	8.4	15						128	23	11	18	14
6							21					
7	11	15						110	22	11	18	11
8	12	10						116	27	9.8	18	14
9	14	7						124	20	11	19	12
10	12	8						133	22	12	18	11
11	10	10						122	15	12	18	9.4
12	9.1	6					120	112	11	13	19	9.0
13	8.8	6					200	101	11	13	22	8.7
14	8.4	6					291	93	11	12	32	8.4
15	8.8	5					369	93	11	12	38	8.7
16	8.8	4.5					432	94	13	11	40	8.4
17	8.8	4.5					448	84	13	11	41	8.4
18	8.8	4.5					302	76	13	9.8	43	8.7
19	8.4	4.5					219	72	13	9.8	44	8.7
20	8.4	6					210	63	13	9.8	45	8.4
21	11	6					185	52	13	10	45	8.7
22	12	5					254	44	13	9.8	42	12
23	10	5					206	40	13	29	41	14
24	11	4.0					114	36	13	36	41	14
25	10	5					104	38	13	38	39	13
26	11	4.5					144	40	15	57	39	9.4
27	12	4.0					168	36	15	60	40	8.4
28	11	4.0					142	31	15	59	42	8.4
29	10	3.5					140	30	15	48	39	8.4
30	9.4	4.0					147	37	15	46	26	10
31	12	4.5					137	48	15	17	25	15
32	16	-					-	29	-	17	24	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							327.5	16	8.4	10.6	650	
November.....							212.5	24	3.5	7.06	421	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							4,542	448	-	151	9,010	
May.....							2,500	133	29	80.6	4,960	
June.....							482	27	11	16.1	956	
July.....							649.0	60	9.8	20.9	1,290	
August.....							948	45	18	30.6	1,880	
September.....							330.1	17	8.4	11.0	655	
Water year .....												

\*Result of discharge measurement.

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., above Turners ranch and 7 miles southeast of Fort Garland.

Drainage area.— 45 square miles.

Records available.— October 1933 to September 1937 in reports of Geological Survey; April 1923 to September 1937 in reports of State engineer.

Extremes.— Maximum discharge during year, 233 second-feet May 16 (gage height, 1.72 feet); minimum daily discharge recorded, 10 second-feet Nov. 3, Apr. 1-3, 6, 7, 9, probably less during period of no record.  
1923-37: Maximum discharge, 318 second-feet May 23, 1926 (gage height, 2.54 feet); minimum not determined.

Remarks.— Records good. Discharge for period of missing gage heights, Apr. 1-7, estimated. No records for Dec. 1 to Mar. 31. No diversion or regulation.

Rating table, May 7 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used May 7-14)

0.6	5	1.4	114
.8	16	1.6	184
1.0	36	1.8	268
1.2	66		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	18	*17.4				10	69	162	63	22	15
2	18	16					10	66	166	59	22	14
3	18	10					10	72	166	56	21	15
4	18	14					11	74	162	52	19	15
5	18	19					11	80	147	51	19	16
6	16	18					10	85	124	49	18	15
7	16	18					10	87	109	46	18	16
8	18	17					11	121	100	46	17	15
9	20	16					10	127	87	43	16	14
10	20	16					12	134	83	45	15	14
11	19	16					16	144	81	45	16	13
12	18	14					22	173	85	42	15	13
13	18	14					31	208	81	39	15	12
14	18	14					41	192	83	38	15	12
15	18	14					53	204	81	35	15	12
16	18	13					63	216	79	33	16	12
17	18	13					57	204	76	33	17	13
18	18	12					45	196	76	31	16	12
19	18	12					46	166	74	28	16	12
20	21	12					43	137	74	28	16	12
21	20	12					51	162	74	26	15	12
22	20	13					65	158	76	25	14	12
23	20	12					65	162	76	24	14	12
24	20	14					53	166	74	23	14	11
25	20	14					49	166	74	23	15	11
26	20	13					53	164	74	24	15	11
27	19	13					66	147	72	23	15	11
28	18	14					66	144	68	25	14	11
29	18	12					60	147	66	30	13	12
30	19	13					58	161	66	25	14	17
31	19	-					-	164	-	23	18	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							577	21	16	18.6	1,140	
November.....							424	19	10	14.1	841	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							1,108	66	10	36.9	2,200	
May.....							4,456	216	59	144	8,840	
June.....							2,816	166	66	93.9	5,690	
July.....							1,133	63	23	36.5	2,250	
August.....							503	22	13	16.2	998	
September.....							391	17	11	13.0	776	
Water year .....												

\*Result of discharge measurement.



Trinchera Creek above Mountain Home Reservoir, near Fort Garland, Colo.

Location.— Water-stage recorder above rating flume, lat.  $37^{\circ}24'$ , long.  $105^{\circ}32'$ , in sec. 31, T. 30 S., R. 71 W.,  $1\frac{1}{2}$  miles above Mountain Home Reservoir dam and 4 miles south-east of Fort Garland. Prior to Apr. 23, 1937, recorder located 6 feet downstream, in rating flume.

Drainage area.— 61 square miles.

Records available.— October 1933 to September 1937 in reports of Geological Survey; May 1923 to September 1937 in reports of State engineer.

Extremes.— Maximum discharge during year, 192 second-feet June 5 (gage height, 2.48 feet); minimum daily discharge recorded, 8.5 second-feet Apr. 1, probably less during period of no record.

1923-37: Maximum discharge, 385 second-feet May 24, 1926 (gage height, 1.84 feet); minimum not determined.

Remarks.— Records excellent except those for Oct. 1 to Nov. 30, June 13 to July 15, Aug. 30, 31, which are fair. Records for period of missing gage heights, June 13 to June 15, computed on basis of one discharge measurement and storage in Mountain Home Reservoir plus measured outflow. No records for Dec. 1 to Mar. 31. Diversions for irrigation above station.

Rating table, Apr. 23 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet; stage affected by backwater from reservoir June 13 to July 15)

0.4	4	1.2	42	2.0	124
.6	10	1.4	58	2.2	161
.8	19	1.6	77	2.4	180
1.0	39	1.8	99	2.6	210

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	16					8.5	52	127	60	18	14
2	16	16	*8.6				9.2	56	140	54	19	13
3	17	11					9.2	66	159	48	20	14
4	16	11					10	68	172	46	19	15
5	15	16					9.6	74	189	45	18	14
6		15					8.9	78	171	43	18	13
7	13	18					9.2	77	171	43	18	16
8	14	16					9.2	89	169	38	17	14
9	15	16					9.2	107	151	36	17	13
10	16	15					9.2	114	144	34	16	12
11	15	16					10	127	136	34	16	12
12	15	16					14	129	125	33	15	12
13	15	16					20	140	117	32	14	12
14	16	16					27	145	108	26	14	11
15	16	14					36	151	104	24	14	11
16	16	13					49	151	102	20	14	10
17	16	13					49	150	100	18	13	11
18	16	13					35	161	98	16	14	11
19	16	13					35	162	94	16	13	10
20	19	12					31	157	92	14	13	10
21	20	13					36	154	90	13	13	9.7
22	18	12					52	145	88	13	13	9.7
23	17	10					54	144	86	12	12	10
24	16	9.3					45	140	84	12	12	9.7
25	15	9.7					45	133	82	12	12	9.4
26	15	10					42	120	80	18	15	9.4
27	15	9.7					59	110	78	13	16	9.4
28	15	10					61	103	78	13	15	9.4
29	16	9.3					62	112	78	16	13	9.4
30	16	9.7					49	123	68	15	14	14
31	16	-					-	119	-	16	16	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							492	20	13	15.9	976	
November.....							396.7	18	9.3	13.2	787	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							893.2	61	8.5	29.8	1,770	
May.....							3,657	162	52	118	7,250	
June.....							3,471	189	68	116	6,880	
July.....							835	60	12	26.9	1,660	
August.....							471	20	12	15.2	934	
September.....							348.1	16	9.4	11.6	690	
Water year .....												

\*Result of discharge measurement.

## 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 below Smith Reservoir and 5 miles southwest of Blanca.

Drainage area.- 396 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; October 1929 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 584 second-foot Apr. 18 (gage height, 5.20 feet); minimum daily discharge, 0.3 second-foot Aug. 30, 31, Sept. 6, 9, 10, 20. 1929-37: Maximum discharge, that of Apr. 18, 1937; minimum daily discharge, that of Aug. 30, 31, Sept. 6, 9, 10, 20, 1937.

Remarks.- Records good for Oct. 1 to Nov. 30, and excellent for Mar. 31 to Sept. 30. No records for Dec. 1 to Mar. 30. Diversions for irrigation above station. Flow regulated by Smith Reservoir (capacity, 5,335 acre-feet).

Rating table, water year 1936-37 (gage height, in feet, and discharge, in second-feet)

Mar. 31 to Sept. 30

0.3	0.2	1.2	2.5	126	5.0	448
.4	1.1	1.4	3.0	176	5.2	584
.6	4.1	1.6	3.5	234		
.8	8.6	1.8	4.0	296		
1.0	14	2.0	4.5	369		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	42	*19				44	247	175	66	9.1	0.5
2	2.2	44					65	240	160	88	8.8	.4
3	5.8	42					87	236	164	93	8.8	.4
4	8.9	38					77	238	185	111	9.1	.5
5	11	39					77	244	177	84	8.8	.4
6	13	44					77	266	170	57	8.6	.3
7	7.0	47					77	299	159	40	8.6	.4
8	4.9	45					66	311	145	27	8.4	.5
9	3.7	42					63	356	140	17	8.1	.3
10	2.6	41					62	387	135	12	8.1	.3
11	2.2	39					69	406	124	9.6	8.6	.5
12	1.6	38					101	416	113	7.2	8.6	.4
13	1.8	37					162	400	102	6.2	8.6	.5
14	3.3	37					211	390	95	5.6	2.1	.6
15	8.6	38					286	389	86	5.2	1.1	.6
16	13	38										
17	14	39					386	397	77	4.7	.9	.5
18	18	39					575	389	66	4.1	.8	.5
19	20	38					429	363	55	3.9	.9	.6
20	25	36					332	334	40	3.6	.7	.5
							306	409	27	3.6	.6	.3
21	31	39					292	280	16	3.8	.5	.4
22	35	36					300	245	9.8	3.6	.5	.6
23	39	35					342	232	4.5	3.6	.4	.6
24	39	30					342	221	3.4	3.6	.4	.6
25	40	27					299	206	3.4	3.4	.6	.6
26	36	26					270	188	3.6	1.5	.5	.6
27	38	26					243	163	6.0	1.8	.4	.6
28	39	26					256	139	22	3.9	.5	.6
29	39	24					271	140	24	6.2	.4	.6
30	38	23					259	184	24	6.7	.3	.6
31	39	-				39	-	199	-	7.2	.3	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						582.0	40	1.4	18.8	1,150		
November.....						1,094	47	23	36.5	2,170		
December.....						-	-	-	-	-		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						6,421	576	44	214	12,740		
May.....						8,812	416	138	84	17,490		
June.....						2,511.7	185	3.4	23.7	4,980		
July.....						694.0	111	1.5	22.4	1,380		
August.....						124.0	9.1	.3	4.00	246		
September.....						14.8	.6	.3	.49	29		
Water year .....												

\*Result of discharge measurement.

## 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.

Drainage area.- 187 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; March to October 1916 and May 1923 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,190 second-feet Apr. 16 (gage height, 6.59 feet); minimum daily discharge, 3.1 second-feet Sept. 24, 25.  
1916, 1923-37: 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.

Remarks.- Records fair. Discharge for period of ice effect, Nov. 27-30, computed on basis of one discharge measurement and weather records; that for period of missing gage heights, Apr. 1-8, estimated. No records for Dec. 1 to Mar. 31. A few diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	31					30	228	110	46	12	6.8
2	16	33	*23				30	232	103	38	11	5.0
3	17	41					30	248	158	35	12	4.3
4	18	32					30	246	133	28	10	6.0
5	16	37					30	248	126	28	9.4	11
6	17	37					35	300	120	27	9.1	7.0
7	16	34					35	330	109	25	8.4	8.8
8	17	31					35	383	98	24	8.0	8.0
9	17	29					38	408	92	23	7.4	6.5
10	18	29					71	414	87	22	6.8	5.2
11	18	27					125	422	79	22	6.2	4.8
12	18	27					211	370	70	26	5.5	4.5
13	17	24					252	347	65	23	5.2	4.1
14	16	25					288	322	62	21	5.2	4.1
15	16	22					543	318	62	20	5.2	3.9
16	15	22					539	304	57	18	5.2	3.5
17	15	21					375	282	53	16	8.8	4.1
18	15	21					133	250	50	15	8.8	4.1
19	15	20					192	238	49	14	8.0	3.9
20	19	17					187	216	45	14	6.5	3.5
21	22	19					212	193	42	13	6.2	3.5
22	24	18					294	168	41	13	6.0	3.5
23	23	15					314	149	38	12	6.0	3.5
24	21	14					216	143	38	13	5.8	3.1
25	21	27					177	132	38	12	5.8	3.1
26	22	23					204	131	45	13	7.0	3.3
27	23	21					262	116	62	14	8.8	3.5
28	23	21					290	107	46	14	7.0	3.9
29	22	21					266	110	39	15	5.8	3.9
30	24	22					254	196	67	22	4.5	6.0
31	28	-					-	127	-	15	4.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						584	28	15	18.8	1,180		
November.....						761	41	14	25.4	1,510		
December.....						-	-	-	-	-		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						5,698	543	30	190	11,300		
May.....						7,078	422	107	248	15,250		
June.....						2,184	168	38	72.8	4,330		
July.....						641	46	12	20.7	1,270		
August.....						226.1	12	4.5	7.29	448		
September.....						146.4	11	3.1	4.88	290		
Water year .....												

\*Result of discharge measurement.

## Ute Creek near Fort Garland, Colo.

Location.— Water-stage recorder above rating flume, lat.  $37^{\circ}26'$ , long.  $105^{\circ}25'$ , in sec. 10 (revised), T. 30 S., R. 72 W.,  $2\frac{1}{2}$  miles north of Fort Garland. Prior to Apr. 2, 1937, recorder located 15 feet downstream in rating flume.

Drainage area.— 32 square miles.

Records available.— October 1933 to September 1937 in reports of Geological Survey; March to October 1916 and May 1923 to September 1937 in reports of State engineer.

Extremes.— Maximum discharge during year, 323 second-feet June 30 (gage height, 3.52 feet); minimum daily discharge, 4.1 second-feet Apr. 9.  
1916, 1923-37: Maximum discharge, 353 second-feet Aug. 5, 1936 (gage height, 3.05 feet); minimum daily discharge, 1.6 second-feet July 6, 1936.

Remarks.— Records good except those for period of ice effect, Oct. 12 to Nov. 30 (computed on basis of seven discharge measurements and weather records), and those for days of missing gage heights, Apr. 1, 2 (estimated), which are fair. No records for Dec. 3 to Mar. 31. A few diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	21					6	84	104	178	30	16
2	22	19	*12				6	93	104	122	30	14
3	24	14					6.4	106	132	103	33	18
4	21	18					7.6	111	110	86	29	26
5	19	20					5.0	124	98	76	27	21
6	20	19					4.7	145	90	71	25	19
7	21	18					5.0	160	82	68	22	21
8	17	18					4.4	167	80	63	21	18
9	17	16					4.1	177	83	60	21	16
10	18	15					5.0	184	77	55	18	15
11	17	15					9.2	185	83	59	18	13
12	17	16					17	185	91	53	16	19
13	17	15					21	203	90	48	14	21
14	18	16					26	208	92	46	13	12
15	17	16					44	218	88	43	13	9.9
16	17	16					70	220	90	41	16	9.2
17	18	16					57	210	94	37	20	11
18	16	17					41	199	91	33	23	9.9
19	15	16					43	199	84	31	17	9.9
20	19	16					42	194	85	26	15	9.2
21	20	16					57	168	86	28	13	9.2
22	20	15					75	156	80	28	11	9.2
23	19	14					78	161	82	27	8.6	9.2
24	20	15					83	145	80	26	6.4	7.8
25	17	16					71	154	92	29	6.4	7.1
26	18	15					75	115	126	33	7.8	7.1
27	19	15					96	107	105	33	13	7.1
28	19	16					99	108	82	33	12	7.1
29	20	15					87	134	75	33	11	7.1
30	21	14					83	158	154	33	11	13
31	23	-					-	113	-	29	21	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							589	24	15	19.0	1,170	
November.....							486	21	13	16.2	964	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							1,228.6	99	4.1	41.0	2,440	
May.....							4,841	220	84	156	9,600	
June.....							2,810	154	75	93.7	5,570	
July.....							1,631	178	28	52.6	3,240	
August.....							542.1	35	6.4	17.5	1,080	
September.....							392.0	26	7.1	15.1	778	
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 W., half a mile east of Platoro.

Drainage area.- 44.4 square miles.

Records available.- April to September 1937.

Extremes.- Maximum discharge observed during period, 1,120 second-feet May 17 (gage height, 2.32 feet), from rating curve extended above 600 second-feet; minimum daily discharge, 8.6 second-feet Sept. 27, 28.

Remarks.- Records good for Apr. 1 to June 7; excellent for June 8 to Sept. 30. Discharge for days of missing gage heights, Apr. 1, 2, estimated. Staff gage read twice daily Apr. 3 to June 7. No diversion above station.

Rating tables, Apr. 2 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 16 to Sept. 30)

Apr. 2 to June 7				June 8 to Sept. 30			
0.4	11	1.0	368	0.3	7	1.8	394
.6	25	2.0	468	.4	11	2.0	500
.8	52	2.2	580	.8	52	2.2	618
1.0	94	2.4	708	1.0	97	2.4	744
1.2	145	2.6	852	1.2	154		
1.4	207	2.8	1,010	1.4	222		
1.6	280	3.0	1,190	1.6	301		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							16	207	655	500	56	22
2							16	322	695	483	49	19
3							17	392	668	414	44	19
4							18	447	605	356	43	19
5							19	463	495	306	44	16
6							17	387	442	268	52	16
7							17	421	500	233	43	36
8							18	511	570	215	38	22
9							20	522	576	201	32	20
10							27	563	588	198	30	19
11							29	642	655	218	27	16
12							31	750	668	187	24	15
13							43	830	637	177	23	15
14							46	914	618	161	23	14
15							121	938	612	148	25	13
16							181	970	649	133	32	13
17							181	1,030	693	121	32	13
18							175	994	699	113	25	12
19							250	964	686	102	23	12
20							257	946	680	87	19	11
21							257	907	674	82	18	11
22							297	868	668	72	16	11
23							272	862	661	66	15	12
24							236	823	600	66	15	11
25							257	473	600	68	16	9.8
26							250	373	570	70	19	9.0
27							297	368	478	72	23	8.6
28							257	373	429	84	24	8.6
29							221	473	404	87	20	14
30							210	506	429	74	32	40
31							-	580	-	64	33	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							4,052	297	16	135	8,040	
May.....							19,599	1,030	207	632	38,870	
June.....							17,904	699	404	597	35,510	
July.....							5,426	500	64	176	10,760	
August.....							915	56	15	29.5	1,810	
September.....							477.0	40	8.6	15.9	946	
Water year .....											95,940	

## Conejos River near Mogote, Colo.

Location.- Water-stage recorder, lat.  $37^{\circ}03'$ , long.  $106^{\circ}11'$ , in sec. 34, T. 33 N., R. 7 E.,  $5\frac{1}{2}$  miles northwest of Mogote.

Drainage area.- 282 square miles.

Records available.- September 1899 to March 1900, April 1903 to September 1913, and October 1933 to September 1937 in reports of Geological Survey; September 1899 to March 1900 and April 1903 to September 1937 in reports of State engineer.

Average discharge.- 35 years (1902-37), 381 second-feet.

Extremes.- Maximum discharge during year, 3,260 second-feet May 18 (gage height, 4.79 feet); minimum daily discharge, 45 second-feet Feb. 4-7, 21, 22, 1899-1900, 1903-37: Maximum discharge, 6,000 second-feet (estimated) Oct. 5, 1911; minimum not determined.

Remarks.- Records good except those for period of ice effect, Dec. 1 to Mar. 21, which were computed on basis of eight discharge measurements, gage heights, and weather records and are fair. No diversion or regulation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	198	161	87	58	50	55	102	803	1,780	970	211	111
2	191	132	100	56	50	60	124	1,060	1,870	1,220	187	97
3	194	96	87	50	50	60	127	1,420	1,830	950	172	89
4	179	132	85	48	45	60	116	1,550	1,720	830	158	104
5	164	172	80	52	45	65	102	1,830	1,490	740	158	93
6	183	168	80	55	45	65	111	1,730	1,320	668	158	104
7	172	158	70	54	45	75	104	1,680	1,240	587	151	161
8	187	151	61	54	47	75	111	1,890	1,400	504	151	132
9	194	135	64	54	47	75	148	2,230	1,460	452	132	102
10	183	132	68	54	47	77	202	2,110	1,360	417	116	85
11	172	129	66	54	47	75	317	2,170	1,530	504	106	76
12	168	124	61	54	47	75	417	2,300	1,600	504	98	69
13	151	132	58	54	47	85	560	2,530	1,510	445	93	66
14	148	138	65	54	47	85	749	2,720	1,480	410	93	66
15	138	135	70	54	47	70	970	2,960	1,360	374	96	62
16	129	138	68	52	50	65	1,220	2,710	1,480	339	114	60
17	119	135	68	54	50	90	1,060	2,830	1,550	312	124	63
18	111	138	58	56	50	100	866	2,990	1,580	295	129	60
19	109	132	62	54	50	110	920	2,820	1,470	285	132	57
20	145	119	62	52	50	110	930	2,610	1,430	260	102	55
21	142	119	58	50	45	110	1,120	2,560	1,470	245	91	53
22	138	119	56	50	45	111	1,270	2,560	1,430	224	83	52
23	138	116	54	50	50	104	1,150	2,560	1,360	224	78	53
24	132	104	50	50	50	80	866	2,160	1,340	194	74	52
25	135	100	60	50	60	93	839	1,750	1,210	245	71	51
26	142	104	64	50	60	85	1,060	1,440	1,270	260	85	49
27	135	102	68	50	55	91	1,310	1,420	1,060	255	124	47
28	127	93	70	50	55	89	1,150	1,440	950	255	119	48
29	119	99	68	50	-	80	902	1,600	902	306	100	53
30	148	87	60	50	-	71	785	1,560	930	322	98	132
31	168	-	56	50	-	89	-	1,640	-	232	124	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,759	198	109	154	9,440		
November.....						3,800	172	87	127	7,540		
December.....						2,084	100	50	67.2	4,130		
Calendar year 1936.....						116,665	2,120	30	319	231,400		
January.....						1,623	58	48	52.4	3,220		
February.....						1,376	60	45	49.1	2,730		
March.....						2,535	111	55	81.8	5,030		
April.....						19,708	1,310	102	657	39,090		
May.....						63,633	2,990	803	2,053	126,200		
June.....						42,402	1,870	902	1,413	84,100		
July.....						13,828	1,220	194	446	27,430		
August.....						3,728	211	71	120	7,590		
September.....						2,292	161	47	76.4	4,550		
Water year 1936-37.....						161,768	2,990	45	443	320,800		

## Conejos River near La Sauces, Colo.

Location.- Two water-stage recorders, lat. 37°23', long. 105°45', in sec. 2, T. 35 N., R. 11 E., half a mile above mouth and 2 miles north of La Sauces.

Drainage area.- 887 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; March 1921 to September 1937 in reports of State engineer.

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

Extremes.- Maximum discharge during year, 3,520 second-feet May 16; minimum daily discharge, 6.1 second-foot Aug. 23 to Sept. 5.

1921-37: Maximum daily discharge, 3,650 second-feet May 24, 1932; no flow July 21 to Sept. 8, 1934.

Remarks.- Records good except those for period of ice effect, Jan. 1 to Feb. 23 (computed on basis of three discharge measurements and partial gage-height record on one channel), and those for period of partial gage-height record, July 14 to Sept. 30 (estimated on basis of two discharge measurements and weekly gage heights), which are fair. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	119	96	73	102	130	101	999	1,600	601	16	6.1
2	85	133	85	59	93	137	101	1,200	1,600	672	15	6.1
3	83	123	86	63	92	143	104	1,520	1,600	754	13	6.1
4	89	107	77	68	92	135	119	2,090	1,730	651	10	6.1
5	96	123	84	68	98	143	131	2,410	1,450	534	9.3	6.1
6	98	148	80	68	110	144	113	2,690	1,240	434	9.1	9.3
7	104	149	78	66	117	145	106	2,730	1,080	318	9.4	15
8	105	138	75	68	117	150	104	2,550	1,020	243	8.2	15
9	102	129	79	68	110	146	111	2,770	990	176	8.2	16
10	100	122	83	68	102	148	147	3,130	928	142	8.1	16
11	101	122	87	70	97	143	411	3,010	836	80	8.1	16
12	96	124	89	75	104	153	595	3,100	823	63	8.1	16
13	94	123	94	80	104	158	976	3,010	765	62	8.1	16
14	91	127	94	85	111	160	1,510	3,170	732	62	8.1	16
15	86	128	96	80	116	158	1,710	3,230	650	62	10	16
16	81	118	106	75	118	152	2,130	3,410	568	54	11	16
17	79	117	116	71	112	154	2,550	3,280	560	44	11	16
18	77	122	105	67	108	147	2,170	3,270	494	43	11	16
19	76	118	103	64	116	143	1,820	3,270	468	37	11	16
20	73	114	102	65	120	122	1,860	3,110	428	36	10	15
21	75	110	101	66	120	119	1,890	2,880	424	31	8.1	13
22	80	106	101	72	116	115	2,200	2,590	424	24	7.1	11
23	83	104	99	73	118	100	2,320	2,410	398	23	6.1	11
24	87	100	94	79	116	96	1,840	2,410	386	24	6.1	10
25	84	100	94	79	124	104	1,340	2,100	382	27	6.1	11
26	86	107	94	79	126	92	1,480	1,720	715	26	6.1	11
27	96	108	84	85	122	94	1,750	1,330	953	23	6.1	11
28	89	108	82	65	120	101	2,050	1,180	869	23	6.1	14
29	87	111	70	90	-	98	1,680	1,200	756	21	6.1	16
30	87	101	64	97	-	107	1,150	1,620	679	21	6.1	16
31	91	-	44	92	-	108	-	1,530	-	20	6.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,748	105	73	88.6	5,450
November.....	3,559	149	100	119	7,060
December.....	2,742	116	44	88.5	5,440
Calendar year 1936.....	80,744.6	2,120	.5	221	160,100
January.....	2,300	97	59	74.2	4,560
February.....	3,101	126	92	111	6,150
March.....	4,045	160	92	130	8,020
April.....	34,569	2,550	101	1,152	68,570
May.....	74,919	3,410	999	2,417	148,600
June.....	25,688	1,800	382	856	50,950
July.....	5,313	754	20	171	10,540
August.....	274.8	16	6.1	8.86	545
September.....	384.8	18	6.1	12.9	763
Water year 1936-37.....	159,643.6	3,410	6.1	437	316,800

## San Antonio River at Ortiz, Colo.

Location.- Water-stage recorder, lat. 37°00', long. 106°02', in sec. 19, T. 32 N., R. 9 E., Half a mile south of Ortiz and half a mile above mouth of Los Pinos Creek.

Drainage area.- 110 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; January to October 1915, May 1919 to October 1920, and October 1924 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,750 second-feet Apr. 15 (gage height, 5.38 feet); no flow July 19-27, Aug. 10, 11.

1915, 1919-20, 1924-37: Maximum discharge, that of Apr. 15, 1937; no flow for periods in nearly every year.

Remarks.- Records excellent except those for period of ice effect, Nov. 3-30 (computed on basis of five discharge measurements and weather records), and those for period of missing gage heights, Apr. 1-8 (estimated), which are fair. No records for Dec. 1 to Mar. 31. A few small diversions for irrigation above station.

Rating table, Apr. 9 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 17 to Sept. 30)

0.5	0	1.4	74	3.0	503
.6	2	1.6	112	3.5	694
.8	11	1.8	154	4.0	922
1.0	24	2.0	200	4.5	1,170
1.2	44	2.5	339		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12.0	13	*4.7				10	302	48	16	1.8	5.2
2	8.8	14					10	389	44	8.5	1.2	2.8
3	7.0	6					15	441	74	8.5	4.0	2.0
4	6.5	6					15	437	48	7.5	4.4	9.0
5	5.6	27					25	482	41	4.8	2.4	8.0
6							25	451	35	3.2	2.0	10
7	5.2	22					40	405	31	2.4	1.8	12
8	9.2	22					60	486	28	2.0	.8	12
9	8.3	23					165	482	26	2.4	.2	5.6
10	9.2	20					370	431	23	1.6	0	4.0
11	8.8	17										
12	7.4	19					712	461	22	2.8	0	2.8
13	6.0	17					946	380	20	3.2	.2	1.8
14	5.6	17					1,080	373	18	3.2	.4	1.4
15	4.7	18					1,040	345	17	1.8	1.0	1.4
16	4.4	21					1,060	333	16	1.2	.4	1.6
17												
18	4.1	17					960	284	15	.8	3.6	1.4
19	4.1	14					669	262	12	.6	50	1.8
20	4.1	12					510	230	12	.4	13	2.8
21	3.5	8					567	225	10	0	8.0	2.0
22	5.2	15					567	167	9.0	0	5.6	2.0
23												
24	12	15					640	126	8.5	0	3.6	1.4
25	8.3	16					673	108	11	0	2.4	1.0
26	8.3	16					574	102	8.5	0	1.8	1.4
27	8.3	13					373	112	6.0	0	1.4	2.4
28	7.8	14					290	96	5.6	0	1.2	1.8
29												
30	9.8	10					376	83	15	0	1.2	1.4
31	9.2	8					475	72	18	0	2.4	.8
	8.8	6					421	64	12	2.0	18	.8
	9.2	9					287	74	8.5	3.2	10	1.0
	7.8	6					243	81	9.0	5.6	10	4.0
	16	-					-	60	-	3.6	13	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							235.2	12	3.5	7.59	467	
November.....							441	27	6	14.7	875	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							13,198	1,080	10	440	26,180	
May.....							8,344	486	60	269	16,550	
June.....							651.1	74	5.6	21.7	1,290	
July.....							85.3	16	0	2.75	169	
August.....							165.8	40	0	5.35	329	
September.....							105.6	12	.8	3.52	209	
Water year .....												



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 above mouth and 2½ miles east of Manassa.

Drainage area.- 348 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; April 1923 to September 1937 in reports of State engineer.

Average discharge.- 14 years, 102 second-feet.

Extremes.- Maximum discharge during year, 1,680 second-feet Apr. 16 (gage height, 5.93 feet); no flow Aug. 16 to Sept. 30.  
1923-37: Maximum discharge, 1,890 second-feet May 5, 1924; no flow for periods in nearly every year.

Remarks.- Records good except those for period of ice effect, Dec. 5 to Mar. 17, which were computed on basis of seven discharge measurements and weather records and are fair. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	48	17			32	30	732	516	143	0.3	
2	12	45	18			34	49	1,020	510	144	.2	
3	13	26	12			36	60	1,310	580	155	.2	
4	13	23	11			38	65	1,410	497	133	.2	
5	13	37	11			40	60	1,460	416	110	.2	
6	13	44	7			44	54	1,480	352	87	.2	
7	15	47	11			48	50	1,400	309	59	.2	
8	14	41	10			54	49	1,400	287	46	.1	
9	15	36	11			52	70	1,480	270	33	.1	
10	16	36	10			52	123	1,470	254	19	.1	
11	13	33	10			48	338	1,470	240	14	.1	
12	11	32	11			46	728	1,450	226	12	.1	
13	10	27	12			44	1,140	1,450	212	8.6	.1	
14	10	30	12			42	1,180	1,460	209	2.3	.1	
15	9.8	34	13			40	1,330	1,480	196	1.5	.1	
16	11	35	14			40	1,520	1,420	183	1.0	0	
17	9.8	35	14			40	1,490	1,390	165	.8	0	
18	9.0	33	12	*13	*20	34	1,120	1,370	152	.7	0	
19	8.6	28	13			27	1,180	1,330	138	.7	0	
20	12	28	14			24	1,150	1,290	133	.6	0	
21	25	28	15			18	1,290	1,150	133	.6	0	
22	31	26	15			13	1,350	1,000	130	.5	0	
23	28	24	15			13	1,420	914	122	.4	0	
24	28	21	16			11	1,040	888	111	.4	0	
25	25	25	15			11	776	797	151	.4	0	
26	28	28	16			13	914	660	244	.4	0	
27	29	21	12			19	1,240	555	244	.3	0	
28	31	21	13			24	1,340	494	205	.4	0	
29	29	19	13			25	1,040	562	172	.4	0	
30	29	18	13			32	736	664	152	.4	0	
31	40	-	14			27	-	566	-	.3	0	

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	563.2	40	8.6	18.2	1,120
November.....	929	48	18	31.0	1,840
December.....	400	18	7	12.9	793
Calendar year 1936.....	32,084.2	1,180	.1	87.7	63,640
January.....	421	-	-	13.6	835
February.....	535	-	-	19.1	1,060
March.....	1,021	54	11	32.9	2,030
April.....	22,922	1,520	30	764	45,470
May.....	35,522	1,480	494	1,146	70,460
June.....	7,509	580	111	250	14,890
July.....	975.7	155	.3	31.5	1,940
August.....	2.3	0	0	.07	4.6
September.....	0	0	0	0	0
Water year 1936-37.....	70,800.2	1,520	0	194	140,400

\*Result of discharge measurement.

## Los Pinos River near Ortiz, Colo.

Location.- Water-stage recorder, lat. 36°58', long. 106°03', in sec. 34, T. 32 N., R. 6 E., 3 miles southwest of Ortiz.

Drainage area.- 167 square miles.

Records available.- October 1933 to September 1937 in reports of Geological Survey; January 1914 to November 1920 and October 1924 to September 1937 in reports of State engineer.

Extremes.- Maximum discharge during year, 2,770 second-feet May 9 (gage height, 5.30 feet), from rating curve extended above 1,400 second-feet; minimum daily discharge, 11 second-feet Sept. 23, 27, 28.  
1914-20, 1924-37: Maximum discharge, that of May 9, 1937; minimum daily discharge, 5 second-feet Aug. 11, Sept. 19, 1934.

Remarks.- Records excellent except those for periods of ice effect or of missing gage heights, which are fair. No records for Dec. 1 to Mar. 31. Diversions for irrigation above station.

Rating table, Apr. 5 to Sept. 30, 1937 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 12 to Sept. 25)

0.7	10	1.8	222	3.0	695
.8	19	2.0	284	3.5	987
1.0	44	2.2	354	4.0	1,340
1.2	76	2.4	430	4.5	1,800
1.4	118	2.6	510	5.0	2,380
1.6	166	2.8	600		

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	82	134				140	675	628	177	39	20
2	60	55					145	1,090	600	193	36	16
3	58	*40					150	1,410	586	171	32	15
4	55	*30					155	1,490	506	144	31	18
5	44	*50					59	1,720	454	125	40	20
6	49	*70					54	1,550	399	120	30	23
7	46	*70					155	1,390	376	114	26	35
8	52	*60					155	1,870	387	100	25	25
9	65	*42					155	1,830	372	90	23	19
10	51	*30					155	1,710	354	96	20	17
11	48	*38					1110	1,740	369	94	18	15
12	45	*48					1250	1,650	361	105	16	14
13	44	*55					1500	1,760	350	84	15	13
14	45	58					759	1,920	332	73	14	14
15	45	57					1,080	1,750	311	64	16	14
16	41	55					1,260	1,540	311	58	16	14
17	39	52					1,000	1,610	319	53	16	14
18	36	49					804	1,460	322	48	18	14
19	35	57					881	1,360	1300	44	21	14
20	78	49					956	1,190	1280	41	17	13
21	65	49					1,130	1,060	1280	41	16	13
22	54	42					1,280	968	1275	38	12	13
23	57	37					1,090	912	1275	34	13	11
24	46	52					716	804	268	35	12	14
25	58	52					656	716	255	43	12	13
26	54	45					930	632	255	39	19	12
27	57	44					1,220	613	240	43	29	11
28	54	40					1,080	609	202	39	25	11
29	55	42					695	706	180	52	19	13
30	70	38					572	690	171	76	29	44
31	99	-					-	641	-	38	25	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,665	99	35	53.7	3,300
November.....	1,491	82	30	49.7	2,960
December.....	-	-	-	-	-
Calendar year .....					
January.....	-	-	-	-	-
February.....	-	-	-	-	-
March.....	-	-	-	-	-
April.....	17,492	1,280	40	583	34,690
May.....	39,071	1,920	609	1,260	77,500
June.....	10,317	628	171	344	20,460
July.....	2,472	193	34	79.7	4,900
August.....	660	40	12	21.9	1,350
September.....	502	44	11	16.7	996
Water year .....					

\*Stage-discharge relation affected by ice; discharge computed on basis of three discharge measurements.

†Gage height missing; discharge computed on basis of records for San Antonio River at Ortiz and near Manassa.

‡Result of discharge measurement.

## Culebra Creek at San Luis, Colo.

Location.- Water-stage recorder and 12-foot Parshall flume, lat.  $37^{\circ}11'$ , long.  $105^{\circ}28'$ , in sec. 35, T. 3 N., R. 72 W. (Beaubien Grant Survey), 1 mile southeast of San Luis.

Drainage area.- 220 square miles.

Records available.- January 1910 to December 1911 and October 1933 to September 1937 in reports of Geological Survey; May 1909 to December 1910 and April 1927 to September 1937 in reports of State engineer; 1911-19 (unpublished) in files of office of State engineer.

Average discharge.- 20 years (1909-19, 1927-37), 65.2 second-feet.

Extremes.- Maximum discharge during year, 296 second-feet June 17 (gage height, 3.22 feet); minimum daily discharge, 12 second-feet Dec. 13.

1909-19, 1927-37: Maximum daily discharge, 470 second-feet June 26, 1915; minimum daily discharge, 5 second-feet Sept. 14-16, 1934.

Remarks.- Records good except those for period of ice effect, Jan. 1 to Feb. 21, which were estimated on basis of weather records and are fair. Diversions for irrigation above station. Flow regulated by Sanchez Reservoir (capacity, 103,100 acre-feet).

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	16	30			26	26	22	114	133	166	45
2	26	26	30			27	27	16	116	129	193	42
3	25	31	29			28	27	24	76	95	198	43
4	17	39	29			27	18	28	49	81	135	40
5	24	40	28			27	33	29	32	132	190	35
6	27	38	26			27	31	30	19	189	172	30
7	26	36	24			19	33	30	34	204	136	28
8	24	34	26			30	31	28	65	202	121	25
9	24	33	26			33	29	34	76	198	144	28
10	23	33	24		25	31	26	56	99	186	144	36
11	17	33	23			30	16	50	106	176	144	31
12	22	32	23			28	33	45	104	79	132	16
13	31	31	12			30	28	66	121	166	131	33
14	28	30	19			29	36	100	194	206	109	36
15	27	15	25			28	39	93	254	196	100	36
16	26	31	26			30	40	79	277	194	104	36
17	22	28	26			31	37	165	288	199	101	36
18	16	27	25			30	25	203	278	182	86	31
19	20	26	23			27	28	220	261	211	79	18
20	26	27	13			27	31	184	246	221	69	20
21	24	29	23		26	16	28	211	261	219	73	24
22	25	30	26		27	20	28	220	242	211	84	32
23	23	30	25		27	26	28	222	230	217	98	32
24	22	30	23		28	27	30	220	225	203	91	31
25	16	30	15		27	24	24	216	212	202	83	30
26	20	31	24		26	16	26	222	150	229	68	19
27	21	31	13		25	16	24	244	99	232	50	22
28	24	31	24		14	16	24	237	79	215	62	31
29	24	24	26		-	22	26	176	104	212	47	32
30	25	29	23		-	26	23	99	120	224	48	40
31	25	-	17		-	26	-	100	-	220	51	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						727	31	16	23.5	1,440		
November.....						901	40	15	30.0	1,790		
December.....						726	30	12	23.4	1,440		
Calendar year 1936.....						18,568.4	235	6.2	50.7	36,840		
January.....						775	-	-	25	1,540		
February.....						700	33	16	25.0	1,390		
March.....						800	40	16	28.6	1,580		
April.....						855	24	16	28.5	1,700		
May.....						3,671	444	16	118	7,280		
June.....						4,531	288	19	151	8,990		
July.....						5,765	232	79	186	11,430		
August.....						3,459	198	47	112	6,860		
September.....						938	45	16	31.3	1,860		
Water year 1936-37.....						23,848	288	12	65.3	47,310		

## Costilla Creek above reservoir, near Costilla, N. Mex.

Location.- Water-stage recorder and timber control, lat. 36°54'25", long. 105°15'00"  
in Sangre de Cristo Grant, 2½ miles by road above Costilla Dam and 17 miles south-  
east of Costilla, Taos County.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period, about 67 second-feet June 3 (gage height, 1.24 feet), from rating curve extended above 17 second-feet; no flow Aug. 9.

Remarks.- Records fair. Discharge for period of missing gage heights, May 1-6, and day of partial gage-height record, Aug. 11, computed on basis of partial gage-height record and record for Casias Creek near Costilla.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								24	24	21	1.6	3.7
2								23	30	19	.5	3.2
3								23	46	17	4.2	4.7
4								24	40	16	2.7	5.2
5								25	33	14	6.3	4.7
6												
7								26	28	12	5.8	4.2
8								26	26	14	1.4	4.2
9								26	24	16	.2	4.2
10								27	22	14	0	3.7
11								28	20	14	.2	3.7
12								27	20	14	4	3.7
13								31	21	13	3.7	3.2
14								33	20	11	4.2	3.2
15								37	20	10	4.2	2.7
16								45	19	9.2	5.2	2.7
17												
18								42	19	8.5	4.2	2.7
19								40	19	7.8	4.7	3.2
20								41	19	6.8	3.7	3.2
21								41	18	6.3	4.2	2.7
22								34	16	8.5	3.7	2.7
23												
24								31	18	9.2	4.2	3.2
25								28	19	7.5	3.2	3.2
26								30	18	5.2	2.7	3.2
27								31	17	3.7	2.7	3.2
28								30	20	7.8	2.7	2.7
29												
30								28	21	2.7	3.7	3.2
31								27	23	3.7	4.7	2.7
								26	19	11	4.7	2.7
								26	16	6.8	3.2	3.2
								26	31	4.7	3.7	6.3
								26	-	3.7	4.2	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....							937	45	23	30.2	1,880	
June.....							683	46	16	22.8	1,350	
July.....							317.9	21	2.7	10.3	631	
August.....							102.4	6.3	0	3.30	203	
September.....							105.1	6.3	2.7	3.50	208	
The period.....											4,250	

## 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 below outlet of Costilla Dam and 18 miles south-east of Costilla, Taos County.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period, 225 second-feet July 23 (gage height, 2.24 feet), from rating curve extended above 160 second-feet; minimum daily discharge, 0.8 second-feet Sept. 25.

Remarks.- Records good. No diversion above station. Flow controlled by Costilla Dam, which forms reservoir having a capacity of 20,750 acre-feet.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	2.6	50	69	65	59
2							-	2.6	71	108	133	53
3							-	2.6	98	114	133	17
4							-	2.6	98	129	133	41
5							-	2.6	86	108	132	56
6							-	2.6	82	106	97	56
7							-	2.6	82	113	83	51
8							-	2.6	83	114	97	47
9							3.3	2.6	82	114	125	40
10		*3.6					1.4	2.6	73	114	112	34
11							1.7	2.6	67	116	112	33
12							1.7	2.6	67	116	112	33
13							2.0	2.6	65	117	91	22
14							2.0	2.6	63	118	77	23
15							2.0	2.6	68	120	86	44
16							2.0	2.6	71	61	121	48
17							2.0	2.6	91	34	113	48
18							2.0	2.6	98	58	106	47
19							2.0	2.6	89	130	102	47
20							2.3	2.6	93	160	34	40
21							2.3	2.6	103	161	3.2	38
22							2.3	2.6	108	161	23	33
23							2.3	2.6	114	161	80	32
24							2.3	2.6	114	159	84	8.6
25							2.3	2.6	61	158	89	.8
26							2.3	2.6	29	157	88	8.6
27							2.3	2.6	48	155	39	17
28							2.6	8.4	68	152	17	20
29							2.6	19	67	148	58	20
30							2.6	27	66	71	88	7.4
31							-	44	-	56	72	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 9-30.....							48.3	3.3	1.4	2.20	96	
May.....							168.6	44	2.6	5.44	334	
June.....							2,355	114	29	76.5	4,670	
July.....							3,628	161	34	117	7,200	
August.....							2,685.2	133	3.2	86.6	5,350	
September.....							1,024.4	59	.8	34.1	2,030	
The period.....											19,660	

\*Discharge measurement.

## Costilla Creek near Costilla, N. Mex.

Location.- Water-stage recorder, lat.  $36^{\circ}58'$ , long.  $105^{\circ}32'$ , in Sangre de Cristo Grant, about half a mile above diversion dam and 2 miles south of Costilla, Taos County.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, about 892 second-feet Apr. 13 (gage height, 3.98 feet), from rating curve extended above 164 second-feet; minimum daily discharge during period of record, 12 second-feet Sept. 26.

Remarks.- Records good. Diversions for irrigation above station. No record for Oct. 10 to Apr. 9.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29						-	106	161	150	63	82
2	27						-	120	191	153	150	70
3	28						-	132	291	165	161	57
4	28						-	131	277	151	179	38
5	26						-	138	255	148	168	65
6												
7	28						-	146	232	142	144	70
8	25						-	146	212	146	113	65
9	26						-	163	199	148	109	60
10	-						35	181	191	144	159	54
11							196	177	150	134	47	
12	-					*15	67	196	163	150	131	43
13	-			*9.4			148	196	159	148	129	43
14	-						300	209	150	146	118	38
15	-						328	215	146	144	98	32
16	-						358	215	140	142	94	48
17	-											
18	-						370	218	142	118	140	58
19	-						292	202	148	73	138	58
20	-						195	207	157	68	134	57
21	-						202	202	146	134	134	56
22	-						168	186	150	159	95	53
23	-											
24	-						168	165	159	184	31	47
25	-						191	152	159	181	25	45
26	-						181	150	163	172	71	42
27	-						129	148	163	196	87	36
28	-						114	146	148	202	96	15
29	-											
30	-						118	127	103	196	98	12
31	-						136	120	109	196	82	19
							134	111	136	202	40	25
							120	129	125	196	37	28
							113	155	126	141	96	40
							-	148	-	67	98	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October 1-9.....							243	29	25	27.0	482	
November.....							-	-	-	-	-	
December.....							-	-	-	-	-	
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 10-30.....							3,887	370	35	184	7,670	
May.....							5,056	218	106	165	10,030	
June.....							5,078	291	103	169	10,070	
July.....							4,692	202	67	151	9,310	
August.....							3,352	179	25	108	6,650	
September.....							1,401	82	12	46.7	2,780	
Water year .....												

\*Discharge measurement.

## Casias Creek near Costilla, N. Mex.

Location.— Water-stage recorder and timber control, lat. 36°54'05", long. 105°15'30", in Sangre de Cristo Grant, 300 feet below road crossing, 2.5 miles by road above Costilla Dam and 17 miles southeast of Costilla, Taos County.

Records available.— April to September 1937.

Extremes.— Maximum discharge during period, about 108 second-feet June 3 (gage height, 1.68 feet), from rating curve extended above 40 second-feet; minimum daily discharge, 4.0 second-feet Aug. 26 and Sept. 28.

Remarks.— Records good except those for June 3-19, which were computed on basis of records for Costilla Creek above reservoir and are poor. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	17	50	29	6.0	6.7
2							-	19	60	26	5.3	6.3
3							-	19	70	24	6.7	8.8
4							-	20	60	22	6.7	8.4
5							-	22	60	22	6.3	7.0
6							-	25	50	21	6.3	7.0
7							-	27	50	22	18	7.0
8		*7.1					*3.7	32	50	21	6.3	6.0
9							-	34	50	19	6.0	5.7
10							-	36	50	21	5.7	5.7
11							-	37	40	19	5.3	6.0
12							-	39	40	17	5.0	5.3
13							-	43	40	16	5.3	5.3
14							-	50	40	15	5.3	5.0
15							-	56	40	14	5.3	5.0
16							-	56	40	13	6.0	5.0
17							-	59	40	13	6.0	5.0
18							-	61	40	12	5.3	4.7
19							-	62	40	12	5.7	5.0
20							-	61	38	12	5.0	4.7
21							-	60	35	12	6.7	5.0
22							-	58	34	9.6	6.0	5.0
23							-	61	34	8.8	4.7	5.3
24							-	59	34	10	4.4	4.7
25							-	58	36	12	4.4	4.4
26							-	51	41	10	4.0	4.7
27							-	48	44	7.0	4.2	4.2
28							-	44	36	15	5.0	4.0
29							-	46	30	10	6.0	4.7
30							18	50	54	7.7	7.3	16
31							-	46	-	6.7	9.6	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 30.....						-	-	-	16.0	36		
May.....						1,356	62	17	43.7	2,690		
June.....						1,306	70	30	43.5	2,590		
July.....						478.8	29	6.7	15.4	950		
August.....						189.8	18	4.0	6.12	376		
September.....						177.6	16	4.0	5.92	352		
The period.....										6,990		

\*Discharge measurement.

## Santistevan Creek near Costilla, N. Mex.

Location.- Water-stage recorder and wooden control, lat.  $36^{\circ}53'05''$ , long.  $105^{\circ}16'50''$ , in Sangre de Cristo Grant, 200 feet above road crossing, 0.9 mile by road above Costilla Dam, and 16 miles southeast of Costilla, Taos County.

Records available.- April to September 1937.

Extremes.- Maximum daily discharge during period 11 second-feet (estimated), May 24; minimum, 1.0 second-foot Sept. 16-30.

Remarks.- Records fair except those estimated for May 4-6, 24-27, July 20, 21, Sept. 4-6, 29, 30, which were estimated and are poor. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	2.6	6.0	4.2	1.9	1.2
2							-	2.4	6.2	4.2	1.6	1.1
3							-	2.4	6.2	4.2	1.5	1.2
4							-	2.4	6.4	4.2	1.6	1.2
5							-	2.5	6.4	4.0	1.7	1.2
6							-	2.6	6.2	4.0	1.8	1.2
7							-	2.6	6.2	3.9	1.8	1.2
8		*1.3					*0.9	2.6	5.7	3.5	1.7	1.2
9							-	2.6	5.5	3.3	1.6	1.2
10							-	2.7	5.3	3.5	1.6	1.2
11							-	3.0	5.3	3.5	1.5	1.2
12							-	3.5	5.3	3.3	1.5	1.1
13							-	4.6	5.0	3.0	1.5	1.1
14							-	5.3	5.0	2.7	1.5	1.1
15							-	6.2	4.8	2.6	1.5	1.1
16							-	6.2	4.8	2.4	1.5	1.0
17							-	6.4	4.6	2.6	1.4	1.0
18							-	6.4	4.6	2.6	1.4	1.0
19							-	6.7	4.6	2.4	1.3	1.0
20							-	6.7	4.4	2.3	1.3	1.0
21							-	6.7	4.4	2	1.4	1.0
22							-	7.0	4.2	2	1.2	1.0
23							-	7.2	4.0	1.9	1.2	1.0
24							-	11	4.0	2.1	1.2	1.0
25							-	9	4.4	2.2	1.2	1.0
26							-	8	4.8	2.1	1.2	1.0
27							-	7	4.8	2.1	1.2	1.0
28							-	6.7	4.6	2.1	1.2	1.0
29							-	6.7	4.6	1.7	1.1	1.0
30							-	2.4	6.4	1.8	1.2	1.0
31							-	6.4	-	1.8	1.3	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-		
February.....							-	-	-	-		
March.....							-	-	-	-		
April 30.....							-	-	-	2.40	4.8	
May.....							162.5	11	2.4	5.24	322	
June.....							152.9	6.4	4.0	5.10	303	
July.....							88.2	4.2	1.7	2.85	175	
August.....							44.8	1.9	1.1	1.45	89	
September.....							32.5	1.2	1.0	1.08	64	
The period.....											957.8	

\*Discharge measurement.



## Latir Creek near Cerro, N. Mex.

Location.- Water-stage recorder and Parshall flume, lat.  $36^{\circ}49'45''$ , long.  $105^{\circ}32'45''$ , in SW $\frac{1}{4}$  sec. 15, T. 30 N., R. 13 E., at mouth of canyon, 100 feet above heading of Cerro Community Ditch and 6 miles northeast of Cerro.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period of record not determined; minimum daily discharge, 0.6 second-foot May 9.

Remarks.- Records good except those for period of missing gage heights, May 25 to June 12, which were estimated and are poor. No diversion for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								2.0		24	6.6	3.7
2							2.6	2.7		23	6.3	3.7
3							2.6	2.0		22	6.0	3.7
4							2.6	3.4		20	6.0	3.6
5							2.3	4.1		19	5.8	3.5
6												
7							2.4	2.9		17	5.6	4.3
8							2.1	3.9		16	4.3	4.6
9							2.3	1.6		16	5.4	4.1
10							2.4	.6		14	5.2	3.9
							2.9	1.3		13	5.2	3.6
11							4.8	1.0		13	5.0	3.4
12							6.6	1.5		12	5.0	3.2
13							9.2	2.1	36	11	5.0	3.4
14							11	3.2	34	11	4.8	3.2
15							13	4.1	34	10	4.6	3.0
16												
17							11	4.6	33	9.2	5.0	3.2
18							5.4	5.2	34	9.2	4.8	3.0
19							3.4	8.0	33	8.6	5.0	2.9
20							3.7	8.6	32	8.0	5.2	2.9
							3.2	7.8	31	7.6	4.8	3.0
21							4.8	7.6	31	7.6	4.6	3.0
22							3.5	7.6	32	7.0	4.1	3.0
23							1.4	7.8	30	6.8	3.9	3.2
24							.8	7.0	28	6.8	3.7	3.2
25							.8	-	29	7.3	3.9	3.0
26												
27							1.8		10	31	7.8	3.0
28							2.6		33	7.0	3.9	2.9
29							1.4		28	7.3	3.5	2.9
30							1.3		28	6.8	3.9	3.4
31							1.4		25	28	6.6	7.3
							-		-	-	6.3	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 2-30.....							113.3	13	0.8	3.91	225	
May.....							215.8	-	.6	6.96	428	
June.....							1,105	-	28	56.8	2,190	
July.....							361.1	24	6.3	11.6	716	
August.....							150.8	6.6	3.5	4.86	299	
September.....							104.6	7.3	2.9	3.49	207	
The period.....											4,060	

Rio Colorado near Questa, N. Mex.  
(Also known as Red River)

Location.- Water-stage recorder, lat.  $36^{\circ}42'$ , long.  $105^{\circ}33'$ , in sec. 33, T. 29 N., R. 13 E.,  $1\frac{1}{2}$  miles above mouth of Cabresto Creek and 2 miles east of Questa.

Drainage area.- 112 square miles.

Records available.- October 1912 to August 1915 and October 1930 to September 1937 in reports of Geological Survey; October 1912 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 742 second-feet May 16; maximum gage height, 3.40 feet May 15; minimum daily discharge, 14 second-feet Dec. 6, 7.  
1930-37: Maximum discharge, 870 second-feet June 14, 1935; minimum daily discharge, 6.3 second-feet Nov. 24, 25, 1931.

Remarks.- Records good for October to April; others fair. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	43	25	23	19	24	30	144	335	179	59	47
2	38	41	19	20	20	27	32	147	350	172	57	41
3	38	25	18	18	22	27	35	165	475	159	57	37
4	38	32	20	20	22	26	36	165	510	147	56	36
5	43	33	22	23	22	26	35	182	454	141	53	37
6	44	34	14	23	21	28	34	193	392	135	50	41
7	44	33	14	22	24	28	34	193	370	132	47	48
8	47	32	16	21	19	29	33	216	350	127	47	39
9	48	29	16	19	22	29	35	228	340	122	44	37
10	46	30	17	20	26	30	38	244	325	119	43	36
11	35	29	16	21	27	29	48	248	315	127	42	35
12	34	29	17	22	27	29	67	272	272	114	41	35
13	39	29	16	26	26	30	107	305	256	104	39	33
14	48	28	19	23	26	30	138	320	248	93	38	31
15	37	28	22	19	25	29	193	582	244	66	37	30
16	32	26	23	19	23	30	193	670	244	80	39	32
17	32	26	24	19	22	30	179	598	248	76	44	30
18	32	26	22	18	22	30	156	558	256	76	50	30
19	32	26	20	18	22	28	182	550	248	75	51	27
20	37	26	22	19	22	27	159	558	248	75	47	27
21	36	26	24	19	28	30	172	542	236	76	44	25
22	36	26	22	19	26	30	200	503	232	71	41	23
23	35	25	20	19	25	30	200	410	224	65	37	25
24	34	24	24	19	25	27	176	370	224	67	35	23
25	36	24	24	20	26	30	144	350	216	67	37	23
26	32	25	25	20	25	29	156	300	220	71	47	22
27	29	25	22	22	24	28	186	295	260	75	48	22
28	29	24	22	23	24	28	190	272	232	75	38	23
29	28	25	25	22	-	26	168	295	240	69	39	24
30	32	22	24	21	-	26	159	330	186	62	51	46
31	47	-	16	22	-	27	-	330	-	59	67	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,156	48	28	37.3	2,290		
November.....						851	43	22	28.4	1,690		
December.....						630	25	14	20.4	1,250		
Calendar year 1936.....						16,849	179	14	46.0	33,416		
January.....						639	26	18	20.6	1,270		
February.....						662	28	19	23.6	1,310		
March.....						877	30	24	28.3	1,740		
April.....						3,495	200	30	116	6,930		
May.....						10,525	670	144	340	20,880		
June.....						8,750	510	186	292	17,360		
July.....						3,096	179	59	99.9	6,140		
August.....						1,425	67	35	46.0	2,830		
September.....						965	48	22	32.2	1,910		
Water year 1936-37.....						33,071	670	14	90.6	65,600		

## Rio Hondo near Valdez, N. Mex.

Location.— Water-stage recorder, lat. 36°32'20", long. 105°33'30", in S½ sec. 28, T. 27 N., R. 13 E., 200 feet above old toll gate, 1½ miles east of Valdez, and above all diversions.

Records available.— August 1934 to September 1937. October 1930 to September 1934, at site half a mile downstream, below two diversion ditches.

Extremes.— Maximum discharge during year not determined; maximum gage height, 5.59 feet Dec. 15 (during ice jam); minimum daily discharge not determined.

1934-37: Maximum discharge not determined; maximum gage height, that of Dec. 15, 1936; minimum daily discharge, 3.0 second-feet (estimated) Jan. 21, 1935.

Remarks.— Records fair except those for period of ice effect, Dec. 6 to Mar. 16 (computed on basis of two discharge measurements, weather records, and records for Rio Colorado near Questa), and those for periods of missing gage heights, May 14-21, July 29 to Aug. 4, Sept. 20-30 (computed on basis of records for Rio Hondo at Arroyo Hondo and Rio Colorado near Questa), which are poor. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
1	21	26	16	12	13	16	29	118	268	139	43	26			
2	20	20	16				38	132	272	142	45	23			
3	20	18	15				42	139	255	135	42	21			
4	21	20	14				42	139	245	131	42	22			
5	20	21	16	14	12	18	40	150	213	126	42	21			
6	22	21	13				14	12	19	39	153	195	121	42	27
7	22	21								37	159	184	116	39	28
8	23	21								37	166	187	109	39	23
9	21	20	14	13	13	19	41	189		210	99	37	22		
10	21	20					44	206		208	93	36	22		
11	20	20					59	219		213	95	35	23		
12	19	18		13	13		19	80		222	215	84	33	22	
13	18	18	99					215	217	80	32	22			
14	18	18	106					240	208	70	31	21			
15	18	18	124					290	199	70	30	21			
16	18	18	16	12	14	21		137	330	199	66	30	21		
17	18	18						134	350	195	62	28	21		
18	17	18						116	340	202	59	28	21		
19	17	18					118	330	193	55	28	21			
20	23	18	17	12	15	22	116	320	195	55	26	20			
21	20	18					22	199	310	164	52	25	20		
22	18	16					24	146	292	164	47	25	20		
23	18	17					28	142	265	150	45	24	20		
24	18	14	14	13	-	26	29	120	255	146	42	22			
25	18	15					26	109	226	144	49	23	20		
26	18	17					26	118	242	150	43	24	20		
27	17	16					26	141	242	146	43	23	20		
28	17	15	14	13	-	26	25	139	228	150	42	22			
29	17	16					26	131	235	144	43	23			
30	23	17					26	120	260	139	43	29			
31	28	-					26	-	270	-	44	33	-		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet					
October.....						610	28	17	19.7	1,210					
November.....						551	26	14	18.4	1,090					
December.....						461	-	-	14.9	914					
Calendar year 1936.....						11,930.6	135	9	32.6	23,660					
January.....						393	-	-	12.7	780					
February.....						380	-	-	13.6	754					
March.....						663	29	-	21.1	1,300					
April.....						2,773	146	29	92.4	5,600					
May.....						7,232	350	118	233	14,340					
June.....						5,770	272	139	192	11,440					
July.....						2,400	142	42	77.4	4,760					
August.....						979	43	22	31.6	1,940					
September.....						653	28	20	21.8	1,300					
Water year 1936-37.....						22,855	350	-	62.6	45,330					

## Rio Hondo at Arroyo Hondo, N. Mex.

Location.— Water-stage recorder, lat. 36°31'50", long. 105°41'45", in T.27 N., R. 12 E., in Arroyo Hondo Grant, half a mile above confluence with Rio Grande and 1.5 miles west of town of Arroyo Hondo.

Records available.— April 1910 to August 1915 (at site 600 feet above confluence with Rio Grande, published as Rio Hondo near Arroyo Hondo) and January 1932 to September 1937 (records equivalent), in reports of Geological Survey; April 1910 to December 1928 in reports of State engineer.

Extremes.— Maximum discharge during water year 1934-35, about 2,510 second-feet Aug. 23 (gage height, 5.45 feet); minimum daily discharge, 5.9 second-feet May 8.  
Maximum discharge during water year 1935-36, about 1,700 second-feet Aug. 20 (gage height, 4.7 feet); minimum daily discharge, 5.9 second-feet July 5, 6.  
Maximum discharge during water year 1936-37, about 1,230 second-feet June 26 (gage height, 4.21 feet); minimum daily discharge, 6.9 second-feet Aug. 21.  
1932-37: Maximum discharge, about 2,510 second-feet Aug. 23, 1935, (gage height, 5.45 feet); minimum daily discharge, 4 second-feet July 13-16, 1934.

Remarks.— Records fair except those for periods of ice effect, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, 1934-37

1934-35

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	8.8	10	14	18	14	22	9.3	112	81	10	22
2	16	8.4	9	13	18	16	22	8.9	79	70	14	21
3	16	8.4	9	15	18	16	27	9.3	83	57	13	22
4	16	9.6	9	14	18	14	23	8.6	90	46	19	24
5	16	10	10	16	18	14	18	8.6	91	46	24	25
6	14	8.0	13	18	17	14	16	7.2	119	36	18	22
7	12	8.0	14	18	17	14	10	6.2	177	33	18	23
8	11	8.8	15	17	17	14	11	5.9	163	34	15	24
9	10	9.2	16	16	16	12	11	17	166	44	12	21
10	11	9.6	16	17	15	12	8.0	19	166	26	12	20
11	11	11	18	18	14	12	7.1	25	146	21	12	16
12	12	12	18	18	14	11	6.5	32	144	19	12	16
13	11	13	18	17	14	8.5	6.2	34	148	18	12	15
14	11	12	19	18	14	8.6	6.4	33	182	22	12	14
15	10	11	20	22	13	9.6	16	16	191	20	9.6	14
16	11	11	20	19	11	13	19	23	245	16	11	14
17	11	12	19	14	14	16	25	32	218	14	11	15
18	11	11	17	14	16	14	28	49	188	12	13	15
19	11	12	15	14	17	16	27	55	200	11	11	15
20	11	12	18	12	17	16	29	74	188	11	12	13
21	11	12	21	10	17	15	24	52	185	27	11	12
22	11	13	22	11	18	16	21	61	203	25	11	11
23	11	12	21	12	18	16	16	114	269	16	118	11
24	10	11	20	14	18	16	14	114	188	11	19	13
25	10	12	19	14	18	15	15	139	130	11	16	14
26	10	12	19	15	12	16	11	148	125	12	16	17
27	9.2	12	19	16	14	16	9.6	139	112	13	24	28
28	9.2	11	21	17	16	16	10	130	97	11	58	22
29	10	10	20	19	-	18	9.6	119	90	10	23	20
30	12	10	19	19	-	22	10	121	91	9.6	28	19
31	11	-	16	18	-	26	-	169	-	11	23	-

Discharge, in second-feet, of Rio Hondo at Arroyo Hondo, N. Mex., 1934-37--Continued

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	14	22	17	18	17	17	44	70	6.9	11	13
2	19	14	22	16	17	18	16	41	64	6.9	11	12
3	19	14	22	18	16	18	14	48	54	6.2	20	12
4	19	13	23	18	14	19	10	57	48	6.2	52	11
5	18	12	24	19	13	19	9.3	66	40	5.9	56	9.3
6												
7	54	14	24	19	15	18	9.6	67	32	5.9	46	9.6
8	34	14	23	19	13	16	7.9	70	28	6.2	41	9.3
9	29	14	22	19	16	15	8.9	91	22	6.9	39	9.3
10	27	15	20	19	15	17	11	84	18	6.2	31	9.3
	25	14	19	19	14	18	13	70	16	6.5	26	8.2
11	25	14	21	18	15	18	20	64	16	11	27	8.2
12	20	13	22	18	15	17	36	81	14	19	26	8.9
13	19	13	22	19	14	18	47	90	11	7.2	24	8.9
14	18	13	20	19	15	18	58	102	9.3	7.6	24	9.3
15	18	13	16	19	14	19	60	123	8.2	8.2	20	9.3
16	18	14	16	18	15	18	57	132	8.9	8.2	17	9.3
17	18	14	16	18	15	19	58	141	8.6	7.2	15	8.9
18	18	14	17	18	15	18	58	132	7.9	6.2	16	9.3
19	18	14	18	18	14	18	53	141	6.5	6.5	14	11
20	24	13	20	18	14	18	46	123	6.5	7.2	89	9.6
21	20	14	23	19	14	18	40	110	6.5	7.9	35	10
22	19	14	20	19	15	20	48	93	6.2	7.2	26	11
23	18	14	20	20	16	19	70	91	6.5	6.9	20	11
24	18	14	20	20	16	20	66	86	6.6	6.9	19	11
25	17	16	20	20	15	21	67	86	9.6	6.9	18	11
26	16	19	20	19	14	20	61	84	6.9	6.9	18	15
27	16	15	20	19	14	19	61	83	6.2	6.9	15	15
28	16	14	20	19	14	19	57	74	6.2	7.2	14	15
29	16	21	19	18	16	19	49	70	6.2	7.6	14	16
30	15	22	19	16	-	18	46	79	6.5	7.6	16	16
31	15	-	18	17	-	17	-	74	-	8.6	14	-

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	24	26			26	13	81	425	144	11	24
2	16	21	26			29	15	93	425	112	10	20
3	15	20	*26			27	17	99	430	99	9.6	17
4	15	23	26			24	20	97	368	95	10	16
5	15	20	27		*20	22	16	99	284	88	9.6	22
6	16	20	*23			25	13	104	215	79	10	26
7	15	23	*23			31	11	110	156	73	10	37
8	15	27	25			26	8.9	121	156	70	8.9	32
9	14	26	27			26	10	180	148	67	8.2	28
10	14	26	26			29	12	320	134	60	7.9	25
11	14	27			*25	30	16	328	134	60	7.6	25
12	14	27				27	26	280	141	54	8.2	25
13	14	27				24	46	224	136	45	8.2	24
14	14	26				19	73	270	127	40	7.6	23
15	14	26				12	123	400	125	32	7.2	23
16	14	27				20	236	435	121	23	7.2	22
17	14	27				22	146	425	116	18	7.6	20
18	14	26				28	16	460	114	13	9.3	20
19	15	26				26	11	90	430	114	11	18
20	16	26				26	8.9	79	405	116	7.9	14
21	16	25	*25			26	9.6	86	415	112	6.9	13
22	15	25				27	11	112	352	112	9.3	12
23	16	25				28	11	121	368	112	9.3	13
24	16	24				30	12	93	348	114	9.3	14
25	18	25				30	12	83	312	121	9.6	14
26	16	24				25	12	88	227	181	12	17
27	16	24				25	12	106	200	236	20	18
28	16	25				24	12	112	182	270	14	18
29	16	25				-	12	95	230	209	15	20
30	17	26				-	12	79	495	182	13	30
31	21	-				-	12	-	490	-	12	-

\*Stage-discharge relation affected by ice; discharge computed on basis of two discharge measurements, gage heights, weather records, and records for Rio Colorado near Questa.

Discharge, in second-feet, of Rio Hondo at Arroyo Hondo, N. Mex., 1934-37--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1934 .....	362.4	16	9.2	11.7	719
November.....	320.8	13	8.0	10.7	636
December.....	520	22	9	16.8	1,050
Calendar year 1934 .....	4,956.2	390	4	13.6	9,830
January 1935 .....	491	22	10	15.8	974
February.....	447	18	11	16.0	887
March.....	454.2	26	8.8	14.7	901
April.....	482.4	29	6.2	16.1	957
May.....	1,777.0	169	5.9	57.5	3,520
June.....	4,566	259	79	152	9,060
July.....	792.6	61	8.6	26.6	1,570
August.....	617.6	118	9.6	19.9	1,220
September.....	538.0	28	11	17.9	1,070
Water year 1934-35 .....	11,369.0	259	5.9	31.1	22,540
October 1935 .....	645	54	15	20.8	1,280
November.....	436	22	12	14.6	865
December.....	628	24	16	20.3	1,250
Calendar year 1935 .....	11,874.8	259	5.9	32.5	23,550
January 1936 .....	572	20	16	18.5	1,130
February.....	436	18	13	15.0	865
March.....	566	21	15	18.3	1,120
April.....	1,174.7	67	7.9	39.2	2,330
May.....	2,697	141	41	87.0	5,350
June.....	558.3	70	6.2	15.6	1,110
July.....	232.7	19	5.9	7.51	462
August.....	814	89	11	26.3	1,610
September.....	326.7	16	8.2	10.9	648
Water year 1935-36 .....	9,086.4	141	5.9	24.8	18,000
October 1936 .....	477	21	14	15.4	946
November.....	743	27	20	24.8	1,470
December.....	780	-	-	25.2	1,550
Calendar year 1936 .....	9,377.4	141	5.9	25.6	18,590
January 1937 .....	620	-	-	*20	1,230
February.....	681	-	-	24.3	1,360
March.....	582.5	31	8.9	18.8	1,160
April.....	2,049.9	256	8.9	68.5	4,070
May.....	8,590	495	81	277	17,020
June.....	5,634	430	112	188	11,170
July.....	1,329.5	144	9.3	42.9	2,640
August.....	347.5	35	6.9	11.2	689
September.....	630	37	12	21.0	1,250
Water year 1936-37 .....	22,454.4	495	6.9	61.6	44,540

\*Stage-discharge relation affected by ice; discharge computed on basis of two discharge measurements, gage heights, weather records, and records for Rio Colorado near Questa.

## Rio Pueblo de Taos at Taos, N. Mex.

Location.- Water-stage recorder, lat. 36°25', long. 105°34', in NE¼ sec. 8, T. 25 N., R. 13 E., 50 feet below highway bridge, half a mile above confluence with Rio Lucero, and three-quarters of a mile northwest of Taos.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, 230 second-feet May 16 (gage height, 2.35 feet); minimum daily discharge, 0.6 second-foot Sept. 24.  
1936-37: Maximum discharge, that of May 16, 1937; minimum daily discharge, 0.5 second-foot June 28, 1936.

Remarks.- Records good except those for period of ice effect, Jan. 22 to Feb. 17, (which were computed on basis of weather records and one discharge measurement and are poor, and those for period of missing gage heights, June 18-30, which were computed on basis of range of stage and records for Rio Lucero near Arroyo Seco and below diversions near Arroyo Seco and are fair. Diversions for irrigation above and below station. Records do not include discharge of North Channel of Rio Pueblo de Taos, which branches off from Rio Pueblo de Taos about 1 mile above this station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	8.6	6.4	3.5	4.5	4.8	14	81	133	39	2.1	4.4
2	1.5	8.2	6.1	3.7	4.5	5.1	23	81	128	38	2.1	3.5
3	1.4	8.1	3.5	2.5	4.5	5.8	28	98	143	36	2.1	3.0
4	1.4	5.4	4.2	3.2	4.5	6.1	28	95	143	33	2.1	2.6
5	1.3	8.2	5.8	3.4	6	5.8	23	95	128	32	2.0	2.1
6	1.5	8.6	2.8	3.5	7	6.1	21	108	115	31	1.7	2.1
7	1.4	9.4	2.6	3.9	10	5.8	18	108	103	31	2.0	2.3
8	1.3	9.0	3.5	4.5	8	6.4	19	130	95	29	2.1	2.3
9	1.3	7.4	3.7	4.2	6	7.0	23	155	86	27	2.1	2.1
10	1.2	5.6	3.7	5.4	6	7.8	25	161	80	26	2.1	2.0
11	1.2	1.8	3.5	6.4	6	10						
12	1.2	1.7	3.4	6.7	6	12	40	189	74	26	2.1	2.1
13	1.1	3.1	3.5	5.4	6	11	62	185	74	21	2.1	1.8
14	1.2	7.8	3.5	3.7	6	11	81	191	76	16	2.1	1.6
15	1.5	8.2	3.5	3.7	5.5	9.8	100	189	71	15	2.1	1.4
							114	210	67	15	2.1	1.3
16	1.5	8.2	4.2	3.7	5.5	9.4	151	220	64	12	1.7	1.2
17	1.4	8.2	4.2	3.7	5.5	9.0	143	208	57	12	1.6	1.1
18	1.2	8.6	3.9	3.5	5.4	9.0	128	196	54	13	1.6	1.0
19	1.2	7.8	3.5	3.2	5.4	8.2	130	183	51	13	1.6	1.1
20	1.4	7.8	3.9	3.0	5.4	7.8	128	172	49	8.8	1.7	.9
21	1.8	8.2	3.9	2.6	4.8	8.6	126	159	47	4.7	1.6	1.1
22	2.1	7.0	3.9	2	5.1	9.4	147	143	46	3.5	1.4	1.0
23	2.3	7.4	3.9	2	4.8	15	153	135	45	3.0	1.4	1.0
24	2.3	4.8	4.2	2	4.8	13	119	131	45	2.8	1.4	.6
25	3.4	5.4	4.2	3	4.8	15	97	119	45	2.8	1.4	.8
26	4.5	5.1	3.9	3.5	5.1	13		105	48	2.8	1.3	.8
27	4.2	5.4	3.7	3.5	5.4	12	112	92	50	2.5	1.3	.7
28	3.7	5.1	3.2	3.5	5.1	11	123	87	49	2.5	1.4	.8
29	3.7	5.8	3.7	4	-	11	115	92	45	2.3	1.4	.7
30	3.5	5.4	3.2	4	-	11	97	145	42	2.3	1.8	1.1
31	8.2	-	1.7	4.5	-	11	-	141	-	2.5	5.7	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						66.4	8.2	1.1	2.14	132		
November.....						199.3	9.4	1.7	6.64	395		
December.....						118.9	6.4	1.7	3.84	236		
Calendar year .....												
January.....						115.4	6.7	2	3.72	229		
February.....						157.6	10	4.5	5.63	313		
March.....						237.9	15	4.8	9.29	671		
April.....						2,488	153	14	82.9	4,930		
May.....						4,404	220	81	142	8,740		
June.....						2,252	143	42	75.1	4,470		
July.....						505.5	39	2.3	16.3	1,000		
August.....						59.4	5.7	1.3	1.92	118		
September.....						48.5	4.4	.6	1.62	96		
Water year 1936-37.....						10,702.9	220	.6	29.3	21,230		

## Rio Taos at Los Cordovas, N. Mex.

Location.- Water-stage recorder, lat.  $36^{\circ}23'$ , long.  $105^{\circ}39'$ , in  $\frac{1}{4}$  sec. 23, T. 25 N., R. 12 E., in Martinez Grant, about 50 feet below mouths of Rio Ranchos de Taos and Arroyo Seco, half a mile northeast of Los Cordovas, and 4 miles west of Taos.

Drainage area.- 359 square miles.

Records available.- April 1910 to August 1915 and October 1930 to September 1937 in reports of Geological Survey; April 1910 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 594 second-feet June 3 (gage height, 4.25 feet); minimum daily discharge, 11 second-feet July 24.  
1930-37: Maximum discharge, 725 second-feet Sept. 24, 1931 (gage height, 4.65 feet former datum); minimum daily discharge, 1.4 second-feet Aug. 7, 10, 1934.

Remarks.- Records good except those for periods of ice effect, which are poor. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	31	29	25	*30	42	56	196	505	232	26	37
2	20	38	30	*23	*30	46	76	206	520	225	26	29
3	19	30	25	*20	*35	46	90	241	564	198	25	24
4	19	27	26	21	*35	43	91	236	520	165	20	20
5	19	33	33	*19	*40	42	82	234	462	144	20	19
6	24	33	26	*20	*45	45	79	273	406	133	18	20
7	23	33	25	*22	*40	52	90	262	346	129	18	23
8	22	32	27	*22	*40	57	79	316	302	129	16	20
9	20	30	27	*26	*35	54	102	380	263	112	17	20
10	19	28	26	*24	*35	59	117	420	223	105	16	20
11	18	23	24	*23	*40	59	157	448	192	117	15	18
12	18	22	24	*24	*45	56	227	448	161	101	28	17
13	16	23	24	*26	*45	68	309	448	175	96	24	16
14	16	28	26	25	*45	75	380	462	153	80	18	16
15	18	29	26	*23	*50	62	406	505	131	61	18	14
16	19	30	30	*25	50	57	476	534	116	42	18	14
17	20	29	32	*22	48	53	462	534	99	33	18	14
18	20	28	28	*23	43	52	406	534	91	29	18	14
19	20	28	26	*22	39	49	393	520	65	22	22	14
20	28	28	27	*21	32	41	357	505	80	15	20	14
21	29	28	29	*25	*42	47	334	462	73	14	17	14
22	26	26	29	*23	*37	49	393	406	68	13	16	14
23	25	26	27	*25	41	56	420	393	68	12	16	17
24	22	25	31	*26	48	49	331	393	66	11	16	15
25	33	25	31	*27	50	54	266	367	86	12	16	15
26	26	25	32	*29	44	58	243	314	175	12	16	15
27	24	26	29	*32	41	56	266	273	362	15	15	15
28	22	26	26	*30	41	60	309	268	344	30	16	15
29	22	26	26	*30	41	49	262	344	294	35	19	16
30	24	26	26	*35	*32	52	238	505	259	27	48	32
31	30	-	*23	*30	-	52	-	520	-	27	65	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						681	33	16	22.0	1,350		
November.....						842	38	22	26.1	1,670		
December.....						850	33	23	27.4	1,690		
Calendar year 1936.....						14,421.5	275	3.0	39.4	28,610		
January.....						765	32	19	24.7	1,520		
February.....						1,146	50	30	40.9	2,270		
March.....						1,638	75	41	52.8	3,260		
April.....						7,509	476	56	250	14,890		
May.....						11,967	534	196	366	23,740		
June.....						7,209	564	66	240	14,300		
July.....						2,366	232	11	76.3	4,690		
August.....						662	65	15	21.4	1,310		
September.....						550	37	14	18.3	1,090		
Water year 1936-37.....						36,185	564	11	99.1	71,770		

\*Stage-discharge relation affected by ice; discharge computed on basis of two discharge measurements, gage heights, weather records, and records for Rio Colorado near Questa.



## North Channel of Rio Pueblo de Taos at Taos, N. Mex.

Location.- Staff gage, lat. 36°25', long. 105°34', in SE $\frac{1}{4}$  sec. 5, T. 25 N., R. 13 E., at highway bridge, 0.1 mile above confluence with Rio Lucero, 1 mile below division from Rio Pueblo de Taos, and 1 mile northwest of Taos.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge observed during year, 35 second-feet May 11 (gage height, 1.45 feet); minimum daily discharge, 0.2 second-foot July 23 and Aug. 18.

1936-37: Maximum discharge, that of May 11, 1937; minimum daily discharge, 0.2 second-foot at times.

Remarks.- Records good except those for periods of ice effect or missing gage heights and those for Apr. 11-22, all of which are poor. Discharge includes flow from Rio Pueblo de Taos plus seepage inflow less small irrigation diversions.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	*1.5	1.4	1.0	1.2	1.1	2.1	10	24	5.0	1.3	3.1
2	.4	*1.4	.9	.9	1.2	1.3	2.9	9.8	23	4.1	1.4	3.1
3	.4	*1.3	.9	.6	1.2	1.6	3.3	13	27	3.7	1.2	2.7
4	.4	*1.2	1.4	.6	1.2	1.4	3.7	12	26	3.0	1.3	.5
5	.4	1.4	1.3	.7	1.4	1.3	3.6	12	22	3.0	.6	.3
6	.4	*1.5	1.3	.8	1.5	1.3	3.3	17	19	2.7	.4	.4
7	.4	*1.5	1.3	.9	6.1	1.4	3.4	18	14	2.5	.3	.3
8	.4	1.0	1.4	.9	1.5	1.4	3.3	23	13	1.6	.4	.4
9	.4	1.0	1.3	1.0	1.2	1.6	3.6	26	11	1.9	.6	.4
10	.4	1.0	1.1	†1.0	1.2	2.0	3.7	31	9.8	2.0	.6	.4
11												
12	.4	1.0	.9	†.9	1.5	2.6	5.7	34	8.4	2.2	.4	.3
13	.5	.9	1.1	.9	1.8	3.4	7.0	32	8.1	1.5	.4	.4
14	.9	1.5	1.3	.9	2.3	2.6	15	28	5.9	.6	.4	.4
15	.8	1.6	1.5	1.0	1.6	2.9	17	31	5.2	.6	1.1	.6
16	.5	1.6	1.5	1.0	1.7	2.8	20	34	3.9	.4	.4	.8
17	.3	1.6	1.1	1.3	1.7	2.2	22	33	2.3	.3	.4	1.0
18	.3	1.6	1.0	1.1	1.7	2.2	20	32	2.8	.4	.2	.4
19	.3	1.7	.9	1.3	1.5	1.7	21	31	3.0	.4	.8	.4
20	.3	1.6	1.1	1.3	1.2	1.7	19	29	2.8	.3	1.5	.6
21	.7	1.6	.9	1.3	1.5	1.7	17	26	2.5	.3	1.4	.6
22	1.0	1.4	.9	†1.2	1.8	2.0	21	23	2.0	.3	1.4	.6
23	.9	1.5	1.0	†1.2	1.9	3.1	24	21	1.7	.2	1.2	1.3
24	.9	1.3	1.0	1.4	1.3	3.6	19	19	1.5	.3	.4	.6
25	*1.1	1.5	1.1	1.4	1.4	2.8	13	18	3.0	.4	.4	.8
26	*1.2	1.5	1.1	†1.4	1.3	2.1	11	16	4.6	.4	.4	.6
27	*1.1	1.3	.9	1.4	1.1	2.2	14	13	5.1	.4	.4	.6
28	*1.1	1.1	.9	1.4	1.2	2.1	18	12	7.0	.5	1.9	.5
29	*1.1	1.0	1.0	1.4	-	1.8	15	14	6.2	.4	.6	.6
30	*1.0	1.1	1.2	1.4	-	2.0	13	27	5.2	.4	.6	1.0
31	*1.4	-	1.0	1.2	-	1.8	-	26	-	.6	3.3	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	20.2		1.4		0.3		0.65		40			
November.....	40.2		1.7		.9		1.34		80			
December.....	34.9		1.5		.9		1.13		69			
Calendar year .....												
January.....	33.8		1.4		.6		1.09		67			
February.....	45.8		6.1		1.1		1.64		91			
March.....	65.0		5.6		1.1		2.10		129			
April.....	35.8		2.4		2.1		11.9		705			
May.....	703.9		34		9.8		22.7		1,400			
June.....	279.5		27		1.5		9.32		554			
July.....	41.3		5.0		.2		1.33		62			
August.....	26.1		3.3		.2		.84		52			
September.....	24.0		3.1		.3		.80		48			
Water year 1936-37.....	1,670.2		34		.2		4.58		3,320			

\*Gage height missing; discharge computed on basis of records for Rio Pueblo de Taos, at Taos, N. Mex.

†Stage-discharge relation affected by ice; discharge computed on basis of weather records.

## Rio Lucero near Arroyo Seco, N. Mex.

Location.-- Water-stage recorder and wooden control, lat.  $36^{\circ}30'$ , long.  $105^{\circ}32'$ , in Antoine Leroux Grant, in sec. 10, T. 28 N., R. 13 E., 200 feet above diversion dam for Tenorio and Indian Ditches, 2 miles southeast of Arroyo Seco,  $4\frac{1}{2}$  miles north of Taos Pueblo, and  $7\frac{1}{2}$  miles northeast of Taos.

Records available.-- April 1910 to December 1915 (published as Rio Lucero near Taos, New Mex.) and November 1933 to September 1937 in reports of Geological Survey; January 1911 to December 1915 in reports of State engineer.

Extremes.-- Maximum discharge during year, 190 second-feet May 17 (gage height, 2.37 feet); minimum daily discharge, 5 second-feet (estimated) Feb. 22.  
1933-37: Maximum discharge, that of May 17, 1937; minimum daily discharge, not determined.

Remarks.-- Records good except those for period of ice effect, Dec. 6 to Mar. 7, which were computed on basis of five discharge measurements, weather records, and records for Rio Colorado near Questa and are fair. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	16	10	7.5	6	8.5	10	47	175	103	21	15
2	14	13	8.1	7	6	9	14	56	170	99	21	15
3	14	14	7.7	7	6	9	16	67	179	88	20	14
4	14	16	7.7	8	6	9	16	62	175	81	19	14
5	14	15	6.3	9	6	9.5	14	66	157	76	19	14
6	15	14	6	9	6	9.5	13	70	130	70	19	15
7	14	14	6	8.5	6.5	9.5	13	73	116	65	18	15
8	14	13	7	8	6.5	9.7	12	87	117	59	17	14
9	14	14	7	7.5	6.5	9.7	13	110	120	54	17	13
10	13	14	7	7.5	7	11	16	114	117	53	17	13
11	12	14	7	8	7	13	28	114	122	57	16	13
12	12	13	7	8	7	14	47	122	124	51	16	13
13	12	13	7	8.5	7	13	64	136	124	47	16	13
14	12	13	8	7.5	7	12	76	141	118	45	16	13
15	12	13	9	6.5	7	10	94	160	111	41	15	12
16	11	14	9	6.5	6.5	9.7	101	177	108	39	15	12
17	11	14	10	6.5	6	8.9	81	182	113	36	15	12
18	11	14	9.5	6.5	6	8.9	62	170	116	34	17	12
19	11	13	9	6.5	6	8.5	62	168	111	31	15	11
20	14	13	9.5	6.5	6	8.5	56	167	111	32	14	11
21	13	13	10	6.5	5.5	8.9	63	160	108	30	14	11
22	12	12	9.5	6.5	5	10	85	152	110	28	14	11
23	13	11	9	6.5	7.5	12	83	154	108	27	13	12
24	12	13	9.5	6.5	8	11	57	146	107	26	12	10
25	12	13	9.5	6.5	8.5	10	45	136	104	25	13	10
26	12	13	10	6.5	8.5	9.3	49	118	108	25	13	9.7
27	12	11	9.5	7	8.5	8.5	66	113	118	25	13	9.3
28	12	12	9	7	8.5	8.1	70	110	117	25	12	9.3
29	11	10	9.5	7	-	7.7	53	116	113	24	14	11
30	16	10	9	6.5	-	7.3	46	172	110	23	18	16
31	17	-	6.5	6	-	8.5	-	184	-	22	20	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					400	17	11	12.9	793			
November.....					395	16	10	13.2	783			
December.....					258.8	10	6	8.35	513			
Calendar year 1936.....					7,340.4	90	-	20.1	14,560			
January.....					222.5	9	6	7.18	441			
February.....					188.0	8.5	5	6.71	373			
March.....					302.2	14	7.3	9.75	599			
April.....					1,424	101	10	47.5	2,820			
May.....					3,850	184	47	124	7,640			
June.....					3,717	179	104	124	7,870			
July.....					1,441	103	22	46.5	2,860			
August.....					499	21	12	16.1	990			
September.....					373.3	16	9.3	12.4	740			
Water year 1936-37.....					13,070.8	184	5	35.8	25,920			

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 below 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 1937.

Extremes.- Maximum discharge during year, 130 second-feet May 17 (gage height, 2.05 feet); no flow at times.

1934-37: Maximum discharge, that of May 17, 1937; no flow at times.

Remarks.- Records fair except those for periods of ice effect and periods of missing gage heights or doubtful stage-discharge relation, which are poor.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.5	1.9	*0.9	*0.8	1.6	3.8	25	55	40		0
2	0	.6	1.8	*.6	*.8	2.1	5.4	30	56	38		0
3	0	.9	1.0	*.5	*.8	2.2	6.0	37	56	35		0
4	0	1.1	1.3	*.6	*.9	2.0	5.8	33	55	29		0
5	0	1.2	1.6	*.6	*.9	1.9	5.8	34	52	23		0
6	0	1.2	.6	*.6	*.9	1.9	5.0	34	50	22		0
7	0	.9	1.4	1.0	.9	2.0	3.0	33	50	22		0
8	0	4.1	1.6	.8	.4	3.5	2.8	†38	50	20		0
9	0	7.4	1.7	.9	*.5	4.0	2.6	†50	48	19		0
10	0	7.7	1.8	.8	*.6	4.7	1.6	†52	47	19		0
11	0	7.0	1.7	.5	*.7	5.2	5.6	†59	45	17		0
12	0	6.0	2.6	.9	*.8	6.0	23	†55	45	15		0
13	0	7.2	3.0	*.8	*.9	5.6	39	†65	44	14		0
14	.1	8.7	3.1	*.7	1.0	4.7	40	†63	39	11		0
15	.1	7.7	3.1	*.7	.7	4.3	42	†64	37	9.0		0
16	.1	7.4	2.2	*.6	.8	4.0	41	†63	34	†6		0
17	.1	7.0	1.7	*.6	.9	3.8	40	†99	37	†3		0
18	.2	6.5	1.7	*.6	1.0	3.8	39	†65	36	†1		0
19	.4	5.8	1.6	*.6	1.2	2.7	40	†76	32	†0		0
20	.5	6.2	1.6	.5	1.1	4.1	37	†97	34	†0		.6
21	.5	4.4	1.6	.3	1.1	2.2	40	†91	34	†.2		1.7
22	.4	2.5	1.6	.3	1.1	1.0	38	†82	32	†0		0
23	.4	2.0	1.5	.2	1.1	1.2	37	†75	28	†0		0
24	.2	1.7	1.2	*.5	1.4	.5	37	†67	27	†0		0
25	.2	1.7	1.2	*.5	1.6	.6	33	†68	27	†0		0
26	.2	2.0	1.2	*.4	1.4	.3	30	†50	29	†0		0
27	.2	1.8	1.2	*.3	1.4	2.2	36	43	40	†0		0
28	.2	2.1	1.2	.1	1.5	3.4	32	42	43	†0		0
29	.3	1.9	1.2	.2	-	3.3	31	42	43	†0		.6
30	.6	1.7	1.2	*.6	-	2.7	26	50	42	†0		1.8
31	.6	-	*1.0	*.8	-	3.4	-	54	-	†0		-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						5.3	0.6	0	0.17	11		
November.....						116.9	8.7	.5	3.90	232		
December.....						51.1	3.1	.6	1.65	101		
Calendar year 1936.....						1,411.8	34	0	3.87	2,800		
January.....						18.0	1.0	.1	.58	36		
February.....						27.2	1.6	.4	.97	54		
March.....						90.9	6.0	.3	2.93	180		
April.....						728.4	42	1.6	24.3	1,440		
May.....						1,791	99	25	57.8	3,550		
June.....						1,247	56	27	41.6	2,470		
July.....						343.2	50	0	11.1	681		
August.....						0	0	0	0	0		
September.....						4.7	1.8	0	.16	9.3		
Water year 1936-37.....						4,423.7	99	0	12.1	8,760		

\*Stage-discharge relation affected by ice; discharge computed on basis of two discharge measurements, gage heights, and weather records.

†Gage height missing or stage-discharge relation doubtful; discharge computed on basis of study of loss of water between this station and that on Rio Lucero near Arroyo Seco.

## Tenorio ditch near Arroyo Seco, N. Mex.

Location.- Water-stage recorder and concrete-lined channel, lat.  $36^{\circ}30'$ , long.  $105^{\circ}32'$ , in Antoine Leroux Grant, in sec. 10 (projected), T. 26 N., R. 13 E., 400 feet below head gate, 2 miles southeast of Arroyo Seco,  $4\frac{1}{2}$  miles north of Taos Pueblo, and  $7\frac{1}{2}$  miles northeast of Taos.

Records available.- June 1935 to September 1937.

Extremes.- Maximum discharge during year, 15 second-feet June 1-5; maximum gage height, 1.51 feet June 3, 4; no flow at times.

1935-37: Maximum discharge, 17 second-feet May 7, 1936 (gage height, 1.68 feet); no flow at times.

Remarks.- Records good except those for Oct. 1-13 and those for periods of missing gage heights, which are poor. No record for Dec. 17 to Apr. 20. No diversion above station. Ditch diverts from right bank of Rio Lucero; water used for irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7						-	1.2	15	0.4	*2.5	2.6
2	.3						-	1.3	15	.4		2.2
3	.2						-	1.3	15	.4	*2.7	1.9
4	.4						-	1.2	15	1.2		2.2
5	.3						-	4.1	15	2.3	*2.5	2.2
6	.3						-	5.7	8.4	2.2	*2	2.3
7	.2						-	5.8	3.8	1.7		2.6
8	.3						-	6.0	4.1	1.0		2.2
9	.4						-	6.6	4.1	1.6		2.1
10	.4						-	6.6	6.1	2.7		1.4
11	.3						-	6.7	8.1	5.0	*2.5	.9
12	.3						-	7.4	8.2	3.8		1.9
13	.3						-	9.2	8.2	3.4		1.8
14	*.3						-		8.1	3.4		1.7
15	*.2						-		8.1			1.8
16	*.2						-				*3	
17	*.1						-		9.4			2.1
18	*.1						-		9.1			1.9
19	*0						-		9.7			2.3
20	0						-		9.0		*2	1.7
21									9.2			1.2
22	.1						0.3		8.7	*1.6	1.0	1.5
23	0						.5		9.3		1.0	1.2
24	0						.7		8.0	*1.5	1.1	1.4
25	.1						.5		6.9		2.1	1.2
26							.6		6.5		2.1	1.2
27	.1						1.0				2.4	1.3
28	.1						1.7		4.4		2.6	1.8
29	.1						1.9	8.5	2.2		2.1	1.9
30	0						1.7	8.5	1.4	*2	1.7	2.4
31	0						1.5	9.3	.5		2.2	3.9
							-	12	-		3.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						7.9	2.7	0	0.25	16		
November.....						0	0	0	0	0		
December 1-16.....						0	0	0	0	0		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 21-30.....						10.4	1.9	.3	1.04	21		
May.....						227.4	12	1.2	7.34	451		
June.....						237.0	15	.5	7.90	470		
July.....						64.1	5.0	.4	2.07	127		
August.....						66.7	3.5	1.0	2.15	132		
September.....						54.1	3.9	.1	1.80	107		
Water year .....												

\*Gage height missing; discharge computed on basis of records for stations on Rio Lucero and diversions from Rio Lucero.

Indian ditch at head, near Arroyo Seco, N. Mex.

Location.— Water-stage recorder and concrete-lined channel, lat.  $36^{\circ}30'$ , long.  $105^{\circ}32'$ , in sec. 10, T. 28 N., R. 13 E., 500 feet below head, 2 miles southeast of Arroyo Seco,  $4\frac{1}{2}$  miles north of Taos Pueblo, and  $7\frac{1}{2}$  miles northeast of Taos.

Records available.— July 1934 to September 1937.

Extremes.— Maximum discharge during year, 28 second-feet June 16 (gage height, 2.12 feet); no flow at times.

1934-37: Maximum discharge, that of June 16, 1937; no flow at times.

Remarks.— Records good. Discharge for period of ice effect, Nov. 3 to Apr. 20, computed on basis of three discharge measurements, weather records, and knowledge of local conditions. No diversion above station. Ditch diverts from left bank of Rio Lucero; water used for irrigation.

Discharge, in second-feet, water year October 1937 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	7.3						0	17	6.4	5.4	7.7
2	6.2	5.9						0	15	6.4	5.6	7.3
3	6.1	3.0						0	15	6.2	5.7	6.9
4	5.7	0						0	15	6.1	5.7	6.9
5	5.6	0						0	14	5.9	5.6	6.4
6	5.9	0						0	14	5.4	5.3	7.5
7	5.7	0						0	14	4.7	5.4	7.5
8	5.7	0						0	14	3.9	5.6	6.9
9	5.6	0						0	13	3.6	5.4	6.4
10	5.3	0						0	13	3.4	5.6	6.9
11	5.1	0						0	14	5.3	5.4	7.5
12	5.0	0						0	14	7.3	5.4	6.9
13	5.0	0						0	14	7.1	5.6	6.4
14	5.1	0						0	14	7.1	5.3	6.4
15	5.1	0						0	14	7.1	6.2	6.2
16	5.0	0						0	11	7.1	7.7	6.2
17	4.8	0						0	4.1	6.9	7.3	3.4
18	4.8	0						0	4.6	6.8	7.9	.8
19	5.1	0						0	4.7	6.8	7.9	1.0
20	6.1	0						0	4.6	8.0	7.5	1.6
21	5.7	0						0	4.4	8.2	6.9	4.1
22	5.4	0						0	4.4	8.0	6.8	6.9
23	5.3	0						0	4.6	7.9	6.1	8.2
24	5.3	0						7.3	4.4	7.7	5.1	5.7
25	5.6	0						12	4.6	6.9	5.3	3.4
26	5.4	0						12	4.6	6.4	5.7	3.2
27	5.3	0						14	5.4	6.4	5.6	2.9
28	5.1	0						14	6.8	6.4	5.8	2.7
29	5.0	0						14	6.4	6.4	6.9	3.4
30	6.1	0						18	6.4	5.9	6.0	5.4
31	7.3	—						18	—	5.6	9.2	—
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				170.0	7.3	4.8	5.48	337				
November.....				16.2	7.3	0	.54	32				
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.....				109.3	18	0	3.53	217				
June.....				294.8	17	4.1	9.83	585				
July.....				197.3	6.2	3.4	6.36	391				
August.....				192.7	9.2	5.1	6.22	382				
September.....				162.3	6.2	.8	5.41	322				
Water year 1937-38.....				1,142.6	18	0	3.13	2,270				

## 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 1937.

Extremes.- Maximum discharge during year, 25 second-feet June 29 (gage height, 2.01 feet); no flow at times.

1934-37: Maximum discharge, 34 second-feet July 3, 1935 (gage height, 2.10 feet); no flow at times.

Remarks.- Records good except those for period of ice effect, Dec. 6 to Apr. 20, which were estimated on basis of weather records and knowledge of local conditions and are poor. No diversion above station. Ditch diverts from right bank of Rio Lucero; water used for irrigation.

## Discharge, in second-feet, water year October 1937 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	2.6	2.9				0	0	11	18	5.8	2.7
2	2.6	1.9	.8				0	0	11	18	5.4	2.6
3	2.6	2.1	1.2				0	0	12	17	4.8	2.6
4	2.6	2.7	1.4				0	0	11	18	4.4	2.4
5	2.6	4.1	2.2				0	0	9.7	15	4.3	2.3
6	2.6	4.0	2.0				0	0	8.8	14	4.4	2.3
7	2.3	3.9	1.0				0	0	8.4	14	4.3	2.3
8	2.4	3.8	.5				0	0	8.5	13	4.6	2.2
9	2.2	3.5	.5				0	0	8.2	13	4.8	2.1
10	2.2	3.5	.5				0	0	7.8	12	3.6	2.0
11	2.2	3.5	.5				0	0	10	12	2.9	2.2
12	2.1	3.6	.2				0	0	14	11	2.6	1.9
13	2.1	3.4	0				0	0	14	11	2.5	1.9
14	2.2	3.4	0				0	0	13	10	2.4	1.6
15	2.2	3.4	0				0	0	12	10	1.9	1.6
16	2.2	3.8	0				0	0	12	9	1.5	1.6
17	2.2	3.8	0				0	0	8.9	9	1.5	1.6
18	2.3	3.8	0				0	0	9.1	8	1.5	1.7
19	2.4	3.8	0				0	0	17	8	1.6	1.6
20	3.0	3.7	0				0	.2	20	7.3	1.7	2.2
21	2.8	3.6	0				.2	.2	20	6.7	1.6	1.8
22	2.8	3.6	0				.2	.2	21	6.0	1.9	1.2
23	2.7	3.2	0				.1	.2	21	8.0	1.9	1.2
24	2.6	3.2	0				.1	.1	20	7.9	1.9	1.2
25	2.7	2.6	0				.1	2.0	19	6.6	1.8	1.4
26	2.7	2.2	0				.1	6.9	21	5.9	1.9	1.4
27	2.7	3.1	0				.1	6.7	23	5.9	1.9	1.2
28	2.6	3.4	0				.1	6.8	20	6.4	2.0	1.2
29	2.5	2.5	0				0	8.0	20	6.3	2.2	1.3
30	3.6	2.2	0				0	14	19	6.2	3.6	2.1
31	3.2	-	0				-	13	-	6.1	4.3	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				78.2		3.6	2.1	2.52	155			
November.....				97.7		4.1	1.9	3.26	194			
December.....				13.7		2.9	0	.44	27			
Calendar year .....												
January.....				0		0	0	0	0			
February.....				0		0	0	0	0			
March.....				0		0	0	0	0			
April.....				1.0		.2	0	.03	2.0			
May.....				58.3		14	0	1.88	116			
June.....				430.4		23	7.6	14.3	854			
July.....				319.3		18	5.9	10.3	633			
August.....				91.9		5.6	1.5	2.96	182			
September.....				55.4		2.7	1.2	1.85	110			
Water year 1936-37.....				1,145.9		23	0	3.14	2,270			

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 Antoine Leroux Grant, in sec. 16 (projected), T. 26 N., R. 13 E., 40 feet below 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 1937.

Extremes.- Maximum discharge during year, 14 second-feet June 17 (gage height, 1.36 feet); no flow at times.

1935-37 Maximum discharge, 16 second-feet May 4, 1936; maximum gage height, that of June 17, 1937; no flow at times.

Remarks.- Records fair except those for periods of missing gage heights, Oct. 7-19, Oct. 23 to Nov. 5, and Nov. 23-30, which were computed on basis of records for the two stations on Rio Lucero and other diversions from Rio Lucero and are poor. No record for Dec. 1 to Apr. 20. No diversion above station. Ditch diverts from right bank of Rio Lucero; water used for irrigation.

Discharge, in second-feet, water year October 1937 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3					-	4.1	4.8	8.4	0	0.4
2	0	1	*2.1				-	5.1	4.4	8.1	0	.3
3	0	2					-	5.8	4.9	7.0	0	.3
4	0	4					-	5.3	4.6	6.6	0	.3
5	0	2					-	5.1	4.1	6.1	0	.3
6	0	.9					-	5.1	3.9	5.6	0	.3
7	.3	.9					-	6.0	3.9	5.3	0	.3
8	.7	.9					-	9.0	4.0	5.0	0	.2
9	.8	1.0					-	9.5	4.1	4.8	0	.2
10	1.0	1.2					-	9.9	3.9	4.7	0	.2
11	1.0	1.2					-	9.8	5.1	4.4	0	.2
12	1.1	2.9					-	9.7	10	3.8	0	.1
13	1.1	2.2					-	8.8	11	3.6	0	.1
14	1.2	1.6					-	8.6	11	3.4	0	.1
15	1.2	1.4					-	8.9	10	3.0	0	.1
16	1.3	1.2	*.6				-	7.4	10	2.1	0	.1
17	1.3	1.2					-	6.6	12	3.6	0	.3
18	1.4	1.2					-	4.1	12	6.1	0	.6
19	1.4	1.0					-	4.5	11	4.5	0	.3
20	1.6	1.0					-	5.3	6.2	5.2	0	.1
21	2.9	1.3					5.8	4.6	2.1	2.9	0	.1
22	3.7	1.2					6.2	4.1	3.6	.9	0	.1
23	2.6	2					6.2	4.3	7.4	.8	0	.1
24	2.5	2					4.5	3.7	7.5	.8	0	.1
25	2	2					3.6	3.3	7.5	1.7	0	.1
26	2.5	2					4.0	2.6	7.9	.9	0	.2
27	2.5	1					5.9	2.9	9.0	.3	0	.1
28	3	1					6.0	3.4	8.9	.3	0	.1
29	2	1					4.6	3.8	9.0	.2	1.0	.1
30	4	1					4.1	6.0	8.9	.1	1.2	.3
31	3.5	-					-	5.6	-	.1	.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						46.5	4	0	1.50	92		
November.....						46.3	4	.9	1.64	92		
December.....						-	-	-	-	-		
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 21-30.....						50.9	6.2	3.6	5.09	101		
May.....						182.9	9.9	2.6	5.90	363		
June.....						212.9	12	2.1	7.10	422		
July.....						110.2	8.4	.1	3.55	219		
August.....						2.7	1.2	0	.09	5.4		
September.....						6.1	.6	.1	.20	12		
Water year .....												

eDischarge measurement.

## 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. 28 N., R. 13 E., 250 feet below 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 1937.

Extremes.— Maximum discharge during year, 28 second-feet May 30 (gage height, 2.11 feet); no flow at times.

1934-37: Maximum discharge, that of May 30, 1937; no flow at times.

Remarks.— Records good except those for period of missing gage heights, Dec. 3 to Mar. 8, which were estimated on basis of one discharge measurement, weather records, and knowledge of local conditions and are poor. No diversion above station. Ditch diverts from right bank of Rio Lucero; water used for irrigation.

## Discharge, in second-feet, water year October 1937 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	2.0	3.7			0	0.2	11	8.0	3.4	5.0	2.4
2	3.2	2.5	2.9			0	.2	13	7.3	3.3	5.2	2.1
3	3.1	3.8	2.5			0	.4	14	9.3	2.9	5.3	1.9
4	3.0	6.4	2.0			0	.5	14	9.6	5.8	5.3	1.9
5	2.9	5.4	1.0			0	.3	14	8.0	10	4.9	1.8
6	3.1	6.2	0			0	1.0	14	7.0	9.8	4.4	2.0
7	3.0	6.1	0			.2	2.6	14	6.6	9.4	3.7	2.2
8	3.1	4.2	0			.2	2.5	15	6.3	9.0	3.2	1.9
9	3.2	1.9	0			.2	2.3	18	11	8.5	2.9	1.7
10	3.4	1.9	0			.2	1.9	18	13	8.2	3.4	1.6
11	3.5	.5	0			.3	6.5	18	13	7.5	3.7	1.9
12	3.4	.2	0			.3	3.9	18	9.3	6.6	3.4	1.6
13	3.3	.2	0			.2	1.7	17	7.3	6.0	3.2	1.4
14	3.3	.2	0			.1	1.9	14	14	8.0	3.0	1.2
15	3.3	.2	0			.1	1.6	12	17	8.6	2.4	1.1
16	3.3	.2	0			.1	8.9	9.8	17	9.1	1.9	1.0
17	3.1	.2	0			.1	7.7	8.5	18	7.9	2.0	2.5
18	2.6	.2	0			.1	1.2	17	18	5.8	2.2	4.9
19	1.9	.2	0			.1	1.3	12	17	9.5	2.2	3.3
20	2.6	.2	0			.2	1.4	8.6	17	7.6	1.8	1.2
21	2.6	1.9	0			1.8	3.1	10	18	8.9	1.9	.2
22	2.5	3.3	0			3.9	4.2	15	17	7.6	1.6	.4
23	2.2	2.9	0			4.8	3.5	14	14	6.7	1.3	.6
24	1.2	3.4	0			7.0	2.2	12	14	6.7	.9	.7
25	1.4	5.3	0			4.4	1.7	11	14	4.6	1.0	1.9
26	1.2	4.3	0			4.1	6.6	8.2	15	6.0	1.1	1.8
27	1.1	5.4	0			1.8	11	13	8.6	6.0	1.0	1.6
28	1.0	6.2	0			.1	10	18	4.8	6.2	1.0	1.5
29	1.0	3.6	0			.1	8.5	20	4.3	5.8	.8	1.2
30	1.8	3.0	0			.2	8.9	17	3.8	5.4	1.4	1.4
31	2.5	-	0			.2	-	9.7	-	6.2	4.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						79.4	3.5	1.0	2.56	157		
November.....						82.3	6.4	.2	2.74	163		
December.....						12.1	3.7	0	.39	24		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						30.8	7.0	0	.99	61		
April.....						107.7	11	.2	3.59	214		
May.....						428.8	20	8.2	13.8	851		
June.....						347.1	18	3.8	11.6	698		
July.....						216.0	10	2.9	6.97	428		
August.....						85.3	5.3	.8	2.75	169		
September.....						50.9	4.9	.2	1.70	101		
Water year 1936-37.....						1,440.4	20	0	3.95	2,860		



## Embudo Creek at Dixon, N. Mex.

Location.— Water-stage recorder, lat.  $36^{\circ}12'$ , long.  $105^{\circ}55'$ , in sec. 29, T. 23 N., R. 10 E., 1 mile northwest of Dixon and  $2\frac{1}{2}$  miles above confluence with Rio Grande.

Drainage area.— 305 square miles.

Records available.— October 1930 to September 1937 in reports of Geological Survey; October 1923 to December 1931 in reports of State engineer.

Extremes.— Maximum gage height during year, 4.34 feet Aug. 30; maximum discharge, about 2,910 second-foot July 8; minimum daily discharge, 15 second-foot (estimated) Aug. 21-23.

1930-37: Maximum gage height, 6.95 feet July 8, 1936 (discharge not determined); minimum daily discharge, 1 second-foot July 23, 24, 1932.

Remarks.— Records poor. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1937 to September 1938

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	39	29	28	23	26	59	265	723	392	*40	71
2	63	36	28	22	25	32	90	290	734	376	*35	59
3	59	34	25	19	25	38	107	357	767	314	*30	53
4	59	33	26	20	24	29	104	344	733	235	*30	52
5	55	32	25	26	29	39	97	326	630	190	31	55
6	66	32	16	27	39	43	97	357	545	154	34	52
7	66	33	20	29	158	45	97	326	460	154	33	104
8	66	34	20	28	42	42	92	392	364	421	40	84
9	66	34	20	29	26	48	102	500	290	620	48	75
10	64	35	20	23	29	56	110	536	250	518	53	63
11	64	35	19	25	33	61	170	572	210	650	61	61
12	61	36	21	30	49	58	280	581	182	484	63	56
13	56	35	22	33	55	53	413	600	166	332	*40	55
14	53	35	24	32	58	*60	518	610	141	235	*30	*50
15	50	35	28	26	175	*70	640	690	123	170	*20	41
16	46	35	33	25	70	*70	756	734	112	135	*20	40
17	45	35	33	26	*60	*80	787	778	99	*110	17	42
18	41	35	23	22	*50	*60	670	734	92	*90	*30	41
19	35	33	25	25	43	*70	680	660	84	*70	*20	40
20	35	31	28	24	27	*70	572	660	77	*60	*20	38
21	38	29	33	25	19	*90	500	590	70	*50	*15	38
22	40	27	29	22	31	*110	690	518	61	*45	*15	36
23	42	27	26	*20	35	*60	690	527	53	*40	*15	77
24	45	26	31	25	35	104	406	554	46	*35	*20	86
25	46	26	30	27	39	61	290	500	105	*30	*40	70
26	45	26	30	24	33	75	314	378	433	*70	*35	64
27	43	29	25	24	28	71	456	326	690	*50	*30	61
28	43	29	21	25	25	71	527	392	563	*100	*25	59
29	42	30	27	25	—	61	420	581	500	*70	*20	61
30	40	29	18	25	—	59	326	800	371	*70	*230	110
31	39	—	16	26	—	53	—	712	—	*50	154	—

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,576	66	35	50.8	3,130
November.....	971	39	27	32.4	1,930
December.....	771	33	16	24.9	1,530
Calendar year 1937.....	29,998	440	7	82.0	59,520
January.....	785	33	19	25.3	1,560
February.....	1,287	175	19	46.0	2,550
March.....	1,924	110	26	62.1	3,820
April.....	11,020	767	59	367	21,860
May.....	16,190	800	265	522	32,110
June.....	9,662	767	46	322	19,160
July.....	6,322	650	30	204	12,540
August.....	1,294	230	15	41.7	2,570
September.....	1,794	110	36	59.8	3,560
Water year 1936-37.....	53,596	800	15	147	106,300

\*Gage height missing; discharge computed on basis of gage heights, weather records, and records for Rio Colorado near Questa.

## Pueblo Creek near Penasco, N. Mex.

Location.— Water-stage recorder, lat.  $36^{\circ}11'$ , long.  $105^{\circ}40'$ , in SW $\frac{1}{4}$  sec. 28, T. 23 N., R. 12 E., 300 feet below head gate of Picuris Ditch,  $1\frac{1}{2}$  miles east of Picuris Pueblo, 2 miles northeast of Penasco, and  $3\frac{1}{2}$  miles above confluence with Rio Santa Barbara.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during period, 644 second-feet June 29 (gage height, 2.14 feet); minimum daily discharge, 4 second-feet (estimated) Jan. 5, 24, 1936-37; Maximum discharge, about 717 second-feet Aug. 20, 1936 (gage height 2.52 feet), from rating curve extended above 200 second-feet; minimum daily discharge, 1.0 second-foot July 27 and 28, 1936.

Remarks.— Records good except those for periods of ice effect, which are fair, and those for periods of missing gage heights, which are poor. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	14	12	*7	*8	*16	40	211	279	176	26	28
2	17	14	*11	*7	*9	*16	65	224	264	154	24	15
3	18	9.4	*12	*6	*9.5	*17	70	246	269	135	19	15
4	17	14	*12	*6	*10	*17	61	232	250	106	15	16
5	15	15	11	*4	*10	*17	50	224	224	92	14	24
6	15	14	*9	*4.5	*12	*17	50	232	195	85	9.4	24
7	14	14	*9	*5	*12	*17	50	224	179	85	9.0	30
8	13	13	*10	*6	*8	17	50	250	165	81	9.4	18
9	12	12	*10	*6	*8	19	61	264	161	74	9.4	17
10	12	11	*9.5	*6	*8	21	†85	274	141	61	9.0	15
11	12	12	*9	*6	*8	23	†132	279	132	112	8.6	†14
12	11	12	*8.5	*6.5	*10	26	†191	274	120	96	6.0	†13
13	9.0	11	*8.5	6.7	*14	24	†250	274	117	78	4.6	†12
14	11	12	*8.5	6.4	*16	21	†274	274	112	66	4.6	†11
15	11	12	*8.5	7.1	*20	21	†344	295	104	64	4.6	10
16	11	12	*8	7.1	*20	19	†442	305	96	67	18	10
17	12	11	*8	6.7	*20	20	†429	305	87	54	19	10
18	11	12	*8	6.4	*20	21	†373	290	81	45	16	†11
19	11	12	*9	*7	*20	14	†378	279	78	28	15	10
20	19	10	*10	*6	*18	20	†332	274	68	26	14	9.4
21	20	12	*11	*6	*16	26	†332	255	61	24	11	10
22	17	12	*9	*5	*14	36	†391	225	54	23	10	10
23	16	12	*9	*5	*15	37	†397	224	46	21	7.9	12
24	14	*8.5	12	*4	*15	39	†295	232	42	18	7.1	11
25	15	*11	*10	*4.5	*15	35	†242	211	108	16	7.1	9.4
26	14	*11	11	*5	*15	32	†260	183	123	25	8.6	9.4
27	14	*11	*9.5	*6	*16	26	†305	168	132	29	14	10
28	14	12	*10	*8	*16	24	†321	179	135	39	25	10
29	13	13	*11	*10	—	30	†264	215	158	47	17	11
30	13	*10	*8	*10	—	22	†228	290	168	35	37	21
31	15	—	*8	*10	—	25	—	295	—	28	57	—
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							432.0	20	9.0	13.9	687	
November.....							358.9	15	8.5	12.0	712	
December.....							300.0	12	8	9.66	595	
Calendar year .....												
January.....							195.9	10	4	6.32	339	
February.....							384.5	20	8	13.7	763	
March.....							715	39	14	23.1	1,420	
April.....							6,786	442	40	226	13,460	
May.....							7,710	305	168	249	15,290	
June.....							4,139	279	42	138	8,210	
July.....							2,003	176	18	64.6	3,970	
August.....							456.5	57	4.6	14.7	905	
September.....							426.2	30	9.4	14.2	845	
Water year 1937-38.....							23,907.0	442	4	65.5	47,420	

\*Stage-discharge relation affected by ice; discharge computed on basis of four discharge measurements, gage heights, weather records, and records for Embudo Creek at Dixon.  
†Gage height missing; discharge computed on basis of records for Picuris ditch near Penasco.  
‡Gage height missing; discharge interpolated.

## Picuris ditch near Penasco, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat.  $36^{\circ}11'$ , long.  $105^{\circ}40'$ , in SW $\frac{1}{4}$  sec. 28, T. 23 N., R. 12 E., 500 feet below head gate,  $1\frac{1}{2}$  miles east of Picuris Pueblo, and 2 miles northeast of Penasco.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 24 second-feet Aug. 27 (gage height, 1.85 feet); no flow at times.

1936-37: Maximum discharge, about 26 second-feet July 7, 1936; maximum gage height, 2.32 feet Aug. 20, 1936; no flow at times.

Remarks.- Records good. Ditch diverts from right bank of Pueblo Creek; water used for irrigation. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2						0	0.5	2.9	0.9	7.2	3.6
2	.2						0	2.0	2.6	.7	7.2	6.0
3	.2						0	2.2	2.5	.3	7.2	5.2
4	.2						0	1.9	2.1	1.0	6.2	5.0
5	.2						0	1.8	1.5	6.5	5.2	2.0
6	.2						0	1.8	2.3	8.9	4.7	0
7	.1						0	1.7	2.5	9.1	4.7	3.2
8	.1						0	2.6	2.4	6.5	4.7	6.8
9	.1						0	3.5	3.2	6.9	4.7	5.6
10	.1						0	3.4	2.9	7.8	4.3	4.7
11	.1						.1	3.0	3.1	8.5	4.2	4.7
12	.3						.7	2.9	5.6	8.0	3.9	4.0
13	.3						.9	1.5	6.2	7.8	4.8	3.6
14	.3						.7	1.4	6.2	6.8	4.6	3.6
15	.3						.2	1.5	6.2	6.2	4.7	3.2
16	.3						0	2.5	6.0	5.1	4.5	3.1
17	.1						0	3.8	5.9	3.8	3.4	3.0
18	0						0	3.8	6.0	3.6	3.4	3.2
19	0						.1	3.8	6.0	6.9	3.8	2.5
20	0						.1	4.0	5.4	8.0	4.0	2.0
21	0						.1	3.2	5.6	7.7	3.9	2.2
22	0						.1	2.7	7.4	7.5	3.9	2.3
23	0						.1	2.6	6.8	7.1	4.7	3.4
24	0						0	3.0	6.2	5.9	5.4	2.9
25	0						0	2.7	6.2	5.0	5.4	2.2
26	0						.8	1.9	3.0	5.2	5.4	2.2
27	0						1.8	1.5	5.2	6.6	5.9	2.2
28	0						.6	3.9	3.6	7.7	3.6	2.0
29	0						.3	5.0	4.0	7.5	5.2	2.3
30	0						.1	4.2	2.2	7.5	6.8	5.5
31	0						-	3.4	-	7.2	0	-
Month												
	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	3.3		0.3		0		0.11		6.5			
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.....	6.7		1.8		0		.22		18			
May.....	83.9		5.0		.5		2.71		186			
June.....	131.7		7.4		1.5		4.39		261			
July.....	189.3		9.1		.3		6.11		375			
August.....	147.7		7.2		0		4.76		293			
September.....	102.2		6.8		0		3.41		203			
Water year 1936-37.....	664.8		9.1		0		1.82		1,320			

## Alcalde ditch at Alcalde, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat.  $36^{\circ}04'$ , long.  $106^{\circ}04'$ , in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 21 N., R. 8 E., 1 mile south of Alcalde and about 5 miles below head gate.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 46 second-feet June 26 (gage, 2.54 feet, flume crest raised by temporary floor); no flow at times.  
1936-37: Maximum discharge 47 second-feet Aug. 29, 1936; maximum gage height, that of June 26, 1937; no flow at times.

Remarks.- Records fair except those for periods of ice effect or doubtful or missing gage heights, which are poor. Ditch diverts from left bank of Rio Grande; water used for irrigation on San Juan Grant. Diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	14	8.1	*1.3	0	0	3.7	8.2	0.2	21	†3	
2	16	16	11	*.2	0	0	3.8	7.3	0	14	†3	†5
3	18	16	10	0	0	0	3.4	11	3.3	12	†5	
4	19	12	11	0	0	0	9.8	14	10	9.8	†2	†7
5	19	8.1	9.5	0	0	0	†8	15	11	9.9	0	5.6
6	16	7.4	9.5	0	0	0	†5	21	10	9.9	0	7.3
7	17	5.6	8.9	0	0	0	6.4	5.6	8.5	12	0	0
8	15	4.3	7.9	0	*3.0	0	6.1	1.6	4.4	7.9	0	0
9	17	4.4	7.4	0	0	0	5.2	8.3	5.8	8.8	0	.1
10	16	5.6	7.9	0	0	0	5.1	7.6	2.3	5.4	0	0
11	18	9.5	8.9	0	0	0	9.5	9.2	1.5	6.2	0	2.3
12	15	9.1	9.8	0	0	0	8.6	5.1	1.8	7.0	†1	9.2
13	14	12	6.2	0	0	0	6.0	6.8	.1	2.4	0	9.6
14	11	9.5	6.8	0	0	0	6.9	8.0	1.0	1.1	†2	3.8
15	12	8.1	8.4	0	0	0	14	10	1.8	.7	†7	4.1
16	9.9	8.1	5.3	0	0	0	13	10	.8	.6	†5	5.5
17	11	8.6	6.1	0	0	0	5.5	1.9	.8	0	†5	2.6
18	5.3	7.8	5.2	0	0	0	11	1.3	1.1	4.4	4.4	2.1
19	10	6.2	9.3	0	0	0	7.7	6.4	0	5.7		3.2
20	13	8.7	6.3	0	0	0	7.6	3.1	1.5	6.8		0
21	13	13	8.4	0	0	0	6.7	2.0	2.6	4.0		0
22	12	11	8.5	0	0	.3	5.7	3.8	5.4	1.7		1.3
23	12	7.4	7.5	0	0	5.2	11	6.4	3.9	4.5		1.2
24	12	3.8	8.4	0	0	6.7	15	7.6	13	8.4		0
25	13	2.2	7.9	0	0	9.7	16	14	14	5.0	†4	0
26	11	3.0	8.6	0	0	10	7.9	15	11	6.1		1.0
27	10	4.3	8.8	0	0	8.5	9.6	9.5	0	13		0
28	10	5.5	8.8	0	0	8.7	15	12	0	4.0		0
29	13	9.9	8.7	0	-	4.9	13	13	1.9	0		2.2
30	12	8.7	*6.8	0	-	3.9	14	19	10	0		4.3
31	12	-	*3.8	0	-	2.7	-	1.1	-	†2		-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						418.2	19	5.3	13.5	829		
November.....						250.0	16	2.2	8.33	496		
December.....						249.5	11	3.8	8.05	495		
Calendar year .....												
January.....						1.5	1.3	0	.05	3.0		
February.....						3	3	0	.11	6.0		
March.....						60.6	10	0	1.95	120		
April.....						260.2	16	3.4	8.67	516		
May.....						264.8	21	1.1	8.54	525		
June.....						130.7	14	0	4.36	259		
July.....						194.3	21	0	6.27	355		
August.....						89.4	-	0	2.88	177		
September.....						87.4	9.6	0	2.91	173		
Water year 1936-37.....						2,009.6	21	0	5.51	3,980		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage-heights doubtful; discharge computed on basis of gage-height record and knowledge of local conditions.

‡Gage height missing; discharge estimated.

## San Rafael ditch at Alcalde, N. Mex.

Location.- Water-stage recorder and 5-foot Parshall flume, lat.  $36^{\circ}05'$ , long.  $106^{\circ}05'$ , in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 22 N., R. 8 E., 200 feet south of north boundary of San Juan Pueblo Grant, 1 mile west of Alcalde,  $1\frac{1}{2}$  miles below head gate, and  $2\frac{1}{2}$  miles north of Chamita.

Records available.- February 1936 to September 1937.

Extremes.- Maximum discharge during year, 80 second-feet July 1 (gage height, 2.43 feet); no flow at times.

1936-37: Maximum discharge, that of July 1, 1937; no flow at times.

Remarks.- Records good. Discharge for period of ice effect, Jan. 3-5, computed on basis of weather records. Ditch diverts from right bank of Rio Grande; water used for irrigation on San Juan Grant. Diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	2.8	3.0	0.2		0	0	16	0	11	17	1.7
2	7.3	1.2	2.8	.2		0	.2	16	0	0	16	.8
3	2.4	1.6	2.6	.2		0	.3	16	0	0	16	.6
4	8.0	2.1	4.3	0		0	1.3	16	3.3	0	12	2.1
5	6.7	4.3	5.4	0		0	.3	18	18	0	12	0
6	5.2	4.3	4.1	0		0	.2	21	19	0	9.1	.5
7	5.0	3.0	2.6	0		0	3.5	21	18	6.9	10	.6
8	5.2	2.1	2.1	0		0	2.9	17	16	15	8.9	0
9	5.0	1.8	1.7	0		0	11	16	19	9.8	6.4	0
10	4.6	1.8	1.7	0		0	13	16	12	6.2	3.4	0
11	4.5	3.3	1.4	0		0	15	15	10	11	3.4	0
12	3.8	5.0	.9	0		0	15	14	16	9.9	2.5	3.4
13	2.8	6.0	1.1	0		0	15	14	17	3.5	7.3	5.8
14	3.4	5.4	1.1	0		0	13	16	15	0	6.0	4.7
15	3.1	5.2	1.7	0		0	14	18	13	1.5	4.1	3.0
16	2.6	4.9	1.3	0		0	18	19	16	2.7	1.0	9.1
17	2.6	4.5	1.4	0		0	13	17	17	.5	.3	9.4
18	1.7	2.8	.9	0		0	11	16	16	0	3.4	8.2
19	1.4	1.6	.3	0		0	9.6	17	12	.2	6.7	10
20	.8	2.5	1.2	0		0	7.7	17	15	2.4	11	6.7
21	.7	4.5	1.3	0		0	8.9	16	14	5.2	9.1	3.1
22	.5	4.7	1.2	0		0	17	16	12	10	8.0	3.1
23	.4	4.5	1.3	0		0	20	17	13	16	6.0	3.5
24	.4	4.5	1.2	0		.7	17	16	17	12	3.8	4.9
25	.4	4.5	1.3	0		1.0	17	16	16	8.7	3.8	5.6
26	.4	4.5	1.2	0		.5	14	17	18	6.9	12	7.1
27	.3	4.0	1.3	0		.4	17	16	6.2	11	15	5.6
28	.7	4.1	1.3	0		.1	15	15	6.4	19	14	6.7
29	1.8	4.0	1.1	0		.2	16	11	6.9	17	12	4.0
30	1.2	3.3	.7	0		.1	16	0	11	12	14	0
31	2.6	-	.4	0		.2	-	0	-	13	5.7	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					95.9	10	0.3	3.09	190			
November.....					109.4	6.0	1.2	3.65	217			
December.....					58.9	5.4	.3	1.74	107			
Calendar year .....												
January.....					1.2	.8	0	.04	2.4			
February.....					0	0	0	0	0			
March.....					3.2	1.0	0	.10	6.3			
April.....					321.9	20	0	10.7	638			
May.....					476	21	0	15.4	944			
June.....					372.6	19	0	12.4	739			
July.....					210.4	19	0	6.79	417			
August.....					258.9	17	.3	8.35	514			
September.....					110.2	10	0	3.67	219			
Water year 1936-37.....					2,013.8	21	0	5.52	3,990			

## 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 SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 21 N., R. 8 E., three-quarters of a mile below head and 1 mile south of Alcalde.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 43 second-feet June 26 (gage height, 2.33 feet); no flow at times.  
1936-37: Maximum discharge, that of June 26, 1937; no flow at times.

Remarks.- Records good except those for July to September, which are fair above 10 second-feet and poor below. Some diversions above station. Acequia Madre diverts from left bank of Rio Grande; water used for irrigation, almost entirely on Indian land.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	0				0	14	11	15	11	16	3.3
2	7.6	0				0	22	9.2	16	11	15	5.4
3	7.6	0				0	20	8.8	14	13	7.1	3.6
4	6.1	0				0	19	7.6	14	14	9.8	3.1
5	5.4	0				0	19	11	12	12	14	3.3
6	5.4	0				0	19	20	10	8.3	11	15
7	4.4	0				0	18	21	10	12	14	11
8	3.7	0				0	17	24	12	22	11	0
9	3.2	.1				0	18	25	11	17	11	.4
10	3.0	0				0	16	26	12	12	9.2	2.8
11	2.5	.1				0	17	30	19	12	11	4.6
12	1.8	0				0	17	29	20	8.8	16	3.0
13	1.6	0				0	18	27	20	3.4	19	1.7
14	1.4	0				0	16	25	20	7.4	12	.5
15	1.0	0				0	12	28	20	9.9	11	10
16	1.9	0				0	12	28	22	11	9.7	21
17	1.1	0				3.5	13	18	20	6.3	16	21
18	1.0	0				4.6	14	16	19	4.3	19	21
19	.8	0				5.2	14	16	17	8.7	21	16
20	1.2	0				11	12	20	14	16	22	15
21	3.3	0				19	12	21	13	15	21	10
22	3.8	0				18	11	19	11	16	22	9.1
23	1.1	0				19	12	20	12	20	22	12
24	0	0				18	15	17	11	16	23	9.0
25	0	0				18	14	18	16	19	19	17
26	0	0				17	12	13	26	21	19	26
27	0	0				17	12	11	18	24	17	20
28	0	0				17	12	11	21	13	16	24
29	0	0				16	13	12	14	5.0	17	25
30	0	0				13	12	12	12	14	10	19
31	0	-				12	-	16	-	20	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						76.0	7.6	0	2.45	161		
November.....						0	.1	0	.01	.4		
December.....						0	0	0	0	0		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						206.3	19	0	8.72	413		
April.....						449	22	11	15.0	891		
May.....						568.5	30	6.8	18.3	1,130		
June.....						470	26	10	16.7	932		
July.....						405.1	24	3.4	13.1	804		
August.....						480.8	23	0	14.9	914		
September.....						334.8	26	0	11.2	664		
Water year 1936-37.....						2,972.7	30	0	8.14	5,900		

## Rio Chama at Park View, N. Mex.

Location.— Water-stage recorder, lat.  $36^{\circ}43'$ , long.  $106^{\circ}34'$ , in Tierra Amarilla Grant, 150 feet above highway bridge, 650 feet below mouth of Rio Brazos, and half a mile northwest of Park View, Rio Arriba County.

Drainage area.— 405 square miles.

Records available.— November 1912 to September 1916 and October 1930 to September 1937 in reports of Geological Survey; November 1912 to September 1916 and August 1924 to December 1931 in reports of State engineer.

Extremes.— Maximum discharge during year, about 8,530 second-feet Apr. 16 (gage height, 7.15 feet), from rating curve extended above 2,800 second-feet; minimum daily discharge, 30 second-feet (estimated) Sept. 21-28.  
1930-37: Maximum discharge that of Apr. 16, 1937; minimum daily discharge, 3 second-feet July 6, 7, 1934.

Remarks.— Records fair except those for periods of ice effect, Dec. 6 to Mar. 15 (computed on basis of four discharge measurements, gage heights, weather records, and records for Rio Colorado near Questa and Embudo Creek at Dixon), and those for periods of missing or partial gage-height record, June 6-29, July 22-25, July 31 to Aug. 2, Sept. 14-17, 19-30 (computed on basis of available gage heights, weather records, and records for Rio Colorado near Questa and Embudo Creek at Dixon), which are poor. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	198	226	89				328	2,350	1,270	371	60	50
2	184	171	84				471	3,750	1,190	385	55	44
3	174	136	76	60	70	80	471	3,860	1,270	331	55	48
4	165	191	92				375	3,860	940	294	57	50
5	141	177	94				355	4,110	874	259	80	55
6	141	174			80		330	3,980	800	210	59	64
7	139	174					335	4,110	760	185	52	108
8	147	162	70			90	525	4,240	700	184	48	71
9	144	153					750	3,730	650	148	45	58
10	128	147		70	70		1,220	3,260	600	146	40	50
11	115	139					2,000	3,260	600	229	39	46
12	106	139					2,540	2,730	550	250	39	45
13	101	139	80			110	2,940	2,730	500	205	39	42
14	99	144					3,610	2,940	500	150	38	40
15	96	150					5,230	3,040	500	120	38	40
16	94	144					7,030	2,730	500	104	38	35
17	92	156					125	5,080	3,580	500	92	47
18	86	153			80		133	3,860	3,490	500	90	49
19	88	144					115	4,380	3,580	500	85	82
20	205	139					112	4,650	2,830	500	83	50
21	165	139	90	60			128	5,380	2,540	450	80	42
22	144	128					165	5,080	2,210	450	60	39
23	147	122					174	4,110	1,970	450	75	38
24	141	106					150	2,830	1,740	450	70	38
25	150	108					159	2,540	1,530	450	75	35
26	150	103			70		141	3,150	1,260	450	85	40
27	150	96					159	4,240	1,240	500	85	55
28	147	99					177	3,730	1,230	450	94	48
29	136	96	80	70			181	2,110	1,600	450	102	45
30	184	88					174	1,680	2,350	367	80	47
31	290	-					226	-	1,470	-	70	66
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,436	290	88	143	8,800		
November.....						4,243	226	68	141	8,420		
December.....						2,575	-	-	83.1	5,110		
Calendar year 1936.....						138,370	4,290	30	378	274,400		
January.....						2,020	-	-	65.2	4,010		
February.....						2,140	-	-	76.4	4,240		
March.....						3,841	226	-	124	7,680		
April.....						81,308	7,030	326	2,710	161,300		
May.....						96,880	4,240	1,230	2,803	172,300		
June.....						18,661	1,270	367	622	37,010		
July.....						4,785	383	70	154	9,490		
August.....						1,499	92	35	48.4	2,970		
September.....						1,381	110	30	48.0	2,740		
Water year 1936-37.....						213,769	7,030	30	586	424,000		

## El Vado Reservoir near Tierra Amarilla, N. Mex.

Location.- Staff gage, lat. 36°36', long. 106°44', in NE $\frac{1}{4}$  sec. 33, T. 28 N., R. 2 E. (unsurveyed), at left abutment of El Vado dam, 2 miles below old town of El Vado and 13 miles southwest of Tierra Amarilla. Zero of gage is 9,565 feet above mean sea level (erroneously published in Water-Supply Paper 808 as 9,565 feet).

Records available.- January 1935 to September 1937.

Extremes.- Maximum daily contents during year, 175,000 acre-feet May 31 to June 2 (gage height, 6,894.8 feet); minimum daily, 38,210 acre-feet Sept. 30 (gage height, 6,823.0 feet).

1935-37: Maximum daily contents and gage height, those of May 31 to June 2, 1937; minimum daily contents, 58 acre-feet Jan. 1, 1935.

Remarks.- Capacity of reservoir is 226,000 acre-feet at gage height 6,910.0 feet. Stored water is used for irrigation of land in Middle Rio Grande Conservancy District. Gage-height record and rating table of storage capacity furnished by Middle Rio Grande Conservancy District.

Contents, in acre-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56,880	50,560	53,180	58,250	63,340	55,110	43,310	150,200	175,000	163,700	128,500	73,890
2	57,290	49,790	53,420	58,530	63,490	53,940	45,960	150,500	175,000	163,700	127,300	72,040
3	57,700	49,740	53,680	58,670	63,490	52,900	47,080	152,400	174,400	153,700	126,600	70,200
4	58,250	47,700	53,810	58,810	63,490	52,120	49,130	154,600	174,400	163,400	125,900	67,880
5	58,530	46,960	53,940	58,960	63,490	50,620	51,080	156,700	174,400	163,400	125,000	66,500
6	58,960	46,080	54,070	59,100	63,640	49,780	52,640	158,300	175,000	163,200	124,500	64,380
7	59,240	45,850	54,200	59,240	63,780	48,220	53,680	158,800	172,600	162,600	122,800	62,310
8	59,560	46,330	54,330	59,380	65,560	46,460	55,370	159,900	172,100	161,600	121,400	59,100
9	59,960	46,710	54,460	59,520	66,180	45,830	58,810	161,600	171,500	160,700	120,000	57,430
10	60,250	47,080	54,590	59,660	66,500	45,450	60,840	163,200	170,900	160,500	118,800	56,600
11	60,400	47,450	54,720	59,810	65,560	44,960	65,870	164,800	170,900	160,500	117,700	55,500
12	60,250	47,960	54,850	60,100	64,820	44,240	71,280	165,900	170,600	160,200	116,600	54,460
13	59,960	48,350	54,980	60,400	63,780	43,880	76,170	167,000	170,300	160,200	115,300	53,680
14	59,660	48,870	55,110	60,550	63,040	43,540	81,420	167,600	170,300	159,900	112,800	52,640
15	59,380	49,130	55,240	60,700	62,900	43,200	87,220	168,600	170,000	159,700	110,400	51,600
16	59,100	49,520	55,370	60,840	62,450	42,850	94,890	169,800	169,800	159,400	107,600	50,560
17	58,810	49,790	55,500	60,990	62,180	42,960	101,600	170,600	169,500	158,900	105,000	49,790
18	58,530	50,040	55,640	61,290	62,020	42,960	107,600	171,200	169,200	157,800	102,400	49,000
19	58,250	50,430	55,810	61,430	61,580	42,450	112,000	170,900	168,900	156,700	100,000	48,220
20	57,700	50,690	56,050	61,580	60,840	44,960	116,600	170,900	168,600	155,100	98,000	47,200
21	57,150	50,950	56,330	61,720	60,100	44,480	121,600	170,300	168,900	153,200	95,270	46,210
22	56,880	51,210	56,600	61,870	59,380	43,880	128,300	170,300	169,200	150,500	93,190	45,200
23	56,600	51,470	56,740	62,020	58,960	44,480	135,300	170,900	169,800	148,000	91,170	44,720
24	56,050	51,860	56,960	62,160	59,240	45,450	139,400	171,800	168,600	145,800	89,200	44,240
25	54,980	51,990	57,150	62,310	59,380	45,200	141,800	172,100	167,800	143,400	87,220	43,540
26	54,330	52,250	57,290	62,450	58,670	44,480	143,700	173,400	167,000	140,700	84,820	41,600
27	53,680	52,510	57,430	62,600	57,560	44,000	146,400	172,600	166,400	138,600	82,800	40,560
28	52,900	52,770	57,700	62,750	56,330	43,770	149,100	172,600	165,400	136,300	81,420	39,630
29	52,250	52,900	57,840	62,900	-	43,310	150,500	173,200	164,800	132,200	79,420	38,920
30	51,880	53,030	57,980	63,040	-	42,650	150,500	173,800	164,200	130,700	77,470	38,210
31	51,210	-	58,110	63,190	-	43,310	-	175,000	-	129,500	75,510	-



## Rio Chama near Tierra Amarilla, N. Mex.

**Location.**— Water-stage recorder, lat. 36°35', long. 106°44', in Tierra Amarilla Grant, 1,800 feet below El Vado Dam and 13 miles southwest of Tierra Amarilla, Rio Arriba County.

**Records available.**— October 1935 to September 1937. October 1913 to November 1915 and April to September 1916 (published as Rio Chama near El Vado), at site 1,900 feet upstream; records equivalent.

**Extremes.**— Maximum discharge during year, 4,330 second-feet May 30 (gage height, 9.63 feet); minimum daily discharge, 2.6 second-feet Feb. 23.

1913-15, 1916-17, 1935-37: Maximum discharge, 4,860 second-feet May 10, 1916; minimum daily discharge, that of Feb. 23, 1937.

**Remarks.**— Records good except those for periods of missing gage heights, June 15 to July 1, Aug. 31, which were computed on basis of operation of gates at El Vado Dam and are poor. Flow controlled by storage in El Vado Reservoir (capacity, 226,000 acre-feet at a gage height 8,910 feet). Several diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	812	4.3	4.6	5.7	630	610	2,300	2,010	500	620	1,130
2	13	785	4.6	5.0	5.7	630	615	2,360	2,010	437	477	1,130
3	11	785	4.6	4.6	6.1	630	258	2,540	1,760	433	401	1,130
4	9.4	785	4.6	4.6	6.1	625	4.3	2,320	1,660	433	401	1,010
5	9.4	780	4.6	4.6	6.1	615	162	3,170	1,660	405	401	925
6	11	529	4.6	4.6	6.1	620	283	3,500	1,400	350	785	925
7	11	3.7	4.6	4.6	25	630	286	3,560	1,290	665	1,070	925
8	11	3.7	4.3	4.3	7.5	620	290	3,680	1,260	665	1,040	898
9	12	3.7	4.3	4.3	6.1	630	441	3,800	1,190	458	1,040	898
10	12	3.7	4.3	4.6	124	625	670	3,930	925	302	1,190	898
11	66	3.7	4.3	4.6	269	620	680	4,060	925	292	1,320	898
12	346	3.9	4.3	4.6	266	605	692	4,080	925	292	1,360	765
13	404	3.9	4.3	4.6	266	610	708	4,190	925	292	1,360	690
14	404	3.9	4.3	4.6	269	615	610	4,190	925	288	1,460	690
15	400	4.3	4.6	4.3	272	605	552	3,800	920	292	1,500	665
16	400	4.3	4.6	4.3	266	610	562	3,670	920	390	1,500	530
17	396	4.3	4.6	4.3	282	610	570	3,670	920	665	1,460	449
18	396	4.3	4.6	4.3	280	605	580	3,670	920	665	1,460	449
19	396	4.3	4.6	4.6	328	605	590	3,420	800	918	1,460	449
20	396	4.3	4.6	5.3	328	605	590	3,500	500	1,330	1,460	453
21	392	4.3	4.6	5.0	328	605	600	2,780	400	1,360	1,260	457
22	490	4.3	4.3	5.3	280	570	610	2,200	400	1,360	1,160	461
23	680	4.3	4.3	5.3	2.6	503	708	1,960	800	1,290	1,130	457
24	665	4.3	4.3	5.3	3.2	562	1,060	2,010	800	1,360	1,130	512
25	660	4.6	4.3	5.3	300	605	1,340	1,680	1,200	1,460	1,130	690
26	655	4.3	4.3	5.3	534	605	1,600	1,620	1,100	1,400	1,130	665
27	650	4.3	4.6	5.3	566	605	1,980	1,620	1,000	1,290	1,130	665
28	697	4.3	4.6	5.3	630	605	2,200	1,400	900	1,190	1,100	665
29	521	4.3	4.6	5.3	-	605	2,290	1,680	800	898	1,130	690
30	644	4.3	5.0	5.3	-	605	2,290	1,680	700	790	1,160	398
31	812	-	5.0	5.7	-	605	-	1,880	-	665	1,140	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						10,582.8	812	9.4	341	20,990		
November.....						4,575.3	812	3.7	153	9,070		
December.....						139.5	5.0	4.3	4.50	277		
Calendar year 1936.....						197,780.6	3,470	3.7	540	392,300		
January.....						149.7	5.7	4.3	4.83	297		
February.....						5,648.2	630	2.6	202	11,200		
March.....						18,820	630	503	607	37,330		
April.....						24,431.3	2,290	4.3	814	48,460		
May.....						90,500	4,190	1,400	2,919	179,500		
June.....						31,765	2,010	400	1,059	63,000		
July.....						23,135	1,460	288	746	45,890		
August.....						34,365	1,500	401	1,109	68,160		
September.....						21,567	1,130	398	719	42,780		
Water year 1936-37.....						265,678.8	4,190	2.6	728	527,000		

## Rio Chama near Chamita, N. Mex.

**Location.**— Water-stage recorder, lat. 36°08', long. 106°08', in S $\frac{1}{2}$  sec. 31, T. 22 N., R. 8 E., 80 feet below new Espanola-Ojo Caliente highway bridge,  $\frac{3}{4}$  miles northwest of Chamita, and 4 miles above confluence with Rio Grande.

**Records available.**— October 1912 to June 1915 and October 1930 to September 1937 in reports of Geological Survey; October 1912 to December 1931 in reports of State engineer.

**Extremes.**— Maximum discharge during year, 6,610 second-feet Apr. 16 (gage height, 6.35 feet); minimum daily discharge, 9 second-feet Jan. 3.  
1930-37: Maximum discharge, 7,700 second-feet May 20, 1932; maximum gage height, 6.74 feet May 16, 1935, present site and datum; no flow at times.

**Remarks.**— Records good except those for periods of ice effect, Jan. 1, 4, 5, 8-10, Jan. 12 to Feb. 7, which were computed on basis of two discharge measurements, gage heights, weather records, and records for Rio Chama near Tierra Amarilla, Rio Grande at Otowi Bridge, and Rio Colorado near Questa and are poor. Diversions for irrigation above station. Flow regulated by operation of gates at El Vado Dam.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	154	783	58	30	30	831	1,020	3,310	2,480	705	675	1,270
2	133	792	66	23	30	919	1,490	3,710	2,480	577	586	1,170
3	104	765	49	9	30	1,180	1,660	4,030	2,480	596	439	1,180
4	107	747	44	20	30	1,030	1,220	4,030	2,130	511	330	1,240
5	104	792	51	30	30	1,160	705	4,520	1,890	457	362	1,080
6	129	810	30	37	30	963	726	4,860	1,840	413	379	1,010
7	154	675	35	30	30	1,390	875	4,690	1,520	370	701	1,490
8	142	280	49	30	1,620	1,620	952	5,030	1,400	799	963	1,090
9	133	171	56	30	345	1,320	1,520	5,370	1,350	655	941	1,010
10	133	163	58	35	176	1,480	1,890	5,200	1,240	568	908	963
11	125	150	44	37	96	1,330	2,780	5,200	1,030	558	996	930
12	118	125	46	35	232	1,320	3,550	5,200	974	457	1,030	898
13	190	125	49	35	448	1,050	4,110	5,370	930	345	1,090	746
14	421	100	58	35	422	1,170	4,520	5,370	908	285	1,120	665
15	329	90	39	30	1,210	1,110	4,690	5,370	919	285	1,240	615
16	329	87	84	30	1,690	930	5,200	4,860	886	257	1,320	596
17	342	118	89	30	919	1,080	3,950	4,690	897	278	1,360	520
18	342	133	49	30	788	1,240	3,000	4,520	897	577	1,360	484
19	342	104	56	30	715	1,010	3,470	4,350	908	539	1,360	457
20	348	107	69	30	596	864	3,160	3,950	768	979	1,320	439
21	317	97	81	30	493	875	3,310	3,630	413	1,270	1,330	413
22	317	84	53	25	520	996	3,550	2,860	354	1,170	1,110	422
23	387	75	30	25	502	1,160	3,310	2,480	413	1,210	1,080	457
24	630	61	35	30	292	810	2,630	2,580	799	1,120	1,060	466
25	792	51	63	35	385	886	2,700	2,480	1,260	1,330	1,100	475
26	792	53	97	35	926	842	2,930	2,060	1,720	1,390	1,140	615
27	666	49	81	35	810	768	3,470	1,840	1,500	1,350	1,170	615
28	630	61	81	35	799	778	3,710	1,830	1,220	1,260	1,160	606
29	666	66	61	35	-	810	3,470	1,870	952	1,290	1,170	655
30	562	72	37	30	-	799	3,230	2,860	886	997	1,520	1,440
31	666	-	18	30	-	831	-	2,630	-	726	1,710	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						10,604	792	104	342	21,030		
November.....						7,768	810	49	260	15,440		
December.....						1,676	97	18	54.1	3,320		
Calendar year 1936.....						252,516	5,090	18	690	500,900		
January.....						941	37	9	30.4	1,870		
February.....						14,244	1,690	30	509	28,250		
March.....						32,552	1,620	768	1,050	64,570		
April.....						32,798	5,200	705	2,760	164,200		
May.....						120,730	5,370	1,830	3,895	239,500		
June.....						37,444	2,480	354	1,248	74,270		
July.....						23,244	1,390	257	750	46,100		
August.....						32,030	1,710	330	1,033	63,530		
September.....						24,005	1,490	413	800	47,610		
Water year 1936-37.....						388,054	5,370	9	1,063	769,700		

## El Rito Creek near El Rito, N. Mex.

Location.- Water-stage recorder, lat.  $36^{\circ}23'$ , long.  $106^{\circ}13'$ , in sec. 19, T. 25 N., R. 7 E., 3 miles northwest of El Rito. Gaging station destroyed in flood of Apr. 16. Record obtained from water-stage recorder at former site 200 feet downstream, Apr. 29 to Sept. 30.

Records available.- May 1931 to September 1937.

Extremes.- Maximum discharge during year not determined; minimum daily discharge not determined.

1931-37: Maximum discharge not determined; minimum daily discharge, 0.3 second-foot June 21-23, 1934.

Remarks.- Records fair except those for periods of missing gage heights, Oct. 30 to Apr. 28, June 18-24, which were computed on basis of six discharge measurements and records for Rio Ojo Caliente at La Madera, and are poor. Gage-height record for period Oct. 30 to Apr. 16, destroyed by flood on latter date. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6							178	41	14	3.8	1.5
2	8.8							242	42	12	4.0	1.4
3	6.9							233	50	12	3.2	1.4
4	5.6							216	37	8.6	3.2	1.7
5	4.4							208	32	6.2	3.4	1.6
6												
7	5.4							250	29	5.4	3.0	1.4
8	5.6							290	26	8.3	2.8	1.4
9	5.9							260	25	6.5	2.6	1.4
10	7.8							233	26	6.0	2.2	1.3
11	5.9							242	24	8.3	2.1	1.2
12												
13	4.9							216	21	9.9	1.6	1.2
14	4.2							190	20	8.9	1.5	1.1
15	3.7							172	19	7.0	1.6	1.1
16	3.4							162	18	6.5	1.6	1.1
17	3.2							145	18	5.7	1.7	1.1
18												
19	3.2							126	19	4.9	2.0	1.1
20	3.2							108	17	4.4	4.4	1.1
21	3.0							89	16	4.4	2.1	1.3
22	3.0							94	14	4.0	2.2	1.3
23	6.9							74	12	4.0	1.8	1.3
24												
25	7.5							62	11	5.4	1.6	1.2
26	7.2							56	10	4.7	1.7	1.2
27	7.2							72	9	4.2	1.7	1.2
28	6.9							80	8	4.4	1.4	1.2
29	8.2							56	7.0	4.4	1.1	1.1
30												
31	8.8							49	10	4.7	1.3	1.1
	9.2							44	14	6.5	1.4	1.1
	9.6							48	11	5.7	1.4	1.0
	9.6							57	8.3	7.0	1.6	1.3
	10							99	9.6	5.7	1.8	1.1
	15							49		4.9	4.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						203.8	15	3.0	6.57	404		
November.....						140	-	-	4.7	278		
December.....						77.5	-	-	2.5	154		
Calendar year 1936.....						6,639.1	240	-	18.1	13,160		
January.....						75.0	-	-	2.4	149		
February.....						88.0	-	-	3.1	175		
March.....						1,280	-	-	41.3	2,540		
April.....						7,027	-	-	234	13,940		
May.....						4,398	290	44	142	8,720		
June.....						603.9	50	7.0	20.1	1,200		
July.....						204.6	14	4.0	6.60	406		
August.....						70.6	4.9	1.1	2.28	140		
September.....						47.4	11	1.0	1.58	94		
Water year 1936-37.....						14,215.8	-	-	38.9	28,200		

## Rio Ojo Caliente at La Madera, N. Mex.

Location.- Water-stage recorder, lat.  $36^{\circ}20'45''$ , long.  $106^{\circ}02'50''$ , in NE $\frac{1}{4}$  sec. 1, T. 24 N., R. 8 E., 2.5 miles south of La Madera and 4 miles north of Ojo Caliente.

Records available.- April 1932 to September 1937.

Extremes.- Maximum discharge during year, about 2,570 second-feet Apr. 16 (gage height, 5.37 feet), from rating curve extended above 1,100 second-feet; minimum daily discharge, 4 second-feet July 17, 19-21.

1932-37: Maximum discharge, that of Apr. 16, 1937; maximum gage height, 7.60 feet (former site and datum) July 15, 1933; minimum daily discharge, 1 second-foot at times.

Remarks.- Records poor. Discharge for periods of ice effect, Dec. 31, Jan. 2-6, Jan. 10 to Feb. 2, Feb. 4-21, and for period of missing gage heights, Apr. 11-20, computed on basis of weather records and records for Rio Chama at Park View. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	62	27	21	20	37	407	691	157	42	10	23
2	59	57	15	18	18	55	566	895	157	37	10	17
3	49	33	14	15	19	62	603	949	194	29	8	16
4	44	44	20	14	20	46	515	915	134	22	7	34
5	37	57	26	15	22	49	425	980	103	16	7	21
6	55	54	16	17	22	48	425	855	79	11	8	18
7	62	52	17	20	24	90	412	795	63	25	7	34
8	48	48	20	24	20	126	530	980	55	10	7	44
9	48	40	19	22	20	118	708	915	46	10	7	29
10	41	37	17	18	22	185	825	825	37	7	6	22
11	36	36	17	19	22	194	1,050	825	30	10	6	19
12	31	35	17	20	24	194	1,500	724	29	13	6	17
13	26	33	17	22	26	194	1,400	702	32	9	5	16
14	25	36	19	20	26	163	1,600	674	30	7	6	14
15	25	36	19	18	26	140	1,800	658	25	6	6	14
16	24	35	20	20	26	192	1,950	603	22	5	9	14
17	24	35	22	22	28	312	1,800	525	20	4	14	14
18	24	36	18	20	25	303	1,200	452	18	5	10	14
19	24	33	19	22	24	207	1,500	420	20	4	13	14
20	24	31	20	20	23	163	1,400	376	20	4	11	14
21	36	31	22	20	25	185	1,320	304	17	4	10	14
22	36	29	19	18	29	270	1,390	256	14	5	8	14
23	36	29	18	18	30	292	1,220	232	14	5	8	14
24	37	22	20	20	33	185	735	359	13	5	8	13
25	39	20	20	20	45	191	664	305	14	6	8	12
26	41	20	22	22	40	160	825	224	48	16	7	13
27	42	21	15	23	33	154	1,040	185	67	14	8	14
28	41	23	17	24	32	178	915	182	67	14	8	14
29	41	26	22	25	-	185	647	243	32	17	10	14
30	40	21	17	21	-	163	565	336	21	15	21	24
31	71	-	16	24	-	234	204	-	-	11	29	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,237	71	24	39.9	2,450		
November.....						1,072	62	20	35.7	2,130		
December.....						587	27	14	18.9	1,160		
Calendar year 1936.....						34,103	1,110	5	95.2	67,650		
January.....						622	25	14	20.1	1,230		
February.....						728	45	18	26.0	1,440		
March.....						5,074	312	37	164	10,060		
April.....						29,357	1,950	407	979	58,230		
May.....						17,638	980	182	569	34,980		
June.....						1,578	194	13	52.6	3,130		
July.....						387	42	4	12.5	768		
August.....						286	29	5	9.3	571		
September.....						554	44	12	18.5	1,100		
Water year 1936-37.....						59,122	1,950	4	162	117,200		

## 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 below head gate and ¾ miles northwest of Chamita.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 56 second-feet July 8 (gage height, 2.32 feet); no flow at times.  
1936-37: Maximum discharge, 70 second-feet July 19, 1936 (gage height, 2.34 feet); no flow at times.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are fair. Ditch diverts water from left bank of Rio Chama for irrigation. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3.0	3.6			0	0	17	19	12	7.3	4.2
2	*.8	4.5	0			0	8.0	0	13	7.6	18	8.7
3	7.3	4.1	0			0	11	9.6	7.8	8.3	19	8.8
4	0	3.0	0			0	0	16	9.0	17	24	6.4
5	0	1.7	1.6			0	8.6	17	18	12	30	0
6	0	2.1	0			0	9.1	22	20	7.3	22	12
7	0	1.5	0			0	13	16	17	14	30	9.9
8	3.9	1.6	0			0	11	14	31	30	34	4.5
9	2.6	.4	0			0	12	0	26	19	37	*2.0
10	.5	0	0			4.0	13	22	6.4	15	36	11
11	0	0	0			6.9	0	24	13	9.2	31	21
12	4.1	9.5	0			7.6	14	16	22	12	29	22
13	6.1	12	0			*5.5	13	20	31	24	28	20
14	0	12	0			0	12	24	22	26	27	18
15	6.1	8.4	0			*9.1	11	16	24	28	25	21
16	8.2	11	0			8.7	9.4	0	25	35	14	27
17	2.2	3.4	0			11	7.3	11	17	30	28	17
18	1.5	1.1	0			11	*.3	21	18	23	24	20
19	1.6	0	0			0	13	16	12	27	21	21
20	8.9	0	0			10	*6.6	22	0	22	26	16
21	6.3	0	0			0	*12	29	9.0	19	23	16
22	0	1.9	0			13	17	15	29	25	17	15
23	0	0	0			*9.9	11	2.1	25	20	17	19
24	.8	0	0			*6.0	6.4	22	35	16	22	11
25	.7	0	0			0	0	21	20	19	14	16
26	0	0	0			*6.5	11	23	18	16	23	11
27	10	0	0			*9.9	2.7	22	0	17	23	6.5
28	22	0	0			0	12	27	0	11	12	5.3
29	11	0	0			*6.7	18	9.0	16	12	*2.8	5.1
30	3.6	0	0			0	18	11	21	23	*.7	.8
31	6.3	-	0			0	-	32	-	22	*.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						114.5	22	0	3.69	227		
November.....						81.2	12	0	2.71	161		
December.....						5.2	3.6	0	.17	10		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						125.8	13	0	4.06	250		
April.....						280.4	18	0	9.35	556		
May.....						516.7	32	0	16.7	1,020		
June.....						524.2	35	0	17.5	1,040		
July.....						578.4	35	7.3	18.7	1,150		
August.....						662.2	37	.4	21.4	1,310		
September.....						376.2	27	0	12.5	746		
Water year 1936-37.....						3,274.8	37	0	8.94	6,470		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

## Santa Clara ditch near Espanola, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°58', long. 106°05', in NW¼ sec. 15, T. 20 N., R. 8 E., 300 feet above siphon under Santa Clara Creek, three-quarters of a mile east of Santa Clara, about 2 miles below head gate, and 2 miles south of Espanola.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 17 second-feet May 16 and Aug. 30 (gage height, 0.97 foot); no flow at times.  
1936-37: Maximum discharge, 18 second-feet Aug. 26, 1936 (gage height, 1.00 foot); no flow at times.

Remarks.- Records good except those for periods of missing gage heights, June 17 to July 8, July 13-18, which were estimated and are poor. Ditch diverts water from right bank of Rio Grande at Espanola for irrigation on Santa Clara Pueblo Grant. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3						0	8.7	7.2		3.7	0.2
2	.2						0	8.9	7.4		1.5	.2
3	.1						0	8.7	7.6		1.7	.1
4	.1						0	9.1	8.2		2.0	.3
5	.1						0	9.8	7.6		2.8	1.1
6	0						0	11	6.0		2.9	1.1
7	0						1.3	9.3	4.0		5.5	2.6
8	0						1.4	11	3.8		1.6	3.5
9	0						3.5	12	3.6	2.0	4.4	6.6
10	0						5.8	9.1	3.4	2.2	8.9	6.6
11	0						3.4	5.5	3.2	2.2	9.6	5.0
12	0						2.0	3.4	3.6	2.6	10	.8
13	0						3.0	3.8	5.2		6.4	2.2
14	0						1.2	7.4	5.0		9.3	4.3
15	0						3.5	8.5	5.0		7.6	3.5
16	0						3.9	14	4.8	5	6.4	1.7
17	0						2.7	11			6.6	3.0
18	0						4.0	7.6			4.7	2.9
19	0						8.7	4.1		7.0	2.3	2.9
20	0						14	4.1		5.8	7.4	3.4
21	0						14	3.0		9.6	4.0	3.2
22	0						15	1.7		9.1	6.2	3.8
23	0						14	1.3		12	3.1	4.3
24	0						13	9.6		8.5	6.4	2.1
25	0						11	11		9.3	7.6	.2
26	0						9.8	10		4.7	8.7	0
27	0						8.7	8.9		3.4	9.6	0
28	0						9.1	8.2		3.5	8.3	0
29	0						10	7.2		3.5	4.2	0
30	0						8.7	6.8		4.1	7.2	0
31	0						-	6.6	-	4.1	.3	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0.8	0.3	0	0.03	1.6		
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.....						170.7	15	0	5.69	339		
May.....						241.3	14	1.3	7.78	479		
June.....						141.6	8.2	-	4.72	281		
July.....						147.6	12	-	4.76	293		
August.....						173.1	10	.3	5.58	343		
September.....						65.6	6.6	0	2.19	130		
Water year 1936-37.....						940.7	15	0	2.58	1,870		

## Rio Santa Cruz at Cundiyo, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}58'$ , long.  $105^{\circ}55'$ , in SE $\frac{1}{4}$  sec. 17, T. 20 N., R. 10 E., 135 feet below highway bridge at junction of Rio Medio and Rio Frijoles to form Rio Santa Cruz and a quarter of a mile northwest of Cundiyo.

Records available.- September 1931 to September 1937 in reports of Geological Survey; June 1928 to June 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 184 second-feet May 30; maximum gage height recorded, 2.57 feet May 30 (may have been higher during period of ice effect); minimum daily discharge, 6.0 second-feet Nov. 24.  
1931-37: Maximum discharge, about 2,610 second-feet Sept. 24, 1931 (gage height, 8.20 feet, former datum); minimum daily discharge, 3 second-feet Feb. 3, 1932, and Jan. 21, 1935.

Remarks.- Records good except those for periods of ice effect or missing gage heights, which are poor. Several diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	20	10	8	9	12	32	92	168	83	26	22
2	24	17	9.0	8	9	13	49	94	158	80	26	19
3	23	7.4	11	7	10	13	54	97	152	72	27	17
4	23	15	15	8	12	13	55	99	142	68	27	16
5	19	22	11	9	13	13	46	103	130	64	24	17
6	20	18	9	10	13	12	47	108	122	63	21	28
7	18	16	8	10	12	13	44	106	115	71	20	36
8	17	14	8	9	10	15	42	112	108	74	18	25
9	16	13	9	8	9	14	48	115	97	66	18	21
10	16	14	10	8	10	18	57	121	92	63	18	20
11	16	14	9	9	11	23	80	124	87	68	17	19
12	16	14	8	10	12	26	95	126	78	72	17	17
13	16	14	9	9	13	25	104	127	74	62	17	15
14	16	14	10	9	15	21	114	128	71	56	16	15
15	16	13	10	9	13	19	128	134	69	51	15	14
16	16	12	10	9	11	20	144	140	64	48	18	13
17	16	12	10	9	10	21	152	138	59	44	19	12
18	15	12	9.0	9	11	20	134	132	55	41	28	12
19	15	11	9.4	10	10	18	122	130	52	39	24	13
20	23	9.8	9.4	10	10	18	112	128	48	37	20	12
21	21	11	9.4	8	8	20	114	121	45	37	16	13
22	18	11	9.8	7	9	29	118	115	41	32	16	13
23	18	11	9.8	7	11	38	114	115	39	32	15	13
24	16	6.0	9.8	8	11	37	99	118	37	31	15	13
25	20	9.0	10	9	13	31	96	112	48	35	16	13
26	18	12	10	10	12	28	99	104	60	37	16	13
27	17	12	10	11	13	26	104	105	78	34	21	12
28	18	12	9	12	12	24	103	110	70	37	15	12
29	16	13	9	12	-	23	97	127	72	35	22	13
30	18	10	8	11	-	23	92	178	80	30	32	27
31	27	-	8	10	-	24	-	166	-	28	40	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						575	27	15	18.5	1,140		
November.....						389.2	22	6.0	13.0	772		
December.....						296.6	15	8	9.57	588		
Calendar year 1936.....						9,436.4	102	-	25.8	18,710		
January.....						283	12	7	9.1	561		
February.....						312	15	8	11.1	619		
March.....						650	38	12	21.0	1,290		
April.....						2,665	144	32	88.8	5,290		
May.....						3,721	178	92	120	7,380		
June.....						2,511	168	37	83.7	4,980		
July.....						1,890	85	28	51.3	3,150		
August.....						640	40	15	20.6	1,270		
September.....						504	35	12	16.8	1,000		
Water year 1936-37.....						14,136.8	178	6.0	38.7	28,040		

Note.- Discharge for periods of ice effect, Dec. 5-17, Dec. 28 to Feb. 3, Feb. 5, 6, 8-17, 21, 22, and day of missing gage height, Sept. 7, computed on basis of four discharge measurements, weather records, and records for Nambe Creek near Nambe.

## Santa Clara Creek near Espanola, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°58', long. 106°11', in SW $\frac{1}{4}$  sec. 11, T. 20 N., R. 7 E.,  $\frac{5}{8}$  miles above mouth and  $\frac{5}{8}$  miles southwest of Espanola.

Records available.- February 1936 to September 1937.

Extremes.- Maximum discharge during year, 17 second-feet Sept. 22 (gage height, 2.18 feet); minimum daily discharge, 2.1 second-feet Feb. 21.

1936-37: Maximum discharge, about 68 second-feet July 28, 1936 (gage height, 2.32 feet), by slope-area method; minimum daily discharge, 1.2 second-feet June 23, 1936.

Remarks.- Records good except those for periods of ice effect, Nov. 24-27, Dec. 3, 5-15, 19, 20, Dec. 28 to Feb. 3, Feb. 8-14, 20-23, which were computed on basis of five discharge measurements, gage heights, and weather records, and are poor. Small diversion about a quarter of a mile above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	4.5	4.5	3	3.5	3.4	5.5	6.4	7.3	6.6	3.1	3.4
2	4.5	4.8	3.9	3	3.5	3.6	6.6	6.2	6.8	5.4	3.0	3.3
3	4.5	3.6	3.9	3	3.5	3.9	6.2	6.0	6.8	4.6	3.0	3.9
4	4.5	4.2	4.5	3.5	3.1	3.4	5.8	6.0	7.3	4.1	3.0	4.4
5	4.5	4.5	4.5	4	3.4	3.4	4.8	6.6	7.0	3.9	3.0	3.7
6	4.8	4.5	2.3	4.5	3.4	3.4	4.8	7.0	7.0	3.7	3.0	3.7
7	4.2	4.2	2.3	5.5	5.5	3.9	4.8	7.0	7.0	3.7	2.7	4.2
8	3.6	4.2	3.1	4	2.3	4.2	5.5	6.8	6.8	3.7	3.0	4.4
9	3.6	4.5	3.4	4.5	2.5	4.5	6.6	7.5	6.2	3.9	3.6	3.7
10	3.6	4.5	3.1	5	2.5	5.5	6.9	8.0	6.6	5.0	2.8	3.3
11	3.4	4.2	2.3	5.5	3	5.8	7.3	8.0	6.2	4.6	2.7	3.1
12	3.4	4.5	2.6	6	3.5	5.8	7.3	7.7	5.8	4.6	2.7	3.3
13	3.6	4.5	2.8	5.5	4	5.8	6.9	7.5	5.8	3.4	3.0	3.3
14	3.4	4.0	3.9	4.5	4.5	5.2	6.9	7.3	5.6	3.7	3.3	3.1
15	3.4	4.5	5.2	5	4.5	4.8	7.7	7.5	5.4	3.6	3.6	3.0
16	3.6	4.5	5.8	5.5	3.9	4.8	8.1	7.7	5.0	3.4	3.7	3.4
17	3.6	4.5	5.8	5	3.6	4.8	8.1	7.5	4.6	3.3	3.3	3.4
18	3.6	4.8	5.8	4	3.6	4.8	*8.5	7.0	4.4	3.6	3.7	3.3
19	3.6	4.8	5.8	5.5	3.4	4.5	*8.5	6.6	4.1	3.4	3.3	3.1
20	4.2	4.8	5.8	5	2.6	5.2	*8	6.6	4.1	3.6	3.1	3.1
21	4.5	4.8	5.8	4.5	2.1	4.8	*8	6.6	3.7	3.4	3.1	3.4
22	4.5	4.5	5.8	4	3.4	4.8	7.3	6.6	3.3	3.3	2.8	3.9
23	4.5	4.5	6.2	4	3.6	5.2	7.7	6.8	4.1	3.3	3.1	3.6
24	4.5	4.5	5.8	3.5	3.9	4.2	7.3	6.4	4.1	3.1	3.3	3.1
25	4.5	4.5	5.8	3	3.9	4.8	6.6	6.2	4.4	3.1	3.1	3.3
26	4.2	4.5	5.8	3.5	3.6	4.2	6.4	5.6	6.0	3.1	3.7	3.3
27	4.2	4.8	5.5	4	3.4	4.2	6.4	5.6	7.3	3.4	4.1	3.3
28	3.9	4.2	5.2	4.5	3.9	4.8	6.6	8.0	6.0	4.1	3.7	3.3
29	4.2	4.2	5.2	4.5	-	4.5	6.8	7.5	5.4	3.6	4.4	3.7
30	5.5	4.2	4.2	4	-	4.2	6.2	10	6.0	4.1	3.9	6.2
31	5.8	-	2.8	4	-	4.8	-	8.5	-	3.4	4.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						129.1	5.8	3.4	4.16	256		
November.....						134.1	4.8	3.6	4.47	266		
December.....						139.4	6.2	2.3	4.50	276		
Calendar year .....												
January.....						135.0	6	3	4.35	268		
February.....						97.6	5.5	2.1	3.49	194		
March.....						141.2	5.8	3.4	4.55	280		
April.....						203.9	8.5	4.8	6.80	404		
May.....						218.7	10	5.6	7.05	434		
June.....						170.1	7.3	3.3	5.67	337		
July.....						119.7	6.6	3.1	3.86	237		
August.....						102.2	4.4	2.7	3.30	203		
September.....						107.2	6.2	3.0	3.57	213		
Water year 1936-37.....						1,698.2	10	2.1	4.65	3,370		

\*Gage height missing; discharge estimated on basis of knowledge of local conditions.



## Guachupangue ditch near Espanola, N. Mex.

Location.— Water-stage recorder lat.  $35^{\circ}58'$ , long.  $106^{\circ}07'$ , in SE $\frac{1}{4}$  sec. 8, T. 20 N., R. 8 E., a quarter of a mile below head,  $1\frac{1}{2}$  miles west of Santa Clara Pueblo, and  $2\frac{1}{2}$  miles southwest of Espanola.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during year not determined; maximum gage height, 2.40 feet (backwater from weed jam) Mar. 20; no flow at times.

1936-37: Maximum discharge not determined; maximum gage height, 2.41 feet Sept. 22, 1936; no flow at times.

Remarks.— Records poor. Discharge estimated for period of missing gage heights, Jan. 6-19, and for periods of backwater from weed jam, Mar. 19-22, Apr. 7-14, Apr. 28 to May 31. Ditch diverts water from left bank of Santa Clara Creek for irrigation on Spanish land grants near Guachupangue. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.6	0	0	0	3.1		0.8	1.4	2.7	0
2	0	.2	.7	.1	0	0	4.4		.9	.5	2.4	0
3	0	.1	1.2	0	0	0	2.8		1.4	2.7	1.5	0
4	0	.8	1.9	0	0	0	.2		0	3.2	1.0	.1
5	0	1.8	1.2	0	0	0	.8		0	3.0	0	0
6	0	1.0	.1	0	0	0	1.6		0	.8	0	1.5
7	0	.4	.1	0	.1	0	1.5		0	0	1.5	4.1
8	0	.1	.7	0	0	0	1.5		4.7	0	2.0	2.5
9	0	1.0	.8	0	0	0	1.5		2.4	0	2.9	.2
10	0	2.5	.4	0	0	.4	1.5		1.1	2.6	.5	0
11	0	1.5	.1	0	.1	.4	2		1.1	3.6	0	2.6
12	0	1.0	.5	0	.1	.2	2		1.1	3.6	0	3.9
13	0	.8	1.6	0	0	3.9	2		1.2	.8	0	4.4
14	0	.7	2.2	0	0	6.0	1.5		1.0	0	1.6	1.6
15	0	.7	.7	0	0	4.5	0		1.0	0	2.5	0
16	0	.7	.2	0	0	4.1	0		.8	0	2.9	0
17	0	.7	.1	0	0	4.0	.3		.6	1.8	.8	.1
18	0	.7	0	0	0	4.1	2.9		.6	2.3	0	1.7
19	.9	.8	0	0	0	4	4.6		.5	2.4	0	2.6
20	2.5	.6	.1	0	0	4	5.0		1.0	.5	0	1.2
21	2.7	.3	0	0	0	4	3.5		.5	.1	1.6	.7
22	2.4	.1	0	0	0	4	1.6		.1	.1	1.9	1.4
23	1.5	.1	0	0	0	4.8	1.7		0	0	1.8	.4
24	.6	.1	.1	0	0	2.9	1.7		0	1.3	.6	0
25	.7	.1	0	0	0	2.8	1.1		0	2.0	0	0
26	.5	.1	0	0	0	0	.8		3.4	2.0	0	0
27	.5	.1	.3	0	0	2.0	.8		5.6	.9	.4	0
28	.3	.1	.2	0	0	3.9			5.4	0	2.0	0
29	.3	.1	0	0	-	3.8	1		4.6	0	3.0	0
30	.6	.1	0	0	-	2.7			2.4	0	.7	.1
31	.2	-	0	0	-	2.7	-		-	2.3	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						13.7	2.7	0	0.44	27		
November.....						17.3	2.5	0	.58	34		
December.....						13.8	2.2	0	.45	27		
Calendar year .....												
January.....						.1	.1	0	0	.2		
February.....						.3	.1	0	.01	.6		
March.....						69.2	6.0	0	2.23	137		
April.....						53.4	5.0	0	1.78	106		
May.....						50	-	-	1.61	99		
June.....						42.2	5.6	0	1.41	84		
July.....						37.9	3.6	0	1.22	75		
August.....						34.3	3.0	0	1.11	68		
September.....						29.1	4.4	0	.97	58		
Water year 1936-37.....						361.3	-	0	.99	716		

## Nambé Creek near Nambé, 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 Nambé Pueblo Grant, about 1,000 feet below diversion dam for Nambé canal, 2½ miles southeast of Nambé, and 6½ miles above confluence with Rio Tesuque.

Records available.— October 1932 to September 1937.

Extremes.— Maximum discharge during year, 80 second-feet May 30 (gage height, 3.63 feet); minimum daily discharge, 3.1 second-feet Dec. 6, 1932-37; Maximum discharge, about 878 second-feet Aug. 23, 1935 (gage height, 6.43 feet); no flow for several days in October 1934.

Remarks.— Records fair except those for periods of ice effect or fragmentary gage-height record, which are poor. One diversion for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	6.0	5.0	†4.2	4.0	5.0	28	56	26	10	6.0
2	14	12	5.0	†5.2	4.0	4.5	8.1	28	58	26	8.1	6.8
3	14	8.4	*5.0	†4.7	5.0	4.7	9.7	28	62	20	7.8	6.5
4	14	12	6.0	†4.7	†5.0	4.5	9.7	28	58	19	8.1	6.8
5	13	12	6.0	†4.7	5.2	4.7	8.1	28	53	18	7.4	7.4
6	15	11	*5.1	†5.0	5.0	4.7	8.4	29	46	16	6.5	14
7	13	11	5.2	4.7	5.5	4.7	6.8	29	40	16	6.3	16
8	12	11	5.2	4.5	5.2	5.0	8.1	30	39	17	6.0	11
9	12	9.7	†4.7	4.5	5.2	4.0	9.0	31	37	17	5.8	11
10	12	9.7	4.5	†4.0	†5.2	4.7	10	32	35	16	5.8	12
11	11	9.4	†4.2	†4.5	†6.0	5.2	14	33	34	16	5.5	11
12	11	9.0	†4.7	†5	5.8	6.0	18	35	32	20	6.0	11
13	11	8.4	†5.0	†5	5.2	6.3	24	35	31	17	6.8	8.7
14	10	8.4	†5.0	†5	5.5	5.8	29	35	29	16	6.0	7.4
15	10	8.4	†5.0	†5	5.8	5.8	35	40	26	15	5.5	6.4
16	11	8.1	5.2	†5	5.0	5.2	38	42	24	14	5.5	8.1
17	11	8.1	5.2	†5	4.5	5.5	35	41	23	15	7.8	7.8
18	10	7.8	5.0	†5	4.7	5.0	37	38	23	14	9.4	7.8
19	10	7.1	†4.7	†6	4.7	4.5	39	37	22	13	9.7	7.4
20	13	7.1	†4.7	5.8	4.5	4.2	35	38	21	12	6.8	6.8
21	12	7.1	5.0	†5.8	†4.5	5.0	38	35	19	13	6.5	6.5
22	11	6.8	4.7	†4.5	4.0	3.8	39	33	18	12	6.8	6.5
23	11	6.5	5.0	†4	4.2	5.2	39	35	18	12	5.2	6.8
24	11	*5.0	5.0	†4	4.5	6.4	32	34	18	12	5.5	6.8
25	12	*5.2	4.7	†4	4.5	6.3	31	30	24	15	6.3	6.5
26	12	5.5	4.7	†4.5	4.5	6.0	31	28	28	11	6.3	6.3
27	12	5.5	4.5	†5	4.2	5.2	32	30	37	9.0	6.3	6.0
28	12	6.8	4.7	5.0	4.2	4.7	32	35	35	9.0	5.8	5.8
29	11	6.0	5.0	5.0	-	4.7	30	45	31	10	8.1	5.0
30	13	5.5	4.7	5.0	-	4.5	29	71	28	6.7	7.8	11
31	14	-	†4.7	5.0	-	4.0	-	57	-	9.4	9.7	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	372	15	10	12.0	738
November.....	251.5	13	5.0	8.36	499
December.....	152.1	6.0	3.1	4.91	302
Calendar year 1936.....	3,653.6	31	3.1	9.96	7,240
January.....	150.1	6	4	4.84	298
February.....	135.8	6.0	4.0	4.85	289
March.....	154.8	6.4	3.8	4.99	307
April.....	718.9	39	5.0	24.0	1,430
May.....	1,098	71	28	35.4	2,180
June.....	1,005	62	18	33.5	1,990
July.....	466.1	26	8.7	15.0	924
August.....	215.1	10	5.2	6.94	427
September.....	249.1	16	5.0	8.30	494
Water year 1936-37.....	4,968.5	71	3.1	13.6	9,860

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.  
†Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

Nambe Creek at Pojoaque Bridge, near Nambe, N. Mex.

Location.— Water-stage recorder, lat.  $35^{\circ}54'$ , long.  $106^{\circ}01'$ , in NW $\frac{1}{4}$  sec. 8, T. 19 N., R. 9 E., 300 feet below head of Barranco Alto ditch, a quarter of a mile above highway bridge at Pojoaque, 1 mile above confluence with Rio Tesuque, and 3 miles west of Nambe.

Records available.— February 1936 to September 1937.

Extremes.— Maximum discharge during year, about 480 second-feet June 28 (gage height, 4.08 feet), from rating curve extended above 85 second-feet on basis of slope-area determination at 2,400 second-feet; no flow at times.  
1936-37: Maximum discharge, about 2,400 second-feet Aug. 20, 1936 (gage height, 5.18 feet), by slope-area method; no flow at times.

Remarks.— Records poor. Several diversions above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	19	3.2	4.0	4.0	6.8	0.3	19	77	27	5.0	1.1
2	9.0	20	3.4	3.4	3.4	6.3	.3	19	107	27	1.4	.2
3	6.8	18	3.4	3.2	4.2	6.3	.3	19	77	16	2.1	0
4	4.5	21	4.2	4.0	4.2	5.4	.4	17	85	17	2.2	.7
5	2.9	18	6.3	7.6	4.2	6.3	.4	14	57	14	2.3	3.2
6	10	18	5.8	9.6	4.0	5.4	.3	14	65	6.3	2.4	.3
7	17	18	6.3	8.1	5.8	4.5	.4	12	58	6.3	2.5	8.1
8	17	9.6	5.0	6.8	9.0	4.0	.5	16	53	3.2	2.6	9.0
9	16	6.8	5.8	4.5	7.2	3.2	.7	33	33	1.1	.3	7.6
10	13	3.7	6.3	3.7	4.2	3.2	1.2	30	26	.2	.1	2.6
11	12	3.2	7.2	3.7	5.8	2.3	9.6	25	28	2.7	0	.2
12	10	3.2	8.8	5.0	7.6	2.6	3.2	24	21	2.3	0	.3
13	9.6	3.4	7.6	9.6	6.3	4.5	13	18	22	.8	0	.4
14	8.6	2.9	10	11	6.8	4.2	27	6.8	11	.1	0	.4
15	9.0	2.9	10	11	7.6	3.2	46	11	4.5	0	0	.2
16	10	2.9	9.6	15	7.2	2.8	37	14	2.6	0	.2	0
17	8.1	2.9	9.0	12	6.8	2.4	26	24	2.1	0	0	0
18	7.6	2.3	7.2	18	6.3	2.1	35	46	8.6	.2	0	1.5
19	6.8	2.3	7.6	17	6.8	1.7	30	6.6	7.6	.7	0	7.2
20	6.8	3.2	8.6	14	6.3	1.5	27	10	11	.3	0	2.6
21	13	3.7	9.0	14	5.4	1.3	33	23	5.0	.2	0	.7
22	14	4.2	9.0	14	6.8	1.1	37	32	2.3	.1	4.2	.7
23	17	3.2	7.6	9.0	6.8	.9	35	46	2.9	.4	.4	.2
24	16	2.1	8.1	14	5.8	.7	33	44	2.6	1.8	.2	.1
25	21	1.4	8.1	11	6.3	.5	33	38	7.6	11	0	.1
26	14	1.2	7.6	8.6	7.2	1.7	27	21	70	4.0	0	.1
27	14	1.1	7.2	4.2	6.8	1.8	24	25	44	1.4	0	.1
28	11	1.8	7.6	3.2	7.2	2.6	22	50	38	1.1	.2	.1
29	15	2.6	7.6	4.5	-	3.7	23	60	35	1.1	12	.1
30	11	2.6	5.8	6.3	-	1.2	24	104	31	1.2	6.8	17
31	15	-	4.2	4.5	-	.4	-	87	-	.7	6.3	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	357.7		21		2.9		11.5		709			
November.....	205.2		21		1.1		6.84		407			
December.....	216.9		10		3.2		7.00		430			
Calendar year .....												
January.....	264.5		18		3.2		8.53		525			
February.....	170.0		9.0		3.4		6.07		337			
March.....	94.6		6.8		.4		3.05		188			
April.....	549.6		46		.3		18.3		1,090			
May.....	910.4		104		6.8		29.4		1,810			
June.....	994.8		107		2.1		33.2		1,970			
July.....	148.2		27		0		4.78		294			
August.....	51.2		12		0		1.65		102			
September.....	64.8		17		0		2.16		129			
Water year 1936-37.....	4,027.9		107		0		11.0		7,990			

Note.— Discharge for periods of ice effect, Dec. 30 to Jan. 5, Jan. 10-12, 15-30, Feb. 1-5, 8-11, 21, 22, computed on basis of gage heights and weather records; that for periods of missing gage heights, Mar. 16-18, 21-24, Aug. 4-7, interpolated; that for periods of doubtful stage-discharge relation, Apr. 20 to May 7, May 27, 28, June 2 to July 8, Aug. 20 to Sept. 7, computed on basis of gage heights and study of loss or gain between stations on 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 below head gate and 2½ miles southeast of Nambe.

Records available.- May 1932 to September 1937.

Extremes.- Maximum discharge during year, 6.1 second-feet July 27 (gage height, 1.32 feet); no flow at times.

1932-37: Maximum discharge, 6.5 second-feet Sept. 23, 1934 (gage height, 1.38 feet); 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.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.5	1.4	2.4	0.6	0.6	1.9
2						0	.5	1.4	1.9	.1	2.2	.9
3						0	.4	.9	.7	2.0	2.1	1.0
4						0	.4	1.5	.6	1.6	2.4	.7
5						0	.4	1.6	.5	1.4	2.2	.9
6						0	.4	1.2	.8	2.2	2.0	.3
7						0	.9	1.2	2.8	2.1	1.8	0
8						.6	.4	2.1	2.3	2.1	1.7	1.5
9						1.7	.4	1.5	2.0	2.0	1.6	1.2
10						1.6	.4	1.8	1.5	1.6	1.2	.4
11						1.5	.4	1.6	1.4	1.3	.9	.3
12						1.5	.4	1.5	1.7	2.5	.6	.4
13						1.3	.3	1.2	1.4	1.4	.6	1.6
14						1.0	.2	1.5	1.2	.9	.6	2.2
15						1.0	.3	.7	1.4	1.0	.7	1.1
16						1.0	1.3	.7	1.8	1.7	1.9	.9
17						.9	1.1	1.4	2.1	1.0	2.1	.7
18						1.0	.8	3.4	1.8	1.0	1.7	.6
19						1.0	.8	3.8	1.4	1.4	2.0	.5
20						.9	1.3	1.3	1.1	2.1	2.8	.7
21						.9	1.1	1.0	1.8	1.9	2.1	.8
22						2.4	1.4	1.5	1.9	1.6	.9	.7
23						2.1	.7	1.4	1.5	2.3	2.5	.8
24						.5	1.2	2.5	1.8	1.7	2.5	.6
25						.3	1.1	3.0	2.6	1.0	2.1	.4
26						.3	2.3	2.2	1.0	3.1	1.0	.3
27						.3	1.5	.7	.3	4.6	1.2	.2
28						.2	1.0	.5	.4	4.4	.9	.2
29						.2	1.0	.2	.4	2.4	0	1.4
30						.2	1.2	.1	1.0	2.6	.8	1.9
31						.9	-	1.1	-	1.4	1.8	-
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 1936.....						158.6	3.5	0	.43	315		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						25.3	2.4	0	.75	46		
April.....						23.9	2.3	.2	.80	47		
May.....						44.9	3.8	.1	1.45	89		
June.....						43.5	2.8	.3	1.45	86		
July.....						56.8	4.6	.1	1.83	113		
August.....						47.5	2.8	0	1.53	94		
September.....						25.3	2.2	0	.84	50		
Water year 1936-37.....						265.2	4.6	0	.73	525		

## Llano Frio ditch near Nambu, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°52', long. 105°57', in SW $\frac{1}{4}$  sec. 14, T. 19 N., R. 9 E., 1,100 feet below head and  $\frac{1}{4}$  miles southeast of Nambu.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 12 second-feet during period when recorder clock was stopped, July 6-12 (gage height, 1.27 feet); no flow at times.  
1936-37: Maximum discharge, 14 second-feet Aug. 20, 1936 (gage height, 1.47 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights, which are poor. Ditch diverts water from right bank of Nambu Creek for irrigation. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.9	4.2			0	3.9	4.5	4.6	1.5	1.5	0.1
2	1.6	.7	4.1			0	4.3	4.8	2.6	4.9	1.7	0
3	1.7	.4	3.4			0	4.5	4.8	2.4	4.9	.6	0
4	.7	*.5	3.5			0	4.0	4.9	1.9	4.9	.9	0
5	.7	*.6	3.7			0	3.6	5.1	1.4	4.7	1.2	.9
6	.4	.7	1.0			1.3	3.5	5.4	.6		1.1	2.7
7	1.0	.5	0			2.2	3.9	5.4	2.1		.6	1.4
8	1.8	0	0			3.0	4.2	5.5	3.2		.3	1.3
9	2.1	.6	0			3.9	4.4	5.8	2.9		.6	1.4
10	1.6	1.7	0			5.0	3.6	5.6	2.3	*4	1.1	1.2
11						5.3	3.0	5.4	3.1		1.2	1.1
12	1.4	3.6	0			5.2	5.4	5.6	4.2	1.9	1.1	1.0
13	1.2	2.5	0			4.2	5.2	5.7	4.3	3.3	1.2	.7
14	.1	1.7	0			4.5	3.9	5.7	4.5	3.8	.9	.2
15	0	1.9	0			4.5	3.8	5.9	5.5	3.2	0	
16	.3	3.0	0			4.4	3.4	5.7	5.2	3.6	.8	*1.0
17	.8	3.0	0			3.3	3.1	4.4	5.2	2.4	1.8	
18	.6	2.9	0			1.4	2.6	4.5	5.2	4.5	.4	0
19	*.8	2.5	0			1.8	3.3	4.5	4.1	3.4	.3	0
20	*.8	2.4	0			1.5	4.7	4.3	1.8	1.1	.1	.5
21	*.9	1.1	0			2.0	3.7	3.9	3.7	.5	0	1.7
22	.9	.8	0			1.8	3.9	4.6	3.9	1.2	.1	1.3
23	*1.1	2.2	0			1.2	2.7	5.5	3.5	.7	.1	1.3
24	*1.2	2.1	0			1.1	2.7	5.7	6.2	1.0	.3	1.7
25	1.4	2.7	0			0	3.0	4.2	6.0	.2	.1	1.2
26	1.3	3.0	0			0	2.8	3.6	3.7	.3	.6	0
27	1.2	3.2	0			0	5.7	5.0	.1	0	.9	.6
28	1.3	3.4	0			0	5.2	6.0	.1	.9	1.1	1.1
29	1.2	1.8	0			.2	4.2	5.4	.1	1.2	.9	.3
30	1.3	2.8	0			2.4	4.2	2.7	0	.4	.3	.3
31	1.1	-	0			4.1	-	4.8	-	.6	.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						32.6	2.1	0	1.05	65		
November.....						66.5	3.6	0	1.88	112		
December.....						19.9	4.2	0	.64	39		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						64.3	5.3	0	2.07	129		
April.....						115.4	5.7	2.6	3.38	231		
May.....						154.9	6.0	2.7	5.00	307		
June.....						94.4	6.2	0	3.15	187		
July.....						79.1	4.9	0	2.55	157		
August.....						22.5	1.6	0	.73	45		
September.....						25.1	2.7	0	.84	50		
Water year 1936-37.....						665.7	6.2	0	1.82	1,320		

\*Gage height missing; discharge interpolated or estimated.

## Llano ditch near Nambu, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°52', long. 105°57', in SW $\frac{1}{4}$  sec. 14, T. 19 N., R. 9 E., a quarter of a mile below head and 1.1 miles southeast of Nambu.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 9.5 second-feet June 26 (gage height, 1.11 feet); no flow at times.

1936-37: Maximum discharge, 13 second-feet July 15, 1936 (gage height, 1.38 feet); no flow at times.

Remarks.- Records good except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from right bank of Nambu Creek for irrigation. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.1	0.4	*0.4		0	0	3.6	2.2	1.4	0	2.5
2	.8	.4	.4	*.4		0	0	3.6	2.0	1.0		1.0
3	.8	.4	.3	*.4		0	.3	3.6	2.9	.6	2.0	2.0
4	1.0	.8	*.4	*.4		0	1.3	3.6	3.2	.9	2.0	2.2
5	1.0	.9	.3	*.5		0	1.5	3.7	2.8	1.2	1.9	1.1
6	.9	.8	.2	*.5		0	2.3	3.4	.5	2.0	2.9	3.1
7	.6	.7	*.7	.5		0	2.2	3.3	.4		.7	1.4
8	.5	.7	*.7	.4		.4	2.6	2.9	1.7	0		2.7
9	.4	.8	*.6	.4		1.1	2.6	2.2	3.1	1.5	0	4.9
10	.4	.9	*.5	0		1.2	2.6	1.8	3.8		1.9	5.0
11	.4	.6	*.6	0		1.6	.8	2.9	4.1		1.4	4.7
12	.4	.5	*.7	0		1.8	3.5	2.6	4.6	1.4	1.0	4.5
13	.4	.6	*.6	0		1.2	2.6	2.6	4.8	3.4	2.1	3.9
14	.4	.7	*.6	0		.4	2.7	2.5	5.0	3.7	1.8	1.0
15	.4	.7	.8	0		.3	3.4	2.7	4.5	3.0	.1	1.2
16		.5	.7	0		.3	1.6	2.7	4.3	2.6	2.1	1.9
17	1.4	.3	.7	0		.4	1.9	3.1	4.2	2.8	3.5	.9
18	1.4	.3	*.6	0		.5	2.0	2.9	4.4	3.0	3.8	.2
19	1.4	.5	*.6	0		.3	2.9	1.6	4.5	2.5	2.9	1.5
20	1.4	1.0	*.7	0		.3	3.0	2.4	3.4	3.7	3.2	1.7
21	1.4	.6	.6	0		.3	3.3	3.1	3.8	4.5	1.8	.8
22	1.3	.3	*.6	0		1.2	4.2	3.9	4.4	3.8	1.2	1.2
23	1.1	.7	*.7	0		1.2	2.9	4.6	4.1	5.0	2.3	1.9
24	.1	.7	.6	0		1.0	2.6	2.7	6.2	1.5	1.6	2.0
25	.1	.5	.6	0		1.1	1.3	1.8	3.7	.4	1.9	1.0
26	.1	.5	.6	0		1.1	2.5	3.0	2.3	2.2	1.9	.4
27	.1	.5	*.5	0		.3	3.3	.7	0	2.6	1.4	1.3
28	.1	.6	*.5	0		0	3.8	1.9	0	1.9	1.3	2.0
29	.1	.7	.5	0		0	3.9	4.2	.4	2.2	0	1.9
30	.1	.5	*.4	0		0	3.4	1.6	1.5	2.0	.4	1.9
31	.1	-	*.4	0		0	-	1.5	-	2.0	3.7	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	12.8	1.0	0.1	0.41	25
November.....	17.9	1.0	.1	.60	36
December.....	17.1	.8	.2	.55	34
Calendar year .....					
January.....	3.9	.5	0	.13	7.7
February.....	0	0	0	0	0
March.....	16.0	1.8	0	.52	32
April.....	71.0	4.2	0	2.37	141
May.....	86.7	4.6	.7	2.80	172
June.....	92.8	6.2	0	3.09	184
July.....	66.6	4.5	.4	2.15	132
August.....	51.4	3.8	0	1.66	102
September.....	61.8	5.0	.2	2.06	125
Water year 1936-37.....	498.2	6.2	0	1.36	989

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge computed on basis of recorded range in stage.

‡Gage height missing; discharge estimated.

## Moises Pena ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°52', long. 105°57', in SW $\frac{1}{4}$  sec. 14, T. 19 N., R. 9 E., 200 feet below head and 1 $\frac{1}{4}$  miles southeast of Nambe.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, 5.9 second-feet Aug. 29 (gage height, 1.32 feet); no flow during most of year.  
1936-37: Maximum discharge, that of Aug. 29, 1937; no flow most of time.

Remarks.- Records fair except those for June 25, 26, July 22, which were computed on basis of information furnished by official for Mocha ditch, and are poor. Ditch diverts water from left bank of Nambe Creek for irrigation. Annual diversion between station and head estimated at 5 acre-feet.

Discharge, in second-feet, water year October 1936 to September 1937

May 10	.3	July 24	.2	Aug. 25	.4
11	.5	Aug. 14	.2	26	.5
June 25	.3	16	.6	27	.5
26	.2	20	.5	28	.3
July 23	.3	21	.2	29	.1

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	.5	0	.03	1.6
June.....	.5	.3	0	.02	1.0
July.....	.5	.3	0	.02	1.0
August.....	3.3	.6	0	.11	6.5
September.....	0	0	0	0	0
Water year 1936-37.....	5.1	.6	0	.014	10.1

Note.- No flow except on days for which discharge is given.

## 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 below head and 1 mile southeast of Nambe.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year, 3.2 second-feet July 22 (gage height, 0.84 foot); no flow at times.  
1936-37: Maximum discharge, 4.5 second-feet July 15, 1936 (gage height, 1.05 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights, which are poor. Ditch diverts water from right bank of Nambe Creek for irrigation on Indian land. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1						0	0.1	0.1	0	} *0.5	0.5	1.2	
2						0	.5	0	0		1.0	1.6	
3						0	.5	.4	0		.8	1.2	
4						0	0	0	0		.5	.9	
5						0	.5	0	0		.1	.5	
6						0	0	.2	0		.4	1.0	
7						0	0	.5	0		.4	.6	
8						0	0	0	.4		.3	1.1	
9						0	0	0	0		.3	.9	
10						0	0	0	0		.2	.8	
11						0	0	.5	} *0.5	.1	.7		
12						0	.5	.7		0	0	.6	
13						0	.2	.4		0	0	.4	
14						0	.5	.3		.7	0	.3	
15						0	.1	.8		1.2	0	.6	
16						0	0	.6		} *0.5	1.2	.5	.4
17						0	0	1.0			.8	.4	.5
18						0	0	0			.2	.1	.6
19						0	.5	.2			.9	.1	0
20						0	.6	.2			1.2	.6	.2
21						0	.8	0	} *0.5	1.4	.4	.4	
22						0	0	.3		1.8	0	.4	
23						0	.3	0		1.7	.6	.3	
24						0	.6	0		.6	.8	.3	
25						0	0	0		.8	.9	.4	
26						0	.2	0	0	.7	.8	.4	
27						0	.5	0	0	.7	.8	.3	
28						0	.8	0	0	.6	.9	.2	
29						0	0	0	0	.9	.1	.2	
30						0	.4	0	0	.6	.4	.8	
31						.1	-	0	-	.6	1.3	-	
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.....						.1	.1	0	0	.2			
April.....						7.8	.8	0	.26	15			
May.....						6.2	1.0	0	.20	12			
June.....						8.9	-	0	.30	18			
July.....						22.3	1.6	0	.72	44			
August.....						13.3	1.3	0	.43	26			
September.....						17.8	1.6	0	.59	35			
Water year 1936-37.....						76.4	1.8	0	.21	150			

\*Gage height missing; discharge estimated.



## 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 N., R. 9 E., 400 feet below head and half a mile south of Nambe.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 8.5 second-feet May 21 (gage height, 1.03 feet); no flow at times.  
1936-37: Maximum discharge, 14 second-feet Aug. 20, 1936 (gage height, 1.43 feet); no flow at times.

Remarks.- Records good except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	1.6	*0.3	0	0.2	0	0.7	0	0.2	0.1	2.5
2	0	.1	1.5	*.2	0	.2	1.5	1.9	0	.2	1.2	2.9
3	0	.2	1.1	*.1	0	1.0	1.5	1.0	0	3.5	2.2	2.0
4	0	.1	1.6	0	0	1.2	1.4	1.4	0	2.8	2.2	1.5
5	0	.8	1.7	0	0	1.4	1.0	2.1	0	1.3	1.8	.2
6	0	1.3	1.0	0	0	1.0	1.4	2.0	0	1.0	1.3	2.1
7	0	1.1	1.7	0	0	.8	2.0	2.4	.1	1.1	.4	1.5
8	0	1.1	*1.6	0	0	.6	2.0	3.8	.4	1.3	.2	1.6
9	0	.9	*1.5	0	0	.3	2.3	1.9	.4	†1.5	.2	1.4
10	0	.7	*1.5	0	0	.1	1.4	2.6	1.2	†2	1.1	1.0
11	0	.4	*1.4	0	0	.3	1.5	4.3	3.8	†2	1.4	.8
12	0	.5	1.3	0	0	.3	3.0	2.8	4.3	†2.5	2.1	.6
13	0	.5	.3	0	0	0	2.8	2.8	3.8	3.0	1.3	2.4
14	0	.6	0	0	0	0	2.9	4.9	2.8	2.7	1.3	2.4
15	0	.6	0	0	0	0	2.6	5.3	3.8	3.4	0	3.6
16	0	.4	.7	0	0	.3	3.2	2.1	4.0	4.1	.4	2.0
17	.3	.8	1.1	0	0	.9	2.6	2.6	5.0	3.4	1.5	1.6
18	.5	1.4	*1.0	0	0	1.0	1.9	1.9	2.9	.3	2.1	.8
19	.8	1.4	*.6	0	.2	.8	.6	2.8	3.1	.9	2.8	0
20	2.0	1.5	*.7	0	.1	.8	2.1	3.7	3.0	2.0	1.4	1.5
21	2.1	2.0	1.0	0	.1	.2	2.3	4.5	5.0	1.9	.5	0
22	1.3	2.2	.8	0	.2	.6	1.2	2.9	5.1	1.4	0	1.0
23	1.0	1.3	*.7	0	.4	1.4	2.1	.7	4.7	1.7	1.1	.2
24	1.2	.8	.9	0	.4	2.3	2.6	.1	3.3	.9	1.0	.6
25	1.0	1.4	.9	0	.3	3.1	1.6	1.7	2.5	.3	1.1	.3
26	.9	1.2	.9	0	.1	3.0	1.0	0	.9	2.8	1.2	.8
27	.9	.8	.7	0	.2	2.7	.5	0	0	2.3	1.3	2.0
28	.9	1.8	.6	0	.2	2.7	.9	.5	0	1.9	.9	2.5
29	1.0	1.8	.7	0	-	1.9	.8	0	0	2.1	.1	.2
30	1.2	1.7	*.5	0	-	1.7	.5	0	.9	1.9	.1	.6
31	.5	-	*.4	0	-	1.2	-	0	-	1.6	1.5	-
Month						Second-foot-days	Maximum	Minimum		Mean	Run-off in acre-feet	
October.....						15.6	2.1	0		0.50	31	
November.....						29.5	2.2	.1		.98	59	
December.....						50.0	1.7	0		.97	60	
Calendar year .....												
January.....						.6	.3	0		.02	1.2	
February.....						2.2	.4	0		.08	4.4	
March.....						32.0	3.1	0		1.03	63	
April.....						51.2	3.2	0		1.71	102	
May.....						83.4	5.3	0		2.05	126	
June.....						61.0	5.1	0		2.03	121	
July.....						56.0	4.1	.2		1.87	115	
August.....						33.8	2.8	0		1.09	87	
September.....						40.6	3.6	0		1.55	81	
Water year 1936-37.....						417.9	5.3	0		1.14	831	

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

## Ortiz ditch at Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°53', long. 105°58', in SE $\frac{1}{4}$  sec. 10, T. 19 N., R. 9 E., 400 feet below head and half a mile northwest of Nambe.

Records available.- February 1936 to September 1937.

Extremes.- Maximum discharge during year, 6.8 second-feet May 23 (gage height, 0.89 foot); no flow at times.

1936-37: Maximum discharge, 9.7 second-feet Aug. 20, 1936 (gage height, 1.14 feet); no flow at times.

Remarks.- Records good except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from right bank of Nambe Creek for irrigation. About 5 acres irrigated above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.3	0.1	*0.1	0	0.2	0.7	0.7	0.2	0.5	2.4	0.2
2	0	.9	0	*.1	0	.2	1.4	.3	.5	.6	1.0	.3
3	.1	.7	0	*.1	0	.2	1.3	1.4	.1	.4	1.1	.7
4	0	.8	.1	*.1	0	.2	0	2.2	.3	.1	1.3	.8
5	0	.4	.3	*.1	*.2	.2	1.4	2.2	1.5	1.3	1.3	.8
6	.1	.1	0	*.1	*.5	.1	1.6	2.8	.7	1.5	1.4	1.3
7	.2	.2	.2	.1	0	0	1.1	3.3	.3	1.3	1.1	} 1.3
8	.1	.2	*.2	.1	0	.1	.8	3.2	.3	1.4	.8	
9	.2	.2	*.1	.1	0	.1	1.8	1.9	.7	2.3	1.4	
10	.3	.2	0	.1	0	.1	1.6	1.4	.8	2.2	.7	
11	.3	.6	0	0	.1	.2	0	1.0	1.4	.4	1.0	
12	.1	.8	0	0	0	.2	1.5	1.0	2.9	1.6	1.0	} †1
13	.4	1.2	0	0	0	.1	1.2	1.8	3.4	2.5	.8	
14	1.2	1.3	0	0	0	0	1.8	2.9	3.9	3.5	1.2	
15	1.0	0	.1	0	0	0	2.2	2.2	4.2	2.5	2.8	
16	.8	1.0	.1	0	0	0	2.1	1.3	5.0	2.0	1.2	
17	.4	1.2	.3	0	0	0	2.1	1.7	3.4	1.8	1.2	} .8
18	.6	1.4	.3	0	0	.2	1.5	1.2	1.6	1.1	1.1	
19	.6	1.1	.1	0	.1	.6	2.6	1.5	2.1	1.0	.8	
20	.6	.7	.1	0	.1	.5	2.8	1.7	2.5	1.2	1.1	
21	.4	.5	0	0	.1	0	1.9	1.6	2.3	1.1	1.0	
22	.4	.1	0	0	.1	.4	2.4	2.2	3.0	1.2	1.0	1.0
23	.4	.6	0	0	0	1.1	2.3	2.0	3.2	.9	1.2	.4
24	.1	.4	0	0	0	.5	1.5	1.0	2.8	.8	1.3	.5
25	.4	.4	0	0	.1	.6	1.6	.9	3.9	.8	1.0	.9
26	.3	.6	.4	0	.3	.6	2.2	1.0	1.2	.9	1.0	1.1
27	.5	.1	.2	0	.3	.6	2.0	.7	0	1.1	1.8	.6
28	.4	0	.1	0	.3	.1	1.2	.4	.3	1.6	1.2	1.0
29	.3	.1	.1	0	-	.8	.6	0	.3	2.0	1.3	1.5
30	.4	0	.1	0	-	.6	.9	.4	.2	1.8	.2	1.3
31	.4	-	*.1	0	-	.2	-	.6	-	1.8	.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10.9	1.2	0	0.35	22
November.....	16.1	1.4	0	.54	32
December.....	3.0	.4	0	.10	6.0
Calendar year .....					
January.....	1.0	.1	0	.03	2.0
February.....	2.2	.5	0	.08	4.4
March.....	8.7	1.1	0	.28	17
April.....	46.1	2.8	0	1.54	91
May.....	46.5	3.3	0	1.50	92
June.....	53.2	5.0	0	1.77	106
July.....	43.2	3.5	.1	1.39	86
August.....	35.9	2.8	.2	1.16	71
September.....	27.2	-	-	.91	54
Water year 1936-37.....	294.0	5.0	0	.81	583

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

## Canyon ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°54', long. 105°59', in NW $\frac{1}{4}$  sec. 10, T. 19 N., R. 9 E., 600 feet below head and  $1\frac{1}{2}$  miles west of Nambe.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 7.4 second-feet Apr. 13 (gage height, 0.91 foot); no flow Jan. 21-28.

1936-37: Maximum discharge, 14 second-feet Aug. 20, 1936 (gage height, 1.43 feet); no flow at times.

Remarks.- Records fair except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.4	2.3	*0.1	*0.1	0.6	0.9	2.2	1.1	0.3	0.2	1.5
2	.1	.4	†2	*.1	.1	.7	1.1	1.5	1.3	.2	2.2	2.0
3	.1	.3	†2	*.1	.1	.7	1.8	2.5	1.3	1.5	1.3	1.4
4	.1	.3	†2	*.1	.2	.5	2.4	2.9	1.1	.8	1.4	1.0
5	.1	.3	†1	*.1	.2	.7	1.5	3.3	.8	3.0	1.1	.7
6	.1	.5	†.5	*.1	.1	.5	1.1	4.5	.7	3.1	.6	2.0
7	.1	.7	†.5	.1	.2	.3	.7	3.8	.6	3.0	1.9	2.1
8	.1	.8	.5	.1	*.1	.2	.2	3.8	.5	2.7	.6	2.4
9	.1	.5	.5	.1	*.1	.2	.2	2.1	.4	2.8	.8	2.4
10	.3	.9	.4	*.1	*.1	.2	.4	2.2	1.0	2.5	1.7	3.0
11	.7	.9	.2	*.1	.1	.5	2.0	2.2	1.7	.6	1.2	3.1
12	.4	1.4	.2	*.1	.1	.4	2.8	2.8	2.8	1.8	1.3	3.0
13	.1	1.5	.2	*.1	.1	.2	4.4	3.0	2.8	2.6	1.3	1.8
14	.1	1.6	.2	*.1	.1	.2	4.6	2.9	4.0	2.4	.8	2.2
15	.1	1.5	.2	*.1	.1	.2	3.3	2.8	4.5	2.5	.1	1.7
16	.2	1.3	.2	.2	.1	.2	2.1	4.0	4.3	2.0	.7	1.4
17	.3	1.5	.4	.1	.1	.2	2.8	3.7	4.4	1.7	.3	2.2
18	.4	1.3	1.1	.1	.1	.2	1.8	3.3	4.8	1.2	2.3	2.6
19	.4	1.8	1.1	.1	.1	.2	3.2	3.0	3.6	1.7	1.6	.3
20	.3	2.1	.6	.1	.1	.6	2.8	1.9	2.1	1.5	.9	.7
21	.3	2.1	.2	0	.1	1.8	2.2	3.5	3.7	2.0	1.4	2.6
22	.4	2.4	.2	0	.1	1.2	1.9	3.0	3.0	1.3	.2	1.8
23	.2	1.7	.2	0	.1	2.2	2.4	3.0	2.6	1.9	.3	2.6
24	.3	1.9	.2	0	.5	1.7	2.0	1.6	2.7	2.1	.8	2.2
25	.4	2.1	.2	0	.7	2.1	.9	2.7	3.5	.2	1.1	1.6
26	.3	1.4	.2	0	.5	2.0	3.4	3.3	2.4	.9	1.1	3.3
27	.3	1.6	.1	0	.5	1.1	4.2	2.6	.2	1.2	1.1	2.4
28	.3	2.4	.1	0	.5	.9	2.9	2.8	.2	1.4	.8	.8
29	.3	2.7	.1	.1	-	1.2	3.5	2.8	1.1	1.4	.2	2.8
30	.4	2.3	.1	-	-	.8	2.7	2.0	.2	1.4	1.6	2.8
31	.4	-	*.1	.1	-	.5	-	1.2	-	1.0	2.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						7.9	0.7	0.1	0.25	16		
November.....						40.6	2.7	.3	1.35	81		
December.....						17.8	2.3	.1	.57	35		
Calendar year .....												
January.....						2.4	.2	0	.08	4.8		
February.....						5.3	.7	.1	.19	11		
March.....						23.0	2.2	.2	.74	46		
April.....						66.2	4.6	.2	2.21	131		
May.....						86.7	4.5	1.2	2.80	172		
June.....						63.4	4.8	.2	2.11	126		
July.....						52.7	3.1	.2	1.70	105		
August.....						33.4	2.5	.1	1.08	66		
September.....						60.4	3.3	.3	2.01	120		
Water year 1936-37.....						459.8	4.8	0	1.26	914		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

## Acequia Rincon near Nambe, N. Mex.

Location.— Water-stage recorder and 3-foot Parshall flume, lat. 35°53', long. 105°59', in SE $\frac{1}{4}$  sec. 9, T. 19 N., R. 9 E., 400 feet below head and  $1\frac{1}{2}$  miles west of Nambe.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during year, 9.8 second-feet June 12 (gage height, 0.84 foot); no flow at times.

1936-37: Maximum discharge, that of June 12, 1937; no flow at times.

Remarks.— Records for March to September good, others fair except those for periods of ice effect or partial gage-height record, which are poor. Acequia diverts water from left bank of Nambe Creek for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0.4			0	2.3	0.2	1.5	0.9	0	0.7
2	0	.2	.4			0	1.8	.8	0	.5	1.3	2.2
3	1.1	.2	*.1			0	2.1	1.6	0	.6	1.1	2.2
4	1.3	.2	*.4			0	3.2	1.3	.3	.6	.9	1.5
5	1.1	.2	*.2			0	1.4	1.0	1.1	2.3	1.1	0
6	1.1	.3	0			0	1.1	3.0	0	3.2	.7	1.3
7	0	.2	0			0	1.3	.2	0	3.3	1.3	2.7
8	.1	1.2	.2			0	1.0	2.8	.2	2.9	.1	2.9
9	.1	1.6	*.4			0	1.3	2.3	.6	3.3	.1	.4
10	.2	1.6	*.4			0	1.9	3.2	2.1	2.7	.3	.6
11		1.5	*.2			0	2.8	2.5	3.1	.2	.9	.3
12	.4	1.3	*.3			0	3.6	4.3	3.5	1.6	.8	.5
13	.4	1.1	*.5			0	2.1	3.5	2.0	1.8	1.0	.8
14	.3	.8	*.3			0	2.2	2.5	3.9	2.1	.7	2.6
15	.3	1.0	0			0	3.7	2.5	4.0	1.7	0	2.3
16	.3	.6	0			0	1.3	1.9	4.5	.9	.6	2.1
17	.3	.3	0			.7	2.1	1.0	5.0	1.3	.8	2.2
18	.2	.2	0			2.1	1.5	2.1	4.2	0	1.2	3.0
19	.2	.3	*.2			1.0	3.3	2.2	3.4	2.4	1.5	2.2
20	.5	.3	*.3			1.7	2.2	2.1	.3	1.9	.9	1.0
21	.4	.3	0			2.4	2.1	2.8	2.4	1.9	.9	2.1
22	.3	.5	*.1			1.5	.8	3.6	4.0	.6	0	1.5
23	.6	.2	0			1.6	0	2.9	3.2	1.5	.3	2.1
24	.3	*.1	*.1			1.2	1.0	.8	3.6	1.8	.7	1.4
25	.2	0	0			2.4	.8	.8	3.4	0	1.3	2.3
26	.2	*.3	0			2.2	1.1	1.5	.2	.6	1.3	2.0
27	.2	*.3	0			2.3	2.3	0	0	1.5	1.2	1.0
28	.3	.4	0			2.1	1.0	.5	0	1.7	1.0	.3
29	.4	.6	*.1			1.7	1.0	0	.1	1.1	0	.6
30	.4	.5	*.1			1.5	.9	0	.5	1.0	0	.7
31	.6	-	*.1			1.6	-	0	-	.9	.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						8.2	0.6	0	0.26	16		
November.....						16.6	1.6	0	.55	33		
December.....						4.8	.5	0	.15	9.5		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						26.0	2.4	0	.84	52		
April.....						53.2	3.7	0	1.77	106		
May.....						53.9	4.3	0	1.74	107		
June.....						57.1	5.0	0	1.90	113		
July.....						46.8	3.3	0	1.51	93		
August.....						22.9	1.5	0	.74	45		
September.....						45.5	3.0	0	1.52	90		
Water year 1936-37.....						335.0	5.0	0	.92	664		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

## Las Joyas ditch near Nambe, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat. 35°53', long. 106°00', in NW $\frac{1}{4}$  sec. 9, T. 19 N., R. 9 E., 1,000 feet below head and 2 $\frac{1}{4}$  miles west of Nambe.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 22 second-feet June 18 (gage height, 1.46 feet); no flow at times.

1936-37: Maximum discharge, that of June 18, 1937; no flow at times.

Remarks.- Records fair except those for periods of ice effect, fragmentary gage-height record, and missing gage heights, and those for July 15-21 and Sept. 11-21, all of which are poor. Ditch diverts water from right bank of Nambe Creek for irrigation of Spanish grants. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.5	0	*1.1		0	1.3	1.9	0	0.8	0.3	11.2
2	0	.2	0	*1.1		0	1.3	1.7	0	.5	.8	11.2
3	0	0	.6	*.6		0	1.0	2.9	0	1.9	1.1	11.2
4	0	.1	1.4	*.5		0	1.9	2.3	0	1.8	1.1	.9
5	.8	.3	1.2	0		0	1.2	3.4	.4	1.0	1.1	.9
6	.8	0	1.0	0		0	1.1	3.0	.4	2.4	.8	2.4
7	0	1.0	2.0	0		0	1.1	4.3	.7	1.7	1.0	1.1
8	0	†2.1	2.1	0		0	1.8	3.3	1.6	3.6	1.2	1.4
9	0	†1.2	*2.0	0		0	2.0	0	1.9	3.0	.8	2.4
10	0	.4	1.5	0		0	1.8	2.7	1.7	1.7	.8	2.0
11	0	0	*1.3	0		0	.1	2.4	2.5	3.3	1.1	4.8
12	0	.2	*1.4	0		0	.5	3.8	4.0	†1.4	1.2	4.6
13	0	.7	*1.2	0		0	.7	1.6	1.7	†2.2	1.2	3.7
14	.4	.4	*1.2	0		0	.9	4.4	5.4	2.4	1.4	1.7
15	1.3	.2	*1.6	0		1.6	2.4	5.0	6.4	3.0	.9	1.2
16	.7	.1	1.3	0		4.0	1.5	0	7.6	1.6	1.4	.9
17	.3	.1	1.2	0		3.3	4.4	5.2	4.8	1.0	1.9	.7
18	.2	.1	*1.1	0		3.4	.2	3.7	7.2	.4	2.5	.6
19	0	.4	*1.2	0		3.0	4.4	4.0	2.5	.2	2.4	0
20	.7	.5	*1.4	0		2.5	4.2	5.6	3.0	.1	1.7	.5
21	.6	.3	1.0	0		3.2	1.6	6.4	3.1	0	1.4	1.1
22	.6	.3	*1.0	0		1.4	1.4	6.7	2.3	.5	.8	1.8
23	.6	.3	*1.1	0		2.4	1.6	1.1	5.3	1.0	.7	2.3
24	.6	.4	.9	0		1.7	3.3	3.2	4.0	1.1	1.5	2.2
25	.4	.6	.9	0		2.2	2.4	2.4	3.7	.6	1.6	2.7
26	.1	.8	.8	0		.9	3.4	3.4	6.6	.9	1.3	1.8
27	0	1.3	*.6	0		.7	4.9	0	0	1.4	1.8	1.6
28	0	1.4	*.6	0		1.1	3.8	0	0	1.4	1.1	1.4
29	.2	1.5	*.8	0		1.4	2.6	0	0	1.8	†1.1	1.8
30	.5	.9	*.9	0		1.4	2.6	0	0	1.5	†1.1	1.5
31	.8	-	*.9	0		.6	-	0	-	1.1	†1.2	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				9.5	1.3	0	0.31	19				
November.....				16.1	2.1	0	.54	32				
December.....				34.2	2.1	0	1.10	68				
Calendar year .....												
January.....				3.3	1.1	0	.11	6.5				
February.....				0	0	0	0	0				
March.....				34.8	4.0	0	1.12	69				
April.....				61.4	4.9	.1	2.05	122				
May.....				83.3	6.7	0	2.69	165				
June.....				74.8	7.6	0	2.49	143				
July.....				45.3	5.6	0	1.46	90				
August.....				38.3	2.5	.3	1.24	76				
September.....				51.6	4.8	0	1.72	102				
Water year 1936-37.....				452.6	7.6	0	1.24	898				

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

‡Gage height missing; discharge interpolated.

## 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 below head and 3¼ miles west of Nambe.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 7.6 second-feet June 26 (gage height, 0.97 foot); no flow at times.

1936-37: Maximum discharge, that of June 26, 1937; no flow at times.

Remarks.- Records good except those for Aug. 29 to Sept. 2, which were interpolated and are poor. Ditch diverts water from right bank of Nambe Creek for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.7	0.9	0	0	0	0.5
2						0	.5	1.1	0	0	.5	.5
3						0	.5	1.1	0	0	.6	.5
4						0	.6	1.2	0	0	.6	.6
5						0	.7	1.4	0	.9	.6	.6
6						0	.9	1.5	0	1.0	.8	.4
7						0	1.0	.9	0	1.4	.7	.5
8						0	.7	1.7	.6	1.3	.4	.7
9						0	.5	2.5	1.1	1.0	.7	0
10						0	.7	2.0	1.3	.7	.8	0
11						0	.1	2.0	1.6	0	.6	0
12						0	.9	1.6	1.2	1.0	.7	.1
13						.2	.9	1.7	1.0	1.6	.7	.5
14						.5	.3	1.3	2.1	.9	.7	.6
15						.5	.6	.5	2.4	.9	0	.6
16						1.4	1.8	.1	1.6	.8	.4	.6
17						1.6	.9	1.4	1.0	.6	.7	.6
18						.9	0	.7	1.6	0	.7	.6
19						.3	.2	1.0	1.0	0	.7	.2
20						0	.5	.6	1.5	.4	.6	.6
21						0	1.4	.4	1.1	.7	.5	.5
22						.3	.9	.2	1.0	.7	.1	.5
23						.7	.8	0	.9	.6	.8	.5
24						.5	.8	.9	1.1	.4	.8	.5
25						.5	.1	1.0	1.8	.1	.7	.5
26						.5	1.4	.9	1.7	.7	.7	.5
27						0	1.1	1.6	0	.7	.7	.5
28						0	1.0	1.3	0	.7	.5	.5
29						0	.8	.1	0	.7	.5	.5
30						0	.8	0	0	.6	.5	.4
31						.4	-	0	-	.6	.5	-
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.....						8.3	1.6	0	.27	16		
April.....						22.1	1.8	0	.74	44		
May.....						31.6	2.5	0	1.02	63		
June.....						25.6	2.4	0	.85	51		
July.....						19.0	1.6	0	.61	38		
August.....						17.8	.8	0	.57	35		
September.....						13.6	.7	0	.45	27		
Water year 1936-37 .....						138.0	2.5	0	.58	274		

## 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 below head, a quarter of a mile above highway bridge at Pojoaque, and 3 miles west of Nambe.

Records available.- March 1936 to September 1937.

Extremes.- Maximum discharge during year, 5.3 second-feet Sept. 30 (gage height, 1.18 feet); no flow at times.

1936-37: Maximum discharge, 6.1 second-feet Aug. 28, 1936 (gage height, 1.31 feet); no flow at times.

Remarks.- Records good except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from left bank of Nambe Creek 300 feet above station on Nambe Creek at Pojoaque Bridge for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.1	1.0			0	0.5	1.5	0	0.1	0	0
2	.3	.2	1.1			0	.6	0	0	.1		.5
3	.2	*.5	.5			0	.7	.5	0	.1		1.2
4	.3	*.6	.1			0	0	.5	.4	.3		1.1
5	.2	*.6	.1			0	.6	.8	.6	.7	†.5	.6
6	.2	.5	.1			0	.5	1.1	0	1.0		.2
7	.4	.4	0			0	.1	1.2	.1	†.5		.1
8	.3	.2	0			0	.3	.6	1.1	†.5	0	0
9	.4	*.2	0			0	.3	.2	1.6	0	†.7	0
10	.2	.5	0			0	.3	.5	1.5	.6	.4	0
11	.2	.4	0			0	.2	1.0	1.3	.1	.5	.8
12	.3	.7	0			0	.4	1.1	1.0	.5	.4	1.0
13	.4	.7	0			0	.4	.4	1.9	1.2	.4	.7
14	.3	.8	0			0	.2	.6	1.3	.7	.5	.4
15	.3	.9	0			0	.4	.9	1.3	.7	.3	.6
16	.2	.9	0			0	.6	.8	.9	.7	.8	1.0
17	.1	.9	0			0	.6	1.2	1.1	.5	.6	.9
18	.1	.8	0			0	.1	1.3	1.2	.2	.8	.8
19	.8	.9	0			0	.4	1.0	1.0	1.4	.8	.2
20	1.0	.6	0			0	.3	1.6	.2	1.1	.9	.2
21	.6	.4	0			0	.3	2.0	.5	.8	.9	0
22	.6	.6	0			†.5	.9	1.7	.9	.8	.4	0
23	.7	.7	0			†.5	.4	1.1	.9	.7	.7	.4
24	.6	.9	0			†.5	.4	1.0	.8	.4	.9	.8
25	.2	.7	0			†.5	.2	.9	.7	0	.8	.8
26	.1	1.1	0			1.1	1.2	0	.7	.5	1.0	.7
27	0	.9	0			.1	1.1	0	0	.6	1.0	.7
28	.1	.9	0			0	1.2	0	.1	.7	1.0	.7
29	.1	1.0	0			.6	.9	0	.3		.3	.8
30	.1	.6	0			.4	.8	0	.2	†.5	.1	.9
31	.1	-	0			.2	-	0	-		0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						9.8	1.0	0	0.32	19		
November.....						19.2	1.1	.1	.64	38		
December.....						2.9	1.1	0	.09	5.8		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						4.4	1.1	0	.14	8.7		
April.....						14.9	1.2	0	.50	30		
May.....						23.5	2.0	0	.76	47		
June.....						21.6	1.6	0	.72	45		
July.....						17.0	1.4	0	.55	34		
August.....						17.2	1.0	0	.55	34		
September.....						16.1	1.2	0	.54	32		
Water year 1936-37.....						146.6	2.0	0	.40	292		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

## Jacana 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 above Rio Tesuque crossing, half a mile below head, and 4 miles west of Nambe.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during year, 7.2 second-feet May 18; maximum gage height, 0.97 foot Apr. 17; no flow at times.

1936-37: Maximum discharge, 7.3 second-feet Aug. 20, 1936; maximum gage height, 1.02 feet July 15, 1936; no flow at times.

Remarks.- Records fair except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from left bank of Nambe Creek for irrigation. During nonirrigation season it is probable that entire flow carried by this ditch is wasted into Rio Tesuque, which this ditch crosses below station. Records include some inflow from seepage. Additional inflow from seepage and some flow from Rio Tesuque enters ditch below station. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	1.4	0.7	0.1	0.1	0.4	0.1	2.0	0.1	1.6	2.1	1.4
2	.5	1.4	.7	.1	.1	.4	.2	4.2	.2	.8	1.1	.6
3	.5	.9	.6	0	.1	.4	.3	3.4	.2	1.0	.6	.4
4	.5	1.0	.9	.1	.1	.4	2.0	3.6	†.2	1.4	.6	.5
5	.5	1.5	1.2	0	.1	.4	1.6	3.1	†.2	2.0	.5	.5
6	.5	1.2	.9	0	.1	.4	.7	.8	†.1	2.0	.5	1.0
7	.5	1.0	.9	.1	.2	.4	.8	1.3	.1	2.0	.6	1.2
8	.5	.8	.9	.1	.1	.3	.6	1.2	1.2	†.2	.6	.7
9	.4	.7	.8	.1	.2	.3	1.0	1.0	2.4	†.5	.7	1.2
10	.4	.6	.8	.1	*.2	.2	1.6	.9	2.4	†.5	1.1	1.3
11	.4	.5	.1	.1	.3	.2	.6	3.0	2.1	†.2	.6	1.0
12	.4	.4	.1	.1	.4	.2	1.5	2.3	2.5	†.2	.5	.7
13	.5	.4	.1	.2	.4	.4	1.6	3.6	2.6	.6	.5	.4
14	1.8	.4	.1	.2	.4	.3	2.7	3.1	2.8	1.0	.5	.3
15	1.6	.4	.1	.2	.4	.3	1.8	2.6	1.8	.9	.7	.3
16	1.7	.4	.1	.2	.4	.3	3.3	4.1	1.3	.5	.6	.4
17	1.6	.4	.1	.2	.4	.2	2.9	1.4	.5	.6	.5	.3
18	1.5	.4	.1	.2	.4	.2	2.2	2.0	.8	.9	.5	.5
19	1.2	.7	.1	.2	.4	.2	1.2	2.0	1.3	.6	.6	.5
20	1.4	1.2	.1	.2	.3	.5	1.3	2.7	2.6	.5	.5	.6
21	1.3	1.0	.1	.2	.3	.5	2.4	2.6	1.5	.6	.5	.6
22	1.4	1.1	.1	*.2	.3	.4	2.5	2.9	1.1	.6	.5	.6
23	1.5	1.1	.1	*.1	.3	.1	1.7	2.7	.9	.6	.5	.5
24	1.4	.7	.1	0	.3	.1	1.3	.6	.8	.6	.7	.5
25	1.6	.3	.1	0	.3	.1	1.3	1.4	1.5	.6	.6	.6
26	1.0	.4	0	0	.3	.1	1.0	1.3	2.0	1.0	.7	.5
27	1.4	.5	0	0	.3	.1	1.3	1.8	1.1	.7	.6	.5
28	1.3	.5	0	0	.4	†.2	1.5	1.2	.8	.7	.6	.4
29	1.2	.5	0	0	-	†.2	1.3	.2	.8	.8	1.1	.6
30	1.2	.5	.1	.1	-	.3	2.3	.2	1.5	.8	1.6	1.1
31	1.4	-	.1	.1	-	.2	-	.1	-	.9	1.8	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						31.9	1.8	0.4	1.03	63		
November.....						22.4	1.5	.3	.75	44		
December.....						10.3	1.2	0	.33	20		
Calendar year .....												
January.....						3.2	.2	0	.10	6.3		
February.....						7.6	.4	.1	.27	15		
March.....						9.7	.5	.1	.29	17		
April.....						44.6	3.3	.1	1.49	88		
May.....						63.7	4.2	.1	2.05	126		
June.....						37.4	2.8	.1	1.25	74		
July.....						32.3	2.0	.5	1.04	64		
August.....						23.1	2.1	.5	.75	46		
September.....						19.7	1.4	.3	.66	39		
Water year 1936-37.....						304.9	4.2	0	.84	602		

\*Stage-discharge relation affected by ice; discharge computed on basis of weather records.

†Gage height missing; discharge interpolated.

‡Gage height missing; discharge computed on basis of records for Nambe Creek at Pojoaque.



## Rio Tesuque above diversions, near Santa Fe, N. Mex.

Location.- Water-stage recorder, lat. 35°44', long. 105°54', in SE $\frac{1}{4}$  sec. 32, T. 18 N., R. 10 E., 1 mile above mouth of Rito Tesque and 4 miles northeast of Santa Fe.

Records available.- March 1936 to September 1937 in reports of Geological Survey; May to October 1919, at site 175 feet downstream, in reports of State engineer.

Extremes.- Maximum discharge during year, 44 second-feet Sept. 30 (gage height, 2.34 feet); minimum daily discharge, 0.5 second-foot (estimated) Jan. 3, 22-24.  
1936-37: Maximum discharge, about 370 second-feet Sept. 7, 1936 (gage height, 4.0 feet, from floodmarks), by slope area method; minimum daily discharge, that of Jan. 3, 22-24, 1937.

Remarks.- Records fair except those for periods of ice effect, missing gage heights, or fragmentary gage-height record, all of which are poor. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	2.6	1.2	0.7	0.9	1.4	2.8	8.9	14	3	1.5	0.7
2	2.5	2.6	1.0	.6	1.0	1.5	3.2	9.2	16	3	1.5	.7
3	2.5	2.3	1.0	.5	1.1	1.5	3.4	9.6	18	2.5	1.4	.7
4	2.6	2.8	1.2	.7	1.2	1.4	3.0	9.6	18	2.5	1.5	.7
5	2.6	3.0	1.0	.8	1.2	1.7	3.2	10	17	2.5	1	.8
6	2.8	3.0	1.0	.9	1.2	1.5	3.0	11	16	2.5	1	1.0
7	3.0	3.0	1.4	.9	1.4	1.8	3.0	11	16	2.5	1	1.1
8	3.0	3.0	1.2	.8	1.2	1.9	3.0	11	15	3	1	2.4
9	3.2	3.0	1.4	.6	1.2	2.1	3.0	11	15	3	1	2.1
10	3.2	3.2	1.4	.6	1.2	2.3	3.4	11	13	3	.6	1.4
11	2.8	2.8	1.4	.7	1.2	2.5	4.7	11	12	3	.9	1.4
12	2.6	3.0	1.4	.8	1.4	2.6	8.2	12	11	3	.9	1.5
13	2.8	2.5	1.5	.7	1.2	2.6	9.6	12	11	2.5	.8	1.4
14	2.8	2.5	1.5	.7	1.2	2.5	11	11	11	2.5	.8	1.4
15	2.8	2.3	1.5	.7	1.4	2.3	16	11	10	2.5	.8	1.4
16	2.6	2.3	1.5	.7	1.2	2.2	14	11	9.6	2.3	.8	1.5
17	2.6	2.1	1.5	.7	1.2	2.3	13	12	8.9	4.7	.8	1.5
18	2.5	1.9	1.5	.7	1.2	2.3	12	12	8.9	5.8	.8	1.5
19	2.5	1.9	1.7	.8	1.2	2.5	11	12	8.6	5.5	.6	1.4
20	2.8	1.8	1.7	.7	1.2	2.2	11	12	6.2	3	.8	1.2
21	2.6	1.7	1.7	.6	1.2	2.6	11	12	7.5	2	.8	1.2
22	2.3	1.5	1.7	.5	1.2	3.2	11	11	7.2	2	.8	1.2
23	2.3	1.4	1.4	.5	1.2	3.2	11	11	7.5	2	.7	1.2
24	2.1	.7	1.4	.5	1.5	3.2	10	8.9	7.5	2	.7	1.2
25	2.3	1.0	1.4	.6	1.7	3.4	9.2	6.6	7.5	2	.8	1.1
26	2.2	1.1	1.2	.6	1.5	3.0	8.9	8.2	8.6	1.5	.8	1.1
27	2.5	1.1	1.2	1.0	1.4	2.6	9.2	7.8	9.2	1.5	.7	1.1
28	2.3	1.2	1.2	1.2	1.2	2.8	9.2	7.8	6.4	1.5	.8	1.1
29	2.5	1.2	1.1	1.3	-	2.6	8.9	8.9	3.6	1.5	.8	1.2
30	2.6	1.1	1.0	1.1	-	2.5	8.9	21	3.5	1.5	.8	4
31	2.6	-	.8	1.0	-	2.5	-	16	-	1.5	.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	80.6	3.2	2.1	2.60	180
November.....	65.6	3.2	.7	2.12	126
December.....	41.1	1.7	.6	1.33	82
Calendar year .....					
January.....	23.4	1.3	.5	.75	46
February.....	34.9	1.7	.9	1.25	69
March.....	72.7	3.4	1.4	2.35	144
April.....	238.6	16	2.8	7.96	474
May.....	359.5	21	7.8	11.0	573
June.....	325.7	18	3.5	10.9	646
July.....	61.3	5.8	1.5	2.62	161
August.....	28.4	1.5	.7	.92	56
September.....	40.2	4	.7	1.34	80
Water year 1936-37.....	1,370.2	21	.5	3.75	2,720

Note.- Discharge for periods of ice effect, Dec. 4-8, 11, 12, Dec. 31 to Feb. 4, Feb. 10, computed on basis of two discharge measurements and weather records; that for periods of missing gage heights, June 8, 9, June 30 to July 15, July 20-26, Aug. 4-9, computed on basis of weather records and records for Nambe Creek near Nambe; and that for days of partial gage-height record computed on basis of partly estimated gage heights.

## Rio Tesuque at Tesuque Bridge, near Santa Fe, N. Mex.

Location.— Water-stage recorder, lat. 35°45', long. 105°56'. in SE¼ sec. 25, T. 18 N., R. 9 E., at bridge on U. S. Highways 64 and 285 at Tesuque, 800 feet below head of Acequia Medio, 1½ miles below mouth of Rito Tesuque, and 5 miles north of Santa Fe.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during year, about 590 second-feet Sept. 9 (gage height, 1.60 feet, from floodmarks), from rating curve extended above 16 second-feet on basis of slope-area determination at 660 second-feet; no flow at times.  
1936-37: Maximum discharge, about 660 second-feet Sept. 7, 1936 (gage height, 1.62 feet), by slope-area method; no flow at times.

Remarks.— Records for Oct. 1 to Apr. 15, fair; those for Apr. 16 to Sept. 30, poor. Discharge for periods of missing gage heights, June 4-9, June 28 to July 14, July 17-28, computed on basis of weather records and study of loss or gain in flow between this station and that known as "Rio Tesuque above diversions, near Santa Fe"; that for Sept. 9 computed on basis of partly estimated gage height. Diversions for irrigation above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	2.3	0.3	0.3	0.3	0.4	1.0	9.0	66	5	0.1	0
2	5.5	2.3	.3	.3	.3	.4	1.8	9.0	36	4	.1	0
3	4.6	1.2	.3	.3	.3	.4	2.9	9.0	45	3	.1	0
4	5.0	2.0	.4	.3	.3	.4	3.6	9.0	37	3	.6	.1
5	5.9	2.5	.5	.3	.3	.6	1.8	9.0	33	3	.1	.1
6	5.5	2.7	.4	.3	.3	.6	2.7	8.1	29	2	.1	.8
7	9.0	2.5	.9	.4	.5	.6	4.6	8.1	26	2	.1	.8
8	6.3	2.3	.7	.4	.4	.8	4.2	8.1	20	4	.1	.4
9	5.5	2.0	.5	.3	.3	.9	5.5	9.0	17	4	0	3
10	5.9	2.0	.2	.3	.3	.9	9.8	8.1	12	2	0	.6
11	5.0	1.8	.2	.3	.4	1.2	13	9.0	9.8	2	0	.6
12	3.8	1.2	.2	.3	.4	1.6	15	9.0	9.8	3	0	.3
13	3.8	1.2	.2	.3	.5	1.6	12	9.0	9.8	2	0	.3
14	3.3	.7	.4	.3	.4	1.4	43	9.8	9.0	2	0	.3
15	3.3	.3	.3	.3	.4	1.0	31	9.8	6.8	1.6	0	.3
16	2.9	.3	.2	.3	.4	1.0	46	11	5.9	1.2	0	.3
17	2.7	.3	.2	.3	.4	1.2	30	11	5.5	1	0	.3
18	2.5	.2	.2	.3	.4	1.6	21	9.8	4.6	1	0	.3
19	2.7	.2	.2	.3	.4	1.2	16	9.8	3.5	1	0	.3
20	2.9	.2	.2	.3	.4	1.0	12	9.8	2.7	1	0	.3
21	2.5	.2	.2	.3	.4	1.0	9.0	9.8	2.5	1	0	.3
22	2.5	.2	.2	.3	.5	1.8	9.0	9.0	2.3	1	0	.3
23	2.7	.4	.2	.3	.5	2.1	9.0	9.0	1.6	0	0	.3
24	2.5	.5	.2	.3	.5	2.0	9.0	9.0	2.3	0	0	.3
25	2.7	.6	.2	.4	.5	2.5	9.0	9.0	2.9	0	0	.3
26	2.5	.4	.2	.4	.4	2.1	9.0	8.1	12	0	0	.3
27	2.3	.4	.2	.4	.4	2.0	9.0	8.1	26	0	0	.3
28	2.1	.4	.3	.3	.4	1.4	9.0	8.1	20	0	0	.3
29	2.3	.3	.3	.3	-	1.0	9.0	9.0	15	.1	0	.3
30	2.3	.3	.3	.3	-	1.2	9.0	30	10	.1	0	3.5
31	2.3	-	.3	.3	-	1.0	-	63	-	.1	0	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				118.7	9.0	2.1	3.83	235				
November.....				51.9	2.7	.2	1.06	63				
December.....				9.4	.9	.2	.30	19				
Calendar year .....												
January.....				9.8	4	.3	.32	19				
February.....				11.0	5	.3	.39	22				
March.....				36.9	2.5	.4	1.19	73				
April.....				367.1	46	1.0	12.2	728				
May.....				356.5	63	8.1	11.5	707				
June.....				480.8	66	1.6	15.0	954				
July.....				50.1	5	0	1.62	99				
August.....				1.5	.8	0	.05	3.0				
September.....				15.5	3.5	0	.62	31				
Water year 1936-37.....				1,489.2	66	0	4.08	2,950				

## 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 below head and 4 miles northeast of Santa Fe.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during year, 4.6 second-feet Aug. 4 (gage height, 1.11 feet); no flow at times.

1936-37: Maximum discharge, 6.2 second-feet Sept. 7, 1936 (gage height, 1.33 feet); no flow at times.

Remarks.— Records good except those for periods of ice effect, which are fair, and those for periods of missing gage heights, which are poor. Ditch diverts water for irrigation from right bank of Rio Tesuque 500 feet below known as "Rio Tesuque above diversions, near Santa Fe." No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.4	0.5	0		*0.4	0.3	0.6	0.2	1.9	0.6	1.0
2	.2	.4	.4	0		.4	.4	.6	.2	1.9	.6	.9
3	.2	.3	*.4	0		.4	.5	1.2	.2	1.6	.6	.3
4	.2	*.4	.5	0		*.4	.4	1.5	.8	1.7	.7	1.0
5	.8	.4	.4	0		.4	.4	1.4	1.3	1.6	.4	1.3
6	1.8	.3	*.4			.5	.4	1.6	1.1	1.6	.2	1.7
7	1.4	.3	*.6			.4	.4	1.7	1.0	1.4	.3	.6
8	.5	.3	*.4		+0.3	.4	.4	1.6	1.0	.5	.7	1.0
9	.5	.2	*.5			.4	.5	2.0	.9	.8	.5	0
10	.6	.2	*.5			.5	.6	2.2	.8	.7	1.0	.2
11	.5	.2	*.4			.5	.5	2.4	.8	.7	1.2	.5
12	.5	.2				.5	.3	2.5	.6	.1	1.2	.5
13	.5	.2				.5	.2	2.6	.8	.6	.4	.5
14	.5	.2		+1.3		.4	.5	2.7	1.3	.8	1.0	.5
15	.5	.2				.4	.2	2.9	1.7	.9	.8	.5
16	.5	.2			.3	.3	.5	3.1	1.0	.7	1.0	.5
17	.4	.2	+1.4		.3	.3	1.6	3.3	.9	.4	1.2	.7
18	.4	.2			.3	.3	1.7	3.3	.9	.8	1.2	1.0
19	.4	.1			.3	.3	1.9	3.3	1.4	.6	1.4	1.0
20	.4	.2			*.3	.3	2.1	3.4	1.8	.6	.4	.9
21	.4	.7			*.3	.4	2.0	3.4	1.7	.5	1.1	.8
22	.4	.9		0	*.3	.5	2.0	3.3	1.1	.5	1.1	.8
23	.5	.6	.4	0	.4	.5	1.6	3.3	1.8	.5	1.0	.8
24	.5	*.4	.4	0	.4	.4	1.4	3.2	2.3	.7	1.0	.7
25	.5	*.5	.4	0	.5	.3	1.1	3.1	2.4	1.0	1.1	.7
26	.5	*.6	.4	0	.4	.3	1.1	2.9	2.6	.7	1.0	.7
27	.5	.5	.4	0	*.4	.2	1.2	2.8	.8	1.2	.3	.7
28	.5	.6	.4	0	*.3	.2	.4	2.1	0	1.0	1.0	.7
29	.5	.5	.4	0	-	.2	.7	.4	0	.6	1.1	.8
30	.5	.5	*.3	0	-	.2	.6	.3	1.2	.8	1.2	.4
31	.5	-	+1.3	0	-	.2	-	.2	-	.6	1.3	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					16.3	1.8	0.2	0.53	32			
November.....					10.9	.9	.1	.36	22			
December.....					12.8	-	-	.41	25			
Calendar year .....												
January.....					4.8	-	0	.15	9.5			
February.....					9.0	-	-	.32	16			
March.....					11.2	.5	.2	.36	22			
April.....					25.9	2.1	.2	.86	51			
May.....					69.1	3.4	.2	2.23	137			
June.....					32.8	2.6	0	1.09	85			
July.....					27.9	1.9	.1	.90	55			
August.....					26.6	1.4	.2	.86	53			
September.....					21.7	1.7	0	.72	43			
Water year 1936-37.....					269.0	3.4	0	.74	532			

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

## 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 SW $\frac{1}{4}$  sec. 32, T. 18 N., R. 10 E., 150 feet below head and 4 miles northeast of Santa Fe.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, 3.1 second-feet Sept. 30 (gage height, 0.89 foot); no flow at times.

1936-37: Maximum discharge, that of Sept. 30, 1937; no flow at times.

Remarks.- Records fair except those for periods of ice effect or missing gage heights, which are poor. Ditch diverts water from left bank of Rio Tesuque for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.7	0.1	*0.1			0	0.9	0		0.2	0
2	0	.7	0	0			0	.8	0		.1	0
3	0	.8	.3	0			0	.8	0		.1	0
4	0	.8	.1	0			0	.8	0		0	.4
5	0	.6	.1	0			0	.8	0		0	0
6	0	.5	0	0			0	.8	0		0	0
7	0	.4	0	0			0	.7	.3		0	0
8	0	.4	0	0			0	.5	1.0	} 0.5	0	0
9	.2	.3	0	0			0	.5	1.0		0	.1
10	.7	.2	0	0			0	.5	1.2		0	0
11	.3	.3	0	0			0	.7	1.1		0	0
12	.2	.4	0	0			0	.7	1.2		0	.3
13	.2	.3	0	0			0	1.3			.5	.4
14	0	.3	0	0			0	1.5			0	.5
15	0	.2	0	0			0	1.6			.1	.4
16	0	.2	0	0			.1	1.4		.3	.2	.4
17	0	.2	0	0			1.2	1.3		.4	0	.3
18	0	.2	0	0			1.5	.5		.4	0	.2
19	0	.2	0	0			.7	.4		.3	0	.1
20	.2	.2	0	0			1.2	.8	} 1.0	.3	.7	.2
21	.4	.1	0	0			1.2	1.1		.3	0	.2
22	.5	.1	0	0			1.3	1.0		.2	0	.2
23	.5	.1	0	0			.9	1.1		.3	0	.1
24	.5	.1	0	0			.8	1.1		.3	0	.2
25	.6	.1	0	0			.7	1.0		.3	0	.2
26	.6	.1	0	0			.7	.9		.1	0	.2
27	.6	.1	.1	0			1.0	.9	.5	0	.4	.1
28	.6	.1	.1	0			1.4	1.0	0	0	0	.1
29	.6	.1	*.1	0			1.0	.5	0	.1	0	.2
30	.6	.1	0	0			.9	0	0	.6	0	.2
31	.9	-	*.1	0			-	0	-	.8	0	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	8.2					0.9	0	0.26	16			
November.....	9.0					.8	.1	.30	18			
December.....	1.0					.3	0	.03	2.0			
Calendar year .....												
January.....	.1					.1	0	0	.2			
February.....	0					0	0	0	0			
March.....	0					0	0	0	0			
April.....	14.6					1.5	0	.49	29			
May.....	25.9					1.6	0	.84	51			
June.....	20.8					-	0	.68	40			
July.....	12.2					-	0	.39	24			
August.....	2.3					.7	0	.07	4.6			
September.....	5.1					.5	0	.17	10			
Water year 1936-37.....	98.7					-	0	.27	195			

\*Stage-discharge relation affected by ice; discharge computed on basis of five discharge measurements and weather records.

†Gage height missing; discharge interpolated.

‡Gage height missing; discharge estimated on basis of gage heights, records for Cajon Grande ditch and Acequia Madre, and knowledge of local conditions.

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 SE $\frac{1}{4}$  sec. 31, T. 18 N., R. 10 E., 350 feet below head and 4 miles northeast of Santa Fe.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during year, 11 second-feet July 7 (gage height, 1.12 feet); no flow at times.

1936-37: Maximum discharge, that of July 7, 1937; no flow at times.

Remarks.- Records good except those for periods of ice effect or fragmentary gage-height record, which are poor. Acequia diverts water from right bank of Rio Tesuque for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.3		*0.7	0	0	2.1	0.8	0	1.0	0
2	0	0	.2		0	0	0	2.2	*.7	0	1.0	0
3	0	0	.4		0	0	0	2.2	.9	0	1.0	0
4	0	0	.4		0	0	0	2.0	.8	0	.7	0
5	0	0	*.1		0	0	0	2.2	*.8	0	.8	.2
6	0	0	0		0	0	0	2.4	*.8	.4	.5	.4
7	0	0	*.1		0	0	0	2.5	*.8	1.2	.5	.4
8	0	0	*.1		0	0	0	2.5	*.9	.2	.4	.2
9	0	0	0		0	0	0	2.7	1.8	.6	.7	.2
10	0	0	0		0	0	0	2.7	2.9	1.4	.4	0
11	0	.1	0		0	0	0	2.6	2.8	1.8	0	0
12	0	.4	*.1		0	0	0	2.6	2.6	1.6	0	0
13	0	.4	*.1		0	0	0	2.7	2.4	1.3	0	0
14	0	.4	*.1		0	0	1.2	2.9	2.8	.6	0	0
15	0	.4	*.1		0	0	3.4	3.2	3.2	.9	0	0
16	0	.4	0		0	0	1.7	3.4	3.2	1.0	0	0
17	0	.3	0		0	0	1.1	3.5	3.2	1.4	0	.2
18	0	.3	0		0	0	1.5	4.1	3.4	1.0	0	.3
19	0	.3	.1		0	.2	2.1	4.4	2.9	1.1	.1	.2
20	0	.4	0		0	.4	1.5	4.0	2.5	1.1	.1	.3
21	0	.3	0		0	.7	1.5	2.5	2.3	1.1	0	.3
22	0	.2	.3		0	.4	1.3	1.3	2.4	1.0	0	.3
23	0	.3	.6		0	0	1.4	1.3	1.8	1.1	0	.3
24	0	*.1	.5		0	0	1.1	1.4	2.0	.8	0	.3
25	0	*.2	.4		0	0	.8	1.3	2.5	.7	0	.2
26	0	*.3	.5		0	0	1.4	1.2	3.5	1.0	0	.2
27	0	*.4	*.4		0	0	2.2	1.2	.7	.7	0	.2
28	0	.6	*.5		0	0	2.5	1.4	0	.7	0	.1
29	0	*.6	.4		-	0	2.3	2.1	0	1.1	0	.1
30	0	*.4	*.1		-	0	2.2	*.6	0	.5	0	.5
31	.1	-	0		-	0	-	*.6	-	.3	0	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					0.1	0.1	0	0	0.2			
November.....					6.8	.6	0	.23	13			
December.....					5.8	.6	0	.19	12			
Calendar year .....												
January.....					0	0	0	0	0			
February.....					1.7	.7	0	*.02	1.4			
March.....					1.7	.7	0	.05	3.4			
April.....					29.2	3.4	0	.97	58			
May.....					71.8	4.4	.6	2.32	142			
June.....					55.4	3.5	0	1.85	110			
July.....					24.5	1.8	0	.79	49			
August.....					7.2	1.0	0	.23	14			
September.....					4.9	.5	0	.16	9.7			
Water year 1936-37.....					208.1	4.4	.0	.57	413			

\*Stage-discharge relation affected by ice; discharge computed on basis of four discharge measurements, gage heights, and weather records.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

Acequia Madre at waste, near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°46', long. 105°56', in NE¼ sec. 25, T. 18 N., R. 9 E., at end of Acequia Madre and 5½ miles north of Santa Fe.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, about 5 second-feet sometime during period May 27 to June 7 (probably May 29), when recorder clock was stopped (gage height, 1.17 feet); no flow most of time.  
1936-37: Maximum discharge, that of May 29, 1937; no flow most of time.

Remarks.- Records good except those for periods of missing gage heights, May 28 to June 6 and June 27 to July 7, which were computed on basis of records for Acequia Madre at head, Cajon Grande ditch near Santa Fe, and weather records and are poor. Records represent unused water returned to Rio Tesuque from end of Acequia Madre.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	0.5	0		
2								0	0	0		
3								0	0	.5		
4								0	0	0		
5								0	0	0		
6								0	0	0		
7								0	0	0		
8								0	0	0		
9								0	0	.7		
10								0	0	.3		
11								0	0	0		
12								0	0	0		
13								0	.3	0		
14								0	.2	0		
15								.3	.1	0		
16								1.6	0	0		
17								1.2	0	0		
18								.7	.1	0		
19								.7	.1	0		
20								.6	0	0		
21								.9	0	0		
22								.4	0	0		
23								.8	.1	0		
24								1.0	0	0		
25								1.2	0	0		
26								1.4	0	0		
27								1.3	0	0		
28								2.5	0	0		
29								2.0	0	0		
30								.5	0	0		
31								.5	-	0		
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	0		0		0		0		0		0	
November.....	0		0		0		0		0		0	
December.....	0		0		0		0		0		0	
Calendar year .....												
January.....	0		0		0		0		0		0	
February.....	0		0		0		0		0		0	
March.....	0		0		0		0		0		0	
April.....	0		0		0		0		0		0	
May.....	17.5		2.5		0		.56		35			
June.....	2.5		.5		0		.08		5.0			
July.....	1.1		.7		0		.04		2.2			
August.....	0		0		0		0		0			
September.....	0		0		0		0		0			
Water year 1936-37.....	21.1		2.5		0		.06		42.2			

## 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 below Santa Fe National Forest boundary, 2½ miles above mouth, and 5 miles northeast of Santa Fe.

Records available.— March 1936 to September 1937.

Extremes.— Maximum discharge during year, about 95 second-feet Aug. 4 (gage height, 2.50 feet) by slope-area method; no flow at times.

1936-37: Maximum discharge, that of Aug. 4, 1937; maximum gage height, 2.58 feet Sept. 7, 1936 (backwater from rock slide); no flow at times.

Remarks.— Records good except those for periods of ice effect and partial gage-height record, which are poor. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	0.6	0.4	*0.2	*0.3	0.6	1.8	3.2	11	1.2	0.2	0
2	2.5	.6	.3	*.2	*.3	.7	2.0	3.0	13	1.2	.1	0
3	2.5	.4	.3	*.1	*.4	.7	1.7	2.8	12	1.1	.1	0
4	2.5	.4	.3	*.1	*.4	.6	1.7	2.8	11	1.0	1.9	0
5	2.2	.4	*.2	*.1	*.4	.8	1.7	2.8	10	.8	.3	.1
6	2.0	.4	*.3	*.2	*.4	.6	1.7	2.6	9.6	.8	.3	.5
7	2.0	.5	*.3	.2	.6	1.0	1.7	2.6	8.4	.8	.3	†6.6
8	2.0	.5	*.3	.2	.4	1.1	1.8	2.6	7.0	1.0	.3	†7.5
9	1.6	.5	*.3	.2	*.6	1.2	2.3	2.6	5.4	.8	.2	.4
10	1.6	.5	*.4	.2	*.6	1.3	2.5	2.6	4.3	.6	.2	.1
11	1.3	.5	*.4	.2	*.8	1.4	3.0	2.6	3.7	.6	0	.1
12	1.3	.5	*.4	.2	*.3	1.4	3.9	2.6	3.0	.6	.1	.1
13	1.2	.5	.4	.2	.3	1.7	4.6	2.6	2.6	.5	.1	.1
14	1.2	.5	*.3	.2	.3	1.7	5.7	2.5	2.3	.5	.1	.2
15	1.1	.5	.3	.2	.3	1.6	6.7	2.5	2.2	.3	.1	.2
16	1.0	.5	.3	.2	.3	1.6	8.1	2.3	1.6	.3	0	.2
17	1.0	.5	.3	.2	.2	1.7	8.4	2.3	1.7	.3	0	.2
18	.8	.6	.3	*.1	.2	2.0	7.5	2.3	1.6	.3	0	.1
19	.8	.6	.3	*.1	.3	1.8	6.7	2.3	1.6	.3	.1	.2
20	.8	.5	.3	*.2	*.3	2.0	6.7	2.2	1.3	.2	0	.1
21	.8	.4	.3	*.1	*.3	2.2	6.4	1.8	1.3	.2	0	.1
22	.7	.4	.3	*.1	.3	2.2	6.4	1.7	1.1	.2	0	.1
23	.7	.4	.3	*.1	.3	2.3	6.4	1.7	1.1	.2	0	.1
24	.6	.3	.3	*.1	.3	2.3	5.9	1.7	1.0	.2	0	.1
25	.7	.3	.3	*.1	.3	2.5	5.2	1.4	1.0	.2	0	.1
26	.7	.3	.4	*.2	.5	2.5	4.7	1.2	1.1	.2	0	0
27	.6	.3	.4	*.3	.6	2.5	4.3	1.1	1.7	.1	0	0
28	.6	.3	*.3	*.4	.6	2.2	4.1	1.4	1.8	.1	0	0
29	.6	.3	*.3	*.4	-	2.2	3.9	3.5	1.4	.2	0	0
30	.6	.4	*.3	*.3	-	2.0	3.4	13	1.3	.2	0	.9
31	.6	-	*.2	*.2	-	2.0	-	10	-	.2	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						59.0	2.5	0.6	1.26	77		
November.....						13.4	.6	.3	.45	27		
December.....						9.7	.4	.2	.31	19		
Calendar year .....												
January.....						5.8	.4	.1	.19	12		
February.....						10.9	.8	.2	.39	22		
March.....						50.8	2.5	.6	1.64	101		
April.....						130.8	8.4	1.7	4.36	259		
May.....						90.6	13	1.1	2.92	180		
June.....						126.3	13	1.0	4.21	251		
July.....						15.2	1.2	.1	.49	30		
August.....						4.4	1.9	0	.14	8.7		
September.....						18.0	7.5	0	.60	36		
Water year 1936-37 .....						514.8	13	0	1.41	1,020		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage-height record fragmentary; discharge computed on basis of partial gage-height records and records for Rio Tesuque above diversions, near Santa Fe.

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 below head and 5 miles north of Santa Fe.

Records available.-- March 1936 to September 1937.

Extremes.-- Maximum discharge during year, 7.9 second-feet Sept. 8 (gage height, 1.55 feet, from high-water marks); no flow at times.

1936-37: Maximum discharge, that of Sept. 8, 1937; no flow at times.

Remarks.-- Records good except those for periods of ice effect or missing gage heights, which are poor. Acequia diverts water for irrigation from right bank of Rio Tesuque about 800 feet above station at Tesuque Bridge. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.3	0.9	*0.7	*0.8	0.6	1.0	1.9	0.3	0.2	1.3	1.1
2	.2	.3	.9		*.7	.7	1.4	1.6	.8	.4	1.3	1.1
3	.3	.2	.9		.7	.7	1.4	1.6	1.1	.2	1.3	1.1
4	.3	.6	1.0		.8	.6	1.3	1.7	.6	.1	.8	1.1
5	.3	.6	1.0		.8	.4	2.3	1.8	.2	.3	.6	1.0
6	.3	.5	.8	1.0	.8	.4	2.3	1.8	.7	1.1	1.0	.7
7	.3	.5	.3	.9	1.0	.5	2.0	1.7	.7	.7	1.1	.6
8	.2	.4	.6		.5	.5	2.4	1.6	.6	.5	1.2	1.1
9	.2	.6	.8		.6	.4	2.5	1.6	.6	.4	1.2	0
10	.6	.6	1.1	*8	.6	.6	1.0	1.6	1.0	.7	1.2	.2
11	.6	.5	1.0		.7	.6	1.0	1.8	1.7	1.1	1.3	.3
12	.5	.3	1.0		.8	.6	.3	1.6	1.7	.3	1.3	.7
13	.5	.3	1.1		.7	.6	.8	1.6	1.6	†.3	1.3	1.0
14	.5	.8			.7	.5	.4	1.6	1.2	†.4	1.2	1.0
15	.5	1.2	.8		.7	.5	.6	1.6	1.1	†.5	1.2	.9
16	.5	1.0	1.2	*8	.6	.5	.4	1.9	1.2	.6	1.2	.9
17	.4	1.0	1.1		.5	.5	.3	2.1	1.0	1.1	1.2	.9
18	.4	1.2	1.0		.5	.3		2.3	1.4	1.2	1.2	1.0
19	.4	1.1	.9		.5	0	.8	2.4	1.6	1.0	1.3	.9
20	.4	1.0	.9		.5	0	.5	2.4	1.2	1.0	1.2	.9
21	.3	.9	1.0	*7	.6	0	.7	2.8	1.0	1.2	1.2	.9
22	.3	.9	.9		.6	0	.4	2.3	1.6	1.3	1.2	.9
23	.3	.6	.6		.6	0		1.8	2.3	1.3	1.2	.9
24	.3	.6	.8		.6	.1	0	1.7	2.0	1.3	1.2	1.0
25	.4	.6	.6		.7	.2	0	1.5	.7	1.3	1.3	1.0
26	.3	.8	.8	*1.0	.6	.1	0	1.3	1.2	1.3	1.2	.9
27	.3	.8	.6		.6	.3	.9	1.2	.2	1.3	1.2	.9
28	.3	.8	.8		.6	.5		1.6	0	1.3	1.2	1.0
29	.3	.9			-	.7	1.9	1.5	.1	1.3	1.2	1.1
30	.3	.9	*.7		*.9	-	1.8	1.1	.1	1.4	1.2	.6
31	.4	-	*.7	*.8	-	.5	-	.3	-	1.3	1.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						11.3	0.6	0.2	0.36	22		
November.....						20.8	1.2	.2	.69	41		
December.....						26.7	1.2	.3	.86	53		
Calendar year .....												
January.....						25.0	-	-	.61	50		
February.....						18.5	1.0	.5	.66	37		
March.....						12.6	.7	0	.40	25		
April.....						31.1	2.5	0	1.04	62		
May.....						55.4	2.9	.3	1.72	106		
June.....						29.5	2.3	0	.98	59		
July.....						26.4	1.4	.1	.65	52		
August.....						36.7	1.3	.6	1.18	73		
September.....						25.7	1.1	0	.86	51		
Water year 1936-37.....						317.6	2.8	0	.67	631		

\*Stage-discharge relation affected by ice; discharge computed on basis of two readings of staff gage and weather records.

†Gage height missing; discharge interpolated.



## Acequia Medio at waste, near Santa Fe, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°46', long. 105°56', near center of sec. 24, T. 18 N., R. 9 E., at end of Acequia Medio and 6 miles north of Santa Fe.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, 2.3 second-feet sometime during period May 5 to June 3 (probably May 30), when recorder clock was stopped (gage height, 0.77 foot); no flow at times.

1936-37: Maximum discharge, that of May 30, 1937; no flow at times.

Remarks.- Records poor. Station is below all lateral head gates on Acequia Medio, and flow represents unused water returned to Rio Tesuque.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	*0.2	*0.1		0.2	0
2							0	.2	*.1		.1	0
3							0	.2	*.1		0	0
4							0	.1	.1		0	0
5							0		.1		0	0
6							0		.3		0	.3
7							0		0		0	.3
8							0		0		.1	.3
9							0		0		.1	0
10							0	*.1	0		0	0
11							0		*.2		0	0
12							0		*.2		0	.2
13							*.1		*.1		0	.1
14							*.1		0		0	0
15							*.1		0		0	0
16							0		0		.1	0
17							0		0		0	0
18							0		*.1		0	0
19							0		*.2		0	.1
20							*.1		*.1		0	.1
21							*.2		0		0	0
22							*.1	*.2	0		.1	0
23							0		0		.1	0
24							0		*.2		0	0
25							0		*.2		0	0
26							0		*.1		0	.1
27							0		0		0	.1
28							*.2		0		0	0
29							*.1	*.4	0		.1	0
30							*.1	*.4	0		.1	0
31							-	*.1	-		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.....							1.1	.2	0	.04	2.2	
May.....							5.3	-	-	.17	11	
June.....							2.2	.3	0	.07	4.4	
July.....							0	0	0	0	0	
August.....							1.0	.2	0	.03	2.0	
September.....							1.6	.3	0	.05	3.2	
Water year 1936-37.....							11.2	-	0	.03	22.8	

\*Gage height missing; discharge estimated on basis of weather records and records for Acequia Medio at head.



## Post ditch near Tesuque Pueblo, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°47', long. 105°57', in SE $\frac{1}{4}$  sec. 14, T. 18 N., R. 9 E., a quarter of a mile below head and 2 miles south-east of Tesuque Pueblo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, 7.3 second-feet July 11 (gage height, 1.50 feet); no flow at times.

1936-37: Maximum discharge, that of July 11, 1937; no flow at times.

Remarks.- Records good except those for period of missing gage heights, May 25 to July 7, which were estimated and are poor. Ditch diverts water from right bank of Rio Tesuque for irrigation on Tesuque Pueblo land. Several diversions above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	1.0	0			0.8	1.4
2						0	0	0			.2	1.5
3						0	0	.1			.2	.8
4						0	0	.6			.3	0
5						0	0	1.1		0.9	1.5	.4
6						0	0	.7			1.5	.5
7						0	0	.1			1.5	.1
8						0	0	.6	0.8	1.0	.5	.1
9						0	0	1.3		1.2	0	.1
10						0	0	.7		1.5	1.0	.1
11						0	0	.1		1.4	1.7	.1
12						0	0	1.1		.5	.7	.1
13						0	0	1.2		.5	1.4	.1
14						0	0	.2		.7	.7	.1
15						0	0	.3		.3	1.2	.1
16						0	0	.2		.6	1.5	.1
17						0	0	.2		1.2	1.5	.1
18						0	0	1.3		1.0	1.5	.1
19						0	0	1.7		.4	1.3	.1
20						0	0	1.3		0	0	.1
21						0	0	.1		.3	1.1	.1
22						0	.5	.1		1.7	1.2	.1
23						0	1.7	.1		1.7	1.1	.1
24						0	1.7	.1	.9	1.7	1.1	.1
25						0	1.1	.1		.7	1.1	.1
26						0	0			1.1	.5	.1
27						.8	0			1.7	0	.6
28						1.7	0			1.4	0	.6
29						1.7	0			.1	0	.2
30						1.6	0			0	.8	.2
31						1.5	-		-	.2	1.5	-
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.....						7.3	1.7	0	.24	14		
April.....						6.0	1.7	0	.20	12		
May.....						17.4	-	0	.66	35		
June.....						25.5	-	-	.65	51		
July.....						27.2	-	0	.88	54		
August.....						27.2	1.7	0	.88	54		
September.....						8.2	1.5	0	.27	16		
Water year 1936-37.....						118.8	-	0	.33	236		

## Qwiyo ditch near Tesuque Pueblo, N. Mex.

Location.— Water-stage recorder and 1-foot Parshall flume, lat. 35°47', long. 105°58', in SW¼ sec. 14, T. 18 N., R. 9 E., 400 feet below head and 1½ miles southeast of Tesuque Pueblo.

Records available.— July 1936 to September 1937.

Extremes.— Maximum discharge during year, about 8 second-feet July 11 (gage height, 1.33 feet); no flow at times.

1936-37: Maximum discharge, that of July 11, 1937; maximum gage height, 1.95 feet Sept. 7, 1936 (backwater from trash in flume); no flow at times.

Remarks.— Records good except those for periods of doubtful accuracy of gage heights, which are fair, and those for periods of faulty intake action or missing gage heights, which are poor. Ditch diverts water from right bank of Rio Tesuque for irrigation on Tesuque Pueblo land. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.1	1.0	0	} *0.5		
2						0	1.6	0	0			
3						0	.3	*.5	0			
4						0	0	*1.0	0			
5						0	0	*1.0	0			
6						0	0	0	0	} *0.5		
7						0	0	*.5	0			
8						0	0	*.5	0		*.5	
9						0	0	*.7	0		.6	
10						0	0	*.5	0		.4	
11						0	0	0	.5		.2	
12						0	0	0	0		1.2	
13						0	0	0	0		1.4	
14						0	0	*.1	1.1		1.4	
15						0	0	0	.9		.6	
16						0	0	0	*.8	†1.1		
17						0	0	0	0	†1.6		
18						0	0	0	0	†.9		
19						0	0	0	0	†1.3		
20						0	0	0	0	†1.7		
21						0	0	0	0	†1.6		
22						.7	0	0	0	†.9		
23						2.0	0	0	0	†1.0		
24						1.6	0	*.1	0	†.7		
25						0	.6	0	0	†.8		
26						0	1.6	0	0	†.6		
27						1.2	1.2	0	0	†.9		
28						0	.7	0	0	†1.0		
29						0	1.3	0	0	†.5		
30						0	1.2	0	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 .....												
January.....						0	0	0	0	0		
February.....						0	2.0	0	0	0		
March.....						5.5	1.6	0	.13	11		
April.....						6.6	1.6	0	.29	17		
May.....						5.9	1.0	0	.19	12		
June.....						3.3	1.1	0	.11	6.5		
July.....						25.2	1.8	0	.75	46		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
Water year 1936-37.....						46.5	2.0	0	.13	92.5		

\*Operation of intake faulty or gage height missing; discharge computed on basis of recorded range in stage and knowledge of local conditions.

†Accuracy of gage height doubtful.

## 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 below head and half a mile southeast of Tesuque Pueblo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, about 8 second-feet (mean daily discharge less than 0.05 second-foot) Sept. 5 (gage height, 1.78 feet); no flow during most of year. 1936-37: Maximum discharge that of Sept. 5, 1937; no flow most of time.

Remarks.- Records fair except those for period of missing gage heights, June 21 to July 7, which were estimated and are poor. Ditch diverts water from left bank of Rio Tesuque for irrigation on Tesuque Pueblo lands. No diversion between station and head.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0	0		0	
2							0	0	0		0	
3							0	0	0		0	
4							.2	0	0		0	
5							0	0	0	.2	0	
6							.5	0	0		0	
7							.1	0	0		0	
8							.4	0	0	0	0	
9							0	0	0	0	0	
10							0	0	0	0	0	
11							0	0	0	0	0	
12							.3	0	0	0	0	
13							.4	0	0	0	0	
14							0	0	0	0	0	
15							0	.3	0	0	0	
16							0	0	0	0	0	
17							0	0	0	0	0	
18							0	.4	0	0	0	
19							0	.5	0	0	0	
20							0	.4	0	0	0	
21							0	0		0	0	
22							0	0		0	0	
23							0	0		0	0	
24							0	.1		0	0	
25							0	.3	.2	0	0	
26							0	.1		0	.4	
27							0	.4		0	.6	
28							.5	0		0	.3	
29							.2	.3		0	.2	
30							0	.3		0	.3	
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 .....												
January.....	0					0	0	0	0			
February.....	0					0	0	0	0			
March.....	0					0	0	0	0			
April.....	2.2					.4	0	.07	4.4			
May.....	3.1					.5	0	.10	6.1			
June.....	2.0					-	0	.07	4.0			
July.....	1.4					-	0	.05	2.8			
August.....	1.8					.6	0	.06	3.6			
September.....	0					0	0	0	0			
Water year 1936-37.....	10.5					-	0	.03	20.9			

## 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 SW $\frac{1}{4}$  sec. 12. T. 19 N., R. 8 E., 1,800 feet below head and  $3\frac{1}{2}$  miles east of San Ildefonso.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year, 5.9 second-feet June 13 (gage height, 1.52 feet); minimum daily discharge, 0.1 second-foot July 30, 31, Aug. 4-12.  
1936-37: Maximum discharge, 8.8 second-feet Aug. 3, 1936; maximum gage height, that of June 13, 1937; no flow July 9 and 10, 1936.

Remarks.- Records for October to March good; those for April to September fair except those for periods of ice effect or missing or partial gage-height record, which are poor. Ditch diverts water from left bank of Rio Pojoaque for irrigation. Records include seepage inflow from drain ditch, which enters about 100 feet above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.3	0.4	0.4	0.3	0.4	3.0	1.6	0.4	0.2	0.8	1.9
2	.5	.3	.4	.5	.3	.4	2.7	1.6	.6	.3	.6	1.0
3	.5	.3	.4	.3	.3	.4	1.5	1.3	.5	.7	.2	.3
4	.5	.3	.5	.3	.3	.4	1.6	1.0	.3	1.0	.1	.3
5	.5	.3	.6	.5	.4	.4	1.1	1.8	.2	1.1	†.1	.5
6	.5	.4	.4	.3	.4	.4	.8	1.8	†.4	.9	†.1	.5
7	.5	.4	.4	.4	.5	.3	.5	2.4	.5	.7	†.1	.6
8	.4	.4	.4	.4	.5	.3	.5	2.6	.4	.7	.1	.6
9	.5	.5	.5	.4	.4	.3	.4	1.4	1.2	.7	†.1	†.4
10	.5	.4	.6	.4	.4	.3	.4	.9	1.8	†.7	.1	.4
11	.5	.5	.4	.4	.4	.3	.3	1.1	2.0	†.6	.1	.5
12	.4	.5	.4	.3	.4	.3	.2	1.7	2.3	†.6	.1	.5
13	.4	.5	.4	.4	.4	.4	1.6	1.4	1.5	†.5	.2	.8
14	.4	.4	.4	.4	.4	.4	1.7	1.4	1.1	†.4	.2	.7
15	.4	.4	.5	.4	.5	.3	1.5	1.9	.9	.4	.4	.5
16	.4	.4	.5	.4	.5	.3	2.2	2.1	1.0	.4	.3	.3
17	.3	.4	.5	.4	.5	.5	2.3	1.9	.8	.4	.3	.3
18	.3	.4	.4	.4	.4	.9	2.4	2.4	.8	1.2	.3	.3
19	.3	.4	.3	.4	.4	1.2	1.9	1.4	1.3	.8	.4	.3
20	.3	.4	.3	.3	.4	1.5	1.6	1.5	.7	.4	.4	.3
21	.3	.4	.3	.4	.4	1.2	2.8	1.5	.8	.3	.4	.4
22	.3	.4	.3	*.3	.4	1.2	1.8	2.1	.4	.2	.5	.8
23	.3	.4	.3	*.3	.4	1.7	2.1	1.7	.8	.2	.4	.6
24	.3	.4	.3	*.3	.4	1.0	1.7	2.0	.5	.2	.4	.5
25	.3	.4	.4	*.3	.4	1.2	1.9	1.9	1.1	.3	.4	.4
26	.3	.4	.3	*.3	.4	1.1	2.1	1.8	1.4	.3	.4	.4
27	.3	.4	.3	*.3	.4	.6	2.0	1.1	.5	.2	.4	.3
28	.3	.4	.3	*.3	.4	.3	2.6	1.7	.2	.2	.5	.3
29	.4	.3	.4	.3	-	.5	2.6	1.0	.2	.2	†.9	.5
30	.3	.4	.3	.3	-	1.5	2.1	.7	.2	.1	†.3	1.2
31	.3	-	.3	.3	-	2.1	-	.4	-	.1	1.6	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						11.9	0.5	0.3	0.38	24		
November.....						11.9	.5	.3	.40	24		
December.....						12.1	.6	.3	.39	24		
Calendar year .....												
January.....						10.7	.4	.3	.35	21		
February.....						11.3	.5	.3	.40	22		
March.....						22.1	2.1	.3	.71	44		
April.....						49.8	3.0	.2	1.66	99		
May.....						49.1	2.6	.4	1.88	97		
June.....						24.8	2.3	.2	.83	49		
July.....						15.0	1.2	.1	.48	30		
August.....						12.0	1.6	.1	.39	24		
September.....						16.4	1.9	.3	.55	33		
Water year 1936-37.....						247.1	3.0	.1	.68	491		

\*Stage-discharge relation affected by ice; discharge computed on basis of weather records.

†Gage height missing; discharge interpolated.

‡Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

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 below head and 3 miles east of San Ildefonso.

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during year, 13 second-feet June 28 (gage height, 1.30 feet); no flow at times.  
1936-37: Maximum discharge, 14 second-feet July 27, 1936 (gage height, 1.43 feet); no flow at times.

Remarks.— Records fair except those for periods of missing gage heights, June 4-7, July 8-14 (computed on basis of records for Nambe Creek at Pojoaque Bridge, near Nambe and weather records), and those between 0.1 and 0.5 second-foot, which are poor. Ditch diverts water from right bank of Rio Pojoaque for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0			0	0.4	0.7	0	1.8	1.1	0
2	0	0	.1			0	0	.4	0	2.3	.6	0
3	0	0				0	0	1.1	0	.9	0	0
4	0	0	.3			0	0	2.3	0	.9	.3	0
5	0	0	.8			0	0	1.4	0	.7	0	0
6	0	0	.1			0	0	2.7	1	1.2	0	0
7	0	0	0			0	0	2.2	1.9	.4	0	0
8	0	0	0			0	0	2.4	.9	.5	0	0
9	0	0	0			0	0	2.5	.5	.5	0	0
10	0	0	0			0	0	1.8	1.1	0	0	0
11	0	.6	0			0	.8	2.6	2.5	0	0	0
12	0	.4	0			0	.6	1.3	2.3	0	0	0
13	0	0	0			0	4.7	1.3	3.8	0	0	0
14	0	.1	0			0	4.2	1.7	2.5	0	0	0
15	0	0	0			.8	1.0	1.7	1.9	0	.5	0
16	0	.8	0			.9	1.5	2.1	.1	0	.3	0
17	0	0	0			2.1	1.0	1.6	.1	0	0	0
18	0	0	0			2.2	1.2	2.9	.6	1.2	0	0
19	0	.7	0			1.8	1.6	2.2	.5	.5	0	0
20	0	1.7	0			1.5	2.2	2.2	2.2	0	0	0
21	0	1.3	0			1.3	2.4	2.2	.8	0	0	0
22	0	.8	0			.8	1.9	2.4	.2	0	0	0
23	.2	0	0			.1	1.9	4.7	0	0	0	0
24	.4	0	0			.3	2.9	1.6	0	0	0	0
25	.5	.2	0			1.4	2.5	1.3	1.5	0	.3	0
26	0	0	0			1.2	1.9	1.9	1.5	0	0	0
27	0	0	0			2.0	2.3	.6	0	0	0	0
28	0	0	0			1.6	1.9	.6	0	0	0	.3
29	.6	0	0			1.8	1.8	.3	0	0	3.6	.5
30	1.0	0	0			2.9	1.0	.2	0	0	2.3	.8
31	0	-	0			2.0	-	0	-	0	2.0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2.6	1.0	0	0.08	5.0		
November.....						6.6	1.7	0	.22	13		
December.....						1.6	.8	0	.05	3.2		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						24.7	2.9	0	.60	49		
April.....						39.7	4.7	0	1.32	79		
May.....						52.9	4.7	0	1.71	105		
June.....						25.9	3.8	0	.86	51		
July.....						10.9	2.3	0	.35	22		
August.....						11.0	3.6	0	.35	22		
September.....						1.6	.8	0	.05	3.2		
Water year 1936-37.....						177.4	4.7	0	.49	352		

## Rancho ditch near San Ildefonso, N. Mex.

Location.- Water-stage recorder and 1-foot Parshall flume, lat. 35°53', long. 106°04', near line between SE $\frac{1}{4}$  sec. 10 and SW $\frac{1}{4}$  sec. 11, T. 19 N., R. 8 E., 350 feet below head and 2 $\frac{1}{4}$  miles east of San Ildefonso.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during year, 6.2 second-feet Apr. 17; maximum gage height, 1.72 feet Nov. 22; no flow at times.

1936-37: Maximum discharge, that of Apr. 17, 1937; maximum gage height, that of Nov. 22, 1936; no flow at times.

Remarks.- Records poor. Ditch diverts water from left bank of Rio Pojoaque for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.9		0	0	0.4	0.9	0	0	0.6	*0.1
2		0	1.7		0	0	.6	.8	0	.1	.5	.1
3		0	1.2		0	0	.4	2.2	0	*.1	.3	.1
4		0	1.2		0	0	.6	1.3	0	*.2	.2	.1
5		0	1.7		0	0	.9	1.6	*.5	*.2	*.2	.1
6		0	.8		0	0	.7	1.6	0	*.2	*.2	.1
7		0	.6		0	0	.5	2.0	0	*.3	*.3	.8
8		0	.5		0	0	.5	2.0	0	*.3	*.3	.7
9		0	.4		0	0	.5	1.9	0	*.3	.3	.1
10		0	.1		0	0	.6	1.5	0	*.3	.3	.3
11		0	.3		0	.5	1.1	1.5	.6	*.4	.3	.3
12		0	.3		0	.7	.4	2.4	1.3	*.4	.3	.3
13		0	.3		0	.5	0	1.9	.9	*.4	.3	.3
14		0	.6		0	.9	0	1.4	1.1	*.5	.3	.3
15		0	.6		0	.4	0	1.8	1.2	.5	.3	.3
16		0	.3		0	0	0	2.2	.9	.5	.3	.3
17		0	.7		0	.2	1.5	2.1	.9	.5	.3	.3
18		0	.2		0	.8	2.0	1.1	.8	.6	.3	.3
19		0	.4		0	.4	.9	1.0	1.0	.6	.3	.3
20		0	.1		0	.2	1.9	1.6	1.1	.5	.3	.3
21		.1	0		0	0	1.6	2.6	1.0	.5	.3	.3
22		1.8	.2		0	.2	.6	2.7	1.0	.4	.3	.3
23		1.9	.4		0	.5	.1	1.6	.8	.4	.3	.3
24		1.2	.1		0	.6	.4	1.1	1.3	.4	.2	.2
25		1.0	.2		.1	.6	.4	.2	1.8	.4	.2	.1
26		.8	.1		.2	.7	1.2	.3	2.2	.4	*.2	.1
27		1.3	.2		.2	.4	.8	0	0	.4	*.2	.1
28		1.7	.2		.1	0	.7	.4	0	.3	*.2	0
29		1.7	.1		-	.2	.8	0	0	.3	*.1	0
30		1.8	.1		-	.3	1.4	0	0	.3	*.1	.1
31		-	0		-	.2	-	0	-	.3	*.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						13.3	1.9	0	.44	26		
December.....						15.3	1.9	0	.49	30		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						.6	.2	0	.02	1.2		
March.....						8.2	.8	0	.26	16		
April.....						21.5	2.0	0	.72	45		
May.....						41.6	2.7	0	1.34	83		
June.....						18.3	2.2	0	.61	36		
July.....						11.0	.6	0	.35	22		
August.....						8.4	.6	.1	.27	17		
September.....						7.0	.8	0	.23	14		
Water year 1936-37.....						145.2	2.7	0	.40	288		

\*Gage height missing; discharge estimated or interpolated.



## 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 below head and 2 miles east of San Ildefonso.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year, 12 second-feet July 11 (gage height, 1.29 feet); no flow at times.  
1936-37: Maximum discharge, that of July 11, 1937; no flow at times.

Remarks.- Records good except those for period of ice effect, Feb. 9-13 (computed on basis of one discharge measurement and weather records), and those between 0.1 and 0.5 second-foot, which are poor. Ditch diverts water from left bank of Rio Pajoague for irrigation. No diversion above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.5	0		0	0	0	0.9	0.4	0	0	0
2	0	.6	0		0	.4	0	0	0	0	0	0
3	0	.3	0		0	.8	0	.2	0	.2	0	0
4	0	.7	0		0	1.8	0	0	0	2.6	.5	0
5	0	1.5	0		.2	0	0	.9	0	2.3	.1	2.2
6	0	1.1	0		.6	0	0	0	0	0	0	1.2
7	0	.2	0		1.1	0	0	.6	0	0	0	1.9
8	0	.2	0		1.4	.7	0	1.4	.4	.5	2.2	1.5
9	0	0	.3		.5	1.3	0	2.5	2.7	.6	1.9	1.7
10	0	.2	.5		.6	1.9	0	1.1	2.7	.5	0	2.3
11	0	.2	0		0	1.4	3.6	.7	1.7	5.8	0	0
12	0	.2	0		0	1.2	1.6	.5	.7	1.5	0	0
13	0	.2	0		0	1.4	1.5	0	1.7	1.1	0	0
14	.3	.2	.1		0	0	1.5	.5	.6	0	0	0
15	.4	0	0		0	0	.7	.5	.1	0	0	0
16	.2	.3	0		0	0	1.0	0	0	0	0	0
17	.2	.1	0		0	0	1.4	.2	0	0	0	0
18	0	.1	0		0	0	2.7	.7	.2	0	0	0
19	.1	0	.2		0	0	1.1	2.1	0	0	0	2.8
20	.5	.1	.2		0	0	1.3	1.0	3.5	0	0	1.9
21	.8	.2	.1		0	.1	1.8	1.2	1.8	0	0	0
22	.9	.3	0		0	0	1.9	1.2	0	0	2.1	0
23	1.1	.6	0		0	.8	2.3	2.6	0	0	1.1	0
24	.5	0	0		0	0	.9	1.7	0	0	0	0
25	.2	0	0		0	0	.2	2.0	0	3.5	0	0
26	.6	.2	0		0	1.0	0	2.0	0	2.0	0	0
27	1.1	.2	0		0	.8	.4	0	0	0	0	0
28	1.0	0	0		0	2.1	.8	.3	0	0	0	0
29	.9	0	0		-	2.2	.7	.2	0	0	0	0
30	.6	0	0		-	.9	.4	.1	0	.1	0	1.1
31	1.1	-	0		-	.1	-	.4	-	0	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						10.5	1.1	0	0.34	21		
November.....						8.2	1.5	0	.27	16		
December.....						1.4	.5	0	.06	2.8		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						4.3	1.4	0	.15	8.5		
March.....						18.9	2.2	0	.61	37		
April.....						25.8	3.6	0	.86	51		
May.....						25.3	2.6	0	.82	50		
June.....						16.6	3.5	0	.55	33		
July.....						21.0	5.8	0	.68	42		
August.....						7.9	2.2	0	.25	16		
September.....						16.6	2.8	0	.55	33		
Water year 1936-37.....						156.4	5.8	0	.45	310		

## Ortiz ditch at San Ildefonso, N. Mex.

Location.— Water-stage recorder and 1.5-foot Parshall flume, lat. 35°54', long. 106°06', in NW¼ sec. 9, T. 19 N., R. 8 E., 1,000 feet below head and three-quarters of a mile northeast of San Ildefonso.

Records available.— April 1936 to September 1937.

Extremes.— Maximum discharge during year, 8.2 second-feet Apr. 19 and May 13 (gage height, 1.22 feet); no flow at times.  
1936-37: Maximum discharge, that of Apr. 19 and May 13, 1937; no flow at times.

Remarks.— Records for February to September good; those for October to January fair, except those for periods of ice effect or missing gage heights, which are poor. Ortiz ditch diverts water from left bank of Rio Pojoaque for irrigation. Records include water received from Well ditch not included in miscellaneous measurements on that ditch. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0.2			0	1.2	0.2	1.0	0	1.1
2	0	0	0	.2			0	1.8	1.0	1.1	0	1.1
3	0	0	0	.1			0	.5	0	.7	0	1.0
4	0	0	*.1	*.1			0	.6	0	0	0	.5
5	0	0	0	0			0	.4	0	.5	0	.2
6	0	.8	0	0			0	.5	0	0	0	.5
7	0	1.7	.1	0			0	.2	0	.2	0	.6
8	0	2.4	.1	0			0	0	.1	.3	0	.7
9	0	.8	.1	0			0	1.4	.1		.5	.7
10	0	0	.1	0			0	.5	0		.9	.6
11	0	0	.1	0			0	1.3	.2	} ↑.4	.9	.6
12	0	.2	.1	0			0	2.0	.1		.9	.6
13	0	.2	.1	0			.1	2.5	.6		.9	.6
14	0	.2	.1	0			.6	1.2	.2		.9	.6
15	.6	.2	.1	0			1.9	1.8	.1	.4	1.0	.5
16	3.3	.1	.1	0			.5	1.4	0	.8	1.0	.4
17	1.7	.1	.1	0			2.0	2.5	0	.8	.4	.4
18	1.0	.1	.1	0			2.7	1.1	0	.2	.1	.4
19	.3	.1	.2	0			1.6	.4	0	.2	0	.4
20	.3	.1	.2	0			2.9	.4	0	.2	.3	.4
21	0	.1	.1	0			1.4	1.1	0	.1	.6	.3
22	0	.1	.2	0			.8	.1	.1	.3	0	.3
23	.3	0	.2	0			2.3	.8	.1	.9	.1	.4
24	1.7	0	.2	0			.8	.3	0	0	.7	.3
25	.4	0	.2	0			1.2	.7	.2	0	.9	.3
26	0	.1	.2	0			1.0	.6	.9	.6	.7	.3
27	0	0	.2	0			1.3	0	0	1.2	.7	.3
28	.3	0	.2	0			2.2	.3	0	1.3	.8	.2
29	.3	0	.2	0			1.6	0	0	1.5	1.0	.2
30	0	0	.2	0			.8	0	.1	1.4	.8	.3
31	.2	-	.2	0			-	0	-	.4	1.1	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					10.4	3.3	0	0.34	21			
November.....					7.2	2.4	0	.24	14			
December.....					3.8	.2	0	.12	7.5			
Calendar year .....												
January.....					.6	.2	0	.02	1.2			
February.....					0	0	0	0	0			
March.....					0	0	0	0	0			
April.....					25.9	2.9	0	.86	51			
May.....					25.6	2.5	0	.83	51			
June.....					4.0	1.0	0	.33	7.9			
July.....					16.5	1.5	0	.53	33			
August.....					15.2	1.1	0	.49	30			
September.....					14.6	1.1	.2	.49	29			
Water year 1936-37.....					123.8	3.3	0	.34	246			

\*Stage-discharge relation affected by ice; discharge computed on basis of weather records.  
†Gage height missing; discharge estimated.

Sili main canal at head, at Cochiti, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}38'$ , long.  $106^{\circ}19'$ , in NE $\frac{1}{4}$  sec. 17, T. 16 N., R. 6 E., about 1 mile below heading from Rio Grande at Cochiti Diversion Dam and  $1\frac{1}{2}$  miles northeast of Cochiti.

Records available.- May to September 1937. October 1936 to May 1937, at site 0.8 mile downstream (published as Sili main canal at Cochiti); records equivalent if flow of Cochiti West Side acequia is added.

Extremes.- Maximum discharge during period, 110 second-feet Sept. 16 (gage height, 3.99 feet); no flow at times.

Remarks.- Records good except those for days of fragmentary gage-height record, which are fair. Canal diverts water from Rio Grande for irrigation. One small diversion about a quarter of a mile above station irrigates approximately 10 acres.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	33	68	*12	75
2								-	48	76	71	70
3								-	59	59	60	72
4								-	81	*0	75	57
5								-	57	19	84	*5
6								-	*11	68	85	56
7								-	56	64	54	72
8								56	69	69	*15	67
9								*16	60	72	79	79
10								76	50	58	83	72
11								73	69	*17	86	55
12								71	59	*70	84	*10
13								72	*10	63	93	66
14								73	58	55	67	71
15								56	64	63	*12	76
16												
17								*20	78	73	86	58
18								77	84	56	85	17
19								77	83	*17	85	28
20								75	48	81	73	*10
21								81	*23	79	73	70
22												
23								80	91	77	68	78
24								68	*68	75	*11	78
25								*24	83	76	58	78
26								77	79	56	69	79
27								68	86	*16	81	55
28								79	50	61	85	*13
29								79	*0	81	90	79
30								76	47	86	65	84
31								29	84	90	*14	69
								*18	66	79	70	62
								57	-	62	77	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 8-31.....							1,478	81	16	61.6	2,930	
June.....							1,754	91	0	58.5	3,480	
July.....							1,888	90	0	60.9	3,740	
August.....							2,060	93	11	66.5	4,080	
September.....							1,763	84	5	58.8	3,500	
The period.....											17,740	

\*Sunday.

†Gage-height record fragmentary; discharge computed on basis of partial gage-height record, records for Sili main canal wasteway at Borrego Arroyo, near San Felipe, and Sili main canal at end, near San Felipe, and knowledge of canal regulation.

## Sili main canal at Cochiti, N. Mex.

Location.— Water-stage recorder, lat. 35°38', long. 106°20', in NW¼ sec. 17, T. 16 N., R. 6 E., 100 feet below Cochiti west side acequia, 1½ miles northeast of Cochiti, and 2 miles below head at Cochiti Division Dam on Rio Grande. Zero of gage is 5,238.50 feet above mean sea level (general adjustment of 1929).

Records available.— April 1936 to May 1937 (discontinued).

Extremes.— Maximum discharge during period ending Sept. 30, 1936, 109 second-feet Aug. 21 (gage height, 4.55 feet); no flow at times.  
Maximum discharge during period Oct. 1, 1936 to May 8, 1937, 91 second-feet Apr. 24 (gage height, 4.00 feet); no flow at times.

Remarks.— Records good except those for period of missing gage heights, which are fair. Canal diverts water from Rio Grande for irrigation. Cochiti west side acequia and four small laterals, which irrigate about 50 acres, divert above station.

Discharge, in second-feet, 1936-37

1936											1937		
Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	Apr.	May	
1	0	58	72	56	61	66	64	24	47	0	58	52	
2	0	43	76	68	40	63	64	60	28	0	61	22	
3	10	33	78	72	68	60	41	64	0	0	45	73	
4	20	74	76	54	43	60	20	60	0	0	29	72	
5	13	74	76	25	62	39	58	58	0	0	59	74	
6	27	62	51	70	67	0	54	56	0	0	60	74	
7	27	54	19	73	67	37	48	37	0	0	60	74	
8	24	83	68	61	50	52	59	10	0	0	58	56	
9	29	67	66	47	42	45	58	49	0	0	59	-	
10	26	29	56	65	86	56	39	52	0	0	46	-	
11	38	81	60	43	76	56	11	49	0	34	20	-	
12	26	81	68	28	78	37	55	40	0	53	51	-	
13	36	84	51	78	78	26	55	49	0	40	56	-	
14	39	85	27	76	77	54	40	32	0	26	62	-	
15	34	84	71	57	54	53	58	22	0	51	66	-	
16	26	66	71	45	37	44	58	21	0	53	64	-	
17	46	26	70	66	72	51	38	0	0	52	48	-	
18	35	88	70	51	70	39	27	0	0	52	23	-	
19	5	84	69	24	70	0	58	0	0	54	78	-	
20	52	84	48	66	70	23	60	16	0	39	66	-	
21	58	83	25	68	61	57	60	50	0	23	64	-	
22	60	83	68	62	52	48	60	50	0	46	64	-	
23	47	63	69	68	22	36	53	50	0	62	65	-	
24	36	32	68	68	66	31	37	49	0	58	48	-	
25	41	74	64	56	63	75	0	49	0	64	22	-	
26	11	74	66	23	65	43	35	46	0	66	62	-	
27	51	75	52	70	65	0	56	45	0	46	76	-	
28	52	76	22	65	64	0	57	31	0	29	81	-	
29	54	75	65	76	45	43	43	23	0	62	76	-	
30	57	59	64	73	10	52	57	47	0	62	71	-	
31	-	20	-	81	67	-	35	-	0	61	-	-	
Month						Second-foot-days	Maximum	Minimum		Mean	Run-off in acre-feet		
April 1936.....						978	60	0		32.6	1,940		
May.....						2,054	88	20		66.5	4,070		
June.....						1,806	78	19		60.2	3,680		
July.....						1,837	81	23		59.3	3,640		
August.....						1,847	85	10		59.6	3,660		
September.....						1,246	75	0		41.5	2,470		
The period.....											19,360		
October 1936.....						1,463	64	0		47.2	2,900		
November.....						1,141	64	0		38.0	2,260		
December.....						75	47	0		2.4	149		
January 1937.....						0	0	0		0	0		
February.....						0	0	0		0	0		
March.....						1,035	68	0		33.4	2,050		
April.....						1,698	81	20		56.6	3,370		
May 1-8.....						497	74	22		62.1	986		
The period.....											11,720		

Sili main canal at end, near San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°28', 106°26', in NW¼ sec. 8, T. 14 N., R. 5 E., a quarter of a mile above outlet to Rio Grande and about 2 miles north of San Felipe.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 41 second-feet Sept. 27 (gage height, 3.06 feet); no flow at times.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	*1.0	*29	1.3	25
2								-	.6	28	9.5	24
3								32	2.8	20	25	26
4								32	8.0	1.3	28	25
5								30	6.2	*5	27	*3.6
6								29	0	*8	25	*16
7								31	0	*10	25	27
8								30	0	9.3	2.6	27
9								3.1	2.4	10	19	27
10								26	2.3	8.7	25	28
11								33	15	.9	24	*10
12								28	11	.4	24	0
13								27	1.4	8.6	17	0
14								31	7.2	7.8	25	8.8
15								32	7.8	7.1	2.0	30
16								4.7	6.6	8.4	13	.7
17								28	12	5.5	27	.1
18								31	15	.6	27	0
19								33	8.9	2.9	26	0
20								33	2.0	10	26	0
21								33	11	21	26	15
22								33	6.7	23	3.4	26
23								4.5	11	25	18	27
24								*31	16	21	23	27
25								*50	7.3	.7	25	28
26								*10	11	20	16	2.5
27								*8.4	.4	26	14	20
28								9.5	2.8	26	27	28
29								*2.8	33	27	3.3	26
30								0	3.4	26	20	25
31								0	-	25	26	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 3-31.....								656.0	33	0	22.6	1,300
June.....								212.8	33	0	7.09	422
July.....								422.2	29	.4	13.6	837
August.....								600.1	28	1.3	19.4	1,190
September.....								502.7	30	0	16.8	997
The period.....												4,760

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights, records for Sili main canal at head, at Cochiti, and knowledge of regulation of canal.



Sili main canal wasteway at Borrego Arroyo, near San Felipe, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}29'$ , long.  $106^{\circ}25'$ , in SE $\frac{1}{4}$  sec. 33, T. 15 N., R. 5 E., just below waste gates from Sili main canal at Borrego syphon and 4 miles northeast of San Felipe.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 86 second-feet Sept. 11 (gage height, 3.40 feet); no flow at times.

Remarks.- Records fair. Those for May 9, 16, 23, 30, June 1, 26, 30, July 4, 11, 12, 18, Aug. 1, 2, Sept. 5, 6 computed on basis of knowledge of regulation and records for Sili main canal at head, at Cochiti. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								35	†9.8	21	*†0.9	7.2
2								*4.0	8.6	21	†5.6	6.0
3								21	23	24	10	6.4
4								7.0	29	*†4.5	13	6.4
5								11	33	0	12	*†.1
6								13	*3.8	22	9.1	†6.1
7								13	33	26	7.8	8.8
8								12	32	27	*1.2	9.7
9								*†2.2	49	26	7.4	12
10								8.0	10	26	8.8	13
11								6.7	28	*†2.8	9.4	34
12								3.9	28	†9.0	10	*3.0
13								3.8	*6.4	26	6.7	38
14								4.7	24	26	8.1	28
15								5.2	25	26	*1.6	12
16								*†.1	25	26	5.4	43
17								5.4	28	23	9.4	5.0
18								5.4	26	*†2.8	9.4	28
19								5.4	23	19	8.4	*3.5
20								6.0	*4.0	16	7.8	42
21								5.7	25	12	7.5	27
22								6.2	22	13	*.9	15
23								*†.3	23	14	3.4	17
24								23	24	15	5.6	18
25								40	11	*1.8	4.1	15
26								41	†6.2	9.4	10	*2.1
27								31	*0	11	13	12
28								36	3.8	11	7.0	16
29								22	20	13	*0	13
30								*†1.2	†6.1	11	5.0	8.8
31								31	-	9.1	6.0	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....								410.2	41	0.1	13.2	814
June.....								587.7	49	0	19.6	1,370
July.....								492.4	27	0	15.9	977
August.....								212.5	13	0	6.85	421
September.....								456.1	43	.1	15.2	905
The period.....												4,290

\*Sunday.

†Gage height missing; discharge computed on basis of records for Sili main canal at head, at Cochiti and knowledge of regulation.

Cochiti main canal at head, at Cochiti, N. Mex.

Location.— Water-stage recorder, lat.  $35^{\circ}38'$ , long.  $106^{\circ}19'$ , in E $\frac{1}{2}$  sec. 17, T. 16 N., R. 6 E., 300 feet above Cochiti east side acequia,  $1\frac{1}{2}$  miles northeast of Cochiti, and about  $1\frac{1}{4}$  miles below heading from Rio Grande.

Records available.— May to September 1937. April 1936 to May 1937, at site 600 feet downstream; records equivalent if flow of Cochiti east side acequia is added to earlier records.

Extremes.— Maximum discharge during period, 168 second-feet Sept. 16 (gage height, 3.74 feet); no flow at times.

Remarks.— Records good except those for periods of missing gage heights, which are fair. Canal diverts water from Rio Grande for irrigation. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	104	97	*60	106
2								-	103	103	116	112
3								-	112	77	112	119
4								-	109	*0	109	89
5								-	75	21	116	*56
6								-	*64	109	116	119
7								-	112	106	82	126
8								-	122	109	*53	122
9								-	122	109	109	130
10								122	126	89	112	126
11								122	122	*58	126	*90
12								116	105	109	130	*160
13								122	*65	109	122	119
14								89	122	106	94	116
15								94	119	109	*69	119
16								*68	119	109	122	92
17								119	119	80	122	37
18								124	116	*50	119	84
19								124	87	112	119	*60
20								126	*58	122	122	119
21								122	116	116	94	116
22								97	116	119	*170	116
23								*58	119	119	119	112
24								94	119	92	112	106
25								104	122	*63	119	79
26								126	56	122	116	*64
27								126	*0	122	119	112
28								121	69	122	82	116
29								68	112	122	*60	116
30								*161	103	119	116	104
31								†130	-	94	126	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 10-31.....						2,353	130	51	106	4,630		
June.....						3,013	126	0	100	5,980		
July.....						2,994	122	0	96.6	5,940		
August.....						3,263	130	53	105	6,470		
September.....						3,042	130	37	101	6,030		
The period.....										29,050		

\*Sunday.

†Gage height missing; discharge computed on basis of records for Cochiti main canal at San Felipe and Cochiti main canal wasteway near Domingo and knowledge of regulation of canal.



## Cochiti main canal at Cochiti, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}38'$ , long.  $106^{\circ}19'$ , in  $N\frac{1}{2}SE\frac{1}{4}$  sec. 17, T. 16 N., R. 6 E., 300 feet below Cochiti east side acequia,  $1\frac{1}{2}$  miles northeast of Cochiti, and 2 miles below head at Cochiti Diversion Dam on Rio Grande. Zero of gage is 5,231.14 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to May 1937 (discontinued).

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 173 second-feet Sept. 25 (gage height, 6.36 feet); no flow at times.  
Maximum discharge during period Oct. 1, 1936 to May 9, 1937, 152 second-feet Nov. 15; maximum gage height, 609 feet May 3; no flow at times.

Remarks.- Records fair. Canal diverts water from Rio Grande for irrigation. Cochiti east side acequia diverts between station and head.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	128	115	121	98	128
2							-	96	115	121	*66	138
3							-	*45	121	131	111	138
4							4	128	109	97	74	138
5							*30	158	103	*47	109	88
6							70	139	67	116	134	*0
7							61	134	*44	128	138	153
8							52	122	97	106	100	142
9							54	108	100	86	*80	117
10							36	*54	90	134	148	138
11							52	128	83	75	148	138
12							*155	124	105	*46	148	84
13							*60	124	80	138	138	*74
14							*75	124	*45	138	131	134
15							*67	128	109	118	87	128
16							94	123	93	104	*54	116
17							*93	*49	121	124	115	145
18							*55	131	124	93	134	92
19							*123	128	124	*49	134	29
20							*92	121	91	121	142	*61
21							*92	112	*51	131	119	138
22							*94	116	138	105	81	115
23							92	96	131	121	*60	120
24							94	*59	128	128	112	128
25							65	134	131	103	121	128
26							*27	128	131	*66	131	79
27							122	128	105	156	131	*0
28							131	128	*38	139	138	0
29							131	124	115	131	78	86
30							128	100	124	100	*44	99
31							-	*34	-	124	121	-

\*Sunday.

†Gage height missing; discharge computed on basis of once-daily reading of staff gage and record of regulation furnished by Middle Rio Grande Conservancy District.

Discharge, in second-feet, of Cochiti main canal at Cochiti, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	*20	118	109		0	115	96				
2	118	32	69	57		0	110	*59				
3	69	124	68	*0		0	72	122				
4	*45	121	121	0		0	*62	128				
5	124	128	89	0		0	112	131				
6	121	131	*38	0		0	109	128				
7	113	75	115	0		*0	115	124				
8	124	*39	115	0		0	109	96				
9	128	120	115	0		0	109	*65				
10	83	142	118	0		0	80	-				
11	*31	145	115	0		0	*51	-				
12	128	105	92	0		†37	112	-				
13	124	142	*112	0		0	115	-				
14	101	96	112	0		*†44	109	-				
15	131	*77	115	0		†87	106	-				
16	134	51	88	0		†109	109	-				
17	88	0	121	0		†106	73	-				
18	*68	0	121	0		†100	*48	-				
19	128	0	124	0		†100	118	-				
20	131	51	*74	0		†74	118	-				
21	138	115	121	0		*†42	113	-				
22	138	*115	118	0		†85	116	-				
23	138	115	69	0		†109	118	-				
24	91	100	121	0		106	84	-				
25	*0	106	121	0		100	*53	-				
26	85	106	115	0		89	114	-				
27	128	106	*73	0		63	116	-				
28	121	77	121	0		*54	128	-				
29	94	*63	121	0		109	128	-				
30	131	121	121	0		100	123	-				
31	81	-	106	0		103	-	-				
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April 4-30, 1936.....					1,949	131	4	72.2	3,870			
May.....					3,432	138	34	111	6,810			
June.....					3,014	138	38	100	5,980			
July.....					3,402	156	46	110	6,760			
August.....					3,424	148	44	110	6,790			
September.....					3,073	153	0	102	6,100			
The period.....									36,300			
October 1936.....					3,249	138	0	105	6,440			
November.....					2,623	145	0	87.4	5,200			
December.....					3,247	124	38	105	6,440			
January 1937.....					166	109	0	5.35	329			
February.....					0	0	0	0	0			
March.....					1,617	109	0	52.2	3,210			
April.....					3,045	128	48	102	6,040			
May 1-9.....					949	131	59	105	1,880			
The period.....									29,540			

\*Sunday.

†Gage height missing; discharge computed on basis of once-daily reading of staff gage and record of regulation furnished by Middle Rio Grande Conservancy District.

## Cochiti main canal at San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°26', long. 106°25' in NW¼NE¼ sec. 20, T. 14 N., R. 5 E., just below Tonque Arroyo siphon, at highway bridge three-quarters of a mile east of San Felipe. Zero of gage is 5,162.61 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 79 second-feet June 24 (gage height, 3.10 feet); no flow at times.

Maximum discharge recorded during water year 1936-37, 66 second-feet Aug. 9; maximum gage height recorded, 2.89 feet Oct. 30; no flow at times.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are poor. Canal diverts water from Rio Grande at Cochiti Diversion Dam, about 17 miles above.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	65	51	44	†45
2								0	65	50	*1.9	†53
3								0	68	†50	32	56
4								0	72	†40	9.7	46
5								0	68	*†2	36	44
6								0	68	63	45	*.8
7								0	*46	66	51	5.8
8								0	2.7	†60	29	48
9								0	41	†50	*.3	49
10								0	49	54	0	43
11								0	49	42	0	49
12								0	60	*.1	26	45
13								0	52	25	32	*6.3
14								0	52	26	35	48
15								0	*2.0	60	46	46
16								0	32	52	*1.6	48
17								0	47	48	32	43
18								0	59	16	43	49
19								0	52	*0	45	5.8
20								0	47	47	44	*5.7
21								0	*3.1	55	41	56
22								0	66	51	39	48
23								0	60	43	*.7	54
24								0	62	48	25	51
25								0	64	37	40	58
26								0	64	*1.2	44	46
27								0	56	33	47	*†.5
28								0	*†3	48	48	0
29								44	†50	51	46	7.0
30								10	†50	46	*.9	44
31								*0	-	45	45	-

\*Sunday.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights, records for Cochiti main canal at head, at Cochiti, Cochiti main canal wasteway near Domingo, and Algodones lateral at end, at San Felipe, and knowledge of local conditions.

Discharge, in second-feet, of Cochiti main canal at San Felipe, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	*16				0	40	†50	52	14	*†2	54
2	54	13				0	41	*†3	†35	46	52	58
3	41	18				0	41	45	†20	*43	50	58
4	*0	24				0	*3.2	47	†18	†4	56	†53
5	54	43				0	34	48	16	0	55	*†4
6	54	39				0	39	54	*2.7	41	54	54
7	54	35				*0	46	49	36	50	†41	55
8	50	*0				0	45	†43	43	54	*†4	53
9	54	0				0	46	*†2	48	51	54	53
10	44	0				0	39	†44	50	*47	60	55
11		0				0	*1.2	53	48	†3	52	†50
12	36	0				†10	31	49	42	54	51	*†4
13	54	0				0	43	47	*†4	52	52	53
14	54	0				*0	45	45	44	54	†48	50
15	48	0					40	†44	46	53	*†2	54
16	56	0				†40	49	*†6	47	45	47	58
17	51	0					†41	†38	48	*42	47	4.4
18	*7.2	0					*†2	38	50	†3	49	36
19	54	0					†6	44	†48	41	52	*6.3
20	60	0					41	46	*†2	43	52	56
21	62	0				*0	39	49	45	48	†42	60
22	62	0				†40	40	50	50	42	*†4	60
23	63	0					45	*†4	51	42	47	60
24	48	0					39	53	55	*†41	40	56
25	*4.6	0					41	*†2	49	†2	41	53
26	37	0				39	41	50	†48	44	50	*3.9
27	60	0				29	43	54	*†3	45	53	56
28	57	0				*1.0	49	53	0	46	52	55
29	56	0				44	54	†27	0	49	*6.6	57
30	51	0				44	52	*†0	0	49	53	58
31	55	-				43	-	†25	-	*†45	53	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 1936.....						1,471.8	72	2.0	49.1	2,920		
July.....						1,240.3	66	0	40.0	2,460		
August.....						929.1	51	0	30.0	1,840		
September.....						1,101.9	58	0	36.7	2,190		
The period.....										9,410		
October 1936.....						1,434.0	63	0	46.3	2,840		
November.....						186	43	0	6.2	369		
December.....						0	0	0	0	0		
January 1937.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						611.0	-	0	19.7	1,210		
April.....						1,077.4	54	1.2	35.9	2,140		
May.....						1,209	54	0	39.0	2,400		
June.....						1,006.7	55	0	33.6	2,000		
July.....						1,193	54	0	38.5	2,370		
August.....						1,321.6	60	2	42.6	2,620		
September.....						1,387.6	60	3.9	46.3	2,750		
Water year 1936-37.....						9,426.3	-	0	25.8	18,700		

\*Sunday.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights, records for Cochiti main canal at head, at Cochiti, Cochiti main canal wasteway near Domingo, and Algodones lateral at end, at San Felipe, and knowledge of local conditions.

Cochiti east side acequia at Cochiti, N. Mex.

Location.- Staff gage, lat. 35°38', long. 106°19', in E $\frac{1}{2}$  sec. 17, T. 16 N., R. 6 E., 200 feet below heading from Cochiti main canal and  $\frac{1}{2}$  miles northeast of Cochiti. Zero of gage is 5,234.49 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to May 1937 (discontinued).

Extremes.- Maximum discharge observed during period ending Sept. 30, 1936, 14 second-feet July 9; maximum gage height observed, 2.42 feet Aug. 17; no flow at times. Maximum discharge observed during period Oct. 1, 1936, to May 9, 1937, 17 second-feet Apr. 21 (gage height 2.38 feet); no flow at times.

Remarks.- Records for March to May 1937 poor, others fair. Gage read once daily. Gage readings furnished by Middle Rio Grande Conservancy District. One small diversion above gage irrigates about 10 acres.

Discharge, in second-feet, 1936-37

Day	1936						1937				
	Apr.	May	June	July	Aug.	Sept.			Mar.	Apr.	May
1	0	10	5.7	10	5.3	2.2			0	4.1	5.4
2	0	6.5	7.3	11	1.8	3.1			0	5.0	2.0
3	0	2.7	9.2	13	2.7	4.1			0	3.3	4.1
4	0	7.1	5.2	8.7	1.6	2.9			0	2.2	5.7
5	0	2.5	4.1	3.4	2.3	1.5			0	4.4	7.6
6	0	3.7	2.3	8.4	6.0	0			0	2.5	6.7
7	0	4.6	.2	12	5.4	1.6			0	4.0	5.8
8	0	4.4	.4	9.9	2.2	3.5			0	3.2	5.2
9	0	2.7	5.7	8.8	4.9	2.6			0	3.4	3.4
10	0	1.0	5.2	12	9.0	3.3			0	1.9	-
11	0	2.6	4.8	5.4	6.9	2.1			0	3.2	-
12	0	1.6	6.7	3.4	6.7	1.6			0	5.6	-
13	0	3.7	5.7	8.2	7.4	2.1			0	5.1	-
14	0	4.1	1.7	7.8	7.6	3.8			0	4.5	-
15	0	4.1	4.0	6.5	4.6	3.4			2.7	6.0	-
16	2.6	5.3	3.5	6.3	2.6	3.3			7.3	3.3	-
17	3.7	3.2	9.4	8.0	8.8	3.1			6.5	.5	-
18	.8	7.6	12	4.9	4.6	2.0			5.7	0	-
19	.6	10	7.8	2.1	4.0	0			8.0	0	-
20	2.5	4.8	6.6	6.0	5.1	0			5.6	3.6	-
21	4.4	3.3	3.7	7.3	2.1	0			.8	13	-
22	6.2	5.6	9.0	4.7	2.1	0			1.6	0	-
23	5.0	3.0	9.6	6.7	1.7	0			13	3.0	-
24	5.4	3.9	13	6.4	3.1	0			2.4	3.8	-
25	3.8	9.4	9.2	6.4	5.7	0			1.0	3.0	-
26	1.2	4.8	11	4.7	3.8	0			0	7.4	-
27	5.0	6.7	7.4	10	3.1	0			0	3.3	-
28	6.5	6.7	2.8	10	3.0	0			1.7	5.1	-
29	6.4	5.8	8.2	5.2	1.2	0			3.4	6.9	-
30	6.7	4.0	10	5.2	.9	0			1.7	10	-
31	-	1.7	-	5.0	2.1	-			1.4	-	-
Month	Second-foot-days						Maximum	Minimum	Mean	Run-off in acre-feet	
April 1936.....	60.8						6.7	0	2.03	121	
May.....	146.9						10	1.0	4.74	291	
June.....	191.4						13	.2	6.38	380	
July.....	227.4						13	2.1	7.34	451	
August.....	126.3						9.0	.9	4.07	251	
September.....	46.4						4.1	0	1.55	92	
The period.....										1,590	
October 1936.....	0						0	0	0	0	
November.....	0						0	0	0	0	
December.....	0						0	0	0	0	
January 1937.....	0						0	0	0	0	
February.....	0						0	0	0	0	
March.....	62.8						13	0	2.03	125	
April.....	121.3						13	0	4.04	241	
May 1-9.....	43.9						7.6	2.0	4.88	87	
The period.....										453	

## Cochiti main canal wasteway near Domingo, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}32'$ , long.  $106^{\circ}21'$ , in NW $\frac{1}{4}$  sec. 19, T. 15 N., R. 8 E., 50 feet below waste gate, about 500 feet above outlet to Galisteo Arroyo, and  $1\frac{1}{2}$  miles west of Domingo.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period not determined; maximum gage height, 6.35 feet June 26 (backwater from Galisteo Arroyo); no flow at times.

Remarks.- Records fair except those for periods of missing gage heights, which are poor. Discharge represents waste return from Cochiti main canal.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	37	52	50	*†28	16
2							-	*31	†70	33	50	20
3							-	31	S7	31	24	29
4							-	39	75	*5.0	30	40
5							-	42	67	3.0	31	*33
6							-	46	*34	35	23	34
7							-	36	42	28	25	36
8							-	48	31	27	*10	34
9							-	*27	26	22	16	38
10							-	40	31	26	19	36
11							-	36	28	*18	23	44
12							-	31	27	21	24	*37
13							-	37	*22	20	16	45
14							-	29	26	18	24	34
15							46	46	21	18	*17	36
16							43	*33	19	16	20	33
17							43	38	21	22	15	20
18							*23	30	23	*16	16	47
19							53	36	24	12	17	*21
20							41	36	*19	11	19	31
21							38	33	21	17	30	30
22							39	40	22	20	*24	30
23							39	*30	21	19	27	31
24							42	†40	18	25	23	27
25							*20	43	43	*28	29	30
26							35	28	30	†26	30	*20
27							32	47	*10	†52	30	30
28							36	†55	50	†35	27	29
29							36	†55	50	†25	*23	28
30							26	*†30	50	†24	26	20
31							-	†60	-	†40	25	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April 15-30.....							592	53	20	37.0	1,170	
May.....							1,199	60	27	38.4	2,360	
June.....							1,062	67	10	35.4	2,110	
July.....							741.0	52	3.0	23.9	1,470	
August.....							723	31	10	23.3	1,430	
September.....							937	47	16	31.2	1,860	
The period.....											10,400	

\*Sunday.

†Gage height missing; discharge computed on basis of records for Cochiti main canal at head, at Cochiti, and Cochiti main canal at San Felipe, and knowledge of regulation.

Augustine lateral at end, near Domingo, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}30'$ , long.  $106^{\circ}24'$ , in NW $\frac{1}{4}$  sec. 34, T. 15 N., R. 5 E., at outlet to Santo Domingo east riverside drain,  $4\frac{1}{2}$  miles southwest of Domingo.

Records available.- June to September 1937.

Extremes.- Maximum discharge during period, 7.7 second-feet Sept. 1 (gage height, 1.22 feet); no flow at times.

Remarks.- Records fair. Discharge represents waste return from irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	0	0	5.8
2									-	.7	2.1	4.5
3									-	1.7	.7	3.6
4									-	0	0	.6
5									-	0	.5	0
6									-	1.2	.1	.3
7									-	2.1	.3	.4
8									-	.4	0	1.4
9									-	.5	0	1.3
10									-	1.1	0	2.0
11									-	0	0	1.6
12									-	.7	.1	0
13									-	1.4	.1	.4
14									-	.6	1.0	.3
15									-	.9	0	.5
16									-	.7	1.6	2.2
17									-	1.3	2.7	.2
18									-	3.2	3.2	.5
19									-	.6	3.3	0
20									-	.6	2.5	.6
21									-	0	1.8	2.2
22									3.1	.4	0	1.9
23									1.0	.2	.9	3.1
24									1.5	.5	1.1	2.2
25									1.5	0	2.8	.4
26									1.8	.1	2.5	0
27									.1	1.4	2.7	1.3
28									0	1.4	1.7	.9
29									0	2.0	.1	.2
30									0	.3	.9	.3
31									-	2.3	4.8	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June 22-30.....						9.0	3.1	0	1.00	18		
July.....						23.1	2.3	0	.75	46		
August.....						37.5	4.8	0	1.21	74		
September.....						38.7	5.8	0	1.29	77		
The period.....										215		

Algodones lateral at end, at San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°25', long. 106°27', in NE $\frac{1}{4}$  sec. 30, T. 14 N., R. 5 E., about a quarter of a mile above outlet to Rio Grande and three-quarters of a mile south of San Felipe.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 102 second-feet Sept. 15 (gage height, 2.70 feet), from rating table extended above 50 second-feet; no flow at times.

Remarks.- Records for May to June 22 are good; those for June 23 to September are fair except those for periods of fragmentary gage-height record, which are poor. Discharge represents return waste from Cochiti main canal except that diverted about 1,000 feet below gage for irrigation of 16 acres.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								18	48	10	*†1.0	12
2								*1.8	52	25	†4.8	17
3								6.2	18	14	8.9	17
4								1.3	16	*35.0	9.6	17
5								7.4	†14	0	6.5	*†1.0
6								17	*†3.0	8.9	6.9	†16
7								12	†7.8	11	17	22
8								11	11	18	*†2.0	24
9								*0	16	18	†15	23
10								8.2	19	16	8.5	26
11								13	15	*†2.0	9.1	32
12								10	9.2	19	18	*†1.0
13								11	*.2	19	15	†29
14								9.5	6.4	23	5.8	†29
15								23	8.7	22	*.1	36
16								*5.7	8.1	15	3.3	36
17								5.4	5.1	15	10	3.2
18								1.4	9.8	*†1.0	16	25
19								3.9	5.8	†6.3	24	*†4.0
20								4.9	*0	11	22	18
21								5.4	.8	7.7	14	20
22								15	6.9	3.4	*†3.5	17
23								*†3.0	28	3.8	8.3	16
24								†19	15	4.5	4.5	15
25								2.3	14	*0	6.6	14
26								7.8	25	9.6	9.7	*†1.0
27								17	*†2.0	15	10	16
28								45	0	9.0	7.8	17
29								†25	0	7.8	*†2.0	20
30								*†0	0	9.4	7.8	27
31								†25	-	9.4	11	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....								335.2	45	0	10.8	665
June.....								346.8	48	0	11.6	688
July.....								334.8	23	0	10.8	664
August.....								288.7	24	.1	9.31	673
September.....								561.2	36	1.0	18.4	1,090
The period.....												3,680

\*Sunday.

†Gage-height record fragmentary; discharge computed on basis of records for Cochiti main canal at San Felipe and knowledge of local conditions.



Algodones acequia at end, near Algodones, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}22'$ , long.  $106^{\circ}30'$ , in NW $\frac{1}{4}$  sec. 15, T. 13 N., R. 4 E., about 400 feet above outlet to Albuquerque main canal and  $1\frac{1}{2}$  miles southwest of Algodones.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period not determined; maximum gage height, 3.21 feet July 11; no flow at times.

Remarks.- Records good except those for May 26 and July 11, which are fair. Discharge represents return waste from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	0	1.3	5.6
2								-	0	2.7	1.5	7.6
3								-	0	7.9	2.1	7.0
4								-	0	2.4	2.4	3.1
5								-	0	0	2.5	1.6
6								-	0	1.3	3.9	2.0
7								-	3.7	4.0	3.8	5.1
8								-	8.1	5.1	.1	4.8
9								-	5.7	5.3	.5	5.1
10								-	7.5	9.1	3.2	2.8
11								-	4.0	3.3	1.4	2.0
12								-	3.9	.7	.8	.1
13								-	1.1	5.5	.6	.3
14								-	2.3	5.6	.3	.8
15								-	4.0	4.9	.1	1.6
16								-	4.3	3.6	.3	3.6
17								-	3.8	3.9	.4	1.7
18								-	1.6	1.8	.2	0
19								-	6.9	3.5	.9	0
20								-	6.8	1.5	2.6	.6
21								-	6.9	0	1.1	3.3
22								-	8.6	.4	3.4	3.3
23								-	.8	.5	3.5	0
24								-	3.6	2.4	4.6	.7
25								-	6.8	6.2	2.9	1.7
26								-				
27								-	12	5.0	2.6	3.7
28								-	11	0	3.7	6.3
29								-	8.1	0	5.0	8.0
30								-	.5	0	4.3	9.4
31								-	0	0	3.5	8.0
								-	0	-	4.2	5.9
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 18-31.....						77.6	12	0	5.54	154		
June.....						69.3	8.1	0	2.31	137		
July.....						109.2	9.1	0	3.52	217		
August.....						47.9	5.9	0	1.55	95		
September.....						115.2	9.4	0	3.84	228		
The period.....										831		

## Santa Fe Creek near Santa Fe, N. Mex.

Location.— Water-stage recorder and sharp-crested control, lat.  $35^{\circ}41'$ , long.  $105^{\circ}50'$ , in SW $\frac{1}{4}$  sec. 24, T. 17 N., R. 10 E., about 300 feet below upper storage reservoir of New Mexico Power Co. and 6 miles east of Santa Fe. New gage well and shelter constructed and gage set to independent datum March 26.

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 1937, at present site, in reports of Geological Survey; January 1913 to November 1930, at site 2 miles downstream, and November 1930 to December 1931, at present site, in reports of State engineer. All records equivalent.

Extremes.— Maximum discharge during year, 84 second-feet May 30 (gage height, 2.03 feet); minimum daily, 1.7 second-feet Dec. 12-14, 16, 17, 20-28.

1930-37: Maximum discharge, 139 second-feet Sept. 19, 1931 (gage height, 2.35 feet former datum); minimum daily discharge, 0.6 second-foot Nov. 13, 1933.

Remarks.— Records good except those for periods of missing gage heights, Nov. 8-19, 29 (computed on basis of knowledge of operation of reservoir gate), Apr. 4-30, May 1-4, 14-18 (computed on basis of flow for Rio Tesuque near Santa Fe, Rio Nambé near Nambé, and Rio Santa Cruz at Cundiyo), and those for day of construction, Mar. 25 (computed on basis of knowledge of operation of reservoir gate), which are fair. Flow regulated at dam just above station. No diversion above gage.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	7.7	3.7	2.3	2.0	2.4	6.2	28	57	15	5.7	5.4
2	12	7.7	3.7	2.4	2.0	2.4	8.7	29	59	14	5.7	5.4
3	12	7.7	3.7	2.4	2.0	2.3	1.0	30	56	13	5.7	4.9
4	12	7.7	3.7	2.4	2.0	2.4	11	31	50	12	5.7	4.5
5	11	7.7	3.9	2.3	2.0	2.4	9	31	44	11	5.9	4.2
6	11	7.4	3.9	2.3	2.0	2.4	9	31	39	10	5.9	4.5
7	9.8	7.4	3.9	2.3	2.2	2.4	8	31	34	12	5.9	4.5
8	9.4	7	3.7	2.2	2.2	2.4	9	31	31	16	5.7	4.5
9	9.0	7	2.9	2.3	2.0	2.4	10	31	27	13	5.7	4.5
10	8.6	7	1.8	2.3	2.0	2.6	11	31	25	12	5.4	4.5
11	8.1	7	1.8	2.2	2.0	2.4	14	31	23	10	5.4	4.5
12	7.7	7	1.7	2.2	1.9	2.4	24	34	20	9.6	5.4	4.5
13	11	7	1.7	2.2	1.9	2.4	27	40	18	7.8	5.4	4.5
14	14	7	1.7	2.2	1.9	2.4	32	40	17	7.0	5.7	4.5
15	14	7	1.8	2.2	1.9	2.6	45	43	16	6.5	5.4	4.5
16	12	7	1.7	2.2	1.9	2.9	42	45	14	5.9	5.7	4.5
17	11	7	1.7	2.2	2.2	3.1	40	42	13	5.7	5.7	4.5
18	11	7	1.6	2.2	2.6	3.1	37	37	12	5.4	5.4	4.5
19	10	7	1.8	2.2	2.6	3.1	35	35	11	5.2	5.4	4.5
20	10	5	1.7	2.2	2.5	3.1	34	34	11	7.0	5.7	4.5
21	9.8	2.4	1.7	2.3	2.6	2.9	34	32	11	10	5.7	4.5
22	9.8	2.4	1.7	2.3	2.6	7.4	35	30	11	9.9	5.4	4.5
23	9.4	2.4	1.7	2.3	2.6	9.0	33	30	11	9.9	5.4	4.5
24	9.4	2.4	1.7	2.3	2.6	9.1	30	28	11	9.6	5.4	4.2
25	9.4	2.4	1.7	2.3	2.6	6.1	26	24	11	9.6	5.4	4.2
26	9.4	2.4	1.7	2.3	2.6	8.1	29	20	11	9.0	5.2	4.2
27	9.4	2.4	1.7	2.3	2.4	7.3	32	20	11	9.0	5.2	4.2
28	9.0	2.4	1.7	2.2	2.4	7.3	32	22	20	6.8	5.2	4.2
29	9.0	3.1	1.9	2.2	-	5.2	30	32	17	5.4	4.9	4.5
30	8.1	3.5	2.3	2.0	-	5.7	28	73	15	5.4	5.2	4.5
31	8.6	-	2.3	2.0	-	5.7	-	57	-	5.4	5.2	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							316.9	14	7.7	10.2	629	
November.....							168.1	7.7	2.4	5.60	333	
December.....							72.4	3.9	1.7	2.34	144	
Calendar year 1936.....							3,296.3	84	1.4	9.01	6,540	
January.....							69.8	2.4	2.0	2.25	138	
February.....							62.3	2.6	1.9	2.22	124	
March.....							126.4	9.0	2.3	4.08	251	
April.....							732.9	45	6.2	24.4	1,450	
May.....							1,053	73	20	34.0	2,090	
June.....							706	59	11	23.5	1,400	
July.....							288.1	16	5.2	9.29	571	
August.....							170.7	5.9	4.9	5.51	339	
September.....							135.4	5.4	4.2	4.51	269	
Water year 1936-37.....							3,902.0	73	1.7	10.7	7,740	

## Pena Blanca riverside drain near Domingo, N. Mex.

Location.- Staff gage, lat. 35°32', long. 106°22', in SW¼ sec. 12 T. 15 N., R. 5 E., about 600 feet above outlet to Rio Grande and 3 miles northwest of Domingo. Zero of gage is 5,171.17 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 25 second-feet Apr. 30, May 1, 9; minimum daily, 7 second-feet July 25 and Aug. 8.

Maximum daily discharge during water year 1936-37, 42 second-feet May 14, 15; minimum daily discharge, 9 second-feet Aug. 4-6.

Remarks.- Records poor. Discharge for water year 1935-36 computed on basis of 24 discharge measurements and records for Algodones riverside drain at Algodones and Rio Grande at Cochiti and at San Felipe. Discharge for water year 1936-37 computed on basis of 44 discharge measurements and records for Rio Grande at Cochiti. The Middle Rio Grande Conservancy District furnished 32 discharge measurements and the El Paso County Water Improvement District no. 1 furnished 4. Discharge represents return flow to the Rio Grande from irrigation.

## Discharge, in second-feet, 1936-37

1936

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

\*Discharge measurement.

Discharge, in second-feet, Pena Blanca riverside drain near Domingo, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12	14	12	11	13	17	16	*37	37	27	11	18
2	11	14	*13	*13	*12	17	18	37	36	26	10	17
3	11	*13	13	13	12	18	*19	37	39	25	10	17
4	11	13	13	13	12	18	18	37	40	23	9	18
5	*12	*14	*12	13	12	19	16	38	38	22	9	18
6	12	15	11	13	12	19	18	38	35	*20	9	17
7	14	15	11	13	13	20	15	39	35	19	10	18
8	*15	15	11	13	15	20	16	39	*31	17	11	19
9	14	15	11	13	17	21	17	40	29	*16	*13	19
10	13	15	11	12	*13	21	18	40	28	15	13	*18
11	12	*14	11	*12	12	20	19	41	26	15	13	18
12	12	13	11	12	12	20	21	41	25	14	14	18
13	*11	12	11	12	13	19	24	41	23	13	15	17
14	11	12	12	12	14	19	28	42	22	12	16	17
15	11	12	*12	12	16	18	29	42	22	11	17	17
16	12	13	13	12	17	18	33	41	21	10	18	16
17	13	*15	14	12	*18	17	*32	*41	20	10	19	16
18	13	15	15	12	18	17	30	41	20	10	20	16
19	13	14	*14	*12	*18	17	32	40	19	10	20	16
20	*13	13	13	12	18	16	31	40	19	11	*19	15
21	*13	*12	14	13	18	16	30	40	*15	12	18	14
22	13	12	14	*13	*18	*16	32	39	13	13	17	*15
23	13	12	12	13	*16	16	34	39	13	13	15	16
24	14	*13	*11	13	15	16	32	38	14	13	14	15
25	15	12	11	13	15	15	31	36	17	13	13	16
26	15	12	11	13	16	15	29	35	20	*13	14	16
27	*14	12	11	14	16	15	32	34	23	13	15	17
28	13	12	10	14	16	15	35	35	26	13	16	17
29	13	12	10	14	-	15	33	33	28	13	17	18
30	13	12	10	*14	-	15	38	35	28	12	18	20
31	13	-	10	13	-	15	-	37	-	11	19	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 1936.....						611	25	16	19.7	1,210		
June.....						459	19	12	15.3	910		
July.....						345	17	7	11.1	684		
August.....						346	16	7	11.2	686		
September.....						346	16	8	11.5	686		
The period.....										4,180		
October 1936.....						395	15	11	12.7	783		
November.....						397	15	12	13.2	787		
December.....						368	15	10	11.9	730		
January 1937.....						394	14	11	12.7	781		
February.....						416	18	12	14.9	825		
March.....						540	21	15	17.4	1,070		
April.....						777	38	15	25.9	1,540		
May.....						1,191	42	33	38.4	2,360		
June.....						762	40	13	25.4	1,510		
July.....						465	27	10	15.0	922		
August.....						452	20	9	14.5	897		
September.....						508	20	14	16.9	1,010		
Water year 1936-37.....						6,665	42	9	18.3	13,220		

\*Discharge measurement.

Santo Domingo west riverside drain near Domingo, N. Mex.

Location.- Measuring section, lat.  $35^{\circ}32'$ , long.  $106^{\circ}23'$ , in SE $\frac{1}{4}$  sec. 14, T. 15 N., R. 5 E., at outlet to Rio Grande, half a mile downstream from Galisteo Creek and  $3\frac{1}{2}$  miles northwest of Domingo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge for period ending Sept. 30, 1936, 2.0 second-foot July 15, Aug. 6, 22, 23, Sept. 2, 28; minimum daily, 1.0 second-foot July 24-26, Aug. 8-14, 17-19, 27, Sept. 8-16.

Maximum daily discharge during water year 1936-37 not determined; no flow Aug. 3-10.

Remarks.- Records poor. Discharge computed on basis of 42 discharge measurements, of which 3 were furnished by Middle Rio Grande Conservancy District and 4 by El Paso County Water Improvement District no. 1, and records for Algodones riverside drain at Algodones, Rio Grande at Cochiti, and Rio Grande at San Felipe. Discharge represents return flow to Rio Grande from irrigation on part of lands of Cochiti Division of Middle Rio Grande Conservancy District.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	1.5	1.5
2										-	1.5	2.0
3										-	1.5	*1.5
4										-	1.5	1.5
5										-	*1.5	1.5
6										-	2.0	1.5
7										-	1.5	1.5
8										-	1.0	1.0
9										-	1.0	1.0
10										-	1.0	*1.0
11										-	1.0	1.0
12										-	1.0	1.0
13										-	1.0	1.0
14										-	1.0	1.0
15										*2.0	1.5	1.0
16										1.5	1.5	1.0
17										1.5	1.0	1.0
18										1.5	1.0	1.0
19										1.5	1.0	1.5
20										1.5	*1.5	1.5
21										*1.5	1.5	*1.5
22										1.5	2.0	1.5
23										1.5	2.0	1.5
24										1.0	1.5	1.5
25										1.0	1.5	1.5
26										1.0	1.5	1.5
27										1.5	*1.0	1.5
28										1.5	1.5	2.0
29										*1.5	1.5	1.5
30										1.5	1.5	1.5
31										1.5	1.5	-

\*Discharge measurement.

Discharge, in second-feet, of Santo Domingo west riverside drain near Domingo, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	2.0	1.0	1.0	1.5	1.5			2.5	1.5	0.5	1.0
2	1.5	2.0	*1.0	1.0	*1.5				2.5	*1.0	.5	1.0
3	1.5	*2.0	1.0	1.0	1.5				2.5	1.0	0	.5
4	1.5	2.0	1.0	1.0	1.5				*2.5	1.0	0	.5
5	1.5	2.0	1.0	1.0	1.5				2.5	1.0	0	.5
6	1.5	2.0	1.0	*1.0	1.5				2.5	.5	*0	.5
7	*1.5	2.0	1.0	1.0	1.5				2.5	.5	0	.5
8	1.5	1.5	1.0	1.0	1.5				2.5	.5	0	*.5
9	1.5	1.5	1.0	1.0	1.5				2.5	*.5	0	1.0
10	1.0	1.0	1.0	1.0	*1.5				2.5	.5	0	*.5
11	1.0	1.0	1.0	1.0	1.5	1.0			2.5	.5	.5	.5
12	*1.0	1.0	1.0	1.0	1.0				2.5	.5	.5	.5
13	1.0	1.0	1.0	1.0	1.0				2.5	.5	.5	.5
14	1.0	1.0	1.0	1.0	1.5				2.5	.5	.5	.5
15	1.0	1.0	*1.0	1.0	1.5				2.5	.5	.5	.5
16	1.5	1.0	1.0	1.0	1.5	1.0			2.5	.5	.5	.5
17	1.5	*1.0	1.0	1.0	1.5				2.0	.5	.5	.5
18	1.5	1.0	1.0	1.0	1.0				*2.0	.5	.5	*.5
19	1.5	1.5	1.0	1.0	*1.0				2.0	.5	.5	.5
20	1.5	1.0	1.0	1.0	1.0				2.0	.5	.5	.5
21	*1.5	1.0	1.0	1.0	1.5	*1.0			2.0	.5	.5	.5
22	1.5	1.0	1.0	1.0	1.5				2.0	.5	.5	.5
23	1.5	1.0	1.0	*1.0	*1.5				1.5	*.5	.5	.5
24	1.5	*1.0	*1.0	1.0	1.5				1.5	.5	*.5	.5
25	1.5	1.0	1.0	1.0	1.5				1.5	.5	.5	*.5
26	2.0	1.0	1.0	1.0	1.5	1.0			2.0	.5	.5	.5
27	*1.5	1.0	1.0	1.0	1.5				2.0	.5	.5	.5
28	1.5	1.0	1.0	*1.0	1.5				2.0	.5	.5	.5
29	1.5	1.0	1.0	1.5	-				1.5	.5	.5	.5
30	1.5	1.0	1.0	1.5	-				1.5	.5	.5	.5
31	1.5	-	1.0	1.5	-				-	.5	1.0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July 15-31, 1936.....						24.5	2.0	1.0	1.44	49		
August.....						42.5	2.0	1.0	1.37	84		
September.....						40.5	2.0	1.0	1.35	80		
October.....						44.0	2.0	1.0	1.42	87		
November.....						38.5	2.0	1.0	1.28	76		
December.....						31.0	1.0	1.0	1.00	61		
January 1937.....						32.5	1.5	1.0	1.05	64		
February.....						39.5	1.5	1.0	1.41	78		
March.....						40.0	-	-	1.29	79		
April.....						60.0	-	-	2.0	119		
May.....						77.5	-	-	2.5	154		
June.....						65.5	2.5	1.5	2.18	130		
July.....						18.5	1.5	.5	.60	37		
August.....						12.0	1.0	0	.59	24		
September.....						16.5	1.0	.5	.55	33		
Water year 1936-37.....						475.5	-	0	1.30	942		

\*Discharge measurement.

## San Felipe east side acequia near Domingo, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}31'$ , long.  $106^{\circ}22'$ , in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 15 N., R. 5 E., at siphon of Santo Domingo east riverside drain, 50 feet below head gate, three-quarters of a mile west of Santo Domingo Pueblo, and 3 miles west of Domingo. Zero of gage is 5,156.94 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 116 second-feet Aug. 3 (gage height, 4.13 feet), result of overflow from Santo Domingo east riverside drain; no flow at times.

Maximum discharge during water year 1936-37, 57 second-feet June 26; maximum gage height, 4.16 feet May 26; no flow at times.

Remarks.- Records fair except those for periods of ice effect or missing or fragmentary gage-height record, which are poor. Discharge represents diversion from left bank of Rio Grande for irrigation. No records for Feb. 23 to Mar. 24.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	23	32	23	17
2								-	24	27	20	12
3								-	23	34	27	15
4								-	23	36	50	6
5								-	18	41	19	0
6								-	21	36	15	0
7								-	28	31	14	8
8								-	27	22	13	12
9								-	26	25	12	9
10								-	23	20	12	8
11								-	27	34	4	7
12								-	36	42	10	14
13								-	43	35	10	12
14								-	47	19	8	10
15								-	32	14	9	10
16								-	130	20	9	10
17								-	29	18	11	7
18								-	42	13	10	5
19								-	42	15	0	14
20								-	44	11	0	11
21								-	46	4	0	4
22								-	42	8	0	23
23								-	36	17	0	33
24								-	50	17	0	16
25								-	26	50	0	13
26												
27								27	46	34	13	14
28								27	44	25	28	19
29								25	47	25	28	19
30								24	39	21	22	20
31								25	29	22	24	21
								25	-	22	19	-

† Gage height missing; discharge estimated or interpolated.

Discharge, in second-feet, of San Felipe east side acequia near Domingo, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	35	11	4	0	-	16	18	11	2	16	17
2	25	54	11	1	1	-	20	17	6	0	12	15
3	26	31	12	0	1	-	20	29	1	0	10	14
4	23	26	8	0	1	-	18	29	0	0	10	14
5	17	19	9	0	0	-	16	27	0	0	16	14
6	16	17	7	0	1	-	16	26	0	0	19	†9
7	22	14	7	1	3	-	17	25	0	0	20	†8
8	26	11	5	*1	2	-	21	25	8	0	30	†6
9	23	8	4	*2	0	-	16	26	7	0	28	†2
10	23	8	4	*1	0	-	14	27	7	0	25	0
11	†22	8	2	0	0	-	15	28	4	0	23	0
12	†21	8	3	0	0	-	15	29	0	0	24	0
13	20	8	4	0	0	-	16	30	0	0	26	6
14	23	7	6	0	0	-	18	30	14	0	25	10
15	23	7	4	0	0	-	20	30	29	0	35	9
16	20	6	5	0	0	-	19	31	25	3	34	9
17	21	8	4	0	0	-	18	31	20	9	26	5
18	21	7	4	0	0	-	18	30	14	14	15	3
19	27	10	5	0	0	-	17	29	11	14	15	3
20	29	10	6	0	0	-	16	29	10	13	15	5
21	22	9	5	1	0	-	15	28	2	9	15	9
22	18	10	3	0	0	-	16	27	8	6	15	10
23	13	9	4	0	-	-	15	28	12	8	14	14
24	23	9	4	0	-	-	14	28	12	10	14	16
25	†23	8	4	0	-	19	13	27	26	11	14	17
26	23	9	5	0	-	18	13	30	27	13	14	21
27	28	7	5	0	-	18	14	17	7	18	15	20
28	30	6	3	0	-	16	15	12	3	†22	15	18
29	29	6	3	*2	-	18	15	10	3	†24	16	16
30	35	8	3	*3	-	14	16	8	5	†20	16	23
31	27	-	2	*3	-	13	-	†8	-	17	19	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 25-30, 1936.....	179	27	24	25.6	355
June.....	1,042	50	18	34.7	2,070
July.....	756	42	4	24.4	1,500
August.....	360	50	0	11.6	714
September.....	371	33	0	13.4	736
The period.....					5,380
October 1936.....	721	35	13	23.3	1,430
November.....	363	35	6	12.1	720
December.....	165	12	2	5.3	327
Calendar year.....					
January 1937.....	19	4	0	.6	38
February 1-22.....	10	3	0	.5	20
March 25-31.....	113	19	13	16.1	224
April.....	492	21	13	16.4	976
May.....	767	31	8	24.7	1,520
June.....	272	29	0	9.1	540
July.....	213	24	0	6.9	422
August.....	591	35	10	19.1	1,170
September.....	313	23	0	10.4	621

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and knowledge of local conditions.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

‡Gage height missing; discharge estimated or interpolated.



## San Felipe east side acequia at San Felipe, N. Mex.

Location.- Water-stage recorder, lat. 35°26', long. 106°26', in SW¼ sec. 17, T. 14 N., R. 5 E., at highway bridge half a mile northeast of San Felipe. Prior to April 15, 1937, staff gage at same site and datum. Zero of gage is 5,130.00 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge observed during period ending Sept. 30, 1936, 9.4 second-feet July 9 (gage height, 1.48 feet); no flow at times.

Maximum discharge observed during water year 1936-37, 20 second-feet June 1 (gage height, 2.17 feet); no flow at times.

Remarks.- Records for June to October 1936 are poor; those for November 1936 to September 1937 are fair except those for periods of missing gage heights, which are poor. Discharge for June to October 1936 computed on basis of 26 discharge measurements and occasional gage readings, with that for intervening days estimated or interpolated. No record for Jan. 1 to Apr. 12, 1937.

Discharge, in second-feet, 1936-37

Day	1936					1937					
	June	July	Aug.	Sept.	Oct.	Apr.	May	June	July	Aug.	Sept.
1	-		0	1.3	3.0	-	1.7	4.0	0	2.2	3.8
2	-		0	3.4	*3.0	-	0	.2	0	3.5	4.1
3	-	4.5	0	5.5	2.0	-	2.2	0	0	1.4	4.4
4	-		0	.2	1.0	-	2.2	0	0	0	.1
5	-		0	0	*.5	-	6.4	0	0	0	0
6	-	2.9	0	0	1.4	-	11	0	0	.2	0
7	-	2.9	0	0	*2.3	-	4.4	0	0	.3	.5
8	-	3.8	0	0	2.5	-	4.9	4.6	0	2.0	1.5
9	-	4.7	0	0	2.7	-	7.2	6.1	0	3.2	0
10	-	0	0	0	2.9	-	6.1	*6	0	2.6	0
11	-	.4	.8	.2	3.1	-	9.7	.4	0	2.3	0
12	-	.8	1.1		*3.3	-	9.4	.2	0	1.6	0
13	-	1.3	0	1.6	4.2	†13	9.6	0	0	0	0
14	-	6.9	0		5.2	*12	8.7	1.5	0	0	.4
15	-	6.0			6.2	12	7.8	6.3	0	0	.5
16	-	5.2		3.0	*7.1	11	8.1	7.1	0	0	2.0
17	-	5.7		.7	5.2		4.1	4.1	2.2	.4	2.1
18	-	6.2			3.2	*10	7.6	4.9	.7	0	.6
19	-	6.8	1.4		*1.2		6.3	2.3	.3	1.4	.2
20	-	7.2		3.0		12	6.6	2.3	.6	3.8	.5
21	-	1.0				12	5.5	1.5	0	3.7	3.8
22	-	1.4		5.2		11	6.0	1.5	0	3.5	2.9
23	-	6.4		5.4	1.0	15	6.6	0	.4	2.2	1.7
24	-	6.8		5.6		15	0	0	.7	1.4	2.1
25	-	7.2				14	.4	1.7	.1	0	0
26	-	7.6	2.9			11	3.7	1.2	0	1.9	0
27	-	8.0	3.9	4.2	*.9	11	.3	.9	0	.6	.6
28	-	8.4	4.5		0	13	0	.6	0	2.0	6.3
29	-	0	3.6		0	14	0	0	0	4.1	8.5
30	6.1	4.0	2.8	2.9	0	15	0	0	.4	5.1	2.3
31	-	2.6	2.1	-	0	-	.4	-	.9	5.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
July 1936 .....						136.1	8.4	0	4.39	270	
August .....						37.1	4.5	0	1.20	74	
September .....						72.8	5.6	0	2.43	144	
The period .....										488	
October 1936 .....						87.9	7.1	0	2.19	155	
November .....						0	0	0	0	0	
December .....						0	0	0	0	0	
April 13-30, 1937 .....						219	-	-	12.2	434	
May .....						162.0	11	0	4.90	301	
June .....						57.4	7.1	0	1.91	114	
July .....						6.3	2.2	0	.20	12	
August .....						52.6	5.1	0	1.70	104	
September .....						45.9	6.5	0	1.65	97	

\*Discharge measurement.

†Gage height missing; discharge estimated.

## RIO GRANDE BASIN

Lower Santo Domingo west riverside drain near Domingo, N. Mex.

Location.- Measuring section at lat.  $35^{\circ}29'$ , long.  $106^{\circ}25'$ , in SW $\frac{1}{4}$  sec. 34, T. 15 N., R. 5 E., about 100 feet above outlet to Rio Grande and 5 miles southwest of Domingo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 3.5 second-feet July 11 and 12; minimum daily, 1.0 second-foot Sept. 18, 21, 25-27.

Maximum daily discharge during water year 1936-37 not determined; minimum daily, 1.5 second-feet on several days.

Remarks.- Records poor. Discharge computed on basis of 37 discharge measurements, of which 3 were furnished by Middle Rio Grande Conservancy District and 2 by El Paso County Water Improvement District no. 1, and records for Algodones riverside drain at Algodones, Santo Domingo east riverside drain near Domingo, and Rio Grande at Cochiti and at San Felipe. Discharge represents return flow to Rio Grande from irrigation on part of Cochiti Division of Middle Rio Grande Conservancy District.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										2.5	2.5	2.5
2										2.5	2.5	2.5
3										2.5	2.5	*2.5
4										2.5	3.0	1.5
5										3.0	3.0	1.5
6												
7										3.0	3.0	1.5
8										2.5	2.5	1.5
9										2.5	2.0	1.5
10										2.5	1.5	1.5
11										3.5	2.0	1.5
12										3.5	2.0	1.5
13										3.0	*2.0	1.5
14										2.5	2.0	1.5
15										*2.0	2.0	1.5
16										1.5	2.0	1.5
17										1.5	2.5	1.5
18										1.5	2.0	1.0
19										1.5	2.0	1.5
20										1.5	*2.0	1.5
21												
22										1.5	2.0	1.0
23										*2.0	2.5	1.5
24										2.0	3.0	2.0
25										1.5	3.0	*2.0
26										2.0	2.0	*1.0
27										2.0	1.5	1.0
28										2.5	*1.5	1.0
29										2.5	2.0	1.5
30										*3.0	2.0	2.0
31										3.0	2.0	2.0

\*Discharge measurement.

Discharge, in second-feet, of Lower Santo Domingo west riverside drain near Domingo, N. Mex.,  
1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	2.0	2.5	2.0	2.0	2.0				3.5	2.0	2.5
2	1.5	2.0	*2.5	2.0	*2.0	2.0				3.0	2.0	2.0
3	1.5	*2.0	2.5	2.0	2.0	2.5				3.0	2.0	2.0
4	1.5	2.0	2.5	2.0	2.0	2.5				3.0	1.5	2.0
5	1.5	2.0	2.5	2.0	2.0	2.5				2.5	1.5	2.0
6	1.5	2.0	2.5	*2.5	2.0	2.5				2.5	1.5	2.0
7	*1.5	2.0	2.0	2.5	2.0	2.5				2.5	1.5	2.0
8	1.5	2.0	2.0	2.5	2.0	3.0			3.5	2.0	1.5	*2.0
9	1.5	2.0	1.5	2.5	2.0	3.0				*2.0	1.5	2.0
10	1.5	1.5	1.5	2.0	*2.0	3.0				2.0	1.5	*2.0
11	1.5	1.5	1.5	2.0	1.5	3.0				2.0	1.5	2.0
12	*1.5	1.5	1.5	*2.0	1.5	3.0				2.0	2.0	2.0
13	1.5	1.5	1.5	2.0	1.5	3.0				2.0	2.0	2.0
14	1.5	1.5	2.0	2.0	1.5	2.5				2.0	2.0	2.0
15	1.5	1.5	*2.0	2.0	1.5	2.5			*3.0	2.0	2.0	2.0
16	1.5	1.5	2.0	2.0	1.5	2.5			3.0	2.0	2.0	2.0
17	2.0	*2.0	2.0	2.0	2.0	2.5			3.0	2.0	2.0	2.0
18	2.0	2.0	2.0	2.0	2.0	2.5			3.0	2.0	2.0	*2.0
19	1.5	2.0	2.0	*2.0	*2.0	2.5			2.5	2.0	2.0	2.0
20	1.5	2.0	2.0	2.0	2.0	2.5			2.5	2.0	2.0	2.0
21	*2.0	2.0	2.0	2.0	2.0	2.5			2.5	2.0	2.0	2.0
22	2.0	2.0	2.0	2.0	2.0	*2.5			2.5	2.0	1.5	2.0
23	1.5	2.0	2.0	2.0	*2.0	2.0			2.5	*2.0	1.5	2.0
24	2.0	*2.0	*2.0	2.0	2.0	2.0			3.0	2.5	*1.5	2.0
25	2.0	2.0	2.0	2.0	2.0	2.0			*3.0	2.5	1.5	2.0
26	2.5	2.0	2.0	2.0	2.0	2.0			3.0	2.5	1.5	2.0
27	*2.5	2.0	2.0	2.5	2.0	2.0			3.5	2.5	1.5	2.0
28	2.0	2.0	2.0	*2.5	2.0	2.0			3.5	2.5	2.0	2.0
29	2.0	2.0	2.0	2.0	-	-			3.5	2.5	2.0	2.5
30	2.0	2.0	2.0	2.0	-	-			3.5	2.5	2.0	2.5
31	2.0	-	2.0	2.0	-	-			-	2.5	2.5	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
July 1936	73.0					3.5	1.5	2.36	145			
August	68.0					3.0	1.5	2.19	135			
September	47.5					2.5	1.0	1.68	94			
The period									374			
October 1936	53.5					2.5	1.5	1.73	106			
November	56.5					2.0	1.5	1.88	112			
December	62.5					2.5	1.5	2.02	124			
Calendar year												
January 1937	65.0					2.5	2.0	2.10	129			
February	53.0					2.0	1.5	1.89	105			
March	75.0					3.0	-	2.42	149			
April	90.0					-	-	3.0	179			
May	108.5					-	-	3.5	215			
June	96.5					-	2.5	3.22	191			
July	72.0					3.5	2.0	2.32	143			
August	55.5					2.5	1.5	1.79	110			
September	61.5					2.5	2.0	2.05	122			
Water year 1936-37	649.5					-	1.5	2.33	1,680			

\*Discharge measurement.

## Santo Domingo east riverside drain near Domingo, N. Mex.

Location.- Staff gage, lat.  $35^{\circ}29'$ , long.  $106^{\circ}24'$ , in  $8\frac{1}{2}$  sec. 34, T. 15 N., R. 5 E., about 50 feet below junction with Santo Domingo interior drain, about 200 yards above outlet to Rio Grande, and 5 miles southwest of Domingo. Zero of gage is 5,134.68 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge for period ending September 30, 1936, 42 second-feet Sept. 28; minimum daily, 14 second-feet Aug. 7 and 8.  
Maximum daily discharge during water year 1936-7, 42 second-feet May 14, 15; minimum daily, 15 second-feet Aug. 6, 7.

Remarks.- Records poor. Discharge computed on basis of 71 discharge measurements, of which 26 were furnished by Middle Rio Grande Conservancy District and 5 by El Paso County Water Improvement District no. 1, and records for Algodones riverside drain at Algodones, Pena Blanca riverside drain near Domingo, and Rio Grande at Cochiti and at San Felipe. Discharge represents return flow to Rio Grande from irrigation on Cochiti division of Middle Rio Grande Conservancy District.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										22	19	23
2										*22	20	21
3										22	*23	*22
4										23	23	24
5										25	*16	24
6										26	15	23
7										*24	14	23
8										23	14	23
9										*24	15	*23
10										24	15	22
11										25	16	22
12										28	17	*23
13										27	*19	24
14										23	19	23
15										*22	20	20
16										22	20	16
17										20	19	19
18										19	19	*22
19										20	22	24
20										*21	*31	22
21										20	37	24
22										*18	35	30
23										16	28	33
24										15	22	*28
25										16	18	*24
26										16	19	21
27										18	*23	30
28										18	23	42
29										*20	22	32
30										19	24	29
31										18	26	-

\*Discharge measurement.

Discharge, in second-feet, of Santo Domingo east riverside drain near Domingo, N.Mex., 1936-37--Cont.

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*28	26	19	22	16	24	22	*33	34	40	27	26
2	27	27	*20	*23	*16	24	24	32	35	38	25	25
3	26	*26	20	22	*19	25	*25	33	36	37	*22	23
4	27	25	21	21	19	25	24	34	37	36	19	23
5	28	*24	*21	20	19	26	22	35	36	34	17	24
6												
7	28	25	22	*20	19	26	20	36	35	*32	15	23
8	*27	26	21	20	21	27	19	37	33	30	15	23
9	*26	25	21	21	23	28	19	38	*31	29	17	*22
10	26	24	*21	21	24	29	20	39	30	27	19	23
11	26	24	20	22	*22	29	21	40	29	26	*21	*24
12												
13	27	*24	20	*22	20	29	22	40	28	25	22	23
14	*27	22	20	21	19	28	23	41	28	26	23	22
15	29	21	20	21	19	28	24	41	27	*25	24	21
16	30	20	20	*20	20	28	25	42	26	24	25	21
17	29	20	*21	20	21	27	27	42	25	23	25	20
18												
19	27	21	21	20	22	26	28	41	24	22	26	19
20	25	22	22	19	*22	26	*27	41	23	22	26	19
21	25	*23	22	19	22	25	26	40	22	22	27	*19
22	26	24	*20	*19	*23	25	28	40	21	*22	27	18
23	*26	23	20	*16	23	24	27	39	21	22	*24	17
24												
25	*25	*21	21	16	22	23	26	39	20	22	24	16
26	26	22	*22	16	*22	*23	*28	38	19	23	23	16
27	27	23	22	16	*21	23	29	37	19	23	23	16
28	28	*23	22	16	21	22	28	36	20	24	22	17
29	29	22	22	16	22	21	27	35	22	24	22	17
30												
31	27	21	22	16	23	21	26	34	*30	25	22	18
2	*24	20	21	16	23	21	28	34	35	*26	23	18
3	24	20	20	16	23	21	30	35	40	27	23	*19
4	24	19	20	16	-	21	32	32	41	28	24	20
5	23	19	20	*16	-	21	33	32	41	29	25	23
6	24	-	20	16	-	21	-	33	-	28	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 1936.....	656	28	15	21.1	1,300
August.....	653	37	14	21.1	1,300
September.....	738	42	18	24.6	1,460
The period.....					4,060
October 1936 .....	821	30	23	26.5	1,630
November.....	682	27	19	22.7	1,350
December.....	644	22	19	20.8	1,280
Calendar year .....					
January 1937 .....	585	23	15	18.9	1,160
February.....	586	24	15	20.9	1,160
March.....	767	29	21	24.7	1,520
April.....	760	33	19	25.3	1,510
May.....	1,147	42	32	37.0	2,280
June.....	865	41	19	25.9	1,720
July.....	841	40	22	27.1	1,670
August.....	704	27	15	22.7	1,400
September.....	615	26	16	20.5	1,220
Water year 1936-37 .....	9,020	42	15	24.7	17,900

\*Discharge measurement.

## RIO GRANDE BASIN

Santo Domingo interior drain near Domingo, N. Mex.

Location.- Measuring section, lat.  $35^{\circ}29'$ , long.  $106^{\circ}24'$ , in S $\frac{1}{2}$  sec. 34, T. 15 N., R. 5 E., at outlet to Santo Domingo east riverside drain, 5 miles southwest of Domingo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 9.5 second-feet July 13, 14; minimum daily, 3.5 second-feet Aug. 10, 11.

Maximum daily discharge during water-year 1936-37, 9.5 second-feet June 21; minimum daily, 2.0 second-feet June 14.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 52 discharge measurements, of which 28 were furnished by Middle Rio Grande Conservancy District and 5 by El Paso County Water Improvement District No. 1, and records for riverside drains in Cochiti division of Middle Rio Grande Conservancy District. Discharge represents return flow from irrigation of part of lands of Cochiti division of Middle Rio Grande Conservancy District.

Discharge, in second-feet, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 1936.....	9.5	5.5	6.90	424
August.....	7.5	3.5	5.42	333
September.....	8.5	5.0	7.03	419
The period.....				1,180
October 1936.....	7.5	5.5	6.65	409
November.....	8.5	5.5	7.08	421
December.....	8.0	6.0	6.95	427
January 1937.....	7.0	6.5	6.79	418
February.....	8.0	5.0	6.84	380
March.....	-	-	6.77	417
April.....	5.5	-	4.58	273
May.....	-	-	3.53	217
June.....	9.5	2.0	4.85	277
July.....	7.5	6.0	6.89	423
August.....	8.0	7.0	7.50	461
September.....	8.0	6.5	6.88	410
Water year 1936-37.....	9.5	2.0	6.26	4,530

Lower Santo Domingo east riverside drain near San Felipe, N. Mex.

Location.— Measuring section, lat.  $35^{\circ}27'$ , long.  $106^{\circ}26'$ , in NW $\frac{1}{4}$  sec. 9, T. 14 N., R. 5 E., at outlet to Rio Grande,  $2\frac{1}{2}$  miles northeast of San Felipe.

Records available.— July 1936 to September 1937.

Extremes.— Maximum daily discharge during period ending Sept. 30, 1936, 3.6 second-feet Sept. 27; minimum daily, 1.9 second-feet July 22, 23.

Maximum daily discharge during water year 1936-37 not determined; minimum daily, 1.7 second-feet Sept. 18, 19.

Remarks.— Records poor. Discharge computed on basis of 33 discharge measurements of which 3 were furnished by Middle Rio Grande Conservancy District and 5 by El Paso County Water Improvement District no. 1, and records for Algodones riverside at Algodones and Rio Grande at Cochiti and at San Felipe. Discharge represents return flow to Rio Grande from irrigation on part of land in Cochiti division of Middle Rio Grande Conservancy District.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										3.3	2.6	2.6
2										3.2	2.7	2.6
3										3.0	2.8	*2.6
4										3.0	3.0	2.6
5										3.1	3.2	2.5
6										*3.1	3.1	2.6
7										3.3	2.9	2.6
8										3.1	2.7	2.6
9										3.1	2.6	2.6
10										3.1	2.6	*2.6
11										3.1	2.6	2.8
12										3.3	2.5	3.0
13										3.2	*2.4	3.0
14										*2.1	2.4	2.8
15										2.0	2.3	2.6
16										2.0	2.5	2.6
17										2.1	2.5	2.6
18										2.0	2.5	2.7
19										2.0	2.5	2.9
20										2.1	2.6	3.0
21										2.0	2.7	3.0
22										*1.9	2.7	3.0
23										1.9	2.4	3.0
24										2.1	2.0	*2.8
25										2.1	2.0	*3.0
26										2.3	2.1	3.5
27										2.6	*2.2	3.6
28										2.8	2.4	3.4
29										*2.8	2.5	2.8
30										2.7	2.5	2.4
31										2.6	2.5	"

\*Discharge measurement.

Discharge, in second-feet, of Lower Santo Domingo east riverside drain near San Felipe, N. Mex.,  
1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	3.1	2.8	3.1	3.9	3.6				3.6	3.0	3.3
2	2.4	3.0	*3.0	3.0	3.9	3.6				3.5	2.8	3.2
3	2.4	*3.2	3.2	3.0	4.0	3.6				3.4	*2.7	3.1
4	2.4	3.2	3.4	2.9	4.1	3.7				3.3	2.7	3.1
5	2.5	3.1	3.6	2.9	4.2	3.7				3.2	2.6	3.0
6	2.5	2.9	3.9	*2.8	4.3	3.8				3.2	2.6	2.9
7	*2.4	3.1	4.1	2.8	4.5	3.8				3.1	2.6	2.9
8	2.3	3.0	3.9	2.9	4.7	3.9			4.5	3.1	2.6	*2.8
9	2.2	2.8	*3.8	2.9	4.3	4.0				3.0	2.7	2.7
10	2.1	2.6	3.4	3.0	4.1	4.1				3.0	2.7	2.6
11	2.1	2.7	3.2	3.0	4.1	4.2				3.0	2.8	2.5
12	*2.1	2.9	3.3	2.9	4.2	4.3				3.0	2.8	2.3
13	2.2	3.2	3.3	2.9	4.3	4.4				3.0	2.8	2.2
14	2.3	3.5	3.1	3.0	4.5	4.4			*3.9	2.9	3.0	2.1
15	2.5	3.6	*2.9	3.1	4.7	4.4			3.9	2.9	3.0	2.0
16	2.7	3.7	3.0	3.1	5.0	4.3			3.8	*2.9	3.1	1.9
17	2.8	3.8	3.2	3.2	5.2	4.3			3.8	2.8	*3.2	1.8
18	2.8	3.7	3.5	3.3	5.3	4.2			3.7	2.8	3.2	*1.7
19	2.7	3.7	3.5	*3.4	5.2	4.1			3.6	2.8	3.2	1.7
20	2.7	3.5	3.5	3.4	5.1	4.1			3.5	2.8	3.1	1.8
21	*2.6	*3.3	3.4	3.5	5.0	4.0			3.4	2.9	3.1	1.9
22	2.6	3.1	*3.3	3.5	*4.7	*4.0			3.4	3.0	3.0	2.0
23	2.6	3.1	3.3	3.5	*4.1	3.9			3.4	3.0	3.0	2.1
24	2.8	*3.1	3.2	3.6	3.8	3.8			3.4	3.0	3.0	2.2
25	3.1	3.0	3.0	3.6	3.7	3.7			3.5	3.1	3.0	2.3
26	3.7	2.8	3.1	3.7	3.6	3.7			3.7	3.1	3.0	2.5
27	*3.5	2.7	3.1	3.7	3.6	3.6			4.0	3.1	3.0	2.7
28	3.3	2.6	3.2	3.7	3.6	3.6			3.8	3.2	3.1	*2.8
29	3.3	2.6	3.2	3.8	-	3.6			3.7	3.2	3.2	2.9
30	3.4	2.7	3.2	3.8	-	3.6			3.6	3.2	3.3	3.0
31	3.3	-	3.1	3.8	-	3.6			-	3.1	3.4	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 1936.....	81.0	3.3	1.9	2.61	161
August.....	79.0	3.2	2.0	2.55	157
September.....	84.1	3.6	2.4	2.80	187
The period.....					485
October 1936.....	82.6	3.7	2.1	2.66	164
November.....	93.3	3.8	2.6	3.11	185
December.....	102.5	4.1	2.8	3.31	203
Calendar year.....					
January 1937.....	100.8	3.8	2.8	3.25	200
February.....	121.7	5.3	3.6	4.35	241
March.....	121.6	4.4	3.6	3.92	241
April.....	135.0	-	-	4.5	268
May.....	155.0	-	-	5.0	307
June.....	120.6	-	3.4	4.02	239
July.....	95.2	3.6	2.8	3.07	189
August.....	91.4	3.4	2.6	2.95	161
September.....	74.0	3.3	1.7	2.47	147
Water year 1936-37.....	1,293.7	-	1.7	3.54	2,560

\*Discharge measurement.



## Southwest San Felipe acequia near San Felipe, N. Mex.

Location.- Staff gage, lat.  $35^{\circ}25'$ , long.  $106^{\circ}28'$ , in NE $\frac{1}{4}$  sec. 25, T. 14 N., R. 4 E., just below wasteway, half a mile below head and  $1\frac{1}{4}$  miles southwest of San Felipe.

Records available.- June to December 1936 (discontinued).

Extremes.- Maximum discharge observed during period, 5.2 second-feet July 28 and Aug. 28; maximum gage height observed, 1.72 feet July 28; no flow at times.

Remarks.- Records poor. Gage read about three times weekly. Acequia diverts water from left bank of Rio Grande for irrigation. No diversion between station and head.

Discharge, in second-feet, 1936

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-	*3.6	*2.3	2.6	16	-	1.8	0	0
2	-	*3.6	*1.2	*2.6	17	-	*1.4	*1.2	*.6
3	-	*3.6	0	*2.6	18	-	*1.1	2.4	*1.7
4	-	*3.6	0	2.6	19	-	*.6	2.4	2.5
5	-	*3.5	0	*2.0	20	-	.4	*2.5	*1.7
6	-	3.5	0	*1.3	21	-	0	2.0	*.8
7	-	*3.5	0	*.6	22	-	*.4	*1.5	0
8	-	*1.6	.1	0	23	-	.7	*1.0	0
9	-	0	*.1	1.7	24	-	*1.6	*.5	0
10	-	0	0	*1.2	25	-	*2.5	0	0
11	-	0	0	.7	26	-	*3.4	.4	0
12	-	0	0	*.6	27	-	*4.3	*2.8	0
13	-	0	0	*.4	28	-	5.2	5.2	0
14	-	0	0	*.5	29	-	*4.6	*4.6	0
15	-	*.9	0	*.1	30	*3.6	*4.1	*5.9	0
					31	-	3.5	*3.2	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
July.....				63.4	5.2	0	2.05	126	
August.....				37.3	5.2	0	1.20	74	
September.....				26.8	2.6	0	.89	53	
The period.....								253	

\*Gage height missing; discharge interpolated or estimated.

Note.- No flow Oct. 1 to Dec. 31, 1936.

## RIO GRANDE BASIN

Algodones riverside drain at Algodones, N. Mex.

Location.- Measuring section, lat.  $35^{\circ}23'$ , long.  $106^{\circ}30'$ , in SE $\frac{1}{4}$  sec. 3, T. 13 N., R. 4 E., 0.4 mile above outlet and 1 mile west of Algodones. June 5 to Dec. 31, 1936, water-stage recorder at same site; zero of gage was 5,077.47 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum daily discharge for period ending Sept. 30, 1936, 55 second-feet Sept. 27; minimum daily, 32 second-feet Aug. 24.

Maximum daily discharge for water year 1936-7 not determined; minimum daily, 23 second-feet Jan. 6.

Remarks.- Records poor. Discharge for April 29 to June 4, 1936, computed on basis of six discharge measurements and records for Rio Grande at Cochiti and at San Felipe; that for Jan. 1 to Sept. 30, 1937, computed on basis of 34 discharge measurements and records for Rio Grande at San Felipe. Results of 30 discharge measurements were furnished by Middle Rio Grande Conservancy District and 17 by El Paso County Water Improvement District No. 1. Discharge represents return flow from irrigation on part of Cochiti Division of Middle Rio Grande Conservancy District.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	*48	*37	45	37	47
2							-	47	37	46	40	46
3							-	46	37	46	40	44
4							-	45	38	47	50	46
5							-	*46	39	50	47	44
6							-	48	39	44	44	46
7							-	50	40	42	39	44
8							-	*48	41	38	37	45
9							-	46	39	36	40	46
10							-	44	37	35	39	46
11							-	43	38	43	37	50
12							-	42	40	42	36	51
13							-	41	41	40	38	49
14							-	40	40	40	38	47
15							-	41	36	39	34	44
16							-	42	36	41	41	41
17							-	44	36	35	36	41
18							-	45	36	35	36	44
19							-	46	40	35	40	49
20							-	46	37	35	40	49
21							-	*44	35	34	49	47
22							-	42	35	35	44	50
23							-	41	38	34	37	53
24							-	40	39	34	32	50
25							-	39	42	40	36	42
26							-	38	41	40	40	42
27							-	38	42	41	45	55
28							-	37	45	42	45	50
29							-	*48	36	47	39	42
30							-	48	36	48	34	37
31							-	36	-	36	49	-

\*Discharge measurement.

Discharge, in second-feet, of Algodones riverside drain at Algodones, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	35	30	26	45		45	*53	*55	41	37	44
2	41	41	31	*26	*44		45		52	40	36	43
3	40	40	32	27	44		*49		53	39	*36	42
4	41	39	31	25	*44				51	38	35	41
5	42	34	30	24	44				50	37	35	41
6								55				
7	42	34	32	23	45				49	*35	33	41
8	40	35	32	24	46				48	35	30	40
9	37	37	31	25	43				*47	34	30	*40
10	34	29	28	25	35		50		46	33	31	39
									45	32	*31	39
11	32	26	28	24	33	50			45	32	32	38
12	29	27	28	24	33				44	33	34	37
13	32	29	27	26	35				44	32	35	37
14	40	32	28	*27	37				43	31	38	36
15	44	34	28	*27	40				43	30	40	35
16	44	34	29	28	43				42	29	39	35
17	39	34	30	29	38				41	30	39	35
18	40	32	31	31	*35			60	41	32	39	*35
19	36	32	27	*32	*36				40	*34	38	34
20	36	28	28	33	36				40	32	*37	33
21	37	28	28	35	35				*39	32	37	33
22	34	28	29	*35	35	*50			*36	33	37	34
23	32	28	30	37	*35			55				
24	37	30	29	39					37	34	36	34
25	42	31	26	40					38	34	*36	*35
									41	35	36	35
26	46	32	26	42	40				45	35	36	35
27	44	32	28	45		45			47	36	37	35
28	39	31	29	*47					46	37	38	36
29	39	30	29	47				55	44	*38	40	37
30	41	30	28	48	-				*42	38	42	38
31	39	-	27	45	-				-	37	44	-
Month	Second-foot-days			Maximum		Minimum		Mean		Run-off in acre-feet		
May 1936.....	1,324			50		36		42.7		2,630		
June.....	1,178			48		35		39.2		2,530		
July.....	1,223			50		34		39.5		2,430		
August.....	1,253			50		32		40.4		2,490		
September.....	1,380			55		35		46.0		2,740		
The period.....										12,620		
October 1936.....	1,191			46		29		38.4		2,360		
November.....	982			41		25		32.1		1,910		
December.....	899			32		26		29.0		1,780		
January 1937.....	990			47		23		31.9		1,960		
February.....	1,103			48		33		39.4		2,190		
March.....	1,505			-		-		48.5		2,990		
April.....	1,564			-		-		52.1		3,100		
May.....	1,778			-		-		57.4		3,530		
June.....	1,332			55		36		44.4		2,640		
July.....	1,068			41		29		34.5		2,120		
August.....	1,123			44		30		36.2		2,230		
September.....	1,117			44		33		37.2		2,220		
Water year 1936-37.....	14,532			-		23		40.1		29,030		

\*Discharge measurement.

## Jemez Creek near Jemez, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}39'$ , long.  $106^{\circ}44'$ , in SE $\frac{1}{4}$  sec. 32, T. 17 N., R. 2 E., 850 feet above diversion dam of Jemez west side and Jemez east side ditches, about 1 mile below mouth of Rio Guadalupe, and 4 miles north of town of Jemez. New gage well and shelter constructed at site 60 feet downstream and datum raised 0.20 foot Mar. 11, 1937.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, about 1,680 second-feet Apr. 12 (gage height, 6.30 feet), from rating curve extended above 400 second-feet; minimum daily discharge, 16 second-feet (estimated) Jan. 3, 1936-37; Maximum discharge, about 3,000 second-feet Sept. 26, 1936 (gage height, 8.8 feet, present datum, from floodmarks), by slope-area method; minimum daily discharge, that of Jan. 3, 1937.

Remarks.- Records fair except those for periods of ice effect, missing gage heights, or faulty recorder operation, all of which are poor. Several diversions above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	127	95	64	20.	24	51	305	327	190	85	38	35
2	106	82	45	19	25	57	660	372	170	105	33	26
3	95	45	38	16	26	71	700	382	170	115	30	33
4	89	58	50	19	29	54	504	385	156	85	30	33
5	64	78	72	23	32	60	311	372	137	65	30	37
6	62	74	36	26	35	56	278	378	127	60	25	37
7	62	78	44	25	78	71	260	327	180	90	25	42
8	62	71	57	25	41	89	368	318	112	85	25	51
9	64	59	49	25	22	89	740	305	105	75	25	85
10	56	54	44	17	29	101	598	296	95	65	25	38
11	51	51	39	23	38	114	988	281	85	130	25	25
12	46	52	41	24	42	127	1,030	260	60	110	31	25
13	45	50	44	27	39	127	1,030	252	75	80	30	20
14	44	56	45	24	126	118	1,000	240	68	45	26	20
15	44	57	48	17	197	121	900	232	62	39	26	20
16	42	54	51	20	76	114	800	229	58	34	27	20
17	39	54	52	20	56	129	700	215	55	32	43	20
18	36	57	42	17	50	141	600	204	53	30	46	25
19	35	59	35	20	54	110	550	196	45	28	49	25
20	46	52	35	20	45	94	500	190	45	22	33	20
21	80	56	44	21	45	129	475	138	40	22	30	20
22	71	51	41	17	45	160	460	121	55	28	40	20
23	60	57	31	19	45	190	425	116	65	19	35	25
24	54	39	38	21	51	141	400	172	60	20	30	24
25	74	38	39	21	59	165	400	127	105	36	22	22
26	74	44	38	23	52	170	400	108	90	40	26	21
27	60	45	29	26	48	146	400	95	70	38	38	21
28	51	57	27	24	48	170	405	234	80	92	37	22
29	46	62	32	19	-	162	349	281	60	66	34	22
30	84	45	24	20	-	150	324	615	60	46	25	59
31	143	-	19	19	-	193	-	248	-	39	36	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,012	143	35	64.9	3,990		
November.....						1,728	95	38	57.6	3,430		
December.....						1,292	72	19	41.7	2,560		
Calendar year .....												
January.....						657	27	16	21.2	1,500		
February.....						1,457	197	22	52.0	2,890		
March.....						3,670	193	51	118	7,280		
April.....						17,161	1,030	260	572	34,020		
May.....						8,014	613	95	259	15,900		
June.....						2,693	190	40	89.8	5,340		
July.....						1,824	130	19	58.8	3,620		
August.....						975	49	22	31.5	1,930		
September.....						593	85	20	29.8	1,770		
Water year 1936-37.....						42,366	1,030	16	116	84,030		

Note.- Discharge for periods of ice effect, Dec. 30 to Jan. 8, Jan. 10-12, 14-28, 30, computed on basis of gage heights and weather records; that for period of missing gage heights, Apr. 13-28 computed on basis of records for station near Bernalillo and weather records; that for period of faulty recorder operation, June 10-13, June 19 to July 14, July 20-24, Aug. 3-11, 20-24, Sept. 11-20, computed on basis of weather records and records for station at San Ysidro.

## Jemez Creek at San Ysidro, N. Mex.

Location.- Water-stage recorder above diversion dam of Zia ditch, lat.  $35^{\circ}34'$ , long.  $108^{\circ}45'$ , in sec. 32 T. 16 N., R. 2 E., in San Ysidro Grant, a quarter of a mile northeast of San Ysidro and  $2\frac{1}{4}$  miles above mouth of Rio Salado.

Records available.- May to September 1937.

Extremes.- Maximum gage height during period, 4.80 feet May 30 (discharge not determined); minimum daily discharge, 3.2 second-feet Aug. 12.

Remarks.- Records fair below 150 second-feet and poor above. Discharge includes flow diverted by Zia ditch. Several diversions above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	174	87	26	20
2								-	108	112	21	12
3								-	115	127	17	27
4								556	108	87	15	33
5								412	92	62	17	21
6								398	83	49	12.	22
7								290	75	92	7.1	22
8								314	75	85	6.2	30
9								342	69	66	4.2	80
10								342	65	50	3.5	34
11								556	64	130	3.9	22
12								290	58	106	3.2	15
13								314	55	83	6.5	12
14								314	54	40	4.2	11
15								328	52	24	3.8	9.4
16								300	48	14	3.9	8.0
17								280	46	13	5.1	8.0
18								250	44	15	20	8.7
19								204	42	6.5	30	8.5
20								186	39	5.1	22	7.5
21								162	40	5.2	16	7.4
22								134	45	4.8	25	8.0
23								134	38	4.7	17	11
24								168	30	4.3	6.1	12
25								162	100	9.1	6.3	9.6
26								124	96	18	6.2	10
27								108	101	15	8.6	9.6
28								388	115	76	29	9.4
29								426	106	57	26	10
30								1,200	81	34	14	36
31								384	-	26	15	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 4-31 .....								8,666	1,200	108	310	17,190
June.....								2,216	174	30	73.9	4,400
July.....								1,507.7	130	4.3	48.6	2,990
August.....								400.8	30	3.2	12.9	795
September.....								534.1	80	7.4	17.8	1,060
The period.....												26,440

## Jemez Creek near Bernalillo, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}23'40''$ , long.  $106^{\circ}32'25''$ , in S $\frac{1}{4}$  sec. 32, T. 14 N., R. 4 E., about 2 miles above confluence with Rio Grande and 6.2 miles north of Bernalillo. Zero of gage is 5,120.11 feet above mean sea level (general adjustment of 1929).

Records available.- March 1936 to January 1938 (discontinued).

Extremes.- Maximum discharge during period ending Sept. 30, 1936, about 6,370 second-feet July 11 (gage height, 4.75 feet); no flow at times.

Maximum discharge during water year 1936-37, about 1,650 second-feet Apr. 12;

maximum gage height, 2.90 feet July 3; no flow at times.

Maximum discharge during period Oct. 1, 1937 to Jan. 12, 1938, 356 second-feet Oct. 13 (gage height, 2.12 feet); no flow at times.

Remarks.- Records poor. Practically all the flow in creek above station is diverted for irrigation during summer months.

## Discharge, in second-feet, 1936-38

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				-		-	125	400	90	0	5	10
2				-		-	150	375	57	0	10	5
3				-		-	175	350	26	0	15	0
4				-		-	200	335	21	0	19	0
5				-		-	225	317	15	0	12	0
6				-		-	250	300	13	0	8	0
7				-		-	275	282	8	0	4	0
8				-		-	300	207	5	0	2.8	0
9				-		-	400	165	1	0	1	0
10				-		-	600	165	0	0	0	0
11				-		-	1,100	165	14	432	0	0
12				-		-	1,480	83	6	181	0	0
13				*17		-	1,480	104	0	70	0	3
14				-		-	1,100	104	0	50	0	6
15				-		-	1,000	83	0	30	0	4
16				-		-	950	68	0	15	0	2
17				-		-	900	59	0	10	0	2
18				-		-	900	50	0	8.6	0	6
19				-		-	850	60	0	6	0	20
20				*14		-	850	48	0	4	1	24
21				-		-	830	94	0	2	2	27
22				-		-	*822	94	0	1	4	253
23				-		-	800	94	0	0	6	30
24				-		-	750	83	0	0	7.8	18
25				-		-	700	106	0	0	4	15
26				-		-	650	99	0	0	0	338
27				-		-	600	94	0	0	0	1,070
28				-		-	*533	106	0	0	0	200
29				-		-	50	75	0	40	5	150
30				-		-	75	450	57	0	10	120
31				-		-	100	-	72	-	15	-

\*Discharge measurement.

Note.- Discharge for periods of missing gage heights, Mar. 29 to May 3, July 13 to Sept. 30, computed on basis of eleven discharge measurements, highwater marks, and records for station at Jemez; that for May 5, 6, 10, 17 interpolated.

Discharge, in second-feet, of Jemez Creek near Bernalillo, N. Mex., 1936-38--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	108	24	1	19	14	144	394	378	45	1	0
2	90	60	99	1	21	31	276	410	325	90	3	0
3	82	68	48	1	17	31	342	454	270	179	3	0
4	70	79	24	1	20	22	297	454	218	22	7	4
5	60	75	50		75	26	566	410	175	37	50	12
6	50	60	57	5	103	31	378	394	130	31	0	8
7	40	75	53		130	15	349	386	108	19	0	17
8	50	21	29		150	13	403	314	94	58	0	10
9	50	19	29		50	45	554	229	60	42	0	51
10	48	57	26	5	13	37	839	314	29	53	0	19
11	48	42	12	10	20	108	701	363	17	48	0	3
12	48	45	19		32	121	1,120	252	17	144	0	0
13	45	48	17		40	185	1,070	252	15	24	6	0
14	45	50	10		60	145	1,070	300	13	17	60	0
15	45	50	15		200	83	1,150	300	10	6	4	0
16	40	83	34		98	68	860	240	8	1	0	0
17	30	75	22		19	48	800	175	6	0	0	0
18	40	53	6		71	57	539	175	6	0	0	0
19	50	53	29		103	60	593	196	6	0	0	0
20	57	60	72	17	102	54	490	218	8	0	29	0
21	53	42	57	11	34	19	539	150	0	0	4	0
22	40	50	22	7	79	52	522	145	0	0	0	0
23	48	48	13	7	83	80	434	140	8	0	0	0
24	42	40	22	13	48	71	349	117	4	0	0	0
25	48	42	29	13	26	24	426	140	79	0	0	0
26	53	26	10	21	48	70	328	122	335	0	0	0
27	45	19	21	19	64	117	314	108	170	0	0	0
28	57	29	24	19	8	108	418	160	117	4	0	0
29	42	29	3	17	-	145	410	480	42	31	0	0
30	80	12	1	17	-	130	294	475	75	14	0	0
31	75	-	1	17	-	64	-	418	-	0	0	-

Note.- Discharge for periods of missing or fragmentary gage height-record, Oct. 1, 2, 16-19, Apr. 26-27, May 22-25, 27, computed on basis of partly estimated gage heights and records for station at Jemez; that for periods of missing gage heights, Oct. 4-6, June 2, 3, 13-16, interpolated; that for periods of ice effect, Dec. 30, to Jan. 19, Jan. 21, 22, Feb. 2, 3, 7-9, 11, 13, 14 computed on basis of six discharge measurements, weather records, and records for station at Jemez.

1937-38

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	17	8	21								
2	24	10	7	22								
3	26	8	15	34								
4	17	7	5	37								
5	8	5	3	29								
6	6	7	5	9								
7	2	6	8	12								
8	0	17	13	19								
9	0	12	29	8								
10	0	19	15	28								
11	4	15	24	19								
12	20	10	29	24								
13	96	10	64	-								
14	37	17	48	-								
15	62	12	37	-								
16	94	12	40	-								
17	86	10	26	-								
18	45	4	21	-								
19	21	2	12	-								
20	22	6	7	-								
21	21	12	23	-								
22	24	10	19	-								
23	22	12	22	-								
24	21	15	10	-								
25	21	10	12	-								
26	29	13	17	-								
27	24	5	22	-								
28	19	4	17	-								
29	15	4	16	-								
30	10	4	15	-								
31	21	-	19	-								

Discharge, in second-feet, of Jemez Creek near Bernalillo, N. Mex., 1936-38--Continued

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 1936.....	19,945	1,480	125	665	39,560
May.....	4,698	400	48	152	9,320
June.....	256	90	0	8.53	508
July.....	869.6	452	0	28.1	1,720
August.....	131.6	19	0	4.25	261
September.....	2,303	1,070	0	76.8	4,570
The period.....					55,940
October 1936.....	1,651	100	30	53.3	3,270
November.....	1,518	108	12	50.6	3,010
December.....	878	99	1	28.3	1,740
Calendar year.....					
January 1937.....	302	21	1	9.7	599
February.....	1,733	200	8	61.9	3,440
March.....	2,084	185	13	67.2	4,130
April.....	16,875	1,150	144	552	32,880
May.....	8,645	480	108	279	17,150
June.....	2,723	378	0	90.8	5,400
July.....	865	179	0	27.9	1,720
August.....	167	60	0	5.4	351
September.....	127	51	0	4.2	262
Water year 1936-37.....	37,268	1,150	0	102	73,920
October 1937.....	837	96	0	27.0	1,660
November.....	298	19	2	9.9	591
December.....	607	64	3	19.6	1,200
Calendar year 1937.....	34,963	1,150	0	95.8	69,350
January 1-12, 1938.....	260	37	6	21.7	516



## Jemez west side ditch near Jemes, 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 below head gate and ¾ miles north of Jemes.

Records available.— April 1936 to September 1937.

Extremes.— Maximum discharge during year, 33 second-feet Apr. 16 (gage height, 1.61 feet); no flow at times.

1936-37: Maximum discharge, 52 second-feet July 11, 1936 (gage height, 2.10 feet); no flow at times.

Remarks.— Records good. No diversion between station and head. Ditch diverts water from right bank of Jemez Creek for irrigation of Indian lands in Jemez Pueblo Grant.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.6			5.5	15	17	17	13	14	18
2	0	0	0.5			17	2.1	22	16	14	13	17
3	0	0	.2			17	2.5	22	17	14	14	18
4	0	0	.2			16	4.9	17	17	15	13	18
5	0	0	.7			17	4.3	16	16	12	13	18
6	0	0	.3			16	5.7	16	16	11	13	18
7	0	0	.3			17	4.5	13	16	11	14	18
8	.2	0	.4			15	7.4	15	19	11	16	19
9	.6	.1	.7			15	8.7	17	17	12	14	18
10	.2	.3	.6			15	12	15	17	16	15	13
11	.2	.2	.3			14	.3	15	15	20	5.9	13
12	.2	.3	.1			14	.6	17	17	19	17	13
13	.1	0	.2			14	3.6	21	20	13	16	13
14	.1	.1	.1			13	11	22	20	13	16	13
15	0	.1	.1			13	20	21	18	11	16	13
16	.2	0	.1			11	25	22	19	10	16	13
17	.6	0	.2			10	21	21	16	11	17	13
18	.6	0	0			9.4	23	20	15	14	18	13
19	.5	.1	0			6.6	24	20	13	14	18	13
20	.6	.1	0			.9	22	20	13	16	17	12
21	.6	.2	0			1.2	23	20	6.0	16	17	12
22	.3	.2	0			2.2	21	20	10	16	18	13
23	.2	0	0			1.4	22	20	25	16	17	14
24	.2	.1	0			1.3	20	22	25	19	16	12
25	.2	.2	0			2.1	21	21	23	20	15	12
26	.3	0	0			1.7	24	20	19	19	16	12
27	.3	0	0			1.3	23	21	15	18	16	12
28	.2	0	.1			1.5	8.8	10	12	19	19	12
29	.2	.6	0			1.1	3.1	.4	5.7	11	18	14
30	.3	.5	0			0	10	.3	7.5	11	19	15
31	0	.5	0			8.7	-	9.1	-	12	19	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				6.9		0.6	0	0.22	14			
November.....				3.1		.6	0	.10	6.1			
December.....				5.9		.8	0	.19	12			
Calendar year .....												
January.....				0		0	0	0	0			
February.....				0		0	0	0	0			
March.....				279.9		17	0	9.03	555			
April.....				393.5		25	.3	13.1	780			
May.....				532.8		22	.3	17.2	1,060			
June.....				482.2		25	5.7	16.1	956			
July.....				449		20	10	14.5	891			
August.....				437.9		19	5.9	15.7	968			
September.....				432		19	12	14.4	887			
Water year 1936-37.....				3,073.2		25	0	8.42	6,100			

## Jemez east side ditch near Jemes, N. Mex.

Location.- Water-stage recorder and 4-foot Parshall flume, lat.  $35^{\circ}39'$ , long.  $106^{\circ}44'$ , in NE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 4, T. 16 N., R. 2 E., about 4,500 feet below head gate and 3 miles north of Jemes.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during year, 16 second-feet Mar. 10 (gage height, 0.99 foot); no flow at times.  
1936-37: Maximum discharge, 48 second-feet Sept. 26, 1936 (gage height, 2.00 feet); no flow at times.

Remarks.- Records good except those for July 14-26, which were computed on basis of fragmentary gage-height record and are poor. Ditch diverts water from left bank of Jemez Creek for irrigation of Indian lands in Jemez Pueblo Grant. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.2	0.2		0	0.3	4.1	7.8	6.7	5.8	4.1	5.3
2	3.4	2.2	.1		0	.1	0	7.4	6.5	7.3	4.1	5.4
3	2.1	2.5	0		0	.1	5.9	6.4	6.5	3.9	4.4	7.2
4	1.5	2.8	0		0	0	9.4	4.5	6.1	2.9	4.9	3.7
5	1.6	3.4	0		0	0	4.8	2.8	5.6	6.4	5.2	4.0
6	1.7	2.5	0		0	0	6.4	7.6	5.6	8.7	3.5	4.2
7	1.7	.7	0		0	0	7.3	11	5.4	7.8	3.6	6.2
8	1.8	.6	0		0	5.5	8.6	8.5	5.4	6.0	5.1	6.6
9	1.8	.6	0		0	11	9.2	9.3	7.2	6.4	5.2	8.8
10	2.1	.6	0		0	13	6.0	3.4	8.4	6.9	4.4	6.6
11	2.5	.3	0		0	13	1.8	8.6	7.5	7.0	7.0	6.3
12	2.5	0	0		0	12	5.9	8.7	7.5	2.7	5.0	6.5
13	2.4	0	0		0	11	4.5	8.4	7.4	.1	6.2	6.6
14	2.6	0	0		0	10	8.1	6.4	7.8	1.3	7.2	6.0
15	2.6	2.1	0		0	10	9.8	0	8.9	5.9	7.3	5.9
16	2.5	4.0	0		0	9.8	6.3	0	7.6	5.8	7.3	5.9
17	2.6	4.2	0		0	9.9	10	5.0	6.9	5.7	8.8	6.0
18	2.5	4.2	0		0	7.7	9.6	8.1	6.2	5.2	6.9	5.9
19	3.0	4.3	0		0	3.1	9.1	5.2	4.3	5.5	3.8	5.7
20	4.1	4.6	0		0	2.2	8.5	8.3	3.3	5.9	5.2	5.7
21	2.0	4.9	0		0	2.1	8.3	7.7	1.1	5.7	7.1	6.7
22	0	3.0	0		0	2.5	8.6	7.2	2.8	6.5	4.5	7.3
23	0	0	0		0	2.0	7.4	7.1	9.7	7.0	5.0	8.5
24	0	0	0		0	2.1	7.4	7.5	9.5	7.1	4.8	5.4
25	.6	0	0		0	3.9	8.1	7.0	7.2	7.2	6.4	5.1
26	1.6	.2	0		0	3.7	8.1	8.5	0	7.1	7.1	5.0
27	1.5	0	0		4.6	3.1	8.1	9.4	0	5.6	7.8	5.0
28	1.6	.1	0		8.2	3.7	8.5	5.6	0	4.1	3.4	5.0
29	1.5	.1	0		-	4.1	9.0	.2	0	3.3	3.5	5.2
30	1.8	.1	0		-	3.6	7.9	0	.3	4.5	3.4	4.2
31	1.6	-	0		-	3.9	-	4.5	-	4.2	4.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						58.6	4.1	0	1.89	116		
November.....						49.2	4.9	0	1.84	98		
December.....						.3	.2	0	.01	.6		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						12.8	8.2	0	.46	25		
March.....						153.6	13	0	4.95	305		
April.....						215.7	10	0	7.19	428		
May.....						195.6	11	0	6.31	398		
June.....						161.6	9.7	0	5.39	321		
July.....						169.5	8.7	.1	5.47	336		
August.....						167.1	8.8	3.4	5.39	331		
September.....						173.7	8.8	3.7	5.79	345		
Water year 1936-37.....						1,357.6	13	0	3.72	2,690		

## Antonio Pecos ditch at Jemes, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°37', long. 106°44', in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 16 N., R. 2 E., about 2,500 feet below head and a third of a mile west of Jemes.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, 11 second-feet June 24; maximum gage height, 1.57 feet (backwater from check dam) Sept. 4; no flow at times.

1936-37: Maximum discharge, 16 second-feet July 11, 1936; maximum gage height, that of Sept. 4, 1937; no flow at times.

Remarks.- Records good except those for periods of backwater from check dam, which are poor. Ditch diverts water from left bank of Jemez Creek for irrigation of Indian lands in Jemez Pueblo Grant. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	1.3	0	0		0	0	5.1	1.6	0.4	*1.4	3.5
2	.5	2.0	0	0		0	.3	5.5	1.2	.5	*1.5	*1.5
3	.7	.9	.2	0		0	1.6	4.3	1.0	.2	*1.5	2.5
4	.2	1.4	.1	0		.1	1.0	4.1	1.0	.3	*1.6	*.9
5	.5	1.1	0	.1		.1	1.9	4.2	2.3	.2	*1.6	1.3
6	.3	1.1	0	.1		.1	3.7	4.3	4.6	.3	*1.6	1.9
7	.4	1.6	.3	.1		.1	4.6	4.7	3.8	.3	*2.4	*4.2
8	.6	2.4	0	0		0	3.6	5.9	3.7	.2	2.6	*3.0
9	.6	2.4	0	0		.3	1.3	7.1	4.2	.4	2.3	*2.9
10	.6	1.8	0	0		.3	2.0	5.9	5.3	1.4	1.9	*1.8
11	.8	.7	0	0		.2	1.5	5.5	5.2	1.4	4.4	*.8
12	1.2	.4	0	0		.2	3.1	1.6	4.7	.1	1.8	1.1
13	.8	0	0	0		.2	2.3	1.5	3.9	.1	1.4	*.9
14	.5	0	0	0		.2	5.6	2.6	4.2	.1	2.5	*.7
15	.3	0	0	0		.1	2.8	4.1	4.3	.6	2.4	*1.7
16	.8	0	0	0		.2	2.6	6.0	3.8	*1.2	1.9	1.7
17	.6	0	0	0		.1	4.1	5.7	3.9	*1.2	3.3	2.1
18	.8	0	0	0		1.5	4.2	5.2	3.6	*1.7	3.9	2.1
19	.9	0	0	0		2.2	3.7	6.1	2.1	3.7	3.8	2.4
20	1.6	0	0	0		2.1	3.8	5.6	3.7	1.7	1.9	3.1
21	1.4	0	0	0		2.3	3.9	5.3	5.4	2.9	.2	2.8
22	.8	0	0	0		1.0	4.5	6.2	5.3	3.1	.3	2.2
23	.6	0	0	0		.2	6.0	5.8	3.2	3.3	.7	*3.8
24	1.2	0	0	0		.1	5.3	7.5	5.0	*4.2	2.0	*2.2
25	1.3	0	0	0		.2	4.1	7.8	4.2	*3.4	1.0	*.7
26	1.0	0	0	0		.1	4.1	7.4	0	1.0	1.8	*.7
27	1.0	.4	0	0		.9	4.4	7.0	0	1.3	1.9	*1.0
28	2.0	0	0	0		1.7	4.0	8.4	0	*1.3	2.2	*1.7
29	1.5	0	0	0		1.3	3.8	3.9	0	*1.3	5.1	*1.9
30	1.8	0	0	0		.6	3.8	.3	.1	*1.4	*2.0	*2.2
31	1.1	-	0	0		0	-	1.0	-	*1.4	*3.2	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					28.7	2.3	0.2		0.93	57		
November.....					17.5	2.4	0		.68	35		
December.....					.6	.3	0		.02	1.2		
Calendar year .....												
January.....					.3	.1	0		.01	.6		
February.....					0	0	0		0	0		
March.....					16.4	2.3	0		.53	33		
April.....					97.6	6.0	0		3.25	194		
May.....					155.6	8.4	.3		5.02	309		
June.....					81.3	5.4	0		3.04	181		
July.....					40.6	4.2	.1		1.31	81		
August.....					64.1	4.4	.2		2.07	127		
September.....					59.3	4.2	.7		1.98	118		
Water year 1936-37 .....					572.0	8.4	0		1.57	1,140		

\*Stage-discharge relation affected by backwater from check dam; discharge for July 28 to Aug. 5 estimated and that for the other periods indicated computed on basis of partial gage-height record.

## San Ysidro ditch near San Ysidro, N. Mex.

Location.- Water-stage recorder and 3-foot Parshall flume, lat. 35°35', long. 106°46', in SE $\frac{1}{4}$  sec. 30, T. 16 N., R. 2 E., 6,000 feet below head and 1 $\frac{1}{4}$  miles north of San Ysidro.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during year, 11 second-feet Apr. 28 and May 28; maximum gage height, 1.47 feet (backwater from ice) Dec. 6; no flow at times.  
1936-37: Maximum discharge, 16 second-feet Sept. 28, 1936; maximum gage height, that of Dec. 6, 1936; no flow at times.

Remarks.- Records good except those for day of missing gage height and periods of ice effect, which are poor. Ditch diverts water from right bank of Jemez Creek for irrigation of Spanish grants. One or two small diversions between station and head.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.6				0	0.5	0	0	0.2	2.1
2		0	*1.2				3.3	0	0	0	0	1.8
3		0	*.7				1.2	0	0	0	0	1.8
4		0	*1.0				.9	.5	.1	0	0	2.4
5		0	1.5				0	0	0	0	0	2.4
6		0	*.4				0	0	0	0	0	3.8
7		0	*.2				0	0	0	0	1.5	7.2
8		0	*.7				0	.3	0	0	2.2	5.1
9		0	*.7				2.6	1.6	0	.1	1.2	2.2
10		0	*.1				3.5	1.6	0	0	1.3	1.7
11		0	0				3.3	.7	0	.1	4.6	1.2
12		0	0				2.8	.2	.1	.7	2.3	1.1
13		0	0				.6	0	.4	.1	4.9	.6
14		0	0				.2	0	0	2.7	1.8	.2
15		0	0				.1	0	0	2.4	1.6	1.2
16		0	0				.2	.1	.3	1.5	2.0	4.3
17		0	0				0	.9	1.8	1.0	5.7	4.3
18		0	0				0	.1	2.5	.8	6.2	5.0
19		0	0				.3	0	3.1	.8	1.1	4.5
20		0	0				0	1.4	3.3	1.7	.6	3.2
21			0				0	2.6	3.7	.9	.3	3.4
22			0				1.2	.1	3.7	1.5	.2	3.6
23			0				6.4	.5	.7	0	1.5	5.5
24			0				6.1	.4	.5	0	4.9	6.0
25			0				4.6	.3	1.3	1.5	2.7	5.3
26			0				3.2	.1	4.3	4.8	3.1	5.1
27		1.3	0				5.3	0	4.1	4.0	5.4	4.8
28		1.6	0				1.2	3.6	2.1	1.2	7.2	5.0
29		1.5	0				0	.2	0	0	2.3	5.2
30		1.3	0				0	0	0	0	1.9	4.8
31		-	0				-	0	-	.1	2.0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						16.2	-	0	.54	32		
December.....						8.1	1.6	0	.26	16		
Calendar year .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						47.0	6.4	0	1.57	93		
May.....						15.9	3.8	0	.51	32		
June.....						32.0	4.3	0	1.07	65		
July.....						25.9	4.8	0	.84	51		
August.....						69.0	7.2	0	2.23	137		
September.....						104.8	7.2	.2	3.49	208		
Water year 1936-37.....						318.9	7.2	0	.87	632		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge estimated.

Zia ditch near San Ysidro, N. Mex.

Location.— Water-stage recorder and 4-foot Parshall flume, lat.  $35^{\circ}33'$ , long.  $106^{\circ}45'$ , in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 15 N., R. 1 E., 1 mile south of San Ysidro and about 6,500 feet below head.

Records available.— June 1936 to September 1937.

Extremes.— Maximum discharge during year, 17 second-feet May 28 (gage height, 1.05 feet); no flow at times.  
1936-37: Maximum discharge, 21 second-feet July 11, 1936 (gage height, 121 feet); no flow at times.

Remarks.— Records good except those for period of faulty intake action, July 2-7, which were computed on basis of gage heights and knowledge of local conditions and are poor. Ditch diverts water from left bank of Jemez Creek for irrigation of Indian lands. No diversion between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.3	8.6	4.3	0	9.2	8.0
2						0	4.7	8.2	9.9	.8	7.3	6.8
3						0	4.9	7.4	11	0	4.5	4.7
4						0	2.6	9.4	9.3	0	5.4	5.8
5						0	2.9	12	7.3	0	9.7	8.9
6						0	2.8	13	7.4	8	9.0	6.3
7						0	2.3	12	7.4	13	5.9	5.8
8						0	2.2	12	7.2	14	4.7	6.1
9						0	4.0	12	8.0	13	2.2	5.8
10						0	4.3	12	10	13	1.6	3.6
11						0	4.8	11	9.8	13	1.7	3.2
12						1.2	2.7	11	9.1	13	1.1	2.8
13						4.2	4.4	11	8.6	12	4.7	2.2
14						4.0	2.7	11	8.5	12	2.4	4.4
15						4.2	.4	11	8.3	8.6	1.9	8.6
16						4.4	1.9	12	8.0	4.7	1.7	7.7
17						2.1	2.9	11	7.9	5.4	2.7	7.1
18						0	2.2	11	7.8	13	8.1	6.8
19						0	2.6	11	6.6	8.3	8.3	6.8
20						0	3.4	11	6.5	6.0	4.8	5.8
21						0	3.2	11	9.2	5.8	4.3	5.5
22						0	3.4	11	12	5.4	3.6	5.7
23						0	2.6	10	9.1	4.4	3.0	7.4
24						0	.1	10	6.0	4.1	3.8	7.9
25						0	0	9.4	10	7.4	3.7	7.1
26						0	2.6	8.8	5.5	8.6	3.3	7.4
27						0	7.4	8.4	0	7.1	4.3	7.2
28						0	10	9.6	0	7.4	5.0	6.8
29						0	9.4	2.2	0	7.2	3.6	7.0
30						0	9.1	.7	0	6.7	5.1	7.2
31						0	-	.1	-	7.1	7.5	-
Month												
October.....						0	0	0	0	0	0	0
November.....						0	0	0	0	0	0	0
December.....						0	0	0	0	0	0	0
Calendar year .....												
January.....						0	0	0	0	0	0	0
February.....						0	0	0	0	0	0	0
March.....						20.1	4.4	0	0	.65	40	
April.....						106.7	10	0	0	3.56	212	
May.....						298.8	13	.1	0	9.64	593	
June.....						214.7	12	0	0	7.16	426	
July.....						229.0	14	0	0	7.39	454	
August.....						144.1	9.7	1.1	0	4.65	286	
September.....						186.1	8.9	2.2	0	6.20	369	
Water year 1936-37.....						1,199.5	14	0	0	3.29	2,380	

## Albuquerque main canal at Algodones, N. Mex.

Location.- Water-stage recorder, lat. 35°23', long. 106°30', in W<sup>1</sup>/<sub>4</sub> sec. 10, T. 13 N., R. 4 E., a quarter of a mile below head and three-quarters of a mile west of Algodones. Zero of gage is 5,074.68 feet above mean sea level (general adjustment of 1923).

Records available.- April 1936 to February 1937 (discontinued).

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 568 second-feet July 7 (gage height, 6.36 feet); no flow at times.

Remarks.- Records good except those for periods of ice effect or fragmentary gage-height record, which are poor. Results of discharge measurements used as discharge for Apr. 4 and 6, and that for Apr. 9 computed on basis of staff-gage reading. Canal diverts water from left bank of Rio Grande a quarter of a mile above station for irrigation. No diversion above station.

Discharge, in second-feet, 1936-37

Discharge, in second-feet, 1936-37												
Day	1936									1937		
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	-	306	228	406	197	291	192	*48	140	0	23	
2	-	206	306	394	*82	349	214	92	130	0	0	
3	-	*54	349	383	187	360	164	228	146	*0	0	
4	360	282	358	271	166	327	*50	236	162	0	0	
5	-	316	349	*140	†212	232	212	222	98	0	0	
6	190	306	258	383	†210	*66	240	226	*42	0	0	
7	-	306	*80	394	155	282	249	†163	130	39	*0	
8	-	295	311	328	236	306	249	*136	140	45	0	
9	338	195	372	349	*62	338	245	†120	133	10	22	
10	-	*71	372	310	306	338	175	†97	126	*0	39	
11	-	289	360	0	295	338	*42	65	133	0	68	
12	-	306	372	*56	316	232	218	220	84	0	80	
13	-	406	303	293	349	*63	259	238	*41	†5	82	
14	-	418	*128	349	360	295	264	64	144	†10	*0	
15	-	406	372	327	291	306	212	*0	159	†5	13	
16	338	279	430	316	*43	316	264	0	83	†10	2	
17	327	*108	394	338	316	316	173	0	0	*0	0	
18	306	372	394	198	315	306	*62	6	36	0	0	
19	*190	383	246	*77	349	233	266	148	62	†15	0	
20	†330	394	287	360	277	*36	270	132	*0	†20	0	
21	†330	394	*383	360	†126	224	251	70	0	†2	*0	
22	†330	394	406	360	†116	293	234	*0	26	0	0	
23	338	240	285	316	*48	287	236	93	62	†5	0	
24	338	*154	406	316	245	282	181	162	0	*†10	-	
25	193	383	394	218	327	338	*66	180	0	†10	-	
26	*67	383	406	*86	327	248	270	164	0	†5	-	
27	303	372	383	349	327	*0	272	176	*14	0	-	
28	316	316	*192	341	316	0	253	99	79	0	-	
29	306	295	394	262	270	62	253	*49	0	0	-	
30	306	221	406	360	*68	218	249	164	32	0	-	
31	-	*60	-	372	245	-	163	-	0	*0	-	
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April 16-30, 1936.....					4,218	338	67	281	8,370			
May.....					8,910	418	54	287	17,670			
June.....					9,804	430	80	330	19,640			
July.....					9,012	406	0	291	17,880			
August.....					7,159	360	43	231	14,200			
September.....					7,282	360	0	243	14,440			
The period.....									92,200			
October 1936.....					6,448	272	42	208	12,790			
November.....					3,508	238	0	117	6,960			
December.....					2,202	162	0	71.0	4,370			
January 1937.....					191	45	0	6.2	379			
February 1-23.....					329	82	0	14.3	653			
The period.....									25,150			

\*Sunday.

†Stage-discharge relation affected by ice; discharge computed on basis of one discharge measurement, gage heights, and knowledge of regulation of canal.

‡Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

## Albuquerque main canal near Algodones, N. Mex.

Location.— Water-stage recorder, lat.  $35^{\circ}21'$ , long.  $106^{\circ}31'$ , in SE $\frac{1}{4}$  sec. 16, T. 13 N., R. 4 E., 300 feet below sluicing waste, 2 miles below head, and 2 $\frac{1}{4}$  miles southwest of Algodones.

Records available.— April to September 1937. April 1936 to February 1937 at site 2 miles upstream.

Extremes.— Maximum discharge during period, 479 second-feet June 26 (gage height, 5.57 feet); no flow at times.

Remarks.— Records good except those for periods of doubtful gage-height record, May 28–31, June 26, 27, Aug. 7, 8, 14, 15, which were computed on basis of partly estimated gage heights and knowledge of regulation, and are poor. Canal diverts water from left bank of Rio Grande 2 $\frac{1}{4}$  miles above station for irrigation. Discharge represents diversion from Rio Grande except for irrigation of about 5 acres between station and head.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							—	223	9	53	174	279
2							—	47	110	325	322	312
3							—	274	171	324	330	336
4							—	275	191	75	280	277
5							—	276	169	57	302	47
6							—	264	47	330	260	241
7							—	260	221	325	210	315
8							—	206	253	164	35	304
9							—	64	243	243	320	282
10							—	275	273	210	340	290
11							—	291	256	0	331	242
12							—	293	253	115	350	57
13							—	301	226	223	330	324
14							—	275	162	214	300	353
15							—	233	361	259	45	340
16								322	86	353	345	349
17								279	190	338	392	346
18								68	245	343	390	273
19								280	293	358	354	89
20								270	287	114	337	345
21								269	276	292	262	351
22								256	250	370	358	362
23								250	107	363	330	357
24								181	112	367	364	342
25								56	149	372	315	280
26								230	219	225	367	95
27								258	212	2	368	342
28								257	95	1	338	332
29								254	9	0	316	332
30								254	9	0	302	297
31								—	8	—	324	—
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						—	—	—	—	—		
February.....						—	—	—	—	—		
March.....						—	—	—	—	—		
April 16-30.....						3,484	322	56	232	6,910		
May.....						6,103	301	8	197	12,110		
June.....						6,521	372	0	217	12,930		
July.....						7,865	368	0	254	15,600		
August.....						8,724	392	35	281	17,300		
September.....						8,491	367	47	283	16,840		
The period.....										81,690		

Albuquerque main canal above Griegos lateral, near Alameda, N. Mex.

Location.- Water-stage recorder lat.  $35^{\circ}10'51''$ , long.  $106^{\circ}38'36''$ , in E $\frac{1}{2}$  sec. 17, T. 11 N., R. 3 E., 1,900 feet above Griegos lateral and beginning of wasteway to Rio Grande, 2,000 feet above outlet of wasteway to Rio Grande, and  $1\frac{1}{2}$  miles southwest of Alameda.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 212 second-feet Sept. 8; maximum gage height, 3.40 feet July 29; no flow June 1.

Remarks.- Records for May to June 15 good, June 16 to September fair except those for periods of doubtful gage-height record, which are poor. The difference between the discharge of Albuquerque main canal above Griegos lateral and that of Griegos lateral at head represents net waste return to Rio Grande from Albuquerque main canal.

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Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	5	66	155
2								-	3	136	125	125
3								-	29	146	126	152
4								-	50	*80	114	160
5								-	24	*10	109	12
6								-	1	132	91	122
7								96	39	126	87	163
8								79	61	90	*10	176
9								7	50	90	86	165
10								79	79	97	105	142
11								99	95	*20	105	149
12								98	108	*35	80	*15
13								65	108	90	112	127
14								68	47	112	100	142
15								87	100	107	*10	153
16												
17								*10	111	120	116	*150
18								51	118	106	153	*150
19								43	122	85	172	*150
20								55	132	107	151	*10
21								81	69	96	150	*140
22												
23								66	80	110	139	145
24								80	113	120	11	151
25								*15	117	124	141	153
26								47	138	117	148	163
27								77	130	84	138	166
28												
29								69	122	125	142	*25
30								58	*40	125	137	158
31								*70	*12	143	146	165
								*10	11	146	*15	161
								4	6	137	115	158
								1	-	130	145	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 7-31 .....								1,435	99	1	57.4	2,850
June.....								2,115	138	0	70.5	4,200
July.....								3,149	145	5	102	6,250
August.....								3,375	161	10	109	6,680
September.....								3,983	176	12	133	7,900
The period.....												27,890

\*Gage-height record doubtful; discharge computed on basis of partly estimated gage heights and records for Griegos lateral at head, near Alameda.



Albuquerque main canal wasteway near Alameda, N. Mex.

Location.- Water-stage recorder lat.  $35^{\circ}13'33''$ , long.  $106^{\circ}35'21''$ , in NE $\frac{1}{4}$  sec. 35, T. 12 N., R. 3 E., just below waste gate, about 500 feet above outlet to Rio Grande and  $\frac{3}{4}$  miles northeast of Alameda.

Records available.- August to September 1937.

Extremes.- Maximum discharge during period, 97 second-feet Sept. 9 (gage height, 2.17 feet); no flow at times.

Remarks.- Records fair. Discharge represents waste return from Albuquerque main canal.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1											-	1.8
2											-	1.4
3											10	1.8
4											7.0	2.0
5											2.6	*0
6											1.6	2.0
7											1.2	2.0
8											*0	2.0
9											.8	19
10											9.6	38
11											9.4	30
12											4.4	*0
13											5.4	23
14											2.4	26
15											*0	29
16											3.1	27
17											3.6	33
18											2.8	29
19											3.3	*.6
20											14	33
21											13	29
22											*0	30
23											15	28
24											18	27
25											17	26
26											19	*0
27											51	45
28											23	45
29											*0	51
30											1.9	59
31											1.9	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June.....												
July.....												
August 3-31.....				240.9	51	0	8.31					
September.....				639.6	59	0	21.3					
Water year .....												

\*Sunday.

Corrales main canal at end, near Alameda, N. Mex.

Location.— Water-stage recorder, lat.  $35^{\circ}09'41''$ , long.  $106^{\circ}40'25''$ , in SW $\frac{1}{4}$  sec. 19, T. 11 N., R. 3 E., at outlet to Rio Grande,  $3\frac{1}{2}$  miles southwest of Alameda.

Records available.— April to September 1937.

Extremes.— Maximum discharge during period, 36 second-feet June 13 (gage height, 2.98 feet); no flow at times.

Remarks.— Records good except those for periods of missing or fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	11	0	0	11	0
2							-	1.4	0	5.3	17	.8
3							-	8.3	2.1	24	24	1.9
4							-	11	14	12	20	1.0
5							-	13	18	0	14	.6
6							-	10	7.0	8.5	13	1.8
7							-	9.2	*9	12	9.2	4.7
8							-	5.7	11	16	1.3	1.4
9							-	1.4	11	13	4.5	.3
10							-	2.8	*12	19	6.7	5.8
11							-	5.8	*12	2.8	4.6	7.0
12							-	4.2	*14	.4	16	2.3
13							*15	2.9	20	15	20	8.4
14							15	4.9	5.9	12	20	12
15							15	3.5	14	13	6.2	12
16							17	1.6	21	19	3.8	13
17							19	.8	21	15	0	10
18							4.5	12	18	16	0	7.4
19							11	8.2	16	16	0	5.7
20							17	4.5	13	9.4	0	8.7
21							20	9.7	0	14	0	11
22							15	11	10	0	0	9.1
23							14	2.0	12	0	0	6.2
24							*15	1.4	*10	6.3	.5	12
25							*5	19	15	3.2	11	
26							*10	18	9.6	0	0	*13
27							*15	16	0	14	0	*15
28							16	13	0	15	0	17
29							14	.5	0	12	0	15
30							6.9	0	0	12	0	13
31							-	0	-	15	.8	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April 15-30.....							245.4	20	4.5	13.6	487	
May.....							212.6	19	0	6.86	422	
June.....							289.0	21	0	9.63	575	
July.....							353.4	24	0	11.7	721	
August.....							195.8	24	0	6.32	388	
September.....							227.1	17	0	7.57	450	
The period.....											5,040	

\*Gage height missing or fragmentary; discharge computed on basis of partial gage-height record, study of records for the preceding and the following day and knowledge of local conditions.

Griegos lateral at head, near Alameda, N. Mex.

Location.- Water-stage recorder, lat. 35°10'50", long. 106°38'49", in S½ sec. 17, T. 11 N., R. 3 E., 300 feet below point of diversion from Albuquerque main canal and about 2 miles southwest of Alameda.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 189 second-feet Aug. 11 (gage height, 3.96 feet); no flow at times.

Remarks.- Records for June 16 to September 30 good; others fair except those for periods of fragmentary gage-height record, which are poor. The difference between the discharge of Albuquerque main canal above Griegos lateral and that of Griegos lateral at head represents net waste return to Rio Grande from Albuquerque main canal.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	1	1	*40	100
2								-	3	48	*95	107
3								-	13	37	101	104
4								-	28	23	93	102
5								-	28	3	94	*20
6								-	6	68	83	92
7								84	56	75	98	97
8								90	84	32	*10	97
9								61	73	34	93	97
10								88	82	52	115	93
11								106	85	*25	116	89
12								122	100	*25	92	*20
13								90	82	62	116	72
14								76	57	68	103	85
15								97	102	77	12	104
16								54	104	99	111	88
17								74	120	97	128	84
18								77	122	80	127	88
19								91	121	101	121	*15
20								98	77	94	100	83
21								100	89	105	94	78
22								97	108	114	*15	83
23								*15	98	115	102	82
24								55	100	103	108	84
25								63	93	*70	90	74
26								*50	76	115	102	*25
27								*45	*30	119	85	*70
28								*55	*5	105	97	72
29								*30	2	*100	*20	67
30								*5	2	92	79	68
31								*2	-	*85	106	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 7-31.....								1,705	122	2	68.2	3,580
June.....								1,947	122	1	64.9	3,660
July.....								2,224	119	1	71.7	4,410
August.....								2,736	128	10	88.3	5,430
September.....								2,330	107	15	77.7	4,620
The period.....												21,700

\*Gage height missing or fragmentary; discharge computed on basis of partial gage-height record, records for Albuquerque main canal above Griegos lateral, and knowledge of regulation.

## Griegos acequia wasteway at Albuquerque, N. Mex.

Location.- Water-stage recorder and broad-crested weir, lat. 35°07'05", long. 106°39'00", in SW $\frac{1}{4}$  sec. 5, T. 10 N., R. 3 E., 5 feet above outlet to Alameda interior drain and three-quarters of a mile north of Albuquerque.

Records available.- May 1937 to January 1938 (discontinued).

Extremes.- Maximum discharge during period, 21 second-feet May 27 (gage height, 3.35 feet); no flow at times.

Remarks.- Records fair except those for periods of fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

## Discharge, in second-feet, 1937-38

1937										1938			
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.				
1	-	0	0	0.8	0.4	8.5	1.1	0.2	0				
2	-	0	5.3	5.8	1.3	10	1.0	.4	0				
3	-	2.2	6.9	6.0	3.0	1.2	1.3	.2	0				
4	-	2.0	5.3	1.7	7.5	6.7	.8	.7	0				
5	-	2.5	0	.1	.8	.3	1.2	0	0				
6	-	0	2.0	1.0	1.4	.1	1.0	0	-				
7	-	2.6	3.4	2.4	2.5	.1	.2	0	-				
8	-	3.1	2.3	0	2.5	.8	2.5	0	-				
9	-	3.5	.5	0	2.8	3.1	1.2	0	-				
10	-	6.5	3.1	.4	5.4	0	0	0	-				
11	-	1.3	1.1	1.9	3.8	2.1	1.9	0	-				
12	-	*.5	0	2.1	.2	.1	.8	0	-				
13	-	*.5	2.6	4.1	1.0	0	1.7	0	-				
14	-	*.5	4.6	.1	2.7	0	0	0	-				
15	-	0	2.4	0	8.7	0	0	0	-				
16	-	0	2.4	*.3	2.2	0	0	0	-				
17	0	.6	*1.2	*.5	5.8	0	0	0	-				
18	1.3	1.3	*.7	4.0	4.5	*.7	0	0	-				
19	3.6	2.0	1.0	4.9	.1	4.9	0	0	-				
20	3.8	2.8	.1	7.9	3.2	3.3	0	0	-				
21	3.3	.4	1.6	7.3	3.0	3.7	0	0	-				
22	1.0	1.4	.5	.7	1.3	3.1	0	0	-				
23	5.0	.9	2.6	3.6	1.8	6.0	0	0	-				
24	1.1	3.8	0	5.2	1.4	.2	0	0	-				
25	1.3	*2.3	0	3.8	1.8	4.5	0	0	-				
26	1.3	*9.0	.3	1.1	.2	6.1	0	0	-				
27	8.1	5.3	3.0	*.3	5.5	1.4	0	0	-				
28	5.2	0	7.4	*.2	11	0	0	0	-				
29	.4	0	3.2	0	11	0	0	0	-				
30	0	0	3.8	0	9.1	.3	0	0	-				
31	0	-	3.6	.6	-	0	-	0	-				
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
May 17-31, 1937.....					35.4	8.1	0	2.56	70				
June.....					55.0	9.0	0	1.83	109				
July.....					70.9	7.4	0	2.29	141				
August.....					66.8	7.9	0	2.15	132				
September.....					105.9	11	.1	3.53	210				
October.....					66.7	10	0	2.15	132				
November.....					14.7	2.5	0	.49	29				
December.....					1.5	.7	0	.05	3.0				
January 1-5, 1938.....					0	0	0	0	0				
The period.....									826				

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

## Bernalillo riverside drain near Bernalillo, N. Mex.

Location.- Staff gage, lat.  $35^{\circ}15'$ , long.  $106^{\circ}35'$ , in E $\frac{1}{2}$  sec. 23, T. 12 N., R. 3 E.,  $1\frac{1}{2}$  miles above outlet to Rio Grande and  $3\frac{1}{2}$  miles southwest of Bernalillo. Zero of gage is 5,017.52 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 122 second-feet May 2; minimum daily, 60 second-feet July 25.

Maximum daily discharge during water year 1936-37, 145 second-feet May 12-14; minimum daily, 70 second-feet Feb. 25, 26, Mar. 3, 4.

Remarks.- Records poor. Discharge computed from hydrograph drawn on basis of 73 discharge measurements, of which 32 were furnished by Middle Rio Grande Conservancy District and 28 by El Paso County Water Improvement District no. 1, records for Upper Corrales riverside drain near Alameda, Rio Grande at San Felipe, and Rio Grande near Isleta. Discharge represents return flow from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								*120	*91	82	85	*88
2								122	90	*85	85	86
3								120	88	84	*83	85
4								113	86	86	86	*82
5								*106	84	88	90	85
6								98				
7								95	80	*88	78	84
8								92	*81	86	74	84
9								87	80	88	78	84
10								86	78	*92	*81	84
11								96	78	94	84	*86
12								87	78	90	84	*96
13								90	80	86	82	92
14								92	82	80	78	86
15								96	*81	78	76	*84
16								97	76	78	78	82
17								98	72	82	*80	86
18								*98	68	84	*85	*81
19								96	72	80	84	94
20								95	76	*75	*86	96
21								93	80	70	88	95
22								*92	*82	66	94	*94
23								90	80	64	88	92
24								87	*78	62	84	88
25								88	76	60	82	*85
26								89	76	66	*81	86
27								92	78	*86	78	92
28								94	80	90	82	103
29								96	82	86	88	*86
30								94	84	81	94	82
31							*106	95	-	82	91	-

\*Discharge measurement.

Discharge, in second-feet, of Bernalillo riverside drain near Bernalillo, N.Mex., 1936-37--Contd.  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	84	86	75	75	72	80	*119	*108	100	99	110
2	83	90	86	*76	*75	72	*92	115	120	98	100	105
3	84	90	*87	78	75	70	*98	110	*116	96	99	105
4	84	*84	*76	80	75	70	105	115	115	94	*98	105
5	83	*90	74	83	*75	72	105	120	114	92	94	105
6	*82	92	75	86	75	74	98	125	112	*90	90	102
7	80	*85	76	90	78	76	92	130	*111	90	87	*96
8	81	92	78	93	80	78	92	130	109	89	84	*92
9	84	88	*76	95	75	80	93	132	107	88	86	88
10	*87	*79	*74	90	*72	82	95	*133	106	87	*92	88
11	83	77	74	90	71	82	98	140	105	86	94	84
12	*78	75	73	92	*71	82	102	145	103	88	95	82
13	*77	75	73	96	73	82	108	145	102	*91	98	82
14	76	76	74	*100	75	81	115	145	100	92	105	83
15	77	78	75	104	78	*80	*123	*142	98	90	110	84
16	77	*81	*76	*107	*81	79	*144	142	96	88	110	85
17	78	83	77	110	80	78	*140	143	95	82	110	85
18	79	84	78	105	*76	78	135	*143	93	80	110	84
19	*81	83	79	90	75	77	135	142	92	*81	105	82
20	*85	*83	80	*85	*75	76	135	141	99	82	*98	*80
21	90	82	*80	85	74	76	130	140	*95	84	97	79
22	88	80	*80	*85	74	75	130	135	*81	85	96	90
23	87	*79	79	82	*73	75	*127	130	90	90	95	86
24	85	*84	78	80	72	74	*119	120	90	90	*94	*91
25	86	86	78	81	70	74	110	130	92	90	94	95
26	88	87	77	*82	70	73	110	120	105	90	95	95
27	*86	86	76	80	71	73	110	110	120	92	96	94
28	85	80	75	77	72	72	115	105	110	95	97	85
29	84	81	76	*75	-	72	120	110	105	*95	98	97
30	83	84	74	74	-	74	120	110	*102	96	100	100
31	80	-	74	74	-	76	-	110	-	98	105	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 1936.....						2,992	122	86	96.2	5,910		
June.....						2,398	91	69	79.9	4,760		
July.....						2,505	94	60	80.8	4,970		
August.....						2,596	94	74	83.7	5,150		
September.....						2,634	103	82	87.8	5,220		
The period.....										26,010		
October 1936.....						2,563	90	76	82.7	5,080		
November.....						2,508	95	75	83.6	4,970		
December.....						2,595	87	73	77.3	4,760		
January 1937.....						2,700	110	74	87.1	5,360		
February.....						2,088	81	70	74.6	4,140		
March.....						2,355	82	70	76.0	4,670		
April.....						3,376	144	80	113	6,700		
May.....						3,977	145	105	128	7,890		
June.....						3,101	120	90	103	6,180		
July.....						2,790	100	80	90.0	5,530		
August.....						3,031	110	84	97.8	6,010		
September.....						2,738	110	79	81.3	5,430		
Water year 1936-37.....						33,622	145	70	92.1	66,680		

\*Discharge measurement.

## Ranchitos interior drain near Bernalillo, N. Mex.

Location.- Measuring section, lat. 35°20', long. 106°33', in SE $\frac{1}{4}$  sec. 30, T. 13 N., R. 4 E., at outlet to Bernalillo riverside drain and 1 $\frac{1}{2}$  miles north of Bernalillo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 6.5 second-feet July 15; minimum daily, 2.0 second-feet July 25-27.

Maximum daily discharge during water year 1936-7, 5.0 second-feet Aug. 24; minimum daily, 0.7 second-foot Dec. 28 to Jan. 5.

Remarks.- Records poor. Daily not sufficiently accurate for publication. Discharge computed on basis of 51 discharge measurements, of which 8 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District no. 1, and records for nearby drains. Discharge represents return flow and waste from upper portion of Albuquerque division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 15-31, 1936....	6.5	2.0	3.08	104
August.....	4.3	2.2	3.30	203
September.....	4.3	2.6	3.40	202
The period.....				509
October 1936.....	2.5	1.5	1.95	120
November.....	3.5	1.0	2.39	142
December.....	2.0	.7	1.39	85
January 1937.....	1.9	.7	1.36	84
February.....	1.5	1.0	1.32	73
March.....	-	-	1.71	105
April.....	4.9	-	3.06	182
May.....	-	-	3.00	185
June.....	3.0	1.5	2.17	129
July.....	2.9	1.8	2.26	139
August.....	5.0	2.3	3.31	203
September.....	2.8	1.8	2.09	125
Water year 1936-37.	5.0	.7	2.17	1,570

## Bernalillo interior drain near Bernalillo, N. Mex.

Location.- Measuring section, lat. 35°16', long. 106°36', in SE $\frac{1}{4}$  sec. 14, T. 12 N., R. 3 E., at highway bridge 80 feet above confluence with Bernalillo riverside drain and 3 miles southwest of Bernalillo.

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge for period ending Sept. 30, 1936, 2.7 second-feet July 24-28; minimum daily, 1.0 second-foot July 15.

Maximum daily discharge during water year 1936-37, not determined; no flow during part of April.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 45 discharge measurements, of which 2 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District no. 1. Discharge represents return flow from irrigation to Bernalillo riverside drain.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 15-31, 1936....	2.7	1.0	2.24	76
August.....	2.6	1.6	2.06	127
September.....	2.5	1.6	2.04	121
The period.....				324
October 1936.....	2.6	1.5	1.94	119
November.....	2.5	1.4	1.89	113
December.....	2.6	.7	1.86	114
January 1937.....	1.6	.6	.97	60
February.....	1.8	1.0	1.30	72
March.....	-	-	1.3	79
April.....	-	0	.7	44
May.....	-	-	1.8	111
June.....	2.0	1.5	1.71	102
July.....	1.9	1.5	1.65	101
August.....	1.5	1.4	1.46	90
September.....	1.4	1.3	1.31	78
Water year 1936-37	-	0	1.80	1,080

## RIO GRANDE BASIN

Upper Corrales riverside drain near Alameda, N. Mex.

Location.- Staff gage, lat.  $35^{\circ}12'00''$ , long.  $106^{\circ}38'37''$ , in NE $\frac{1}{4}$  sec. 8, T. 11 N., R. 3 E., 0.2 mile above outlet to Rio Grande and  $1\frac{1}{2}$  miles northwest of Alameda. Prior to Mar. 4, 1937, water-stage recorder at same site and datum. Zero of gage is 4,992.08 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 108 second-feet July 12; maximum gage height, 3.14 feet Sept. 27; minimum daily discharge, 23 second-feet June 18.

Maximum daily discharge during water year 1936-37, 100 second-feet (estimated) June 3; maximum gage height observed, 2.76 feet Sept. 9; minimum daily discharge, 26 second-feet Jan. 24.

Remarks.- Records for May 1936 to February 1937, fair; those for June to September 1937, poor. Discharge for Mar. 4 to Sept. 30, 1937, computed on basis of 21 discharge measurements, and records for Bernalillo riverside drain near Bernalillo and Rio Grande at San Felipe. Results of 30 discharge measurements were furnished by Middle Rio Grande Conservancy District and of 16 by El Paso County Water Improvement District no. 1. Discharge represents return flow from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	64	40	52	41
2								-	66	41	58	42
3								-	64	41	48	42
4								-	60	45	48	48
5								*56	58	50	54	48
6								-	56	43	40	55
7								-	62	42	29	48
8								-	54	38	29	55
9								-	51	47	34	54
10								-	+48	44	42	54
11								-	+46	56	44	58
12								-	54	57	50	58
13								-	51	50	52	61
14								-	56	46	46	56
15								-	43	52	54	58
16								-	34	+52	62	56
17								-	28	59	50	53
18								-	25	49	47	52
19								50	29	58	48	58
20								54	49	40	52	65
21								52	46	37	69	57
22								52	44	36	60	62
23								54	42	36	52	62
24								61	46	32	40	54
25								56	52	29	36	53
26								63	50	47	33	55
27								+66	48	44	40	66
28								66	52	44	42	54
29								69	49	54	44	40
30								*41	66	44	48	36
31								-	66	-	52	48

\*Discharge measurement.

+Gage-height record missing or fragmentary; discharge computed on basis of available gage heights, recorded range in stage, weather records, and records for Rio Grande at San Felipe.



Discharge, in second-feet, of Upper Corrales riverside drain near Alameda, N.Mex., 1936-37--Contd.

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	+58	41	34	32	34	40	70	92	52	58	53
2	42	+60	40	*32	32	32	50	72	95	50	54	51
3	45	+60	36	+32	36	33	*64	*73	100	49	50	50
4	+44	+56	34	+32	36	35	70	75	97	49	*49	50
5	+44	+48	36	+32	32	38	74	77	96	48	45	48
6	44	+54	37	+32	36	40	70	79	95	*48	40	48
7	40	54	32	+32	36	45	65	82	*94	47	35	*48
8	42	53	32	+32	46	45	60	85	91	47	30	45
9	42	51	32	+32	46	46	58	87	88	46	32	*40
10	40	52	33	+32	30	47	58	90	82	46	34	38
11	+38	48	34	32	28	47	60	93	77	45	*34	37
12	+34	38	33	34	27	46	62	95	72	48	38	36
13	35	36	33	32	29	46	65	96	67	52	42	35
14	36	38	32	34	34	45	87	96	62	51	45	35
15	43	40	32	36	38	*45	70	95	58	*49	50	35
16	46	37	34	34	56	44	*72	93	54	40	52	37
17	54	38	35	32	54	44	75	90	50	35	51	40
18	55	37	34	32	40	43	78	*87	*48	33	50	42
19	55	37	33	35	37	42	80	87	46	33	50	41
20	64	36	34	34	34	41	80	87	48	*35	49	*41
21	58	34	34	32	34	40	78	97	*51	45	*48	40
22	54	37	34	30	29	39	75	96	*42	55	48	39
23	48	34	35	29	29	38	74	84	40	57	47	40
24	51	34	36	26	28	38	72	86	40	60	*47	41
25	54	38	35	27	27	37	70	90	45	60	45	42
26	52	39	32	28	27	37	68	95	52	60	45	44
27	51	39	36	28	33	36	66	94	60	62	45	46
28	+50	35	34	28	34	36	66	92	58	66	46	48
29	+49	36	36	32	-	36	66	94	56	*68	48	50
30	+50	37	34	32	-	36	68	96	54	66	50	54
31	+45	-	35	31	-	37	-	95	-	62	55	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April.....					775	69	50	59.6	1,540			
May 19-31, 1936.....					1,469	66	23	49.0	2,910			
June.....					1,407	59	29	45.4	2,790			
July.....					1,455	69	29	46.9	2,890			
August.....					1,597	68	36	53.2	3,170			
September.....												
The period.....									13,300			
October 1936.....					1,439	64	34	46.4	2,850			
November.....					1,294	60	34	43.1	2,570			
December.....					1,068	41	32	34.5	2,120			
Calendar year.....												
January 1937.....					980	36	26	31.6	1,940			
February.....					980	56	27	35.0	1,940			
March.....					1,246	47	32	40.2	2,470			
April.....					2,022	80	40	67.4	4,010			
May.....					2,703	96	70	87.4	5,370			
June.....					2,010	100	40	67.0	3,990			
July.....					1,564	68	33	50.5	3,100			
August.....					1,412	58	30	45.5	2,800			
September.....					1,294	54	35	43.1	2,570			
Water year 1936-37.....					18,017	100	26	49.4	35,730			

\*Discharge measurement.

†Gage-height record missing or fragmentary; discharge computed on basis of available gage heights, recorded range in stage, weather records, and records for Rio Grande at San Felipe.

## Corrales interior drain near Alameda, N. Mex.

Location.— Measuring section, lat.  $35^{\circ}13'05''$ , long.  $106^{\circ}37'00''$ , in SW $\frac{1}{4}$  sec. 34, T. 12 N., R. 3 E., 0.5 mile above outlet into Upper Corrales riverside drain and 2 miles north of Alameda.

Records available.— July 1936 to September 1937.

Extremes.— Maximum daily discharge during period ending Sept. 30, 1936, 2.5 second-foot July 23-26; minimum daily, 1.1 second-foot July 15.

Maximum daily discharge during water year 1936-37 not determined; minimum daily, 1.1 second-foot Feb. 20, 21.

Remarks.— Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 49 discharge measurements, of which 8 were furnished by Middle Rio Grande Conservancy District and 13 by El Paso County Water Improvement District no. 1, and records for Bernalillo interior drain near Bernalillo and Ranchitos interior drain near Bernalillo. Discharge represents return flow from irrigation on upper end of Albuquerque Division of Middle Rio Grande Conservancy District.

Discharge, in second-feet, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 15-31, 1936.....	2.5	1.1	2.12	71
August.....	2.1	1.6	1.86	114
September.....	2.1	1.5	1.82	108
October 1936.....	2.1	1.2	1.63	100
November.....	3.3	1.4	2.37	141
December.....	2.8	1.3	2.06	127
January 1937.....	1.8	1.2	1.46	90
February.....	1.6	1.1	1.36	75
March.....	-	-	1.40	86
April.....	-	-	2.49	148
May.....	-	-	3.0	184
June.....	3.6	2.1	2.84	169
July.....	2.3	1.6	1.94	119
August.....	2.8	2.2	2.56	187
September.....	2.5	1.5	2.05	121
Water year 1936-37.....	-	1.1	2.10	1,520

## San Mateo interior drain near Alameda, N. Mex.

Location.— Measuring section, lat.  $35^{\circ}12'10''$ , long.  $106^{\circ}38'20''$ , in SE $\frac{1}{4}$  sec. 5, T. 11 N., R. 3 E., at highway culvert, 100 feet above confluence with Upper Corrales riverside drain and  $1\frac{1}{2}$  miles northwest of Alameda.

Records available.— August 1936 to September 1937.

Extremes.— Maximum daily discharge during period not determined; minimum daily, 0.1 second-foot on many days.

Remarks.— Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 29 discharge measurements, of which 4 were furnished by Middle Rio Grande Conservancy District and 2 by El Paso County Water Improvement District no. 1, and records for Bernalillo interior drain near Bernalillo and Corrales interior drain near Alameda. Discharge represents return flow from irrigation on Albuquerque Division of Middle Rio Grande Conservancy District.

Discharge, in second-feet, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August 12-31, 1936.....	-	-	0.26	11
September.....	-	-	.52	31
October 1936.....	-	-	.8	49
November.....	-	-	.3	18
December.....	-	-	.3	18
January 1937.....	-	-	.1	6.1
February.....	-	-	.1	6.6
March.....	-	-	.1	6.1
April.....	-	-	.2	12
May.....	-	-	.4	25
June.....	-	-	.4	24
July.....	-	-	.15	9.1
August.....	-	-	.1	6.1
September.....	-	-	.15	8.9
Water year 1936-37.....	-	-	.26	188

Lower Corrales riverside drain near Alameda, N. Mex.

Location.- Staff gage, lat. 35°10'10", long. 106°39'40", in NE¼ sec. 19, T. 11 N., R. 3 E., three-quarters of a mile above outlet to Rio Grande and 3 miles southwest of Alameda. Zero of gage is 4,978.34 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 25 second-feet (estimated) July 12; minimum daily, 10 second-feet July 25.

Maximum daily discharge during water year 1936-37, 34 second-feet (estimated); May 20 and 21; minimum daily, 14 second-feet Oct. 13.

Remarks.- Records poor. Staff gage read two to four times weekly. Discharge computed on basis of 103 discharge measurements, of which 39 were furnished by Middle Rio Grande Conservancy District and 17 by El Paso County Water Improvement District no. 1, and records for Arisco riverside drain near Isleta and Rio Grande at San Felipe. Discharge represents return flow from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37  
1936

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

\*Discharge measurement.

Discharge, in second-feet, of Lower Corrales riverside drain near Alameda, N.Mex., 1936-37--Contd.

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	18	*17	17	*16	15	20	25	29	*22	19	21
2	16	18	18	*16	16	15	22	25	28	21	18	20
3	15	*18	*17	16	16	16	*25	*25	*28	20	18	20
4	15	18	16	16	16	16	27	26	27	19	*17	20
5	16	*19	16	15	*16	16	26	27	27	18	17	19
6	*16	19	16	15	16	17	25	27	26	*18	17	19
7	16	*17	15	16	16	17	24	27	*25	17	16	*19
8	17	19	*15	17	16	18	24	28	24	17	16	20
9	18	20	16	18	*16	19	24	28	24	17	17	*21
10	*19	18	*17	18	16	20	25	28	24	17	17	21
11	18	*17	18	18	16	21	25	28	25	18	*17	21
12	*16	16	18	18	*16	22	26	29	25	18	17	21
13	*14	16	17	17	16	22	26	29	25	17	18	21
14	14	16	*17	17	16	21	27	30	24	17	18	20
15	15	16	17	*17	16	*21	28	30	24	*17	19	20
16	17	16	16	*15	*17	21	*29	31	23	17	20	20
17	18	*17	15	15	17	21	30	31	22	17	20	19
18	18	17	15	15	18	22	30	*32	*22	17	21	19
19	17	17	15	*16	*18	22	30	33	22	17	21	18
20	*17	*18	16	*17	*16	22	28	34	22	*16	21	*18
21	17	18	*17	17	16	22	28	34	*22	15	*21	18
22	*19	17	*17	*16	16	22	25	33	22	16	21	18
23	20	*16	17	15	15	22	24	32	23	17	20	18
24	20	*17	17	15	15	22	23	31	24	18	*20	19
25	20	16	17	15	*15	21	23	30	25	18	19	*19
26	18	16	17	*16	15	21	23	29	26	19	19	19
27	*17	16	18	16	15	21	24	28	27	19	19	19
28	16	16	18	*16	15	20	24	28	26	19	19	20
29	16	16	18	16	-	20	24	29	25	*19	20	20
30	16	16	*18	17	-	20	25	30	23	20	20	21
31	17	-	17	17	-	20	-	30	-	20	21	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 1936.....						513	19	15	16.5	1,020		
June.....						522	24	13	17.4	1,040		
July.....						483	25	10	15.6	958		
August.....						497	19	13	16.0	986		
September.....						529	23	15	17.6	1,050		
The period.....										5,050		
October 1936.....						523	20	14	16.9	1,040		
November.....						514	20	16	17.1	1,020		
December.....						518	18	15	16.7	1,030		
January 1937.....						505	18	15	16.3	1,000		
February.....						448	18	15	16.0	889		
March.....						615	22	15	19.8	1,220		
April.....						762	30	20	25.4	1,510		
May.....						907	34	25	29.3	1,800		
June.....						739	29	22	24.6	1,470		
July.....						557	22	15	18.0	1,100		
August.....						583	21	16	18.8	1,160		
September.....						588	21	18	19.6	1,170		
Water year 1936-37.....						7,259	34	14	19.9	14,410		

\*Discharge measurement.

## Albuquerque riverside drain near Albuquerque, N. Mex.

Location.- Staff gage, lat. 35°06'00", long. 106°41'10", in NW¼ sec. 13, T. 10 N., R. 2 E., half a mile above confluence with Rio Grande and about 1½ miles west of Albuquerque. Zero of gage is 4,951.86 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to Sept. 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 86 second-feet July 5; minimum daily, 48 second-feet July 25.

Maximum daily discharge during water year 1936-37, 180 second-feet May 20; minimum daily, 56 second-feet Nov. 29.

Remarks.- Records for June 1936 to February 1937, fair; those for March to September 1937, poor. Discharge computed on basis of 95 discharge measurements, of which 29 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District no. 1, 28 readings of staff gage, and records for Upper Corrales riverside drain near Alameda, and Rio Grande at San Felipe and near Isleta. Barr feeder diverts about 20 second-feet from left bank of drain about 400 feet below station; remainder of flow is return from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	74	†66	*62
2									-	74	73	†61
3									-	*74	*72	61
4									-	78	*70	†61
5									-	86	†73	61
6									-	84	†72	61
7									-	*83	64	60
8									-	*80	†60	60
9									-	*76	60	*60
10									-	74	†60	63
11									-	72	*61	†62
12									-	76	†61	†62
13									-	†70	63	*65
14									-	65	†63	*66
15									-	*61	64	*65
16									-	60	65	†64
17									-	60	*64	62
18									-	†59	*63	60
19									*76	55	†64	†66
20									74	*53	*65	68
21									72	*54	†72	†68
22									*71	52	82	*69
23									*75	†50	72	†70
24									77	49	62	68
25									79	48	*59	62
26									78	49	†57	*62
27									*76	50	†56	82
28									76	*53	†59	*77
29									75	56	62	70
30									74	†59	65	†64
31									-	†61	*64	-

\*Discharge measurement.

†Discharge computed on basis of staff-gage reading.

Discharge, in second-feet, of Albuquerque riverside drain near Albuquerque, N.Mex., 1936-37--Contd.  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	67	68	58	*58		80	*146	*128	100	93	100
2	61	66	70	*57	58		*90	145	130	100	92	95
3	†60	63	66	58	58		100	160	135	100	90	95
4	59	*65	68	*59	59		105	150	140	100	*89	95
5	57	67	*67	60	59		100	150	145	100	88	95
6	*56	*69	61	60	*59		95	150	145	*102	85	90
7	57	*68	60	61	60		90	150	*143	100	80	90
8	†56	68	*60	61	62	75	95	155	140	95	80	88
9	57	67	59	62	66		100	160	135	95	80	*86
10	*58	62	59	63	*63		105	160	135	95	82	83
11	60	*62	*60	64	62		110	160	130	90	84	80
12	58	66	61	64	62		115	160	125	95	*85	78
13	*57	66	64	*65	*64		120	160	125	90	88	76
14	*66	68	*67	64	65		130	165	120	90	90	75
15	70	68	68	63	66		140	170	120	85	95	75
16	71	66	70	62	68	*75	150	170	115	80	95	75
17	69	*64	70	61	*71		*160	170	115	*81	100	77
18	67	64	69	*60	70		155	170	110	80	100	80
19	66	64	67	*65	*70		155	175	105	80	100	78
20	*65	64	66	64	*75		150	180	110	*83	100	77
21	67	63	*64	*62	70		145	*172	115	85	100	*79
22	*63	63	66	62	*64		140	170	*111	90	98	80
23	62	*63	65	61	65		140	165	105	90	*95	*82
24	70	*62	64	60	*67	75	135	160	*104	90	92	84
25	70	61	63	*60	66		130	155	110	90	90	85
26	67	59	*61	61	65		*126	150	115	90	*91	85
27	*64	58	60	60	65		125	145	120	95	93	85
28	63	57	59	*60	65		130	140	110	95	95	86
29	70	56	58	60	-		135	135	105	85	95	88
30	69	*61	59	59	-		140	135	*101	100	100	90
31	68	-	59	58	-		-	130	-	*94	105	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 19-30, 1936.....						903	79	71	75.2	1,790		
July.....						1,995	86	48	64.4	3,960		
August.....						2,013	82	56	64.9	3,990		
September.....						1,942	82	60	64.7	3,850		
The period.....										13,590		
October 1936.....						1,967	71	56	63.5	3,800		
November.....						1,917	69	56	63.9	3,800		
December.....						1,978	70	58	63.8	3,920		
January 1937.....						1,894	65	57	61.1	3,780		
February.....						1,802	75	58	64.4	3,570		
March.....						2,325	-	-	75.0	4,610		
April.....						3,691	160	80	123	7,320		
May.....						4,853	180	130	157	9,630		
June.....						3,647	145	101	122	7,230		
July.....						2,855	102	80	92.1	5,660		
August.....						2,850	105	80	91.9	5,550		
September.....						2,532	100	75	84.4	5,020		
Water year 1936-37.....						32,311	180	56	88.5	64,070		

\*Discharge measurement.

†Discharge computed on basis of staff-gage reading.

## Arenal main canal at Albuquerque, N. Mex.

Location.- Water-stage recorder lat. 35°05'30", long. 106°41'32", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 10 N., R. 2 E., 400 feet below Atrisco lateral diversion, about 1,000 feet below heading from Rio Grande, and three-quarters of a mile west of Albuquerque. Zero of gage is 4,947.95 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 218 second-feet July 9 (gage height, 5.82 feet); no flow at times.

Maximum discharge during water year 1936-37, 224 second-feet Aug. 12; maximum gage height, 6.05 feet June 17; no flow at times.

Remarks.- Records fair except those for April to July 1936 and those for periods of fragmentary gage-height record or periods when discharge was computed on basis of twice-daily readings of staff gage, all of which are poor. Canal diverts water from Rio Grande for irrigation. Flow controlled at head gates. Atrisco lateral and a pump ditch, which irrigate about 100 acres, divert from canal about 400 feet above station.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	122	118	120	77	88
2							-	107	112	135	13	153
3							-	45	110	135	89	132
4							-	134	104	82	55	139
5							-	102	108	47	79	95
6							-	105	129	132	112	13
7							-	*120	46	100	116	94
8							-	133	85	117	97	110
9							-	100	70	103	27	75
10							96	23	84	109	135	124
11							} *50	117	110	85	127	127
12								117	99	0	129	80
13								70	102	45	133	30
14							} 18	75	61	109	138	83
15									106	83	139	65
16								*90	} *110	96	42	66
17								168		104	49	130
18								142		122	68	138
19								66	141	124	11	118
20								75	135	101	89	88
21								76	124	58	82	64
22								*120	107	118	118	38
23								*120	83	132	115	19
24								165	43	127	122	82
25								*135	88	123	73	87
26								107	98	120	29	77
27									83	99	160	119
28									95	26	133	141
29							} *50	109	117	137	123	0
30								0	86	114	9	0
31							-	-	38	-	138	53

\*Gage height missing; discharge estimated.

Discharge, in second-feet, of Arenal main canal at Albuquerque, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	0	46			0	17	*104	0	0	*60	112
2	58	23	44			0	42	*53	0	0		136
3	0	27	63			0	57	122	22	0	112	123
4	14	47	43			0	0	120	*29	0	132	*100
5	84	10	0			0	61	122	*3	0	132	*80
6	69	17	0			0	102	109	0	0	122	*60
7	22	27	0			0	118	104	*36	0	104	*80
8	73	29	0			0	124	*61	*31	0	105	*90
9	49	34	0			0	133	*73	103	0	108	*90
10	0	40	0			0	117	117	77	66	111	*80
11	10	24	0			+27	61	130	62	77	144	*80
12	71	0	0			+37	116	132	105	106	129	*80
13	71	0	0			+16	*89	126	97	116	130	*80
14	21	0	0			0	*22	135	116	103	140	*70
15	44	0	0			+24	112	136	109	101	110	*90
16	89	0	0			+34	119	116	109	103	122	*70
17	90	0	0			+66	*92	118	120	111	137	56
18	18	0	0			+39	*23	119	114	123	141	81
19	104	0	0			0	112	139	109	128	143	58
20	85	0	0			+46	82	127	101	144	125	57
21	24	0	0			+42	72	112	126	127	121	63
22	108	0	0			+49	106	98	120	96	105	65
23	65	0	0			+16	100	0	89	122	99	72
24	0	0	0			+24	*78	0	98	125	110	75
25	22	0	0			+19	*20	36	71	*86	124	*72
26	74	0	0			17	114	102	38	*88	113	*17
27	42	0	0			17	117	100	0	120	119	*8
28	21	0	0			0	131	33	0	126	122	22
29	87	0	0			10	130	0	0	118	96	49
30	42	40	0			0	99	0	0	106	129	37
31	0	-	0			0	-	0	-	*60	-140	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 10-30, 1936.....						1,728	-	0	82.3	3,430		
May.....						3,038	-	-	98.0	6,030		
June.....						3,025	132	26	101	6,000		
July.....						2,879	160	0	92.9	5,710		
August.....						2,816	141	9	90.8	5,590		
September.....						1,991	153	0	66.4	3,950		
The period.....										30,710		
October 1936.....						1,503	108	0	48.5	2,980		
November.....						318	47	0	10.6	631		
December.....						196	63	0	6.3	389		
January 1937.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						483	66	0	15.6	958		
April.....						2,566	133	0	85.5	5,090		
May.....						2,764	139	0	89.2	5,480		
June.....						1,885	126	0	62.8	3,740		
July.....						2,352	144	0	75.9	4,670		
August.....						3,645	144	-	118	7,230		
September.....						2,133	136	8	71.1	4,230		
Water year 1936-37.....						17,845	144	0	48.9	35,400		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and records for Atrisco lateral at head, at Albuquerque.

+Discharge computed on basis of twice-daily staff-gage readings by employee of Middle Rio Grande Conservancy District.



Arenal main canal at end, near Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}57'$ , long.  $106^{\circ}42'$ , in  $S\frac{1}{2}$  sec. 2, T. 8 N., R. 2 E., at outlet to Isleta interior drain, 3 miles north of Isleta.

Records available.- May 1937 to January 1938 (discontinued).

Extremes.- Maximum discharge during period, about 14 second-feet Oct. 18 (gage height, 1.80 feet); no flow at times.

Remarks.- Records fair. Discharge represents waste return at end of Arenal main canal.

Discharge, in second-feet, 1937-38

1937													1938			
Day					Sept.	Oct.	Nov.	Dec.	Jan.							
1					0	2.0	2.0	0	0							
2					0	1.9	.9	.1	0							
3					0	.5	1.1	1.3	0							
4					0	1.9	3.2	2.8	0							
5					0	1.9	5.0	2.0	0							
6					0	1.3	2.1	1.0	-							
7					0	1.3	1.6	.8	-							
8					0	1.4	0	.2	-							
9					0	*2.1	0	0	-							
10					0	2.4	0	0	-							
11					0	2.4	0	0	-							
12					0	3.5	0	0	-							
13					0	2.5	0	0	-							
14					0	1.5	0	0	-							
15					2.7	1.3	0	0	-							
16					2.0	0	0	0	-							
17					.8	0	0	0	-							
18					.2	2.3	0	0	-							
19					0	.7	0	0	-							
20					0	.8	0	0	-							
21					0	4.2	0	0	-							
22					0	6.2	0	0	-							
23					0	2.4	0	0	-							
24					0	.9	0	0	-							
25					0	.4	0	0	-							
26					0	.8	0	0	-							
27					0	.4	0	0	-							
28					0	.3	0	0	-							
29					0	*1.3	0	0	-							
30					0	1.2	0	0	-							
31					-	.9	-	0	-							
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet							
May 20-31, 1937.....					0	0	0	0	0							
June.....					0	0	0	0	0							
July.....					0	0	0	0	0							
August.....					0	0	0	0	0							
September.....					5.7	2.7	0	.19	11							
October.....					50.7	6.2	0	1.64	101							
November.....					15.9	5.0	0	.53	32							
December.....					8.2	2.8	0	.26	16							
January 1-5, 1938.....					0	0	0	0	0							
The period.....									160							

\*Discharge measurement.

## Atrisco lateral at head, at Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°05'35", long. 106°41'29", in NW 1/4 SW 1/4 sec. 13, T. 10 N., R. 2 E., about 225 feet below heading from Arenal main canal, three-quarters of a mile above Old Town Bridge, and three-quarters of a mile west of Albuquerque. Zero of gage is 4,950.06 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937. April to July 1936, Atrisco acequia at Albuquerque and Atrisco lateral at Albuquerque, both sites three-quarters of a mile downstream; records of combined flow equivalent to records at present site.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 141 second-feet Aug. 3 (gage height, 4.21 feet); no flow at times.

Maximum discharge during water year 1936-37, 174 second-feet Sept. 6, (gage height, 4.90 feet); no flow at times.

Remarks.- Records fair except those for periods of missing or doubtful gage heights, which are poor. Lateral diverts water from Arenal main canal for irrigation. No diversion from lateral above station.

## Discharge, in second-feet, 1936-37

1936											
July 25	49	Aug. 6	93	Aug. 18	100	Aug. 30	*14	Sept. 11	84	Sept. 23	80
26	*28	7	90	19	98	31	90	12	54	24	70
27	106	8	78	20	77	Sept. 1	87	13	*26	25	49
28	97	9	29	21	75	2	98	14	80	26	3
29	90	10	106	22	64	3	98	15	87	27	*1
30	70	11	103	23	*23	4	100	16	76	28	0
31	80	12	106	24	98	5	97	17	84	29	0
Aug. 1	42	13	106	25	100	6	*15	18	80	30	0
2	*16	14	100	26	75	7	82	19	45		
3	68	15	100	27	98	8	93	20	*11		
4	48	16	*68	28	112	9	93	21	63		
5	74	17	93	29	89	10	90	22	77		

## 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	9	100		0	0	87	80	0	66	74	63
2	56	26	109		0	0	80	72	0	70	82	77
3	1	50	106		0	0	*53	75	29	60	82	82
4	16	90	62		0	21	82	52	26	70	80	90
5	75	98	0		0	0	*54	77	21	70	77	64
6	61	98	0		0		72	75	0	66	74	64
7	19	87	0		0		77	77	46	59	73	80
8	69	84	0		0		90	74	54	63	73	74
9	53	76	0		0	+50	100	72	51	77	80	72
10	1	93	0		0		96	76	58	76	80	67
11	11	84	0		0		82	77	62	48	82	72
12	66	0	0		0		96	72	70	55	87	70
13	64	0	0		0		*83	68	55	60	84	82
14	21	0	0		0	+0	*18	72	70	62	90	82
15	80	0	0		0		93	74	73	69	82	80
16	90	0	0		0	+70	98	66	69	68	84	84
17	*54	0	0		0		93	71	72	59	82	70
18	*19	0	0		0		82	72	77	72	84	77
19	77	0	0		0	+0	87	70	75	70	84	77
20	82	0	0		0		90	66	77	74	77	80
21	87	0	0		0		87	74	80	74	80	77
22	98	0	0	43		+70	90	74	80	76	77	82
23	87	0	0	72			90	72	87	87	77	84
24	42	0	0	78			87	*45	84	90	80	82
25	*50	0	0	37			74	*21	80	82	84	55
26	84	0	0	1	96		77	0	*58	82	80	48
27	*53	0	0	1	31	90	29	*20	80	77	47	
28	*22	0	0	0	0	93	*18	0	93	84	66	
29	90	0	0	-	16	84	0	58	84	87	76	
30	75	*2	0	-	58	82	0	43	84	80	48	
31	15	-	0	-	80	-	0	-	84	72	-	

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 25-31, 1936.....	510	106	28	72.9	1,010
August.....	2,431	112	14	78.4	4,820
September.....	1,803	100	0	60.1	3,580
October 1936.....	1,662	98	1	53.6	3,300
November.....	967	98	0	28.9	1,720
December.....	377	109	0	12.2	748
January 1937.....	0	0	0	0	0
February.....	231	76	0	8.2	459
March.....	1,452	-	0	46.8	2,880
April.....	2,385	100	0	79.5	4,750
May.....	1,801	82	0	58.1	3,570
June.....	1,587	87	0	52.9	3,150
July.....	2,230	93	48	71.9	4,420
August.....	2,489	90	72	80.3	4,940
September.....	2,162	84	47	72.1	4,290
Water year 1935-36.....	17,243	109	0	47.2	34,210

\*Sunday.

+Gage height missing; discharge computed on basis of observation by engineer on Mar. 11 and data relative to diversions and waste furnished by Middle Rio Grande Conservancy District.

Gage height missing or doubtful; discharge computed on basis of partly estimated gage heights, records for Atrisco wasteway at Albuquerque and Arenal main canal at Albuquerque, and knowledge of local conditions.

## Atrisco lateral at Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°05'16", long. 106°40'57", in NE¼ sec. 24, T. 10 N., R. 2 E., 100 feet below head of Atrisco acequia, about 150 feet above U. S. Highway 86, a quarter of a mile west of Albuquerque, and about three-quarters of a mile below diversion from Arenal main canal.

Records available.- April to July 1936 (discontinued).

Extremes.- Maximum discharge recorded during period, 139 second-feet July 2 (gage height, 4.55 feet); no flow at times.

Remarks.- Records fair except those for periods of missing gage heights, April 28, 29, May 24-27 (computed on basis of knowledge of regulation), and those for April 16, 22, 23 (interpolated), which are poor. Lateral diverts water from Arenal main canal for irrigation near Albuquerque. Flow regulated at head gates and at head of Atrisco acequia, which diverts 100 feet above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	82	51	85		
2							-	84	46	79		
3							-	*63	47	70		
4							-	66	40	24		
5							-	69	42	*8		
6							-	76	33	60		
7							-	93	*21	47		
8							-	90	52	66		
9							-	66	43	61		
10							49	*24	54	66		
11							47	81	75	55		
12							*0	77	46	*0		
13							47	77	19	52		
14							62	69	*6	85		
15							60	68	22	74		
16							58	51	12	73		
17							57	*21	41	74		
18							58	69	68	59		
19							*39	63	71	*18		
20							23	82	38	63		
21							44	65	*7	34		
22							51	37	70	62		
23							58	29	70	58		
24							65	*20	81	82		
25							74	30	69	*29		
26							*81	40	69	-		
27							74	40	77	-		
28							60	22	*13	-		
29							40	40	73	-		
30							13	33	72	-		
31							-	*14	-	-		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 10-30.....						1,060	81	0	50.5	2,100		
May.....						1,741	93	14	56.2	3,450		
June.....						1,428	81	6	47.6	2,880		
July 1-25.....						1,357	85	0	54.3	2,690		
August.....						-	-	-	-	-		
September.....						-	-	-	-	-		
The period.....										11,070		

\*Sunday.

## Atrisco acequia at Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°05'15", long. 106°40'57", in NE¼NW¼ sec. 24, T. 10 N., R. 2 E., at heading from Atrisco lateral, 150 feet above U. S. Highway 66, and a quarter of a mile west of Albuquerque.

Records available.- April to July 1937 (discontinued).

Extremes.- Maximum discharge during period, 36 second-feet April 16; maximum gage height, 4.10 feet April 19; no flow at times.

Remarks.- Records good. Acequia diverts water from Atrisco lateral for irrigation in Albuquerque Division of Middle Rio Grande Conservancy District.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	19	14	18		
2							-	14	18	10		
3								*14	19	17		
4							-	16	19	16		
5							-	16	18	*.7		
6							-	12	20	16		
7							-	14	*0	14		
8							-	13	13	11		
9							-	10	14	7.8		
10							10	*.7	11	11		
11							8.2	12	9.5	2.6		
12							*0	17	0	*0		
13							12	18	13	3.1		
14							13	18	*0	10		
15							19	16	11	11		
16							26	12	11	11		
17							20	*3.8	14	11		
18							11	18	9.6	9.5		
19							*7.6	17	11	*1.7		
20							11	18	14	20		
21							15	20	*0	12		
22							17	14	17	17		
23							20	11	22	22		
24							19	*7.9	18	20		
25							11	19	16	20		
26							*0	18	14	*5.5		
27							11	12	14	24		
28							12	14	*1.2	18		
29							8.0	19	20	-		
30							9.0	17	18	-		
31							-	*4.8	-	-		
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-		
February.....							-	-	-	-		
March.....							-	-	-	-		
April 10-30.....							259.8	26	0	12.4	515	
May.....							435.2	20	0.7	14.0	863	
June.....							379.5	22	0	12.6	753	
July 1-28.....							339.9	24	0	12.1	674	
August.....							-	-	-	-		
September.....							-	-	-	-		
The period.....											2,800	

\*Sunday.

## Atrisco wasteway at Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°04'53", long. 106°40'36", in SE $\frac{1}{4}$  sec. 24, T. 10 N., R. 2 E., about 500 feet above outlet to Rio Grande and 0.4 mile west of Albuquerque. Gage datum raised 2.00 feet May 5, 1937. Zero of gage at new datum is 4,947.22 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 101 second-feet Aug. 24, maximum gage height, 4.00 feet June 14; no flow at times.

Maximum discharge recorded during water year 1936-37, 126 second-feet Nov. 30 (gage height, 3.89 feet); no flow at times.

Remarks.- Records poor for April to September 1936, others fair. Records represent return of waste from Atrisco lateral.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	12	2	46	24	50
2							-	10	*2	48	11	58
3							-	14	0	44	44	59
4							-	16	0	28	33	56
5							-	17	0	7	55	45
6							-	24	0	34	54	13
7							-	23	16	38	48	50
8							-	24	11	38	38	53
9							-	19	0	41	14	53
10							28	6	2	29	57	48
11							21	16	8	27	59	59
12							0	12		0	51	35
13							15	7	*10	35	62	15
14							22	7		58	53	57
15							10	7	18	51	56	59
16							27	3	10	38	52	50
17							18	8	12	48	48	57
18							14	9	24	30	48	50
19							20	15	44	18	48	28
20							4	7	42	29	27	12
21							10	6	16	10	24	40
22							8	3	52	6	28	52
23							5	3	35	8	12	53
24							14	9	35	11	59	49
25							4	9	35	6	48	35
26							16	0	38	16	28	0
27							15	0	32	41	53	0
28							7	0	13	25	66	0
29							7	0	40	27	45	0
30							9	0	40	24	10	0
31							-	0	-	31	53	-

\*Gage height missing, discharge computed on basis of records for Atrisco lateral at Albuquerque and knowledge of regulation.

## RIO GRANDE BASIN

Discharge, in second-feet, of Atrisco wasteway at Albuquerque, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	0	94		0	0		-	0	29	59	28
2	42	25	109		0	0		-	0	18	49	34
3	0	42	105		0	0		-	11	35	34	34
4	14	69	67		0	-		-	25	30	30	32
5	60	61	0		0	-		23	17	28	31	28
6	42	64	0		0	-		23	0	28	31	35
7	14	59	0		0	-		18	36	30	18	34
8	43	70	0		0	-		19	22	30	14	36
9	36	46	0		0	-		27	11	38	21	31
10	0	58	0		0	-	\$31	25	10	37	21	28
11	7.8	68	0		0	-		12	9	27	10	26
12	40	0	0		0	-		20	7	26	16	35
13	34	0	0		0	-		19	13	29	26	31
14	9.5	0	0		0	-		14	9	27	27	35
15	38	0	0		0	-		18	7	32	31	37
16	59	0	0		0	-		31	4	27	27	40
17	55	0	0		0	-		17	5	20	31	50
18	16	0	0		0	-		12	7	13	27	31
19	56	0	0		0	-		12	12	3	25	38
20	65	0	0		0	-		10	14	6	23	36
21	164	0	0		0	-		9	18	4	16	62
22	163	0	0		35	-		11	14	8	23	44
23	62	0	0		60	-		10	22	27	27	39
24	44	0	0		65	-		24	30	25	39	38
25	45	0	0		34	-		15	31	38	34	36
26	67	0	0		0	-		0	29	29	31	39
27	44	0	0		0	-		14	0	18	33	20
28	17	0	0		0	-		8	0	33	35	32
29	56	0	0		-	-		1	43	66	39	47
30	39	64	0		-	-		0	25	43	34	37
31	0	-	0		-	-		0	-	52	34	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 10-30, 1936.....	274	28	0	13.0	543
May.....	296	24	0	9.2	567
June.....	557	52	0	18.6	1,100
July.....	892	58	0	28.8	1,770
August.....	1,308	66	10	42.2	2,590
September.....	1,138	69	0	37.9	2,260
The period.....					8,830
October 1936.....	1,172.3	67	0	37.8	2,330
November.....	628	70	0	20.9	1,240
December.....	376	109	0	12.1	744
Calendar year.....					
January 1937.....	0	0	0	0	0
February.....	194	65	0	6.93	385
March.....	-	-	-	-	-
April.....	-	-	-	-	-
May 5-31.....	390	31	0	14.4	774
June.....	422	43	0	14.1	837
July.....	864	66	3	27.5	1,690
August.....	896	69	10	28.9	1,760
September.....	1,049	62	20	35.0	2,060
Water year.....					

†Gage height missing; discharge computed on basis of recorded range in stage and records for Atrisco lateral at head at Albuquerque.  
‡Discharge measurement.

## Pajarito lateral wasteway near Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°01'30", long. 106°40'29", in E½NE¼ sec. 12, T. 9 N., R. 2 E., at outlet to Rio Grande, 3½ miles southwest of Albuquerque.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 96 second-feet June 25 (gage height, 3.00 feet); no flow at times.

Remarks.- Records good. Discharge represents return flow from irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	2.2	7.1	13
2								-	0	4.0	11	16
3								-	8.0	2.0	24	10
4								-	6.8	4.7	25	8.7
5								-	0	4.8	3.0	11
6								-	0	1.6	2.0	.2
7								-	.6	1.6	1.2	9.4
8								-	3.0	.8	3.0	17
9								-	6.8	.7	2.8	23
10								-	3.2	2.2	6.8	16
11								-	1.6	7.6	8.3	15
12								-	2.6	21	8.6	9.1
13								-	6.5	28	6.6	11
14								-	3.6	24	12	18
15								-	11	11	25	18
16								-	15	5.3	34	17
17								-	12	4.0	30	16
18								-	12	6.0	23	18
19								-	6.6	8.8	25	16
20								-	17	3.5	23	17
21								-	10	5.8	21	8.4
22								-	11	3.8	26	11
23								-	10	4.7	20	15
24								-	10	6.2	18	17
25								-	15	9.0	11	11
26									11	16	27	9.3
27									7.6	0	29	8.2
28									3.6	0	25	8.9
29									0	0	18	14
30									0	1.6	22	12
31									0	-	15	8.4
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 26-31.....								22.2	11	0	3.70	44
June.....								189.9	17	0	6.55	377
July.....								307.3	29	.7	9.91	610
August.....								438.2	34	1.2	14.1	989
September.....								372.5	23	.2	12.4	759
The period.....												2,646

## RIO GRANDE BASIN

Los Padillas acequia at head, near Isleta, N. Mex.

Location.- Staff gage, lat. 34°59', long. 106°41', in NW¼ sec. 25, T. 9 N., R. 2 E., at heading from Rio Grande, 5 miles north of Isleta. Zero of gage is 4,909.94 feet above mean sea level (general adjustment of 1929).

Records available.- July to December 1936 (discontinued).

Extremes.- Maximum discharge observed during period, 10 second-feet Aug. 4 (gage height, 2.24 feet); no flow at times.

Remarks.- Records poor. Gage read three or four times a week after July 1. No flow October to December 1936. Acequia diverts water from Rio Grande for irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	0	†0	1.4
2									-	0	†3	†1.0
3									-	0	†6	†.5
4									-	†0	10	0
5									-	†0	0	†0
6									*4.3	†1.3	0	†0
7									-	2.6	0	0
8									-	†2.8	0	†0
9									-	†3.0	0	0
10									-	3.2	0	†0
11									-	†3.2	0	0
12									-	†.8	0	†0
13									-	0	0	†0
14									-	0	0	†0
15									-	0	0	0
16									-	0	0	0
17									*2.5	0	†5	†0
18									-	0	3.5	0
19									-	0	3.6	0
20									-	0	†4.5	†.5
21									-	0	†5.4	1.0
22									-	0	6.3	†1.0
23									-	0	†4.8	†.9
24									-	0	3.4	.9
25									-	0	0	†.4
26									-	0	0	0
27									-	†1	†0	†0
28									-	0	†0	†0
29									-	5.8	0	†0
30									-	†4.3	†.3	0
31									-	2.8	†.6	†0
									-	0	1.0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June.....												
July.....						30.8	5.8	0	0.99	61		
August.....						57.4	10	0	1.85	114		
September.....						7.6	1.4	0	.25	15		
Water year .....												

\*Discharge measurement.

†Gage height missing; discharge estimated.

Note.- No flow Oct. 1 to Dec. 31, 1936.



## Isleta Indian lateral near Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}59'$ , long.  $106^{\circ}41'$ , in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 9 N., R. 2 E., 100 feet below heading from Rio Grande and  $\frac{4}{5}$  miles north of Isleta. Zero of gage is 4,904.70 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 55 second-feet July 12 (gage height, 3.10 feet); no flow at times.

Maximum discharge observed during water year 1936-37, 72 second-feet June 27 (gage height, 3.39 feet); no flow at times.

Remarks.- Records fair except those estimated, which are poor. Lateral diverts water from right bank of Rio Grande for irrigation.

## Discharge, in second-feet, 1936-37

Day	1936						1937					
	June	July	Aug.	Sept.	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	-	6.2	6.2	2.2	0	1.6	-	8.1	6.7	23	29	17
2	-	5.6	16	0	0	0	-	32	6.5	19	120	3.0
3	-	4.5	8.5	0	0	0	-	26	5.0	23	13	6.2
4	-	7.6	8.8	0	1.1	0	-	21	4.4	28	12	13
5	-	15	8.8	.2	0	.1	-	20	4.7	29	1.0	13
6	*12	12	3.6	4.8	0	0	-	20	4.6	20	1.6	21
7	-	11	.5	.6	0	.4	-	21	4.1	28	0	10
8	-	12	.2	0	0	1.6	-	21	6.7	31	0	23
9	-	17	0	1.4	0	0	-	21	121	35	13	18
10	-	17	.8	0	0	0	-	20	133	25	2.8	7.8
11	-	18	1.9	.3	1.3	0	-	19	36	21	2.1	6.7
12	-	23	1.0	.2	0	0	-	19	36	26	9.1	11
13	-	0	4.1	7.6	0	0	2.2	19	41	114	28	9.4
14	-	0	2.8	1.5	0	0	1.9	18	35	19	22	7.5
15	*7.3	0	2.2	.4	1.0	.8	1.2	18	31	15	29	3.4
16	-	0	6.0	1.1	0	0	.3	18	29	1.3	16	3.8
17	-	0	3.7	1.1	.2	0	0	17	24	0	14	4.1
18	-	0	.9	.7	3.7	0	0	17	23	0	23	1.5
19	-	0	.9	0	0	0	0	15	24	9.4	27	1.0
20	-	0	.9	7.8	0	0	3.6	14	33	9.6	32	1.9
21	-	0	1.1	3.6	2.3	0	4.6	13	22	3.6	27	0
22	-	0	.6	7.7	1.6	0	5.3	13	14	34	26	0
23	-	0	0	7.3	3.7	0	5.3	12	13	29	22	0
24	-	0	0	2.1	3.3	0	4.3	12	15	27	13	.3
25	-	0	0	0	4.8	0	3.4	11	23	28	113	1.0
26	8.0	.7	0	1.6	2.3	0	2.2	9.5	45	28	116	2.0
27	8.0	.7	0	20	2.6	0	1.6	9.0	41	30	15	1.6
28	13	0	0	13	2.3	0	1.8	8.5	19	29	15	1.8
29	13	3.0	0	1.8	1.9	0	5.7	8.0	18	32	19	3.3
30	10	6.2	6.2	0	1.6	0	8.0	7.5	22	36	116	3.9
31	-	6.2	5.4	-	3.3	-	-	7.0	-	28	17	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 25-30, 1936.....						52.0	13	8.0	10.4	103		
July.....						165.7	23	0	5.35	329		
August.....						91.1	16	0	2.94	181		
September.....						87.5	20	0	2.92	174		
October.....						37.0	4.8	0	1.19	73		
November.....						4.5	1.6	0	0.15	8.9		
December.....						0	0	0	0	0		
The period.....										869		
April 13-30, 1937.....						51.4	8.0	0	2.86	102		
May.....						494.6	32	7.0	16.0	981		
June.....						643.7	45	4.1	21.5	1,280		
July.....						659.9	36	0	21.3	1,310		
August.....						481.6	32	0	14.9	916		
September.....						186.2	23	0	6.21	369		
The period.....										4,960		

\*Discharge measurement.

†Gage height missing; discharge estimated.

Gage height missing; discharge interpolated or computed on basis of partly estimated gage heights.

## Indian lateral wasteway near Isleta, N. Mex.

Location.— Water-stage recorder lat.  $34^{\circ}56'$ , long.  $106^{\circ}41'$ , in  $W\frac{1}{2}$  sec. 12, T. 8 N., R. 2 E., at outlet to Atrisco riverside drain, 2 miles north of Isleta.

Records available.— May to September 1937.

Extremes.— Maximum discharge during period, 47 second-feet Sept. 3 (gage height, 4.65 feet); no flow at times.

Remarks.— Records good except those for periods of partial or missing gage-height record, which are poor. Discharge represents return flow from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	5.7	2.8	16	36
2								-	5.7	.5	14	44
3								-	15	.4	*6.6	36
4								-	26	5.3	*.9	39
5								-	15	3.8	1.3	34
6								-	10	.6	.7	16
7								-	13	*.3	0	6.6
8								-	15	*.3	0	14
9								-	31	*.4	0	20
10								-	18	.9	0	19
11								-	12	6.8	2.9	18
12								-	5.3	6.4	6.9	19
13								-	11	8.4	5.3	14
14								-	8.3	4.7	20	13
15								-	9.7	.8	38	13
16								-	7.3	0	35	11
17								*17	9.8	0	34	9.4
18								13	8.8	0	35	8.9
19								12	10	.1	40	13
20								23	17	.3	42	7.3
21								20	7.6	.2	38	2.7
22								22	2.2	.3	40	14
23								20	4.1	2.0	50	25
24								15	.7	6.2	*13	21
25								7.8	6.8	4.5	*6.9	14
26								26	29	9.6	10	7.9
27								30	28	27	18	4.0
28								31	*7	26	18	2.2
29								*6.6	*3	28	18	6.5
30								*7.2	*3.9	27	22	19
31								6.1	-	17	21	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 17-31 .....								258.7	31	6.1	17.2	513
June.....								343.9	31	0.7	11.5	682
July.....								190.6	28	0	6.15	378
August.....								533.5	42	0	17.2	1,060
September.....								505.5	44	2.2	16.8	1,000
The period.....												3,630

\*Gage-height record missing or partial; discharge computed on basis of partial gage-height record and knowledge of local conditions.

## Isleta lateral wasteway at Isleta, N. Mex.

Location.- Staff gage, lat. 34°55', long. 106°42', in SE¼ sec. 23, T. 8 N., R. 2 E., at outlet to Isleta interior drain, three-eighths of a mile south of Isleta. Prior to Aug. 31 water-stage recorder at same site but independent datum.

Records available.- April to November 1937 (discontinued).

Extremes.- Maximum discharge during period, about 66 second-feet Aug. 31 (gage height, 3.82 feet); no flow at times.

Remarks.- Records good except those for periods of incomplete gage-height record and those for September to November, which are poor. Gage read twice daily Sept. 9 to Nov. 27. Discharge represents return flow from irrigation.

Discharge, in second-feet, 1937

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.				
1	-	13	†3	11	†15	†10	9.2	0.4				
2	-	6.8	2.9	†8	†12	†10	9.2	0				
3	-	7.5	7.2	†3	†8	0	3.4	.7				
4	-	12	23	9.2	†5	0	4.2	2.2				
5	-	†14	11	9.8	5.0	0	6.4	5.8				
6	-	†13	6.2	4.8	2.5	0	4.7	3.2				
7	-	†13	9.2	5.3	.5	0	5.2	*3.0				
8	-	12	14	5.5	1.6	†2	6.4	2.8				
9	-	16	24	5.1	3.6	2.6	8.1	4.7				
10	-	19	17	7.6	.6	6.9	6.6	5.5				
11	-	22	†17	20	.1	2.4	2.2	3.0				
12	-	27	†15	18	1.2	14	6.4	3.4				
13	-	26	21	16	†5.0	8.8	5.5	2.8				
14	-	26	15	13	†9.8	8.5	4.4	2.6				
15	-	27	14	14	19	9.9	1.5	1.3				
16	-	26	14	6.5	16	7.5	.7	0				
17	-	21	19	4.8	14	14	.2	0				
18	-	20	23	1.2	21	14	1.9	0				
19	-	19	22	5.0	27	15	0	0				
20	-	23	27	3.2	26	17	0	0				
21	-	23	21	3.4	22	13	0	0				
22	-	21	17	2.0	24	.3	0	0				
23	-	21	11	13	19	.2	0	0				
24	-	18	21	10	13	4.0	0	0				
25	-	11	22	15	22	7.2	.6	0				
26	5.0	22	29	20	22	1.5	4.7	0				
27	6.8	24	22	23	20	.4	1.5	0				
28	17	23	7.2	20	26	.2	1.4	†10				
29	*16	3.9	9.6	23	21	6.1	1.4	†10				
30	*14	†3	8.0	22	18	11	.6	†10				
31	-	†3	-	†19	20	-	.6	-				
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April 26-30.....					58.8	17	5.0	11.8	117			
May.....					536.2	27	3	17.3	1,060			
June.....					472.3	29	2.9	15.7	937			
July.....					341.4	23	1.2	11.0	677			
August.....					419.9	27	.1	13.5	835			
September.....					176.5	17	0	5.88	350			
October.....					97.0	9.2	0	3.13	192			
November.....					41.4	5.8	0	1.38	82			
The period.....									4,240			

\*Gage-height missing; discharge interpolated.

†Gage-height record incomplete; discharge computed on basis of partial gage-height record and knowledge of local conditions.

‡Gage height missing; discharge estimated.

## Albuquerque-Barr riverside drain near Isleta, N. Mex.

Location.- Water-stage recorder, lat. 34°56', long. 106°41', in NE¼ sec. 12, T. 8 N., R. 2 E., 0.6 mile above confluence with Rio Grande and 2¼ miles northeast of Isleta. Zero of gage is 4,892.38 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to March 1937 (discontinued).

Extremes.- Maximum discharge during period, about 150 second-feet (estimated) Sept. 27, 1936 (gage height, 3.72 feet); minimum daily discharge, 57 second-feet July 25, 1936.

Result of discharge measurement May 26, 1937, 186 second-feet.

Remarks.- Records good. Barr canal diverts water for irrigation nine miles above station. Discharge in drain represents return flow to Rio Grande. Results of 30 discharge measurements furnished by Middle Rio Grande Conservancy District and of 16 discharge measurements by El Paso County Water Improvement District No. 1.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	83	81	83	74
2								-	82	81	88	74
3								-	90	82	83	75
4								-	84	90	90	75
5								-	82	98	84	78
6								-	82	86	91	75
7								-	85	86	85	75
8								-	81	94	84	76
9								-	76	97	82	78
10								-	74	88	77	85
11								-	74	*84	70	87
12								-	78	*90	72	86
13								-	85	*84	74	87
14								-	82	*78	74	81
15								-	85	73	77	75
16								-	81	63	79	74
17								-	71	62	78	72
18								-	70	62	72	69
19								-	67	62	77	80
20								-	67	63	*93	95
21								-	70	62	*98	90
22								-	72	63	*90	90
23								-	71	64	*96	83
24								-	74	58	*82	77
25								-	81	57	*77	74
26								-	84	58	74	*96
27								-	83	63	71	*147
28								-	82	64	70	122
29								82	81	74	74	112
30								90	81	74	75	106
31									-	76	74	-

\*Gage heights missing July 11-14 and faulty, Aug. 20-25; stage-discharge relation affected by backwater Sept. 26, 27; discharge computed on basis of partly estimated gage heights and records for Atrisco riverside drain near Isleta and Rio Grande near Isleta.

Discharge, in second-feet, of Albuquerque-Barr riverside drain near Isleta, N. Mex., 1936-37--  
Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	90	99	95	74	94	-	-	-	-	-	-
2	84	84	100	93	81	94	-	-	-	-	-	-
3	84	78	100	93	83	93	-	-	-	-	-	-
4	84	83	99	92	85	94	-	*102	-	-	-	-
5	82	90	100	86	87	94	*102	-	-	-	*83	-
6	88	96	98	85	88	-	-	-	-	-	-	-
7	90	99	98	86	91	-	-	-	-	*105	-	-
8	90	93	98	186	90	-	-	-	-	-	-	-
9	88	83	98	186	101	-	-	-	*101	-	-	*84
10	87	82	97	186	94	-	-	-	-	-	*77	*80
11	95	105	96	186	91	-	-	-	*92	-	-	-
12	90	110	96	86	90	-	-	-	-	-	-	-
13	82	112	95	87	88	-	-	-	-	-	-	-
14	85	115	95	85	90	-	-	-	-	-	-	-
15	84	115	96	86	91	-	-	-	-	*74	-	-
16	82	114	96	88	88	*68	-	-	-	-	-	-
17	84	113	95	88	104	-	-	-	-	-	-	-
18	84	111	93	89	99	-	-	-	-	-	-	-
19	84	103	94	89	96	-	*120	-	-	-	-	-
20	85	94	96	89	97	-	-	-	-	*66	-	*75
21	92	92	99	97	97	-	-	-	-	-	-	*67
22	96	87	98	96	98	-	-	*150	*105	-	-	-
23	99	83	97	85	95	-	-	-	-	-	*85	-
24	100	83	97	82	95	-	-	-	*95	-	-	-
25	100	88	95	82	94	-	-	-	-	-	-	-
26	94	99	93	82	93	-	-	*166	-	-	-	-
27	94	100	92	85	95	-	-	-	-	*84	-	-
28	103	101	90	83	96	-	-	-	-	-	*82	-
29	99	101	94	82	-	-	-	-	-	-	-	-
30	94	98	96	83	-	-	-	-	-	-	-	-
31	91	-	95	82	-	-	-	-	-	-	-	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 1936	2,348	85	67	78.3	4,660
July	2,317	98	57	74.7	4,600
August	2,484	98	70	80.1	4,950
September	2,554	147	69	85.1	5,070
The period					19,260
October 1936	2,792	103	82	90.1	5,540
November	2,902	115	78	96.7	5,760
December	2,985	100	90	98.2	5,920
Calendar year					
January 1937	2,676	93	82	86.3	5,310
February	2,580	104	74	92.1	5,120
March 1-5	469	94	93	93.8	930
April					
May					
June					
July					
August					
September					
The period					28,580

\*Discharge measurement.

†Gage height missing; discharge interpolated.

## Alameda interior drain at Albuquerque, N. Mex.

Location.- Staff gage, lat.  $35^{\circ}05'55''$ , long.  $106^{\circ}40'35''$ , in NE $\frac{1}{4}$  sec. 13, T. 10 N., R. 2 E., at highway bridge, three-quarters of a mile above confluence with Albuquerque-Barr riverside drain and about 1 mile west of city limits of Albuquerque. Zero of gage is 4,947.08 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 58 second-feet Aug. 5; minimum daily discharge, 26 second-feet Sept. 24.

Maximum daily discharge during water year 1936-37, 61 second-feet Sept. 11-15; minimum daily discharge, 9 second-feet Jan. 18, Feb. 10-21.

Remarks.- Records fair for July 21 to Nov. 30, 1936; others poor. Gage read four to six times a week July 21 to Nov. 30; for days during this period when gage was not read, except as noted in the following table, and for June 11 to July 20, 1936, and Dec. 1, 1936, to Sept. 30, 1937, discharge was computed on basis of discharge measurements, one staff-gage reading, and records for Isleta interior drain at Isleta and Barr interior drain near Isleta. Discharge represents return flow to Albuquerque-Barr riverside drain. Results of 30 discharge measurements furnished by Middle Rio Grande Conservancy District and of 18 by El Paso County Water Improvement District No. 1.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	37	57	32
2									-	38	*48	31
3									-	40	39	35
4									-	41	40	31
5									-	44	58	†30
6									-	46	45	†40
7									-	49	44	†45
8									-	‡52	41	44
9									-	53	*40	38
10									-	54	39	34
11									‡54	54	31	41
12									35	53	33	40
13									37	‡52	38	31
14									39	50	32	33
15									40	46	32	35
16									41	43	*32	35
17									41	40	33	35
18									†41	36	36	45
19									40	34	38	41
20									37	‡52	36	*35
21									35	30	36	29
22									‡54	*34	†40	36
23									‡54	38	†42	31
24									34	46	37	26
25									34	†45	30	34
26									34	†41	33	34
27									34	†38	29	*30
28									34	37	33	27
29									35	*39	38	*29
30									36	41	*34	31
31									-	40	29	-

\*Gage not read; discharge interpolated.

†Gage not read; discharge estimated.

‡Discharge measurement.

Discharge, in second-feet, of Alameda interior drain at Albuquerque, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	*24	20	14	†10	10	17	29	†34	41	46	54
2	*29	22	†22	†14	10	10	†17	30	33	41	46	53
3	28	22	21	13	10	10	20	†30	31	41	47	52
4	*26	28	19	†11	10	10	29	31	29	41	47	51
5	23	32	18	11	10	10	†31	32	28	42	†48	51
6	38	29	18	11	†10	10	30	33	27	†43	47	51
7	25	26	18	11	10	10	28	33	†25	43	47	51
8	27	*22	†18	11	10	10	26	34	24	44	47	52
9	*30	22	17	11	10	10	24	35	23	45	46	†57
10	28	31	†16	12	†9	10	21	36	23	45	46	60
11	*27	25	†16	12	9	10	21	36	24	46	46	61
12	*25	26	15	12	9	10	†21	37	26	46	†45	61
13	27	28	14	†12	†9	10	21	37	28	46	44	61
14	32	*24	†14	11	9	10	22	38	31	46	43	61
15	*29	*24	†14	11	9	10	23	38	34	45	43	61
16	25	*23	14	10	9	†10	25	39	36	44	42	60
17	*26	22	13	10	†9		†26	39	37	†41	41	60
18	*28	22	†15	†9	9		27	40	39	39	40	59
19	29	19	15	†11	†9		28	40	40	36	40	59
20	32	19	15	11	†9		27	40	42	†36	40	58
21	25	18	†15	†11	9		27	†40	44	36	40	†57
22	35	*17	†15	11	†10		26	41	†46	36	41	55
23	34	18	14	11	10		25	41	50	37	†42	†52
24	*33	19	14	11	†10	17	24	41	†54	38	45	51
25	*32	*18	14	†11	10		24	41	55	39	50	50
26	39	*17	†14	11	10		†25	41	55	41	†55	50
27	30	18	14	11	10		26	40	55	42	56	49
28	*28	23	14	†11	10		26	39	46	43	57	49
29	29	*20	14	11	-		27	38	43	44	57	49
30	33	17	†14	10	-		28	37	†41	45	56	48
31	*27	-	14	10	-		-	36	-	†45	55	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 11-30, 1936	729	41	34	36.4	1,450
July	1,323	54	30	42.7	2,620
August	1,175	58	29	37.9	2,350
September	1,034	45	26	34.5	2,050
The period					8,450
October 1936	907	39	23	29.3	1,800
November	679	32	17	22.6	1,350
December	488	22	13	15.7	968
Calendar year					
January 1937	347	14	9	11.2	688
February	268	10	9	9.6	552
March	415	-	10	13.4	823
April	742	31	17	24.7	1,470
May	1,142	41	29	36.8	2,270
June	1,103	55	23	36.8	2,190
July	1,297	46	36	41.8	2,570
August	1,445	57	40	46.6	2,870
September	1,644	61	49	54.8	3,260
Water year 1936-37	10,477	61	9	28.7	20,790

\*Gage not read; discharge estimated.

†Discharge measurement.

## Barr canal at Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°03'48", long. 106°39'16", in NW¼SW¼ sec. 29, T. 10 N., R. 3 E., 100 feet below heading from Albuquerque-Barr riverside drain and 0.4 mile south of Albuquerque. Zero of gage is 4,934.05 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 99 second-feet May 29; maximum gage height, 3.55 feet July 1; no flow at times.

Maximum discharge recorded during water year 1936-37, 101 second-feet Aug. 24 (gage height, 3.81 feet); no flow at times.

Remarks.- Records good except those for periods of faulty gage heights, which are fair, and those for periods of missing gage heights, which are poor. Results of measurements furnished by El Paso Water Improvement District No. 1 used on Apr. 7, 1936, and Mar. 16, 1937. Canal diverts water from Albuquerque-Barr riverside drain for irrigation. No diversion from canal above station. Flow controlled at head gates.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	76	57	81	73	64
2							-	81	71	83	66	54
3							-	78	70	77	64	56
4							-	69	70	56	63	57
5							-	72	73	53	75	62
6							-	82	68	62	59	60
7							58	88	66	71	56	60
8							*59	81	60	77	54	66
9							*61	70	56	75	56	66
10							62	79	62	77	66	62
11							69	81	68	48	70	65
12							62	75	77	18	53	67
13							*61	68	79	67	56	66
14							*60	63	68	78	51	62
15							*60	72	64	69	55	63
16							*59	82	80	68	56	65
17							58	75	75	66	54	64
18							62	64	68	62	60	70
19							66	69	68	55	35	54
20							66	70	67	57	25	35
21							68	72	64	54	50	56
22							70	65	65	63	69	67
23							75	69	68	68	59	59
24							75	66	66	66	58	55
25							72	63	75	65	58	56
26							70	72	74	69	57	38
27							73	77	70	59	54	0
28							78	78	77	62	55	0
29							77	85	74	68	65	0
30							72	68	74	70	60	0
31							-	56	-	70	60	-

\*Gage height faulty; discharge interpolated.



Discharge, in second-feet, of Barr canal at Albuquerque, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	40		0	21	0	56	68	0	58	57	83
2	35	41		0	0	0	54	74	0	59	52	71
3	35	39		0	0	0	58	64	0	60	56	69
4	34	38		0	0	0	56	68	29	73	74	56
5	33	37		0	0	0	50	74	54	60	83	65
6	35	37		0	0	0	49	78	50	63	76	64
7	35	37		0	0	0	51	77	49	63	76	66
8	36	37		0	0	0	49	78	60	64	75	68
9	35	36		0	0	0	54	77	65	60	73	72
10	36	27		0	0	0	56	72	64	59	75	78
11	35	0		0	0	0	53	74	74	63	75	70
12	35	0		0	0	0	52	72	69	51	75	52
13	35	0		0	0	} \$40	52	64	70	56	80	48
14	36	0		0	0		60	60	68	56	78	64
15	35	0		0	0		58	64	70	64	77	75
16	36	0		0	0	40	60	66	75	54	68	74
17	35	1		0	0	} \$45	†64	62	72	50	68	77
18	34	2		0	0		†73	62	65	52	69	77
19	34	16		0	0		72	67	66	59	70	68
20	34	21		0	0		72	72	75	56	78	62
21	34	25		0	0	} \$45	77	77	68	66	73	74
22	35	27		0	0		72	77	70	74	58	72
23	36	27		0	0		72	76	68	85	74	82
24	39	27		0	0		70	48	75	84	81	89
25	37	9		0	0		66	62	80	80	90	86
26	38	0		0	0	54	62	62	57	77	88	84
27	32	0		0	0	53	71	49	20	96	87	78
28	21	0		0	0	51	68	5	46	71	96	80
29	37	0		0	-	52	68	3	64	61	84	66
30	41	0		0	-	54	†68	3	64	71	80	68
31	42	-		10	-	55	-	0	-	77	82	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 7-30, 1936.....	1,593	78	58	66.4	3,180
May.....	2,287	88	56	73.1	4,500
June.....	2,075	80	56	69.2	4,120
July.....	2,014	83	18	65.0	3,990
August.....	1,789	75	25	57.7	3,550
September.....	1,549	70	0	51.6	3,070
The period.....					22,590
October 1936.....	1,079	42	21	34.8	2,140
November.....	524	41	0	17.5	1,040
December.....	0	0	0	0	0
Calendar year.....					
January 1937.....	10	10	0	.32	20
February.....	21	21	0	.75	42
March.....	894	-	0	28.5	1,750
April.....	1,843	77	49	61.4	3,660
May.....	1,855	78	0	59.8	3,680
June.....	1,685	80	0	56.2	3,540
July.....	2,012	86	50	64.9	3,990
August.....	2,318	90	52	74.8	4,600
September.....	2,138	89	48	71.3	4,240
Water year 1936-37.....	14,369	90	0	59.4	28,500

†Gage-height record faulty; discharge computed on basis of partly estimated gage heights and recorded range in stage.

‡Gage height missing; discharge computed on basis of measurement on Mar. 16 and data furnished by Middle Rio Grande Conservancy District.

Barr canal at end, near Isleta, N. Mex.

Location.- Water-stage recorder, lat. 34°56', long. 106°40', in NW¼ sec. 18, T. 8 N., R. 3 E., at highway crossing, about a quarter of a mile above outlet to Rio Grande and 1½ miles northeast of Isleta.

Records available.- 1936 (occasional discharge measurements during irrigation season) and April to September 1937.

Extremes.- Maximum discharge during period, about 32 second-feet August 4 (gage height, 2.67 feet, caused by arroyo inflow); no flow at times.

Remarks.- Records good except that for April 16, which was computed on basis of partial-day gage height and knowledge of local conditions and is fair. Discharge represents return flow from irrigation.

## Measurements of discharge, in second-feet, during 1936

June 20	8.01	Aug. 4	15.6
July 1	5.43	8	8.18
9	4.58	12	5.86
16	15.8	21	.50
30	6.44	Sept. 2	7.85
Aug. 1	12.5	10	14.3

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	2.3	0	13	5.9	4.8
2							-	8.5	0	13	11	6.9
3							-	9.2	0	11	1.5	3.7
4							-	10	0	12	3.6	4.0
5							-	5.7	0	1.5	1.2	4.7
6							-	3.2	0	5.3	0	2.7
7							-	4.9	0	11	0	1.2
8							-	3.1	0	10	0	1.6
9							-	5.8	0	11	0	5.6
10							-	6.5	0	6.3	0	5.0
11							-	8.6	0	6.0	0	5.7
12							-	15	0	3.6	1.4	9.6
13							-	15	0	1.8	6.0	6.3
14							-	10	0	1.6	3.2	8.2
15							-	12	0	3.1	1.8	4.7
16								5.0	7.5	.4	2.2	3.0
17								4.8	7.3	3.9	4.5	1.2
18								13	8.9	1.9	5.8	4.0
19								17	13	.5	4.6	7.3
20								6.7	4.9	.6	8.2	5.4
21								7.5	.5	4.4	3.3	8.7
22								6.8	.6	3.7	11	3.2
23								7.8	7.8	5.7	5.7	3.8
24								5.1	3.3	4.2	4.5	.5
25								14	4.0	1.5	15	.6
26								18	6.4	7.7	14	3.2
27								5.8	7.4	.5	6.3	1.7
28								4.4	2.4	.8	14	5.8
29								6.5	.9	8.7	6.0	4.8
30								6.2	0	16	1.3	8.0
31							-	0	-	3.9	6.7	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-	-	-
February.....						-	-	-	-	-	-	-
March.....						-	-	-	-	-	-	-
April 16-30.....						128.6	18	4.4	8.57	255		
May.....						197.7	15	0	6.38	392		
June.....						60.5	16	0	2.02	120		
July.....						220.5	15	1.3	7.11	437		
August.....						114.5	11	0	3.69	227		
September.....						188.1	13	1.2	6.27	373		
The period.....										1,800		

## Barr canal wasteway near Albuquerque, N. Mex.

Location.- Water-stage recorder, lat. 35°00'36", long. 106°40'18", in NW¼ sec. 18, T. 9 N., R. 3 E., at outlet to Rio Grande, 4½ miles south of Albuquerque.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 123 second-feet June 26 (gage height, 2.81 feet); minimum daily discharge, 2.1 second-feet July 21.

Remarks.- Records good except that for May 27, which was computed on basis of recorded range in stage and knowledge of wasteway regulation and is poor. Discharge represents waste from Barr canal.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	3.3	20	25	26
2								-	3.2	25	19	27
3								-	3.2	30	18	34
4								-	21	39	15	30
5								-	41	27	33	35
6								-	36	15	34	28
7								-	34	23	34	37
8								-	35	21	31	36
9								-	35	24	21	36
10								-	17	15	28	27
11								-	13	23	18	44
12								-	13	8.0	22	38
13								-	41	19	24	27
14								-	24	14	32	31
15								-	12	11	44	39
16								-	9.4	6.9	30	36
17								-	18	4.5	30	45
18								-	12	5.1	30	33
19								-	7.0	7.7	33	29
20								-	17	4.2	42	21
21								30	7.0	2.1	40	28
22								19	6.6	5.4	33	35
23								42	5.2	12	29	32
24								19	12	17	32	31
25								27	14	30	27	46
26								20	23	32	31	44
27								15	26	19	21	37
28								5.8	18	31	22	48
29								4.9	22	31	34	42
30								3.4	25	28	24	48
31								3.3	-	26	23	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....					
November.....					
December.....					
Calendar year .....					
January.....					
February.....					
March.....					
April.....					
May 21-31.....	189.4	42	3.3	17.2	376
June.....	553.9	41	3.2	18.5	1,100
July.....	576.9	39	2.1	18.6	1,140
August.....	879	44	15	28.4	1,740
September.....	1,050	48	21	35.0	2,080
The period.....					6,440

Williams lateral at end, near Isleta, N. Mex.

Location.— Water-stage recorder, lat. 34°58', long. 106°41', in SE¼ sec. 36, T. 9 N., R. 2 E., 5 feet above outlet to Albuquerque-Barr riverside drain, about 0.9 mile east of Los Padillas, and 3.5 miles north of Isleta.

Records available.— June to September 1937.

Extremes.— Maximum discharge during period not determined; maximum gage height, 2.78 feet June 10 (caused by backwater); no flow at times.

Remarks.— Records good except those for June 7, 10, 26–28, Aug. 23–26, which were computed on basis of partial gage-height record and knowledge of local conditions, and are poor. Discharge represents return flow from irrigation in Albuquerque Division.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	11	10	1.6
2									-	12	15	4.8
3									-	4.1	14	5.9
4									-	5.9	1.9	7.7
5									-	11	1.2	5.2
6									-	12	4.2	6.5
7									1.7	15	11	13
8									6.7	9.8	12	10
9									2.5	4.6	13	8.7
10									1.7	7.6	12	9.2
11									0	15	12	8.8
12									1.6	8.0	10	6.0
13									0	6.6	13	7.8
14									0	7.8	13	9.4
15									0	7.7	4.6	9.6
16									0	9.3	3.9	5.6
17									0	3.8	.3	7.1
18									0	.3	0	7.5
19									.1	.6	2.5	6.5
20									3.8	.8	11	8.4
21									9.3	3.4	9.8	8.4
22									9.0	1.4	11	9.5
23									2.6	0	8.7	7.7
24									.9	0	9	8.8
25									3.6	0	9	5.5
26									3.6	2.0	9.8	.3
27									0	6.9	6.0	1.2
28									4.1	6.6	4.7	1.2
29									11	5.4	0	1.4
30									9.4	9.8	0	2.7
31									-	6.3	.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June 7-30 .....						71.6	11	0	2.98	142		
July.....						194.7	15	0	6.28	396		
August.....						220.7	15	0	7.12	438		
September.....						198.0	13	.3	6.60	393		
The period.....										1,360		

## San Jose interior drain near Albuquerque, N. Mex.

Location.- No gage; measuring section, lat.  $35^{\circ}01'30''$ , long.  $106^{\circ}39'30''$ , in NE $\frac{1}{4}$  sec. 7, T. 9 N., R. 3 E., at culvert under highway, half a mile above confluence with Albuquerque-Barr riverside drain and 4 miles south of Albuquerque.

Records available.- June 1936 to September 1937 (discontinued).

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 6.5 second-feet Sept. 17, 18; minimum daily discharge, 1.3 second-feet Sept. 11, 12.

Extremes for water year 1936-37 not determined.

Remarks.- Daily records not sufficiently accurate for publication. Monthly records poor. Discharge computed on basis of 42 measurements and records for Bernalillo interior drain near Bernalillo and Corrales interior drain near Alameda. Discharge represents return flow to Albuquerque-Barr riverside drain. Results of 4 discharge measurements furnished by Middle Rio Grande Conservancy District and of 14 by El Paso County Water Improvement District No. 1.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 16-30, 1936....	4.4	2.0	2.71	81
July.....	6.3	1.9	3.55	218
August.....	4.1	1.4	2.75	169
September.....	6.5	1.3	3.48	207
The period.....				675
October 1936.....	3.1	.9	2.14	132
November.....	4.3	.6	2.71	161
December.....	2.6	.4	1.53	82
January 1937.....	1.6	.4	1.08	66
February.....	1.7	1.2	1.47	82
March.....	-	-	1.24	76
April.....	-	-	1.88	112
May.....	-	-	1.60	92
June.....	-	-	5.25	312
July.....	-	-	3.21	197
August.....	2.7	1.3	2.10	129
September.....	2.0	.8	1.53	79
Water year 1936-37	-	-	2.10	1,520

## Barr interior drain near Isleta, N. Mex.

Location.- No gage; measuring section, lat.  $34^{\circ}57'$ , long.  $106^{\circ}40'$ , in SE $\frac{1}{4}$  sec. 1, T. 8 N., R. 2 E., at road bridge 500 feet above confluence with Albuquerque-Barr riverside drain and 2 $\frac{1}{2}$  miles northeast of Isleta.

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 15 second-feet Aug. 29 to Sept. 25; minimum daily discharge, 9 second-feet July 15-22, Sept. 18-24.

Maximum daily discharge during water year 1936-37, 15 second-feet Aug. 5; minimum daily discharge, 4 second-feet Jan. 22-24, 27-29, Feb. 11, 26.

Remarks.- Daily records not sufficiently accurate for publication. Monthly records poor. Discharge computed on basis of 57 measurements and records for Alameda interior drain at Albuquerque and San Jose interior drain near Albuquerque. Discharge represents return flow to Albuquerque-Barr riverside drain. Results of 14 discharge measurements furnished by Middle Rio Grande Conservancy District and of 18 by El Paso County Water Improvement District No. 1.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 16-30, 1936....	14	10	11.8	351
July.....	12	9	10.4	637
August.....	15	10	11.6	716
September.....	15	9	11.7	694
The period.....				2,400
October 1936.....	10	7	8.1	500
November.....	9	6	7.9	472
December.....	7	5	5.8	359
January 1937.....	6	4	5.0	309
February.....	6	4	5.1	236
March.....	-	-	7.4	452
April.....	-	-	8.0	476
May.....	-	-	11.7	720
June.....	14	9	11.8	702
July.....	11	7	7.9	486
August.....	15	7	10.0	615
September.....	11	7	8.4	502
Water year 1936-37	15	4	8.1	5,880

## Atrisco riverside drain near Isleta, N. Mex.

Location.— Staff gage, lat.  $34^{\circ}56'$ , long.  $106^{\circ}41'$ , in SE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 12, T. 8 N., R. 2 E., half a mile above confluence with Rio Grande, and 2 miles north of Isleta. Prior to Mar. 3, 1937, water-stage recorder at same site and datum. Zero of gage is 4,891.33 feet above mean sea level (general adjustment of 1929).

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during period ending Sept. 30, 1936, 100 second-feet Sept. 27 (gage height, 3.40 feet); minimum daily discharge, 21 second-feet Aug. 27. Maximum discharge during water year 1936-37, 103 second-feet (estimated) May 20; maximum gage height observed, 3.77 feet May 18; minimum daily discharge, 31 second-feet Feb. 11 and 26.

Remarks. Records good for May 1936 to February 1937; others poor. Discharge for days of missing gage heights, May 12, 13, 1936, computed on basis of records for Rio Grande at San Felipe and knowledge of local conditions; that for Dec. 15-17, 1936, Jan. 8-11, 1937, interpolated. Records for Mar. 3 to Sept. 30, 1937, computed on basis of 28 discharge measurements and records for Albuquerque-Barr riverside drain near Isleta and Rio Grande near Isleta and knowledge of local conditions. Drain represents return flow to Rio Grande. Results of 30 discharge measurements furnished by Middle Rio Grande Conservancy District and of 23 by El Paso County Water Improvement District No. 1.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	-	63	49	41	49
2							-	-	61	49	44	44
3							-	-	60	48	48	47
4							-	-	58	48	44	45
5							-	-	57	49	46	40
6							-	80	56	52	44	41
7							-	83	57	49	38	39
8							-	86	55	52	38	38
9							-	86	52	52	36	41
10							-	62	48	55	38	40
11							-	76	50	64	38	43
12							-	72	54	76	37	45
13							-	68	55	57	39	47
14							-	67	55	55	40	48
15							-	77	55	64	39	45
16							*56	75	50	51	45	45
17							-	72	48	46	47	45
18							-	66	43	41	43	44
19							-	68	41	37	44	45
20							*76	71	46	35	44	45
21							-	70	49	34	54	44
22							*79	65	50	32	56	46
23							-	63	44	31	50	46
24							-	65	46	26	40	42
25							-	65	50	25	31	38
26							-	71	52	26	24	44
27							*92	70	51	36	21	73
28							-	65	51	39	33	65
29							-	64	53	41	35	52
30							-	62	49	44	41	46
31							-	63	-	39	47	-

\*Discharge measurement.

Discharge, in second-feet, of Atrisco riverside drain near Isleta, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	43	39	39	38	34	40	71	73	75	56	52
2	39	43	42	38	36	35	55	70	73	73	52	52
3	39	43	43	37	38	35	70	*69	72	69	46	50
4	41	43	42	37	38	38	85	*80	71	65	42	50
5	41	43	40	35	37	40	78	79	69	60	*39	52
6	42	43	39	36	35	42	*72	80	69	57	37	52
7	43	43	38	38	34	44	65	81	68	55	35	50
8	43	44	38	38	35	48	60	82	*68	53	35	49
9	43	42	39	37	45	50	60	83	*74	52	37	*48
10	43	40	41	37	36	50	62	85	78	52	39	*50
11	44	41	40	36	31	50	64	*86	80	54	*40	52
12	44	40	39	36	32	48	66	88	80	*55	42	52
13	43	38	38	36	34	45	68	90	80	*46	47	51
14	44	38	38	35	38	48	70	90	80	42	55	50
15	44	38	38	37	41	50	75	88	78	40	60	49
16	44	38	38	38	49	48	*80	88	74	38	61	49
17	43	38	37	38	54	*48	86	90	70	36	62	48
18	44	39	37	37	52	49	96	*93	65	36	63	47
19	40	39	37	38	51	50	*102	100	60	40	64	46
20	40	40	38	38	49	52	90	103	58	*39	65	*44
21	42	40	38	39	48	48	*74	*100	56	37	65	*44
22	42	40	39	40	47	45	70	97	*54	40	60	44
23	43	39	40	38	42	48	68	93	55	45	*50	43
24	42	39	40	37	38	50	68	87	58	48	45	43
25	43	38	42	36	34	47	70	80	65	48	43	43
26	42	38	42	37	31	45	72	*75	75	*49	44	45
27	43	38	42	37	33	43	*73	73	65	52	45	48
28	41	38	43	37	34	42	73	72	84	55	45	52
29	40	38	42	38	-	41	72	72	82	57	47	55
30	41	38	41	38	-	40	72	72	78	60	48	60
31	43	-	41	38	-	40	-	73	-	68	50	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 6-31, 1936.....						1,852	86	62	71.2	3,670		
June.....						1,557	63	41	51.9	3,090		
July.....						1,393	78	25	44.9	2,760		
August.....						1,265	56	21	40.8	2,510		
September.....						1,372	73	38	45.7	2,720		
The period.....										14,750		
October 1936 .....						1,308	44	39	42.2	2,590		
November.....						1,202	44	38	40.1	2,380		
December.....						1,231	43	37	39.7	2,440		
Calendar year .....												
January 1937 .....						1,156	40	35	37.3	2,290		
February.....						1,110	54	31	39.6	2,200		
March.....						1,391	52	34	44.9	2,760		
April.....						2,156	102	40	71.9	4,280		
May.....						2,590	103	69	83.5	5,140		
June.....						2,132	85	54	71.1	4,230		
July.....						1,586	75	36	51.2	3,150		
August.....						1,519	65	35	49.0	3,010		
September.....						1,470	60	43	49.0	2,920		
Water year 1936-37 .....						18,851	103	31	51.6	37,390		

\*Discharge measurement.

Chical lateral at head, at Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}54'$ , long.  $106^{\circ}41'$ , in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 8 N., R. 2 E., 75 feet below highway bridge, 985 feet below heading from Peralta main canal, and half of a mile southeast of Isleta. Zero of gage is 4,860.08 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 86 second-feet May 2; maximum gage height, 4.54 feet July 2; no flow at times.

Maximum discharge during water year 1936-37, 86 second-feet May 20; maximum gage height, 4.44 feet June 23; no flow at times.

Remarks.- Records good except those for periods of missing or partial gage-height records and those for April to June 1936, which are poor. Lateral diverts water from Peralta main canal for irrigation. No diversion from lateral above station.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	63	45	43	47	37
2							-	63	44	59	43	40
3							-	68	42	24	28	39
4							-	68	38	*22	17	39
5							-	68	24	20	50	39
6							58	61	36	0	51	38
7							54	53	41	0	48	35
8							52	37	38	0	42	28
9							49	41	33	0	38	26
10							20	36	9	0	39	25
11							18	30	†14	0	43	23
12							27	*30	†16	0	36	24
13							44	*30	†18	0	42	24
14							48	30	†15	0	41	33
15							42	32	†23	26	31	35
16							*48	47	†20	28	30	35
17							53	*47	†20	35	41	29
18							50	47	†20	17	48	27
19							32	53	} †30	0	47	25
20							37	59		0	30	25
21							39	53		26	0	24
22							30	48	} †40	48	34	22
23							*34	47		50	48	22
24							39	47		50	55	22
25							*40	43		42	36	22
26								39	} †10	†10	14	15
27							41	39		†23	3	0
28							56	42		0	31	0
29							58	42		†15	48	0
30							59	42	} †40	52	40	0
31							-	44		45	34	-

\*Gage height missing; discharge interpolated.

†Gage-height record incomplete; discharge computed on basis of partly estimated gage heights and knowledge of local conditions.



Discharge, in second-feet, of Chical lateral at head, at Isleta, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	30	25	0	44	38	30
2	0	0				0	32	30	0	29	37	31
3	0	0				0	27	32	0	33	38	34
4	0	12				0	10	28	0	0	35	37
5	0	17				0	†29	26	0	8	18	34
6	0	20				0	36	25	0	15	18	29
7	0	20				0	30	6	0	17	11	33
8	0	19				0	26	0	0	13	4	41
9	0	18				0	29	0	0	0	7	36
10	0	23				0	33	0	0	0	32	30
11	0	27				0	33	0	0	0	49	35
12	0	27				0	28	0	0	32	46	34
13	0	27				0	31	0	0	41	53	30
14	0	29				0	44	0	9	43	50	38
15	0	35				†14	40	0	16	39	53	33
16	0	18				†18	33	23	32	35	48	36
17	17	0				0	35	41	32	13	53	38
18	19	0				0	31	59	35	†1	53	29
19	18	0				0	26	65	32	1	41	26
20	18	0				0	24	78	29	1	38	26
21	20	0				0	30	48	27	1	40	16
22	21	25				†14	41	24	32	35	39	33
23	21	40				†22	43	37	52	45	34	30
24	20	44				†25	36	0	60	46	33	38
25	20	43				†25	41	22	62	52	43	34
26	20	43				26	41	26	42	48	46	35
27	18	43				24	41	21	0	52	44	38
28	19	43				24	30	0	0	50	38	38
29	18	46				12	29	0	0	50	37	38
30	17	31				0	29	0	31	53	24	19
31	11	-				4	-	0	0	50	29	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 6-30, 1936.....						1,068	59	18	42.7	2,120		
May.....						1,454	68	30	46.9	2,880		
June.....						918	-	-	30.6	1,620		
July.....						608	59	0	19.6	1,210		
August.....						1,133	53	0	36.5	2,850		
September.....						753	40	0	25.1	1,490		
The period.....										11,770		
October 1936.....						277	21	0	8.9	549		
November.....						553	46	0	21.8	1,300		
December.....						0	0	0	0	0		
Calendar year.....												
January 1937.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						208	26	0	6.7	413		
April.....						968	44	10	32.3	1,920		
May.....						616	78	0	19.9	1,220		
June.....						491	62	0	16.4	974		
July.....						852	53	0	27.5	1,690		
August.....						1,160	53	4	37.4	2,300		
September.....						981	41	16	32.7	1,950		
Water year 1936-37.....						6,206	78	0	17.0	12,320		

†Gage-height record incomplete; discharge computed on basis of partly estimated gage heights and knowledge of local conditions.

‡Gage height missing; discharge computed on basis of daily staff-gage reading by Middle Rio Grande Conservancy District.

Chical acequia at head, at Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}54'$ , long.  $106^{\circ}41'$ , in NW $\frac{1}{4}$ SE $\frac{1}{4}$ , sec. 24, T. 8 N., R. 2 E., about 500 feet below heading from Peralta main canal, half a mile south-east of Isleta. Zero of gage is 4,882.08 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 33 second-feet Aug. 13 (gage height, 2.81 feet); no flow at times.

Maximum discharge during water year 1936-37, 29 second-feet May 14; maximum gage height, 2.97 feet July 24; no flow at times.

Remarks.- Records fair except those for periods of incomplete or missing gage-height record and those for April to June 1936, which are poor. Acequia diverts water from Peralta main canal for irrigation; prior to July 6, 1936, it diverted from Chical lateral. No diversion from acequia above station.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	12	4.0	7.0	5.7	9.2
2							-	10	4.5	8.4	6.8	9.4
3							-	8.2	5.8	6.4	4.1	11
4							-	11	5.8	6.0	4.4	13
5							-	8.9	6.0	7.4	5.5	9.1
6							-	5.5	6.8	0	5.7	8.4
7							15	4.9	6.2	0	3.2	5.4
8							-	3.7	8.2	0	0	6.8
9							-	3.3	7.4	0	.2	5.1
10							-	4.5	2.6	0	2.7	2.7
11							.9	8.6	4.4	0	6.1	1.5
12							0	11	5.5	0	6.8	2.6
13							4.5	10	2.8	0	23	0
14							1.8	11	2.8	0	22	3.7
15							3.7	10	2.4	0	7.0	4.4
16												
17							3.7	10	2.7	0	3.0	5.5
18							5.7	0	1.2	0	11	4.1
19							6.6	5.8	.8	0	13	2.0
20							3.0	20		0	9.8	0
21							5.2	22		0	5.2	0
22							7.3	20		9.9	0	0
23							2.2	14	*5	17	3.6	0
24							7.8	9.8		23	2.4	2.5
25							12	5.3		26	1.9	1.0
26							12	5.1	11	5.6	0	1.5
27												
28							10	4.0	12	0	0	2.3
29							12	3.4	17	7.7	0	0
30							16	4.8	11	1.8	0	0
31							12	4.6	6.4	6.4	4.2	0
							18	4.7	4.0	14	13	0
							-	0	-	10	16	-

\*Gage-height record incomplete; discharge computed on basis of recorded range in stage, engineers' notes, and knowledge of regulation.

†Gage height missing; discharge computed on basis of records of operation furnished by Rio Grande Conservancy District.

Discharge, in second-feet, of Chical acequia at head, at Isleta, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	*3.0	10	0	11	0	9.1
2	0	0				0	1.5	5.0	0	7.7	3.1	13
3	0	0				0	6.3	11	0	5.8	3.3	12
4	0	0				0	2.0	7.5	0	5.0	4.0	10
5	0	0				0	2.1	6.7	0	4.2	.9	15.6
6	0	0				0	4.9	8.2	0	3.4	3.0	16.2
7	0	0				0	4.2	9.7	0	7.3	.9	11
8	0	0				0	3.9	7.8	0	17	0	11
9	0	1.9				0	6.2	0	0	17	8.8	14.7
10	0	.4				0	6.4	5.8	0	9.8	11	15.3
11	0	2.5				0	0	11	4.8	.2	18	15.9
12	0	2.2				0	4.9	15	6.1	0	18	14.8
13	0	5.6				0	6.8	21	9.8	4.2	17	9.8
14	0	9.5				0	7.6	24	13	4.6	16	17.8
15	0	4.1					6.6	18	13	9.1	16	13.0
16	0	2.0					3.2	7.0	14	6.8	18.2	11.2
17	0	0					3.6	11	14	4.0	19.2	4.8
18	0	0					3.1	12	14	0	13.9	2.8
19	0	0					2.0	11	7.2	1.3	10	0
20	0	0				+4.0	4.2	13	6.1	.5	14.9	1.7
21	0	0					11	13	9.6	0	14.2	2.6
22	0	0					11	8.6	12	16	10	8.3
23	4.8	2.7					8.1	.8	12	21	13.4	8.5
24	8.0	4.8					7.9	.2	6.6	21	16.0	9.2
25	3.4	5.1					6.6	0	6.4	23	15.7	5.2
26	.0	5.3				0	7.9	0	9.0	16	17.2	2.5
27	1.6	5.3				6.3	6.1	0	0	9.1	18.7	3.6
28	1.6	8.0				3.4	5.8	0	0	9.8	18.1	3.7
29	2.3	11				0	8.2	0	0	8.4	10	2.0
30	2.5	3.9				4.8	9.0	0	9.4	6.0	10	1.9
31	2.1	-				*5.0	-	0	-	5.2	18.7	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
April 11-30, 1936.....	150.4					18	0	7.52	298			
May.....	256.1					22	0	8.28	508			
June.....	173.3					-	-	5.78	344			
July.....	158.6					26	0	5.12	315			
August.....	186.3					23	0	6.01	370			
September.....	111.2					13	0	3.71	221			
The period.....									2,060			
October 1936.....	26.3					8.0	0	.85	52			
November.....	74.3					11	0	2.48	147			
December.....	0					0	0	0	0			
Calendar year.....												
January 1937.....	0					0	0	0	0			
February.....	0					-	0	0	0			
March.....	68.5					-	0	2.21	136			
April.....	164.1					11	0	5.47	325			
May.....	237.3					24	0	7.65	471			
June.....	168.4					14	0	5.61	334			
July.....	254.4					23	0	8.21	505			
August.....	198.2					18	0	6.39	393			
September.....	187.0					13	0	5.57	331			
Water year 1936-37.....	1,358.5					24	0	3.72	2,690			

\*Gage-height record incomplete; discharge computed on basis of recorded range in stage, engineers' notes, and knowledge of regulation.

†Gage height missing; discharge computed on basis of records of operation furnished by Rio Grande Conservancy District.

‡Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

## RIO GRANDE BASIN

Peralta main canal near Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}54'$ , long.  $106^{\circ}41'$ , in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 8 N., R. 2 E., 600 feet below wasteway,  $1\frac{1}{2}$  miles below heading from Rio Grande at Isleta diversion, and  $\frac{1}{2}$  miles south of Isleta. Zero of gage is 4,873.16 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge observed during period ending Sept. 30, 1936, 254 second-feet May 15 (result of discharge measurement); maximum gage height recorded, 6.67 feet Aug. 5; no flow at times.  
Maximum discharge recorded during water year 1936-37, 267 second-feet Sept. 3 (gage height, 6.81 feet); no flow at times.

Remarks.- Records fair except those for periods of fragmentary gage-height record or when discharge was computed from once-daily staff-gage readings and those for April to June 1936, which are poor. Canal diverts water from Rio Grande for irrigation. Chical lateral, Chical acequia, and Cacique acequia diverts above station.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	171	204	163	208	204
2							-	129	204	159	213	187
3							-	163	204	136	125	200
4							-	171	195	143	137	200
5							-	175	204	151	222	200
6							-	187	191	167	213	204
7							†184	195	89	171	200	191
8								187	102	167	140	*175
9							} 165	200	208	137	140	*179
10								204	171	141	183	159
11							} †147	218	175	118	151	139
12								222	191	0	113	171
13							} †170	226	204	74	187	179
14								236	200	159	175	200
15								254	200	179	115	213
16								†220	†170	167	59	204
17							195	†191	†135	163	208	187
18							191	222	99	167	208	171
19							179	208	102	179	213	144
20							†151	200	123	163	137	163
21							†143	183	123	139	0	159
22							†169	†179	119	66	142	167
23							†196	175	102	28	195	167
24							†222	54	80	20	175	159
25							†222	†75	107	6	46	147
26							†222	†96	167	57	0	107
27							222	117	167	175	0	0
28							208	171	175	127	95	0
29							206	171	175	167	167	0
30							213	171	175	191	195	0
31							-	130	-	195	208	-

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

†Discharge computed from once-daily readings of staff gage, furnished by Middle Rio Grande Conservancy District.

‡Gage-height record incomplete or missing; discharge computed on basis of partly estimated gage heights, staff-gage readings, and knowledge of regulation or interpolated.

Discharge, in second-feet, of Peralta main canal near Isleta, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	*150	171	*78	163	213	204
2	59	0				0	187	175	*91	171	226	187
3	100	0				0	155	183	70	163	231	218
4	101	60				0	131	183	76	167	206	222
5	91	111				†47	131	175	76	191	170	218
6	97	111				†70	147	179	71	204	87	195
7	103	109				†98	151	183	130	218	0	*156
8	104	115				†114	144	123	139	222	0	*183
9	102	113				†114	151	0	139	222	206	191
10	98	151				†114	155	56	139	213	218	171
11	98	167				†114	151	147	143	208	240	171
12	99	156				†114	139	171	147	213	231	175
13	92	163				†114	139	195	143	204	226	175
14	98	167				†114	179	195	155	213	222	183
15	101	179				†114	191	200	167	218	240	183
16	155	88				†114	183	187	191	200	240	200
17	179	0				†114	171	191	191	*146	249	179
18	167	0				†114	119	200	231	0	249	127
19	139	0				†114	175	208	240	0	222	107
20	143	0				†114	175	213	240	0	213	147
21	143	0				†114	195	222	226	0	204	127
22	139	115				†123	187	213	218	186	200	127
23	147	183				†131	195	180	208	236	187	127
24	135	204				†123	187	0	208	240	66	139
25	135	208				†114	175	134	204	240	205	113
26	139	218				†131	187	195	160	240	222	87
27	131	218				134	183	173	0	236	226	163
28	131	226				143	183	0	0	240	200	187
29	123	236				147	179	0	0	236	*130	179
30	131	164				135	171	0	123	240	*46	114
31	89	-				131	-	0	-	240	*84	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 7-30, 1936.....	4,417	222	-	184	8,780
May.....	5,500	249	54	177	10,910
June.....	4,761	208	80	159	9,440
July.....	4,095	195	0	132	8,120
August.....	4,870	222	0	147	9,080
September.....	4,576	213	0	153	9,080
The period.....					55,370
October 1936.....	3,569	179	0	115	7,080
November.....	3,465	236	0	116	6,870
December.....	0	0	0	0	0
Calendar year.....					
January 1937.....	0	0	0	0	0
February.....	0	0	0	0	0
March.....	3,123	147	0	101	6,190
April.....	4,946	195	119	165	9,810
May.....	4,452	222	0	144	8,830
June.....	4,204	240	0	140	8,340
July.....	5,870	240	0	183	11,250
August.....	5,660	249	0	183	11,230
September.....	4,955	222	87	165	9,830
Water year 1936-37.....	40,044	249	0	110	79,430

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

†Discharge computed from once-daily readings of staff gage, furnished by Middle Rio Grande Conservancy District.

Peralta main canal at end, near Belen, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}42'$ , long.  $106^{\circ}44'$ , in SE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 4, T. 5 N., R. 2 E., 400 feet above outlet to Rio Grande and  $2\frac{1}{2}$  miles northeast of Belen. Zero of gage is 4,807.63 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during year ending Sept. 30, 1936, 163 second-feet May 30; maximum gage height, 4.50 feet July 11 (caused by backwater from Rio Grande); no flow at times.

Maximum discharge observed during water year 1936-37, 202 second-feet Sept. 1; maximum gage height observed, 5.86 feet May 23; no flow at times.

Remarks.- Records good except those for periods of missing or fragmentary gage-height record, Oct. 10-12, 1936 (interpolated), Aug. 7, 8, 30, 31, Sept. 2, 3, 1937 (computed on basis of partly estimated gage heights and knowledge of local conditions), and those for July 8-12, 1936, Mar. 27 to May 4, 1937 (stage-discharge relation affected by backwater from Rio Grande), all of which are poor. Discharge represents return flow from irrigation. No records for Mar. 1-26.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								--	82	30	39	39
2								--	74	23	38	32
3								--	76	24	22	38
4								--	59	19	10	35
5								--	62	34	32	32
6								--	40	36	38	45
7								--	65	22	37	44
8								--	74	17	19	48
9								--	55	10	8.7	34
10								--	35	3.4	34	38
11								--	21	39	9.3	49
12								--	48	18	4.3	67
13								--	61	29	5.6	77
14								--	71	52	20	88
15								--	53	45	16	102
16								--	40	47	5.0	113
17								--	15	37	20	104
18								--	1.5	50	30	97
19								--	.7	55	40	85
20								--	.6	45	32	97
21								--	5.9	12	10	88
22								--	18	4.1	12	82
23								--	14	.6	51	80
24								--	2.5	.6	52	86
25								--	30	.5	21	63
26								--	19	.5	1.6	.75
27								--	23	.5	.6	13
28								--	44	.5	2.2	0
29								20	37	5.4	15	0
30								55	24	9.9	35	0
31								75	--	21	42	--

Discharge, in second-feet, of Peralta main canal at end, near Belen, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	9.4	12			-	15	18	30	36	96	89
2	22	0	0			-	20	49	59	5.2	85	25
3	95	0	0			-	36	42	50	22	83	20
4	90	42	0			-	41	30	67	68	61	34
5	89	48	0			-	30	24	56	54	31	33
6	86	26	0			-	14	27	55	27	13	65
7	95	18	0			-	43	26	53	19	2.0	31
8	96	12	0			-	32	21	40	13	1.0	46
9	100	9.4	0			-	12	3.0	34	16	1.2	37
10	97	19	0			-	7.5	9.0	31	41	9.6	46
11	94	23	0			-	7.8	39	27	83	2.0	51
12	91	38	0			-	3.8	7.2	24	76	5.5	65
13	88	30	0			-	1.7	7.4	33	75	12	71
14	88	25	0			-	3.0	12	14	49	31	60
15	92	40	0			-	11	26	5.9	34	80	54
16	94	42	0			-	11	53	11	32	61	56
17	105	0	0			-	16	17	3.8	23	35	63
18	96	0	0			-	18	6.2	2.2	8.8	38	49
19	62	0	0			-	12	14	31	.7	36	36
20	58	0	0			-	7.9	23	87	2.0	19	52
21	59	0	0			-	4.8	14	78	1.2	24	36
22	60	50	0			-	4.0	45	45	0	24	29
23	60	67	0			-	2.4	119	33	0	29	23
24	63	30	0			-	8.4	30	32	1.0	36	31
25	65	23	0			-	14	43	48	22	40	44
26	59	32	0			-	13	66	62	32	18	26
27	56	43	0			22	11	80	30	35	42	45
28	49	45	0			21	12	26	3.8	42	62	52
29	40	58	0			13	19	4.1	.2	35	64	69
30	37	62	0			10	19	1.9	42	54	45	70
31	60	-	0			8.4	-	.6	-	77	70	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 1936 .....						1,149.2	82	0.6	36.3	2,280		
July .....						681.0	55	.5	22.3	1,370		
August .....						700.3	52	.6	22.6	1,390		
September .....						1,761	113	0	58.4	3,470		
The period .....										8,510		
October 1936 .....						2,248	105	0	72.5	4,460		
November .....						789.8	67	0	26.3	1,570		
December .....						12	12	0	.4	24		
Calendar year .....												
January 1937 .....						0	0	0	0	0		
February .....						0	0	0	0	0		
March 27-31 .....						74.4	22	8.4	14.9	148		
April .....						450.3	43	1.7	15.0	898		
May .....						833.4	119	.6	28.5	1,750		
June .....						1,087.6	87	.2	36.3	2,160		
July .....						983.9	83	0	31.7	1,950		
August .....						1,156.3	96	1.0	37.3	2,290		
September .....						1,413	89	20	47.1	2,800		

Cacique acequia at head, at Isleta, N. Mex.

Location.- April 11-22, 1936: Water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, about 50 feet below former heading from Chical lateral at independent datum.

May 18, 1936 to February 1937: Staff gage on right bank about 30 feet below present gage. Zero of gage was 4,881.76 feet above mean sea level (general adjustment of 1929).

March 1937 to May 3, 1937: Staff gage of Middle Rio Grande Conservancy District on right bank about 30 feet below present gage and at same datum.

May 4 to Sept. 30, 1937: Water-stage recorder, lat. 34°54', long. 106°41', in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 8 N., R. 2 E., about 30 feet below heading from Peralta main canal, and half a mile southeast of Isleta.

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge observed during period ending Sept. 30, 1936, 28 second-feet April 20 (gage height 2.18 feet); no flow at times.

Maximum discharge observed water year 1936-37, 39 second-feet Sept. 1; maximum gage height, 2.11 feet July 28; no flow at times.

Remarks.- Records poor for April to May 3, 1937; others fair. Gage read twice a day June 4 to Nov. 30, 1936, and once a day Mar. 15 to May 3, 1937. Discharge for periods of missing gage heights, Apr. 1-10, and Apr. 23-June 3, 1936 computed on basis of 5 discharge measurements and data regarding diversions furnished by the Middle Rio Grande Conservancy District. Acequia diverts for irrigation from left bank of Peralta Main Canal.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										9.0	16	12
2										11	15	15
3							10		15	12	8	12
4									15	6.5	16	6.7
5							0	10	16	6.5	18	11
6									16	9.7	15	6.5
7									16	10	14	4.0
8							10		17	9.0	7	4.7
9								12	16	8.7	8	9.4
10							0		8.7	11	16	4.9
11							0		9.7	0	8	2.6
12							0		12	0	0	13
13							12		6.0	6.2	18	8.7
14							12		10	11	5.2	14
15							6.0		7.0	13	2.3	14
16							14		12	7.7	6.0	15
17							16		5.7	6.0	15	6.2
18							0	8.4	2.8	8.7	16	12
19							0		3.3	9.4	17	7.3
20							16		10	8.7	15	6.2
21							23	7.5	14	10	0	6.2
22							6.8		16	0	12	6.2
23							0		13	0	10	6.5
24							0	6.6	4.0	0	5	5.7
25							10		17	0	0	4.4
26							0	11	16	0	0	2.7
27							0		17	3.8	0	0
28							0	15	16	0	8	0
29							0		18	5.7	16	0
30							0	15	8.7	9.4	6.2	0
31							-		-	18	9.4	-



Discharge, in second-feet, of Cacique acequia at head, at Isleta, N. Mex., 1936-37--continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	8.8	22	1.0	17	17	24
2	0	0				0	11	24	.1	17	23	24
3	0	0				0	5.4	21	0	12	22	20
4	0	1.8				0	0	22	0	14	17	16
5	0	.2				0	6.6	20	0	21	12	18
6	0	.2				0	8.6	21	0	24	6.1	15
7	0	.2				0	8.4	22	0	24	0	13
8	0	0				0	8.4	14	0	23	0	17
9	0	.5				0	8.2	0	0	24	21	15
10	0	0				0	10	6.5	12	18	24	15
11	0	6.5				0	5.1	17	20	0	28	16
12	0	3.1				0	10	18	20	12	25	16
13	0	6.5				0	10	14	22	26	25	15
14	0	6.7				0	14	16	26	25	25	16
15	0	7.7				8.0	14	24	27	24	29	13
16	0	3.7				8.0	9.8	22	26	21	28	14
17	0	0				8.0	9.8	26	23	11	27	14
18	0	0				10	2.0	19	24	.4	26	8.7
19	1.8	0				8.0	9.6	15	20	0	24	6.2
20	1.5	0				10	6.9	26	22	0	21	10
21	1.6	0				10	16	24	25	0	22	4.6
22	1.6	0				10	16	23	25	22	24	10
23	1.1	6.7				12	15	18	26	27	24	12
24	1.8	12				10	12	0	27	25	22	12
25	1.3	7.7				4.3	11	7.7	25	25	25	11
26	1.2	4.7				0	13	14	17	24	28	9.4
27	1.3	11				8.0	12	11	0	22	27	14
28	1.4	5.2				3.6	14	0	0	29	25	17
29	2.6	4.7				6.1	18	0	.9	21	23	16
30	2.1	3.3				5.2	25	0	13	26	17	10
31	.5	-				5.2	-	0	-	26	18	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
April 1936.....	195.8					23	0	6.53	388			
May.....	309.5					-	-	9.98	614			
June.....	364.9					17	2.8	12.2	724			
July.....	211.0					18	0	6.81	419			
August.....	299.1					18	0	9.65	593			
September.....	216.9					15	0	7.23	430			
The period.....									3,170			
October 1936.....	19.8					2.6	0	.64	39			
November.....	92.4					12	0	3.08	183			
December.....	0					0	0	0	0			
Calendar year .....												
January 1937 .....	0					0	0	0	0			
February.....	0					0	0	0	0			
March.....	128.4					12	0	4.08	251			
April.....	318.6					25	0	10.6	632			
May.....	487.2					26	0	15.1	927			
June.....	402.0					27	0	13.4	797			
July.....	580.4					29	0	18.1	1,110			
August.....	655.1					29	0	21.1	1,300			
September.....	421.9					24	4.6	14.1	837			
Water year 1936-37 .....	3,063.8					29	0	8.39	6,080			

## Public wasteway near Belen, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}42'$ , long.  $106^{\circ}44'$ , in SW $\frac{1}{4}$  sec. 4, T. 5 N., R. 2 E., at highway crossing, three-quarters of a mile above outlet to Lower Peralta riverside drain and 3 miles northeast of Belen. Zero of gage is 4,806.28 feet above mean sea level (general adjustment of 1923).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 96 second-feet Sept. 26 (gage height, 4.16 feet); no flow at times.

Maximum discharge observed during water year 1936-37, 100 second-feet June 25 (gage height, 4.26 feet); no flow at times.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are fair, and those for periods of incomplete or missing gage-height record, which are poor. Discharge represents return flow from irrigation. No records for Mar. 1-26, 1936.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	162	29	37	38
2								-	68	26	55	43
3								-	152	27	57	54
4								-	36	40	18	51
5								-	44	44	55	62
6								-	136	25	39	80
7								-	125	23	*48	57
8								-	121	23	*15	80
9								-	13	24	*8.0	50
10								-	22	24	34	41
11								-	35	44	21	50
12								-	30	12	24	52
13								-	34	*6.2	24	69
14								-	24	*15	29	69
15								-	24	34	34	74
16								-	24	48	17	74
17								-	19	49	22	68
18								-	8.0	42	31	62
19								-	4.4	32	38	57
20								-	5.8	32	54	57
21								35	12	25	23	59
22								41	11	*22	11	55
23								36	11	*9.0	68	54
24								30	12	*1.0	66	44
25								20	17	1.1	57	44
26								32	18	.8	*12	64
27								50	18	7.2	*.3	*27
28								45	30	4.1	7.8	*1.5
29								46	23	9.6	47	*.5
30								152	32	20	37	0
31								157	-	35	43	-

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

†Gage height missing; discharge estimated.

Discharge, in second-feet, of Public wasteway near Belen, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	*17	17			-	69	47	*1	50	67	7.4
2	0	*1.0	0.2			-	67	62	.2	69	54	17
3	0	*0	0			-	56	45	.1	76	49	26
4	0	0	0			-	46	40	.1	50	54	33
5	0	12	0			-	26	38	.2	36	47	60
6	0	35	0			-	49	26	.1	39	25	42
7	0	34	0			-	66	29	7.0	33	8.9	29
8	0	37	0			-	50	37	55	34	*.5	54
9	0	26	0			-	*47	*14	54	44	*2.0	68
10	0	26	0			-	*34	*.4	54	53	9.2	66
11	0	37	0			-	47	*0	47	55	9.1	60
12	0	29	0			-	*29	*.6	54	56	9.4	80
13	0	25	0			-	*21	18	51	69	14	64
14	0	34	0			-	24	23	31	68	13	60
15	0	30	0			-	46	37	34	72	49	60
16	6.6	27	0			-	47	28	35	65	35	57
17	28	*4.6	0			-	40	15	21	59	27	54
18	48	*.2	0			0.3	34	11	6.0	*24	35	48
19	48	*.1	0			-	24	12	25	*1.5	41	37
20	57	0	0			-	38	14	31	*.1	42	35
21	66	0	0			-	37	39	19	0	53	29
22	69	0	0			-	45	42	26	2.0	68	28
23	69	*13	0			-	+60	35	34	7.0	66	54
24	66	*25	0			-	-	21	48	3.8	49	66
25	66	30	0			-	-	14	77	16	47	63
26	66	21	0			-	+50	47	95	21	47	45
27	64	24	0			-	44	+45	37	44	50	51
28	60	36	0			53	+50	48	*1.2	44	52	66
29	51	40	0			76	+50	32	*.2	51	59	74
30	57	57	0			60	+55	*9	2.2	50	24	82
31	55	-	0			59	-	*2	-	48	5.6	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 21-23, 1936.....	444	57	20	40.4	881
June.....	774.2	68	4.4	25.8	1,540
July.....	734.0	49	.8	23.7	1,460
August.....	1,055.1	68	.3	34.0	2,090
September.....	1,496.6	74	0	49.9	2,970
The period.....					8,940
October 1936.....	876.6	69	0	28.3	1,740
November.....	620.9	57	0	20.7	1,230
December.....	17.2	17	0	.55	34
Calendar year.....					
January 1937.....	0	0	0	0	0
February.....	0	0	0	0	0
March 27-31.....	292	76	44	58.4	579
April.....	1,352	69	21	45.1	2,680
May.....	853.0	67	0	27.5	1,690
June.....	853.3	95	.1	28.4	1,690
July.....	1,234.4	76	0	39.8	2,450
August.....	1,111.7	68	.5	35.9	2,210
September.....	1,515.4	82	7.4	50.5	3,010

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.  
†Gage-height record incomplete; discharge computed on basis of two discharge measurements and partial gage heights.

La Constancia acequia at end, near Belen, N. Mex.

Location.- Water-stage recorder, lat. 34°39', long. 106°44', in S $\frac{1}{2}$  sec. 16, T. 5 N., R. 2 E., about 1,000 feet above outlet to Rio Grande and 2 miles east of Belen. Prior to May 6, 1937, staff gage at same site and datum. Zero of gage is 4,805.68 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge observed during period July 8 to Sept. 30, 1936, 16 second-feet July 8 (gage height, 1.85 feet); no flow at times.

Maximum discharge observed during water year 1936-37, 36 second-feet May 28 (gage height, 2.40 feet); no flow at times.

Remarks.- Records for July to November 1936 are poor, as are also those for Aug. 25, 26, Sept. 4-7, 1937, which were estimated; others are good. Discharge for July to November 1936, computed on basis of three to six gage readings a week, with that for days when gage was not read estimated or interpolated. Discharge represents return flow from irrigation to Rio Grande. No records for Jan. 1 to May 5, 1937.

Discharge, in second-feet, 1936-37

Day	1936						1937					
	May	June	July	Aug.	Sept.	Oct.	Nov.	May	June	July	Aug.	Sept.
1		-	-	0	9.9	0	1.0	-	0	0.2	11	2.1
2		-	-	1	.9	0	.2	-	0	9.4	8.8	3.2
3		-	-	3	11	0	0	-	0	12	9.3	.2
4		-	-	4.4	9.3	0	0	-	0	6.9	6.8	
5		*19	-	8.8	8	0	0	-	0	4.0	5.0	
6		-	-	5.0	7	0	4.6	5.5	0	3.2	3.0	4
7		-	-	5.3	6	0	5.4	7.2	0	2.8	1.7	
8		-	16	4	4.8	0	6.2	5.1	2.8	2.4	.1	
9		-	14	3	6.6	0	7.0	3.5	11	3.9	.1	
10		-	11	1.7	2.7	0	2.2	.1	8.5	4.2	.8	5.5
11		-	7	.1	1.7	0	3.3	0	5.5	6.7	.5	2.0
12		*2.2	3	0	2	0	5.6	.1	3.7	7.1	.6	2.8
13		-	.1	.6	3	0	4.2	.1	2.2	3.4	1.1	4.7
14		-	1	3.3	4.2	0	2.1	0	1.0	5.0	1.4	6.5
15		-	2	.6	9.6	0	3.0	.5	.3	9.3	.5	3.9
16		-	2.4	2	10	0	3.8	3.0	.8	9.8	.6	4.7
17		-	2.7	3.1	9.3	0	4.6	3.0	2.7	6.5	1.9	2.1
18		-	3.6	2	12	0	0	5.5	.5	3.6	.5	7.9
19		-	4.5	.1	10	7.9	0	.9	.5	0	8.6	
20		-	5.3	.8	8	11	0	0	.6	0	.3	4.5
21		-	4.6	6.8	6.8	6.8	0	.2	1.2	0	.4	8.6
22		-	1.1	.9	12	8.8	0	.3	3.4	0	1.8	7.6
23		-	2.2	5	12	9.0	0	6.6	3.6	0	5.8	12
24		-	.9	8.8	12	7.9	1.6	3.6	2.1	0	6.3	9.6
25		-	.5	5.3	3.8	7.4	3.3	0	3.7	0	6	4.1
26		-	.2	6.3	7.3	7.0	1.0	2.8	5.8	0	6	7.6
27		*3.5	0	.6	0	8.8	1.1	7.5	.7	.1	5.9	10
28		-	0	.5	0	7.9	0	4.4	0	4.3	8.1	11
29		-	0	1	0	5.3	0	.1	0	3.2	9.9	11
30		-	.5	2	0	6.6	0	0	0	1.8	5.6	12
31		-	0	2.7	-	1.7	-	0	-	9.3	4.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July 8-31, 1936.....						82.6	16	0	3.44	164		
August.....						88.7	8.8	0	2.86	176		
September.....						189.9	12	0	6.33	377		
October 1936.....						96.1	11	0	3.10	191		
November.....						60.2	7.0	0	2.01	119		
December.....						0	0	0	0	0		
May 6-31, 1937.....						60.0	7.5	0	2.31	119		
June.....						60.6	11	0	2.02	120		
July.....						121.4	12	0	3.92	241		
August.....						114.2	11	0	3.68	227		
September.....						187.6	12	.2	6.26	372		

\*Discharge measurement.

## Belen high-line canal near Isleta, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}54'$ , long.  $106^{\circ}43'$ , in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 8 N., R. 2 E., at bridge on U. S. Highway 85,  $1\frac{1}{2}$  miles southwest of Isleta and  $1\frac{1}{2}$  miles below heading from Rio Grande at Isleta diversion. Zero of gage is 4,875.27 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 406 second-feet June 30 (gage height, 5.33 feet); no flow at times.

Maximum discharge during water year 1936-37, 347 second-feet Apr. 20; maximum gage height, 5.30 feet July 22; no flow at times.

Remarks.- Records good except those for April to June 1936 and March to May 1937, which are fair, and that of July 12, 1936, which was computed on basis of knowledge of regulation and is poor. Discharge for Feb. 26 to Mar. 24 computed on basis of daily staff-gage readings furnished by Middle Rio Grande Conservancy District. Canal diverts water from Rio Grande for irrigation. Four small diversions from canal above station provide water to irrigate an area of about 25 acres.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-		-	205	283	307	307	125
2					-		-	98	283	323	323	62
3					-		-	149	275	323	199	29
4					-		-	226	268	315	158	42
5					-		-	238	260	315	283	58
6					-		-	245	195	307	307	84
7					-		-	238	214	299	252	149
8					-		-	222	268	291	191	194
9					-		-	179	299	291	188	227
10					-		187	186	268	230	299	252
11					-		148	238	291	201	307	153
12					-		149	245	307	5	315	225
13					-		216	268	331	169	315	260
14					*248		230	276	323	252	283	268
15					-		226	283	299	252	212	268
16					-		215	260	275	238	216	260
17					-		212	275	262	245	283	226
18					-		146	283	201	226	252	212
19					*94		149	283	188	190	245	215
20					-		211	299	291	211	179	220
21					-		224	291	355	55	0	214
22					*78		238	291	301	4	136	214
23					-		221	240	174	4	193	218
24					-		238	210	159	4	177	208
25					-		174	283	291	78	174	193
26					-		170	283	331	162	168	142
27					-		211	291	323	230	165	0
28					-		222	283	331	169	180	0
29					-		221	283	364	230	171	0
30					-		216	250	355	323	131	0
31					-		-	220	-	283	128	-

\*Discharge measurement.

Discharge, in second-feet, of Belen high-line canal near Isleta, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	191	268	0	201	221	260
2	0	0				0	207	275	0	187	230	275
3	0	0				0	212	268	0	171	238	275
4	0	101				0	187	260	0	151	148	245
5	0	159				0	211	228	0	168	202	198
6	46	149				37	228	260	0	175	252	205
7	110	153				32	228	260	0	200	252	171
8	115	153				0	228	108	0	186	198	190
9	113	145				0	226	0	0	182	238	230
10	106	155				40	224	56	0	175	124	209
11	105	154				80	226	148	0	170	91	230
12	111	149				80	230	149	0	177	111	238
13	102	177				81	275	159	0	121	252	245
14	109	191				81	260	178	0	81	260	283
15	136	198				137	283	178	0	179	245	283
16	166	109				138	283	185	4	170	260	275
17	188	0				201	252	194	8	153	227	263
18	186	0				202	188	177	3	169	212	245
19	178	0				202	275	158	2	224	208	228
20	182	0				202	323	275	180	218	220	268
21	173	0				204	315	283	260	174	245	204
22	160	138				204	307	260	291	260	238	171
23	164	238				205	307	192	291	299	252	154
24	155	252				205	299	15	263	268	283	164
25	161	245				193	280	134	268	299	275	230
26	157	245				188	283	268	167	268	291	260
27	160	260				180	291	203	0	291	260	263
28	149	252				195	275	0	0	275	291	245
29	151	238				201	260	0	0	291	291	245
30	155	168				188	268	0	177	291	283	141
31	121	-				188	-	0	-	275	260	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
April 10-30, 1936.....	4,226	238	146	201	8,380
May.....	7,622	299	98	246	16,120
June.....	5,355	364	159	278	16,570
July.....	6,532	323	4	211	12,980
August.....	6,727	323	0	217	13,340
September.....	4,718	268	0	157	9,360
The period.....					75,730
October 1936.....	5,639	188	0	117	7,220
November.....	4,029	260	0	134	7,990
December.....	0	0	0	0	0
Calendar year.....					
January 1937.....	0	0	0	0	0
February.....	0	0	0	0	0
March.....	5,684	206	0	118	7,270
April.....	7,608	323	187	263	16,080
May.....	5,119	293	0	165	10,150
June.....	1,934	291	0	64.5	5,840
July.....	6,449	299	51	208	12,790
August.....	7,158	291	91	231	14,200
September.....	6,918	283	141	231	13,720
Water year 1936-37.....	46,612	323	0	127	92,260

\*Discharge measurement furnished by Middle Rio Grande Conservancy District.

## Huning lateral wasteway near Los Lunas, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}47'$ , long.  $106^{\circ}44'$ , in NE $\frac{1}{4}$  sec. 4, T. 6 N., R. 2 E., at outlet to upper Belen riverside drain,  $1\frac{1}{4}$  miles south of Los Lunas.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 67 second-feet July 26 (gage height, 2.74 feet); no flow at times.

Remarks.- Records good except those for periods of faulty recorder operation, May 28, June 27, 28, July 7, 8, 14, 15, 29, 30, Aug. 5-7, 11-12, which were computed on basis of partial gage-height record and knowledge of local conditions and are fair. Discharge represents return flow from irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	29	50	53
2								-	0	41	44	55
3								-	0	50	30	55
4								-	0	47	24	52
5								-	0	48	25	54
6								-	0	44	30	43
7								-	0	50	35	46
8								-	0	50	38	46
9								-	0	41	33	52
10								-	.2	43	25	53
11								-	1.7	45	.6	55
12								-	.2	49	.1	54
13								-	.2	39	32	44
14								-	.1	.5	48	55
15								-	.1	21	54	54
16								-	0	31	39	57
17								-	0	35	32	54
18								45	0	42	50	51
19								17	0	24	50	51
20								41	14	32	47	53
21								42	50	22	42	50
22								41	29	25	39	43
23								34	30	41	38	45
24								19	34	34	48	46
25								18	45	41	53	43
26								40	44	47	45	55
27								36	2.1	50	53	56
28								2.6	4.6	45	56	49
29								0	10	45	53	46
30								0	26	45	45	40
31								0	-	49	51	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 18-31 .....						335.6	45	0	24.0	666		
June.....						271.2	45	0	9.04	538		
July.....						1,205.5	50	.5	38.9	2,390		
August.....						1,209.7	56	.1	39.0	2,400		
September.....						1,510.0	57	40	50.3	3,000		
The period.....										8,990		

Belen feeder 3 wasteway at Bosque, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}34'$ , long.  $106^{\circ}46'$ , in  $W\frac{1}{2}$  sec. 18, T. 4 N., R. 2 E., about 500 feet above outlet to Rio Grande and three-quarters of a mile northeast of Bosque.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 292 second-feet May 28 (gage height, 6.47 feet); no flow at times.

Remarks.- Records good. Discharge represents waste from Belen high-line canal.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-						-	0	0	66	44
2	-	-						-	0	0	42	39
3	-	-						-	0	0	33	36
4	-	-						-	0	0	19	71
5	-	*101						-	0	0	19	89
6	-	-						13	0	0	20	81
7	-	-						27	0	4.2	15	47
8	-	-						47	0	.6	19	27
9	-	-						20	3.0	1.2	14	44
10	-	*23						9.6	5.4	0	4.5	30
11	-	-						8.0	0	0	.7	27
12	-	-						7.4	0	0	.6	32
13	-	*4.3						5.2	0	0	5.0	23
14	-	-						12	0	2.8	9.0	14
15	*86	-						16	0	.4	3.9	22
16	-	-						14	0	2.0	12	20
17	-	-						15	0	0	19	12
18	-	-						9.6	0	11	6.8	25
19	-	-						20	0	27	9.6	50
20	*87	-						25	0	20	6.5	21
21	-	-						23	0	5.0	23	13
22	*71	-						20	0	7.5	78	18
23	-	-						35	0	20	74	25
24	-	-						26	0	20	34	26
25	-	*2.4						26	0	21	48	38
26	-	-						27	0	49	35	74
27	*96	-						78	17	40	25	35
28	-	-						59	33	40	27	53
29	*64	-						0	17	32	53	43
30	-	-						0	0	40	50	54
31	-	*120						0	-	56	51	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 6-31.....						540.8	78	0	20.8	1,070		
June.....						75.4	33	0	2.51	150		
July.....						399.7	56	0	12.9	793		
August.....						822.6	78	.6	26.5	1,620		
September.....						1,183	89	12	39.4	2,350		
The period.....										5,990		

\*Discharge measurement.



Jaral lateral 2 at end, near Bosque, N. Mex.

Location.- Water-stage recorder, lat. 34°32', long. 106°46', in SE¼ sec. 30, T. 4 N., R. 2 E., at outlet to Sabinal riverside drain 1½ miles southeast of Bosque.

Records available.- June to September 1937.

Extremes.- Maximum discharge during period, 21 second-feet July 20 (gage height, 2.35 feet); no flow at times.

Remarks.- Records good except those for days of faulty recorder operation, June 12, July 8, 9, Aug. 13, 14, which were computed on basis of partial gage-height record and knowledge of local conditions and are fair. Discharge represents return flow from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	6.9	5.2	7.4
2									-	7.2	8.5	8.6
3									-	5.6	9.9	5.5
4									-	1.1	8.2	2.4
5									-	2.1	5.1	0
6									-			
7									-	.8	4.4	0
8									-	.7	6.2	.6
9									-	.6	9.8	3.1
10									-	.6	6.6	2.4
									-	.5	4.2	2.3
11									-	1.3	3.8	5.9
12									0.3	3.2	5.6	9.4
13									.2	2.7	5.5	11
14									.1	.1	4.0	9.6
15									0	.2	2.2	13
16									0	0	2.3	14
17									0	.1	3.6	13
18									0	.1	.8	13
19									0	.6	.9	6.3
20									0	1.8	2.1	6.7
21												
22									0	1.0	6.8	8.5
23									.2	1.9	6.1	7.7
24									.4	4.0	11	8.7
25									.5	3.9	5.5	8.2
26									.5	7.3	9.5	11
27												
28									.5	5.0	9.3	8.7
29									3.6	8.2	11	7.4
30									0	8.3	7.4	9.1
31									3.1	9.2	10	10
									5.2	14	11	8.3
									-	9.6	6.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June 1-30.....						14.6	5.2	0	0.77	29		
July.....						108.6	14	0	3.50	215		
August.....						192.6	11	.8	6.21	382		
September.....						221.8	14	0	7.39	440		
The period.....										1,070		

## Sabinal acequia wasteway near Bosque, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}32'$ , long.  $106^{\circ}48'$ , in SW $\frac{1}{4}$  sec. 36, T. 4 N., R. 1 E., 600 feet above outlet to Sabinal riverside drain and about  $2\frac{1}{2}$  miles south of Bosque.

Records available.- June to September 1937.

Extremes.- Maximum discharge during period, 35 second-feet July 30 (gage-height, 4.00 feet); no flow at times.

Remarks.- Records good. Discharge represents return flow from irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	16	14	22
2									-	19	18	18
3									-	16	16	19
4									-	3.4	19	9.6
5									-	8.2	11	.2
6									-	18	11	.1
7									-	17	15	2.0
8									-	15	15	12
9									-	8.9	8.7	9.8
10									-	3.0	6.9	8.1
11									-	19	7.9	16
12									-	18	9.8	9.0
13									-	13	13	15
14									-	7.5	6.7	14
15									-	3.0	24	9.6
16									-	8.4	14	14
17									-	5.4	15	11
18									-	.5	22	17
19									0	0	17	11
20									0	2.1	16	13
21									0	5.1	19	14
22									0	8.9	12	13
23									0	9.3	11	12
24									0	16	15	15
25									0	23	11	15
26									.5	14	14	12
27									3.6	9.9	13	14
28									1.0	18	11	16
29									7.3	25	20	23
30									15	26	16	18
31									-	16	15	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June 19-30.....						27.4	15	0	2.28			
July.....						372.6	26	0	12.0			
August.....						438.8	24	6.7	14.2			
September.....						382.4	23	.1	12.7			
The period.....										2,420		

## Abeytas lateral 1 near Bernardo, N. Mex.

Location.- Staff gage lat.  $34^{\circ}25'$ , long.  $106^{\circ}48'$ , in SW $\frac{1}{4}$  sec. 11, T. 2 N., R. 1 E., 200 feet above U. S. Highway 60,  $\frac{1}{2}$  miles east of Bernardo. Zero of gage is 4,723.17 feet above mean sea level (general adjustment of 1929).

Records available.- June to December 1936 (discontinued).

Extremes.- Maximum discharge observed during period, 6.1 second-feet July 9 (gage height, 1.36 feet); no flow at times.

Remarks.- Records poor. Gage read two or three times a week. Station is below practically all irrigated land.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0	*1.9		
2									0	1.9		
3									0	*2.0		
4									0	*2.2		
5									0	*2.4		
6									0	2.6		
7									0	*3.8		
8									0	6.1		
9									0	6.1		
10									*1.0	*3.0		
11									*1.5	0		
12									*2.0	0		
13									2.5	0		
14									*1.9	0		
15									*1.4	0		
16									*.8	0		
17									.5	0		
18									*.2	0		
19									*.1	0		
20									0	0		
21									*.3	0		
22									*.6	0		
23									.9	0		
24									0	0		
25									0	0		
26									0	0		
27									0	0		
28									0	0		
29									0	0		
30									0	0		
31									-	0		
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June.....								13.5	2.5	0	0.45	27
July.....								31.0	6.1	0	1.00	62
August.....								0	0	0	0	0
September.....								0	0	0	0	0
Water year .....												

\*Gage height missing; discharge interpolated or estimated.

Note.- No flow Oct. 1 to Dec. 31, 1936.

## RIO GRANDE BASIN

Abeytas lateral 2 at Bernardo, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}25'$ , long.  $106^{\circ}49'$ , in S $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 10, T. 2 N., R. 1 E., 200 feet below U. S. Highway 60 and three-quarters of a mile east of Bernardo. Zero of gage is 4,721.06 feet above mean sea level (general adjustment of 1929).

Records available.- June to December 1936 (discontinued).

Extremes.- Maximum discharge observed during period, 16 second-feet Sept. 24; (maximum gage height observed 1.36 feet Sept. 22-24); no flow at times.

Remarks.- Records poor. Gage read two to six times a week. Station is below practically all irrigated land.

Discharge, in second-feet, 1936

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1							*2.6	0	0	0	*1.5	
2						0	2.6	0	0	0	0	
3							*2.4	6.5	0	0	0	
4						0	*2.2	8.0	0	0	0	
5							*2.0	4.0	0	0	0	
6							1.8	8.2	0	0	0	
7							*2.5	10	0	0	.8	
8							3.2	11	0	0	*1.0	
9						*1.4	*3.6	7.7	0	0	1.3	
10							*2.7	4.3	0	0	.5	
11							*1.8	4.3	0	0	.5	
12							*.9	9.1	0	0	.5	
13						2.7	.3	.5	0	0	.3	
14						*2.1	6.9	8.8	0	0	*1.0	
15						*1.4		7.8	9.4	0	*1.6	
16						*.8	*.2	5.1	1.6	0	2.2	
17						.1		2.4	1.5	0	2.2	
18						0	.1	5.3	*6.2	0	0	
19						0	0	6.7	11	0	0	
20						0	0	1.3	*12	0	0	
21						*.2	0	0	13	0	0	
22						*.4	0	.1	15	0	0	
23						.8	0	0	15	0	0	
24						0	0	0	16	0	.7	
25						0	0	0	8.3	0	2.1	
26						0	0	0	*4.2	0	*1.7	
27						0	0	0	0	0	*1.4	
28						0	.1	0	0	0	*1.0	
29						0	0	0	0	2.2	*.6	
30						0	0	0	0	4.5	.2	
31						-	0	0	-	*3.0	-	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June.....						19.7	2.7	0	0.66	39		
July.....						29.6	3.6	0	.95	59		
August.....						111.2	11	0	3.59	221		
September.....						122.0	16	0	4.07	242		
October.....						9.7	4.5	0	0.31	19		
November.....						21.1	2.2	0	.70	42		
December.....						0	0	0	0	0		
The period.....										622		

\*Gage height missing; discharge estimated or interpolated.

## San Francisco lateral at Bernardo, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}26'$ , long.  $106^{\circ}50'$ , in NW $\frac{1}{4}$  sec. 9, T. 2 N., R. 1 E., 50 feet below U. S. Highway 60, at Bernardo, 1 mile above outlet to Rio Puerco. Zero of gage is 4,731.40 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 36 second-feet Aug.

6; maximum gage height, 2.74 feet July 7; no flow at times.

Maximum discharge during water year 1936-37, about 70 second-feet May 28, maximum gage height, 3.39 feet June 27; no flow at times.

Remarks.- Records fair except those for periods of partial gage-height record, July 13, 14, Nov. 7-9, 1936 (computed on basis of partly estimated gage heights), and those for days of flow during period of May to September 1937, which are poor. Discharge represents return flow from irrigation except that after May 27, 1937, which represents run-off from local rains. No record Mar. 1-27, 1937.

Discharge, in second-feet, 1936-37

Day	1936						1937					
	June	July	Aug.	Sept.	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.
1	-	6.5	0.8	0	0	6.4	-	6.4	12	0	0	0.1
2	-	9.1	2.4	0	0	5	-	8.4	15	0	0	0
3	-	9.1	2.5	0	0	0	-	7.4	14	0	0	0
4	-	12	6.6	0	0	0	-	6.7	12	0	0	0
5	*2.0	20	6.0	0	0	1.2	-	6.8	13	0	0	0
6	-	20	15	0	0	3.2	-	15	14	0	0	0
7	-	17	19	0	0	9	-	17	9.3	0	0	.4
8	-	6.2	9.9	0	0	11	-	17	2.1	0	0	0
9	-	7.3	7.3	0	0	13	-	14	0	0	0	0
10	-	10	4.6	0	0	15	-	8.4	0	0	0	0
11	-	13	7.6	.3	0	15	-	13	0	0	0	0
12	-	9.4	1.6	0	0	13	-	10	6.5	0	0	0
13	-	2.0	19	0	0	11	-	9.2	6.5	0	.2	0
14	-	1.8	18	.7	0	16	-	10	5.5	0	.1	0
15	-	3.0	18	2.0	0	16	-	13	7.5	0	0	0
16	-	3.3	10	4.4	0	13	-	1.0	12	0	0	.1
17	-	2.7	18	5.1	0	6.0	-	6.9	3.9	0	0	0
18	-	3.3	17	6.9	0	.3	-	14	6.7	0	0	0
19	-	5.5	15	8.0	0	0	-	4.6	8.5	0	0	0
20	-	2.7	14	7.2	0	0	-	7.0	2.9	0	0	0
21	-	4.6	0	15	0	0	-	12	6.1	0	0	0
22	*15	.2	0	15	0	0	-	12	8.5	0	0	0
23	-	0	0	15	0	2.0	-	14	13	0	0	0
24	-	0	0	12	0	6.1	-	12	5.5	0	0	0
25	-	0	0	5.2	0	2.5	-	13	.6	0	0	0
26	12	0	0	11	0	1.9	-	11	3.9	2.5	0	0
27	11	0	0	3.2	0	1.0	-	13	18	5.4	.1	0
28	24	.5	0	.3	0	2.9	0.7	15	11	.2	0	0
29	21	0	0	0	3.9	9.3	4.4	14	.8	0	0	0
30	9.2	0	0	0	3.1	.9	7.0	11	.1	0	0	0
31	-	1.1	0	-	4.7	-	5.0	-	0	-	.6	0
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 26-30, 1936.....						77.2	24	9.2	15.4	153		
July.....						170.3	20	0	5.49	338		
August.....						225.5	19	0	7.27	447		
September.....						111.3	15	0	3.71	221		
The period.....										1,160		
October 1936.....						11.7	4.7	0	0.38	23		
November.....						177.2	17	0	5.91	351		
December.....						0	0	0	0	0		
January 1937.....						0	0	0	0	0		
February.....						0	0	0	0	0		
April.....						322.8	17	1.0	10.8	640		
May.....						218.9	18	0	7.06	434		
June.....						8.1	5.4	0	.27	16		
July.....						1.0	.6	0	.03	2.0		
August.....						.6	.4	0	.02	1.2		
September.....						0	0	0	0	0		

\*Discharge measurement.

## San Francisco acequia at Bernardo, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}25'$ ,  $106^{\circ}50'$ , in  $\frac{N}{4}$  sec. 10, T. 2 N., R. 1 E., at culvert on U. S. Highway 60, half a mile southeast of Bernardo. Zero of gage is 4,727.43 feet above mean sea level (general adjustment of 1929).

Records available.- June to December 1936 (discontinued).

Extremes.- Maximum discharge observed during period, 13 second-feet Aug. 3; maximum gage height observed, 1.98 feet Sept. 22-24; no flow at times.

Remarks.- Records poor. Acequia diverts from Abeytas lateral 2 about 2 miles above station. Many diversions from acequia both above and below station.

Discharge, in second-feet, 1936

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1						-	+8.0	4.7	0		0	
2						-	9.3	+8.8	0		0	
3						-	+9.1	13	0		0	
4						-	+9.0	12	0		0	
5						-	+8.9	6.0	0		0	
6						-	8.7	4.0	0		0	
7						-	+9.3	3.9	0		0	
8						-	9.9	4.0	0		+3.5	
9						-	9.7	+2.0	0		0	
10						-	+7.5	1.8	0		0	
11						-	+5.3	4.0	0		0	
12						-	+3.0	6.7	0		.4	
13						*6.5	.7	.2	+1.8		1.4	
14						-	+3.8	5.6	3.5		+1.3	
15						-	+6.9	5.2	5.4		+1.2	
16						-	9.0	+3.9	3.1		1.1	
17						*4.6	+7.0	2.6	.4		1.1	
18						-	4.9	2.1	+3.0		0	
19						-	+5.5	4.8	5.6		0	
20						-	6.2	1.5	+4.7		0	
21						-	1.4	.2	3.8		0	
22						-	3.8	.6	4.2		0	
23						*7.7	.1	+3.5	4.4		0	
24						-	0	0	4.5		.1	
25						-	0	0	3.3		.7	
26						*3.5	0	0	+2.2		+6	
27						-	0	0	+1.1		+5	
28						-	2.2	0	0		+3	
29						-	.5	0	0		+2	
30						-	0	0	0		.1	
31						-	1.7	0	-		-	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July.....						151.4	9.9	0	4.88	300		
August.....						97.9	13	0	3.16	194		
September.....						51.0	5.6	0	1.70	101		
October.....						0	0	0	0	0		
November.....						9.9	1.4	0	.33	20		
December.....						0	0	0	0	0		
The period.....										615		

\*Discharge measurement.

+Gage height missing; discharge estimated or interpolated.

San Francisco acequia at end, near Bernardo, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}24'$ , long.  $106^{\circ}50'$ , in  $S\frac{1}{2}$  sec. 16, T. 2 N., R. 1 E., 500 feet above outlet to Rio Puerco and  $1\frac{1}{2}$  miles south of Bernardo.

Records available.- May 1937 to January 1938 (discontinued).

Extremes.- Maximum discharge during period, about 17 second-feet May 27 (gage height, 1.45 feet); no flow at times.

Remarks.- Records poor. Discharge represents return flow from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

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								-	0			
12								-	0			
13								-	0			
14								-	0			
15								-	0			
16								-	0			
17								-	0			
18								-	0			
19								-	0			
20								-	0			
21								-	0			
22								-	0			
23								-	0			
24								-	0			
25								0	0			
26								0	0			
27								1.8	0			
28								4.4	0			
29								0.1	0			
30								0	0			
31								0	-			
Month						Second-foot days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 25-31, 1936.....						6.3	4.4	0	0.80	12		
June.....						0.9	0.9	0	0.03	1.8		
July.....						0	0	0	0	0		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
October.....						0	0	0	0	0		
November.....						0	0	0	0	0		
December.....						0	0	0	0	0		
January 1-5, 1937.....						0	0	0	0	0		
The period.....										14		

## Isleta riverside drain near Isleta, N. Mex.

Location.-- Staff gage, lat.  $34^{\circ}56'$ , long.  $106^{\circ}41'$ , in SE $\frac{1}{4}$  sec. 27, T. 8 N., R. 2 E., about 40 feet above junction with Isleta interior drain, 600 feet above confluence with Rio Grande, and  $2\frac{1}{4}$  miles southwest of Isleta. Zero of gage is 4,868.86 feet above mean sea level (general adjustment of 1929).

Records available.-- June 1936 to February 1937 (discontinued).

Extremes.-- Maximum daily discharge during period, 18 second-feet July 13; minimum daily discharge, 4 second-feet August 29.

Remarks.-- Records poor. Discharge computed on basis of 54 discharge measurements, of which 14 were furnished by Middle Rio Grande Conservancy District and 12 by El Paso Water Improvement District No. 1, and records for Atrisco riverside drain near Isleta and Rio Grande near Isleta. Discharge represents return flow to Rio Grande from irrigation.

Discharge, in second-feet, 1936-37

Day	1936								1937				
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.				
1	--	8	7	5	12	15	10	10	10				
2	--	7	7	*6	11	14	11	10	*10				
3	--	8	9	*11	*12	*13	12	9	10				
4	--	9	*11	13	12	13	*12	9	*11				
5	--	10	*14	13	13	14	12	9	*11				
6	--	11	15	12	13	14	11	9	11				
7	--	12	10	13	13	13	11	9	11				
8	--	*13	7	13	12	12	*10	9	13				
9	--	13	6	*13	12	*11	10	10	14				
10	--	13	6	12	12	9	10	11	12				
11	--	14	*7	11	12	10	10	10	11				
12	--	16	7	10	12	10	*11	9	*11				
13	--	18	8	12	12	10	11	9	10				
14	--	16	8	13	*12	10	*10	9	11				
15	--	12	8	11	*11	11	10	9	13				
16	*10	11	10	*9	10	*12	*10	*9	14				
17	8	10	10	9	11	13	10	9	15				
18	6	9	*9	8	11	12	10	9	15				
19	6	8	8	9	10	11	10	9	14				
20	7	*8	*8	12	10	11	10	10	14				
21	9	8	9	*13	11	11	10	*10	13				
22	8	*6	9	13	11	11	*10	*10	13				
23	7	7	13	*12	11	*11	11	9	12				
24	6	6	*11	12	*12	*11	*11	8	*11				
25	*7	5	8	11	13	*11	11	8	10				
26	7	5	6	*10	14	10	11	8	11				
27	8	5	5	13	15	10	11	*9	12				
28	9	6	5	17	13	10	11	10	12				
29	9	*6	4	16	*13	10	*11	10	--				
30	8	6	5	15	15	10	11	11	--				
31	--	6	5	--	14	--	*11	11	--				
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
June 16-30, 1936.....					115	10	6	7.7	228				
July.....					293	18	5	9.5	581				
August.....					265	15	4	8.2	506				
September.....					345	17	5	11.5	684				
The period.....										2,000			
October 1936.....					373	15	10	12.0	740				
November.....					343	15	9	11.4	680				
December.....					330	12	10	10.6	655				
January 1937.....					291	11	8	9.4	577				
February.....					336	15	10	12.0	664				
The period.....										3,320			

\*Discharge measurement.



## Isleta interior drain at Isleta, N. Mex.

Location.— Water-stage recorder, lat. 34°55', long. 106°42', in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 8 N., R. 2 E., in southwest edge of Isleta, 2 $\frac{1}{2}$  miles above outlet into Isleta river-side drain. Zero of gage is 4,875.21 feet above mean sea level (general adjustment of 1929).

Records available.— July 1935 to May 1936 (occasional discharge measurements), May 1936 to September 1937.

Extremes.— Maximum discharge during period ending Sept. 30, 1936, 104 second-feet July 11 (gage height, 3.59 feet); minimum daily discharge, 47 second-feet Sept. 30.

Maximum discharge during water year 1936-37, 106 second-feet May 28; maximum gage height, 5.54 feet Sept. 1; minimum daily discharge, 20 second-feet Feb. 20-24, Mar. 6-15.

Remarks.— Records good except those for periods of fragmentary gage-height record, which are fair, and those for periods of missing gage heights, which are poor. Several discharge measurements furnished by Middle Rio Grande Conservancy District and El Paso Water Improvement District No. 1. Discharge represents return flow from irrigation of both ground and surface water.

Discharge measurements, in second-feet, by the El Paso County Water Improvement District No. 1 during 1935

July	31	68	Sept.	6	42
Aug.	19	50		17	44
	29	45		25	48

## Discharge, in second-feet, 1935-37

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	-	72	69	72	49
2	-	-	-	-	-	-	-	-	74	72	60	58
3	-	-	-	-	-	-	-	-	+66	76	60	64
4	-	-	*34	-	-	-	-	-	+69	79	64	66
5	-	-	-	-	-	*22	-	-	+65	60	62	66
6	-	-	-	-	-	-	-	72	+60	60	64	55
7	-	-	-	-	-	-	-	+79	+58	69	69	50
8	-	-	-	-	-	-	*37	+58	+58	74	66	64
9	-	-	-	-	-	-	-	+79	+58	84	58	57
10	-	-	-	*30	-	*21	-	+62	+58	79	62	57
11	-	-	-	-	*22	-	-	+57	62	94	60	72
12	-	-	-	-	-	-	-	+55	62	66	62	79
13	-	-	-	-	-	-	-	+55	69	62	62	62
14	*36	-	-	-	-	-	-	59	69	69	57	57
15	-	-	-	-	-	-	*34	64	66	72	62	64
16	-	-	-	-	-	-	-	56	69	62	64	54
17	-	-	-	-	-	-	-	55	64	54	56	56
18	-	*44	-	-	-	-	-	56	64	52	66	58
19	-	-	-	-	-	-	-	62	64	54	64	58
20	-	-	-	-	-	-	*46	+64	64	52	64	48
21	-	-	-	-	-	*34	-	66	64	58	56	49
22	-	-	-	-	*22	-	-	74	62	62	56	+60
23	-	-	-	-	-	-	-	74	64	69	50	+54
24	-	-	*29	*28	-	-	*55	62	69	66	54	63
25	*34	-	-	-	-	*25	-	62	79	62	56	49
26	-	-	-	-	-	-	-	+66	74	56	51	52
27	-	-	-	-	-	-	-	+80	76	60	56	52
28	-	-	-	-	*23	-	-	+74	69	66	64	60
29	-	-	-	-	*24	-	-	74	66	72	69	48
30	*45	-	-	-	-	-	-	72	72	69	54	47
31	-	-	-	*25	-	-	-	69	-	74	49	-

\*Discharge measurement.

+Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and records for Alameda interior drain at Albuquerque.

†Gage height missing; discharge interpolated.

Discharge, in second-feet, of Isleta interior drain at Isleta, N. Mex., 1935-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	36	31	26	22	22	141	+62	58	59	163	+60
2	52	33	31	27	22	21	140	+63	57	62	163	+60
3	46	34	31	26	22	121	138	+64	56	58	62	60
4	42	33	31	25	22	121	137	66	72	59	58	56
5	46	33	33	25	22	121	136	72	56	54	60	52
6	58	32	31	25	22	120	*35	74	53	52	58	50
7	44	31	31	25	22	120	134	84	50	46	60	48
8	49	29	30	125	21	120	133	84	54	50	55	56
9	50	30	31	125	22	120	132	82	59	51	56	60
10	42	30	30	125	21	120	131	76	60	54	52	62
11	37	31	30	25	21	120	131	76	62	57	54	64
12	39	41	31	25	21	120	132	86	62	59	62	69
13	43	38	30	23	21	120	133	84	64	58	69	62
14	38	34	29	22	21	120	135	89	64	58	76	64
15	39	33	30	22	21	120	138	92	62	60	74	69
16	40	39	29	23	21	121	140	89	62	52	64	66
17	54	38	29	23	21	*21	143	79	62	49	59	58
18	41	36	29	22	21	122	146	74	69	47	64	54
19	44	36	27	22	21	123	48	74	62	49	69	56
20	55	36	27	22	20	125	51	84	72	56	69	54
21	44	35	27	22	20	128	40	86	66	50	62	50
22	49	35	27	23	20	132	44	79	64	52	69	48
23	52	34	27	22	20	136	52	79	60	57	62	52
24	42	33	27	21	20	140	49	69	66	54	60	54
25	39	33	27	21	21	143	45	60	69	60	69	56
26	45	32	27	22	21	*45	47	66	82	66	76	49
27	49	34	127	22	21	146	56	76	170	+70	66	47
28	42	33	126	21	22	146	58	82	58	+70	74	47
29	45	32	26	22	-	145	62	64	58	76	69	50
30	46	31	26	22	-	144	+60	64	56	74	64	54
31	40	-	26	22	-	142	-	60	-	64	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 6-31, 1936.....	1,754	86	55	67.5	3,480
June.....	1,984	79	56	66.1	3,940
July.....	2,063	94	52	66.5	4,090
August.....	1,869	72	49	60.3	3,710
September.....	1,698	79	47	56.6	3,370
The period.....					18,590
October 1936.....	1,396	58	37	45.0	2,770
November.....	1,013	41	29	33.8	2,010
December.....	894	33	26	28.8	1,770
January.....	723	27	21	23.3	1,430
February.....	692	22	20	21.1	1,170
March.....	565	46	20	27.9	1,720
April.....	1,266	62	31	42.2	2,510
May.....	2,339	92	60	75.5	4,640
June.....	1,865	82	50	62.2	3,700
July.....	1,783	76	46	57.5	3,540
August.....	1,982	76	52	63.9	3,930
September.....	1,687	69	47	56.2	3,350
Water year 1936-37.....	16,405	92	20	44.9	32,540

\*Discharge measurement.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and records for Alameda interior drain at Albuquerque.

‡Gage height missing; discharge interpolated or computed on basis of three discharge measurements and records for Alameda interior drain at Albuquerque.

## Upper Peralta riverside drain near Los Lunas, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}48'$ , long.  $106^{\circ}42'$ , in NW $\frac{1}{4}$  sec. 28, T. 7 N., R. 2 E., half a mile above mouth and  $1\frac{1}{2}$  miles east of Los Lunas. Zero of gage is 4,846.87 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 25 second-feet Sept. 29 and 30; minimum daily, 10 second-feet July 25.

Maximum daily discharge during water year 1936-37, 56 second-feet May 25; minimum daily, 17 second-feet July 21, 22.

Remarks.- Records poor. Discharge computed on basis of 97 discharge measurements, of which 29 were furnished by Middle Rio Grande Conservancy District and 19 by El Paso County Water Improvement District No. 1, and records for Lower Peralta riverside drain near Belen, Lower San Juan riverside drain near Bernardo, Upper Belen riverside drain near Los Lunas, and Rio Grande near Isleta. Discharge represents return flow to Rio Grande from irrigation.

## Discharge, in second-feet, 1936-37

1936

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

\*Discharge measurement.

Discharge, in second-feet, of Upper Peralta riverside drain near Los Lunas, N. Mex.,  
1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	25	24	21	24	24	23	27	41	36	20	*23
2	24	*24	*25	21	*24	24	23	27	40	35	20	24
3	23	23	25	21	24	24	24	26	40	35	19	24
4	23	22	24	*21	23	24	25	25	40	35	19	23
5	*24	21	24	21	*22	24	26	25	40	34	*18	23
6	26	20	23	20	*23	24	*26	26	39	34	*19	23
7	27	20	22	20	24	24	25	28	*39	*34	18	23
8	28	20	21	20	24	24	25	31	37	33	18	23
9	28	*21	21	20	25	25	25	34	*34	32	18	22
10	27	*21	*22	20	25	25	27	38	33	31	18	22
11	24	20	22	*20	*23	25	30	*42	32	30	19	*22
12	*22	19	23	20	24	25	33	45	31	28	20	21
13	*20	19	22	21	*24	25	36	47	31	27	21	21
14	18	19	*22	*21	25	25	38	*48	30	*25	22	*20
15	19	20	22	21	26	24	39	49	29	24	23	20
16	*20	*21	22	22	27	23	*39	49	29	23	23	20
17	*22	20	22	22	*27	*23	39	49	28	22	23	20
18	20	23	22	22	27	23	39	49	28	21	*23	20
19	*21	23	22	23	26	25	39	49	27	20	23	20
20	21	24	22	*24	25	23	39	46	27	18	23	19
21	22	24	22	23	25	22	*39	*46	26	*17	23	19
22	22	24	22	*22	24	22	39	48	*26	17	22	19
23	21	23	22	*20	*24	22	39	49	25	18	22	*19
24	20	*22	*22	21	*24	22	39	52	*23	18	*22	19
25	19	*20	22	22	24	22	38	*56	25	19	22	19
26	*20	19	*22	*23	24	22	36	*42	28	19	22	19
27	*23	20	22	23	24	22	*34	42	31	20	22	20
28	24	20	22	23	24	22	30	42	34	20	22	*20
29	25	21	21	23	-	22	*26	42	37	20	23	20
30	26	23	21	24	-	22	27	41	37	20	23	20
31	26	-	21	24	-	22	-	41	-	20	23	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
June 17-30, 1936.....					176	14	12	12.6	549			
July.....					473	21	10	15.3	938			
August.....					489	22	12	15.8	970			
September.....					573	25	16	19.1	1,140			
The period.....									3,400			
October 1936.....					708	28	18	22.8	1,400			
November.....					645	25	19	21.4	1,280			
December.....					691	25	21	22.3	1,370			
January 1937.....					689	24	20	21.6	1,330			
February.....					685	27	22	24.5	1,360			
March.....					723	25	22	25.3	1,430			
April.....					967	39	23	32.2	1,920			
May.....					1,263	56	25	40.7	2,510			
June.....					967	41	23	32.2	1,920			
July.....					786	36	17	25.3	1,580			
August.....					655	25	18	21.1	1,300			
September.....					627	24	19	20.9	1,240			
Water year 1936-37.....					9,381	56	17	25.7	18,620			

\*Discharge measurement.

## Otero interior drain near Los Lunas, N. Mex.

Location.-- Staff gage, lat.  $34^{\circ}50'$ , long.  $106^{\circ}42'$ , in SW $\frac{1}{4}$  sec. 14, T. 7 N., R. 2 E., three-quarters of a mile above confluence with Lower Peralta riverside drain and  $\frac{1}{4}$  mile northeast of Los Lunas. Zero of gage is 4,846.19 feet above mean sea level (general adjustment of 1929).

Records available.-- June 1936 to September 1937.

Extremes.-- Maximum daily discharge during period ending Sept. 30, 1936, 4.9 second-feet June 25-28, July 2; minimum daily, 2.5 second-feet July 28, 29.

Maximum daily discharge during water year 1936-37, 7.4 second-feet Aug. 25; minimum daily, 2.4 second-feet Feb. 26 to Mar. 2.

Remarks.-- Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 96 discharge measurements, of which 22 were furnished by Middle Rio Grande Conservancy District and 19 by El Paso County Water Improvement District no. 1, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to Lower Peralta riverside drain.

## Discharge, in second-feet, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 10-30, 1936.....	4.9	2.7	3.69	154
July.....	4.9	2.5	3.49	215
August.....	5.4	2.9	3.09	190
September.....	3.9	3.0	3.51	209
The period.....				768
October 1936.....	3.9	3.0	3.42	210
November.....	6.4	3.0	3.76	224
December.....	6.4	3.1	4.40	271
January 1937.....	3.3	2.6	2.83	174
February.....	2.8	2.4	2.64	146
March.....	3.0	2.4	2.65	163
April.....	5.2	3.0	3.83	228
May.....	6.1	4.8	5.37	350
June.....	5.3	4.1	4.63	276
July.....	6.0	3.8	4.73	291
August.....	7.4	5.3	6.01	370
September.....	6.1	4.9	5.34	316
Water year 1936-37.....	7.4	2.4	4.14	3,000

Upper Belen riverside drain above Huning lateral wasteway, near Los Lunas, N. Mex.

Location.— Measuring section, lat.  $34^{\circ}47'$ , long.  $106^{\circ}44'$ , in NE $\frac{1}{4}$  sec. 4, T. 6 N., R. 2 E., above Huning lateral wasteway,  $1\frac{1}{2}$  miles south of Los Lunas and  $2\frac{1}{2}$  miles above confluence with Rio Grande.

Records available.— July to December 1937 (discontinued).

Extremes.— Maximum daily discharge during period, 34 second-feet July 1; minimum daily, 22 second-feet Oct. 29 to Nov. 8.

Remarks.— Records poor. Discharge computed from hydrograph constructed on basis of 11 discharge measurements and records for Upper Peralta riverside drain near Los Lunas and Rio Grande near Isleta. Discharge represents return of ground water from irrigation to Rio Grande, except during irrigation season, when it may be diverted above station.

Discharge, in second-feet, 1937

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.						
1	34	27	29	*27	22	23						
2	33	27	29	28	22	23						
3	32	26	30	27	22	24						
4	31	25	30	26	22	24						
5	30	25	30	25	22	25						
6	29	*24	30	24	22	26						
7	29	24	30	23	22	*27						
8	*29	23	29	23	22	27						
9	29	23	29	23	23	28						
10	28	23	29	24	23	28						
11	28	23	28	24	24	29						
12	28	24	27	*25	25	29						
13	27	24	27	25	*26	29						
14	26	25	*26	26	26	29						
15	25	25	25	26	27	29						
16	24	26	25	27	27	29						
17	24	*26	25	27	28	29						
18	23	26	24	27	28	28						
19	23	27	24	27	28	28						
20	23	27	24	26	28	27						
21	23	27	23	26	28	28						
22	23	27	23	25	27	25						
23	24	26	23	25	*27	25						
24	25	26	23	24	26	25						
25	26	25	23	24	25	26						
26	26	25	24	*24	25	26						
27	27	25	24	23	24	26						
28	27	25	23	23	24	26						
29	26	26	25	22	24	26						
30	26	27	26	22	23	26						
31	28	*28	—	22	—	25						
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July 1937.....						840	34	23	27.1	1,870		
August.....						767	28	23	25.4	1,560		
September.....						769	30	23	26.3	1,560		
The period.....										4,790		
October 1937.....						770	28	22	24.8	1,530		
November.....						742	28	22	24.7	1,470		
December.....						823	29	23	26.5	1,630		
The period.....										4,630		

\*Discharge measurement.

Upper Belen riverside drain near Los Lunas, N. Mex.

Location.- Water-stage recorder, lat. 34°46', long. 106°45', in SW $\frac{1}{4}$  sec. 9, T. 6 N., R. 2 E., three-quarters of a mile above confluence with Rio Grande and 3 miles south of Los Lunas. Zero of gage is 4,827.34 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to February 1937 (discontinued).

Extremes.- Maximum discharge during period, 158 second-feet May 19; maximum gage height, 4.00 feet May 30; minimum daily discharge, 20 second-feet July 23.

Remarks.- Records good. Discharge for periods of missing gage heights, June 19-23, July 24-26, 1936, and Jan. 6-10, 1937, interpolated or computed on basis of recorded range in stage and records for Los Chavez lateral near Los Lunas. Discharge represents return of ground and surface water from irrigation to Rio Grande. Entire flow may be diverted into Los Chavez lateral during irrigation season. Middle Rio Grande Conservancy District furnished 19 discharge measurements, and El Paso County Water Improvement District no. 1 furnished 16.

Discharge, in second-feet, 1936-37

Day	1936									1937		
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	-	75	68	67	76	63	33	36	35	32	32	39
2	-	65	87	78	84	51	33	35	36	32	33	39
3	-	56	94	81	77	29	32	33	36	32	33	-
4	-	77	84	72	48	26	32	31	35	32	33	-
5	-	79	98	77	66	26	31	45	35	31	35	-
6	-	81	85	72	71	35	30	47	33	31	35	-
7	-	76	39	66	34	42	31	45	33	30	37	-
8	-	80	51	*71	42	54	31	47	32	30	36	-
9	-	85	54	70	43	56	30	50	32	30	39	-
10	-	74	70	75	58	60	30	46	31	29	37	-
11	-	104	72	77	65	59	30	46	30	29	36	-
12	-	98	69	38	70	53	30	45	32	31	35	-
13	-	101	85	43	63	84	30	45	32	32	34	-
14	-	104	66	74	55	87	29	44	33	31	35	-
15	-	94	67	61	50	72	29	47	33	31	36	-
16	*73	86	76	74	56	68	43	48	32	32	36	-
17	-	55	54	79	67	65	62	34	32	32	41	-
18	-	84	48	76	74	56	65	34	31	30	40	-
19	-	94	71	63	64	56	57	35	30	31	38	*84
20	-	94	94	65	72	56	58	35	31	31	38	-
21	*85	85	83	50	68	59	60	35	31	30	36	-
22	*86	67	72	21	50	58	66	51	32	30	36	-
23	-	75	61	20	74	50	58	86	32	30	36	-
24	94	45	50	28	66	65	58	71	33	30	37	-
25	93	79	73	36	70	71	56	57	33	29	36	-
26	76	92	70	45	72	67	61	56	33	30	39	-
27	101	93	70	56	67	50	60	68	33	30	39	-
28	91	74	71	50	75	45	55	75	33	29	40	-
29	86	66	70	51	79	39	50	65	33	29	-	-
30	93	115	60	62	60	36	50	65	33	30	-	-
31	-	46	-	72	56	-	48	-	32	32	-	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
April 24-30, 1936.....					634	101	76	90.6	1,260			
May.....					2,539	115	45	81.9	5,040			
June.....					2,092	96	39	69.7	4,150			
July.....					1,670	81	20	60.3	3,710			
August.....					1,972	84	34	63.6	3,910			
September.....					1,647	87	26	54.9	3,270			
The period.....									21,340			
October 1936.....					1,368	66	29	44.1	2,710			
November.....					1,455	86	31	48.5	2,890			
December.....					1,012	36	30	32.6	2,010			
January 1937.....					946	32	29	30.6	1,880			
February.....					1,022	41	32	36.5	2,030			
The period.....									11,620			

\*Discharge measurement.

## Los Lentos interior drain at Los Lunas, N. Mex.

Location.— Measuring section, lat.  $34^{\circ}48'$ , long.  $106^{\circ}43'$ , in NW $\frac{1}{4}$  sec. 27, T. 7 N., R. 2 E., 700 feet above confluence with Upper Belen riverside drain and half a mile of Los Lunas.

Records available.— June 1936 to September 1937.

Extremes.— Maximum daily discharge during period ending Sept. 30, 1936, 5.8 second-feet July 11-13; minimum daily, 2.7 second-feet Aug. 11, 12.  
Maximum daily discharge during water year 1936-37, 6.6 second-feet May 13-15; minimum daily, 2.6 second-feet Feb. 17, 18.

Remarks.— Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 48 discharge measurements, of which 8 were furnished by Middle Rio Grande Conservancy District and 14 by El Paso County Water Improvement District no. 1, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to Upper Belen riverside drain.

Discharge, in second-feet, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 17-30, 1936.....	4.8	3.9	4.38	122
July.....	5.8	3.9	4.57	281
August.....	4.3	2.7	3.73	229
September.....	4.5	3.4	4.00	238
The period.....				870
October 1936.....	4.4	3.0	3.58	220
November.....	4.5	3.4	3.61	215
December.....	4.7	3.3	3.77	232
January 1937.....	3.2	2.7	3.05	188
February.....	3.0	2.6	2.80	156
March.....	3.4	2.7	2.92	180
April.....	4.8	3.4	3.85	229
May.....	6.6	4.9	5.65	348
June.....	5.3	4.8	5.01	298
July.....	5.4	4.4	4.65	286
August.....	6.2	4.1	5.44	334
September.....	4.5	3.9	4.28	254
Water year 1936-37.....	6.6	2.6	4.05	2,940



## Los Chavez lateral near Los Lunas, N. Mex.

Location.— Water-stage recorder, lat. 34°45', long. 106°45', in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 6 N., R. 2 E., 175 feet below heading from Upper Belen riverside drain and 4 miles south of Los Lunas. Zero of gage is 4,822.22 feet above mean sea level (general adjustment of 1929).

Records available.— April 1936 to September 1937.

Extremes.— Maximum discharge during period ending Sept. 30, 1936, 112 second-feet May 30 (gage height, 5.44 feet); no flow at times.

Maximum discharge during water year 1936-37, 108 second-feet May 7 (gage height, 5.02 feet); no flow at times.

Remarks.— Records good except those for periods of fragmentary gage-height record, which are fair, and those for periods of missing gage heights, which are poor. Lateral diverts from Upper Belen riverside drain for irrigation. No diversions between station and head. Several of the discharge measurements were furnished by Middle Rio Grande Conservancy District and El Paso County Water Improvement District no. 1.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	65	74	67	69	57
2							-	†60	89	76	74	45
3							-	†66	66	78	74	30
4							-	76	80	76	48	29
5							-	†79	87	82	57	27
6							-	†76	78	73	62	33
7							-	†72	42	76	36	44
8							-	74	59	69	38	32
9							-	74	65	72	40	63
10							-	†70	72	80	60	66
11								*81	74	67	74	61
12								†81	†79	64	53	53
13								†79	76	63	53	72
14								†75	78	65	64	65
15								†74	74	64	47	60
16								†74	†64	72	57	68
17								†77	†55	63	60	78
18								†80	84	51	59	82
19								†62	76	49	54	69
20								†84	76	64	67	51
21								†85	74	67	53	0
22								*86	74	67	21	15
23								†80	68	58	21	43
24								74	56	47	20	41
25							*30	†72	78	65	27	51
26								†70	74	65	45	61
27								†82	66	66	59	57
28								†80	76	72	51	62
29								†74	82	69	51	64
30								†76	100	65	60	51
31								-	51	-	72	50

\*Discharge measurement.

†Gage height missing; discharge computed on basis of six discharge measurements and records for Upper Belen riverside drain near Los Lunas.

Discharge, in second-feet, of Los Chavez lateral near Los Lunas, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				0	62	78	55	63	72	72
2	0	0				0	67	80	52	50	78	72
3	0	0				0	72	78	47	74	62	65
4	0	0				0	65	78	16	74	49	60
5	0	*29				0	58	78	0	78	55	61
6	0	42				0	58	87	0	78	61	54
7	0	43				0	67	94	0	78	67	54
8	0	44				0	76	83	0	74	65	53
9	0	55				0	69	72	0	76	57	53
10	0	55				0	74	72	*37	78	52	53
11	0	*52					72	72	*57	72	29	51
12	0	49					74	80	47	80	29	51
13	0	48					80	83	44	77	54	49
14	0	47					80	87	43	36	69	55
15	0	53					32	92	41	55	76	58
16	19	29					80	92	40	64	65	58
17	51	0					74	87	39	63	65	58
18	57	0					69	94	38	69	69	55
19	53	0				†40	74	80	37	54	72	49
20	55	0					78	92	46	58	72	49
21	57	0					78	90	63	53	65	49
22	63	26					78	90	65	53	63	48
23	55	45					78	87	67	69	63	53
24	56	41					80	87	65	63	67	56
25	57	29					78	80	78	67	67	55
26	61	44					76	80	88	78	63	60
27	60	65				50	80	73	62	83	65	60
28	56	65				52	83	19	63	76	62	58
29	51	55				58	83	29	59	90	61	57
30	50	47				59	83	46	61	80	62	63
31	32	-				59	-	58	-	72	67	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 11-30, 1936						1,566	86	70	78.3	3,110		
May						2,240	100	51	72.3	4,440		
June						1,975	89	42	65.8	3,920		
August						1,822	82	20	58.8	3,610		
September						1,750	82	0	56.5	3,470		
						1,527	78	1	50.9	3,030		
The period										21,580		
October 1936						835	63	0	26.9	1,660		
November						963	65	0	32.1	1,910		
December						0	0	0	0	0		
January 1937						0	0	0	0	0		
February						0	0	0	0	0		
March						918	-	0	29.6	1,820		
April						2,178	83	32	72.6	4,320		
May						2,398	94	19	77.4	4,760		
June						1,310	88	0	43.7	2,600		
July						2,135	90	36	68.9	4,230		
August						1,923	78	29	62.0	3,810		
September						1,689	72	48	56.3	3,560		
Water year 1936-37						14,349	94	0	39.3	28,460		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

†Gage height missing; discharge computed on basis of data relative to diversion of water by this lateral, furnished by Middle Rio Grande Conservancy District.

Old Belen ditch at end, at Belen, N. Mex.

Location.- Water-stage recorder, lat. 34°39', long. 106°46', in SE¼ sec. 18, T. 5 N., R. 2 E., at outlet to Railroad interior drain and a quarter of a mile south of Belen.

Records available.- May 1937 to January 1938 (discontinued).

Extremes.- Maximum discharge during period, 13 second-feet June 26 (gage height, 2.48 feet); no flow at times.

Remarks.- Records fair. Discharge represents waste return flow from irrigation.

Discharge, in second-feet, May 1937 to January 1938

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.			
1	-	0.8	0.5	3.0	0.2	0.2	0.1	0.8	0.1			
2	-	.1	3.5	3.0	.4	3.1	.1	.1	.1			
3	-	.2	5.1	.6	1.1	.1	.2	.1	.1			
4	-	.1	2.0	.2	1.5	.1	.1	.2	.1			
5	-	.1	1.7	.1	3.7	.1	.1	.2	.1			
6	-	.1	1.2	.5	.6	.1	1.1	.2	.1			
7	-	.1	.7	.5	.3	.1	.7	.2	-			
8	-	.1	.4	2.3	.3	.1	.3	.1	-			
9	-	.1	2.6	1.3	.3	.1	.1	.1	-			
10	-	.5	5.2	1.7	2.1	.1	.1	.1	-			
11	-	.8	2.9	.1	1.9	.1	.1	.1	-			
12	-	.3	5.5	0.	.1	.1	1.5	.1	-			
13	-	.4	1.4	1.0	.4	.1	1.7	.1	-			
14	-	1.6	.5	1.2	.2	.1	2.1	.1	-			
15	-	1.8	.4	3.0	.5	.1	1.4	.1	-			
16	-	2.1	1.3	1.3	.2	.1	2.7	.1	-			
17	-	1.8	.7	1.0	.5	.1	2.3	.1	-			
18	-	.2	1.1	.3	1.0	.3	.1	.1	-			
19	-	.2	.6	.8	.2	.6	.1	.1	-			
20	-	.4	2.9	.5	.3	.2	1.0	.1	-			
21	-	.2	1.6	1.7	.7	.1	4.6	.1	-			
22	-	.2	.5	2.1	.9	2.5	2.8	.1	-			
23	-	.2	3.8	.6	.1	4.1	4.1	.1	-			
24	-	2.1	1.5	1.4	1.3	6.0	4.0	.1	-			
25	-	6.1	.7	1.0	3.2	3.8	3.0	.1	-			
26	1.0	5.5	.7	1.1	4.2	.1	3.4	.1	-			
27	2.9	3.5	.4	1.4	3.5	.1	4.1	.1	-			
28	3.0	.2	.7	1.6	2.8	.1	4.0	.1	-			
29	.1	2.0	.3	2.0	3.6	.1	3.2	.1	-			
30	.1	1.3	4.0	1.8	.4	.2	1.6	.1	-			
31	.5	-	1.3	.6	-	.1	-	.1	-			
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
May 26-31, 1937 .....						7.6	3.0	0.1	1.27	15		
June .....						33.1	6.1	.1	1.10	66		
July .....						55.9	5.5	.3	1.80	111		
August .....						37.7	3.0	0	1.22	75		
September .....						36.5	4.2	.1	1.22	72		
October .....						23.1	6.0	.1	.75	46		
November .....						50.7	4.6	.1	1.69	101		
December .....						4.2	.8	.1	.14	8.3		
January 1-6, 1938 .....						.6	.1	.1	.10	1.2		

## Jarel lateral 1 at Belen, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}40'$ , long.  $106^{\circ}45'$ , in NW $\frac{1}{4}$ NE $\frac{1}{4}$ , sec. 17, T. 5 N., R. 2 E., 5 feet below head gate and 1 mile northeast of Belen. Zero of gage is 4,797.76 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 45 second-feet Aug. 17 (gage height, 2.77 feet); no flow at times.

Maximum discharge observed during water year 1936-37, 44 second-feet June 23 (gage height, 3.51 feet); no flow at times.

Remarks.- Records poor; none for Mar. 1-26, 1937. Discharge represents water diverted from Lower Belen riverside drain for irrigation. Several of the discharge measurements were furnished by Middle Rio Grande Conservancy District and El Paso County Water Improvement District No. 1.

## Discharge, in second-feet, 1936-37

1936												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-		-	13	26	5.6
2							-		-	13	32	6.0
3							-		-	7.2	24	6.0
4							-		-	11	17	5.4
5							-		-	18	3.2	5.3
6							-		-	16	0	5.6
7							-		-	12	2.6	8.4
8							-		-	8.1	2.4	7.8
9							*5.9		-	6.9	2.9	4.9
10							-		-	6.1	†11	9.0
11							-		-	6.5	†8	20
12							-		*7.8	12	0	18
13							-		-	13	5.3	21
14							-		-	6.3	4.8	11
15							-		-	1.5	19	3.2
16							-		-	1.8	26	4.6
17							-		-	11	22	3.1
18							-		*9.8	2.8	7.1	2.5
19							-		-	2.6	8.1	2.4
20							-		-	2.6	0	2.5
21							-		-	5.6	6.9	3.3
22							-		-	21	4.8	0
23							-		-	24	7.5	0
24							*20		27	26	2.3	3.3
25							-		30	24	0	3.9
26							-		27	22	0	5.8
27							-		21	25	0	13
28							-	*2.2	14	24	0	11
29							-		22	23	0	7.7
30							-		17	25	0	6.7
31							-		-	28	0	-

\*Discharge measurement.

†Gage height missing; discharge computed on basis of four discharge measurements and knowledge of regulation.

Discharge, in second-feet of Jaral lateral 1 at Belen, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	0							0	5.3	4.9	2.0
2	5.6	0							0	1.1	5.5	6.0
3	5.3	0							0	.6	4.1	3.7
4	4.9	0							0	.8	2.8	0
5	1.7	3.1							0	.4	2.8	0
6	.2	8.6							0	.2	2.2	0
7	.2	0							0	.3	1.3	0
8	.2	0							1.7	.6	3.4	0
9	.1	0							2.3	.2	1.5	0
10	.1	0							10	.3	3.0	0
11	.1	0							14	.5	14	0
12	.1	0							7.1	4.2	22	0
13	.1	0							6.9	11	22	0
14	.1	0							18	9.0	22	0
15	.1	0							29	8.2	25	0
16	3.9	0							33	6.0	23	0
17	8.9	0							35	5.0	23	0
18	.5	0							35	4.4	26	0
19	0	0							35	3.8	11	0
20	0	0							34	3.0	4.7	0
21	0	0							36	3.1	5.8	1.2
22	0	2.0							40	16	4.9	7.1
23	0	6.4							41	24	4.6	2.2
24	0	0							40	25	5.8	0
25	0	11							35	14	4.7	0
26	0	9.6							31	13	4.6	0
27	0	0							20	14	4.6	0
28	0	0							9.4	14	5.7	0
29	0	0							7.3	7.6	4.9	0
30	0	0							6.7	2.6	4.9	0
31	0	-							-	2.8	2.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 24-30, 1936 .....						158	30	14	22.6	313		
July .....						419.0	28	1.5	13.5	831		
August .....						242.9	32	0	7.84	482		
September .....						207.2	21	0	6.91	411		
The period .....										2,040		
October 1936 .....						38.1	8.9	0	1.23	76		
November .....						40.7	11	0	1.36	81		
December .....						0	0	0	0	0		
January 1937 .....						0	0	0	0	0		
February .....						0	0	0	0	0		
March 27-31 .....						0	0	0	0	0		
April .....						0	0	0	0	0		
May .....						0	0	0	0	0		
June .....						527.4	41	0	17.6	1,050		
July .....						199.0	25	.2	6.42	395		
August .....						277.6	26	1.3	8.95	551		
September .....						22.2	7.1	0	.74	44		

## Arroyos acequia wasteway at Bosque, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}34'$ , long.  $106^{\circ}46'$ , in NE $\frac{1}{4}$  sec. 18, T. 4 N., R. 2 E., at outlet into Sabinas riverside drain, 1 mile northeast of Bosque.

Records available.- June to September 1937.

Extremes.- Maximum discharge during period, 29 second-feet June 27; maximum gage height, 3.12 feet July 11; no flow at times.

Remarks.- Records good. Discharge represents waste return flow from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	14	14	7.7
2									-	10	12	12
3									-	11	5.4	7.0
4									-	12	3.8	3.4
5									-	3.4	1.4	3.7
6									-	2.2	1.0	5.9
7									-	3.7	1.6	2.8
8									-	5.3	5.2	2.9
9									-	4.3	2.7	3.5
10									-	7.3	0	8.4
11									-	17	0	5.7
12									-	10	0	11
13									-	6.7	0	5.6
14									-	3.3	0	1.7
15									-	.1	0	3.9
16									-	3.4	.1	5.7
17									-	3.1	.1	3.3
18									1.2	1.4	.3	5.4
19									.1	2.2	.4	9.5
20									.2	1.3	.2	4.0
21									.			
22									.1	.1	1.3	.1
23									.2	.6	2.6	1.1
24									.3	0	1.6	4.2
25									.4	0	3.5	3.6
26									2.0	0	3.9	4.7
27									14	.4	2.4	14
28									23	.9	5.2	6.6
29									7.3	8.7	2.9	10
30									8.5	17	17	8.1
31									7.3	18	7.7	7.2
									-	14	7.3	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May.....												
June 18-30.....						84.6	23	0.1	4.97	128		
July.....						181.4	18	0	5.85	360		
August.....						103.6	17	0	3.34	205		
September.....						172.7	14	.1	5.76	343		
The period.....										1.040		

## Lower Peralta riverside drain near Belen, N. Mex.

Location.- Water-stage recorder, lat. 30°40', long. 106°44', in NW¼NW¼ sec. 16, T. 5 N., R. 2 E., three-quarters of a mile above outlet into Rio Grande and 1½ miles east of Belen. Zero of gage is 4,795.72 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 191 second-feet May 8 and 9; maximum gage height, 5.27 feet May 30; minimum daily discharge, 71 second-feet July 26.  
Maximum discharge during water year 1936-37, 230 second-feet June 27 (gage height, 6.01 feet); minimum daily discharge, 64 second-feet Mar. 20 and 21.

Remarks.- Records good except those for periods of missing gage heights, which are fair. Discharge represents return flow from irrigation to Rio Grande of ground and surface water. Middle Rio Grande Conservancy District furnished 15 discharge measurements, and El Paso County Water Improvement District No. 1 furnished 14.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	166	154	115	112	118
2							-	166	170	109	130	122
3							-	166	168	112	142	134
4							-	166	160	118	115	134
5							-	182	146	126	130	142
6							-	158	138	116	130	142
7							-	†175	138	112	130	138
8							-	*191	134	113	118	142
9							-	†191	117	114	104	130
10							-	†187	118	117	110	126
11							-	†182	126	134	103	†129
12							-	†177	122	118	97	†146
13							122	†172	130	102	96	†167
14							134	166	130	104	104	†170
15							146	158	134	116	111	†160
16							142	154	126	131	98	†150
17							142	150	111	130	103	146
18							142	138	91	120	110	142
19							158	138	87	108	118	138
20							158	138	87	108	134	138
21							154	142	91	95	126	142
22							154	150	93	92	106	138
23							*169	†141	93	79	150	138
24							150	134	96	72	146	134
25							162	130	100	72	134	126
26							166	142	104	71	94	142
27							170	150	104	75	78	146
28							166	154	113	75	81	116
29							166	182	109	80	111	107
30							166	166	116	87	122	99
31							-	170	-	109	122	-

\*Discharge measurement.

†Gage height missing; discharge computed on basis of one reading of staff gage, two discharge measurements, and records for Sabinal riverside drain near Bosque and Rio Grande near Isleta.

Discharge, in second-feet, of Lower Peralta riverside drain near Belen, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	106	118	75	69	70	142	162	138	166	166	102
2	91	95		75	69	69	146	166	162	162	154	112
3	82	92	95	72	69	70	136	166	134	166	146	122
4	86	89	92	72	70	72	134	†162	130	170	146	126
5	85	90	90	72	71	73	117	†159	130	164	138	150
6	82	108	88	†71	72	†72	122	†156	130	150	116	146
7	81	112	87	†71	74	†72	134	154	130	146	100	134
8	80	113	86	†73	74	†72	122	154	162	146	90	150
9	79	108	86	†74	86	†73	118	146	168	158	88	162
10	78	104	85	†74	78	†74	116	138	158	170	93	166
11	78	118	84	72	76	†74	122	138	150	166	91	158
12	78	115	84	71	75	†73	117	142	158	162	97	170
13	76	112	82	70	72	†73	112	154	154	174	100	162
14	76	118	81	70	73	†72	118	154	138	170	99	154
15	75	117	81	71	73	†72	134	158	138	170	118	158
16	78	115	80	72	78	†70	146	170	138	166	†134	154
17	95	103	79	72	84	†68	156	162	130	158	†136	150
18	112	95	79	72	78	*66	166	150	116	126	†137	146
19	114	93	78	75	76	†65	150	150	138	96	138	134
20	122	92	78	78	75	†64	162	142	142	93	146	130
21	130	91	78	76	75	†64	158	158	134	86	150	115
22	134	90	78	73	74	†66	170	162	134	82	158	118
23	134	98	78	72	73	†120	186	162	142	88	158	142
24	130	110	78	70	75	†140	186	162	150	88	146	150
25	130	115	78	69	72	†145	170	146	174	99	134	150
26	134	110	79	69	70	138	154	158	194	112	134	130
27	134	111	79	70	71	126	166	178	198	134	138	134
28	134	122	78	69	73	130	154	186	146	142	146	146
29	126	126	78	68	-	150	154	174	134	146	146	150
30	130	142	77	69	-	138	166	158	130	154	122	158
31	130	-	76	70	-	134	-	146	-	158	102	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 13-30, 1936.....						2,767	169	122	154	5,490		
May.....						4,942	191	130	159	9,600		
June.....						3,586	170	87	120	7,110		
July.....						3,230	134	71	104	6,410		
August.....						3,563	150	78	115	7,070		
September.....						4,102	170	99	137	8,140		
The period.....										44,020		
October 1936.....						3,192	134	75	103	6,350		
November.....						3,210	142	89	107	6,370		
December.....						2,569	118	76	83.5	5,140		
January 1937.....						2,225	78	68	71.8	4,410		
February.....						2,073	86	69	74.0	4,110		
March.....						2,765	150	64	89.2	5,480		
April.....						4,346	186	112	145	8,620		
May.....						4,873	186	138	157	9,670		
June.....						4,390	198	116	146	8,710		
July.....						4,396	196	82	142	8,720		
August.....						3,967	186	88	128	7,870		
September.....						4,279	170	102	143	8,490		
Water year 1936-37.....						42,307	198	64	116	83,920		

\*Discharge measurement.

†Gage height missing; discharge computed on basis of one discharge measurement and records for Sabinal riverside drain near Bosque and Rio Grande near Isleta.



San Fernandez interior drain near Los Lunas, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}46'$ , long.  $106^{\circ}43'$ , in  $W\frac{1}{2}$  sec. 3, T. 6 N., R. 2 E., at highway bridge a quarter of a mile above confluence with Lower Peralta riverside drain and 2 miles south of Los Lunas. Zero of gage is 4,832.14 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 3.1 second-foot June 30 to July 2; minimum daily, 1.3 second-foot Aug. 28, 29.

Maximum daily discharge during water year 1936-37, 3.1 second-foot July 6, 7, Aug. 22-24; minimum daily, 1.2 second-foot Feb. 26 to Mar. 13.

Remarks.- Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 68 discharge measurements, of which 7 were furnished by Middle Rio Grande Conservancy District and 16 by El Paso County Water Improvement District no. 1, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to Lower Peralta riverside drain.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 18-30, 1936.....	3.1	1.9	2.52	60
July.....	3.1	1.8	2.52	145
August.....	2.1	1.5	1.80	111
September.....	2.6	1.5	2.21	152
The period.....				446
October 1936.....	2.4	1.9	2.02	124
November.....	2.8	1.8	2.08	124
December.....	2.8	1.8	2.14	132
January 1937.....	1.9	1.4	1.70	105
February.....	1.6	1.2	1.40	78
March.....	1.8	1.2	1.39	85
April.....	2.1	1.5	1.68	100
May.....	2.1	1.4	1.74	107
June.....	2.0	1.4	1.64	98
July.....	3.1	1.8	2.47	152
August.....	3.1	1.8	2.32	142
September.....	2.4	1.8	2.09	124
Water year 1936-37.....	3.1	1.2	1.89	1,370

## Tome interior drain near Los Lunas, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}46'$ , long.  $106^{\circ}41'$ , in SW $\frac{1}{4}$  sec. 1, T. 6 N., R. 2 E., at highway crossing 3 miles southeast of Los Lunas. Zero of gage is 4,823.40 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to February 1937 (discontinued).

Extremes.- Maximum daily discharge during period, 27 second-feet Sept. 27; minimum daily, 11 second-feet Feb. 8-12, 21-28.

Remarks.- Records fair. Discharge computed on basis of 35 discharge measurements and records for station near Belen. Discharge represents return flow of ground water from irrigation.

Discharge, in second-feet, July 1936 to February 1937

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.				
1	*25	23	22	23	17	22	17	12				
2	24	24	*22	23	17	21	17	*12				
3	24	24	23	22	16	21	17	12				
4	23	*24	24	22	*16	*20	*17	12				
5	22	24	24	21	16	20	17	*12				
6	21	23	25	*21	16	20	17	12				
7	20	23	25	20	16	20	17	12				
8	*20	22	*26	20	16	20	17	11				
9	20	21	26	19	16	20	17	*11				
10	20	20	26	19	*16	*20	16	11				
11	20	*20	26	19	16	20	16	11				
12	20	20	25	18	16	20	16	11				
13	21	20	25	*18	17	20	16	12				
14	*21	20	24	18	18	19	16	12				
15	21	21	*24	18	19	19	*16	12				
16	21	21	24	18	20	19	16	12				
17	21	21	24	18	21	*19	15	*12				
18	20	*22	24	18	20	18	15	12				
19	20	22	23	18	19	18	15	12				
20	19	23	23	*18	*19	17	14	12				
21	*19	23	23	18	18	17	*14	11				
22	19	23	*23	18	18	17	14	11				
23	19	23	24	18	17	16	13	11				
24	20	23	24	18	*17	*16	13	*11				
25	20	*23	24	18	18	16	12	11				
26	20	22	25	18	19	16	*12	11				
27	21	21	27	*18	20	16	12	11				
28	*21	21	26	18	21	16	12	11				
29	22	21	25	18	22	16	12	-				
30	22	21	*24	18	22	17	12	-				
31	23	21	-	17	-	17	12	-				
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July, 1936.....						649	25	19	20.9	1,290		
August.....						680	24	20	21.9	1,350		
September.....						730	27	22	24.3	1,450		
The period.....										4,090		
October 1936.....						598	23	17	19.0	1,170		
November.....						539	22	16	18.0	1,070		
December.....						573	22	16	18.5	1,140		
January 1937.....						462	17	12	14.9	916		
February.....						323	12	11	11.5	641		
The period.....										4,940		

\*Discharge measurement.

Tome interior drain near Belen, N. Mex.

Location.— Water-stage recorder, lat.  $34^{\circ}42'$ , long.  $106^{\circ}44'$ , in NE $\frac{1}{4}$  sec. 4, T. 5 N., R. 2 E., three-quarters of a mile above outlet into Lower Peralta Riverside drain and 3 miles northeast of Belen. Zero of gage is 4,803.46 feet above mean sea level (general adjustment of 1929).

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during period ending Sept. 30, 1936, 56 second-feet Sept. 27, maximum gage height, 2.23 feet May 30; minimum daily discharge, 26 second-feet July 27.

Maximum discharge during water year 1936-37, 46 second-feet May 28 (gage height, 2.57 feet); minimum daily discharge, 13 second-feet Mar. 8-22.

Remarks.— Records good. Discharge represents return flow from irrigation. Middle Rio Grande Conservancy District furnished 30 discharge measurements, and El Paso County Water Improvement District No. 1 furnished 19.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	40	36	32	32
2								-	39	37	34	32
3								-	*40	37	36	34
4								-	*38	38	36	34
5								-	38	36	36	33
6								-	39	37	38	34
7								-	39	36	36	35
8								-	38	34	37	34
9								-	38	36	35	33
10								-	38	37	34	34
11								-	40	38	32	35
12								-	40	38	31	35
13								-	40	34	30	34
14								-	38	33	32	34
15								-	36	32	32	36
16								-	36	33	34	36
17								-	36	34	34	36
18								-	35	34	36	36
19								-	36	32	38	36
20								-	34	32	41	36
21								-	35	31	41	35
22								-	34	31	38	34
23								-	34	30	37	34
24								-	36	30	38	34
25								-	35	28	36	34
26								-	34	28	36	40
27								-	35	26	36	48
28								-	36	28	33	40
29								41	36	28	32	36
30								42	37	28	32	35
31								42	-	29	32	-

\*Gage-height record faulty; discharge computed on basis of partly estimated gage heights.

Discharge, in second-feet, of Tome interior drain near Belen, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	25	40	21	17	15	†22	*29	34	36	38	37
2	32	24	38	20	17	15	21	*29	33	36	38	38
3	32	24	36	21	18	14	21	*28	33	37	37	39
4	30	23	34	20	18	14	21	*29	34	38	38	39
5	29	22	33	20	18	15	20	30	32	36	38	†39
6	28	22	32	†20	17	†14	19	30	31	36	38	†39
7	28	22	32	†20	17	†14	20	29	30	34	37	†39
8	27	24	30	†20	17	†13	20	28	30	36	36	†39
9	26	24	30	†20	17	†13	20	†27	29	37	33	39
10	26	25	28	†20	16	†13	20	†26	28	39	32	39
11	26	28	28	20	16	†13	21	†25	28	38	32	39
12	25	28	28	19	16	†13	21	†24	30	38	35	38
13	24	28	28	19	16	†13	20	24	30	36	37	37
14	24	30	27	18	16	†13	21	26	35	36	37	36
15	24	32	26	18	16	†13	22	27	31	36	38	34
16	24	33	26	17	17	†13	24	28	32	36	38	34
17	24	34	26	18	17	†13	25	27	35	35	40	34
18	24	32	25	18	17	†13	26	28	36	36	40	34
19	24	32	25	18	17	†13	26	29	40	34	40	33
20	24	31	25	17	16	†13	26	30	38	33	40	32
21	24	30	24	17	16	†13	26	33	37	30	40	31
22	25	28	24	17	16	†13	25	34	36	29	38	30
23	25	28	24	18	16	†14	25	35	37	30	39	32
24	25	28	24	18	16	†14	†25	36	38	30	39	32
25	25	30	23	17	16	†14	†26	33	42	32	36	33
26	26	32	22	17	16	15	†27	30	43	34	37	33
27	26	34	22	17	16	16	†27	34	44	36	38	32
28	25	37	22	17	16	17	†28	41	42	36	40	32
29	24	38	22	17	-	21	†28	40	39	36	40	32
30	24	40	21	17	-	23	*28	38	37	38	40	34
31	26	-	20	17	-	†22	-	36	-	38	39	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June, 1936.....						1,108	40	33	36.9	2,200		
July.....						1,021	38	26	32.9	2,030		
August.....						1,085	41	30	35.0	2,150		
September.....						1,059	48	32	35.3	2,100		
The period.....										8,480		
October 1936.....						810	34	24	26.1	1,610		
November.....						898	40	22	28.9	1,720		
December.....						845	40	20	27.3	1,680		
January 1937.....						573	21	17	18.5	1,140		
February.....						464	16	16	15.6	920		
March.....						452	23	13	14.6	897		
April.....						697	28	19	23.2	1,380		
May.....						943	41	24	30.4	1,870		
June.....						1,042	44	28	34.7	2,070		
July.....						1,092	39	29	35.2	2,170		
August.....						1,168	40	32	37.7	2,320		
September.....						1,059	39	30	35.3	2,100		
Water year 1936-37.....						10,013	44	13	27.4	19,880		

\*Gage-height record faulty; discharge computed on basis of one discharge measurement and partly estimated gage heights.

†Gage height missing; discharge interpolated or computed on basis of reading of staff gage Mar. 8, discharge measurement on Mar. 18, and knowledge of local conditions.

‡Discharge measurement.

Lower Belen riverside drain near Belen, N. Mex.

Location.- Staff gage, lat. 34°38', long. 106°45', in SE $\frac{1}{4}$  sec. 20, T. 5 N., R. 2 E., half a mile above confluence with Rio Grande, 1 mile downstream from highway bridge over Rio Grande, and 2 miles southeast of Belen. Zero of gage is 4,791.14 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 49 second-feet June 15; minimum daily, 7 second-feet July 26-28.

Maximum daily discharge during water year 1936-37, 86 second-feet May 19, minimum daily, 9 second-feet June 23, 24.

Remarks.- Records poor. Discharge computed on basis of 96 discharge measurements, of which 29 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District No. 1, and records for Lower Peralta riverside drain near Belen, Jaral lateral no. 1 at Belen, and Rio Grande near Bernardo. Jaral lateral no. 1 diverts water for irrigation at point 2 $\frac{1}{2}$  miles above station. Discharge represents return flow from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	*20	9	*45
2									-	21	11	38
3									-	20	15	*33
4									-	19	22	32
5									*46	21	*35	32
6									45	23	*38	33
7									44	*27	37	35
8									43	37	34	35
9									41	*41	30	*35
10									40	*37	25	31
11									40	34	30	25
12									*41	31	*37	27
13									43	33	36	29
14									46	*38	33	31
15									49	39	27	34
16									*47	37	20	*36
17									35	35	23	*37
18									28	33	26	39
19									*22	31	*29	41
20									17	28	36	43
21									14	25	34	45
22									11	*13	30	47
23									10	*11	32	*46
24									*11	10	*37	44
25									*14	8	44	40
26									17	7	*43	35
27									19	7	38	36
28									20	7	35	38
29									19	*8	35	41
30									18	8	38	*44
31									-	8	45	-

\*Discharge measurement.

Discharge, in second-feet of Lower Belen riverside drain near Belen, N. Mex., 1936-37--Continued  
1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*42	47	43	38	36	*37	34	65	68	56	41	38
2	40	46	*44	38	*36	37	34	64	66	54	39	36
3	36	44	43	38	37	37	35	62	65	53	37	*38
4	35	*40	43	38	37	37	38	60	65	52	*56	38
5	41	36	43	37	*37	38	40	62	66	50	34	38
6	*41	31	42	*36	*38	37	39	64	66	49	*33	39
7	*39	35	40	36	36	37	38	65	64	49	33	39
8	39	35	39	36	39	36	37	68	56	*48	32	41
9	38	36	39	*37	41	37	40	71	47	48	32	43
10	37	37	39	39	*40	38	45	74	*38	46	32	43
11	37	*38	*40	38	39	39	52	*77	33	46	25	42
12	37	40	41	37	*38	41	62	78	*42	42	17	42
13	37	42	41	36	37	42	*71	79	40	37	14	*41
14	*36	45	41	*36	37	41	72	80	28	*38	15	40
15	*34	45	*40	36	38	40	74	83	17	38	16	*39
16	30	*45	40	37	40	39	77	83	13	38	19	38
17	26	46	*41	38	*42	38	78	84	13	37	23	38
18	35	46	41	37	42	37	78	85	12	37	28	38
19	36	44	40	35	40	*37	77	86	12	36	*43	38
20	38	*42	40	*35	39	36	76	85	12	36	50	37
21	*43	40	40	35	38	36	74	83	11	*35	50	36
22	46	38	40	36	37	34	74	82	10	20	49	30
23	46	38	40	37	*38	33	74	80	*9	12	46	*37
24	44	40	*40	37	38	33	74	77	9	12	40	38
25	42	*29	40	*37	*37	33	74	*75	15	23	*35	38
26	42	30	40	*35	35	33	*65	75	20	23	30	37
27	42	40	39	35	36	32	62	71	40	24	30	38
28	*44	41	38	*35	37	33	*64	69	60	24	30	39
29	*46	41	38	35	-	34	65	68	59	27	30	40
30	48	*42	*38	*36	-	36	66	69	58	33	31	41
31	48	-	38	36	-	36	-	69	-	43	34	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
June 5-30, 1936.....					780	49	10	30.0	1,550			
July.....					717	41	7	23.1	1,420			
August.....					964	45	9	31.1	1,910			
September.....					1,107	47	25	36.9	2,200			
The period.....									7,080			
October 1936.....					1,225	48	26	39.5	2,430			
November.....					1,194	47	29	39.8	2,370			
December.....					1,251	44	38	40.4	2,480			
January 1937.....					1,132	39	35	36.5	2,250			
February.....					1,067	42	35	38.1	2,120			
March.....					1,134	42	32	36.6	2,250			
April.....					1,789	78	34	59.6	3,550			
May.....					2,291	86	60	73.9	4,540			
June.....					1,114	68	9	37.1	2,210			
July.....					1,163	56	12	37.5	2,310			
August.....					1,004	50	14	32.4	1,990			
September.....					1,160	43	30	38.7	2,300			
Water year 1936-37.....					15,524	86	9	42.5	30,800			

\*Discharge measurement.

Los Chavez interior drain at Belen, N. Mex.

Location.— Measuring section, lat.  $34^{\circ}40'$ , long.  $106^{\circ}45'$ , in SE $\frac{1}{4}$  sec. 8, T. 5 N., R. 2 E., at culvert under Los Chavez lateral, 500 feet above confluence with Lower Belen riverside drain and three-quarters of a mile northeast of Belen.

Records available.— June 1936 to September 1937.

Extremes.— Maximum daily discharge during period ending Sept. 30, 1936, 22 second-feet June 16, Sept. 21-25; minimum daily, 11 second-feet Sept. 12-14.

Maximum daily discharge during water year 1936-37, 30 second-feet June 23, minimum daily, 5 second-feet Mar. 12-14.

Remarks.— Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 77 discharge measurements, of which 29 were furnished by Middle Rio Grande Conservancy District and 14 by El Paso County Improvement District no. 1. Discharge represents return flow from irrigation to Lower Belen riverside drain above point of diversion of Jaral lateral No. 1.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 16-30, 1936 .....	22	13	17.1	508
July .....	20	12	15.9	980
August .....	17	12	14.5	889
September .....	22	11	17.6	1,050
The period .....				3,430
October 1936 .....	19	11	13.7	841
November .....	16	12	13.8	823
December .....	15	10	12.3	758
January 1937 .....	13	8	10.7	660
February .....	12	9	10.6	587
March .....	14	5	8.35	514
April .....	19	12	15.8	940
May .....	24	15	18.1	1,110
June .....	30	14	20.8	1,240
July .....	20	17	18.1	1,110
August .....	20	14	16.6	1,020
September .....	26	15	19.9	1,190
Water year 1936-37 .....	30	5	14.9	10,790

# RIO GRANDE BASIN

San Juan canal at head, near Bosque, N. Mex.

Location.- Water-stage recorder, lat. 34°36', long. 106°45', in SW¼ sec. 9, T. 4 N., R. 2 E., about 150 feet below point of diversion from Rio Grande and 3 miles north-east of Bosque.

Records available.- May to July 1936 (discontinued).

Extremes.- Maximum discharge during period, 176 second-feet July 10 (gage height, 3.98 feet), result of sudden rise of Rio Grande during night; minimum daily discharge, 26 second-feet June 3.

Remarks.- Records good. Canal diverts water from Rio Grande for irrigation on Belen Division of Middle Rio Grande Conservancy District. No diversion between station and head. Flow controlled at head gates.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	-	79	55		
2							-	-	34	51		
3							*142	-	26	48		
4							-	-	38	51		
5							-	-	76	58		
6							-	-	110	109		
7							-	-	102	90		
8							-	-	102	96		
9							-	-	68	86		
10							*98	-	62	76		
11							-	-	54	-		
12							-	-	52	-		
13							-	-	47	-		
14							-	-	32	-		
15							-	-	83	-		
16							-	-	86	-		
17							-	-	66	-		
18							-	-	43	-		
19							-	-	34	-		
20							-	99	34	-		
21							-	101	41	-		
22							-	97	71	-		
23							-	92	68	-		
24							-	71	39	-		
25							-	87	60	-		
26							-	78	72	-		
27							*88	82	84	-		
28							-	77	80	-		
29							-	56	81	-		
30							-	73	71	-		
31							-	99	-	-		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 20-31.....						1,012	101	56	84.3	2,010		
June.....						1,895	110	26	63.2	3,760		
July 1-10.....						750	109	48	75.0	1,490		
August.....						-	-	-	-	-		
September.....						-	-	-	-	-		
Water year .....												

\*Discharge measurement, furnished by Middle Rio Grande Conservancy District.



## San Juan canal below Sais lateral, near Bosque, N. Mex.

Location.- Water-stage recorder, lat. 34°35', long. 106°45', in NE¼ sec. 17, T. 4 N., R. 2 E., 500 feet below Sais lateral diversion, about 1½ miles below heading from Rio Grande, and 2 miles northeast of Bosque. Zero of gage is 4,772.24 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, about 144 second-feet Sept. 26 (gage height, 5.18 feet); no flow at times.  
Maximum discharge during water year 1936-37, 98 second-feet Sept. 13; maximum gage height, 5.30 feet Aug. 16; no flow at times.

Remarks.- Records good except those for periods of missing or fragmentary gage-height record, which are poor. Sais lateral diverts from canal, and San Juan acequia and Casa Colorado divert from Sais Lateral. The discharge of San Juan Canal at its head is the sum of its discharge at this station, the discharge for San Juan acequia near Bosque, and the discharge for Casa Colorado acequia near Bosque, to which should be added a small waste at the end of Sais lateral. Flow of canal controlled at head gate and at point of diversion of Sais lateral.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	53	73
2										-	14	67
3										-	33	58
4										-	35	56
5										-	46	54
6										-	60	*5.2
7										-	60	57
8										-	54	54
9										-	44	54
10										-	48	51
11										50	64	54
12										2.0	57	43
13										42	55	1.7
14										46	57	43
15										42	19	40
16										39	0	45
17										34	42	51
18										39	58	48
19										*6.6	50	46
20										*6.1	39	4.4
21										8.6	0	39
22										35	41	41
23										42	0	49
24										35	47	44
25										38	49	37
26										38	56	39
27										36	58	4.4
28										37	60	0
29										33	53	0
30										46	0	0
31										50	50	0

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

Discharge, in second-feet, of San Juan canal below Sals lateral, near Bosque, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2.1	1.1			0	51	54	0	31	52	50
2	0	1.8	1.3			0	50	55	0	20	52	47
3	0	1.8	1.4			0	46	60	0	11	45	64
4	0	23	.9			0	8.1	66	0	23	51	61
5	0	24	.7			0	55	62	0	14	52	25
6	0	21	.7			0	56	61	0	19	62	76
7	0	19	.6			0	49	60	0	18	62	60
8	0	6.8	.6			0	54	63	33	18	48	52
9	0	25	.6			0	57	56	52	16	34	52
10	0	25	.4			†35	62	60	39	18	18	39
11	0	25	.3			†35	58	65	44	12	10	37
12	0	29	.2			†35	74	55	43	16	38	47
13	0	24	.2			†35	67	55	49	20	48	67
14	23	17	.1			†35	59	58	31	13	47	57
15	36	2.3	0			†35	54	54	40	19	56	53
16	40	13	0			†55	43	53	40	*14	74	45
17	34	2.1	0			†55	37	54	49	0	63	41
18	6.1	2.0	0			†55	31	62	60	*1.5	70	51
19	37	2.0	0			†60	48	69	0	22	70	48
20	43	1.8	0			†60	46	60	36	9.6	75	43
21	42	1.8	0			†40	41	65	53	26	78	50
22	41	14	0			†40	46	61	13	34	74	36
23	35	35	0			†40	46	46	12	47	75	55
24	29	34	0			†40	50	66	30	11	60	37
25	1.3	34	0			†40	48	53	38	49	55	42
26	27	25	0			†40	48	50	24	43	64	54
27	27	31	0			29	52	32	17	31	67	49
28	20	18	0			13	56	27	*20	32	68	33
29	38	6.1	0			37	50	3.2	44	44	33	42
30	23	.7	0			48	56	0	36	58	76	61
31	2.6	-	0			51	-	0	-	78	56	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
July 11-31, 1936.....	705.3	50	2.0	33.6	1,400
August.....	1,304	64	0	42.1	2,590
September.....	1,158.7	73	0	38.6	2,300
The period.....					6,290
October 1936.....	505.0	43	0	16.3	1,000
November.....	467.3	35	.7	15.6	927
December.....	9.1	1.4	0	.29	18
January 1937.....	0	0	0	0	0
February.....	0	0	0	0	0
March.....	913	60	0	29.5	1,910
April.....	1,498.1	74	8.1	49.9	2,970
May.....	1,597.2	69	0	51.5	3,170
June.....	825	60	0	27.5	1,640
July.....	746.1	78	0	24.1	1,460
August.....	1,777	78	10	57.3	3,520
September.....	1,474	76	25	49.1	2,920
Water year 1936-37.....	9,811.8	78	0	26.9	19,460

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

†Gage height missing; discharge computed on basis of daily readings of staff gage furnished by Middle Rio Grande Conservancy District.

San Juan canal near Bernardo, N. Mex.

Location.- Water-stage recorder, lat. 34°26', long. 106°46', in NE¼ sec. 1, T. 2 N., R. 1 E., at highway bridge 3 miles east of Bernardo. Zero of gage is 4,736.90 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 78 second-feet Sept. 28 (gage height, 2.74 feet); no flow at times.

Maximum discharge observed during water year 1936-37, about 83 second-feet May 28; minimum gage height observed, 3.71 feet June 27; no flow at times.

Remarks.- Records fair except those for May 27 to July 16, 1937, and those for periods of fragmentary gage-height record, which are poor. No records for Mar. 1-27, 1937. Part of discharge feeds La Joya acequia, and part is wasted to Rio Grande 1½ miles below station; no other diversions.

Discharge, in second-feet, 1936-37  
1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	13	13	34
2									-	2.4	1.7	27
3									-	4.0	4.6	22
4									-	21	12	38
5									*1.3	2.9	22	30
6									-	30	20	20
7									-	23	19	24
8									-	19	20	20
9									-	29	24	20
10									-	17	34	21
11									-	24	35	23
12									-	†12	19	10
13									*24	†8.3	15	2.9
14									-	24	15	4.8
15									-	24	4.8	12
16									-	26	†.8	20
17									*9.1	†6.5	†5.4	21
18									-	15	10	19
19									-	†5.8	14	24
20									-	0	9.1	†5.6
21									-	0	.2	†16
22									*15	4.7	2.4	16
23									-	13	.2	14
24									-	5.8	4.1	20
25									24	7.8	17	18
26									6.8	6.8	32	27
27									15	3.1	32	†5.3
28									17	7.5	19	0
29									28	3.8	24	0
30									26	14	5.2	0
31									-	10	16	-

\*Discharge measurement.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of local conditions.

Discharge, in second-feet, of San Juan canal near Bernardo, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0				-	22	17	0	0	6.0	20
2	0	0				-	21	11	0	0	6.5	9.4
3	0	0				-	19	19	0	0	10	13
4	0	5.6				-	2.9	25	0	0	8.6	15
5	0	10				-	17	17	0	0	4.8	9.4
6	0	12				-	18	13	0	0	7.6	28
7	0	10				-	15	17	0	0	†5.0	16
8	0	5.4				-	13	21	0	0	†5.0	19
9	0	7.0				-	11	12	0	0	†3.2	3.6
10	0	12				-	19	24	0	0	3.7	20
11	0	10				-	20	26	0	0	1.5	15
12	0	17				-	34	12	5.4	0	11	28
13	0	12				-	20	14	17	0	11	17
14	0	13				-	†11	12	7.8	.8	7.0	13
15	6.1	3.2				-	†12	17	8.8	3.3	22	21
16	17	3.8				-	14	24	4.9	1.4	11	17
17	29	.9				-	16	16	2.4	0	11	24
18	2.4	0				-	17	12	5.0	0	12	27
19	8.5	0				-	22	17	7.0	0	11	26
20	19	0				-	14	9.2	2.6	0	11	13
21	8.0	0				-	18	16	17	9.8	20	31
22	11	0				-	13	17	7.2	10	22	17
23	4.8	.8				-	18	15	2.0	11	27	13
24	11	3.1				-	12	31	15	6.9	26	22
25	2.1	11				-	13	32	13	13	20	27
26	8.8	9.4				-	19	18	2.7	9.6	25	27
27	13	8.9				-	14	19	5.0	8.3	13	24
28	13	14				1.2	25	18	0	8.9	11	26
29	7.8	5.6				16	10	0	0	11	27	18
30	13	1.7				21	8.2	0	0	11	28	25
31	.4	-				22	-	0	-	6.5	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
June 25-30, 1936.....	116.8	28	6.8	19.5	232
July.....	381.4	30	0	12.3	756
August.....	450.5	35	.2	14.5	894
September.....	512.6	38	0	17.1	1,020
The period.....	-	-	-	-	2,900
October 1936.....	174.9	29	0	5.64	347
November.....	176.4	17	0	5.88	350
December.....	0	0	0	0	0
January 1937.....	0	0	0	0	0
February.....	0	0	0	0	0
March.....	-	-	-	-	-
April.....	488.1	34	2.9	16.3	968
May.....	501.2	32	0	16.2	994
June.....	122.8	17	0	4.09	244
July.....	111.5	13	0	3.60	221
August.....	408.9	28	1.5	13.1	807
September.....	584.4	31	3.6	19.5	1,180

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of local conditions.

## San Juan canal wasteway near Bosque, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}32'$ , long.  $106^{\circ}46'$ , in NW $\frac{1}{4}$  sec. 32, T. 4 N., R. 2 E., about 300 feet above outlet into Rio Grande and  $2\frac{1}{4}$  miles southeast of Bosque.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period about 200 second-feet June 27 (gage height, 2.15 feet); no flow at times.

Remarks.- Records good except those for May 29 to June 12, which were computed on basis of two discharge measurements, partial gage height record for June 12, knowledge of local conditions and records for San Juan Canal below Sals lateral and are fair. Discharge represents waste return from irrigation.

Discharge, in second-feet, May to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	30	0	5.2
2								-	0	4.4	11	11
3								-	0	2.8	.2	21
4								-	0	17	2.6	16
5								-	0	9.5	12	.7
6								-	0	16	21	13
7								-	0	13	26	17
8								-	30	18	17	19
9								-	45	15	1.4	44
10								-	35	16	.2	17
11								-	40	8.2	0	5.2
12								-	11	4.8	.2	17
13								-	6.5	16	.1	32
14								-	1.1	2.7	.9	25
15								-	1.6	1.8	2.7	23
16								-	1.8	1.4	22	6.4
17								-	1.6	1.2	16	5.8
18								-	1.2	.4	20	10
19								-	.8	0	25	13
20								-	1.3	.2	29	7.4
21								-	1.5	1.2	24	.8
22								-	1.5	1.2	23	8.6
23								-	.4	1.2	8.4	25
24								-	9.2	.7	20	4.9
25								-	15	1.1	4.4	4.0
26								-	6.1	1.0	14	10
27								-	14	1.3	21	7.0
28								-	14	.6	18	3.6
29								0	45	0	4.4	5.4
30								0	36	0	22	27
31								0	-	0	10	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June.....						319.7	45	0	10.7	634		
July.....						186.7	30	0	6.02	370		
August.....						376.6	29	0	12.1	747		
September.....						405.0	44	.7	13.5	803		
The period.....										2,560		

## Casa Colorado acequia near Bosque, N. Mex.

Location.- Staff gage, lat. 34°25', long. 106°45', in SE $\frac{1}{4}$  sec. 9, T. 4 N., R. 2 E., 115 feet below heading from Sais lateral and 2 miles northeast of Bosque. Zero of gage is 4,777.47 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum discharge observed during period ending Sept. 30, 1936, 13 second-feet Aug. 28, 27; maximum gage height observed, 1.73 feet Aug. 28, 29; no flow at times.

Maximum discharge observed during water year 1936-37, 19 second-feet June 14; maximum gage height observed, 2.10 feet Aug. 23; no flow at times.

Remarks.- Records poor. Gage read 4 to 14 times weekly. Acequia diverts water from Sais lateral for irrigation. Flow controlled at head gates. No diversion between station and head.

Discharge, in second-feet, 1936-37

Day	1936					1937						
	July	Aug.	Sept.	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	*2.6	7.5	0	0	0	0	7.0	0	0	*5.4	6.2
2	-	0	*7.6	0	0	0	7.3	0	0	3.8	5.1	14
3	-	*1.5	*7.8	0	0	0	0	5.7	0	7.5	2.5	*12
4	-	4.5	7.9	0	0	0	0	5.5	0	0	0	11
5	-	*2.7	*7.9	0	0	0	0	9.0	0	11	0	0
6	-	.9	0	0	0	0	0	0	0	9.0	0	*3
7	-	.6	*9	0	0	0	5.8	3.9	0	*9	0	6.6
8	-	*2.9	12	0	0	0	7.6	4.6	0	8.8	0	10
9	-	*5.2	*12	0	11	0	8.2	0	0	15	0	14
10	-	*7.4	*11	0	11	0	5.3	6.6	0	17	15	0
11	12	9.7	11	0	*9.6	0	0	0	9.4	*12	15	0
12	0	*9.8	8.0	0	8.2	0	0	12	*5	7.4	0	0
13	*12	10	0	0	10	0	4.1	0	0	8.2	0	14
14	*7	11	0	0	7.2	0	5.1	8.2	14	*5	7.7	10
15	0	4.5	0	0	0	10	5.1	15	*11	2.7	7.8	14
16	0	0	0	5.1	3.4	10	9.3	0	7.3	0	12	5.2
17	*7	6.5	3.6	6.1	0	15	7.0	2.3	8.4	12	*7	15
18	9.0	10	0	0	0	8.1	0	0	0	0	2.4	11
19	0	*10	3.2	4.1	0	0	0	0	2.3	0	15	0
20	0	8.2	0	0	0	10	14	0	.7	0	13	5.2
21	0	0	3.7	0	0	0	15	9.2	0	0	16	0
22	0	0	6.3	0	0	0	10	12	7.1	0	*8	3.6
23	3.7	0	*5.2	0	8.7	0	0	0	5.2	7.3	6.4	0
24	5.9	0	0	0	13	0	4.7	8.5	0	14	11	.9
25	*7.2	0	0	0	*11	0	0	7.6	0	14	4.9	*7
26	*8.5	10	0	0	*8.7	0	0	8.0	0	12	0	0
27	9.8	13	0	0	*6.6	9.5	15	0	0	2.3	0	4.5
28	9.1	12	0	2.4	4.4	0	12	0	0	6.6	0	0
29	8.4	9.4	0	2.4	0	0	0	0	0	12	0	11
30	3.0	0	0	0	0	0	0	0	0	10	15	4.1
31	2.6	7.8	-	0	-	-	-	0	-	5.6	14	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
July 11-31, 1936.....	105.2					12	0	5.01	209			
August.....	160.2					13	0	5.17	318			
September.....	121.7					12	0	4.06	241			
The period.....									768			
October 1936.....	20.1					6.1	0	0.65	40			
November.....	112.8					13	0	3.76	224			
December.....	0					0	0	0	0			
January 1937.....	0					0	0	0	0			
February.....	0					0	0	0	0			
March.....	62.6					15	0	2.02	124			
April.....	135.5					15	0	4.52	269			
May.....	136.1					15	0	4.39	270			
June.....	70.4					14	0	2.35	140			
July.....	212.3					17	0	6.85	421			
August.....	183.2					16	0	5.91	363			
September.....	176.0					15	0	5.87	349			
Water year 1936-37.....	1,109.0					17	0	5.04	2,200			

\*Gage height missing or uncertain; discharge computed on basis of engineers' notes and records for San Juan canal below Sais lateral, near Bosque, or interpolated.

## San Juan acequia near Bosque, N. Mex.

Location.— Staff gage lat. 34°35', long. 106°46', in SE¼SW¼ sec. 8, T. 4 N., R. 2 E., 100 feet below diversion from Sals lateral and about 2 miles northeast of Bosque.

Zero of gage is 4,778.22 feet above mean sea level (general adjustment of 1929).

Records available.— July 1936 to September 1937.

Extremes.— Maximum discharge observed during period ending Sept. 30, 1936, 5.9 second-foot Sept. 11, 12; maximum gage height observed, 1.91 feet Aug. 7; no flow at times.

Maximum discharge observed during water year 1936-37, 6.5 second-foot Aug. 2; maximum gage height observed, 2.06 feet July 31; no flow at times.

Remarks.— Records poor. Gage read 4 to 14 times weekly. Acequia diverts water from Sals lateral for irrigation. Flow controlled at station. No diversion between station and head.

Discharge, in second-feet, 1936-37

Day	1936				1937							
	July	Aug.	Sept.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	-	*2.3	1.8	0	0	0	0	0	0	4.8	4.5	
2	-	0	*2.6	0	0	2.5	0	0	0	6.5	5.0	
3	-	0	*3.5	0	0	0	2.1	0	0	6.1	*5.2	
4	-	1.5	4.3	0	0	0	1.7	0	0	0	5.3	
5	-	*2.4	*4.3	0	0	0	2.2	0	0	0	0	
6	-	4.3	0	0	0	0	0	0	2.8	0	0	
7	-	4.6	*2.3	0	0	0	2.5	0	4.9	0	0	
8	-	*4.4	2.3	0	0	1.6	2.2	0	2.4	0	.8	
9	-	*4.0	*3.5	0	0	0	0	0	.9	0	.9	
10	-	*3.6	*4.7	0	0	0	2.9	0	.6	0	0	
11	0	3.3	5.9	0	0	0	2.9	6.0	0	0	0	
12	0	*2.6	4.4	5.1	0	0	2.8	0	2.7	0	0	
13	0	1.9	0	4.1	0	2.1	0	0	5.2	0	1.3	
14	0	2.3	0	2.9	0	3.8	2.5	0	*3.6	4.0	2.2	
15	0	1.0	0	0	0	1.1	0	5.6	2.2	0	0	
16	0	0	0	0	*3	0	0	4.9	0	3.4	2.6	
17	0	1.6	2.3	0	0	0	0	0	0	4.3	1.0	
18	0	2.8	0	0	0	0	2.8	0	0	4.0	.6	
19	0	0	*2.5	0	0	0	0	4.2	0	3.2	0	
20	0	0	0	0	0	0	0	0	0	4.2	0	
21	0	0	2.6	0	0	2.7	2.5	0	0	0	0	
22	0	0	3.9	0	0	2.8	2.2	*3.8	0	0	0	
23	*1.0	0	*2.0	0	0	0	0	0	0	0	0	
24	0	0	0	2.5	0	0	0	0	0	0	1.9	
25	0	0	0	*1.8	0	0	2.2	0	0	0	0	
26	0	2.1	0	*1.2	0	2.5	0	*1.1	.5	0	0	
27	0	1.8	0	*.6	0	0	0	0	1.5	0	.6	
28	1.2	2.6	0	0	0	2.7	0	0	2.4	0	0	
29	2.4	2.0	0	0	0	0	0	0	3.9	0	.9	
30	4.5	0	0	0	0	0	0	0	4.5	0	1.2	
31	4.6	0	-	0	0	-	0	-	6.2	2.7	-	
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
July 11-31, 1936.....					13.7	4.6	0	0.65	27			
August.....					51.5	4.8	0	1.66	102			
September.....					52.9	5.9	0	1.76	105			
The period.....									234			
October 1936.....					0	0	0	0	0			
November.....					18.2	5.1	0	.61	36			
December.....					0	0	0	0	0			
January 1937.....					0	0	0	0	0			
February.....					0	0	0	0	0			
March.....					12	-	0	.4	24			
April.....					21.6	3.8	0	.73	43			
May.....					31.5	2.9	0	1.02	62			
June.....					25.8	6.0	0	.85	51			
July.....					44.3	6.2	0	1.43	88			
August.....					43.2	6.5	0	1.39	86			
September.....					34.0	5.3	0	1.13	67			
Water year 1936-37.....					230.6	6.5	0	.63	457			

\*Gage height missing or fragmentary; discharge computed on basis of records for Casa Colorado acequia near Bosque and San Juan canal below Sals lateral, near Bosque, or interpolated.

## San Juan lateral at end, near Bosque, N. Mex.

Location.- Water-stage recorder, lat. 34°29', long. 106°47', in NE¼ sec. 13, T. 3 N., R. 1 E., at outlet into San Juan interior drain, 5½ miles south of Bosque.

Records available.- May 1937 to January 1938 (discontinued).

Extremes.- Maximum discharge during period, 28 second-feet May 27 (gage height, 2.57 feet); no flow at times.

Remarks.- Records good except those for days of fragmentary gage-height record, May 25, 28, which were computed on basis of partial gage-height record and knowledge of local conditions and are poor. Discharge represents waste return from irrigation.

## Discharge, in second-feet, May to December 1937

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.				
1	-	0	0	0.3	4.3	0.9	0	0.9				
2	-	0	.8	.3	.6	0	0	.7				
3	-	0	.6	.8	.9	0	0	.4				
4	-	0	.7	3.4	1.4	0	0	.4				
5	-	0	.5	3.9	2.4	0	0	.1				
6	-	0	.4	3.9	3.3	0	0	0				
7	-	0	.4	3.1	2.1	0	0	0				
8	-	0	.4	1.3	2.2	0	0	0				
9	-	0	.3	3.5	.3	0	0	0				
10	-	0	.2	.3	.2	0	0	0				
11	-	0	.3	.2	.3	0	0	0				
12	-	0	.6	0	.8	0	0	0				
13	-	2.1	.5	.1	3.5	0	0	0				
14	-	2.4	2.5	.6	3.2	0	0	0				
15	-	2.2	2.4	1.3	2.3	0	0	0				
16	-	1.3	1.8	1.6	.3	.2	2.4	0				
17	-	.7	1.4	1.7	.1	0	3.6	0				
18	-	1.3	1.7	.3	.5	.5	1.2	0				
19	-	4.3	0	1.9	2.4	.8	1.0	0				
20	-	4.0	0	3.2	3.0	.1	.7	0				
21	-	.9	0	.9	1.9	0	.7	0				
22	-	1.4	.7	3.4	4.3	.2	1.3	0				
23	-	.8	.3	.9	2.4	.5	2.6	0				
24	-	.3	.2	1.6	1.6	.4	1.3	0				
25	3.0	.1	.5	3.2	.9	4.3	1.6	0				
26	5.0	.1	.9	2.1	0	2.2	1.8	0				
27	5.0	2.2	.8	.6	3.3	1.0	3.5	0				
28	4.3	.2	.1	.4	0	.4	1.2	0				
29	0	0	.1	3.6	.5	.1	1.0	0				
30	0	0	.5	3.0	1.1	0	1.0	0				
31	0	-	.3	4.3	-	0	-	0				
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
May 25-31.....					15.3	5.0	0	2.19	30			
June.....					24.3	4.3	0	.81	48			
July.....					19.9	2.5	0	.64	39			
August.....					57.2	4.3	0	1.85	113			
September.....					49.9	4.3	0	1.66	99			
October.....					11.6	4.3	0	0.37	23			
November.....					24.9	3.6	0	.83	49			
December.....					2.5	.9	0	.08	5.0			
January 1-6.....					0	0	0	0	0			
The period.....									406			



## Upper San Juan riverside drain near Bosque, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}32'$ , long.  $106^{\circ}46'$ , in  $\frac{1}{4}$  sec. 29, T. 4 N., R. 2 E., at downstream end of highway culvert, 250 feet east of Bosque Bridge over Rio Grande, half a mile above outlet into Rio Grande, and 2 miles southeast of Bosque. Zero of gage is 4,762.99 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 15 second-feet Sept. 28; maximum gage height observed, 2.44 feet June 9; minimum daily discharge, 6 second-feet June 23-27, July 24-27, 30, 31, Aug. 1.  
Maximum daily discharge during water year 1936-37, 17 second-feet May 20-27; maximum gage height observed, 2.64 feet July 13; minimum daily discharge, 8 second-feet Oct. 7, 8, 15, 16, Jan. 5, 6, July 20-24, Aug. 6-10.

Remarks.- Records poor. Discharge computed on basis of 92 discharge measurements, of which 27 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District No. 1, and records for Lower San Juan riverside drain near Bernardo, Rio Grande near Bernardo, and Rio Grande near Isleta. Discharge represents return flow from irrigation to Rio Grande.

Discharge, in second-feet, 1936-37

1936

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

\*Discharge measurement.

Discharge, in second-feet, of Upper San Juan riverside drain near Bosque, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	10	*11	9	10	11	11	14	*16	13	11	11
2	*9	*10	11	9	*10	11	10	13	15	13	11	12
3	9	11	12	9	10	11	11	13	15	12	10	11
4	9	12	12	*9	10	11	11	12	15	12	10	11
5	10	12	12	8	10	11	12	12	14	11	9	11
6	*9	11	11	8	*10	11	11	12	14	11	9	11
7	8	11	11	9	11	11	11	12	13	*11	9	11
8	8	11	*10	9	11	11	11	12	13	11	8	12
9	9	*11	10	*9	*12	12	11	13	12	11	*8	*12
10	9	11	10	10	*11	12	11	*13	*12	11	8	13
11	9	10	10	10	11	12	12	13	12	11	*9	13
12	*10	10	*10	10	10	13	*12	14	12	12	9	13
13	10	9	10	*9	*10	13	12	14	12	*12	9	*13
14	9	9	10	9	10	12	13	15	12	11	10	12
15	8	9	*10	10	11	12	14	15	12	11	10	12
16	*8	9	10	10	11	12	14	16	12	10	10	12
17	9	10	10	10	*11	11	14	16	12	10	10	11
18	*9	*12	10	10	11	*11	15	16	*11	9	10	11
19	*9	12	11	10	11	12	15	16	10	9	11	10
20	9	12	11	*10	11	12	15	17	10	8	11	*10
21	9	11	10	10	10	12	15	17	9	8	12	10
22	9	11	10	9	10	11	15	17	9	*8	12	10
23	9	*10	10	9	*10	11	*15	17	9	8	12	10
24	9	10	*10	9	10	11	15	17	*10	8	11	10
25	10	9	10	*9	*10	11	14	17	10	9	*10	*10
26	*10	10	10	9	*10	11	14	17	12	9	10	10
27	*10	*11	*9	*9	10	11	*14	17	15	10	*10	10
28	9	11	9	*9	11	11	14	16	14	*11	10	10
29	9	11	9	9	-	11	14	16	14	11	10	11
30	9	*10	9	*9	-	11	14	16	*13	12	11	11
31	9	-	9	10	-	11	-	16	-	12	11	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
June 9-30, 1936.....					170	10	6	7.7	337			
July.....					265	13	6	8.5	526			
August.....					257	10	6	8.3	510			
September.....					299	15	8	10.0	593			
The period.....									1,970			
October 1936.....					282	10	8	9.1	559			
November.....					316	12	9	10.5	627			
December.....					317	12	9	10.2	629			
January 1937.....					288	10	8	9.3	571			
February.....					293	12	10	10.5	581			
March.....					354	13	11	11.4	702			
April.....					390	15	10	13.0	774			
May.....					461	17	12	14.9	914			
June.....					369	16	9	12.3	732			
July.....					325	13	8	10.6	645			
August.....					311	12	8	10.0	617			
September.....					334	13	10	11.1	662			
Water year 1936-37.....					4,040	17	8	11.1	8,010			

\*Discharge measurement.

## Sabinal riverside drain near Bosque, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}32'$ , long.  $106^{\circ}47'$ , in NE $\frac{1}{4}$  sec. 36, T. 4 N., R. 1 E., 20 feet below junction with Bosque interior drain, three quarters of a mile above outlet into Rio Grande, and 2 $\frac{1}{2}$  miles south of Bosque. Prior to Mar. 3, 1937, water-stage recorder at same site but independent datum, with zero of gage at 4753.79 feet above mean sea level (general adjustment of 1929). Present gage installed June 18, 1937.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 84 second-feet Sept. 27 (gage height, 3.89 feet); minimum daily discharge, 34 second-feet July 27.  
Maximum daily discharge during water year 1936-37, 100 second-feet (estimated) May 28-31; minimum daily, 33 second-feet Feb. 14.

Remarks.- Records for June 1936 to Mar. 2, 1937, good; those for Mar. 3 to Sept. 30, 1937, poor. Discharge represents return flow of ground water and waste return of surface water from irrigation. Middle Rio Grande Conservancy District furnished 28 discharge measurements, and El Paso County Water Improvement District no. 1 furnished 16.

Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	56	40	47
2									-	60	50	48
3									-	64	54	43
4									-	60	50	41
5									-	64	54	40
6									-	64	56	40
7									-	56	58	40
8									-	62	53	39
9									*50	70	45	40
10									-	60	46	40
11									-	74	49	45
12									-	60	50	52
13									-	53	56	56
14									-	56	60	60
15									*52	62	56	62
16									-	60	60	56
17									-	58	68	62
18									-	58	66	53
19									-	60	64	50
20									*43	50	70	60
21									-	50	72	58
22									-	45	59	60
23									-	40	53	68
24									-	37	48	64
25									*44	36	46	60
26									-	35	49	70
27									-	34	50	74
28									-	40	48	64
29									62	37	48	53
30									64	38	52	49
31									-	41	48	-

\*Discharge measurement.

Discharge, in second-feet, of Sabinal riverside drain near Bosque, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	60	58	38	35	35	82	62	*99	72	80	49
2	43	47	49	38	35	35	82	63	98	70	78	48
3	42	46	47	37	35	35	81	64	95	68	75	47
4	42	42	47	37	35	35	79	65	90	66	70	46
5	42	41	46	37	36	35	75	68	86	64	65	46
6	42	50	45	*56	36	36	70	69	80	62	60	47
7	41	58	44	36	36	36	65	71	75	59	55	48
8	40	66	43	37	36	36	65	73	68	*57	50	50
9	40	64	43	*37	38	37	65	75	60	55	*46	52
10	40	60	41	36	37	37	65	*77	*57	54	44	55
11	40	53	41	36	36	37	70	80	54	53	42	*58
12	39	53	41	36	34	37	*75	82	54	53	*41	66
13	39	54	41	36	34	38	79	85	53	53	41	*73
14	38	60	40	36	33	38	76	86	52	*54	41	76
15	38	64	40	36	34	38	75	88	52	54	42	78
16	39	66	40	36	35	38	76	90	51	53	43	78
17	44	60	40	36	38	37	80	90	50	52	45	76
18	56	48	40	36	38	*37	85	92	*50	50	47	73
19	56	45	40	36	36	36	85	94	49	48	49	70
20	54	43	40	36	35	35	85	95	48	46	52	62
21	54	41	40	36	34	35	80	96	47	45	53	55
22	56	40	40	35	34	35	75	97	46	*44	53	*51
23	54	43	40	35	34	40	*70	98	*45	44	54	51
24	52	45	40	35	34	50	66	98	46	44	54	55
25	50	48	39	35	34	60	64	98	50	45	*54	*58
26	54	52	39	35	34	70	63	98	60	50	*55	60
27	58	62	38	35	34	75	*62	99	82	60	56	62
28	58	58	39	35	36	82	60	100	78	70	56	62
29	60	52	39	35	-	82	60	100	75	*74	55	62
30	70	62	39	35	-	82	61	100	*74	78	53	60
31	53	-	39	35	-	82	-	100	-	80	51	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
July 1936.....						1,630	74	34	52.6	3,230		
August.....						1,676	72	40	54.1	3,320		
September.....						1,598	74	39	53.3	3,170		
The period.....										9,720		
October 1936.....						1,480	70	38	47.7	2,940		
November.....						1,583	66	40	52.8	3,140		
December.....						1,298	58	38	41.9	2,570		
January 1937.....						1,116	38	35	36.0	2,210		
February.....						986	38	33	35.2	1,960		
March.....						1,421	82	35	45.8	2,820		
April.....						2,176	85	60	72.5	4,320		
May.....						2,653	100	62	85.6	5,260		
June.....						1,924	99	45	64.1	3,820		
July.....						1,777	80	44	57.3	3,520		
August.....						1,660	80	41	53.5	3,290		
September.....						1,774	78	46	59.1	3,520		
Water year 1936-37.....						19,848	100	33	54.4	39,370		

\*Discharge measurement.

Note.- Discharge for days of missing gage-heights, Dec. 6, 1936, Jan. 7, 8, 10, 1937, interpolated, and for May 3 to Sept. 30 computed on basis of 22 discharge measurements, knowledge of local conditions, and records for Lower Peralta riverside drain near Belen and for Rio Grande near Isleta.

## Bosque interior drain near Bosque, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}32'$ , long.  $106^{\circ}47'$ , in NE $\frac{1}{4}$  sec. 36, T. 4 N., R. 1 E., 100 feet above confluence with Sabinal riverside drain and  $2\frac{1}{4}$  miles south of Bosque. Zero of gage is 4,755.40 feet above mean sea level (general adjustment of 1929).

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 33 second-feet Aug. 21; minimum daily, 12 second-feet July 2-6.  
Maximum daily discharge during water year 1936-37, 34 second-feet May 30 to June 1; minimum daily, 6 second-feet Feb. 26 to Mar. 13.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 91 discharge measurements, of which 28 were furnished by Middle Rio Grande Conservancy District and 16 by El Paso County Water Improvement District no. 1, 33 readings of staff gage during period July 1936 to February 1937, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to Sabinal riverside drain.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 9-30, 1936.....	23	14	19.9	867
July.....	19	12	15.2	936
August.....	33	14	20.8	1,280
September.....	28	13	18.4	1,090
The period.....				4,170
October 1936.....	16	9	12.2	752
November .....	18	11	14.4	557
December.....	18	10	11.8	728
January 1937.....	10	7	8.1	498
February.....	8	6	7.7	428
March .....	14	6	7.9	468
April.....	19	15	17.6	1,050
May.....	34	20	24.8	1,530
June.....	34	14	18.5	1,100
July.....	20	13	16.6	1,020
August.....	19	15	17.3	1,050
September.....	22	14	19.1	1,140
Water year 1936-37.....	34	6	14.7	10,650

## Lower San Juan riverside drain near Bernardo, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}26'$ , long.  $106^{\circ}48'$ , in NW $\frac{1}{4}$  sec. 1, T. 2 N., R. 1 E., 50 feet below junction with Las Nutrias interior drain, 1 mile above outlet into Rio Grande, and  $2\frac{1}{4}$  miles east of Bernardo. Zero of gage is 4,724.11 feet above mean sea level (general adjustment of 1929). Prior to March 2, 1937, water-stage recorder at same site and datum.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 60 second-feet Sept. 28 (gage height, 2.22 feet); minimum daily discharge, 26 second-feet July 24 and August 15.

Maximum daily discharge during water year 1936-37, 70 second-feet (estimated) May 13-17; minimum daily, 26 second-feet July 22, 23.

Remarks.- Records for June 1936 to Mar. 2, 1937, good; those for Mar. 3 to Sept. 30, poor. Discharge for period of missing gage heights, May 3 to Sept. 30, 1937, computed on basis of several discharge measurements, knowledge of local conditions, and records for Lower Peralta riverside drain near Belen and for Rio Grande near Bernardo. Discharge represents return flow of ground and surface water from irrigation.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	30	32	36
2									-	29	35	34
3									-	37	32	36
4									-	34	34	34
5									*41	36	36	31
6									-	35	36	30
7									-	36	34	30
8									-	37	32	30
9									-	42	30	31
10									-	47	28	30
11									-	44	28	35
12									-	41	32	36
13									*35	43	30	32
14									-	42	29	32
15									*38	39	26	34
16									-	36	28	33
17									*36	37	26	32
18									-	38	32	34
19									-	35	34	33
20									-	30	31	33
21									-	30	30	32
22									*26	30	33	34
23									-	29	32	32
24									-	26	32	33
25									30	27	32	32
26									37	28	31	32
27									32	26	30	33
28									34	31	31	42
29									34	30	34	36
30									30	30	33	34
31									-	26	32	-

\*Discharge measurement.

Discharge, in second-feet, of Lower San Juan riverside drain near Bernardo, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	34	34	32	32	32	43	48	50	48	42	37
2	33	34	34	32	32	32	43	49	50	47	40	37
3	32	33	35	32	32	32	43	49	50	45	38	37
4	31	34	35	32	32	32	43	49	50	43	36	37
5	30	34	34	32	33	32	43	50	50	41	35	36
6	30	34	32	*32	33	32	43	52	49	40	34	36
7	31	34	32	*31	34	33	43	55	48	*40	32	36
8	30	34	32	*31	34	33	44	59	*48	39	31	36
9	30	34	32	*31	34	34	44	53	46	38	*29	37
10	30	34	32	30	35	34	45	*67	*45	38	29	*37
11	30	34	32	30	34	35	45	68	44	38	29	38
12	30	34	32	31	33	37	*45	69	44	38	*29	40
13	30	34	33	31	32	38	46	70	43	39	30	*41
14	30	35	33	31	32	40	47	70	42	*39	31	41
15	29	34	33	32	32	42	48	70	42	38	32	42
16	30	34	32	32	34	44	49	70	41	37	33	42
17	31	35	32	32	34	45	49	70	41	35	34	42
18	30	35	32	32	35	45	50	69	40	33	35	41
19	30	35	32	32	34	44	50	68	40	32	36	41
20	32	35	32	32	34	44	50	66	39	30	37	40
21	34	35	32	32	33	43	50	64	38	29	38	39
22	35	36	31	32	33	43	50	62	38	*28	39	38
23	32	35	31	32	32	*43	*49	60	*37	28	39	36
24	33	34	31	32	32	43	48	58	*35	29	39	*35
25	33	36	32	32	32	43	49	56	33	30	*38	*33
26	34	36	32	32	31	43	46	*54	37	31	36	32
27	34	37	32	32	32	43	*46	53	44	33	*34	32
28	34	36	33	32	32	43	45	52	53	*35	34	33
29	33	33	34	31	-	43	45	52	*51	37	34	34
30	34	32	33	31	-	43	46	51	50	39	35	34
31	34	-	33	31	-	43	-	51	-	42	36	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
June 25-30, 1936.....						197	37	30	32.8	391		
July.....						1,063	47	26	34.3	2,110		
August.....						977	36	26	31.5	1,940		
September.....						1,006	42	30	33.5	2,000		
The period.....										6,440		
October 1936.....						982	35	29	31.7	1,950		
November.....						1,034	37	32	34.5	2,060		
December.....						1,009	35	31	32.5	2,000		
January 1937.....						979	32	30	31.6	1,940		
February.....						922	35	31	32.9	1,830		
March.....						1,213	45	32	39.1	2,410		
April.....						1,386	50	43	46.2	2,760		
May.....						1,844	70	48	59.5	3,660		
June.....						1,318	55	35	43.9	2,610		
July.....						1,339	48	28	36.7	2,260		
August.....						1,074	42	29	34.6	2,130		
September.....						1,120	42	32	37.3	2,220		
Water year 1936-37.....						14,020	70	28	38.4	27,810		

\*Discharge measurement.

†Gage height missing; discharge interpolated.

## Las Nutrias interior drain near Bernardo, N. Mex.

Location.- Measuring section, lat.  $34^{\circ}26'$ , long.  $106^{\circ}47'$ , in SE $\frac{1}{4}$  sec. 36, T. 3 N., R. 1 E., Half a mile above outlet into Lower San Juan riverside drain and 3 miles north-east of Bernardo.

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 22 second-feet July 16; minimum daily, 6 second-feet Aug. 27-31.

Maximum daily discharge during water year 1936-37, 22 second-feet Mar. 27-30; minimum daily, 7 second-feet Dec. 2-6.

Remarks.- Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 67 discharge measurements, of which 28 were furnished by Middle Rio Grande Conservancy District and 14 by El Paso County Water Improvement District no. 1, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to Lower San Juan riverside drain.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 17-30, 1936.....	16	11	13.6	379
July.....	22	10	15.3	940
August.....	16	6	11.6	712
September.....	14	7	11.5	686
The period.....				2,720
October 1936.....	11	8	9.7	595
November.....	15	8	10.6	643
December.....	10	7	9.4	577
January 1937.....	10	8	9.2	567
February.....	10	9	9.9	549
March.....	22	10	14.9	916
April.....	21	12	14.0	833
May.....	16	13	14.3	879
June.....	15	12	13.2	783
July.....	14	9	11.9	732
August.....	14	11	12.7	760
September.....	15	9	12.4	736
Water year 1936-37.....	22	7	11.9	8,590



## San Francisco riverside drain near Bernardo, N. Mex.

Location.- Staff gage, lat. 34°25', long. 106°48', in NE¼ sec. 11, T. 2 N., R. 1 E., 250 feet below U. S. Highway 60, 2 miles east of Bernardo, and 3 miles above outlet into Rio Grande. Zero of gage is 4,715.30 feet above mean sea level (general adjustment of 1929). Gage destroyed May 17, 1937, by floodwaters from Rio Grande.

Records available.- June 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 8 second-feet

June 4-7, July 12-14; minimum daily, 4 second-feet Aug. 10, 11, 13-15, Sept. 5, 6.

Maximum daily discharge during water year 1936-37, 18 second-feet May 14-16;

minimum daily, 5 second-feet Oct. 3, 12-18, 27-31, Nov. 10-15, 25-28, Dec. 6, 8-13, 24, Jan. 5-8.

Remarks.- Records poor. Discharge computed on basis of 61 discharge measurements, of which 6 were furnished by Middle Rio Grande Conservancy District and 8 by El Paso County Water Improvement District no. 1. Gage read only at times when discharge measurements were made. Discharge for May 17 to July 16, during which period drain carried flood waters from Rio Grande, included in records for Rio Grande near Bernardo. Discharge represents return flow from irrigation to Rio Grande.

## Discharge, in second-feet, 1936-37

1936

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

\*Discharge measurement.

Discharge, in second-feet, of San Francisco riverside drain near Bernardo, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	6	*6	6	*6	7	7	9		-	10	12
2	*6	*6	6	6	6	7	7	9		-	10	12
3	*6	7	6	6	6	7	8	9		-	9	12
4	6	7	6	6	*6	7	8	9		-	9	12
5	*6	7	6	6	6	7	8	9		-	9	12
6	6	6	5	5	6	7	8	9		-	8	12
7	6	6	*6	*6	7	7	8	10		-	8	13
8	6	6	5	5	*6	*7	7	8		-	8	13
9	6	*6	5	*6	6	8	8	11		-	*8	*14
10	6	5	5	6	6	8	8	*12		-	8	15
11	6	5	5	6	*6	8	8	*16		-	8	16
12	*6	*5	*5	6	6	8	*8	17		-	8	16
13	5	5	5	6	6	8	9	17		-	8	*16
14	5	5	*6	6	6	8	9	18		-	8	18
15	5	5	6	*6	6	8	9	18		-	9	14
16	5	*6	*6	6	7	8	*9	18		-	9	13
17	5	*6	6	6	7	8	9	-		8	10	12
18	*5	6	6	6	*7	8	10	-		8	10	11
19	*6	7	6	6	7	8	*11	-		*8	11	11
20	6	7	6	6	7	8	11	-		7	12	10
21	6	6	6	*6	7	8	11	-		7	12	*10
22	6	6	6	6	*7	7	11	-		*7	12	10
23	6	*6	*6	6	7	*7	*11	-		7	12	11
24	6	6	*6	6	7	7	11	-		7	12	12
25	6	5	6	*6	6	8	11	-		7	*11	*13
26	*6	5	6	*6	*6	8	10	-		8	11	14
27	*5	*5	6	6	6	7	*9	-		8	11	14
28	5	5	6	*6	6	7	9	-		9	11	14
29	5	6	6	*6	-	8	9	-		10	11	14
30	5	*6	*6	6	-	8	*9	-		10	11	16
31	5	-	6	6	-	8	-	-		11	12	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
June 4-30, 1936.....					170	8	5	6.3	337			
July.....					192	8	5	6.2	581			
August.....					164	6	4	5.3	325			
September.....					169	7	4	5.6	335			
The period.....									1,380			
October 1936.....					173	6	5	5.6	543			
November.....					175	7	5	5.8	547			
December.....					178	6	5	5.7	553			
Calendar year.....												
January 1937.....					183	6	5	5.9	563			
February.....					180	7	6	6.4	567			
March.....					234	8	7	7.5	464			
April.....					272	11	7	9.1	540			
May 1-16.....					201	18	9	12.6	399			
June.....					-	-	-	-	-			
July 17-31.....					122	11	7	8.1	242			
August.....					306	12	8	9.9	607			
September.....					388	16	10	12.9	770			

\*Discharge measurement

## Bernardo interior drain near Bernardo, N. Mex.

Location.— Staff gage, lat. 34°25', long. 106°49', in SW¼NE¼ sec. 10, T. 2 N., R. 1 E., 150 feet below U. S. Highway 80, three-quarters of a mile east of Bernardo, and 1½ miles above confluence with San Francisco riverside drain. Zero of gage is 4,717.76 feet above mean sea level (general adjustment of 1929).

Records available.— June 1936 to May 1937 (discontinued).

Extremes.— Maximum daily discharge during period, 26 second-feet Sept. 27, 1936; minimum daily, 8 second-feet July 28-31, 1936.

Remarks.— Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 79 discharge measurements, of which 6 were furnished by Middle Rio Grande Conservancy District and 8 by El Paso County Water Improvement District no. 1, weekly readings of staff gage during period July 22 to Dec. 24, and records for Tome interior drain near Belen. Discharge represents return flow from irrigation to San Francisco riverside drain.

## Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
June 4-30, 1936.....	12	10	10.7	571
July.....	17	8	11.5	706
August.....	11	9	9.6	589
September.....	26	9	11.8	704
The period.....				2,570
October 1936.....	13	11	11.7	722
November.....	12	12	12.0	714
December.....	13	11	12.5	770
January 1937.....	12	12	12.0	738
February.....	14	11	12.4	690
March.....	-	-	12.0	738
April.....	21	13	16.6	986
May 1-17.....	19	18	18.9	637
The period.....				5,995

## Rio Puerco at Rio Puerco, N. Mex.

Location.— Water-stage recorder, lat.  $34^{\circ}47'$ , long.  $107^{\circ}00'$ , in sec. 31, T. 7 N., R. 1 W., in San Clemente Grant, at Atchison, Topeka, and Santa Fe Railway bridge in hamlet of Rio Puerco.

Records available.— September 1910 to October 1911, August 1912 to December 1914 (records fragmentary, only gage heights prior to March 1913), and March 1934 to September 1937 in reports of Geological Survey; January 1913 to December 1925 and September 1926 to December 1927 in reports of State engineer.

Extremes.— Maximum discharge during year, about 9,820 second-feet July 3 (gage height, 4.00 feet); no flow at times.  
1934-37: Maximum discharge, about 28,300 second-feet Aug. 21, 1935 (gage height, 7.24 feet), computation of flow over dam; no flow at times.  
Maximum discharge during flood of Sept. 23, 1929, about 40,000 second-feet.

Remarks.— Records poor. Stage-discharge relation not affected by ice. Several diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	4	2	0	0	10	3	32	179	8	42	*400
2	12	4	1	0	1	5	2	18	86	217	569	38
3	7	8	1	0	1	3	1	20	202	2,230	38	*80
4	5	8	1	0	2	14	1	20	64	608	12	*50
5	3	6	2	0	3	26	1	12	23	119	8	*30
6	2	6	1	0	5	11	10	12	20	26	3	*20
7	2	10	0	0	5	8	18	16	14	10	0	*130
8	2	7	0	0	2	7	10	18	6	2	12	*100
9	1	7	0	0	0	8	12	20	3	1	3	*50
10	2	5	1	0	0	18	8	16	2	26	0	10
11	2	3	0	0	0	11	7	20	1	268	0	8
12	2	3	0	0	0	10	12	38	1	492	0	7
13	1	4	0	0	0	7	23	26	1	330	0	5
14	1	5	0	0	21	7	46	26	1	29	3	0
15	0	2	0	0	46	8	69	16	1	8	4	0
16	1	3	1	0	1,680	16	106	12	0	2	7	0
17	0	2	1	1	778	12	162	8	0	0	11	0
18	0	2	0	1	280	12	196	3	0	0	0	0
19	0	2	0	1	80	7	126	2	0	0	6	0
20	1	2	1	0	54	7	50	2	0	0	14	0
21	1	2	1	0	18	5	50	2	0	0	12	0
22	1	2	1	0	4	3	69	2	0	0	2	20
23	1	1	1	0	2	1	86	172	0	0	0	*30
24	2	1	1	0	2	1	126	98	0	0	0	1
25	4	1	2	0	3	1	126	12	0	0	0	1
26	94	1	1	0	32	1	50	10	1	469	136	1
27	*110	1	0	0	35	0	35	509	726	269	*210	1
28	20	2	0	0	26	1	32	435	250	739	*15	0
29	12	2	0	0	-	3	46	251	46	591	5	0
30	7	2	0	0	-	2	64	451	14	250	7	349
31	7	-	0	0	-	5	-	480	-	315	262	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						321	110	0	10.4	637		
November.....						108	10	1	3.6	214		
December.....						19	2	0	.6	38		
Calendar year 1936.....						39,397	5,750	0	106	78,130		
January.....						3	1	0	.1	6.0		
February.....						3,080	1,680	0	110	6,110		
March.....						253	35	0	8.2	502		
April.....						1,547	196	1	51.6	3,070		
May.....						2,761	509	2	89.1	5,460		
June.....						1,645	726	0	54.8	3,260		
July.....						7,009	2,230	0	226	13,900		
August.....						1,383	569	0	44.6	2,740		
September.....						1,331	400	0	44.4	2,640		
Water year 1936-37.....						19,468	2,230	0	53.3	38,600		

\*Gage-height record faulty; discharge computed on basis of partial gage-height trend, weather records, and knowledge of local conditions.

## Bluewater Creek near Bluewater, N. Mex.

Location.- Water-stage recorder, lat.  $35^{\circ}18'$ , long.  $108^{\circ}01'$ , in SW $\frac{1}{4}$  sec. 5, T. 12 N., R. 11 W.,  $2\frac{1}{2}$  miles northwest of village of Bluewater and 8 miles below storage reservoir of Bluewater-Toltec Irrigation District.

Drainage area.- 235 square miles.

Records available.- May 1912 to December 1914 and October 1930 to September 1937 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, 81 second-feet July 26 (gage height, 2.95 feet); minimum daily discharge, 1.5 second-feet (estimated) Jan. 3, 10.  
1930-37: Maximum discharge, about 1,010 second-feet Sept. 1, 1936 (gage height, 6.15 feet); no flow Mar. 9, 1931, Feb. 3, 1935.

Remarks.- Records fair except those for periods of ice effect, which are poor. Flow regulated by storage for irrigation in Bluewater-Toltec Reservoir.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	3.6	2.3	2.3	2.7	3.0	4.2	58	39	31	37	19
2	2.3	3.6	2.3	2.0	2.8	3.1	4.4	58	38	35	29	20
3	2.3	3.7	2.2	1.5	2.8	3.2	4.4	57	37	35	26	18
4	2.3	3.6	2.1	1.7	2.9	3.3	4.8	58	36	36	22	16
5	2.3	3.4	2.0	2.0	3.0	3.0	5.3	57	49	36	16	9.3
6	2.5	3.2	2.0	2.2	3.5	3.6	5.9	57	49	36	15	9.3
7	2.5	3.2	2.0	2.4	4.0	4.3	8.0	70	47	35	15	10
8	2.6	3.0	2.0	2.2	4.0	4.4	7.1	70	44	36	16	9.3
9	2.6	2.9	2.0	2.0	3.6	4.2	7.1	69	44	36	19	7.7
10	2.7	2.9	2.0	1.5	3.2	4.6	12	68	39	30	19	7.4
11	2.6	2.7	2.0	1.6	2.6	4.9	12	67	39	29	19	7.4
12	2.9	2.9	2.0	2.0	2.6	5.0	8.2	67	38	22	36	6.6
13	2.9	2.7	2.2	2.2	2.6	5.1	8.5	66	38	22	41	6.6
14	4.6	2.7	2.7	2.4	2.7	4.6	9.0	64	28	23	42	6.4
15	4.6	2.7	2.9	2.2	2.7	4.2	9.0	46	26	32	42	6.9
16	4.8	2.6	3.0	2.3	2.7	4.6	9.0	44	26	39	44	11
17	4.8	2.6	3.2	2.6	3.0	4.6	9.0	43	24	42	44	11
18	5.5	2.5	2.8	2.5	3.1	4.4	8.8	44	39	45	45	11
19	5.5	2.3	2.5	2.6	3.0	4.6	9.0	43	38	44	45	10
20	5.9	2.3	2.5	2.9	2.9	4.2	9.0	42	26	44	46	11
21	5.7	2.3	2.5	3.0	2.8	4.2	12	42	22	44	46	10
22	6.2	2.3	2.5	2.0	2.9	4.4	12	42	17	44	49	10
23	6.2	2.5	2.5	2.1	3.1	4.4	12	49	22	51	63	9.0
24	6.2	2.5	2.5	2.2	3.1	4.4	11	49	24	70	64	7.7
25	5.5	2.6	2.6	2.5	3.0	4.4	12	49	24	72	64	8.0
26	4.2	2.6	2.7	2.3	2.5	4.4	12	49	35	72	55	8.0
27	3.9	2.7	2.6	2.5	2.6	4.6	24	60	36	68	49	8.0
28	3.9	2.7	2.6	2.6	2.9	4.6	51	60	36	46	48	7.4
29	3.6	2.6	2.7	2.8	-	4.6	57	59	35	38	48	7.7
30	3.6	2.5	2.5	2.9	-	4.4	58	57	30	38	38	8.0
31	3.6	-	2.0	3.0	-	4.2	-	54	-	38	35	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						121.0	6.2	2.2	3.90	240		
November.....						84.4	3.7	2.3	2.81	167		
December.....						74.4	3.2	2.0	2.40	148		
Calendar year 1936.....						5,732.3	72	.7	15.7	11,370		
January.....						71.0	3.0	1.5	2.29	141		
February.....						83.5	4.0	2.5	2.98	166		
March.....						131.5	5.1	3.0	4.24	261		
April.....						415.7	4.6	4.2	13.9	825		
May.....						1,717	70	42	55.4	3,410		
June.....						1,025	49	17	34.2	2,030		
July.....						1,269	72	22	40.9	2,620		
August.....						1,176	64	15	37.9	2,350		
September.....						296.7	20	6.4	9.89	588		
Water year 1936-37.....						6,465.2	72	1.5	17.7	12,830		

Note.- Stage-discharge relation affected by ice Nov. 25-27, Dec. 2-5, 28, Dec. 30 to Feb. 15, Feb. 15, Feb. 17-19, 21-26, Feb. 28 to Mar. 5, Mar. 7-12; discharge computed on basis of two discharge measurements, gage heights, and weather records.

## San Jose River near Grants, N. Mex.

Location.— Water-stage recorder and concrete control, lat. 35°04', long. 107°44', in SE $\frac{1}{4}$  sec. 23, T. 10 N., R. 9 W., at west boundary of Acoma Indian Reservation and  $\frac{1}{2}$  miles east of Grants.

Records available.— June 1936 to September 1937.

Extremes.— Maximum discharge during year, about 177 second-feet Sept. 29 (gage height, 2.48 feet), from rating curve extended logarithmically above 60 second-feet; minimum daily discharge, 4.0 second feet Apr. 17–21.  
1936–37: Maximum discharge, that of Sept. 29, 1937; minimum daily discharge, that of Apr. 17–21, 1937.

Remarks.— Records good. Diversions above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	4.7	5.0	5.0	4.5	4.5	4.7	5.0	5.3	5.8	5.0	5.3
2	5.3	4.7	5.0	5.0	4.5	4.5	4.7	5.0	5.3	18	5.0	7.2
3	5.3	4.7	5.0	5.0	4.5	4.5	5.0	5.0	5.5	21	5.0	22
4	5.3	4.7	5.0	4.7	4.5	4.5	5.0	5.0	5.5	5.5	5.0	12
5	5.3	4.7	5.0	4.7	4.7	4.5	4.7	5.0	5.5	5.3	5.0	8.7
6	5.3	4.7	5.0	4.7	5.0	4.7	5.0	5.0	5.5	5.0	4.7	6.4
7	5.3	5.0	5.0	5.0	5.3	4.7	4.7	5.0	5.3	5.3	4.7	5.8
8	5.3	5.0	5.3	5.0	5.0	4.5	4.7	5.0	5.5	5.0	4.7	5.5
9	5.3	4.7	5.0	5.0	5.0	4.5	4.7	5.0	5.5	5.0	4.7	5.0
10	5.0	4.7	5.0	5.0	5.0	4.3	4.5	5.3	5.5	9.5	4.7	5.0
11	5.0	5.0	5.0	5.0	5.0	4.3	4.5	5.0	5.5	7.7	4.7	5.0
12	5.0	5.0	5.0	5.0	5.0	4.5	4.3	5.0	5.5	5.5	4.7	5.0
13	5.0	5.0	5.0	5.3	5.0	4.5	4.5	5.0	5.0	5.0	4.7	5.0
14	5.0	5.0	5.0	5.3	5.3	4.7	4.3	5.3	5.0	5.0	4.5	5.0
15	5.0	5.0	5.0	5.0	5.5	4.7	4.3	5.3	5.0	5.0	4.5	5.0
16	5.0	5.0	5.0	5.0	5.5	4.7	4.3	5.3	5.3	5.0	4.7	5.0
17	5.0	5.0	5.0	5.0	5.0	4.7	4.0	5.3	5.3	5.0	4.7	5.0
18	5.0	5.0	4.7	4.7	5.0	4.7	4.0	5.3	5.3	5.0	4.7	5.0
19	4.7	5.0	4.7	4.7	5.0	4.5	4.0	5.3	5.3	5.0	4.7	5.0
20	4.7	5.0	4.7	4.7	4.7	4.3	4.0	5.3	5.5	5.0	5.0	5.0
21	4.7	4.7	5.0	4.7	4.7	4.3	4.0	5.0	5.5	5.3	5.0	5.0
22	4.7	5.0	5.0	5.0	4.7	4.3	4.5	5.0	5.5	5.3	5.0	5.0
23	4.7	5.0	5.0	4.7	4.7	4.3	4.5	7.0	5.3	5.3	5.0	5.0
24	4.7	5.0	5.0	4.7	4.5	4.5	4.5	5.0	5.3	5.3	5.3	5.0
25	4.7	5.0	4.7	4.7	4.5	4.5	4.7	5.0	5.5	5.3	5.3	5.0
26	4.7	5.0	4.7	4.7	4.5	4.5	5.0	5.0	5.5	5.5	5.3	5.0
27	4.5	5.0	4.7	4.5	4.5	4.5	5.0	5.0	5.8	5.3	5.3	5.0
28	4.5	5.0	4.7	4.5	4.5	4.7	5.0	5.3	5.8	7.3	5.3	5.0
29	4.5	5.0	4.7	4.5	-	4.7	5.0	5.3	5.8	8.4	5.3	26
30	4.5	5.0	4.7	4.5	-	4.7	5.0	5.3	5.8	5.5	5.3	17
31	4.5	-	4.7	4.5	-	4.7	-	5.5	-	5.0	5.3	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					152.8	5.3	4.5	4.93	303			
November.....					147.3	5.0	4.7	4.91	292			
December.....					152.3	5.3	4.7	4.91	302			
Calendar year .....												
January.....					149.8	5.3	4.5	4.83	297			
February.....					135.6	5.5	4.5	4.84	269			
March.....					140.5	4.7	4.3	4.53	279			
April.....					137.1	5.0	4.0	4.57	272			
May.....					160.8	7.0	5.0	5.19	319			
June.....					152.9	5.8	5.0	5.43	323			
July.....					202.4	21	5.0	6.53	401			
August.....					152.8	5.3	4.5	4.93	303			
September.....					215.9	26	5.0	7.20	428			
Water year 1936-37.....					1,910.2	26	4.0	5.23	3,790			

## San Jose River near San Fidel, N. Mex.

Location.— Water-stage recorder, lat. 35°04', long. 107°40', in SE $\frac{1}{4}$  sec. 28, T. 10 N., R. 8 W., at McCartys, 500 feet below railroad bridge and  $\frac{1}{2}$  miles west of San Fidel.

Records available.— June 1936 to September 1937.

Extremes.— Maximum discharge during year, about 160 second-feet June 27 (gage height, 3.52 feet), from rating curve extended logarithmically above 40 second-feet; minimum daily discharge, 0.5 second-foot Mar. 25 and 28.

1936-37: Maximum discharge, that of June 27, 1937; minimum daily discharge, that of Mar. 25 and 28, 1937.

Remarks.— Records good except those for period of missing gage heights, which are poor. Several diversions above and below station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7	7.7	7.2	7.4	6.6	7.3	1.7	3.0	6.5	*5.0	3.9	3.0
2	6.0	7.6	7.5	7.3	6.7	7.2	1.4	3.4	6.5	*4.8	3.4	4.6
3	5.5	7.5	7.2	†7.3	6.8	7.0	1.4	2.1	5.6	21	2.1	6.3
4	5.7	7.5	7.1	†7.4	6.9	7.1	1.0	1.3	6.3	7.5	25	7.0
5	5.5	7.7	7.0	7.4	7.1	7.1	1.4	1.6	6.6	3.3	6.9	7.2
6	5.2	7.9	6.7	7.3	7.6	7.1	2.2	2.4	6.5	3.0	3.5	5.3
7	5.8	7.8	6.6	7.4	8.4	7.1	2.1	1.8	5.9	2.6	4.3	4.6
8	5.8	7.8	6.6	7.4	8.0	7.0	1.9	1.9	4.8	2.2	4.3	5.2
9	5.3	7.8	6.6	7.5	7.6	6.9	2.9	2.3	5.1	2.2	1.0	4.0
10	7.0	8.0	6.4	7.3	7.2	7.0	2.3	2.1	4.0	4.9	5.5	2.7
11	6.5	7.7	6.3	7.2	7.2	6.9	3.1	1.8	2.3	8.2	1.8	4.4
12	6.5	6.9	6.3	7.2	7.3	6.9	3.4	1.3	2.7	8.1	1.9	3.5
13	6.2	6.8	6.4	7.3	7.4	6.9	3.1	1.5	3.9	2.8	1.8	3.4
14	5.9	7.4	6.4	7.2	7.7	7.1	2.6	2.1	2.3	4.7	1.1	2.6
15	6.6	7.9	6.6	7.3	8.0	7.1	2.1	1.8	2.3	4.5	1.3	3.0
16	7.0	7.7	6.9	7.3	8.3	7.1	2.3	2.0	3.0	1.5	1.5	2.3
17	7.6	7.8	7.1	7.0	8.0	7.3	2.4	2.7	2.6	3.7	1.8	3.7
18	6.7	7.6	6.8	7.0	7.9	7.1	2.3	2.6	2.4	2.9	5.1	3.3
19	8.1	7.6	6.8	6.8	7.9	6.8	1.9	3.0	3.7	2.3	2.6	1.3
20	7.4	7.8	6.7	6.8	7.8	7.0	2.1	2.4	4.6	1.1	1.8	1.7
21	7.6	7.5	6.7	6.7	7.4	6.8	2.4	2.4	2.2	1.5	1.2	3.2
22	7.4	7.6	6.9	†6.6	7.3	5.6	2.4	1.7	1.0	2.0	2.2	3.6
23	7.8	7.5	7.1	6.6	7.5	2.5	3.3	18	1.0	2.0	2.1	4.2
24	7.7	7.6	7.4	6.7	7.5	4.9	2.9	9.6	3.7	2.5	1.8	4.4
25	7.9	7.4	7.3	6.6	7.6	.5	2.1	7.6	7.7	4.7	3.9	3.4
26	7.7	7.4	7.5	†6.6	7.6	.5	2.9	6.8	7.5	8.3	4.3	3.3
27	7.7	7.4	7.4	†6.5	7.5	5.5	2.1	2.6	23	3.9	3.4	4.9
28	7.7	7.5	7.4	6.5	7.2	5.6	2.8	6.3	*17	5.2	1.6	5.0
29	7.7	7.6	7.5	6.6	-	5.7	2.5	17	*7.0	1.8	1.9	4.4
30	8.0	7.5	7.4	6.7	-	4.0	3.1	7.6	*5.5	6.9	3.2	28
31	7.8	-	7.4	6.7	-	2.3	-	7.1	-	3.8	4.3	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						212.0	8.1	5.2	6.84	420		
November.....						227.5	8.0	6.8	7.58	461		
December.....						215.2	7.5	6.3	6.94	427		
Calendar year .....												
January.....						217.6	7.5	6.5	7.02	432		
February.....						210.0	8.4	6.6	7.50	417		
March.....						184.9	7.3	.5	5.96	367		
April.....						70.1	3.4	1.0	2.34	139		
May.....						130.6	18	1.3	4.21	259		
June.....						163.2	23	1.0	5.44	324		
July.....						138.9	21	1.1	4.48	276		
August.....						108.4	23	1.0	3.50	215		
September.....						143.5	28	1.3	4.78	285		
Water year 1936-37.....						2,021.9	28	.5	5.54	4,010		

\*Gage height missing; discharge computed on basis of gage-height trend and weather records.

†Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

## San Jose River near Casa Blanca, N. Mex.

Location.- Water-stage recorder and concrete control, lat. 35°02', long. 107°27', in NW¼ sec. 3, T. 9 N., R. 6 W., 400 feet below head of New Laguna ditch, 1 mile above mouth of Encinal Creek, 1½ miles east of Casa Blanca, and 2 miles above New Laguna reservoir. Zero of gage is 5,566.1 feet above mean sea level (Atchinson, Topeka, and Santa Fe Railway benchmark).

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, about 1.110 second-feet July 26 (gage height, 5.60 feet, from floodmarks in gage well), from rating curve extended above 50 second-feet on basis of slope-area measurement at 460 second-feet; no flow at times.  
1936-37: Maximum discharge, that of July 26, 1937. (Figure of discharge previously published for July 10, 1936, believed to be too high.)

Remarks.- Records fair except those estimated, which are poor. Several diversions for irrigation above and below station. Figures of discharge do not include flow bypassed around station in New Laguna ditch wasteway. See records for New Laguna ditch wasteway near Casa Blanca.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.1	*5	*8	7.4		0	*0	*0	22	*0
2	.1	0	1.5	*3.5	*9	7.4		0	*0	*2	*1	*0
3	0	.4	4.9	*3.5	*9	7.4		0	*0	2	*0	*0
4	0	.2	3.8	*4	*9	7.4		0	*0	0	7	*1
5	0	.1	3.8	*5	10	7.6		0	*0	0	*0	*.5
6	0	.1	.4	*5	11	6.6		0	*0	0	*0	.1
7	0	.4	4.4	*5	12	5.4		0	*0	0	*0	.3
8	0	.1	4.0	*5.5	11	5.1		0	*0	0	*0	0
9	0	.1	8.5	*6	*8	5.1		0	*0	0	*0	0
10	0	.2	7.9	*4	*6	4.6		0	*0	6.3	*0	0
11	0	.2	3.7	*4	*8	3.3		0	*0	.2	*0	0
12	0	.1	2.5	*6.5	*9	2.3		0	*0	0	*0	0
13	0	.2	3.2	*7.5	*10	3.0		0	*0	0	5.2	0
14	0	.2	3.7	*7.5	11	2.5		0	*0	0	9.1	0
15	0	.1	4.4	*7	9.7	2.4		0	*0	0	0	0
16	0	.1	7.1	5.1	10	2.2		0	0	0	0	0
17	0	0	5.8	6.8	9.4	2.6		0	0	0	32	0
18	0	0	6.1	6.6	9.1	1.2		0	0	0	9.5	0
19	0	0	5.6	6.1	8.2	1.9		0	0	0	0	0
20	0	0	6.6	7.9	8.2	.4		0	0	0	0	0
21	0	.4	7.4	*7.5	7.1	.1		0	0	0	0	0
22	0	1.2	6.1	*4	9.1	.1		0	0	0	0	0
23	.1	.7	5.8	*4	7.6	.1		56	0	0	0	0
24	0	.6	6.1	*5	7.4	.1		*16	0	0	0	0
25	.1	.1	6.1	*6	7.6	.1		*0	0	31	9.4	0
26	0	.1	6.1	*4	7.4	0		*0	170	*191	*2	0
27	0	.2	7.4	*4	7.5	0		*0	*23	32	*0	0
28	.1	1.7	7.9	*6	7.4	0		*5	*38	73	*0	0
29	0	1.9	7.6	*10	-	0		150	*6	10	*0	46
30	0	.3	*4	13	-	0		*20	*.1	*0	118	84
31	0	-	*3.5	11	-	0		*0	-	*0	*54	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0.4	0.1	0	0.01	0.8		
November.....						9.7	1.9	0	.32	19		
December.....						156.0	8.5	.1	5.03	309		
Calendar year .....												
January.....						186.0	13	3.5	6.00	369		
February.....						246.7	12	6	8.81	489		
March.....						56.3	7.6	0	2.78	171		
April.....						0	0	0	0	0		
May.....						249	150	0	8.03	494		
June.....						237.1	170	0	7.90	470		
July.....						347.5	191	0	11.2	689		
August.....						269.2	118	0	9.68	534		
September.....						131.9	84	0	4.40	262		
Water year 1936-37.....						1,919.6	191	0	5.26	3,810		

\*Gage-height record fragmentary; discharge estimated on basis of partial gage height-record, weather record, and record for New Laguna ditch near Casa Blanca.



## San Jose River near Laguna, N. Mex.

Location.- Water-stage recorder above diversion dam of Mesita ditch, lat. 35°01', long. 107°19', in sec. 12, T. 9 N., R. 5 W.,  $\frac{3}{4}$  miles east of Laguna and 4 miles below mouth of Cebollita Creek.

Records available.- February to September 1937.

Extremes.- Maximum discharge during period, about 3,900 second-feet Aug. 1 (gage height, 5.50 feet), by computation of flow over dam; no flow at times.

Remarks.- Records fair except those for periods of ice effect or of missing gage heights and those above 100 second-feet, which are poor. Discharge includes flow diverted by Mesita ditch just below station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	*9.2	1.2	†0.1	6.7	7.7	138	31
2					-	*8.7	2.3	†.1	2.7	30	52	152
3					-	7.2	4.0	†.2	2.5	25	†6	†51
4					-	5.8	3.3	†.2	3.8	5.8	†5	†8
5					-	6.4	1.7	†.3	2.7	4.1	†4.5	†8
6					-	7.0	†.7	†.7	3.1	2.8	†2	†5.5
7					-	6.4	0	†.6	3.1	1.8	†.2	†4.5
8					-	6.7	.4	†.1	2.8	1.6	†4	5.5
9					-	6.2	1.9	0	2.6	3.6	†5	9.4
10					-	5.4	4.8	2.4	1.7	4.4	†10	†.5
11					-	5.3	7.5	.2	1.0	60	†5	0
12					-	5.4	9.3	0	.3	6.2	†4	0
13					-	5.8	8.4	0	0	5.5	6.8	0
14					-	5.8	6.1	0	0	5.2	6.7	0
15					-	5.0	4.0	0	0	4.3	4.3	0
16					-	5.6	3.2	0	0	†.3	5.3	0
17					-	5.3	2.2	2.3	0	2.9	5.9	0
18					-	4.4	1.0	2.4	5.1	2.1	†2.5	0
19					-	3.6	†.5	.8	5.2	†.8	†1.5	0
20					-	*3.2	†.1	.1	1.1	0	†2.0	0
21					-	3.3	0	0	0	0	†.5	0
22					*11	2.5	0	0	0	0	†1	0
23					*8.0	2.2	0	2.6	0	0	†.2	0
24					*7.6	1.3	0	6.1	.9	0	†8.4	0
25					8.1	2.2	0	1.3	7.6	0	10	0
26					*12	2.2	†.1	.1	104	106	6.7	0
27					*11	2.0	0	0	155	201	4.4	0
28					*9.0	1.7	0	4.0	62	150	1.8	0
29					-	4.5	0	19	42	87	.8	27
30					-	3.7	0	57	19	28	52	457
31					-	1.9	-	25	-	11	79	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-			
February 22-28.....						66.7	12	7.6	9.53	132		
March.....						145.9	9.2	1.3	4.71	289		
April.....						62.7	9.3	0	2.09	124		
May.....						125.6	57	0	4.05	249		
June.....						434.9	155	0	14.5	863		
July.....						737.1	201	0	23.8	1,460		
August.....						435.5	138	.2	14.0	864		
September.....						739.4	457	0	24.6	1,470		
The period .....										5,450		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights and weather records.

†Gage height missing; discharge computed on basis of weather records and records for Mesita ditch near Laguna.

## Seama-Paraje ditch near Casa Blanca, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat. 35°03', long. 107°32', in sec. 36, T. 10 N., R. 7 W., three-quarters of a mile east of west boundary of Laguna Indian Reservation, 1 mile below head, and 3 miles west of Casa Blanca.

Records available.- March to September 1937.

Extremes.- Maximum discharge during period, 12 second-feet June 26 (gage height, 1.42 feet); no flow at times.

Remarks.- Records fair except those for periods of missing gage heights, Apr. 19-26, June 9-15, July 23-27, which were interpolated and are poor. Ditch diverts from right bank of San Jose River on Acoma Indian Reservation, and water is used for irrigation on Laguna Indian lands. Several small diversions between station and head of ditch.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	1.7	0.4	5.5	0	2.4	0
2						-	1.1	.2	5.4	1.3	3.0	0
3						-	.9	.6	5.7	9.0	.4	0
4						-	3.6	.2	5.3	3.3	2.1	.5
5						-	4.3	.2	4.4	1.2	3.2	1.9
6						-	1.9	.3	4.4	.5	.6	2.1
7						0	.3	.5	5.3	.5	.7	1.8
8						0	1.0	.2	3.5	.4	.5	2.3
9						0	1.2	.2	5.5	.4	.4	1.6
10						0	1.7	.2	3	5.5	.6	.9
11						0	1.1	.2	2.5	7.9	.9	.9
12						0	1.9	.1	2	7.2	.4	1.2
13						0	2.0	.2	1.5	4.7	1.5	1.5
14						0	1.1	.2	1	1.2	2.8	.8
15						.7	.2	.2	.5	.3	.4	1.0
16						3.2	.2	.2	.2	.1	.4	1.1
17						4.2	.3	.1	.2	.3	1.2	1.0
18						3.6	.6	.2	.1	.2	.2	1.4
19						2.2	.6	.3	.1	.3	.2	1.2
20						3.8	.5	.2	.2	.1	.2	1.1
21						3.7	.5	.2	.1	.1	.4	1.1
22						3.9	.4	.2	.3	.2	.3	1.3
23						2.5	.4	.4	.1	.5	.2	1.8
24						2.9	.3	5.4	.2	.5	.2	.9
25						3.3	.3	2.9	.9	1	.3	1.2
26						1.5	.2	1.4	3.4	1	.3	1.2
27						2.5	.2	1.0	0	1.5	.1	2.2
28						3.1	.2	1.9	0	1.6	.1	1.3
29						4.3	.2	3.4	0	.4	.4	.8
30						3.7	.2	4.6	0	2.5	.9	0
31						1.9	-	5.4	-	1.6	.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March 7-31.....						51.0	4.3	0	2.04	101		
April.....						29.1	4.3	.2	.97	58		
May.....						31.7	5.4	.1	1.02	63		
June.....						59.3	5.7	0	1.98	118		
July.....						55.3	9.0	0	1.78	110		
August.....						25.4	3.2	.1	.62	50		
September.....						34.3	2.3	0	1.14	68		
The period.....										566		

## Casa Blanca ditch at Casa Blanca, N. Mex.

Location.- Water-stage recorder and 2-foot Parshall flume, lat.  $35^{\circ}03'$ , long.  $107^{\circ}29'$ , near NE cor. sec. 5, T. 9 N., R. 6 W., half a mile west of Casa Blanca and  $1\frac{1}{4}$  miles below head gate.

Records available.- February to September 1937.

Extremes.- Maximum discharge recorded during period, 15 second-feet Mar. 19 (gage height, 1.50 feet); no flow at times.

Remarks.- Records fair except those for periods of missing gage heights, Apr. 9-26, May 2 to June 15, July 24-26, Aug. 1-12, which were estimated on basis of records for Seama-Paraje Ditch and San Jose River near Casa Blanca and are poor. Ditch diverts water from right bank of San Jose River for irrigation of Indian lands. Several small diversions between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.4	0.3		0.6		4.7
2						0	.3			.2		4.6
3						0	.3			3.6		3.5
4						0	.4		2	4.0		6.7
5						0	.4			.6		5.6
6						0	.8			.2		5.7
7						0	1.9			.1	0.5	5.8
8						0	1.4		1	.2		4.9
9						0				.8		1.4
10						3.3				2.1		.3
11						5.9	.5			.3		.2
12						6.0				.4		.2
13						6.4		.2	.2	.6	.4	.3
14						6.5				.1	4.0	.3
15						5.9				.1	.2	.3
16						4.5			0	0	.1	.2
17						4.6			0	0	.3	.2
18						5.5			0	0	1.8	.2
19						6.2			0	0	.4	.2
20						3.8			0	0	.8	.2
21						3.3	.3		0	0	1.2	.1
22						3.3			0	0	.1	.1
23						1.4			0	0	.1	.1
24						2.1			0	0	.1	.1
25						2.7			0		.2	.1
26						3.5			2.8	.5	.2	.1
27						2.0	.4	2	.6	2.6	.1	.1
28						3.2	.2		.2	2.0	.1	.1
29						3.6	.2		.1	.1	.4	1.6
30						.5	.2		.5	.5	.1	2.8
31						.4	-		-	2.8	.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February 22-28 .....						0	0	0	0	0		
March.....						84.6	6.5	0	2.73	168		
April.....						13.5	1.9	-	.45	27		
May.....						20.7	-	-	.67	41		
June.....						20.2	-	0	.67	40		
July.....						23.4	4.0	0	.75	46		
August.....						17.1	4.0	-	.55	34		
September.....						50.9	6.7	.1	1.70	101		
The period.....										457		

## New Laguna ditch near Casa Blanca, 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 above flume over Encinal Creek, three-quarters of a mile below head and 1½ miles west of New Laguna. Prior to July 9, water-stage recorder and 2-foot Parshall flume just below wasteway, 700 feet below head of ditch.

Records available.- February to September 1937.

Extremes.- Maximum discharge during period, 8.2 second-feet (gage height, 1.38 feet); no flow at times.

Remarks.- Records for Apr. 1 to May 22 and July 9 to Sept. 24, good; those for Feb. 22 to Mar. 31, May 23 to July 8, and Sept. 25-30, poor. Ditch diverts water from left bank of San Jose River for irrigation. Several small diversions between station and head.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	0	0	0	0.2	1.4	0.4	0
2					-	0	0	0	.8	.5	1.2	.1
3					-	0	0	0	.5	2.2	0	1.4
4					-	0	.1	0	.3	0	2.7	5.1
5					-	0	.4	0	.1	0	.7	4.1
6					-	*1.5	0	0	.6	0	0	.8
7					-	*2.4	0	0	.6	0	0	2.0
8					-	2.4	0	0	0	0	0	.5
9					-	*2.4	0	0	0	.6	0	.2
10					-	*2.3	0	0	0	3.2	.2	.2
11					-	*2.2	0	0	0	1.8	0	.1
12					-	*2.0	0	0	0	1.4	0	.1
13					-	*2.0	.1	0	0	.5	.9	0
14					-	*2.0	0	0	0	.2	2.9	0
15					-	1.9	0	0	0	0	.1	0
16					-	1.8	0	0	0	0	0	0
17					-	1.8	0	0	0	0	.2	0
18					-	1.6	0	0	0	0	3.1	0
19					-	*.7	0	0	0	.2	3.2	0
20					-	.9	0	0	0	0	.6	0
21					-	.7	0	0	0	0	.1	0
22					0	.8	0	0	0	0	.1	0
23					0	.2	0	.1	0	0	0	0
24					0	.2	0	2.1	0	0	0	0
25					0	.4	0	1.1	0	.2	.8	0
26					0	0	0	0	.3	2.4	1.3	0
27					0	.1	0	0	1.5	1.7	.1	0
28					0	.7	0	1.1	5.0	3.0	.1	0
29					-	1.1	0	1.4	5.1	1.5	1.9	0
30					-	.3	0	0	4.2	.3	.3	0
31					-	0	-	.1	-	.7	0	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....												
November.....												
December.....												
Calendar year .....												
January.....	-					-	-	-	-			
February 22-28.....	0					0	0	0	0			
March.....	32.4					2.4	0	0	1.05			
April.....	.6					.4	0	0	.02			
May.....	5.9					2.1	0	0	.19			
June.....	19.2					5.1	0	0	.64			
July.....	21.8					3.2	0	0	.70			
August.....	20.9					5.2	0	0	.67			
September.....	14.6					5.1	0	0	.49			
The period.....									228			

\*Gage height missing; discharge computed on basis of records for San Jose River near Casa Blanca and New Laguna ditch wasteway near Casa Blanca.

## New Laguna ditch wasteway near Casa Blanca, N. Mex.

Location.- Staff gage in wooden waste-gate structure, lat.  $35^{\circ}02'$ , long.  $107^{\circ}27'$ , in NW $\frac{1}{4}$  sec. 3, T. 9 N., R. 6 W.,  $1\frac{1}{2}$  miles east of Casa Blanca.

Records available.- March to September 1937.

Extremes.- Maximum gage height during period, 1.25 feet July 25, from floodmarks (discharge not determined); no flow at times.

Remarks.- Records poor. Discharge estimated on basis of six discharge measurements, occasional gage heights, observer's notes, and records for San Jose River near Casa Blanca and New Laguna Ditch near Laguna. Discharge represents unused water returned from New Laguna ditch to San Jose River below station on that stream near Casa Blanca.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	0.3		0	0	1	3	5
2					-	.3		0	0	2	4	3
3					-	.3		0	0	6	0	.5
4					-	.3		0	0	6	1	4
5					-	.3		0	0	1	1	.5
6					-	.5		0	0	0	0	1
7					-	.6		0	0	0	0	1
8				*1.5	-	.5		0	0	0	0	0
9					*1	.4		0	0	0	0	0
10					-	.4		0	0	0	0	0
11					-	.5		0	0	0	0	0
12					-	.6		0	0	0	0	0
13					-	.6		0	0	0	2	0
14					-	.4		0	0	0	3	0
15					-	.4		0	0	0	0	0
16					-	.4		0	0	0	0	0
17					-	.4		0	0	0	4	0
18					-	.4		0	0	0	4	0
19					-	2.1		0	0	0	0	0
20					-	1.6		0	0	0	0	0
21					-	.6		0	0	0	0	0
22					-	.4		0	0	0	0	0
23					-	.4		4	0	0	0	0
24					*.2	1.4		4	0	0	0	0
25					-	2.4		0	0	3	0	0
26					-	2.4		0	7	9	0	0
27					-	.5		0	4	3	0	0
28					-	0		.1	1	15	0	0
29					-	0		9	1	10	0	8
30					-	0		12	1	3	7	11
31					-	0		1	-	0	14	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						19.4	2.4	0	0.63	38		
April.....						0	0	0	0	0		
May.....						30.1	12	0	.97	60		
June.....						14	7	0	.47	28		
July.....						59	15	0	1.90	117		
August.....						43	14	0	1.39	85		
September.....						34.0	11	0	1.13	67		
The period.....										395		

\*Discharge measurement.



## Laguna ditch at New Laguna, N. Mex.

Location.— Water-stage recorder and 3-foot Parshall flume, lat. 35°02', long. 107°24', in SW¼ sec. 6, T. 9 N., R. 5 W., three-quarters of a mile southeast of New Laguna and 1 mile below head gate.

Records available.— October 1936 to September 1937.

Extremes.— Maximum discharge during year, 5.5 second-feet May 11 (gage height, 0.64 foot); no flow at times.

Remarks.— Records good. Ditch supplied with water from New Laguna Reservoir, on San Jose River at New Laguna. First use of water in ditch since ditch was constructed occurred in March 1937. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0	0	0	0	0	0
2						0	0	1.0	0	.8	0	0
3						0	0	0	0	0	0	0
4						0	0	.4	.2	0	0	0
5						0	0	0	.7	0	0	0
6						0	.3	0	0	.6	0	0
7						0	0	.5	0	.5	0	0
8						0	0	0	0	.9	0	0
9						0	0	0	.9	.5	1.2	0
10						0	0	.5	1.0	0	0	0
11						0	.2	.2	0	0	.8	0
12						1.1	0	0	.8	0	1.1	0
13						.5	0	0	0	0	.6	0
14						0	0	.6	0	0	.4	0
15						.5	.7	.3	.8	1.0	.5	0
16						0	.7	0	1.2	.3	.3	0
17						0	.9	0	0	0	1.4	0
18						0	.2	.3	0	0	.4	0
19						0	0	0	1.1	0	0	0
20						.4	.9	0	0	1.0	0	0
21						0	.7	0	0	1.2	.5	0
22						.3	.9	.7	1.1	.7	0	0
23						1.0	0	0	1.4	1.4	.4	0
24						0	.3	.9	0	1.8	0	0
25						0	0	.1	0	1.3	.5	0
26						0	1.0	0	0	0	.1	0
27						0	.9	.5	0	.1	.2	0
28						0	0	.1	0	0	.4	0
29						0	0	.1	0	0	0	.2
30						0	.9	0	0	1.1	.8	.1
31						0	-	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 .....												
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						3.8	1.1	0	.12	7.5		
April.....						8.6	1.0	0	.29	17		
May.....						6.2	1.0	0	.20	12		
June.....						9.2	1.4	0	.31	18		
July.....						13.2	1.8	0	.43	26		
August.....						9.6	1.4	0	.31	19		
September.....						.3	.2	0	.01	.6		
Water year 1936-37.....						50.9	1.8	0	.14	100		

## Paguete 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 above upper diversion dam, 3 miles northwest of Paguate Pueblo, 5 miles above confluence with Cebollita Creek, and 8½ miles northwest of Laguna.

Records available.- February to September 1937.

Extremes.- Maximum gage height during period, 4.28 feet Aug. 1 (discharge not determined); minimum daily discharge, 0.2 second-foot several days in June and July.

Remarks.- Records good except those for periods of missing gage heights, May 6, 9-14, 16, 17, and those for period of faulty gage-height record, Aug. 2-11, which were computed on basis of records for Encinal Creek near Casa Blanca and weather records and are fair. No diversions above station but several below.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	1.2	1.6	1.2	0.6	1.2	5.0	0.4
2					-	1.4	2.6	1.0	.7	1.0	1.0	.4
3					-	1.4	2.6	1.0	.7	1.0	.7	.4
4					-	1.4	1.8	1.0	.6	.7	.6	.4
5					-	1.5	1.6	.9	.7	.6	.7	.4
6					-	1.5	1.6	.9	.7	.6	.7	.5
7					-	1.4	2.1	.8	.6	.6	.6	.6
8					-	1.5	1.5	.8	.6	.4	.5	.8
9					*1.9	1.5	2.1	.7	.6	.9	.5	1.2
10					-	1.5	3.6	.7	.5	.7	.5	.6
11					-	1.5	3.9	.6	.4	1.0	.5	.6
12					-	1.6	3.2	.6	.4	.6	.5	.8
13					-	1.6	2.6	.6	.3	.5	.6	.5
14					-	1.6	2.3	.5	.3	.4	.6	.5
15					-	1.6	1.7	.5	.3	.3	.6	.4
16					-	1.7	1.6	.5	.3	.3	.6	.4
17					-	1.4	1.2	.6	.2	.3	1.0	.6
18					-	1.4	1.2	.6	.2	.3	.6	.6
19					1.2	1.2	1.4	.6	.2	.2	.6	.5
20					1.2	1.4	1.2	.6	.2	.2	.6	.5
21					1.0	1.4	1.2	.6	.2	.2	.6	.6
22					1.4	1.4	1.2	.6	.2	.2	.5	.6
23					1.2	1.4	1.2	.7	.2	.2	.4	.6
24					1.2	1.2	1.2	.8	.2	.3	.5	.4
25					1.2	1.2	1.2	.6	.2	2.5	.6	.4
26					1.2	1.4	1.2	.5	2.6	1.0	.4	.4
27					1.0	1.4	1.2	.6	2.5	2.3	.4	.4
28					1.2	1.5	1.2	.9	1.4	1.0	.4	.4
29					-	1.7	1.0	1.0	.9	.4	.5	1.8
30					-	1.6	1.0	.9	.8	.3	1.9	4.2
31					-	1.6	-	.6	-	.3	.6	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....												
November.....												
December.....												
Calendar year .....												
January.....					-	-	-	-				
February 19-26.....						11.8	1.4	1.0	1.18		23	
March.....						45.1	1.7	1.2	1.45		89	
April.....						53.2	3.9	1.0	1.77		106	
May.....						22.5	1.2	.5	.75		45	
June.....						13.3	2.6	.2	.61		35	
July.....						20.5	2.5	.2	.66		41	
August.....						23.8	5.0	.4	.77		47	
September.....						20.9	4.2	.4	.70		41	
The period.....											428	

\*Discharge measurement.



## 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 Mesita Indian village, 4,300 feet below head gate and 4½ miles east of Laguna.

Records available.- June 1936 to September 1937.

Extremes.- Maximum discharge during year, 23 second feet Sept. 2 (gage height, 1.56 feet); no flow at times.

1936-37: Maximum discharge, that of Sept. 2, 1937, no flow at times.

Remarks.- Records good except those for periods of missing gage heights, June 27 to July 8, Sept. 9-23, which were computed on basis of weather records and records for San Jose River near Laguna and are poor. Ditch diverts water from right bank of San Jose River for irrigation of Indian lands. No diversion above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0	1.1	0	0	5	4.2	4.5
2					0	1.9	2.2	0	1.8	5	0	6.0
3					0	4.3	3.4	.2	2.0	6	1.8	1.9
4					0	5.6	3.0	.2	4.0	5	2.9	1.4
5					0	5.9	1.4	.3	3.1	4	4.2	2.5
6					0	6.4	.7	.7	3.4	3	1.7	.7
7					0	6.1	0	.6	3.2	2	.2	.7
8					0	6.4	.2	.1	2.8	2	3.8	1.5
9					0	6.0	1.9	0	2.0	0	4.8	2.0
10					0	5.3	4.5	1.1	1.0	0	4.3	.2
11					.9	5.2	5.3	.2	.3	.7	4.8	0
12					.9	5.4	3.6	0	0	.3	4.0	0
13					1.4	5.7	6.6	0	0	4.3	6.4	0
14					2.6	5.9	4.5	0	0	4.5	4.7	0
15					1.7	5.0	3.7	0	0	4.2	4.2	0
16					.3	5.6	2.7	0	0	.3	4.7	0
17					1.4	5.6	1.8	2.2	0	1.2	3.5	0
18					2.2	3.2	.8	2.3	4.6	1.1	2.2	0
19					1.9	.3	.5	.7	5.5	.6	1.5	0
20					1.3	2.1	.1	.1	1.1	0	1.9	0
21					.7	3.3	0	0	0	0	.5	0
22					0	2.4	0	0	0	0	1.1	0
23					3.9	1.9	0	2.5	0	0	.2	0
24					5.8	1.2	0	6.3	.5	0	8.1	0
25					6.2	2.3	0	1.4	7.0	0	7.3	0
26					6.7	2.3	0	0	7.3	3.2	1.1	0
27					.8	1.9	0	0	0	6.6	1.9	0
28					0	1.7	0	3.3	0	1.9	1.1	0
29					-	4.8	0	3.9	4	4.0	.3	0
30					-	3.7	0	3.7	7	6.3	.1	0
31					-	1.9	-	4.4	-	6.5	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.....					39.2	6.7	0	1.40	78			
March.....					119.3	6.4	0	3.85	237			
April.....					48.0	6.6	0	1.60	95			
May.....					34.2	6.3	0	1.10	68			
June.....					60.6	7.3	0	2.08	120			
July.....					79.9	8.3	0	2.58	158			
August.....					87.5	8.1	0	2.82	174			
September.....					21.4	6.0	0	.71	42			
Water year 1936-37.....					490.1	8.3	0	1.34	972			

## Socorro main canal north at San Acacia, N. Mex.

Location.- Water-stage recorder, lat. 34°15', long. 106°54', in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 1 S., R. 1 W., at San Acacia, half a mile below point of diversion from Rio Grande. Zero of gage is 4,659.74 feet above mean sea level (general adjustment of 1929).

Records available.- April 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 220 second-feet Aug. 4; maximum gage height, 5.27 feet May 9; no flow at times.

Maximum discharge during water year 1936-37, 258 second-feet May 21 (gage height, 5.48 feet); no flow at times.

Remarks.- Records fair except those for periods of fragmentary gage-height record or when water-stage recorder was not in operation, which are poor. Canal diverts water from right bank of Rio Grande for irrigation. Three acequias, irrigating about 300 acres, divert between station and head.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	170	*144	180	140	*111
2								125	*160	160	155	*124
3								20	*124	135	158	*128
4								58	*110	81	*130	175
5								116	*127	*122	*10	*150
6												
7								*120	*115	*153	*110	*80
8								120	*119	*151	160	*80
9								*155	*142	*158	140	160
10								175	*125	*142	140	170
								150	155	*97	135	180
11								125	150	0	145	*96
12								125	*127	0	165	*76
13								140	160	0	160	*49
14								135	*112	28	155	*104
15								140	*160	54	160	*106
16												
17								105	*165	64	160	160
18								75	160	64	160	160
19								160	170	76	160	158
20								151	150	71	170	106
							56	*160	*112	124	*165	86
21							60	*160	*111	145	*58	87
22							95	*150	155	135	22	50
23							2	*140	160	135	150	0
24							121	*135	*116	79	180	0
25							90	160	*120	*56	160	83
26												
27							0	155	140	*36	170	87
28								0	*140	*41	165	0
29							120	160	*140	*24	160	0
30							135	165	175	55	160	0
31							150	155	180	45	165	0
							-	*81	-	70	*142	-

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

†Water-stage recorder not in operation; discharge computed from readings of staff gage made from one to three times daily.

Discharge, in second-feet, of Socorro main canal north at San Acacia, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	92					72	171	0	56	146	178
2	79	9					66	*160	34	96	175	171
3	56	62					63	*160	35	114	208	191
4	58	94					*15	146	52	*43	214	*155
5	87	90					*3	173	108	*40	217	*100
6	91	99		1		0	65	144	64	158	219	*125
7	92	100					73	113	68	126	201	*75
8	120	86			1		70	109	79	147	207	167
9	113	82					66	72	95	146	190	118
10	120	65					78	132	133	163	144	200
11	110	85		1			79	148	129	76	168	214
12	114	92				15	86	144	132	123	122	213
13	115	65				24	63	116	145	151	144	200
14	102	77				24	46	120	120	141	119	219
15	112	*54		1	0	24	11	127	122	145	181	219
16	0	1			1	24	43	126	135	141	201	219
17	0	1			1	44	*103	136	176	171	188	216
18	26	1			1	77	*5	137	178	188	178	*145
19	120	1		1	0	73	*57	133	164	*140	193	*20
20	90	1		1	0	77	121	138	166	167	193	137
21	150	1			0	58	121	195	176	192	198	124
22	113	1			0	65	143	183	197	155	150	143
23	99	1		1	0	62	*65	116	191	127	205	155
24	98	1			0	69	*110	170	182	187	198	134
25	73	1		1	0	52	*95	188	168	190	191	120
26	43	1			0	75	144	200	*100	200	197	68
27	60	1			0	75	189	*127	*2	205	211	164
28	63	1			0	54	197	*3	*1	204	193	164
29	91	1		1	-	59	184	*2	0	168	186	164
30	100	1			-	62	171	*1	79	198	186	*70
31	83	-			-	72	-	0	-	196	196	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 20-30, 1936.....						829	150	0	75.4	1,640		
May.....						4,134	175	20	133	8,200		
June.....						4,245	180	110	142	8,420		
July.....						2,681	180	0	86.5	5,320		
August.....						4,390	180	10	142	8,710		
September.....						2,746	180	0	91.5	5,450		
The period.....										37,740		
October 1936.....						2,628	130	0	84.8	5,210		
November.....						1,167	100	1	38.9	2,310		
December.....						31	-	-	1.0	61		
January 1937.....						31	-	-	1.0	61		
February.....						17	-	0	.6	34		
March.....						1,085	77	0	35.0	2,150		
April.....						2,624	197	3	87.5	5,200		
May.....						3,870	200	0	125	7,690		
June.....						3,251	197	0	108	6,410		
July.....						4,572	205	40	147	9,070		
August.....						5,719	219	119	184	11,340		
September.....						4,588	219	20	153	9,100		
Water year 1936-37.....						29,563	219	0	81.0	58,630		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

Note.- Discharge for periods when water-stage recorder was not in operation, Nov. 16 to Feb. 14, computed on basis of one discharge measurement and five readings of staff gage; that for Feb. 26 to Mar. 24 computed on basis of twice-daily readings of staff gage, furnished by Middle Rio Grande Conservancy District.

Socorro main canal north wasteway near Lemitar, N. Mex.

Location.— Water-stage recorder, lat. 34°08', long. 106°54', in NW¼ sec. 24, T. 2 S., R. 1 W., 100 feet below waste structure from Socorro main canal north, 400 feet above outlet into Rio Grande, and 2½ miles south of Lemitar. Zero of gage is 4,611.38 feet above mean sea level (general adjustment of 1929).

Records available.— May 1936 to September 1937.

Extremes.— Maximum discharge during period ending Sept. 30, 1936 not determined; maximum gage height, 6.01 feet Aug. 5, (backwater); no flow at times.

Maximum discharge during water year 1936-37, about 190 second-feet Aug. 1; maximum gage height, 5.58 feet May 27 (backwater); no flow at times.

Remarks.— Records poor. Daily records not sufficiently accurate for publication. Flow represents waste return to Rio Grande from Socorro main canal north, which diverts 9 miles upstream.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
May 8-31, 1936.....	-	-	25.6	1,220
June.....	-	-	29.6	1,760
July.....	-	-	20.2	1,240
August.....	-	-	33.8	2,080
September.....	-	-	35.4	2,110
The period.....				8,410
October 1936.....	55	0	34.4	2,110
November.....	37	0	15.4	916
December.....	0	0	0	0
January 1937.....	0	0	0	0
February.....	0	0	0	0
March.....	-	-	18.7	1,150
April.....	-	-	35.8	2,130
May.....	-	-	34.0	2,090
June.....	78	-	31.1	1,850
July.....	72	6	30.7	1,890
August.....	103	16	69.5	4,270
September.....	105	3	57.7	3,430
Water year 1936-37.....	105	0	27.4	19,840

Sarracino lateral at end, at Lemitar, N. Mex.

Location.- Water-stage recorder, lat. 34°10', long. 106°54', in SE¼ sec. 1, T. 2 S., R. 1 W., 50 feet above outlet into Lemitar riverside drain and three-quarters of a mile east of Lemitar.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 18 second-feet May 27 (gage height, 2.21 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights or fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	1.5	6.7	0.9
2								-	0	3.0	5.5	0
3								-	0	4.1	6.4	.1
4								-	0	1.6	6.9	2.1
5								-	0	.7	5.7	0
6								-	0	5.6	5.7	.6
7								-	0	2.6	5.9	1.4
8								-	1.3	1.2	6.6	.8
9								-	2.9	3.7	3.9	.8
10								-	5.9	5.3	3.0	1.5
11								-	3.0	2.0	3.0	2.8
12								-	5.3	4.0	*1.5	1.4
13								-	6.6	6.4	*.5	1.6
14								-	5.5	6.0	*.5	1.8
15								-	4.7	4.5	*1.5	2.2
16								-	3.0	*2.6	4.8	3.3
17								-	2.4	*2.2	4.4	3.0
18								-	4.4	*3.2	3.2	1.8
19								*5.0	3.5	*2.1	6.4	0
20								*5.0	6.6	*.6	5.9	.6
21								*4.5	4.2	.4	5.5	1.5
22								*6.0	3.4	2.0	2.6	1.2
23								*2.0	2.5	1.1	2.1	1.4
24								*2.0	†3	.2	2.5	.9
25								*4.0	†3	.4	2.5	2.7
26								4.4	†2	2.1	3.3	.2
27								7.6	†1	1.9	3.6	2.2
28								1.4	†.5	1.3	6.3	2.3
29								.5	†.2	5.2	5.6	2.9
30								.4	.1	5.6	4.4	1.6
31								.2	-	7.0	2.0	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 19-31.....								43.0	7.6	0.2	3.31	85
June.....								75.0	6.6	0	2.50	149
July.....								90.1	7.0	.2	2.91	179
August.....								130.4	8.4	.5	4.21	259
September.....								43.6	3.3	0	1.45	86
The period.....												758

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

†Gage height missing; discharge estimated.

Chambon lateral at end, near Lemitar, N. Mex.

Location.- Water-stage recorder, lat. 34°08', long. 106°53', in NW¼ sec. 18, T. 2 S., R. 1 E., 20 feet above outlet into Lemitar riverside drain and 2 miles southeast of Lemitar.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, about 21 second-feet July 28 (gage height, 2.05 feet) from rating curve extended above 5 second-feet; no flow at times.

Remarks.- Records poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	0	1.5	0.1
2								-	0	0	.6	.4
3								-	.1	0	4.2	.8
4								-	0	.1	.9	1.6
5								-	.1	0	5.7	*.2
6								-	0	0	.2	0
7								-	.1	6.0	1.4	0
8								-	0	3.4	.3	1.3
9								-	0	0	.3	.7
10								-	0	1.8	0	1.3
11								-	0	.3	0	1.9
12								-	.5	0	0	1.0
13								-	1.0	0	0	*1.0
14								-	.1	0	0	*2.0
15								-	0	0	0	.6
16								-	.7	2.0	0	1.0
17								-	1.4	3.4	.1	.5
18								*1.2	.5	2.1	.5	.7
19								1.2	.2	3.3	.7	0
20								.3	.7	4.8	4.4	0
21								1.2	1.8	10	5.5	0
22								.3	3.1	.3	3.3	0
23								0	6.0	.6	*.2	0
24								2.5	.3	2.2	*1.7	.7
25								2.3	1.9	4.1	*1.4	.6
26								.9	.1	.2	*1.9	0
27								1.2	0	0	*2.3	0
28								.3	0	4.6	*1.9	.7
29								.1	0	1.6	*.6	1.8
30								0	0	.3	*.4	.7
31								0	-	2.1	*.1	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 19-31.....							11.5	2.5	0	0.82	23	
June.....							18.6	6.0	0	.62	37	
July.....							53.2	10	0	1.72	106	
August.....							40.1	5.7	0	1.29	80	
September.....							19.6	2.0	0	.65	39	
The period.....											285	

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of local regulation.

Lemitar acequia at end, near Lemitar, N. Mex.

Location.— Water-stage recorder, lat.  $34^{\circ}08'$ , long.  $106^{\circ}54'$ , in NE $\frac{1}{4}$  sec. 24, T. 2 S., R. 1 W., a quarter of a mile above outlet into Rio Grande and  $2\frac{1}{4}$  miles south of Lemitar.

Records available.— May to September 1937.

Extremes.— Maximum discharge during period, about 130 second-feet May 27 (gage height, 5.74 feet, caused by arroyo inflow), from rating curve extended above 15 second-feet; no flow at times.

Remarks.— Records fair except those for periods of fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	1.1	2.6	6.7
2								-	0	.8	2.1	*6.0
3								-	0	1.1	3.6	*5.0
4								-	0	.8	2.6	*3.0
5								-	0	.3	2.9	*.3
6								-	0	4.4	4.7	0
7								-	0	5.0	4.8	*1.2
8								-	0	4.6	4.8	*1.5
9								-	0	8.6	4.8	0
10								-	0	4.5	3.6	*2.0
11								-	0	7.1	2.9	3.8
12								-	0	8.9	3.3	6.6
13								-	0	8.2	5.1	3.9
14								-	0	9.2	3.0	4.4
15								-	3.2	9.1	6.4	4.6
16								-	6.2	*5.0	5.1	4.4
17								-	5.5	*5.0	3.1	4.5
18								-	6.3	*7.5	7.0	4.3
19								*13	6.1	*4.0	5.4	.1
20								15	8.2	0	8.6	0
21								16	8.8	.1	7.3	0
22								12	7.7	1.7	6.1	.6
23								.6	6.2	1.2	9.1	.9
24								6.4	8.2	1.9	7.2	2.4
25								12	9.5	7.0	5.1	3.3
26								7.6	12	4.1	6.1	.5
27								*12	*2	6.3	7.1	6.4
28								*5	*.2	6.4	6.7	8.2
29								*3	0	6.8	7.5	8.9
30								0	0	5.3	9.2	3.3
31								0	-	4.1	8.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 19-31.....						102.6	16	0	7.89	204		
June.....						90.1	12	0	3.00	179		
July.....						140.1	9.2	0	4.52	278		
August.....						165.9	9.2	2.1	5.35	329		
September.....						96.8	8.9	0	3.23	192		
The period.....										1,180		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights and knowledge of regulation.

## Lemitar riverside drain near Lemitar, N. Mex.

Location.- Water-stage recorder, lat.  $34^{\circ}08'$ , long.  $106^{\circ}53'$ , in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 2 S., R. 1 E., 800 feet above Chambon lateral wasteway,  $1\frac{1}{2}$  miles above outlet, and 2 miles southeast of Lemitar. Zero of gage is 4,614.70 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 65 second-feet June 4; maximum gage height, 2.57 feet May 15; minimum daily discharge, 19 second-feet July 30 to August 1.  
Maximum discharge during water year 1936-37, about 183 second-feet June 28 (gage height, 4.47 feet); minimum daily discharge, 25 second-feet Aug. 14, 15.

Remarks.- Records good except those for periods of missing gage heights, which are poor. Discharge of Lemitar riverside drain represents return flow from irrigation to Rio Grande.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	50	37	19	31
2								-	54	40	22	28
3								-	56	40	24	28
4								-	60	35	24	30
5								-	58	36	27	32
6								-	54	40	28	27
7								-	46	40	29	26
8								56	44	45	31	27
9								59	42	44	28	29
10								58	44	46	28	29
11								53	49	48	27	28
12								50	49	45	24	27
13								54	47	42	24	27
14								58	48	39	22	27
15								58	50	36	23	26
16								52	55	33	26	27
17								47	52	33	25	27
18								48	49	32	25	27
19								54	49	31	26	27
20								56	58	31	27	26
21								57	53	54	27	26
22								56	29	36	25	27
23								53	31	35	27	27
24								52	31	29	29	26
25								49	36	28	28	27
26								54	29	27	27	28
27								58	29	24	27	35
28								52	25	23	28	35
29								53	31	23	27	37
30								52	36	19	29	37
31								46	-	19	28	-



Discharge, in second-feet, of Lemitar riverside drain near Lemitar, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.							
1	37	40	37	40	38	40	}	{	+55	75	60	49	35						
2	36	40	38	40	39	40					69	59	46	34					
3	35	39	39	39	38	}				+55	{	*58	69	65	50	33			
4	35	40	40	40	37									65	59	46	33		
5	36	39	40	+40	38									63	56	43	30		
6	37	39	39	+39	38	}	{	+55	{	+60	62	55	41	29					
7	37	40	39	+39	37							62	52	52	33				
8	37	39	40	*39	37							61	50	38	35				
9	38	39	39	+39	38						}	*58	{	+60	60	51	34	38	
10	38	40	39	*40	40											60	53	30	40
11	38	39	39	38	40	}	{	+50	{	+60	59	51	29	41					
12	38	40	39	38	40							60	49	28	37				
13	38	40	39	37	40							60	48	26	37				
14	39	42	39	36	41						}	+60	{	+60	60	48	25	38	
15	39	42	39	35	42											58	44	25	35
16	39	42	39	35	44	}	{	+60	{	+60	56	44	29	36					
17	39	42	39	35	44							54	43	31	36				
18	39	41	39	34	44							55	42	31	35				
19	39	42	40	35	44						}	+60	{	+60	60	54	42	37	
20	39	42	40	35	42											60	56	38	40
21	39	42	40	35	41	}	{	+49	{	*56	60	54	40	40					
22	43	42	40	35	40							62	56	36	37				
23	44	42	40	35	39							58	54	35	36				
24	43	40	40	35	38						}	+56	{	+56	58	50	36	37	
25	40	40	40	35	38											62	54	40	37
26	40	39	40	35	39	}	{	+55	{	+55	58	56	40	38					
27	40	38	40	36	39							64	57	44	37				
28	40	38	41	37	40						}	+55	{	+55	96	146	45	38	
29	40	38	41	37	-											99	90	48	35
30	40	37	40	37	-											96	65	46	35
31	40	-	40	38	-	}	-	{	+55	{	+55	84	-	48	35				

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 8-31, 1936.....	1,285	59	46	53.5	2,550
June.....	1,302	60	25	43.4	2,580
July.....	1,070	48	19	34.5	2,120
August.....	811	31	19	26.2	1,610
September.....	861	37	26	28.7	1,710
The period.....					10,570
October 1936.....	1,202	44	35	38.8	2,380
November.....	1,202	42	37	40.1	2,380
December.....	1,225	41	37	39.5	2,430
January 1937.....	1,148	40	34	37.0	2,280
February.....	1,115	44	37	39.8	2,210
March.....	1,529	-	-	49.3	3,030
April.....	1,719	-	-	57.3	3,410
May.....	1,988	99	0	64.1	3,940
June.....	1,928	146	50	64.3	3,820
July.....	1,465	63	35	47.3	2,910
August.....	1,123	50	25	36.2	2,230
September.....	1,051	41	29	35.0	2,080
Water year 1936-37.....	16,695	146	25	45.7	33,100

\*Discharge measurement.

†Gage height missing; discharge for Jan. 5-7, 9 interpolated and that for other indicated periods computed on basis of records for Rio Grande at San Acacia and San Antonio riverside drain near San Antonio.

## San Acacia interior drain near San Acacia, N. Mex.

Location.- Staff gage, lat.  $34^{\circ}14'$ , long.  $106^{\circ}55'$ , in SE $\frac{1}{4}$  sec. 11, T. 1 S., R. 1 W., half a mile above outlet into Lemitar riverside drain and  $1\frac{1}{2}$  miles southwest of San Acacia.

Records available.- August 1936 to September 1937.

Extremes.- Maximum daily discharge during period not determined; minimum daily, 3.6 second-feet Sept. 23, 24, 1936.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 49 discharge measurements, of which 20 were furnished by Middle Rio Grande Conservancy District and 11 by El Paso County Water Improvement District no. 1 and records for Chamisal interior drain near San Acacia and Polvadera interior drain at Lemitar. Gage read only at times when discharge measurements were made. Discharge represents ground water return and surface water waste from upper end of Socorro division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August 24-31, 1936.....	6.4	4.0	5.55	86
September.....	8.0	3.6	5.53	329
October 1936.....	8.9	6.7	7.54	464
November.....	9.4	6.3	7.83	466
December.....	9.8	7.7	8.95	550
January 1937.....	9.3	8.4	8.91	548
February.....	9.5	8.6	9.02	501
March.....	-	-	8.84	593
April.....	-	-	8.96	535
May.....	-	-	10.7	856
June.....	-	-	10.4	616
July.....	-	-	9.93	610
August.....	9.5	5.2	6.81	419
September.....	8.1	6.3	7.28	433
Water year 1936-37.....	-	5.2	8.82	6,390

## Chamisal interior drain near San Acacia, N. Mex.

Location.- Measuring section, lat.  $34^{\circ}12'$ , long.  $106^{\circ}54'$ , in S $\frac{1}{2}$  sec. 24, T. 1 S., R. 1 W., just above outlet into Lemitar riverside drain and  $3\frac{1}{2}$  miles south of San Acacia.

Records available.- August 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 2.7 second-feet Sept. 27-30; minimum daily, 1.2 second-feet Aug. 15-17.  
Maximum daily discharge during water 1936-37 not determined; minimum daily, 1.4 second-feet Aug. 15-17.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 35 discharge measurements, of which 3 were made by Middle Rio Grande Conservancy District and 13 by El Paso County Water Improvement District no. 1, and records for Polvadera interior drain at Lemitar and San Acacia interior drain near San Acacia. Discharge represents return flow from irrigation on upper end of Socorro Division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August 1936.....	1.9	1.2	1.63	100
September.....	2.7	1.4	1.98	118
October 1936.....	3.7	2.1	2.82	173
November.....	3.9	2.9	3.32	198
December.....	3.8	2.8	3.26	200
January 1937.....	4.0	3.7	3.87	238
February.....	4.2	3.4	3.76	209
March.....	-	-	3.8	234
April.....	-	-	4.0	238
May.....	-	-	2.99	184
June.....	-	-	2.42	144
July.....	-	-	2.47	152
August.....	2.8	1.4	1.97	121
September.....	2.4	1.9	2.18	130
Water year 19 6-37.....	-	1.4	3.07	2,220

## Polvadera interior drain at Lemitar, N. Mex.

Location.- Measuring section, lat.  $34^{\circ}10'$ , long.  $106^{\circ}54'$ , in SW $\frac{1}{4}$  sec. 1, T. 2 S., R. 1 W., at crossing of Socorro main canal north, 0.3 mile northeast of Lemitar and half a mile above outlet into Lemitar riverside drain.

Records available.- August 1936 to September 1937.

Extremes.- Maximum daily discharge during period, 4.3 second-feet July 24-26, 1937; minimum daily, 1.0 second-foot Dec. 18-21, 1936.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 33 discharge measurements, of which 6 were furnished by Middle Rio Grande Conservancy District and 10 by El Paso County Water Improvement District No. 1, and records for Camisal and San Acacia interior drains near San Acacia. Discharge represents return flow from irrigation on a portion of Socorro Division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August 24-31, 1936.....	2.3	1.8	1.99	32
September.....	2.2	1.5	1.76	105
October 1936.....	2.6	1.5	1.98	122
November.....	2.6	1.5	1.84	109
December.....	1.7	1.0	1.41	87
January 1937.....	2.0	1.3	1.63	100
February.....	2.2	1.4	1.66	92
March.....	-	-	2.1	129
April.....	-	-	2.47	147
May.....	-	-	2.36	145
June.....	-	-	2.63	156
July.....	4.3	3.7	3.98	245
August.....	3.9	2.2	2.72	187
September.....	3.7	2.0	2.55	152
Water year 1936-37.....	4.3	1.0	2.28	1,650

Socorro main canal center at end, near Socorro, N. Mex.

Location.- Water-stage recorder, lat. 34°01', long. 106°52', in SW¼ sec. 29, T. 3 S., R. 1 E., 50 feet above outlet into Socorro riverside drain and 3 miles southeast of Socorro.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period, 64 second-feet Aug. 3 (gage height, 3.83 feet); no flow at times.

Remarks.- Records fair except those for periods of fragmentary gage-height record, which are poor.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	13	0	2.2	*27	13
2							-	16	0	14	*26	12
3							-	29	0	33	44	15
4							-	13	0	26	31	20
5							-	13	0	*5.0	23	*8.0
6							-	12	0	32	19	*11
7							-	4.1	0	21	21	*8.5
8							-	1.8	1.5	21	28	30
9							-	0	5.9	41	17	25
10							-	16	12	35	21	39
11							-	27	20	34	23	40
12							15	26	19	18	6.1	45
13							5.3	16	30	28	5.6	36
14							4.4	24	25	21	4.6	38
15							1.1	27	7.7	26	2.5	40
16							0	31	9.1	30	3.9	43
17							6.5	25	16	21	3.4	40
18							1.3	22	21	33	4.9	35
19							.3	20	18	36	9.6	*3.0
20							1.4	19	29	16	12	*18
21							12	27	18	33	19	40
22							15	25	18	29	20	30
23							11	3.0	21	*11	14	37
24							4.6	17	18	*10	14	30
25							2.3	24	19	39	16	42
26							.8	25	19	35	12	*8.0
27							7.1	28	*2.0	39	22	28
28							29	*15	*1	43	18	38
29							32	0	*1.1	36	16	39
30							16	0	*1	32	13	27
31							-	0	-	35	11	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-		
February.....							-	-	-	-		
March.....							-	-	-	-		
April 12-30.....							165.1	32	0	8.69	327	
May.....							518.9	31	0	16.7	1,030	
June.....							329.5	30	0	11.0	664	
July.....							835.2	43	2.2	26.9	1,660	
August.....							507.6	44	2.5	16.4	1,010	
September.....							838.5	45	3.0	26.0	1,660	
The period.....											6,340	

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

Socorro riverside drain above Socorro main canal center, near Socorro, N. Mex.

Location.— Staff gage, lat.  $35^{\circ}01'$ , long.  $106^{\circ}52'$ , in E $\frac{1}{2}$  sec. 29, T. 3 S., R. 1 E., 0.4 mile above wasteway of Socorro main canal center,  $1\frac{1}{2}$  miles above outlet into Rio Grande and 3 miles east of Socorro.

Records available.— April to September 1937.

Extremes.— Maximum daily discharge during period, 300 second-feet May 29, 1937; minimum daily, 33 second-feet July 23, Aug. 14, 15, 1937.

Remarks.— Records poor. Discharge computed on basis of 23 discharge measurements and records for Lemitar riverside drain near Lemitar, San Antonio riverside drain near San Antonio, and Rio Grande at San Acacia and at San Marcial. Gage read only at times when discharge measurements were made.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	68	110	68	62	47
2							-	68	100	64	59	48
3							-	69	90	68	65	*48
4							-	*69	70	65	59	47
5							-	69	*63	62	55	45
6							-	68	63	60	52	46
7							-	67	63	56	51	48
8							-	*66	63	55	48	50
9							-	67	63	*55	44	52
10							*62	67	64	57	*40	*53
11							62	*68	64	53	38	55
12							63	70	64	50	37	50
13							64	72	64	49	34	51
14							65	74	*64	49	33	52
15							66	76	61	44	33	49
16							66	78	61	44	37	51
17							66	90	59	45	40	*52
18							66	82	59	42	40	51
19							66	83	*59	42	48	51
20							66	*81	61	38	*51	49
21							66	80	59	40	51	51
22							66	78	61	37	48	49
23							66	76	59	*33	46	49
24							*66	80	56	35	46	*48
25							66	90	*57	40	46	48
26							67	90	62	41	*47	44
27							67	100	90	47	46	44
28							67	200	150	50	45	42
29							68	300	90	55	44	42
30							68	200	70	55	45	40
31							-	150	-	*60	46	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-		
February.....							-	-	-	-		
March.....							-	-	-	-		
April 10-30.....							1,379	68	62	65.7	2,740	
May.....							2,886	300	66	93.1	5,720	
June.....							2,119	150	56	70.6	4,200	
July.....							1,557	68	33	50.2	3,090	
August.....							1,434	63	33	46.3	2,840	
September.....							1,452	55	40	48.4	2,880	
The period.....											21,470	

\*Discharge measurement.

## Socorro riverside drain near Socorro, N. Mex.

Location.- Water-stage recorder, lat. 34°01', long. 106°52', in SW¼SW¼ sec. 29, T. 3 S., R. 1 E., 125 feet below Socorro main canal center wasteway, three-quarters of a mile above outlet into Rio Grande, and 3 miles south of Socorro. Zero of gage is 4,569.20 feet above mean sea level (general adjustment of 1929).

Records available.- May 1936 to February 1937 (discontinued).

Extremes.- Maximum discharge during period ending Sept. 30, 1936, about 115 second-feet May 12; maximum gage height, 2.95 feet May 28; minimum daily discharge, 21 second-feet July 30 and 31.

Maximum discharge during period Oct. 1, 1936, to Feb. 28, 1937, 91 second-feet Oct. 6 (gage height, 2.28 feet); minimum daily discharge, 36 second-feet Oct. 1, Jan. 15-17, 21.

Remarks.- Records fair. Discharge represents return flow from irrigation to Rio Grande.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	*73	64	52	30	60
2							-	85	58	65	43	67
3							-	*77	64	82	51	46
4							-	*70	64	*69	50	67
5							-	62	60	*58	48	64
6							-	80	64	*49	35	*30
7							-	*75	63	43	56	27
8							-	74	62	55	57	32
9							-	94	52	49	46	56
10							-	94	42	55	66	52
11							-	85	64	58	64	62
12							-	100	62	44	72	42
13							-	82	55	48	56	38
14							-	68	60	46	50	44
15							-	77	52	50	53	*52
16							-	74	47	49	55	*66
17							-	50	58	57	*52	58
18							-	48	56	48	*50	65
19							-	58	55	54	49	62
20							-	56	54	59	48	*30
21							-	69	42	60	42	*44
22							-	72	37	72	39	69
23							-	67	51	67	37	*32
24							-	59	54	55	60	27
25							-	60	67	46	70	36
26							-	72	60	39	*50	66
27							-	77	80	*32	56	52
28							-	80	74	*27	67	52
29							72	74	74	34	66	46
30							62	77	68	21	52	37
31							-	51	-	21	56	-

\*Gage height missing; discharge computed on basis of records for San Antonio riverside drain near San Antonio, Lemitar riverside drain near Lemitar, and Socorro main canal south near Socorro.

Discharge, in second-feet, of Socorro riverside drain near Socorro, N. Mex., 1936-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	*50	40	40	38	48						
2	37	*50	40	39	38							
3	38	*70	41	40	38							
4	42	*76	42	40	37			†74				
5	47	80	42	40	38							
6	74	74	41	38	38							
7	69	69	41	*38	40							
8	77	64	40	*39	37							
9	74	65	40	*39	37							
10	66	74	40	†40	42							
11	68	72	40	38	40							
12	68	72	40	38	40							
13	60	68	40	38	40							
14	56	58	39	37	40							
15	53	50	40	36	40							
16	52	45	40	36	43							
17	40	42	38	36	51							
18	40	40	38	37	54							
19	58	38	39	*37	50							
20	69	42	*40	37	47							
21	67	41	*40	36	46							
22	64	42	41	37	46							
23	61	41	41	37	46							
24	64	41	41	37	44							
25	50	40	40	38	44							
26	47	40	40	40	42	†64						
27	50	40	40	38	42							
28	53	40	40	38	45							
29	62	40	40	38	-							
30	64	40	40	37	-							
31	65	-	40	38	-							

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 1936.....	2,242	100	48	72.3	4,450
June.....	1,761	80	37	58.7	3,490
July.....	1,543	82	21	49.8	3,060
August.....	1,628	72	30	52.5	3,230
September.....	1,481	69	27	49.4	2,940
The period.....					17,170
October 1936.....	1,771	77	36	57.1	3,510
November.....	1,614	80	38	53.8	3,200
December.....	1,244	42	38	40.1	2,470
January 1937.....	1,177	40	36	38.0	2,330
February.....	1,183	54	37	42.2	2,350
The period.....					13,860

\*Gage height missing; discharge computed on basis of records for San Antonio riverside drain near San Antonio, Lemitar riverside drain near Lemitar, and Socorro main canal south near Socorro.

†Discharge measurement.

Luis Lopez "C" interior drain near Socorro, N. Mex.

Location.— Staff gage, lat.  $34^{\circ}02'$ , long.  $106^{\circ}52'$ , in NE $\frac{1}{4}$  sec. 19, T. 3 S., R. 1 E., at culvert under Socorro main canal center, 500 feet above outlet into Socorro riverside drain and 2 miles southeast of Socorro.

Records Available.— July 1936 to September 1937.

Extremes.— Maximum daily discharge during period ending Sept. 30, 1936, 39 second-feet July 24, 25; minimum daily, 10 second-feet on several days.

Maximum daily discharge during water year 1936-37, not determined; minimum daily, 7 second-feet Oct. 3, 4.

Remarks.— Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 68 discharge measurements, of which 25 were furnished by Middle Rio Grande Conservancy District and 17 by El Paso County Water Improvement District No. 1, and records for Polvadera interior drain at Lemitar and Luis Lopez "B" interior drain near Socorro. Gage read only at times when discharge measurements were made. Discharge represents return flow from irrigation near Socorro.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 13-31, 1936.....	39	10	20.3	764
August.....	20	10	13.8	647
September.....	26	10	17.3	1,030
October 1936.....	24	7	18.3	1,130
November.....	17	11	14.3	849
December.....	15	11	13.3	815
January.....	14	11	13.0	801
February.....	17	10	14.3	793
March.....	-	-	24.6	1,510
April.....	-	21	27.2	1,620
May.....	-	20	30.1	1,850
June.....	31	20	27.3	1,620
July.....	27	16	17.6	1,080
August.....	17	12	14.3	877
September.....	15	11	13.1	778
Water year 1936-37.....	-	7	18.9	13,720

Socorro main canal south near Socorro, N. Mex.

Location.— Water-stage recorder, lat.  $34^{\circ}00'$ , long.  $106^{\circ}52'$ , in SE $\frac{1}{4}$  sec. 31, T. 3 S., R. 1 E., above two small diversions, 150 yards below head gates and 4 miles south of Socorro. Prior to April 14, 1937, at site 1,000 feet downstream, below diversions just mentioned at independent datum; zero of gage was 4,565.49 feet above mean sea level (general adjustment of 1929).

Records available.— May 1936 to September 1937.

Remarks.— Records poor. Daily records not sufficiently accurate for publication. Canal diverts water from Socorro riverside drain for irrigation. The two small diversions above former site of station irrigate about 20 acres.

Monthly discharge, 1936-37

Month	Mean (second- feet)	Run-off in acre-feet
May 1936.....	51.2	3,150
June.....	50.8	3,020
July.....	40.4	2,490
August.....	44.5	2,740
September.....	37.1	2,810
The period.....		13,610
October 1936.....	23.8	1,460
November.....	16.3	970
December.....	0	0
January 1937.....	0	0
February.....	0	0
March.....	31.5	1,940
April.....	44.3	2,640
May.....	52.3	3,220
June.....	37.1	2,210
July.....	45.5	2,790
August.....	50.2	3,090
September.....	37.8	2,250
Water year 1936-37.....	28.4	20,570



Socorro main canal south at end, near San Antonio, N. Mex.

Location.- Water-stage recorder, lat. 33°52', long. 106°52', in SE¼ sec. 18, T. 5 S., R. 1 E., about 200 feet above Bosque del Apache Grant and 3 miles south of San Antonio.

Records available.- April to September 1937.

Extremes.- Maximum discharge during period, about 98 second-feet May 28 (gage height, 5.48 feet, affected by arroyo inflow); no flow at times.

Remarks.- Records poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	13	0	5.3	*9.0	13
2							-	17	0	4.9	*5.5	18
3							-	26	0	11	*10	15
4							-	22	0	15	10	20
5							-	11	0	2.7	7.1	24
6							-	12	0	2.9	7.4	31
7							-	17	0	7.4	9.1	*26
8							-	20	0	7.6	13	*11
9							-	22	1.6	12	13	25
10							-	14	.8	10	19	23
11							-	19	2.1	11	3.6	33
12							-	16	7.7	7.2	6.0	29
13							-	18	6.6	9.7	6.0	20
14							-	16	11	15	7.1	17
15							-	16	5.0	*5.0	13	7.4
16							*6	11	8.6	12	13	4.9
17							17	11	2.5	*6.5	5.8	4.6
18							21	9.2	2.6	8.2	6.2	7.3
19							16	18	3.8	9.9	4.2	8.4
20							15	16	9.6	8.0	8.6	12
21							15	16	10	12	9.7	8.9
22							15	19	8.2	18	15	12
23							14	29	*5.5	15	10	21
24							5.0	27	9.2	*3.0	15	22
25							6.2	26	7.7	12	18	16
26							0	23	17	13	19	7.2
27							5.8	18	11	9.4	15	9.6
28							11	32	7.2	18	*6.0	*14
29							19	*1	9.9	*5.5	18	*13
30							16	0	8.0	*3.0	13	17
31							-	0	-	*2.0	14	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-		
February.....							-	-	-	-		
March.....							-	-	-	-		
April 16-30.....							180.0	21	0	12.0	357	
May.....							518.2	32	0	16.8	1,020	
June.....							156.6	17	0	5.19	309	
July.....							282.2	18	2.0	9.10	560	
August.....							329.3	19	3.6	10.6	653	
September.....							490.3	33	4.6	16.3	972	
The period.....											3,870	

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights, recorded range in stage, engineer's notes, and knowledge of regulation.

San Antonito lateral at end, near San Antonio, N. Mex.

Location.- Water-stage recorder, lat. 33°52', long. 106°52', in SE¼ sec. 17, T. 5 S., R. 1 E., 100 feet above outlet into San Antonio riverside drain and 3 miles south of San Antonio.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 17 second-feet July 28 (gage height, 2.34 feet); no flow at times.

Remarks.- Records good except those for periods of fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	4.2	4.6	2.6
2								-	0	3.4	4.7	1.5
3								-	0	4.8	*3.0	3.0
4								-	0	6.6	8.5	.4
5								-	0	.1	*3.5	7.0
6								-	0	.2	*3.5	9.6
7								-	0	1.8	*1.5	7.9
8								-	1.2	2.8	*.5	4.7
9								-	7.9	10	*4.0	8.9
10								-	4.4	9.4	9.0	7.7
11								-	8.3	9.1	*3.5	6.2
12								-	10	3.4	*2.0	7.0
13								-	8.8	4.9	*3.3	4.8
14								-	7.7	9.2	*3.0	3.1
15								-	2.6	8.2	*2.5	*.5
16								-	7.2	1.5	*2.0	0
17								-	7.6	4.0	*4.2	.7
18								-	3.7	1.1	5.5	3.1
19								-	8.0	4.0	5.8	3.8
20								-	7.6	9.8	3.2	5.5
21								-	4.0	7.5	2.8	5.3
22								-	2.7	7.9	2.1	5.4
23								-	7.1	3.9	3.5	5.3
24								-	8.6	3.4	3.2	5.0
25								-	12	3.0	2.1	2.0
26								-	9.6	8.5	2.1	3.1
27								-	6.3	5.2	2.5	1.1
28								-	2.9	3.3	11	0
29								-	0	.8	6.8	0
30								-	0	1.6	7.9	.5
31								-	-	5.7	2.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 19-31.....						68.8	12	0	5.29	136		
June.....						128.3	10	0	4.28	254		
July.....						140.2	11	.1	4.52	278		
August.....						121.8	12	0	3.93	242		
September.....						148.3	9.8	0	4.94	294		
The period.....										1,200		

\*Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

San Antonito acequia at end, near San Antonio, N. Mex.

Location.— Water-stage recorder, lat. 33°53', long. 106°52', in NW¼ sec. 17, T. 5 S., R. 1 E., at outlet into Elmendorf interior drain, 2½ miles south of San Antonio.

Records available.— May to September 1937.

Extremes.— Maximum discharge during period, 29 second-feet May 28 (gage height, 1.86 feet); no flow at times.

Remarks.— Records good except those for periods of fragmentary gage-height record, which are poor. Discharge represents waste return from irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	0	2.2	4.2	†4.0
2								-	0	3.0	5.7	2.6
3								-	0	7.1	†4.0	1.8
4								-	0	8.9	†3.0	2.0
5								-	0	2.5	1.2	1.5
6								-	0	3.6	1.3	.7
7								-	0	6.5	1.6	†1.0
8								-	0	4.5	2.0	†1.5
9								-	.1	4.6	†1.0	5.9
10								-	.6	4.1	†.5	5.6
11								-	2.9	8.4	†.1	4.7
12								-	8.5	4.9	.2	3.2
13								-	9.7	4.8	.7	2.4
14								*2.0	7.8	4.7	1.3	.7
15								-	2.1	4.3	.6	0
16								-	3.8	†3.5	.6	.5
17								-	7.2	†2.5	1.6	.6
18								-	5.3	†2.5	1.3	.6
19								4.0	3.6	†1.5	1.2	.6
20								3.4	4.4	†1.0	2.5	.6
21								3.2	6.2	†1.5	1.1	.6
22								4.6	1.7	.9	1.9	1.8
23								8.1	2.6	.4	2.0	4.5
24								7.8	1.7	.4	1.8	3.5
25								9.5	2.9	1.6	4.0	2.1
26								10	2.1	3.6	4.8	1.6
27								11	1.2	3.1	2.5	2.0
28								18	1.4	3.2	1.2	2.8
29								†6.0	4.7	2.8	2.2	6.0
30								†.3	2.0	3.9	2.0	7.1
31								0	-	5.3	1.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 19-31.....						85.9	18	0	6.61	170		
June.....						82.5	9.7	0	2.75	184		
July.....						111.8	8.9	.4	3.61	222		
August.....						60.0	5.7	.1	1.94	119		
September.....						72.5	7.1	0	2.42	144		
The period.....										81.9		

\*Discharge measurement.

†Gage-height record fragmentary; discharge computed on basis of partly estimated gage heights.

## San Antonio riverside drain near San Antonio, N. Mex.

Location.- Water-stage recorder, lat.  $33^{\circ}52'$ , long.  $106^{\circ}52'$ , in NW $\frac{1}{4}$  sec. 20, T. 5 S., R. 1 E., 50 feet below mouth of Elmendorf interior drain, 0.4 mile below north boundary of Bosque del Apache Grant, two miles above outlet into Rio Grande, and  $\frac{3}{4}$  miles south of San Antonio.

Records available.- May 1936 to September 1937.

Extremes.- Maximum discharge during period ending Sept. 30, 1936, 88 second-feet May 16; maximum gage height, 2.71 feet May 11; minimum daily discharge, 24 second-feet July 30 to Aug. 2.

Maximum discharge during water year 1936-37, about 450 second-feet May 28 (gage height, 5.74 feet); minimum daily discharge, 41 second-feet Aug. 12.

Remarks.- Records good except those for period of missing gage heights, Mar. 3 to Apr. 28, which were computed on basis of three discharge measurements and records for Rio Grande at San Acacia and Lemitar riverside drain near Lemitar and are poor. Discharge represents return flow from irrigation to Rio Grande.

## Discharge, in second-feet, 1936-37

1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	62	42	24	32
2								-	67	49	24	32
3								-	66	48	25	34
4								-	66	48	29	34
5								-	69	46	38	36
6								-	64	50	35	28
7								-	65	46	36	28
8								68	61	48	37	27
9								70	55	50	36	33
10								80	54	53	36	33
11								73	60	52	34	36
12								70	65	56	32	36
13								72	67	56	36	38
14								76	56	52	33	39
15								81	60	52	36	40
16								86	57	54	33	38
17								77	56	48	33	40
18								72	58	48	33	37
19								76	51	54	34	39
20								68	47	55	35	36
21								71	44	59	42	36
22								76	41	50	42	41
23								72	46	46	39	38
24								74	44	42	39	38
25								70	44	36	38	40
26								72	46	34	40	44
27								74	42	30	36	52
28								70	44	29	36	60
29								68	46	29	35	48
30								69	41	24	34	46
31								65	-	24	29	-

Discharge, in second-feet, of San Antonio riverside drain near San Antonio, N. Mex., 1936-37--  
Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	53	54	54	56	53	80	94	159	79	67	57
2	45	54	56	55	56	54		88	137	77	62	58
3	44	58	56	54	56	56		88	131	90	56	61
4	44	59	55	54	56	56		88	118	98	64	58
5	48	59	55	54	55	55		88	91	70	56	62
6	50	58	55	†54	54	*94	96	83	64	53	59	59
7	50	58	54	†54	53		96	79	72	53	†62	70
8	48	60	*54	†54	52		94	76	69	56	61	61
9	46	60	†54	†54	52		96	88	77	52	72	72
10	45	58	†54	†54	52		91	79	78	54	71	71
11	45	56	54	†54	54	60	94	87	87	46	79	79
12	44	56	55	54	56		98	83	76	41	70	70
13	46	59	56	54	57		98	80	73	42	61	61
14	46	57	56	54	56		101	84	77	44	†59	†59
15	46	54	56	54	54		104	71	74	44	†58	†58
16	46	54	56	54	57	90	101	81	67	44	55	55
17	44	54	55	54	57		101	86	64	46	55	55
18	45	55	55	56	58		98	79	61	61	61	61
19	45	55	55	56	56		101	78	61	62	59	59
20	47	55	55	54	54		98	86	60	73	56	56
21	48	55	54	56	54	*84	94	82	65	72	58	58
22	48	55	54	56	54		91	82	60	67	61	61
23	50	55	54	56	53		96	75	57	62	62	62
24	52	55	54	55	54		98	72	53	65	69	69
25	50	55	55	54	54		106	69	56	66	65	65
26	50	54	55	54	54	*69	104	77	59	65	59	59
27	52	54	56	53	54		126	81	57	58	55	55
28	54	54	56	54	53		98	87	67	52	56	56
29	54	54	56	54	-		86	330	85	64	51	62
30	54	54	56	56	-		91	272	76	67	53	67
31	54	-	55	55	-	-	-	199	-	65	54	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
May 8-31, 1936.....	1,750	86	65	72.9	3,470
June.....	1,637	69	41	54.6	3,250
July.....	1,410	59	24	45.5	2,800
August.....	1,069	42	24	34.5	2,120
September.....	1,127	52	26	37.6	2,240
The period.....					13,880
October 1936 .....	1,486	54	44	47.9	2,950
November.....	1,877	80	53	55.9	3,330
December.....	1,705	56	54	55.0	3,380
Calendar year .....					
January 1937 .....	1,688	56	53	54.5	3,350
February.....	1,531	58	52	54.7	3,040
March.....	1,906	-	-	61.5	3,780
April.....	2,585	-	-	86.2	5,150
May.....	3,802	375	86	123	7,540
June.....	2,683	159	69	89.4	5,320
July.....	2,144	98	53	69.2	4,250
August.....	1,741	73	41	56.2	3,450
September.....	1,668	82	55	62.3	3,710
Water year 1936-37 .....	24,816	375	41	68.0	49,230

\*Discharge measurements.

†Gage height missing; discharge interpolated.

‡Gage-height record fragmentary; discharge computed on basis of partly estimated gage height.

## Luis Lopez "B" interior drain near Socorro, N. Mex.

Location.- Staff gage, lat. 34°00', long. 106°52', in SE¼ sec. 31, T. 3 S., R. 1 E., about 100 feet above outlet into San Antonio riverside drain and 4 miles southeast of Socorro. Zero of gage is 4,560.48 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 6.2 second-feet

July 23; minimum daily, 1.2 second-feet Aug. 16-19, 26, 28.

Maximum daily discharge during water year 1936-37 not determined; minimum daily, 2.3 second-feet Sept. 3.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 56 discharge measurements, of which 18 were furnished by Middle Rio Grande Conservancy District and 18 by El Paso County Water Improvement District No. 1, and records for Luis Lopez "A" interior drain at San Antonio and Luis Lopez "c" interior drain near Socorro. Gage read only at times when discharge measurements were made. Discharge represents ground-water return flow and waste from irrigation on part of Socorro division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in Acre-feet
	Maximum	Minimum	Mean	
July 13-31, 1936.....	6.2	1.3	2.71	102
August.....	1.9	1.2	1.47	90
September.....	2.6	1.5	1.82	108
October 1936.....	4.1	2.4	2.92	180
November.....	4.1	2.9	3.12	166
December.....	3.6	2.9	3.35	206
January 1937.....	3.6	3.1	3.35	204
February.....	3.6	3.3	3.55	196
March.....	-	-	3.7	228
April.....	9.3	-	4.91	292
May.....	-	-	6.05	372
June.....	-	-	4.86	269
July.....	6.2	3.5	5.33	328
August.....	12	2.6	6.02	370
September.....	6.1	2.3	4.88	291
Water year 1936-37.....	-	2.3	4.34	3,140

## Luis Lopez "A" interior drain at San Antonio, N. Mex.

Location.- Staff gage, lat. 33°56', long. 106°52', in NE¼ sec. 32, T. 4 S., R. 1 E., at Socorro main canal south crossing, 0.2 mile above outlet into San Antonio riverside drain and half a mile northeast of San Antonio. Zero of gage is 4,536.36 feet above mean sea level (general adjustment of 1929).

Records available.- August 1936 to September 1937.

Extremes.- Maximum daily discharge during period not determined; minimum daily, 3 second-feet Sept. 21-25, 1936.

Remarks.- Records fair. Daily records not sufficiently accurate for publication. Discharge computed on basis of 57 discharge measurements, of which 22 were furnished by Middle Rio Grande Conservancy District and 15 by El Paso County Water Improvement District No. 1, and records for Luis Lopez "B" interior drain near Socorro and Elmdorff interior drain near San Antonio. Gage read only at times when discharge measurements were made. Discharge represents return flow from irrigation on Socorro Division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
August 11-31, 1936.....	14	6	9.3	387
September.....	12	3	6.9	413
October 1936.....	10	7	8.5	524
November.....	11	10	10.3	611
December.....	11	10	10.5	649
January 1937.....	11	10	10.5	645
February.....	11	10	10.9	605
March.....	15	10	11.9	734
April.....	18	13	15.0	893
May.....	-	13	16.0	986
June.....	-	-	15.5	924
July.....	19	12	15.5	952
August.....	18	12	14.9	916
September.....	14	11	12.6	748
Water year 1936-37.....	-	7	12.7	9,190

## Elmendorf interior drain near San Antonio, N. Mex.

Location.- Staff gage, lat. 33°52', long. 106°52', in S $\frac{1}{4}$  sec. 17, T. 5 S., R. 1 E., about 0.3 mile above outlet into San Antonio riverside drain and 3 miles south of San Antonio. Zero of gage is 4,519.32 feet above mean sea level (general adjustment of 1929).

Records available.- July 1936 to September 1937.

Extremes.- Maximum daily discharge during period ending Sept. 30, 1936, 8.3 second-feet Sept. 15; minimum daily, 1.4 second-feet Aug. 1-5.

Maximum daily discharge during water year 1936-37 not determined; minimum daily discharge 1.2 second-feet Sept. 15.

Remarks.- Records poor. Daily records not sufficiently accurate for publication. Discharge computed on basis of 26 discharge measurements, of which 5 were furnished by El Paso County Water Improvement District No. 1 and 6 by Middle Rio Grande Conservancy District, and records for Luis Lopez "A" interior drain at San Antonio and San Antonio acequia at end near San Antonio. Gage read only at times when discharge measurements were made. Discharge represents ground-water return and waste from irrigation on a portion of Socorro Division of Middle Rio Grande Conservancy District.

Monthly discharge, 1936-37

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
July 14-31, 1936.....	4.5	1.6	3.16	113
August.....	5.1	8.3	3.49	215
September.....	1.4	4.3	5.77	343
October, 1936.....	4.5	1.6	3.25	200
November.....	5.2	1.8	2.74	163
December.....	2.3	1.6	1.95	120
January, 1937.....	2.0	1.8	1.88	116
February.....	-	-	1.8	100
March.....	-	-	2.88	177
April.....	-	-	4.5	268
May.....	-	-	8.0	492
June.....	12	3.5	6.88	410
July.....	11	5.0	6.95	426
August.....	9.5	3.3	6.46	397
September.....	8.0	1.2	3.85	229
Water year 1936-37.....	-	1.2	4.28	3,100

## Alamosa River near Monticello, N. Mex.

Location.- Water-stage recorder, lat.  $33^{\circ}35'$ , long.  $107^{\circ}36'$ , in SW $\frac{1}{4}$  sec. 31, T. 8 S., R. 7 W., at Alamosa dam site and old Fort Ojo Caliente, just below mouth of Wildhorse Creek 15 miles northwest of Monticello.

Drainage area.- 470 square miles.

Records available.- May 1931 to September 1937 in reports of Geological Survey; October to December 1929 and May to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, about 1,380 second-feet Sept. 10 (gage height, 4.87 feet); minimum daily, 6.7 second-feet Feb. 28 Mar. 1-3, 7, 8, Sept. 13, 16-28. 1931-37: Maximum gage height, 13.6 feet Aug. 21, 1936 (discharge not determined); minimum daily discharge, 5.6 second-feet Jan. 9, 1932.

Remarks.- Records good below 10 second-feet, and poor above. Discharge for period of missing gage heights, Apr. 6-11, computed on basis of weather records and knowledge of local conditions. No diversion above station; entire normal flow diverted below station for irrigation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	7.8	7.2	7.2	7.4	6.7	7.4	7.2	7.2	11	7.4	6.9
2	7.6	7.8	7.2	7.2	7.4	6.7	7.4	7.2	7.2	10	7.6	6.9
3	7.6	8.0	7.2	7.2	7.2	6.7	7.4	7.2	7.2	8.1	7.1	6.9
4	7.6	8.0	7.1	7.2	7.2	6.9	7.4	7.4	7.2	7.4	7.1	6.9
5	7.6	8.0	7.1	7.2	7.4	6.9	7.6	7.4	7.2	7.4	7.1	38
6	7.4	8.1	7.1	7.2	7.4	6.9	7.6	7.2	7.2	7.4	7.1	7.2
7	7.4	8.1	7.1	7.2	7.2	6.7	7.6	7.2	7.2	7.4	7.6	7.1
8	7.4	8.1	7.1	7.2	7.2	6.7	7.6	6.9	7.2	7.4	6.9	7.1
9	7.4	8.3	7.1	7.2	7.1	6.9	7.6	7.1	7.2	13	6.9	7.1
10	7.2	8.3	7.1	7.4	7.2	6.9	7.6	7.1	7.2	13	6.9	40
11	7.2	8.3	7.1	7.4	7.2	6.9	7.6	7.1	7.2	15	6.9	8.0
12	7.2	8.1	7.2	7.4	7.2	6.9	7.6	7.1	7.2	11	6.9	12
13	7.2	8.0	7.2	7.4	7.4	7.1	7.6	7.1	7.2	11	6.9	6.7
14	7.2	8.0	7.2	7.4	7.4	7.1	7.6	7.2	7.2	10	7.1	6.9
15	7.2	7.8	7.1	7.4	7.2	7.1	7.4	7.1	7.2	10	6.9	6.9
16	7.2	7.8	7.1	7.4	7.8	7.4	7.2	7.1	7.2	9.8	6.9	6.7
17	7.2	7.8	7.1	7.4	7.4	7.2	7.2	7.1	7.2	9.6	6.9	6.7
18	7.2	7.8	7.1	7.4	7.4	7.2	7.2	7.1	7.2	9.4	7.2	6.7
19	7.2	7.6	7.1	7.4	7.4	6.9	7.2	6.9	7.2	8.9	10	6.7
20	7.4	7.4	7.1	7.4	7.2	6.9	7.2	6.9	7.2	8.7	7.8	6.7
21	7.4	7.4	7.2	7.4	7.2	7.1	7.1	6.9	7.2	8.5	6.9	6.7
22	7.4	7.4	7.2	7.4	7.1	7.2	7.1	7.1	7.4	8.3	6.9	6.7
23	7.4	7.4	7.2	7.4	7.1	7.1	7.2	7.1	7.4	8.3	15	6.7
24	7.4	7.4	7.2	7.4	7.1	6.9	7.4	7.1	7.4	8.0	12	6.7
25	7.6	7.2	7.2	7.6	6.9	7.1	7.4	7.1	7.6	7.8	10	6.7
26	7.6	7.2	7.2	7.4	6.9	7.1	7.4	7.1	12	7.4	7.4	6.7
27	7.8	7.2	7.2	7.4	6.9	7.2	7.2	7.1	15	7.2	7.1	6.9
28	7.8	7.2	7.2	7.6	6.7	7.2	7.1	7.4	8.5	7.2	6.9	6.9
29	7.8	7.2	7.2	7.6	-	7.2	7.1	18	8.8	7.2	6.9	7.1
30	7.8	7.2	7.2	7.4	-	7.1	7.1	8.9	18	7.2	6.9	6.9
31	7.8	-	7.2	7.4	-	7.2	-	7.2	-	7.2	6.9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						230.6	7.8	7.2	7.44	487		
November.....						231.9	8.3	7.2	7.73	460		
December.....						221.8	7.2	7.1	7.15	440		
Calendar year 1936.....						3,921.7	1,200	6	10.7	7,770		
January.....						228.2	7.6	7.2	7.36	453		
February.....						202.2	7.8	6.7	7.22	401		
March.....						217.1	7.4	6.7	7.00	431		
April.....						221.1	7.6	7.1	7.37	439		
May.....						235.6	18	6.9	7.84	463		
June.....						245.3	18	7.2	8.11	483		
July.....						279.8	15	7.2	9.03	555		
August.....						236.0	13	6.9	7.61	468		
September.....						276.1	40	6.7	9.20	548		
Water year 1936-37.....						2,821.7	40	6.7	7.73	5,600		



Tornillo drain at mouth, at Alamo Alto, Tex.

Location.- Staff gage, lat.  $31^{\circ}23'40''$ , long.  $106^{\circ}01'05''$ , in sec. 11, T. 35 S., R. 9 E., 1,230 feet above outlet into Rio Grande and 0.5 mile below Alamo Alto

Records available.- October 1931 to September 1937 in reports of Geological Survey; January 1930 to December 1931 in reports of New Mexico State engineer.

Remarks.- Records represent return flow to Rio Grande from irrigation on about 11,000 acres of the Tornillo district and about 14,000 acres on San Elisario Island. Records furnished by Bureau of Reclamation.

Discharge measurements, in second-feet, water year October 1936 to September 1937

Date	Discharge	Date	Discharge	Date	Discharge
1936		1937		1937	
Oct. 7	74.2	Feb. 18	53.2	June 4	95.2
13	72.8	23	53.4	11	94.9
20	68.2	23	57.2	18	89.2
27	69.0	Mar. 2	49.6	25	96.7
Nov. 3	63.8	2	52.9	July 2	99.8
10	64.2	9	58.3	9	89.2
17	62.7	10	59.0	16	83.6
24	62.8	16	66.9	23	89.1
Dec. 1	59.1	18	66.4	30	97.5
8	59.0	23	67.6	Aug. 6	98.7
15	54.6	26	56.1	13	101
22	54.4	30	74.2	20	93.6
29	61.8	Apr. 2	84.4	27	107
1937		9	89.9	Sept. 3	81.5
Jan. 5	48.1	16	85.6	10	106
12	47.6	23	107	16	91.9
19	49.0	30	102	24	83.8
26	46.6	May 7	91.6	30	77.6
Feb. 2	47.8	17	98.4		
9	56.1	21	85.5		
16	53.8	28	96.0		

## RIO GRANDE BASIN

Tornillo canal at wasteway, near Alamo Alto, Tex.

Location.- Water-stage recorder and Cippoletti weir, lat. 31°23'25", long. 105°59'40", in SW¼ sec. 12, T. 35 S., R. 9 E., at wasteway at end of canal, 2 miles southeast of Alamo Alto. Zero of gage is 3,557.15 feet above mean sea level.

Records available.- October 1931 to September 1937 in reports of Geological Survey; January 1930 to December 1931 in reports of New Mexico State engineer.

Extremes.- Maximum daily discharge during year, 157 second-feet Sept. 12 (gage height, 2.13 feet); no flow Jan. 4 to Feb. 9.

1930-37: Maximum daily discharge, 327 second-feet Sept. 2, 1935 (gage height not determined); no flow at times.

Remarks.- Discharge represents unused irrigation water at end of canal, which is returned to Rio Grande. Hudspeth canal diverts from Tornillo canal just above station. Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	17	10	11	0	60	2.2	5.1	8.4	7.9	7.2	0.9
2	26	8.6	5.6	5.4	0	54	1.1	1.4	8.8	7.0	10	.6
3	29	21	4.5	.2	0	62	1.1	1.6	11	1.6	3.6	.4
4	26	56	3.3	0	0	53	.4	1.4	8.5	5.3	2.8	.3
5	38	37	2.5	0	0	53	.4	1.1	5.2	3.7	4.7	4.5
6	60	102	2.5	0	0	20	.3	1.7	20	3.5	2.2	1.1
7	60	110	2.5	0	0	.9	.2	6.0	12	3.1	1.1	6.7
8	29	139	9.5	0	0	2.4	.2	11	22	1.9	.9	3.1
9	29	77	6.7	0	0	17	.2	19	1.9	1.1	.9	2.5
10	11	102	5.9	0	13	5.9	.2	17	4.8	71	.8	68
11	18	97	30	0	116	3.6	.2	13	1.6	39	.8	84
12	23	84	34	0	82	2.8	.2	10	2.1	24	1.6	157
13	21	83	18	0	42	12	.2	8.3	12	8.8	3.6	138
14	14	73	14	0	38	3.3	.2	4.0	5.4	9.4	2.8	126
15	6.5	71	6.4	0	60	3.1	.2	1.1	4.2	6.1	4.0	107
16	1.9	75	11	0	67	5.6	.2	3.0	3.0	2.8	6.7	90
17	.7	81	11	0	53	5.7	.2	7.7	1.4	1.1	3.6	67
18	.6	84	1.6	0	35	3.9	.2	2.2	2.4	.6	5.5	72
19	.1	46	.4	0	55	2.2	1.4	1.7	1.9	2.4	8.0	83
20	11	7.5	.2	0	65	10	.7	1.1	1.6	1.6	3.3	89
21	28	9.6	0	0	62	33	1.9	8.0	1.9	2.4	8.7	146
22	24	7.5	57	0	43	7.4	.9	13	1.9	1.4	5.6	110
23	24	7.1	57	0	38	1.4	.6	14	6.4	1.4	11	107
24	39	9.6	40	0	27	.9	25	11	8.8	1.4	6.4	92
25	18	69	41	0	40	.7	26	5.0	1.6	2.2	2.6	105
26	14	139	40	0	36	3.0	36	1.6	2.2	3.1	1.6	92
27	11	84	50	0	30	8.4	1.6	1.9	14	5.5	.8	96
28	6.6	79	68	0	52	4.8	1.9	30	12	3.3	1.6	63
29	14	36	48	0	-	2.8	.9	25	25	4.5	3.4	67
30	11	18	40	0	-	4.3	78	*33	2.8	1.6	7.9	54
31	15	-	72	0	-	32	-	*40	-	1.4	2.2	-
Month						Second-foot-days	Maxima	Minimum	Mean	Run-off in acre-feet		
October.....						626.4	60	0.1	20.2	1,240		
November.....						1,828.7	139	7.1	61.0	3,630		
December.....						690.6	72	0	22.3	1,370		
Calendar year 1936.....						7,739.3	139	0	21.1	15,350		
January.....						16.6	11	0	.5	32.9		
February.....						955	116	0	34.1	1,890		
March.....						489.1	65	.7	15.8	970		
April.....						182.8	78	.2	6.1	365		
May.....						296.9	40	1.1	9.6	589		
June.....						214.8	25	1.4	7.2	426		
July.....						229.1	71	.6	7.4	454		
August.....						125.9	11	.8	4.1	250		
September.....						2,022.9	157	.3	67.4	4,010		
Water year 1936-37.....						7,678.8	157	0	21.0	15,224.9		

\*Gage height missing; discharge estimated.

## Hudspeth canal at head, near Alamo Alto, Tex.

Location.— Water-stage recorder, lat. 31°23'25", long. 105°59'40", in SW¼ sec. 12, T. 35 S., R. 9 E. (surveys of Bureau of Reclamation), at head of canal, 2 miles south-east of Alamo Alto.

Records available.— October 1931 to September 1937 in reports of Geological Survey; March 1930 to December 1931 in reports of New Mexico State engineer.

Extremes.— Maximum daily discharge during year, 213 second-feet Aug. 22; no flow at times.

1930-37: Maximum daily discharge, 249 second-feet June 9, 1935; maximum daily gage height, 4.53 feet Aug. 14, 1934; no flow at times.

Remarks.— Records good. Hudspeth canal diverts from Tornillo canal just above waste-way. Flow is used for irrigation on Hudspeth County Conservation and Reclamation District No. 1. Records furnished by Bureau of Reclamation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	95	24		0	0	121	120	152	141	137	101
2	89	33	0		0	0	81	113	156	132	171	68
3	89	13	0		0	0	87	130	159	102	152	68
4	90	88	0		0	0	154	113	140	145	130	85
5	90	96	0		0	0	146	101	148	149	201	115
6	92	15	0		0	0	152	110	149	128	205	109
7	94	0	0		0	0	153	140	145	120	182	158
8	80	0	0		0	0	160	166	136	*158	205	146
9	85	10	0		0	19	166	164	135	121	183	150
10	92	0	0		1.7	70	179	164	141	100	147	99
11	95	0	0	12	64	130	171	149	109	166	60	
12	94	0	71	41	56	157	164	135	138	165	1.1	
13	95	0	96	57	70	94	150	171	140	166	7.8	
14	87	0	105	53	72	60	157	163	147	175	23	
15	.4	0	111	17	91	52	108	152	151	179	30	
16	0	0	113	0	119	29	122	156	149	166	77	
17	0	0	17	0	156	38	147	147	154	152	81	
18	0	0	0	0	156	70	157	153	119	162	61	
19	0	0	0	0	130	132	119	121	181	173	46	
20	0	0	0	0	148	86	126	92	204	177	48	
21	77	0	0	0	169	95	135	112	172	199	1.0	
22	98	0	0	0	128	137	105	111	137	213	32	
23	97	0	73	0	58	152	127	152	139	197	40	
24	97	0	88	0	45	161	114	142	151	196	40	
25	94	0	87	0	49	162	138	140	157	190	42	
26	100	0	87	0	43	143	139	141	165	204	47	
27	96	64	87	0	115	81	142	152	155	187	57	
28	93	62	89	0	166	124	126	147	164	168	59	
29	92	83	71	-	157	118	126	134	159	181	61	
30	94	88	34	-	164	150	130	177	125	189	63	
31	97	-	77	-	182	-	141	-	82	167	-	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,313.4	100	0	74.6	4,590		
November.....						652	96	0	21.7	1,290		
December.....						1,230	113	0	39.7	2,440		
Calendar year 1936.....						34,387.4	208	0	94.0	68,200		
January.....						0	0	0	0	0		
February.....						181.7	57	0	6.49	360		
March.....						2,425	182	0	78.2	4,810		
April.....						3,530	179	29	118	7,000		
May.....						4,173	171	101	135	8,280		
June.....						4,308	177	92	144	8,540		
July.....						4,374	204	82	141	8,680		
August.....						5,490	213	130	177	10,890		
September.....						1,975.9	158	1.0	65.9	3,920		
Water year 1936-37.....						30,653.0	213	0	84.0	60,800		

\*Gage height missing; discharge estimated.

## Pecos River at Irvin ranch, near Pecos, N. Mex.

Location.-- Water-stage recorder, lat. 35°42'25", long. 105°41'00", in NE 1/4 sec. 17, T. 17 N., R. 12 E., at bridge on private road on Irvin ranch, 600 feet above mouth of Indian Creek, 2 miles below Espiritu Santo Creek, and 11 miles north of Pecos.

Drainage area.-- 175 square miles.

Records available.-- March 1910 to December 1914 (published as Pecos River near Cowles) and October 1930 to September 1937 in reports of Geological Survey; August 1919 to December 1931 in reports of State engineer.

Extremes.-- Maximum discharge during year, 744 second-feet June 3 (gage height, 3.41 feet); minimum daily discharge, 19 second-feet January 22.  
1930-37: Maximum discharge, about 1,390 second-feet Sept. 24, 1931 (gage height, 3.70 feet); minimum daily discharge, 6.1 second-feet Jan. 18, 1934.

Remarks.-- Records good except those for period of ice effect, Dec. 8-14, Dec. 30 to Feb. 4, Feb. 9-11 (computed on basis of three discharge measurements, gage heights, weather records, and records for Rio Santa Cruz at Cundiyo), and those for periods of missing gage heights, Nov. 21 to Dec. 7, July 19-26, Sept. 21-30 (computed on basis of records for Rio Santa Cruz at Cundiyo), which are poor. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	65	35	22	25	32	55	283	602	295	68	79
2	81	58	30	21	25	34	84	299	674	348	68	76
3	82	40	35	20	26	34	99	319	708	353	71	68
4	82	59	37	22	27	32	95	323	657	291	72	71
5	76	68	40	24	28	31	79	335	686	259	70	81
6	72	55	35	25	29	31	76	340	515	237	64	112
7	68	52	30	27	35	32	72	344	460	223	56	183
8	68	49	30	23	31	34	71	394	412	223	58	130
9	66	43	30	23	28	34	84	430	376	209	59	119
10	65	44	30	25	25	40	95	465	335	189	55	104
11	62	45	30	26	27	46	142	490	315	216	55	97
12	60	45	30	25	29	49	209	495	291	199	59	89
13	59	43	30	24	30	45	275	505	267	174	59	82
14	58	45	35	23	32	43	327	515	251	154	56	79
15	58	45	31	23	37	38	398	558	230	144	54	74
16	56	43	31	24	31	37	475	574	212	132	60	71
17	55	44	30	23	29	37	450	569	196	123	59	68
18	54	43	30	24	32	36	407	552	183	117	56	68
19	52	40	29	27	31	34	407	535	174	100	71	64
20	66	36	30	22	30	33	348	510	163	95	66	60
21	62	40	28	21	29	42	358	470	154	95	56	60
22	59	40	26	19	30	49	420	440	147	80	52	55
23	59	40	27	20	30	58	407	430	140	80	54	55
24	55	30	25	20	32	51	323	445	142	80	52	50
25	68	32	25	21	35	46	299	412	186	90	55	50
26	55	31	25	23	33	44	335	366	237	95	52	50
27	51	33	24	27	35	40	376	362	331	89	77	45
28	55	40	27	28	33	40	371	394	299	86	68	40
29	50	35	23	28	-	36	340	450	259	88	71	50
30	64	35	22	26	-	38	303	613	269	76	80	80
31	77	-	23	25	-	39	-	680	-	72	119	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,964	82	50	63.4	3,900		
November.....						1,308	65	30	45.6	2,590		
December.....						913	40	22	29.5	1,810		
Calendar year 1936.....						32,865	598	20	89.8	65,190		
January.....						731	28	19	23.6	1,450		
February.....						844	37	25	30.1	1,670		
March.....						1,215	58	31	39.2	2,410		
April.....						7,780	475	55	269	15,430		
May.....						13,798	613	283	445	27,370		
June.....						9,761	708	140	323	19,560		
July.....						5,012	353	72	162	9,940		
August.....						1,991	119	52	64.2	3,950		
September.....						2,310	183	40	77.0	4,680		
Water year 1936-37.....						47,627	708	19	130	94,460		

## Pecos River near Anton Chico, N. Mex.

Location.-- Water-stage recorder, lat.  $35^{\circ}10'$ , long.  $105^{\circ}08'$ , in Anton Chico Grant, about 3 miles southeast of Anton Chico and  $5\frac{1}{2}$  miles below mouth of Tecolote Creek. Prior to July 2, 1937, at site 1.5 miles upstream at independent datum.

Records available.-- April 1910 to December 1914 and October 1930 to September 1937 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, whose distance above the present site ranged from a sixth of a mile to five miles; records are believed to be equivalent.

Remarks.-- Records good for October to April and fair for May to September, except those for periods of ice effect or missing gage heights, which are poor. Several diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	72	21	11		44	75	+300	+7,500	+420	50	53
2	95	82	20		*25	38	90	+300	+10,000	412	41	56
3	101	68	27			35	156	+330	+2,000	398	38	52
4	98	54	15			36	220	+340	+1,200	412	121	47
5	95	38	15		*30	48	215	+350	+1,300	333	103	204
6	90	56	27			53	56	+350	+1,400	281	69	240
7	82	58	31	*10		58	176	350	+800	280	47	1,280
8	77	52	14		25	49	180	+400	+800	249	38	1,080
9	70	48	24		25	44	171	+450	+450	252	33	655
10	64	37	35		15	46	188	+480	+400	260	100	337
11	58	33	31		13	44	210	+500	+350	238	+60	250
12	48	33	36		18	50	284	+510	+350	238	+40	666
13	48	32	25		20	68	354	+530	+300	184	+40	226
14	48	31	26		15	93	452	+540	+300	155	+50	178
15	49	30	27		14	82	498	+580	+300	134	+30	155
16	46	32	23	*15	12	82	596	+600	+250	121	+30	142
17	44	31	22		14	77	645	+600	+250	112	+30	131
18	40	27	22		16	70	589	+580	+250	96	+80	112
19	36	27	14		11	68	575	+560	+200	94	133	105
20	32	29	15		11	68	575	+540	+200	1,800	94	88
21	33	23	11		16	68	498	+500	+200	482	55	81
22	50	22	14		14	70	498	+470	+150	124	90	55
23	50	24	19		10	90	528	+600	+100	98	+90	53
24	49	21	12	*10	12	120	492	+600	+150	75	+70	56
25	49	22	12		11	117	452	+700	+300	60	+60	71
26	46	19	12		17	127	414	+1,500	580	126	+50	73
27	50	14	13		31	108	414	+2,200	+550	98	+45	66
28	50	15	11	*15	30	93	414	+5,500	+400	77	+45	41
29	44	16	7.6		-	93	414	+1,500	580	77	+45	45
30	46	15	7.2		-	95	-	+1,000	+450	66	44	50
31	43	-	5.1	*20	-	77	-	+800	-	55	44	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				1,808		101	32	58.3	3,590			
November.....				1,061		82	14	35.4	2,100			
December.....				593.9		36	5.1	19.2	1,180			
Calendar year 1936.....				31,173.8		755	4.0	85.2	61,840			
January.....				381		-	-	12.3	756			
February.....				542		33	10	19.4	1,080			
March.....				2,214		127	35	71.4	4,390			
April.....				10,863		645	75	362	21,550			
May.....				22,570		3,500	300	728	44,770			
June.....				31,500		10,000	100	1,060	62,480			
July.....				7,797		1,800	55	262	15,470			
August.....				1,845		133	30	59.5	3,660			
September.....				6,638		1,280	41	221	13,170			
Water year 1936-37.....				87,812.9		10,000	5.1	241	174,200			

\*Stage-discharge relation affected by ice; discharge computed on basis of one discharge measurement, weather records, and records for stations at Irvin ranch and at Santa Rosa.

†Gage height missing; discharge computed on basis of five discharge measurements, weather records, and records for stations at Irvin ranch and at Santa Rosa.

## Pecos River at Santa Rosa, N. Mex.

Location.-- Water-stage recorder, lat. 34°56', long. 104°41', in sec. 2, T. 8 N., R. 21 E., at highway bridge, 1 mile above mouth of Rio Agua Negro Chiquita. Prior to June 2, 1937, at site a quarter of a mile upstream at independent datum.

Records available.-- May 1903 to December 1906, February 1910 to July 1911, September 1912 to December 1914, October 1930 to September 1937 in reports of Geological Survey; February 1910 to July 1911, and September 1912 to December 1931 in reports of State engineer.

Extremes.-- Maximum discharge during year, 55,200 second-feet June 2 (gage height, 25.7 feet, present datum); minimum daily discharge, 2.7 second-feet June 25, 1930-37: Maximum discharge and gage height, those of June 2, 1937: minimum daily discharge, that of June 25, 1937.

Remarks.-- Records fair except those for periods of ice effect or fragmentary gage-height record, which are poor. Several diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	16	14	14	12	12	22	276	700	996	51	22
2	48	16	14	} *10	12	11	17	236	118,600	731	51	18
3	49	16	14		12	11	15	200	19,970	1,260	40	18
4	56	27	14		11	11	23	208	12,710	1,170	42	19
5	56	28	14	} *10	12	12	58	208	11,620	1,010	44	25
6	60	25	13		11	14	96	220	11,700	511	44	24
7	61	20	13		10	13	89	220	13,200	321	42	578
8	66	16	13	13	11	11	78	236	11,500	168	38	3,200
9	49	20	13	14	*10	11	71	216	1,000	128	31	1,160
10	46	19	13	14	11	11	69	276	1900	155	284	610
11	41	19	12	13	11	11	67	290	1700	652	77	382
12	33	17	13	13	11	11	64	290	570	320	42	502
13	29	16	13	} *10	11	11	119	310	1500	300	49	1,020
14	23	16	13		11	12	249	308	1400	184	38	328
15	20	16	14		11	12	280	310	1350	97	30	150
16	19	15	13	} *10	12	12	346	352	1300	53	25	87
17	19	15	13		12	11	487	384	1260	31	20	63
18	16	15	13		11	12	541	367	1200	16	24	58
19	15	15	13	} *10	11	12	505	357	1180	7.9	32	40
20	14	15	13		11	13	624	346	160	713	44	31
21	14	14	13		*11	14	499	362	1120	3,600	53	25
22	16	14	13	12	14	423	320	180	873	55	24	
23	16	14	13	11	12	423	276	140	366	49	22	
24	16	14	13	11	10	445	1,080	3.1	150	38	22	
25	16	15	13	11	11	401	1,020	2.7	69	34	22	
26	15	14	13	} *10	11	19	340	1,050	22	36	32	24
27	17	14	13		11	29	305	14,000	1,450	258	31	22
28	18	14	13		13	12	32	300	5,750	2,240	145	26
29	17	14	13	14	-	31	315	4,790	670	94	20	22
30	18	14	12	13	-	24	300	1,860	764	75	19	24
31	17	-	12	14	-	21	-	1,040	-	61	18	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						942	61	14	30.4	1,870		
November.....						501	28	14	16.7	994		
December.....						406	14	12	13.1	805		
Calendar year 1936.....						25,418.3	3,000	8.3	69.4	50,400		
January.....						345	14	-	11.1	684		
February.....						314	12	10	11.2	623		
March.....						451	32	10	14.5	895		
April.....						7,591	624	15	263	15,080		
May.....						27,145	5,750	200	876	53,840		
June.....						50,801.8	18,600	2.7	1,693	100,800		
July.....						14,550.9	3,800	7.9	469	28,860		
August.....						1,423	224	18	45.9	2,950		
September.....						8,564	3,200	18	286	16,990		
Water year 1936-37.....						113,034.7	18,600	2.7	310	224,200		

\*Stage-discharge relation affected by ice; discharge computed on basis of gage heights, weather records, and records for Pecos River near Gaudalupe.

†Gage-height record fragmentary; discharge computed on basis of partial gage heights, weather records, and records for Pecos River near Gaudalupe.

## Pecos River near Guadalupe, N. Mex.

Location.-- Water-stage recorder, lat.  $34^{\circ}36'$ , long.  $104^{\circ}24'$ , in sec. 2, T. 4 N., R. 24 E., half a mile below Alamogordo Dam and  $3\frac{1}{4}$  miles north of Guadalupe.

Records available.-- October 1912 to December 1914 and October 1930 to Sept. 10, 1936 (at site  $1\frac{1}{2}$  miles upstream at independent datum), and Sept. 11, 1936, to September 1937 (at present site and datum) in reports of Geological Survey; records equivalent; October 1912 to December 1931 in reports of State engineer.

Extremes.-- Maximum discharge during water year 1935-36, 9,710 second-feet July 12 (gage height, 7.79 feet, former site and datum); minimum daily discharge not determined.  
Maximum discharge during water year 1936-37, 23,200 second-feet June 3 (gage height, 11.86 feet; no flow Sept. 1, 2).  
1930-37: Maximum discharge, about 27,000 second-feet Oct. 11, 1930 (gage height, 12.8 feet, former site and datum), from rating curve extended logarithmically above 13,500 second-feet; no flow Sept. 1-3, 5, 1937.

Remarks.-- Records good for October to December 1935 and July and August 1936, fair for October 1936 to September 1937, and poor for January to June and for September 1936. Flow partly regulated by Alamogordo Reservoir (capacity, 157,000 acre-feet), which acted as a flood detention reservoir with unregulated outlet tunnels until Aug. 31, 1937, when storage was begun and flow completed regulated. Several diversions for irrigation above station.

Discharge, in second-feet, 1935-37

1935-36

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	156	75	80	104				170	315	78	98	384
2	156	80	75	98				180	300	75	95	204
3	139	80	72	104				190	255	75	247	116
4	142	75	78					200	265	72	287	80
5	128	72	95					200	250	68	588	75
6	98	72	101	100	90	80	70	210	204	68	350	75
7	268	75	92					220	184	64	280	70
8	122	80	85	*95				240	156	427	325	70
9	92	80	88					230	125	232	320	66
10	92	75	65					260	122	260	188	70
11	85	80	85		*92			230	500	533	139	70
12	85	85	88					214	300	4,700	110	75
13	82	88	92			75	75	200	400	2,200	95	75
14	80	85	92	95				196	300	627	85	81
15	80	85	92					184	200	845	75	76
16	78	82	98		90		80	183	150	240	82	73
17	72	85	101				100	222	120	172	85	74
18	70	90	90				160	245	100	132	85	70
19	70	88	90				200	275	90	107	82	74
20	80	88	95	*95		70	210	340	90	101	116	87
21	70	88	95				210	305	80	95	367	145
22	70	85	90				190	250	80	98	196	180
23	68	82	90				190	240	80	88	122	144
24	78	88	90			*68	180	245	70	70	95	114
25	80	107	98		85		170	310	70	70	82	130
26	82	146	98	95			170	260	70	66	72	134
27	80	132	95			70	200	232	75	62	68	130
28	78	107	101				230	370	78	104	1,010	117
29	75	90	101		-		*204	1,540	78	101	875	119
30	70	85	95		-		170	936	78	101	831	165
31	75	-	98		-		-	768	-	98	614	-

\*Discharge measurement.

Note.-- Discharge for periods of missing gage heights, Jan. 4 to May 11, June 11-26, Sept. 5-8, 11-13, computed on basis of five discharge measurements, and records for station at Santa Rosa.

Discharge, in second-feet, of Pecos River near Guadalupe, N. Mex., 1935-37--Continued

1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	97	90	79	97	79	81	300	3,940	422	127	0
2	134	96	96	74	99	79	73	250	4,220	411	112	0
3	114	90	101	70	94	79	70	200	12,100	360	127	0
4	106	101	103	66	96	78	79	200	13,300	467	136	6.4
5	114	106	101	78	92	81	90	200	6,420	380	145	0.4
6	123	117	101	82	90	90	90	200	5,130	300	148	2.6
7	125	117	97	70	87	92	110	210	4,940	330	159	2.9
8	123	110	94	60	82	86	103	230	4,860	375	162	3.2
9	123	97	87	60	78	81	97	249	4,670	444	176	6.8
10	117	96	84	65	79	74	96	274	4,400	467	184	9.8
11	112	96	82	75	78	73	94	385	4,060	606	162	13
12	105	87	86	70	79	72	90	341	3,260	551	91	103
13	110	76	90	75	79	70	92	357	2,680	503	91	245
14	110	78	89	80	78	73	141	369	2,220	545	96	310
15	99	84	87	80	82	78	260	361	1,590	576	93	231
16	94	92	84	82	84	79	333	365	525	582	99	146
17	103	90	81	84	87	78	361	394	330	521	102	67
18	108	90	79	79	86	73	390	403	300	563	91	65
19	106	89	79	79	81	74	430	398	278	594	104	83
20	103	87	81	75	78	72	448	377	260	1,510	139	74
21	96	90	84	70	78	76	457	337	278	1,060	239	67
22	94	84	84	65	81	78	337	313	296	1,760	93	23
23	96	92	89	65	74	79	310	302	300	1,290	96	6.2
24	106	89	87	70	78	76	350	338	335	230	93	11
25	110	92	86	76	76	78	380	390	390	112	110	9.0
26	106	94	87	79	78	78	350	606	444	107	104	15
27	108	101	86	90	78	81	330	1,420	1,190	104	96	47
28	97	97	86	86	81	89	300	4,020	1,860	187	74	97
29	99	94	82	90	-	92	*321	4,320	1,760	219	72	70
30	101	97	79	96	-	96	*394	4,290	816	180	79	79
31	96	-	76	103	-	89	-	4,120	-	148	34	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1935 .....	2,991	258	68	96.5	5,930
November.....	2,630	146	72	87.7	5,220
December.....	2,825	101	72	91.1	5,600
Calendar year 1935 .....	77,056	4,060	38	211	152,800
January 1936 .....	2,986	-	-	96.3	5,920
February.....	2,567	-	-	88.5	5,090
March.....	2,293	-	-	74.0	4,550
April.....	3,739	230	-	125	7,420
May.....	9,850	1,540	170	318	19,540
June.....	5,185	800	70	173	10,280
July.....	11,529	4,700	62	372	22,870
August.....	8,064	1,010	66	260	15,990
September.....	3,331	384	66	111	6,610
Water year 1935-36 .....	57,990	4,700	-	158	115,000
October .....	3,379	141	94	109	6,700
November.....	2,836	117	76	94.8	5,630
December.....	2,718	108	76	87.7	5,390
Calendar year 1936 .....	58,477	4,700	-	160	115,990
January .....	2,373	103	60	76.5	4,710
February.....	2,330	99	74	83.2	4,880
March.....	2,473	96	70	79.8	4,910
April.....	7,057	487	70	235	14,000
May.....	25,449	4,320	200	355	52,460
June.....	37,142	13,300	260	2,908	172,800
July.....	15,703	1,760	104	507	31,150
August.....	3,634	239	34	117	7,210
September.....	1,761.3	310	0	58.7	3,490
Water year 1936-37 .....	187,855.3	13,300	0	432	313,070

Note.- Stage-discharge relation affected by ice Jan. 8-15, 20-24, 1937, and gage-height record fragmentary, Apr. 23-25, July 23, 24, 1937; discharge computed on basis of partial gage-height record and records for station at Santa Rosa.



## Pecos River near Acme, N. Mex.

Location.- Water-stage recorder, lat. 33°34'10", long. 104°22'25", in SW¼ sec. 35, T. 8 S., R. 25 E., at highway bridge, half a mile below mouth of Salt Creek, 3 miles southeast of Acme, and 15 miles northeast of Roswell.

Records available.- July to September 1937 in reports of Geological Survey; August 1921 to July 1923 in reports of State engineer.

Extremes.- Maximum discharge during period, 7,070 second-feet Sept. 8 (gage height, 6.01 feet); minimum daily discharge, 1.1 second-feet Sept. 5.

Maximum discharge during flood of May 28, 1937, 53,300 second-feet (gage height, 14.82 feet), by slope-area method.

Remarks.- Records good. Several diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	-	-	1600	75	4.8
2							-	-	-	570	49	2.7
3							-	-	-	520	34	1.6
4							-	-	-	655	37	1.3
5							-	-	-	323	38	1.1
6							-	*143	-	497	27	8.2
7							-	-	-	323	23	637
8							-	-	-	316	16	2,940
9							-	-	-	208	12	225
10							-	*89	-	208	10	131
11							-	-	-	254	8.7	476
12							-	*133	-	281	10	711
13							-	-	-	343	23	281
14							-	-	-	237	16	116
15							-	-	-	296	31	52
16							-	-	*2,050	206	33	28
17							-	-	*1,280	168	1,000	111
18							-	-	-	154	226	97
19							*761	-	-	116	72	80
20							-	-	-	378	47	54
21							*541	-	-	902	33	34
22							-	-	-	1,110	41	26
23							-	-	-	1,440	104	30
24							-	-	*178	1,260	173	45
25							-	-	-	738	91	54
26							-	-	-	302	52	41
27							-	-	-	202	35	50
28							-	-	-	159	28	22
29							-	-	-	131	19	13
30							*143	-	-	91	11	10
31							-	-	-	97	8.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-			
February.....						-	-	-	-			
March.....						-	-	-	-			
April.....						-	-	-	-			
May.....						-	-	-	-			
June.....						-	-	-	-			
July.....						13,086	1,440	91	422	25,960		
August.....						2,385.9	1,000	8.2	77.0	4,730		
September.....						6,263.7	2,940	1.1	209	12,420		
The period .....										43,110		

\*Discharge measurement.

†Gage height missing; discharge computed on basis of records for station near Guadalupe.

## 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 Artesia-Lovington highway bridge, 4.2 miles east of Artesia, 6.5 miles north of mouth of Pecos River, and 1½ miles above McMillan Dam.

Records available.-- March 1905 to September 1925 and October 1931 to February 1936 (published as Pecos River near Dayton), and February 1936 to September 1937 in reports of Geological Survey; March 1905 to December 1931 in reports of State engineer.

Extremes.-- Maximum discharge during year, about 51,500 second-feet May 30 (gage height, 14.7 feet), by slope-area method; minimum daily discharge, 67 second-feet October 20. 1905-36: Maximum gage height, 15.9 feet Sept. 18, 1919 (discharge not determined); no flow Aug. 17-24, 1934.

Remarks.-- Records for January to September are poor. Those for October to December, including 25 discharge measurements and records of gage heights and discharge, furnished by Bureau of Reclamation. Large diversions for irrigation above station. Discharge represents flow into McMillan Reservoir, in which it is stored for irrigation of about 25,000 acres of the Carlsbad project.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	594	295	227	270	332	320	305	515	15,700	1,760	220	110
2	540	305	254	268	386	305	298	485	8,660	1,310	210	106
3	490	300	275	265	377	280	272	470	6,560	772	188	99
4	419	206	262	268	362	310	282	470	6,560	598	173	91
5	430	172	262	260	350	395	315	455	7,010	685	160	90
6	454	168	275	250	344	425	356	410	7,510	615	145	97
7	305	154	285	245	335	485	318	410	5,800	668	138	90
8	228	158	280	250	355	455	288	380	5,200	530	131	944
9	215	172	275	248	332	410	288	359	4,750	485	131	2,020
10	202	193	271	255	338	392	295	374	4,760	425	116	569
11	202	185	275	268	356	389	262	353	4,420	383	99	1,600
12	181	223	271	265	338	377	280	322	4,570	392	90	2,550
13	176	223	266	259	355	359	285	315	4,180	386	84	968
14	159	249	258	242	332	341	265	310	3,350	395	92	697
15	138	258	254	250	356	362	262	302	3,210	425	91	425
16	116	254	275	295	377	386	248	410	2,970	350	98	298
17	107	232	295	392	362	338	238	410	2,020	347	93	204
18	107	193	310	377	359	289	240	470	1,390	268	900	182
19	99	110	310	350	359	275	312	425	825	230	460	188
20	67	110	310	341	362	278	1,390	410	685	200	472	218
21	193	110	305	362	374	270	1,310	395	615	530	454	194
22	189	139	305	350	368	280	1,040	455	545	623	294	175
23	189	168	280	353	365	265	965	485	485	1,030	279	153
24	211	172	271	341	356	292	965	842	455	1,830	198	146
25	256	158	275	335	330	285	842	2,670	410	1,510	190	131
26	262	129	285	322	315	278	755	1,920	383	903	240	131
27	280	129	290	292	325	252	685	1,970	356	490	192	150
28	285	133	285	285	320	262	668	2,520	356	376	164	148
29	295	158	280	265	-	285	650	10,000	328	305	140	139
30	315	202	271	270	-	278	562	29,400	842	285	130	159
31	305	-	275	278	-	280	-	33,400	-	240	122	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	7,989		594		67		258		15,850			
November.....	5,658		305		110		198		11,180			
December.....	8,612		310		227		278		17,050			
Calendar year .....												
January.....	9,050		392		242		292		17,950			
February.....	9,780		386		315		349		19,400			
March.....	10,197		485		252		329		20,230			
April.....	15,241		1,390		258		508		30,230			
May.....	92,112		33,400		362		2,971		152,700			
June.....	104,867		15,700		328		3,495		208,000			
July.....	19,346		1,830		200		624		38,370			
August.....	6,482		900		84		209		12,660			
September.....	13,040		2,560		90		435		25,860			
Water year 1936-37.....	302,344		33,400		67		828		599,700			

Note.-- Discharge for periods of missing or fragmentary gage-height record, July 19-21, July 30 to Aug. 2, Aug. 5, 18, 19, 29, computed on basis of partial gage-height record and records for station near Acme.

## Pecos River at Carlsbad, N. Mex.

Location.—Water-stage recorder, lat.  $32^{\circ}24'50''$ , long.  $104^{\circ}13'25''$ , in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 22 S., R. 27 E., at Green Street Bridge, in Carlsbad.

Records available.—May 1903 to March 1908, May 1914 to September 1925, October 1928 to September 1930, and October 1931 to September 1937 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.

Average discharge.—25 years (1903-4, 1905-6, 1914-37), 312 second-feet.

Extremes.—Maximum discharge during year, 41,000 second-feet May 31 (gage height, 16.34 feet); minimum daily discharge, 12 second-feet Mar. 5, 1903-8, 1914-37; Maximum discharge, about 85,700 second-feet, Aug. 7, 1916 (gage height, about 21.0 feet); no flow May 9, 1904.

Remarks.—Records fair for January to April and good for May to September, except those for periods of missing or fragmentary gage-height records, which are poor. Those for October to December furnished by Bureau of Reclamation. Large diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	74	247	*80	101	125	76	76	36,000	200	*220	65
2	76	71	247	*90	112	109	76	86	20,400	125	*220	*66
3	79	157	214	*100	90	62	79	82	14,600	138	*190	68
4	74	208	233	*70	76	23	98	82	16,600	125	*170	81
5	79	206	74	*60	82	12	82	86	12,900	116	*140	105
6	76	208	74	*50	101	42	82	86	13,700	112	*120	*100
7	74	186	74	*70	112	56	86	82	16,800	105	*120	*100
8	74	161	74	*80	109	68	70	70	11,800	115	322	105
9	71	233	74	101	112	73	82	73	8,090	215	*160	105
10	69	63	74	82	90	73	86	79	6,730	232	*120	112
11	53	115	74	82	115	73	62	79	6,110	274	79	90
12	60	133	74	82	120	76	62	79	5,810	304	79	90
13	71	125	82	82	97	76	82	76	4,980	304	79	1,410
14	69	133	145	82	112	73	82	79	4,980	298	82	*500
15	66	157	118	86	129	73	82	76	4,330	292	82	*1,000
16	66	161	137	90	129	73	93	76	541	286	86	916
17	74	149	129	86	66	76	73	73	335	244	86	*800
18	71	133	133	86	93	81	68	73	910	93	86	*600
19	79	137	161	86	161	79	73	73	513	105	90	346
20	79	115	137	86	142	76	73	76	395	97	108	304
21	79	141	118	90	56	70	73	73	803	93	895	286
22	76	149	88	76	90	68	76	61	1,150	93	941	274
23	79	186	71	76	103	68	68	70	699	614	479	256
24	76	153	74	68	62	68	73	107	351	198	*210	250
25	76	149	82	68	62	68	76	82	372	120	*150	244
26	76	141	74	68	123	68	79	118	143	105	90	232
27	76	176	74	124	139	73	73	79	148	391	93	209
28	74	166	74	157	110	76	76	1,400	157	1,280	204	198
29	74	153	74	161	-	73	68	9,800	157	914	204	182
30	74	196	74	157	-	73	70	2,370	531	697	157	171
31	74	-	74	125	-	73	-	20,600	-	307	*110	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,270	79	53	73.2	4,500		
November.....						4,537	233	65	151	9,000		
December.....						3,452	247	71	111	6,850		
Calendar year 1936 .....						34,145	480	53	93.3	67,740		
January.....						2,801	161	50	80.4	5,580		
February.....						2,894	161	56	103	5,740		
March.....						2,183	125	12	70.6	4,340		
April.....						2,337	98	68	77.9	4,640		
May.....						36,322	20,600	61	1,172	72,040		
June.....						190,235	36,000	143	6,341	377,300		
July.....						8,582	1,280	93	277	17,020		
August.....						6,172	941	79	199	12,240		
September.....						9,165	1,410	65	306	18,180		
Water year 1936-37 .....						270,955	36,000	12	742	537,400		

\*Gage-height record missing or fragmentary; discharge computed on basis of partial gage-height record 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 NW¼ sec. 19, T. 24 S., R. 29 E., 3 miles southeast of Malaga and 3 miles (revised) below mouth of Black River.

Records available.—May 1920 to September 1925 and October 1931 to September 1937 in reports of Geological Survey; January 1921 to December 1931 in reports of State engineer.

Average discharge.—17 years (1920-37), 299 second-feet.

Extremes.—Maximum discharge during year, 38,200 second-feet June 1 (gage height, 25.7 feet); minimum daily discharge, about 30 second-feet Apr. 3.

1920-37: Maximum discharge and gage height, those of June 1, 1937; no flow Aug. 20-22, 1934.

Maximum stage known, 28.4 feet in September 1919 (discharge not determined).

Remarks.—Records poor for Jan. 1 to June 10 and good for June 11 to Sept. 30. Those for October to December furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	55	140	44	93	139	*40	75	*34,100	263	212	168
2	92	48	144	88	90	127	*35	67	*22,400	147	151	114
3	106	39	144	105	98	105	*30	62	*15,300	78	100	91
4	114	50	144	62	86	120	31	79	*16,200	49	78	88
5	92	45	119	56	65	122	42	84	*13,500	93	83	96
6	103	67	118	40	79	103	42	81	*13,500	56	81	112
7	103	104	88	64	70	98	35	114	*16,000	53	91	141
8	95	133	90	75	65	135	44	83	*12,100	49	88	174
9	98	108	73	103	68	155	46	76	*8,700	65	183	187
10	101	152	97	93	70	109	35	75	*7,000	164	157	139
11	92	71	106	88	73	100	46	78	5,740	245	91	152
12	60	87	90	75	75	102	42	62	5,410	315	75	565
13	39	108	90	64	88	93	52	65	4,670	342	75	221
14	51	95	71	90	70	98	42	50	5,080	345	88	587
15	59	112	99	88	93	94	53	54	5,410	320	161	1,550
16	40	114	92	86	109	96	71	62	3,950	302	151	1,910
17	54	114	92	88	153	86	68	78	3,050	302	166	1,230
18	57	116	104	78	153	93	62	83	1,870	238	157	512
19	54	101	97	62	153	75	73	100	810	155	205	375
20	54	104	104	67	155	83	126	105	830	129	245	357
21	60	83	90	67	112	90	76	102	650	102	728	332
22	67	108	71	70	78	86	66	102	661	88	1,410	320
23	92	123	76	70	73	83	65	105	750	104	2,320	335
24	122	133	38	64	71	76	64	135	252	413	335	335
25	103	103	35	78	81	86	79	284	287	126	238	320
26	87	94	57	62	79	100	109	252	180	95	178	292
27	62	85	52	78	111	90	73	238	143	84	174	290
28	78	104	48	102	155	96	- 75	161	145	662	155	292
29	59	129	36	116	-	75	76	6,900	145	710	235	280
30	52	131	44	114	-	53	71	6,290	145	512	214	226
31	63	-	31	139	-	*45	-	5,400	-	394	198	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,402	122	39	77.5	4,760		
November.....						2,916	162	39	97.2	5,780		
December.....						2,680	144	31	86.5	5,320		
Calendar year 1936 .....						35,908	475	2	98.1	71,210		
January.....						2,474	139	40	79.8	4,910		
February.....						2,646	155	65	94.5	5,260		
March.....						3,025	155	45	97.5	6,000		
April.....						1,759	126	30	59.6	3,550		
May.....						21,512	6,900	54	694	42,670		
June.....						199,158	34,100	143	6,639	395,000		
July.....						7,000	710	49	226	13,880		
August.....						8,823	2,320	75	285	17,500		
September.....						11,791	1,910	88	393	25,390		
Water year 1936-37 .....						266,214	54,100	30	729	528,000		

\*Gage-height record missing or fragmentary; discharge computed on basis of partial gage-height record and records for station at Carlsbad.

## Pecos River near Angeles, Tex.

Location.— Water-stage recorder, lat. 32°02', long. 104°00', in T. 26 S., R. 29 E., half a mile below mouth of Delaware River, 2 miles north of Texas-New Mexico State line, 8½ miles northwest of Angeles, and 17.9 miles above Red Bluff Dam (completed in 1936). Zero of gage is 2,831.2 feet above mean sea level.

Records available.— May 1914 to September 1937 (discontinued because of backwater from Red Bluff Dam; subsequent records for this station will be published as Pecos River at Red Bluff, N. Mex., and Delaware River near Red Bluff, N. Mex.).

Average discharge.— 22 years (1914-15, 1916-37), 373 second-feet.

Extremes.— Maximum discharge during year, 38,900 second-feet June 1 (gage height 22.30 feet), from rating curve extended above 30,000 second feet; minimum, 50 second-feet Apr. 3 and 5.

1914-37: Maximum gage height, 22.5 feet (present datum) Aug. 8, 1916 (discharge not determined; channel capacity has been reduced since 1916 by heavy growth of salt cedars); minimum discharge, 23 second-feet Aug. 20, 1934.

Maximum stage known occurred during flood in October 1904.

Remarks.— Records good except those for periods of missing gage heights, of backwater from Red Bluff Dam, and of fragmentary gage-height record, which are fair. Discharge for July 1 to Sept. 30 computed on basis of records for temporary stations on Pecos River at Red Bluff, N. Mex., and on Delaware River near Red Bluff, N. Mex. A large part of the natural flow above Carlsbad, N. Mex., is diverted for irrigation, and a considerable part of the diverted water is returned to river by seepage.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		147			160	224	77	88	28,400	163	231	162
2		150			160	194	77	95	29,200	171	155	150
3		126			166	194	63	101	16,800	141	131	124
4		117			170	160	63	86	15,600	101	90	97
5		132			150	202	61	104	15,700	121	75	107
6		129			144	176	68	112	12,800	143	87	163
7		202			150	150	72	115	15,200	123	89	2,770
8		228			147	153	66	138	15,500	119	85	990
9		224			132	209	66	106	10,900	121	102	234
10		252			141	209	72	101	8,050	129	175	291
11		198		175	150	163	75	91	6,690	283	137	165
12		160			138	153	88	91	5,280	301	122	1,510
13		194			141	153	70	72	4,600	389	74	425
14					138	138	91	79	4,800	409	76	395
15					138	144	82	72	5,000	381	114	1,050
16	160				150	132	88	61	4,600	377	167	1,960
17					153	135	115	75	3,800	337	175	872
18					176	139	112	84	2,900	317	152	692
19					110	132	112	88	1,600	186	232	472
20					133	109	149	93	1,000	153	542	422
21			175		190	126	180	104	910	136	1,090	402
22				160	180	132	120	98	720	106	2,240	362
23				147	138	126	109	98	690	227	814	382
24				150	138	126	101	106	560	421	302	456
25					138	117	96	165	400	251	220	439
26					126	123	115	596	250	121	202	372
27					138	163	135	266	180	94	196	344
28				158	160	132	101	296	170	158	214	343
29					-	138	96	1,810	157	865	250	343
30	132				-	132	93	8,210	152	607	232	303
31	132	-			-	88	-	2,070	-	426	223	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,904	-	-	158	9,730		
November.....						5,234	-	-	174	10,360		
December.....						5,238	-	-	169	10,390		
Calendar year 1936.....						59,410	2,030	28	162	117,800		
January.....						4,898			156	9,790		
February.....						4,185	190	126	149	8,300		
March.....						4,661	224	88	150	9,240		
April.....						2,813	180	61	93.8	5,580		
May.....						15,674	8,210	61	506	31,090		
June.....						212,479	29,200	152	7,083	421,400		
July.....						7,857	865	94	253	15,580		
August.....						6,922	2,240	74	290	17,840		
September.....						16,779	2,770	97	559	35,280		
Water year 1936-37.....						293,714	29,200	61	805	582,500		

Note.— Discharge for periods of missing gage heights, Oct. 1-29, Nov. 14 to Dec. 21, Dec. 25 to Feb. 2 computed on basis of recorded range in stage and records for station at Malaga, N. Mex.; that for period of backwater from Red Bluff Dam, June 15-28, computed on basis of records for station at Malaga, N. Mex.; and that for periods of fragmentary gage-height record, Sept. 6, 7, 10, 12-14, 24-26, computed on basis of partial gage-height record.

## Pecos River near Orla, Tex.

Location.- Water-stage recorder, lat. 31°49', long. 103°48', in E½ sec. 36, Blk. 56, T.2 (Texas & Pacific Ry. Co. survey), about 600 feet above Paso-Texas pipe-line crossing, 6 miles southeast of Orla, 9 miles southeast of Red Bluff Dam, and 14 miles northwest of Montone.

Records available.- May to September 1937.

Extremes.- Maximum discharge during period, 15,200 second-feet June 9 (gage height, 9.93 feet), by slope-area method; minimum daily discharge, 0.4 second-foot June 3.

Remarks.- Records good except those above 700 second-feet and those for periods of missing gage heights, which are poor. Diversions for irrigation above station. Discharge represents release from Red Bluff Reservoir, which has a capacity of 284,000 acre-feet.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	1.2	401	894	*380
2								-	.6	746	894	385
3								-	.4	990	886	396
4								-	4.9	974	802	375
5								-	628	966	418	
6								-	4,710	795	554	
7								-	5,230	484	530	
8								-	8,150	489	524	
9								-	13,000	462	530	
10								-	8,040	456	536	*260
11								-	*4,030	467	542	
12								-	9,730	467	554	
13								-	8,910	418	584	
14								-	6,500	412	538	
15								-	8,930	254	732	
16								-	7,040	272	732	154
17								-	4,730	272	697	158
18								-	7,440	272	596	158
19								-	3,800	268	608	158
20								-	1,120	258	596	158
21								-	798	254	542	158
22								-	578	276	484	158
23								-	478	423	396	165
24								-	440	355	390	162
25								-	*410	418	390	315
26								-	8.2	*400	614	380
27								-	4.1	*400	634	380
28								-	37	*390	634	375
29								-	461	390	662	375
30								-	23	390	774	360
31								-	4.9	-	902	365
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....												
February.....												
March.....												
April.....												
May 26-31.....								598.2	461	4.1	99.7	1,190
June.....								106,459.1	13,000	.4	3,549	211,200
July.....								16,069	990	254	518	31,870
August.....								17,484	894	360	564	34,680
September.....								7,034	396	154	234	13,950
The period.....												292,900

\*Gage height missing; discharge estimated on basis of recorded range in stage and weather records.

## Gallinas River near Montezuma, N. Mex.

Location.— Water-stage recorder and concrete control, lat. 35°41', long. 105°21', in Las Vegas Grant, 2 miles west of Montezuma, San Miguel County.

Drainage area.— 86 square miles.

Records available.— October 1930 to September 1937 in reports of Geological Survey; March 1915 to December 1931 in reports of State engineer.

Extremes.— Maximum discharge during year, 181 second-feet June 3 (gage height, 2.23 feet); minimum daily discharge, 2.5 second-feet (estimated), Jan. 25 to Feb. 3, 1930-37: Maximum discharge, about 1,420 second-feet Aug. 5, 1935 (gage height, 4.96 feet), from rating curve extended above 350 second-feet; minimum daily discharge, 0.6 second-foot Aug. 15-18, 21, 25, 26, 30, 1934.

Remarks.— Records good except those for periods of ice effect, Dec. 10-18, Dec. 31 to Feb. 7, Feb. 21 which were computed on basis of two discharge measurements, weather records, and records at Montezuma and are poor. Diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	14	6.4	4	2.5	4.8	12	42	72	35	8.3	6.4
2	41	13	5.2	4	2.5	4.8	16	39	107	31	8.3	5.8
3	40	11	5.2	4	2.5	5.2	19	40	175	31	8.3	5.5
4	35	11	4.2	4	3	4.2	21	38	160	29	9.7	7.9
5	29	11	4.8	4	3	4.8	19	35	116	27	9.2	12
6	26	8.8	5.5	4	4	5.2	23	36	96	24	10	13
7	25	11	5.2	4	4	4.5	25	38	79	22	7.9	14
8	22	11	4.2	4	4.0	5.8	25	41	62	21	7.4	28
9	20	9.7	5.2	4	3.8	5.2	28	48	55	19	7.1	32
10	18	8.8	5	4	4.2	6.4	29	79	52	19	7.9	20
11	16	7.9	5	3	4.5	7.4	40	77	46	17	7.1	17
12	16	7.9	5	3	4.5	8.8	51	68	40	16	6.8	14
13	15	8.3	4	3	4.0	8.8	61	61	34	14	6.8	11
14	14	9.2	4	3	3.8	6.4	72	55	31	10	6.8	9.2
15	14	8.6	4	3	4.2	7.4	81	52	31	7.9	5.8	8.3
16	12	8.8	4	3	4.8	8.8	105	55	27	8.3	5.2	7.4
17	12	8.8	4	3	3.8	11	101	51	22	6.8	4.8	7.9
18	12	7.9	5	3	4.0	12	84	47	21	6.4	4.0	7.4
19	11	7.4	4.8	3	4.2	11	85	48	20	6.4	4.8	6.4
20	11	7.9	5.5	3	4	11	70	42	19	6.4	5.5	5.8
21	11	7.9	4.5	3	4	11	62	38	16	7.9	4.8	5.2
22	11	7.9	4.2	3	4.2	12	68	35	15	8.3	4.2	5.5
23	11	8.3	4.0	3	4.0	16	68	34	14	7.9	4.0	6.8
24	11	7.4	4.5	3	4.0	11	56	45	13	7.4	3.4	5.5
25	11	6.8	4.5	2.5	4.0	12	51	41	22	7.9	3.4	5.5
26	11	6.8	4.8	2.5	3.8	11	48	34	23	8.3	4.2	5.2
27	11	5.5	4.2	2.5	3.8	9.7	52	31	42	8.3	5.5	4.2
28	11	5.8	4.8	2.5	4.8	10	54	35	45	8.3	6.4	3.8
29	10	5.8	4.2	2.5	-	9.3	51	51	35	8.8	9.7	3.8
30	9.7	6.1	4.0	2.5	-	7.9	48	75	34	8.3	9.7	5.5
31	14	-	4	2.5	-	8.8	-	67	-	8.8	7.9	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	552.7	42	9.7	17.8	1,100
November.....	280.5	14	5.5	8.68	517
December.....	143.9	6.4	4.0	4.64	285
Calendar year 1936.....	3,170.1	47	1.8	8.66	6,290
January.....	99.5	4	2.5	3.21	197
February.....	107.9	4.8	2.5	3.55	214
March.....	231.2	16	4.2	8.43	518
April.....	1,623	105	12	50.8	3,020
May.....	1,476	79	31	47.6	2,930
June.....	1,524	175	13	50.8	3,020
July.....	447.4	35	6.4	14.4	887
August.....	204.9	10	3.4	6.61	406
September.....	290.0	32	3.8	9.67	578
Water year 1936-37.....	6,891.0	175	2.5	18.9	13,670

## Gallinas River at Montezuma, N. Mex.

Location.- Water-stage recorder, lat. 35°39', long. 105°18', in Las Vegas Grant, at highway bridge half a mile below Montezuma, San Miguel County.

Drainage area.- 89 square miles.

Records available.- August 1903 to December 1914 (prior to October 1904, gage heights only) and October 1930 to September 1937 in reports of Geological Survey; October 1904 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year not determined; minimum daily discharge, 0.9 second-foot Feb. 2.

1930-37: Maximum discharge, about 720 second-feet Oct. 1, 1930 (gage height, 4.81 feet); no flow Oct. 4-7, 1934.

Remarks.- Records good except those for June 9 to July 3, July 20, which were computed on basis of weather records and records for station near Montezuma and are poor. Flow regulated by reservoirs own by Agua Pura Co. Diversions for irrigation and municipal supply above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	7.1	3.5	1.6	1.0	2.6	10	33	58	30	3.5	2.6
2	46	6.8	3.7	1.8	.9	2.0	17	32	93	30	3.3	2.2
3	45	4.6	3.7	1.7	1.0	1.8	20	37	131	27	3.3	2.0
4	40	3.5	3.9	1.7	1.2	2.0	27	37	127	25	6.8	1.8
5	32	6.4	4.6	1.5	1.4	2.4	19	34	100	24	8.0	3.3
6	27	6.1	3.9	1.6	2.0	3.5	25	37	75	21	7.1	7.1
7	24	6.1	3.7	2.0	2.2	3.7	28	37	55	15	6.1	12
8	19	5.7	3.5	1.8	2.2	4.3	21	31	48	17	3.7	23
9	18	5.7	2.8	1.7	1.5	4.6	23	33	40	13	5.0	38
10	17	5.7	3.1	1.6	1.4	4.6	19	71	35	10	6.1	14
11	16	4.6	2.8	1.2	1.5	5.7	28	78	30	9.0	6.8	6.5
12	16	4.3	2.6	1.1	1.5	6.8	48	69	30	6.8	6.1	10
13	15	4.3	2.2	1.1	1.6	8.0	71	60	30	5.3	5.7	4.3
14	12	4.6	2.0	1.2	1.7	5.3	81	52	25	5.3	3.9	3.1
15	12	4.6	2.4	1.4	1.4	6.1	87	46	25	4.6	5.3	2.4
16												
17	11	4.6	2.6	1.2	2.4	7.5	111	47	20	4.3	5.0	2.2
18	9.5	4.6	2.6	1.2	2.4	9.5	109	45	20	3.9	2.8	2.0
19	9.0	4.6	2.2	1.2	1.7	14	90	42	15	3.9	2.4	2.6
20	7.5	4.3	2.2	1.1	1.4	10	92	41	15	3.9	2.0	3.5
21	5.7	3.9	2.4	1.1	1.4	10	81	38	15	20	2.2	1.8
22	3.9	4.3	2.8	1.2	1.5	9.5	69	34	15	3.9	2.0	1.5
23	3.9	4.3	2.8	1.2	1.7	9.0	69	29	10	3.9	2.0	1.2
24	4.3	4.6	2.2	1.2	2.0	12	73	24	10	3.7	1.8	1.6
25	4.3	4.6	2.4	1.1	2.0	9.0	61	44	10	3.7	1.8	1.5
26	3.9	4.3	2.6	1.1	1.7	12	55	40	10	3.7	1.7	1.5
27												
28	4.3	3.1	2.4	1.1	1.6	12	47	30	30	3.5	1.7	1.5
29	3.9	3.1	2.2	1.1	1.7	10	46	26	45	3.7	1.8	1.4
30	3.9	2.6	1.8	1.1	2.2	11	46	28	50	3.7	1.7	1.2
31	3.9	2.8	2.0	1.0	-	9.5	45	41	40	5.3	2.2	1.4
	3.9	3.3	2.2	1.0	-	6.4	40	62	30	5.0	8.0	1.4
	5.7	-	1.5	1.0	-	7.1	-	61	-	3.7	6.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						471.6	46	3.9	15.2	935		
November.....						159.1	71	2.6	4.64	276		
December.....						85.3	4.6	1.5	2.75	169		
Calendar year 1936.....						2,150.0	47	.5	5.87	4,260		
January.....						41.1	2.0	1.0	1.33	82		
February.....						46.2	2.4	.9	1.65	98		
March.....						221.9	14	1.8	7.16	440		
April.....						1,658	111	10	51.9	3,090		
May.....						1,519	75	24	42.5	2,620		
June.....						1,837	131	10	41.2	2,450		
July.....						325.8	30	3.5	10.5	646		
August.....						125.9	8.0	1.7	4.06	250		
September.....						160.6	36	1.2	5.35	319		
Water year 1936-37.....						5,731.5	131	.9	15.7	11,370		



## Rio Ruidoso at Hondo, N. Mex.

Location.- Water-stage recorder, lat.  $33^{\circ}23'$ , long.  $105^{\circ}17'$ , in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 11 S., R. 17 E., a quarter of a mile above confluence with Rio Bonito to form Rio Hondo and half a mile southwest of Hondo. Gaging station destroyed by flood May 27; station rebuilt and recorder reinstalled at independent datum Aug. 30.

Records available.- October 1930 to September 1937 in reports of Geological Survey; August 1930 to December 1931 in reports of State engineer.

Extremes.- Maximum gage height during year, 11.9 feet, present datum, May 31 (discharge not determined); minimum daily discharge, 3 second-feet Jan. 19, 21, 22. 1930-37: Maximum gage height, that of May 31, 1937 (discharge not determined); no flow Aug. 15, 16, 1935.

Remarks.- Records fair except those for periods of missing gage heights, Dec. 29 to Jan. 2, Feb. 24, May 24 to Aug. 29, which were computed on basis of weather records and records for Rio Bonito at Hondo and are poor. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	18	11	8.5	6.8	11	58	35	200	30		5.1
2	115	19	13	8.5	6.8	11	57	34				4.2
3	118	19	13	8.1	7.3	13	58	36	40			3.9
4	111	19	13	6.5	8.9	20	70	37				3.6
5	101	18	13	8.1	7.3	29	73	35			20	4.2
6	84	17	14	6.8	6.8	33	78	39				4.2
7	75	17	14	6.4	9.8	33	75	40			20	5.4
8	61	15	14	8.1	11	35	74	40				7.8
9	51	16	13	8.1	9.8	42	83	43				9.2
10	43	17	13	7.7	10	64	78	42				9.6
11	37	17	11	6.0	11	85	79	39				23
12	33	16	12	4.1	11	109	95	35				31
13	28	15	12	3.6	9.8	115	102	32			10	27
14	23	15	12	3.8	8.9	105	106	29				25
15	18	14	12	4.1	8.9	92	102	25	10		10	26
16	15	15	11	3.6	8.9	84	112	26				25
17	17	15	11	3.3	9.4	108	127	27		10		25
18	17	15	11	3.2	9.8	132	119	25				23
19	14	15	11	3.0	10	112	92	25				22
20	12	15	11	3.2	10	101	91	17				22
21	11	15	11	3.0	8.9	92	84	12			15	21
22	11	15	11	3.0	9.8	97	66	10				36
23	11	16	11	4.6	9.4	90	64	15				33
24	14	17	10	6.4	8.5	88	60					34
25	18	15	10	6.0	7.7	79	59		30			35
26	19	15	10	6.4	5.2	74	49					35
27	20	14	10	6.4	8.9	68	41		300	90	8	29
28	20	14	9.8	6.8	10	65	44					25
29	20	14	9.5	6.4	-	64	41		100		6.9	24
30	20	13	9	6.8	-	65	38					22
31	18	-	9	7.3	-	65	-	900	-	-	6.4	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				1,257		118	11	40.5	2,490			
November.....				475		19	13	16.8	942			
December.....				355.3		14	9	11.5	705			
Calendar year 1936.....				4,539.9		118	.7	12.4	9,000			
January.....				179.8		8.5	3.0	5.80	357			
February.....				250.6		11	5.2	8.95	497			
March.....				2,161		132	11	70.4	4,350			
April.....				2,275		127	38	75.8	4,510			
May.....				2,468		-	10	80.3	4,930			
June.....				1,170		-	-	39.0	2,320			
July.....				410		-	-	13.2	813			
August.....				467.3		-	-	15.1	927			
September.....				600.2		36	3.6	20.0	1,190			
Water year 1936-37.....				12,109.2		-	3.0	33.2	24,010			

## Rio Bonito at Hondo, N. Mex.

Location.- Water-stage recorder, lat. 33°23', long. 105°16', in NE¼NW¼ sec. 4, T. 11 S., R. 17 E., at Hondo, half a mile above confluence with Rio Ruidoso to form Rio Hondo.

Records available.- October 1930 to September 1937 in reports of Geological Survey; August 1930 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 9,270 second-feet May 31 (gage height, 19.0 feet), by a slope-area method; no flow at times.

1930-37: Maximum discharge and gage height, those of May 31, 1937; no flow at times.

Remarks.- Records poor. Several diversions for irrigation above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*9	0.9	0.7	0		0	23	29	*300	*30	7.3	0
2	*7	.7	.7	0		0	22	23	*50	*25	17	0
3	*5	.5	.7	0		0	19	21	*40	*25	4.1	.5
4	3.8	.3	.4	.2		.3	24	20	*30	*25	1.9	4.2
5	5.5	.5	0	.4		1.9	25	19	*20	*20	1.3	1.2
6	6.9	.3	0	.2		8.4	28	23	*10	*10	1.2	4.9
7	6.9	.5	0	0		8.4	32	22	*5	*10	16	*460
8	5.8	0	0	0		4.1	31	22	5	*5	14	*40
9	5.2	0	0	0		3.0	33	24	0	*5	24	*80
10	4.1	0	0	0		3.8	36	24	0	*5	*16	*35
11	3.4	0	0	.1		13	40	24	0	5	*9	*115
12	2.6	0	0	0		27	53	24	0	*5	*51	*55
13	1.7	0	0	0		37	60	21	0	*4	*10	*15
14	1.2	0	0	0		33	62	17	0	*3	*1	*8
15	1.1	0	0	0		26	66	14	0	*1	.5	*6
16	1.0	0	0	.1		26	70	13	0	*1	1.7	*5
17	.5	0	0	0		29	82	*10	0	*1	.5	*5
18	.4	0	0	0		40	80	*10	0	.2	0	6.2
19	.3	0	0	.2		40	59	*10	0	0	8.6	5.5
20	.3	0	0	.1		36	56	*5	0	0	7.4	6.9
21	.3	0	0	0		34	50	*5	0	1.2	3.4	11
22	.4	0	0	0		33	40	*5	0	1.3	1.9	12
23	.5	0	0	0		27	33	7.9	0	.5	1.7	10
24	.4	0	0	0		29	28	*20	0	0	7.1	7.4
25	*.5	.8	0	0		29	32	*25	0	0	21	5.8
26	.6	.8	0	0		29	30	27	*230	0	11	5.5
27	.7	.8	0	0		27	25	*800	*130	0	*3	4.8
28	.5	.8	0	0		25	26	*130	*50	0	*1	4.1
29	.5	.8	0	0		27	33	*50	*40	.2	*.2	4.1
30	.4	.7	0	0		26	32	*50	*30	0	0	3.8
31	.6	-	0	0		24	-	*1,630	-	1.9	0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						77.1	9	0.3	2.49	153		
November.....						7.8	.9	0	.26	15		
December.....						2.5	.7	0	.08	5.0		
Calendar year 1936.....						2,516.2	430	0	6.87	4,990		
January.....						1.3	.4	0	.04	2.6		
February.....						0	0	0	0	0		
March.....						646.9	40	0	20.9	1,280		
April.....						1,230	82	19	41.0	2,440		
May.....						3,124.9	1,630	5	101	6,200		
June.....						940	300	0	31.3	1,860		
July.....						183.3	30	0	5.91	364		
August.....						242.8	51	0	7.83	482		
September.....						921.9	460	0	30.7	1,830		
Water year 1936-37.....						7,378.5	1,630	0	20.2	14,630		

\*Gage-height record missing or fragmentary; discharge computed on basis of partial gage heights, observer's notes, and weather records.

## Rio Felix near Hagerman, N. Mex.

Location.— Water-stage recorder, lat. 33°07', long. 104°20', in sec. 3, T. 14 S., R. 26 E., a quarter of a mile below State Highway 2, 1.5 miles north of Hagerman, and 1.6 miles above mouth.

Records available.— March 1932 to September 1937.

Extremes.— Maximum discharge during year, 26,500 second-feet May 29, (gage height, 20.25 feet), by slope-area method; minimum daily discharge, 6.5 second-feet Aug. 10, 1932-37; Maximum discharge and gage height, those of May 29, 1937; minimum daily discharge, 5.4 second-feet Aug. 12-14, 1935.

Remarks.— Records fair except those for periods of missing or fragmentary gage-height record, which are poor. Several diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		29	10	11	*9.5	7.6	10	9.0	*25	12	13	9.1
2		27	9.8	11	*9.5	7.6	10	9.0	*100	10	10	8.8
3		26	9.8	10	*9.5	7.8	10	9.0	50	10	9.8	9.1
4		27	9.8	9.8	*9.5	7.8	9.6	9.0	*25	9.4	9.4	8.2
5	10	15	10	9.8	*9.5		9.6	8.8	*25	8.2	10	8.8
6		15	10	9.8	*9		9.8	8.8	20	7.7	*8.6	8.8
7		15	9.8	9.6	*9		10	8.5	21	7.4	7.2	7.9
8		11	9.8	9.3	*8.5		9.3	8.5	20	7.7	*7	*80
9		10	9.6	9.3	*8		9.3	9.3	20	6.6	*6.7	*10
10		11	9.8	9.0	*7.5		9.3	8.0	17	7.2	6.5	7.0
11		23	9.3	9.3	*7.5		10	8.0	15	8.8	7.9	2,810
12		29	22	9.3	9.0	*8	9.6	8.0	14	9.8	7.9	85
13		30	22	9.8	8.8	*8	8.8	8.3	*14	9.8	7	13
14		28	22	8.8	8.8	*8	9.6	8.3	14	8.2	6.8	12
15		25	22	6.8	8.8	*7.5	9.8	8.8	14	7.9	10	10
16	25	20	9.0	9.0	7.6		9.6	9.0	14	8.8	11	22
17	24	13	9.0	9.6	7.4		9.6	9.0	14	8.5	11	25
18	20	10	12	9.8	7.4		9.8	8.3	14	11	11	24
19	22	10	9.8	10	7.4		9.0	8.8	14	11	11	21
20	22	11	10	10	7.6		9.6	9.0	14	15	10	22
21	22	20	10	10	14	10	8.8	9.6	14	15	10	18
22	21	20	10	9.8	12	9.6	8.3	8.3	14	13	10	16
23	20	19	10	9.6	16	8.8	8.8	9.0	13	13	9.8	16
24	20	16	11	9.0	13	9.0	8.5	*60	13	13	10	15
25	20	10	11	9.8	9.8	9.0	9.0	*1,800	13	13	11	10
26	24	7.8	11	9.8	7.2	9.3	9.0	*70	13	13	10	11
27	22	7.8	12	*10	7.2	9.6	8.3	*60	13	13	10	9.6
28	26	10	13	*10	7.4	10	8.3	486	13	13	10	11
29	27	10	19	*10	-	10	8.8	*13,800	13	13	10	22
30	32	10	15	*10	-	10	9.0	*1,400	12	13	9.4	20
31	30	-	12	*9.5	-	9.8	-	*70	-	13	9.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						639	32	-	20.6	1,270		
November.....						491.8	29	7.8	16.4	975		
December.....						328.2	19	8.8	10.6	651		
Calendar year 1936.....						5,179.1	44	6.2	14.2	10,280		
January.....						299.2	11	8.8	9.65	593		
February.....						252.5	16	7.2	9.02	501		
March.....						295.9	-	7.6	9.55	587		
April.....						278.8	10	8.3	9.29	553		
May.....						17,946.3	13,800	8.0	579	35,600		
June.....						595	100	12	19.8	1,180		
July.....						330.2	15	6.8	10.7	656		
August.....						291.4	15	6.5	9.40	578		
September.....						3,350.3	2,810	7.0	112	6,650		
Water year 1936-37.....						25,098.4	13,800	6.5	68.8	49,790		

\*Gage-height record missing or fragmentary; discharge computed on basis of partial gage heights and records for Cottonwood Creek near Lake Arthur.

## Cottonwood Creek near Lake Arthur, N. Mex.

Location.- Water-stage recorder, lat.  $32^{\circ}57'$ , long.  $104^{\circ}22'$ , in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 18 S., R. 26 E., 1.8 miles above mouth and  $3\frac{1}{2}$  miles south of Lake Arthur. Datum of gage lowered 0.74 foot Aug. 6, 1936.

Records available.- March 1932 to September 1937.

Extremes.- Maximum discharge during year, about 635 second-feet May 29; maximum gage height, 14.1 feet May 30, from floodmarks (backwater from Pecos River); minimum daily discharge, 0.6 second-foot Aug. 13.

1932-37: Maximum discharge, about 1,100 second-feet June 13, 1935; maximum gage height, that of May 30, 1937; no flow May 19-22, 24, 1936.

Remarks.- Records for July to September are fair except those for July 29 to Aug. 13, which were estimated on basis of partial gage-height record and knowledge of local conditions and are poor. Records for October to June are poor; those for period of backwater from Pecos River, May 28 to June 9, estimated on basis of gage heights, weather records, and records of previous floods. Several diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	8.0	9.4	9.2	8.6	6.8	6.4	5.9	40	5.4	3.0	3.7
2	2.7	8.0	9.5	8.8	9.0	6.7	6.3	5.9	30	4.9	2.8	3.5
3	2.7	8.0	9.5	9.0	9.2	7.0	5.9	5.7	50	6.1	3.0	3.7
4	3.6	6.4	9.6	9.2	9.4	9.7	5.9	4.0	40	8.0	2.2	3.6
5	3.1	8.8	10	9.5	9.0	21	6.9	1.8	30	6.8	1.6	3.4
6	2.7	9.1	9.4	9.1	8.9	16	6.8	3.8	30	6.4	2.5	3.4
7	3.0	9.2	9.4	8.4	8.8	13	5.5	5.9	20	5.8	2.6	3.5
8	3.6	0.3	9.7	8.9	7.7	11	6.7	5.4	20	6.1	1.8	3.5
9	5.6	9.6	9.8	9.3	7.4	10	7.0	5.3	20	6.6	2.4	3.6
10	5.7	9.6	9.5	9.4	7.5	10	7.2	5.6	17	6.6	1.8	3.3
11	5.9	9.5	9.4	9.6	8.0	9.6	8.0	5.7	16	6.8	.9	3.7
12	6.2	9.7	9.1	10	8.4	8.9	7.4	5.5	16	6.5	1.0	3.9
13	6.3	9.8	8.9	11	8.0	9.8	7.7	5.5	13	6.4	.6	3.9
14	6.4	10	8.8	10	8.2	8.4	7.5	5.5	13	6.3	.9	4.2
15	6.5	10	8.7	10	7.9	8.6	7.6	5.2	11	6.0	1.6	4.0
16	6.5	10	8.7	11	8.0	8.6	8.6	4.8	10	6.0	1.4	3.8
17	6.6	11	8.6	11	8.1	8.0	8.6	4.8	9.6	5.7	1.0	4.0
18	6.7	11	8.3	10	8.0	7.9	8.3	5.0	9.3	5.5	1.2	3.9
19	6.6	11	8.3	9.0	7.6	7.4	7.3	5.2	9.1	5.7	2.6	4.0
20	6.4	11	8.4	9.1	7.3	7.3	6.3	4.5	7.8	7.5	4.0	4.0
21	5.9	11	8.6	8.9	7.0	7.6	6.4	4.3	7.0	9.6	11	3.9
22	6.2	10	8.6	9.2	7.1	7.3	5.2	4.5	6.1	7.6	8.0	4.1
23	6.6	10	8.8	9.2	6.7	6.7	4.9	5.9	6.0	7.1	7.1	4.5
24	6.8	9.9	9.2	9.3	6.8	5.9	4.8	7.2	5.9	7.2	6.2	4.6
25	7.3	9.6	9.8	9.4	6.6	5.9	7.3	13	5.9	6.8	6.1	4.6
26	7.1	9.4	10	9.2	6.4	6.2	7.3	6.3	5.9	6.8	5.8	4.6
27	7.3	9.3	9.8	9.1	6.4	6.4	7.3	5.8	5.2	6.6	5.5	4.5
28	7.6	9.7	9.9	9.2	6.5	6.5	6.9	44	5.4	6.0	5.2	4.3
29	7.6	9.6	10	9.4	-	6.3	6.1	490	5.3	4.0	4.3	4.3
30	7.7	9.6	9.4	9.5	-	6.4	5.8	150	5.1	3.1	4.0	4.4
31	7.9	-	9.2	9.0	-	6.4	-	50	-	3.2	3.7	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					177.6	7.9	2.7	5.73	352			
November.....					269.1	11	8.0	9.64	573			
December.....					286.3	10	8.3	9.24	568			
Calendar year 1936 .....					2,825.2	34	0	7.72	5,600			
January.....					292.9	11	8.4	9.45	581			
February.....					218.5	9.4	6.4	7.80	433			
March.....					303.9	21	5.9	8.59	528			
April.....					203.9	8.6	4.8	6.80	404			
May.....					322.0	490	1.8	28.5	1,750			
June.....					469.6	50	5.1	15.7	931			
July.....					193.1	9.6	3.1	6.23	383			
August.....					141.8	40	.6	4.57	281			
September.....					118.4	4.6	3.3	3.95	235			
Water year 1936-37 .....					3,539.5	490	.6	9.70	7,020			

## Madera Canyon near Toyahvale, Tex.

Location.-- Water-stage recorder, lat. 30°52', long. 103°56', in Jeff Davis County, 11 miles above confluence with Toyah Creek and 12 miles southwest of Toyahvale, Reeves County.

Drainage area.-- 54 square miles.

Records available.-- July 1932 to September 1937.

Extremes.-- Maximum discharge during year, 255 second-feet Aug. 21 (gage height, 2.75 feet); no flow at times.

1932-37: Maximum gage height, 8.00 feet Sept. 29, 1932 from floodmarks (discharge not determined); no flow at times.

Remarks.-- Records good. No diversions.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	1.1	1.7	0.4	0.1			0	2.6		0	0.8
2	25	.9	1.7	.4	.1			0	22		0	.6
3	21	.9	1.7	.4	.1			0	7.5		0	.3
4	17	.9	1.7	.3	.1			0	2.6		0	.1
5	14	.9	1.6	.3	.1			0	1.3		0	.1
6	11	.8	1.4	.2	.1			0	.7		0	.1
7	9.8	.8	1.4	.2	.1			0	.4		0	1.2
8	8.7	1.1	1.3	.2	.1			0	.2		0	13
9	7.2	1.1	1.2	.1	.1			0	0		0	3.9
10	6.3	.9	1.2	.1	.1			0	0		0	1.7
11	5.6	.9	1.2	.1	.1			0	0		0	2.2
12	4.7	.8	1.1	.1	0			0	0		0	2.8
13	4.2	.7	1.1	.1	0			0	0		0	6.3
14	3.9	.7	.9	.1	0			0	0		0	3.5
15	3.5	.7	.8	.1	0			0	0		0	2.0
16	3.2	.7	.7	.1	0			0	0		0	1.4
17	2.8	.6	.7	.1	0			0	2.6		0	1.2
18	2.6	.6	.7	.1	0			0	0		0	.8
19	2.3	.7	.7	.1	0			0	0		0	.7
20	2.1	.7	.6	.1	0			0	0		.4	.7
21	1.8	.7	.5	.1	0			0	0		23	2.1
22	1.8	.7	.5	.1	0			0	0		8.6	2.6
23	2.8	1.2	.5	.1	0			0	0		4.4	2.3
24	2.1	1.4	.5	.1	0			0	0		.7	2.1
25	2.0	1.1	.4	0	0			0	0		.7	2.0
26	1.8	.8	.4	0	0			0	0		.7	1.4
27	1.8	.7	.4	0	0			0	0		1.3	.8
28	1.6	.9	.4	0	0			0	0		3.0	.5
29	1.5	1.8	.4	0	-			4.2	0		2.8	.3
30	1.3	2.0	.4	0	-			3.9	0		1.3	.1
31	1.2	-	.4	0	-			1.3	-		1.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						206.6	32	1.2	6.66	410		
November.....						27.8	2.0	.6	.93	55		
December.....						28.2	1.7	.4	.91	56		
Calendar year 1936 .....						2,375.4	216	0	6.49	4,710		
January.....						4.0	.4	0	.13	7.9		
February.....						1.1	.1	0	.04	2.2		
March.....						0	0	0	0	0		
April.....						0	0	0	0	0		
May.....						9.4	4.2	0	.30	19		
June.....						39.9	22	0	1.33	79		
July.....						0	0	0	0	0		
August.....						48.6	23	0	1.57	96		
September.....						57.6	13	.1	1.92	114		
Water year 1936-37 .....						423.2	32	0	1.16	839		

## Devils River near Juno, Tex.

Location.- Water-stage recorder, lat. 29°59', long. 101°09', 500 feet below Walter Baker ranch house, 2 miles above mouth of Phillips Creek, and 13½ miles southwest of Juno, Val Verde County.

Drainage area.- 2,733 square miles.

Records available.- May 1925 to September 1937.

Average discharge.- 11 years (1925-31, 1932-37), 205 second-feet.

Extremes.- Maximum discharge during year, 2,580 second-feet June 7 (gage height, 5.92 feet); minimum, 78 second-feet at times in August and September.  
1925-37: 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. Discharge for periods of missing gage heights, Oct. 30 to Dec. 25, Mar. 31 to Apr. 5, interpolated on basis of indicated range of stage. No diversions above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	225	149	134	121	117	112	105	96	91	99	86	79
2	198	149	134	121	117	112	105	96	91	99	86	79
3	185	148	133	121	117	112	104	96	91	99	86	79
4	175	148	133	119	117	112	104	96	104	99	86	80
5	169	147	132	119	117	110	104	96	94	99	86	79
6	166	147	132	119	117	112	104	94	92	99	86	79
7	160	146	131	119	117	110	104	94	597	97	86	79
8	158	146	131	119	117	110	104	92	1,170	99	85	79
9	158	145	130	117	117	109	104	92	196	100	85	79
10	155	145	130	117	117	109	104	97	131	100	85	79
11	155	144	129	119	116	109	104	94	121	99	85	83
12	151	144	129	119	117	112	104	94	117	99	86	83
13	151	143	128	119	116	114	104	94	116	97	85	80
14	151	143	128	119	116	109	104	92	114	96	85	80
15	150	142	127	119	116	109	104	92	114	96	85	80
16	150	142	127	117	114	109	104	91	112	96	83	80
17	148	141	126	117	116	109	104	91	109	96	83	80
18	148	141	126	117	116	109	105	91	109	94	83	80
19	148	140	125	117	116	109	105	91	107	94	83	80
20	148	140	125	117	116	107	104	91	107	94	83	79
21	148	139	124	117	112	105	102	91	105	94	83	79
22	150	139	124	117	114	107	99	91	105	94	82	79
23	148	138	123	119	114	107	99	91	104	92	80	79
24	150	138	123	119	114	105	97	91	104	92	80	80
25	146	137	122	119	114	105	97	91	102	91	80	85
26	144	137	122	119	114	105	96	91	102	91	80	80
27	144	136	121	119	112	105	96	92	100	91	80	80
28	148	136	121	117	112	105	96	92	100	91	80	80
29	150	135	121	117	-	105	96	99	100	91	79	79
30	150	135	121	117	-	105	96	94	100	89	79	78
31	150	-	121	117	-	105	-	92	-	89	79	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,877	225	144	157	9,670		
November.....						4,280	149	135	142	8,450		
December.....						3,933	134	121	127	7,800		
Calendar year 1936.....						131,466	20,900	112	359	260,700		
January.....						3,669	121	117	118	7,280		
February.....						3,235	117	112	116	6,420		
March.....						3,363	112	105	108	6,670		
April.....						3,058	105	96	102	6,070		
May.....						2,885	99	91	93.1	5,720		
June.....						4,805	1,170	91	160	9,530		
July.....						2,958	100	89	95.4	5,860		
August.....						2,582	88	79	83.3	5,120		
September.....						2,395	85	78	79.8	4,750		
Water year 1936-37.....						42,018	1,170	78	115	85,340		

## Mimbres River near Mimbres, N. Mex.

Location.- Water-stage recorder, lat.  $32^{\circ}52'$ , long.  $107^{\circ}59'$ , in SE $\frac{1}{4}$  sec. 33, T. 16 S., R. 11 W.,  $\frac{1}{2}$  miles northwest of Mimbres.

Drainage area.- 183 square miles.

Records available.- October 1930 to September 1937 in reports of Geological Survey; May 1921 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, about 1,530 second-feet Sept. 8 (gage height, 4.76 feet), from rating curve extended about 130 second-feet; minimum daily discharge, 3.0 second-feet Oct. 19.

1930-37: Maximum discharge, about 2,060 second-feet July 17, 1933; maximum gage height, that of Sept. 8, 1937; minimum daily discharge, 1.4 second-feet July 11, 12, 1933.

Remarks.- Records good for October to January and fair for February to September, except those for period of missing gage heights, Mar. 20 to Aug. 20, which were computed on basis of three discharge measurements, weather records, and records for Mimbres River near Paywood and Gila River near Gila and are poor. Several diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	5.3	5.0	4.1	4.4	15	35	40	10	5	4	7.0
2	5.3	5.3	5.0	4.1	4.4	15						6.5
3	5.0	5.3	4.7	4.1	4.1	13						27
4	4.4	5.3	4.7	4.1	4.4	20						33
5	4.4	5.6	5.0	4.1	4.7	20						16
6	4.1	4.1	5.0	4.1	4.7	21	50	30	6	5	4	40
7	4.1	4.7	5.0	4.1	14	40						24
8	4.4	4.7	5.0	4.1	18	58						146
9	4.1	4.4	5.0	3.8	5.6	88						32
10	4.1	4.1	5.0	3.8	5.0	117						100
11	4.1	4.1	5.0	3.8	5.3	132	70	27	26	5	4	109
12	4.1	4.4	5.0	3.8	5.3	130						46
13	4.1	4.4	5.0	3.8	5.3	106						17
14	4.1	4.7	5.0	4.1	5.3	91						12
15	4.1	4.7	5.0	4.1	5.6	80						8.1
16	4.1	5.0	5.0	4.1	275	76	90	20	5	4	10	7.5
17	3.8	5.0	5.0	4.1	138	138						7.5
18	3.1	4.4	5.0	4.1	49	122						7.0
19	3.0	3.8	5.3	4.1	40	109						6.2
20	3.1	4.1	5.0	4.7	50	88						5.9
21	3.1	4.7	5.0	4.4	17	69	70	15	4	4	31	5.9
22	3.1	5.0	4.1	3.8	18	58						6.2
23	3.3	5.0	3.5	3.8	19	54						7.0
24	3.5	5.0	3.3	4.1	25	51						6.5
25	3.5	5.0	4.1	3.8	30	46						8.1
26	3.5	5.0	4.4	4.1	27	42	40	15	4	4	10	9.1
27	3.5	5.0	4.4	4.1	18	38						13
28	3.5	5.0	4.4	4.1	16	38						11
29	3.5	5.3	4.4	4.7	-	35						10
30	3.5	5.0	4.4	4.1	-	35						8.6
31	3.3	-	4.1	3.8	-	35	-	-	-	-	8.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						120.1	5.3	3.0	3.87	238		
November.....						135.5	5.5	3.3	4.44	264		
December.....						145.8	5.5	3.5	4.70	289		
Calendar year 1936.....						2,255.7	30	2.1	6.16	4,470		
January.....						125.9	4.7	3.8	4.06	250		
February.....						798.1	275	4.1	28.5	1,580		
March.....						1,982	138	15	63.9	3,930		
April.....						1,765	-	-	58.8	3,500		
May.....						688	-	-	22.2	1,360		
June.....						180	-	-	6.0	357		
July.....						144.1	-	-	4.65	286		
August.....						272.6	41	-	8.79	541		
September.....						730.9	146	5.9	24.4	1,450		
Water year 1936-37.....						7,085.8	275	-	19.4	14,000		

## 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., about 6 miles northeast of Faywood Hot Springs and 10 miles northeast of Faywood.

Drainage area.— 485 square miles.

Records available.— April 1908 to December 1914 and October 1930 to September 1937 in reports of Geological Survey; April 1908 to December 1931 in reports of State engineer.

Extremes.— Maximum discharge during year not determined; no flow Oct. 1 to Feb. 13, 1930-37. Maximum discharge, about 6,900 second-feet Aug. 10, 1931 (gage height, 6.62 feet), from rating curve extended above 320 second-feet by logarithmic plotting; no flow at times.

Remarks.— Records fair except those for periods of missing or fragmentary gage-height record, which are poor. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	77	66			*2.5	*2.1	*1.0
2					0	74	64			*2.4	2.1	
3					0	74	72	*15	*4	*2.4	2.1	*50
4					0	83	79			*2.4	2.1	
5					0	83	75			2.4		*4
6					0	94	70		3.2		*2.0	
7					0	133	62		*2.8	*2.4		*15
8					0	227	61	*12	2.4		*1.5	*400
9					0	320	62		2.8	*2.3	1.4	
10					0	370	64		1.7	*2.3	1.4	
11					0	311	62		2.4	2.3		*100
12					0	280	59		2.4	2.4	*1.5	
13					0	251	66	*15	2.3	*2.4		18
14					0.2	198	75		2.1	*2.4	*2.0	20
15					.8	178	81	9	1.9	*2.4		10
16					205	170	94	8.5	1.9	*2.3	2.3	5.9
17					350	580	101	6.6	1.9	*2.3	2.3	4.2
18					195	544	98	4.2	*2.0	2.3	*2.5	3.7
19					174	365	87	4.2	2.1	*2.2	*5.0	3.4
20					145	192	86	4.8	2.3	*2.2	*2.0	3.2
21					115	170	79	5.6	2.3	*2.1	2.3	3.2
22					96	160	72	6.2	2.3	*2.0	*2.5	3.0
23					85	151	61	5.9	2.3	*2.0	*3	3.0
24					90	133	51	5.1	2.3	1.9	*30	3.0
25					103	120	43	5.1	2.1	2.1	*15	4.7
26					103	112		4.5	2.3	2.1	*5	3.0
27					90	108		4.0	2.3	*2.1		2.3
28					79	105	*30	5.9	2.3	2.1		2.1
29					-	101		7.4	*2.3	*2.1	*2.5	1.9
30					-	90		10	*2.3	*2.1		-
31					-	75	-	*7	-	*2.1		-
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 1936.....					1,738	49	0	4.7	3,440			
January.....					0	0	0	0	0			
February.....					1,831.0	350	0	65.4	3,630			
March.....					5,889	580	74	190	11,880			
April.....					1,939	101	-	64.6	3,850			
May.....					299.0	-	-	4.0	583			
June.....					77.0	-	-	2.37	153			
July.....					69.6	2.4	1.9	2.25	138			
August.....					127.6	30	-	4.12	253			
September.....					986.5	400	-	32.9	1,260			
Water year 1936-37.....					11,218.7	580	0	30.7	22,260			

\*Gage-height record missing or fragmentary; discharge computed on basis of available gage heights, weather records, and records for Mimbres River near Mimbres and Gila River near Gila.



## Rio Tularosa near Tularosa, N. Mex.

Location.— Water-stage recorder, lat. 33°07', long. 105°57', in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 14 S., R. 10 E., 200 feet above diversion dam for Tularosa community ditch and 3 miles north-east of Tularosa.

Records available.— December 1912 to December 1914 and October 1931 to September 1937 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 not determined; minimum daily discharge, 6 second-feet Aug. 15.

1931-37: Maximum discharge, about 2,480 second-feet Aug. 27, 1935 (gage height, 7.54 feet); minimum daily discharge, 1 second-foot July 31, Aug. 1, 1934.

Remarks.— Records poor. Stage-discharge relation not affected by ice. Diversions for irrigation above station.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		15	12	11	12	11	12	11	25		10	16
2		15	10	12	12	11	12	10	16			16
3		13	10	12	12	11	12	11	15	*20		
4		13	11	12	12	11	13	10	11			
5		13	12	13	12	11	12	10	12		*10	*15
6	20	12	11	11	12	11	12	10	12			
7		12	12	11	12	10	12	10	17			
8		12	11	12	13	10	12	10	25			10
9		11	11	11	12	10	12	10	16		11	
10	17	11	11	11	12	10	12	10	13		*10	
11		16	13	12	13	10	12	10	15			
12		15	15	12	12	10	11	11	14	*10	10	
13		15	14	12	12	10	11	11	13		9	
14		15	14	12	11	12	10	11	12		6	
15		14	12	11	12	9	11	11	12		6	
16		13	12	11	11	15	9	11	6		10	
17		14	11	11	11	13	12	11	9		12	*10
18		13	11	11	12	12	14	11	9		13	
19	*13	11	11	12	12	14	11	11	11	6	16	
20	13	11	11	12	12	13	11	11	11	10	11	
21	13	11	11	12	12	13	11	10	9			
22	13	11	11	12	12	13	11	10	6	*10		
23	13	11	11	12	12	13	10	11	8			
24	13	11	11	13	11	13	11	14	10		10	
25	13	11	10	12	12	13	10	12	*10	10	*10	
26	14	11	11	12	11	12	10	12		9		11
27	13	11	10	9	11	12	10	12				
28	14	11	11	8	11	12	10					
29	14	11	11	9	-	14	11		*50	*10	11	*10
30	14	11	11	10	-	13	10				14	
31	15	-	11	11	-	13	-			10	15	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						497	-	13	15.7	966		
November.....						361	15	11	12.0	716		
December.....						344	12	10	11.1	682		
Calendar year 1936.....						4,659	40	4	12.7	9,240		
January.....						353	13	8	11.4	700		
February.....						339	15	11	12.1	672		
March.....						358	14	9	11.5	710		
April.....						336	13	10	11.2	686		
May.....						1,092	-	10	35.2	2,170		
June.....						569	-	8	19.0	1,130		
July.....						357	-	-	11.5	708		
August.....						328	18	6	10.6	651		
September.....						338	-	-	11.3	670		
Water year 1936-37.....						5,262	-	6	14.4	10,440		

\*Gage height missing; discharge computed on basis of weather records and records for Rio Ruidoso at Hondo and Rio Bonito at Hondo.

## 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 SW $\frac{1}{4}$  sec. 25, T. 15 S., R. 10 E., a quarter of a mile above La Luz and half a mile below head gate.

Records available.- October 1934 to September 1937.

Extremes.- Maximum discharge during year, 23 second-feet June 25 (gage height, 1.32 feet); no flow Jan. 9, 10.  
1934-37: Maximum discharge, 26 second-feet Aug. 27, 1936 (gage height, 1.58 feet); no flow at times.

Remarks.- Records good except those for periods of missing gage heights, which are poor. Ditch diverts water from Rio La Luz for irrigation.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	5.9	4.5	7.1	7.4	6.1	6.7	2.9	3.6	3.3	2.8	2.4
2	.7	4.7	5.6	7.1	7.9	6.6	6.4	3.2	3.2	3.4	2.4	2.4
3	3.5	5.3	6.2	6.2	8.5	6.1	6.4	3.0	3.4	5.1	2.0	2.0
4	7.1	6.2	5.6	5.4	8.3	6.2	6.2	3.0	3.2	4.1	1.8	*2.3
5	7.1	6.6	5.9	7.1	8.1	6.1	6.1	3.3	2.9	3.0	1.6	2.6
6	6.9	6.6	6.2	5.9	7.9	6.1	5.9	3.4	2.3	2.4	2.0	3.0
7	6.9	6.7	5.8	1.8	7.9	6.1	5.9	3.0	2.0	2.6	1.4	3.0
8	7.1	6.6	5.9	1.2	9.0	5.9	5.9	3.0	1.7	2.6	1.6	3.2
9	7.2	6.4	5.9	0	8.1	5.8	5.7	1.6	2.3	3.8	*4.5	
10	7.1	4.1	5.8	0	6.6	6.1	5.1	3.3	1.9	4.2	2.3	*4.6
11	6.7	2.0	5.6	3.9	6.6	6.4	5.6	3.2	1.7	3.8	1.9	*4.6
12	6.1	4.4	5.8	8.8	7.6	6.4	5.6	3.6	1.5	3.2	4.0	3.7
13	5.9	5.3	5.9	8.8	7.8	6.2	4.7	3.3	1.7	2.9	3.7	*4.0
14	6.2	5.6	6.2	8.7	7.9	6.2	3.4	3.3	1.6	2.3	3.3	*4.0
15	6.4	5.6	6.7	8.3	6.7	7.1	3.2	2.8	1.3	2.0	3.6	3.8
16	6.2	5.6	6.9	7.9	5.4	8.1	4.4	2.9	1.6	2.1	3.2	4.1
17	6.1	5.4	6.7	7.4	5.8	9.0	5.3	2.7	1.7	2.1	2.8	4.1
18	5.8	5.0	6.7	7.4	6.6	7.8	4.1	2.9	1.4	3.3	2.6	4.0
19	6.2	4.1	7.1	6.6	5.9	7.8	3.6	3.2	1.3	1.9	3.0	3.7
20	6.2	4.7	7.2	6.4	7.1	8.3	3.3	2.9	1.3	1.5	4.0	3.8
21	6.7	4.8	7.1	5.8	6.6	8.3	3.6	2.7	1.0	1.6	*4.0	*4.0
22	7.4	5.4	6.2	5.9	2.8	7.8	3.6	2.9	2.4	1.7	4.0	*4.0
23	7.1	6.1	6.6	4.6	3.2	7.9	4.1	4.0	1.6	1.8	4.5	5.0
24	7.9	6.1	6.2	7.1	6.2	7.8	4.4	4.2	1.4	1.9	5.1	4.1
25	6.7	5.6	5.9	4.2	6.1	7.4	4.8	3.6	3.4	2.2	*4.5	4.4
26	6.6	5.6	5.8	1.0	6.7	7.1	4.1	2.6	3.7	2.0	*4.0	4.2
27	6.6	5.4	5.0	2.2	6.1	6.9	4.1	2.8	3.6	1.9	*3.5	4.4
28	6.4	5.4	4.5	6.4	5.9	7.6	3.0	3.8	2.7	1.9	3.0	3.3
29	6.2	5.1	5.3	6.1	-	7.6	4.4	2.2	1.8	1.9	3.6	3.3
30	6.4	4.7	7.2	6.2	-	6.7	3.7	4.8	2.9	1.6	3.6	5.1
31	6.4	-	7.2	7.1	-	6.6	-	4.1	-	1.6	3.0	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	190.7					7.9	0.6	6.15	378			
November.....	161.2					6.7	2.0	5.37	320			
December.....	189.2					7.2	4.5	6.10	375			
Calendar year 1936.....	1,770.5					11	0	4.84	3,510			
January.....	172.6					8.8	0	5.57	342			
February.....	190.7					9.0	2.8	6.81	378			
March.....	216.1					9.0	5.8	6.97	429			
April.....	143.4					6.7	3.0	4.78	284			
May.....	100.3					4.8	2.2	3.24	199			
June.....	65.6					3.7	1.0	2.19	130			
July.....	78.2					5.1	1.5	2.62	155			
August.....	96.6					5.1	1.4	3.12	192			
September.....	111.8					5.1	2.0	3.73	222			
Water year 1936-37.....	1,716.4					9.0	0	4.70	3,400			

\*Gage height missing; discharge computed on basis of recorded range in stage.

## Alamo Creek at Wood ranch, near Alamogordo, N. Mex.

Location.-- Water-stage recorder and 3-foot concrete Parshall flume, lat. 32°51'25", long. 105°50'00", in SW¼ sec. 4, T. 17 S., R. 11 E., 100 feet above road crossing at Wood ranch and 8 miles southeast of Alamogordo.

Records available.-- October 1931 to February 1937 (discontinued).

Extremes.-- Maximum discharge during period, 1.7 second-foot February 16 (gage height, 0.20 foot); minimum daily discharge, 0.9 second-foot October 1-12, 1931-37; Maximum discharge, 7.7 second-foot July 17, 1933 (gage height, 1.55 feet, former datum); minimum daily discharge, 0.6 second-foot Apr. 30, 1935.

Remarks.-- Records fair except those for Feb. 14-28, which are poor due to work on extension of Alamogordo water-supply pipe line to new intake above station.

## Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.0	1.1	1.4	1.5							
2	.9	1.0	1.1	1.4	1.5							
3	.9	1.0	1.1	1.4	1.5							
4	.9	1.0	1.1	1.4	1.5							
5	.9	1.0	1.1	1.4	1.5							
6	.9	1.0	1.1	1.4	1.5							
7	.9	1.0	1.2	1.4	1.5							
8	.9	1.0	1.2	1.4	1.5							
9	.9	1.0	1.2	1.4	1.5							
10	.9	1.0	1.2	1.4	1.5							
11	.9	1.0	1.2	1.4	1.5							
12	.9	1.0	1.2	1.4	1.5							
13	1.0	1.0	1.2	1.5	1.4							
14	1.0	1.0	1.2	1.5	1.2							
15	1.0	1.0	1.2	1.5	1.2							
16	*1.0	1.1	1.2	1.5	1.5							
17	1.0	1.1	1.2	1.5	1.5							
18	1.0	1.1	1.2	1.5	1.5							
19	1.0	1.0	1.3	1.5	1.3							
20	1.0	1.0	1.3	1.5	1.3							
21	1.0	1.0	1.3	1.5	1.3							
22	1.0	1.0	1.3	1.5	1.2							
23	1.0	1.0	1.3	1.5	1.3							
24	1.0	1.1	1.3	1.5	1.4							
25	1.0	1.1	1.3	1.5	1.2							
26	1.0	1.1	1.3	1.5	1.2							
27	1.0	1.1	1.3	1.5	1.1							
28	1.0	1.1	1.3	1.5	*1.1							
29	1.0	1.1	1.3	1.5	-							
30	1.0	1.1	1.3	1.5	-							
31	1.0	-	1.3	1.5	-							
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	29.8					1.0	0.9	0.96	59			
November.....	31.0					1.1	1.0	1.03	61			
December.....	37.9					1.3	1.1	1.22	75			
Calendar year 1936.....	358.5					1.3	.8	.98	711			
January.....	45.3					1.5	1.4	1.46	90			
February.....	38.7					1.5	1.1	1.38	77			
March.....												
April.....												
May.....												
June.....												
July.....												
August.....												
September.....												
The period.....									362			

\*Estimated.

## Alamogordo water supply near Alamogordo, N. Mex.

(Formerly published as Alamogordo water supply at intake, near Alamogordo, N. Mex.)

**Location.**— Water-stage recorder and rectangular contracted weir, lat. 32°52'35", long. 105°55'50", in NW $\frac{1}{4}$  sec. 33, T. 16 S., R. 10 E., at lower end of pipe line, about a mile below mouth of Alamo Canyon and 2 miles southeast of Alamogordo. Prior to May 8, station was located at intake to pipe line, about 6 miles southeast of present site. Sometime after May 8 pipe line was extended farther up Alamo Creek (where a new intake was established), a branch was run up Duncan Arroyo to Fleming Springs, and station was moved to present site.

**Records available.**— October 1932 to September 1937.

**Extremes.**— Maximum discharge during year, 3.6 second-feet Feb. 13 (gage height 0.59 foot); minimum daily discharge, 0.2 second-foot Feb. 2.

1932-37: Maximum discharge, 6.2 second-feet July 8 (gage height 0.89 foot); no flow July 7, 1933.

**Remarks.**— Records excellent. Water is diverted from Alamo Creek and Duncan Arroyo for municipal supply of Alamogordo, which was increased after May 7 by extension of pipe line and elimination of channel losses.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.7	0.6	0.8	0.4	0.5	0.7	0.7	1.1	1.2	1.2	1.2
2	.8	.8	.8	.8	.2	.3	.6	.7	1.1	1.2	1.2	1.2
3	.8	.8	.8	.8	.3	.4	.8	.7	1.2	1.2	1.2	1.2
4	.8	.8	.8	.8	.3	.4	.8	.7	1.2	1.2	1.2	1.2
5	.8	.8	.9	.8	.3	.4	.7	.7	1.2	1.2	1.2	1.2
6	.8	.8	.8	.8	.3	.4	.7	.7	1.2	1.2	1.2	1.2
7	.8	.8	.8	.8	.3	.4	.7	.7	1.2	1.2	1.2	1.2
8	.8	.8	.8	.8	.5	.4	.7	1.2	1.2	1.2	1.2	1.2
9	.8	.8	.8	.8	.4	.4	.7	1.2	1.2	1.2	1.2	1.3
10	.8	.8	.8	.8	.4	.5	.8	1.2	1.2	1.2	1.2	1.3
11	.8	.8	.8	.8	.4	.6	.8	1.2	1.2	1.2	1.2	1.3
12	.8	.8	.8	.8	.4	.6	.7	1.2	1.2	1.2	1.2	1.3
13	.8	.8	.8	.8	.4	.6	.7	1.2	1.2	1.2	1.2	1.3
14	.8	.8	.8	.8	.6	.7	.7	1.2	1.2	1.2	1.2	1.3
15	.8	.8	.8	.8	.8	.7	.7	1.2	1.2	1.2	1.2	1.3
16	.6	.8	.8	.8	.8	.7	.7	1.2	1.2	1.2	1.2	1.3
17	.8	.8	.8	.8	.8	.7	.7	1.2	1.2	1.2	1.2	1.3
18	.8	.8	.8	.8	.8	.9	.7	1.2	1.2	1.2	1.2	1.3
19	.8	.8	.8	.8	.8	.8	.7	1.2	1.2	1.2	1.2	1.3
20	.8	.8	.8	.8	.8	.8	.7	1.2	1.2	1.2	1.2	1.3
21	.8	.6	.8	.8	.8	.7	.7	1.2	1.2	1.2	1.2	1.3
22	.8	.8	.8	.8	.8	.7	.7	1.2	1.2	1.2	1.2	1.3
23	.8	.8	.8	.8	.8	.7	.7	1.1	1.2	1.2	1.2	1.3
24	.8	.8	.8	.8	.8	.7	.7	1.1	1.2	1.2	1.2	1.3
25	.8	.8	.8	.8	.8	.7	.7	1.1	1.2	1.2	1.2	1.3
26	.8	.6	.8	.8	.5	.7	.7	1.1	1.2	1.2	1.2	1.3
27	.8	.8	.8	.8	.4	.7	.7	1.1	1.2	1.2	1.2	1.3
28	.8	.8	.8	.8	.5	.7	.7	.9	1.2	1.2	1.2	1.3
29	.8	.8	.8	.8	-	.7	.7	.4	1.2	1.2	1.2	1.3
30	.7	.8	.8	.7	-	.7	.7	1.1	1.2	1.2	1.2	1.3
31	.7	-	.8	.7	-	.7	-	1.1	-	1.2	1.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						24.6	0.8	0.7	0.79	49		
November.....						23.9	.8	.7	.80	47		
December.....						24.9	.9	.8	.80	49		
Calendar year 1936.....						379.7	1.8	.3	1.04	754		
January.....						24.6	.8	.7	.79	49		
February.....						15.5	.9	.2	.65	31		
March.....						15.5	.7	.5	.60	37		
April.....						21.5	.8	.6	.71	42		
May.....						31.9	1.2	.4	1.03	63		
June.....						35.8	1.2	1.1	1.19	71		
July.....						37.2	1.2	1.2	1.20	74		
August.....						37.2	1.2	1.2	1.20	74		
September.....						38.2	1.3	1.2	1.27	76		
Water year 1936-37.....						353.6	1.3	.2	.91	662		

\*Estimated.

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. These include measurements made in the Rio Grande Basin at points other than gaging stations during the water year 1935-36 but not previously published.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937

## Sabine River Basin

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
Sept. 22	Sabine River....	Gulf of Mexico...	Pendleton (5 miles above Sabinetown), Tex.	124
Mar. 11	Cow Creek.....	Sabine River.....	At bridge on State Highway 63, 2 miles west of Newton, Tex.	61.2

## Neches River Basin

Mar. 11	Sandy Creek....	Neches River....	Jasper, Tex., $\frac{1}{2}$ mile south of courthouse and 1 mile above mouth of Trotti Branch.	26.3
Aug. 15	....do.....	....do.....	....do.....	17.2
Mar. 11	....do.....	....do.....	At bridge on State Highway 63, $\frac{1}{2}$ mile above mouth of Neylands Branch, 1 mile below mouth of Trotti Branch, and $2\frac{1}{2}$ miles west of Jasper, Tex.	32.0
Aug. 15	....do.....	....do.....	....do.....	20.1
Mar. 12	....do.....	....do.....	500 feet below mouth of Neylands Branch and 3 miles west of Jasper, Tex.	36.2
Aug. 15	....do.....	....do.....	....do.....	23.6

## Trinity River Basin

Mar. 16	Salt Creek.....	Trinity River....	On Trinity-Carlisle road, $\frac{1}{2}$ mile above mouth and $9\frac{1}{2}$ miles southeast of Trinity, Tex.	1.3
16	Mill Creek.....	....do.....	On Trinity-Carlisle road, $\frac{1}{2}$ mile above mouth and 10 miles southeast of Trinity, Tex.	1.43

## San Jacinto River Basin

Mar. 2	San Jacinto River.	Gulf of Mexico...	At Beaumont, Sour Lake & Western (Missouri Pacific) Ry. crossing, 4 miles southwest of Huffman, Tex.	388
May 26	....do.....	....do.....	....do.....	154
Aug. 29	....do.....	....do.....	....do.....	205

## Brazos River Basin

Jan. 17	Double Mountain Fork of Brazos River (Yellow House Canyon).	Brazos River....	$1\frac{1}{3}$ mile above Buffalo Spring and 10 miles southeast of Lubbock, Tex.	1.66
17	....do.....	....do.....	2,000 feet below Buffalo Spring and $10\frac{1}{2}$ miles southeast of Lubbock, Tex.	2.0
17	Buffalo Spring..	Double Mountain Fork of Brazos River.	$10\frac{1}{2}$ miles southeast of Lubbock, Tex.....	.34
May 24	White River (Running Water Creek).	Salt Fork of Brazos River.	Plainview, Tex.....	*1,220
June 14	....do.....	....do.....	....do.....	*454
May 28	....do.....	....do.....	15 miles southeast of Plainview, Tex.....	*179.5
June 17	....do.....	....do.....	....do.....	*148.6

\*Slope-area measurement.

†These figures represent crest discharges resulting from the peak flows of May 24, and June 14, at Plainview and indicate flattening and loss between Plainview and this point, which is also on the high plains. About 5 miles downstream from this point flow spills off plains into canyon. Crest discharge at each of these rises at point of spill is estimated to be not more than 20 percent of the discharge at Plainview. This is second year within about the last 40 years when any flow from White River has spilled off the high plains.

## Colorado River Basin

July 12	Colorado River..	Gulf of Mexico..	About 500 feet below Buchanan Dam and 10 miles west of Burnet, Tex.	352
Aug. 9	....do.....	....do.....	2.6 miles below Roy Inks Dam and 12 miles west of Burnet, Tex.	308
Dec. 1	Irrigation canal	South Concho River.	At head, Christoval, Tex.....	14.1
Feb. 5	....do.....	....do.....	....do.....	3.15
Mar. 29	....do.....	....do.....	....do.....	5.67
May 11	....do.....	....do.....	....do.....	21.5
June 22	....do.....	....do.....	....do.....	20.4
Aug. 10	....do.....	....do.....	....do.....	12.2
Sept. 10	....do.....	....do.....	....do.....	14.0
Oct. 17	Barton Creek....	Colorado River..	Above Barton Springs, Austin, Tex.....	11.0
Nov. 20	....do.....	....do.....	....do.....	*.3
Dec. 6	....do.....	....do.....	....do.....	43.5
19	....do.....	....do.....	....do.....	22.5
Jan. 23	....do.....	....do.....	....do.....	78.3

\*Estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

Colorado River Basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
Feb. 6	Barton Creek....	Colorado River..	Above Barton Springs, Austin, Tex.....	59.7
24	....do.....	....do.....	....do.....	29.3
Mar. 17	....do.....	....do.....	....do.....	74.7
Apr. 21	....do.....	....do.....	....do.....	180
May 16	....do.....	....do.....	....do.....	0
June 10	....do.....	....do.....	....do.....	29.6
21	....do.....	....do.....	....do.....	*1.0
July 2	....do.....	....do.....	....do.....	0
12	....do.....	....do.....	....do.....	0
17	....do.....	....do.....	....do.....	0
24	....do.....	....do.....	....do.....	0
Aug. 4	....do.....	....do.....	....do.....	0
20	....do.....	....do.....	....do.....	0
Sept. 7	....do.....	....do.....	....do.....	0
Oct. 17	Barton Springs..	Barton Creek..	Austin, Tex.....	†47.5
Nov. 20	....do.....	....do.....	....do.....	†42.9
Dec. 6	....do.....	....do.....	....do.....	†53.0
19	....do.....	....do.....	....do.....	†46.2
Jan. 23	....do.....	....do.....	....do.....	†63.4
Feb. 6	....do.....	....do.....	....do.....	†52.3
24	....do.....	....do.....	....do.....	†44.9
Mar. 17	....do.....	....do.....	....do.....	†58.9
Apr. 21	....do.....	....do.....	....do.....	†42.5
May 16	....do.....	....do.....	....do.....	†49.5
June 10	....do.....	....do.....	....do.....	†65.0
21	....do.....	....do.....	....do.....	†62.7
July 2	....do.....	....do.....	....do.....	†53.9
12	....do.....	....do.....	....do.....	†46.2
17	....do.....	....do.....	....do.....	†45.0
24	....do.....	....do.....	....do.....	†42.6
Aug. 4	....do.....	....do.....	....do.....	†37.6
20	....do.....	....do.....	....do.....	†32.5
Sept. 7	....do.....	....do.....	....do.....	†31.4
Aug. 20	Mill Spring....	....do.....	....do.....	3.23

\*Estimated.

†Includes flow of Mill Spring.

Guadalupe River Basin

Dec. 7	San Marcos River	Guadalupe River,	San Marcos, Tex.....	*125
Feb. 12	....do.....	....do.....	....do.....	*122
Apr. 1	....do.....	....do.....	....do.....	*126
May 6	....do.....	....do.....	....do.....	*120
June 22	....do.....	....do.....	....do.....	*154
Aug. 10	....do.....	....do.....	....do.....	*113
Sept. 23	....do.....	....do.....	....do.....	*110
Aug. 4	Clear Fork of Flum Creek.	Flum Creek.....	In Lockhart State Park, 2½ miles south- west of Lockhart, Tex.	1.57
4	Hot Well (artesian).	San Marcos River	½ mile east of post office at Ottine, Tex.	.25
Jan. 12	Medina River....	San Antonio River.	At crossing of U. S. Highway 90, at Castroville, Tex.	73.5
June 1	Cibolo Creek....	....do.....	At crossing of Curry Creek road, 2 miles northeast of Van Raub, Tex.	58,900
1	Frederick Creek.	Cibolo Creek....	At Boerne, Tex.....	†16,300

\*Total flow of springs.

†Slope-area measurement.

Nueces River Basin

Jan. 6	Nueces River....	Gulf of Mexico..	At first crossing of State Highway 55, 4 miles above Camp Wood, Tex.	49.2
6	....do.....	....do.....	On State Highway 55, 3½ miles below Camp Wood, Tex.	108
7	Frio River.....	Nueces River....	3 miles above crossing of U. S. Highway 90 and 5 miles northwest of Knippa, Tex.	0
8	....do.....	....do.....	Just below Blackwater Hole, 5 miles below mouth of Dry Frio River and 7 miles be- low Knippa, Tex.	0
10	....do.....	....do.....	Just above mouth of Sabinal River and 9½ miles northwest of Frio Town, Tex.	1.07
10	....do.....	....do.....	450 feet below mouth of Sabinal River and 9½ miles northwest of Frio Town, Tex.	9.10
Apr. 5	....do.....	....do.....	3 miles above mouth of Leona River and 2½ miles west of Derby, Tex.	6.75
Jan. 8	....do.....	....do.....	At mouth of Leona River, 4 miles south of Derby, Tex.	17.7
5	....do.....	....do.....	At road crossing 5 miles west of Fowlerton, Tex.	53.7
7	Dry Frio River..	Frio River.....	At highway crossing, ½ mile below village of Reagan Wells, Tex.	17.7
7	....do.....	....do.....	At crossing of U. S. Highway 90, 5 miles west of Knippa, Tex.	0
12	Sabinal River...	....do.....	1.3 miles above Utopia, Tex.....	30.5
12	....do.....	....do.....	At first crossing below Utopia, Tex., 18.3 miles north of Sabinal, Tex.	53.8

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

## Nueces River Basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (sec.-ft.)
Jan. 12	Sabinal River....	Frio River.....	14.7 miles north of Sabinal, Tex.....	63.4
12	....do.....	....do.....	12.6 miles north of Sabinal, Tex.....	65.2
11	....do.....	....do.....	10.8 miles north of Sabinal, Tex.....	66.4
11	....do.....	....do.....	At crossing of U. S. Highway 90, 1 mile west of Sabinal, Tex.....	16.4
11	....do.....	....do.....	2.7 miles south of Sabinal, Tex.....	12.6
10	....do.....	....do.....	150 feet above mouth and $\frac{1}{4}$ mi. north-west of Frio Town, Tex.....	8.03
11	Hondo Creek.....	....do.....	1,000 feet below mouth of Williams Creek and 1.3 miles east of Tarpley, Tex.....	12.4
10	....do.....	....do.....	At crossing of U. S. Highway 90, just below mouth of Verde Creek, 8 miles east of Hondo, Tex.....	2.10
8	....do.....	....do.....	Just above mouth, 6 miles northwest of Pearsall, Tex.....	0
10	Verde Creek.....	Hondo Creek.....	0.4 mile above mouth and $\frac{3}{4}$ miles northeast of Hondo, Tex.....	1.35
12	Seco Creek.....	....do.....	At crossing of Utopia-Tarpley road, 3.9 miles northeast of Utopia, Tex.....	3.52
Apr. 5	Leona River.....	Frio River.....	4 miles above mouth.....	47.6
Jan. 8	....do.....	....do.....	200 feet above mouth and 4 miles south of Derby, Tex.....	40.3

## Rio Grande Basin\*

1936				
Nov. 17	Rio Grande.....	Gulf of Mexico..	$E\frac{1}{2}$ sec. 24, T. 2 S., R. 1 W., at highway bridge, 4 miles north of Socorro, N. Mex.....	710
18	....do.....	....do.....	....do.....	1,140
Dec. 7	....do.....	....do.....	....do.....	897
Nov. 17	....do.....	....do.....	$E\frac{1}{2}$ sec. 6, T. 3 S., R. 1 E., about 1 mile northeast of Socorro, N. Mex., and $\frac{3}{4}$ miles below highway bridge.....	742
18	....do.....	....do.....	$W\frac{1}{2}$ sec. 16, T. 5 S., R. 1 E., $\frac{2}{3}$ miles south of San Antonio, N. Mex., and bridge on U. S. Highway 380.....	1,080
Dec. 8	....do.....	....do.....	....do.....	767
Nov. 18	....do.....	....do.....	$E\frac{1}{2}$ sec. 26, T. 6 S., R. 1 W., east of milepost 99, of Santa Fe R.R. 4 miles south of Elmerdorf, N. Mex.....	942
Dec. 8	....do.....	....do.....	....do.....	852
1937				
Aug. 12	Allen Creek.....	Costilla Creek..	Above Costilla Dam and reservoir, about 16 miles east of Costilla, N. Mex.....	†.20
Sept. 7	....do.....	....do.....	....do.....	†.15
July 21	Bee Line ditch...	Rio Lucero.....	$E\frac{1}{2}$ sec. 21, T. 26 N., R. 13 E., at head, 3.5 miles south of town of Arroyo Seco, N. Mex.....	†1.0
May 5	Carson main canal	Arroyo Aguafe de Petasa.	$NW\frac{1}{4}$ sec. 31, T. 25 N., R. 11 E., 1 mile below head and 3 miles west of Carson, N. Mex.....	.62
5	....do.....	....do.....	$NW\frac{1}{4}$ sec. 31, T. 25 N., R. 11 E., $\frac{1}{2}$ mile below head and 3 miles west of Carson, N. Mex.....	.90
5	....do.....	....do.....	$SE\frac{1}{4}$ sec. 25, T. 25 N., R. 10 E., $\frac{1}{2}$ mile below head and $\frac{3}{4}$ miles west of Carson, N. Mex.....	.90
5	....do.....	....do.....	$SW\frac{1}{4}$ sec. 25, T. 25 N., R. 10 E., 200 feet below head and $\frac{3}{4}$ miles west of Carson, N. Mex.....	1.99
5	....do.....	....do.....	$SW\frac{1}{4}$ sec. 25, T. 25 N., R. 10 E., 100 feet below head and $\frac{3}{4}$ miles west of Carson, N. Mex.....	4.92
Apr. 2	Santa Clara Creek	Rio Grande.....	$SW\frac{1}{4}$ sec. 8, T. 20 N., R. 8 E., just above head of Guachupaque ditch, $1\frac{1}{2}$ miles west of Espanola and $\frac{2}{3}$ miles above mouth.....	4.39
1936				
Oct. 9	Well ditch.....	Under ground flow from Rio Pojoaque.	$NW\frac{1}{4}$ sec. 9, T. 18 N., R. 8 E., between wasteway and lateral to Ortiz ditch, $\frac{1}{4}$ mile northeast of San Ildefonso, N. Mex.....	0
26	....do.....	....do.....	....do.....	.92
Nov. 10	....do.....	....do.....	....do.....	1.37
23	....do.....	....do.....	....do.....	0
Dec. 4	....do.....	....do.....	....do.....	0
22	....do.....	....do.....	....do.....	.76
1937				
Jan. 11	....do.....	....do.....	....do.....	0
29	....do.....	....do.....	....do.....	0
Feb. 11	....do.....	....do.....	....do.....	0
Mar. 2	....do.....	....do.....	....do.....	0
25	....do.....	....do.....	....do.....	.65
Apr. 14	....do.....	....do.....	....do.....	1.53
May 6	....do.....	....do.....	....do.....	0
June 7	....do.....	....do.....	....do.....	1.19
July 15	....do.....	....do.....	....do.....	1.63
25	....do.....	....do.....	....do.....	1.89
Aug. 9	....do.....	....do.....	....do.....	.29
19	....do.....	....do.....	....do.....	1.56

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during water years 1936-36 and 1936-37.

†Discharge estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

## Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
1937				
Sept. 1	Well ditch.....	Underground flow from Rio Pojoaque.	NW $\frac{1}{4}$ sec. 9, T. 18 N., R. 8 E., between wasteway and lateral to Ortiz ditch, $\frac{1}{2}$ mile northeast of San Ildefonso, N. Mex.	10.10
22	....do.....	....do.....	....do.....	.79
1936				
Oct. 2	Santa Fe Creek...	Rio Grande.....	Sec. 24, T. 17 N., R. 10 E., above upper reservoir, $6\frac{1}{2}$ miles east of Santa Fe, N. Mex.	12.0
16	....do.....	....do.....	....do.....	7.04
Nov. 21	....do.....	....do.....	....do.....	4.30
1937				
Jan. 5	....do.....	....do.....	....do.....	2.36
Mar. 26	....do.....	....do.....	....do.....	6.39
May 7	....do.....	....do.....	....do.....	27.4
July 3	....do.....	....do.....	....do.....	12.5
Aug. 3	....do.....	....do.....	....do.....	3.15
Sept. 13	....do.....	....do.....	....do.....	7.73
1936				
July 8	Upper East Side Santo Domingo acequia.	....do.....	SE $\frac{1}{4}$ sec. 19, T. 16 N., R. 6 E., $\frac{1}{2}$ mile below head and $\frac{1}{2}$ mile southeast of Cochiti, N. Mex.	5.18
14	....do.....	....do.....	....do.....	0
19	....do.....	....do.....	....do.....	0
23	....do.....	....do.....	....do.....	0
28	....do.....	....do.....	....do.....	0
30	....do.....	....do.....	....do.....	.25
Aug. 4	....do.....	....do.....	....do.....	5.62
7	....do.....	....do.....	....do.....	0
Sept. 15	....do.....	....do.....	....do.....	.56
19	....do.....	....do.....	....do.....	1.55
22	....do.....	....do.....	....do.....	7.56
25	....do.....	....do.....	....do.....	.13
29	....do.....	....do.....	....do.....	10.6
Oct. 2	....do.....	....do.....	....do.....	.95
6	....do.....	....do.....	....do.....	0
13	....do.....	....do.....	....do.....	0
16	....do.....	....do.....	....do.....	0
23	....do.....	....do.....	....do.....	0
26	....do.....	....do.....	....do.....	0
Nov. 5	....do.....	....do.....	....do.....	0
23	....do.....	....do.....	....do.....	0
30	....do.....	....do.....	....do.....	0
Dec. 11	....do.....	....do.....	....do.....	0
14	....do.....	....do.....	....do.....	0
21	....do.....	....do.....	....do.....	0
1937				
Apr. 9	....do.....	....do.....	....do.....	5.65
1936				
July 6	San Felipe pump ditch.	....do.....	NW $\frac{1}{4}$ sec. 36, T. 14 N., R. 4 E., at head, $2\frac{1}{2}$ miles southwest of San Felipe, N. Mex.	3.48
10	....do.....	....do.....	....do.....	0
16	....do.....	....do.....	....do.....	0
21	....do.....	....do.....	....do.....	0
30	....do.....	....do.....	....do.....	0
Aug. 4	....do.....	....do.....	....do.....	0
10	....do.....	....do.....	....do.....	0
12	....do.....	....do.....	....do.....	0
13	....do.....	....do.....	....do.....	4.67
25	....do.....	....do.....	....do.....	4.43
Sept. 4	....do.....	....do.....	....do.....	0
1937				
May 15	Albuquerque main canal above Griegos lateral.	....do.....	NE $\frac{1}{4}$ sec. 17, T. 11 N., R. 3 E., just above gaging station, $1\frac{1}{2}$ miles southwest of Alameda, N. Mex.	102
1936				
July 15	Lower Corrales riverside drain.	....do.....	NE $\frac{1}{4}$ sec. 8, T. 11 N., R. 3 E., at highway crossing, $\frac{1}{2}$ mile above bridge over Rio Grande, and $1\frac{1}{2}$ miles northwest of Alameda, N. Mex.	4.67
1937				
June 3	....do.....	....do.....	....do.....	8.24
18	....do.....	....do.....	....do.....	9.16
1936				
June 19	Feeder no. 1 to Barr drain.	....do.....	NW $\frac{1}{4}$ sec. 13, T. 10 N., R. 2 E., $\frac{1}{2}$ mile west of Albuquerque, and 1 mile above Old Town Bridge.	22.4
27	....do.....	....do.....	....do.....	20.3
July 3	....do.....	....do.....	....do.....	21.2
9	....do.....	....do.....	....do.....	22.5
15	....do.....	....do.....	....do.....	20.5
21	....do.....	....do.....	....do.....	21.8
28	....do.....	....do.....	....do.....	19.2
Aug. 4	....do.....	....do.....	....do.....	20.2
11	....do.....	....do.....	....do.....	19.0
18	....do.....	....do.....	....do.....	19.4
25	....do.....	....do.....	....do.....	18.6
Sept. 1	....do.....	....do.....	....do.....	20.6
9	....do.....	....do.....	....do.....	19.0
15	....do.....	....do.....	....do.....	15.7
22	....do.....	....do.....	....do.....	20.1
28	....do.....	....do.....	....do.....	19.0
Oct. 6	....do.....	....do.....	....do.....	17.2
23	....do.....	....do.....	....do.....	24.5
26	....do.....	....do.....	....do.....	22.8

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during 1935-36 and 1936-37.  
 †Discharge estimated.



Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

## Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from	Locality	Discharge (sec.-ft.)
1936				
Nov. 3	Feeder no. 1 to Barr drain.	Rio Grande.....	NW $\frac{1}{4}$ sec. 13, T. 10 N., R. 2 E., $\frac{1}{2}$ mile west of Albuquerque, and 1 mile above Old Town Bridge.	23.3
9	....do.....	....do.....	....do.....	21.4
17	....do.....	....do.....	....do.....	21.8
27	....do.....	....do.....	....do.....	22.0
Dec. 4	....do.....	....do.....	....do.....	19.0
8	....do.....	....do.....	....do.....	21.8
14	....do.....	....do.....	....do.....	20.9
26	....do.....	....do.....	....do.....	18.6
1937				
Jan. 2	....do.....	....do.....	....do.....	16.1
13	....do.....	....do.....	....do.....	19.7
19	....do.....	....do.....	....do.....	20.2
28	....do.....	....do.....	....do.....	19.1
Feb. 6	....do.....	....do.....	....do.....	18.7
10	....do.....	....do.....	....do.....	18.6
17	....do.....	....do.....	....do.....	21.4
24	....do.....	....do.....	....do.....	19.9
Apr. 26	....do.....	....do.....	....do.....	16.0
June 1	....do.....	....do.....	....do.....	17.4
24	....do.....	....do.....	....do.....	12.4
30	....do.....	....do.....	....do.....	15.6
July 17	....do.....	....do.....	....do.....	16.1
31	....do.....	....do.....	....do.....	28.5
June 24	Feeder no. 2 to Barr drain.	....do.....	....do.....	4.86
30	....do.....	....do.....	....do.....	3.50
July 17	....do.....	....do.....	....do.....	1.58
1936				
Dec. 17	Alameda interior drain.	....do.....	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 11 N., R. 3 E., at highway crossing, 1 mile south of Alameda, N. Mex.	2.25
17	....do.....	....do.....	SW $\frac{1}{4}$ sec. 6, T. 10 N., R. 3 E., above entrance of Griegos drain, $\frac{1}{2}$ miles north of Albuquerque, N. Mex.	8.89
17	Griegos interior drain.	....do.....	SW $\frac{1}{4}$ sec. 6, T. 10 N., R. 3 E., above confluence with Alameda drain, $\frac{1}{2}$ miles north of Albuquerque, N. Mex.	3.83
Apr. 10	Arenal pump ditch.	....do.....	W $\frac{1}{2}$ sec. 13, T. 10 N., R. 2 E., just below pump station at head of Arenal main canal $\frac{1}{2}$ mile west of Albuquerque, N. Mex.	.45
Dec. 23	Atrisco riverside drain.	....do.....	NE $\frac{1}{4}$ sec. 30, T. 10 N., R. 3 E., at crossing of U. S. Highway 85, $\frac{1}{2}$ mile west of Albuquerque, N. Mex.	3.99
23	....do.....	....do.....	NW $\frac{1}{4}$ sec. 31, T. 10 N., R. 3 E., $\frac{1}{2}$ mile south of Armijo and 2 miles south of Albuquerque, N. Mex.	10.3
23	....do.....	....do.....	E $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 12, T. 9 N., R. 2 E., just above Pajarito lateral wasteway, $3\frac{1}{2}$ miles southwest of Albuquerque, N. Mex.	19.4
23	....do.....	....do.....	NW $\frac{1}{4}$ sec. 13, T. 9 N., R. 2 E., 1 mile north of Pajarito and $5\frac{1}{2}$ miles south of Albuquerque, N. Mex.	25.9
23	....do.....	....do.....	W $\frac{1}{2}$ sec. 25, T. 9 N., R. 2 E., $\frac{1}{2}$ mile south of Pajarito and 5 miles north of Isleta, N. Mex.	31.6
23	....do.....	....do.....	NW $\frac{1}{4}$ sec. 1, T. 8 N., R. 2 E., $\frac{1}{2}$ mile east of Los Padillas and 3 miles north of Isleta, N. Mex.	39.5
31	Isleta riverside drain.	....do.....	NE $\frac{1}{4}$ sec. 26, T. 8 N., R. 2 E., $\frac{1}{2}$ mile south of Isleta and $\frac{1}{2}$ mile above gaging station.	6.02
31	....do.....	....do.....	SW $\frac{1}{4}$ sec. 26, T. 8 N., R. 2 E., $\frac{1}{2}$ mile above gaging station, and $\frac{1}{2}$ mile southwest of Isleta, N. Mex.	10.2
20	Isleta interior drain.	....do.....	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 9 N., R. 2 E., above Armijo drain, about 4 miles southwest of Albuquerque, N. Mex.	7.40
20	....do.....	....do.....	SE $\frac{1}{4}$ sec. 22, T. 9 N., R. 2 E., at highway crossing, 1 mile west of Pajarito and $5\frac{1}{2}$ miles north of Isleta, N. Mex.	13.5
20	....do.....	....do.....	SW $\frac{1}{4}$ sec. 2, T. 8 N., R. 2 E., above Los Padillas drain, $2\frac{1}{2}$ miles north of Isleta, N. Mex.	14.4
1937				
Aug. 11	Armijo interior drain.	....do.....	S $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 1, T. 9 N., R. 2 E., above 90° bend to right, about 4 miles south of Albuquerque, N. Mex.	4.01
1936				
Dec. 20	....do.....	....do.....	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 9 N., R. 2 E., above mouth, about 4 miles southwest of Albuquerque, N. Mex.	1.76
1937				
Aug. 11	....do.....	....do.....	....do.....	6.84
1936				
Dec. 20	Los Padillas interior drain.	....do.....	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 9 N., R. 2 E., at highway culvert, $\frac{1}{2}$ mile west of Pajarito and $5\frac{1}{2}$ miles north of Isleta, N. Mex.	†.36

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during water years 1935-36 and 1936-37.

†Discharge estimated.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from	Locality	Discharge (sec.-ft.)
1936 Dec. 20	Los Padillas interior drain.	Rio Grande.....	S $\frac{1}{2}$ sec. 2, T. 3 N., R. 2 E., above confluence with Isleta drain, 2 $\frac{1}{2}$ miles north of Isleta, N. Mex.	1.94
1937 Aug. 11	.....do.....	.....do.....	.....do.....	5.13
1936 Oct. 20	Feeder no. 1 wasteway.	.....do.....	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 7 N., R. 2 E., at road bridge above righthand bend, 4 miles north of Los Lunas, N. Mex.	54.9
Oct. 17	Upper Belen riverside drain wasteway	.....do.....	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 6 E., R. 2 E., above Los Chavez lateral 4 miles south of Los Lunas, N. Mex.	7.42
22	.....do.....	.....do.....	.....do.....	2.88
Dec. 11	Lower Peralta riverside drain.	.....do.....	NW $\frac{1}{4}$ sec. 37, T. 7 N., R. 2 E., at highway culvert $\frac{1}{2}$ mile east of Los Lunas, N. Mex.	10.0
11	.....do.....	.....do.....	W $\frac{1}{2}$ sec. 3, T. 6 N., R. 2 E., above San Fernandes drain 2 miles south of Los Lunas, N. Mex.	13.4
11	.....do.....	.....do.....	N $\frac{1}{2}$ sec. 16, T. 6 N., R. 2 E., 3 $\frac{1}{2}$ miles south of Los Lunas, N. Mex.	26.2
11	.....do.....	.....do.....	NW $\frac{1}{4}$ sec. 28, T. 6 N., R. 2 E., 4 $\frac{1}{2}$ miles above gaging station, and 4 $\frac{1}{2}$ miles northeast of Belen, N. Mex.	42.5
11	.....do.....	.....do.....	NW $\frac{1}{4}$ sec. 4, T. 5 N., R. 2 E., 2 miles above gaging station, and 2 $\frac{1}{2}$ miles northeast of Belen, N. Mex.	53.7
10	Tome interior drain.	.....do.....	W $\frac{1}{2}$ sec. 20, T. 8 N., R. 3 E., $\frac{1}{2}$ mile from head and 2 miles southeast of Isleta, N. Mex.	.86
10	.....do.....	.....do.....	S $\frac{1}{2}$ sec. 36, T. 8 N., R. 2 E., 2 miles south of Isleta, N. Mex., and 2 $\frac{1}{2}$ miles below head.	4.24
10	.....do.....	.....do.....	SE $\frac{1}{4}$ sec. 13, T. 7 N., R. 2 E., $\frac{1}{2}$ mile SE of Peralta and 3 $\frac{1}{2}$ miles NE of Los Lunas, N. Mex.	8.78
10	.....do.....	.....do.....	N $\frac{1}{2}$ sec. 36, T. 7 N., R. 2 E., at bridge, 2 miles above gaging station and 2 $\frac{1}{2}$ miles southeast of Los Lunas, N. Mex.	11.3
10	.....do.....	.....do.....	SW $\frac{1}{4}$ sec. 10, T. 6 N., R. 2 E., 2 miles SW of gaging station and 3 $\frac{1}{2}$ miles south of Los Lunas, N. Mex.	21.9
10	.....do.....	.....do.....	S $\frac{1}{2}$ sec. 22, T. 6 N., R. 2 E., 3 miles above mouth and 5 $\frac{1}{2}$ miles south of Los Lunas, N. Mex.	23.8
10	Valencia interior drain.	.....do.....	W $\frac{1}{2}$ sec. 1, T. 6 N., R. 2 E., above confluence with Tome interior drain, 3 miles southeast of Los Lunas, N. Mex.	5.63
1937 Aug. 19	.....do.....	.....do.....	.....do.....	3.21
26	.....do.....	.....do.....	.....do.....	3.62
Sept. 17	.....do.....	.....do.....	.....do.....	3.42
25	.....do.....	.....do.....	.....do.....	3.34
1936 Dec. 10	El Cerro interior drain.	.....do.....	S $\frac{1}{2}$ sec. 22, T. 6 N., R. 2 E., 5 $\frac{1}{2}$ miles south of Los Lunas, N. Mex.	2.21
Oct. 20	San Juan canal...	.....do.....	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 4 N., R. 2 E., below drop structure, 2 $\frac{1}{2}$ miles southeast of Bosque, N. Mex.	18.8
23	.....do.....	.....do.....	.....do.....	18.6
27	.....do.....	.....do.....	.....do.....	13.8
29	.....do.....	.....do.....	.....do.....	16.4
Nov. 5	.....do.....	.....do.....	.....do.....	12.9
10	.....do.....	.....do.....	.....do.....	23.2
24	.....do.....	.....do.....	.....do.....	33.3
Dec. 17	Sabinal riverside drain.	.....do.....	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 5 N., R. 2 E., 0.3 mile below head and 2 miles southeast of Belen, N. Mex.	1.63
17	.....do.....	.....do.....	E $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 5, T. 4 N., R. 2 E., at culvert, 2 $\frac{1}{2}$ miles below head and 3 $\frac{1}{2}$ miles southeast of Bosque, N. Mex.	8.07
17	.....do.....	.....do.....	S $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 7, T. 4 N., R. 2 E., 0.7 mile above feeder no. 3 wasteway, and 1 $\frac{1}{2}$ miles northeast of Bosque, N. Mex.	16.2
17	.....do.....	.....do.....	E $\frac{1}{2}$ sec. 18, T. 4 N., R. 2 E., at feeder no. 3 wasteway, $\frac{1}{2}$ mile northeast of Bosque, N. Mex.	22.0
17	.....do.....	.....do.....	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 4 N., R. 2 E., at highway crossing, 2 miles southeast of Bosque, N. Mex.	29.2
Dec. 3	Lower San Juan riverside drain.	.....do.....	E $\frac{1}{2}$ sec. 1, T. 3 N., R. 1 E., at bridge, 1.4 miles below head and 3 $\frac{1}{2}$ miles south of Bosque, N. Mex.	6.30
3	.....do.....	.....do.....	S $\frac{1}{2}$ sec. 12, T. 3 N., R. 1 E., 3 $\frac{1}{2}$ miles below head and 5 $\frac{1}{2}$ miles south of Bosque, N. Mex.	13.3
3	.....do.....	.....do.....	SW $\frac{1}{4}$ sec. 24, T. 3 N., R. 1 E., across Rio Grande from Abeyta, 4 miles northeast of Bernardo, N. Mex.	17.4
3	.....do.....	.....do.....	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 3 N., R. 1 E., at drain station 341+00, 3 miles northeast of Bernardo, N. Mex.	20.0
3	.....do.....	.....do.....	NW $\frac{1}{4}$ sec. 1, T. 2 N., R. 1 E., above Las Matias drain, 2 $\frac{1}{2}$ miles northeast of Bernardo, N. Mex.	23.9

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during 1935-36 and 1936-37.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

## Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from	Locality	Discharge (sec.-ft.)
1936 Dec. 3	Lower San Juan riverside drain.	Rio Grande.....	W $\frac{1}{2}$ sec. 12, T. 2 N., R. 1 E., above confluence with Rio Grande, $\frac{1}{4}$ miles east of Bernardo, N. Mex.	35.2
Nov. 17	Rio Puerco.....	....do.....	SE $\frac{1}{4}$ sec. 8, T. 2 N., R. 1 E., 100 ft. below U. S. Highway 85, and 1 mile southwest of Bernardo, N. Mex.	2.06
May 26	Rinconada acequia	....do.....	NE $\frac{1}{4}$ sec. 1, T. 1 S., R. 1 W., $\frac{1}{4}$ mile west of San Acacia diversion dam, $\frac{1}{2}$ mile northeast of San Acacia, N. Mex.	3.25
July 21	....do.....	....do.....	....do.....	3.34
Aug. 14	....do.....	....do.....	....do.....	5.28
19	....do.....	....do.....	....do.....	4.80
26	....do.....	....do.....	....do.....	1.39
28	....do.....	....do.....	....do.....	0
Sept. 25	....do.....	....do.....	....do.....	1.92
May 26	Alamillo acequia.	....do.....	NE $\frac{1}{4}$ sec. 1, T. 1 S., R. 1 W., $\frac{3}{8}$ mile west of San Acacia diversion dam and $\frac{3}{8}$ mile northeast of San Acacia, N. Mex.	5.75
July 8	....do.....	....do.....	....do.....	2.47
21	....do.....	....do.....	....do.....	1.25
31	....do.....	....do.....	....do.....	2.87
Aug. 12	....do.....	....do.....	....do.....	3.03
14	....do.....	....do.....	....do.....	3.45
Sept. 4	....do.....	....do.....	....do.....	1.20
9	....do.....	....do.....	....do.....	.76
25	....do.....	....do.....	....do.....	1.86
May 26	San Acacia lateral.	....do.....	N $\frac{1}{2}$ sec. 1, T. 1 S., R. 1 W., $\frac{1}{2}$ mile west of San Acacia diversion dam, northeast of San Acacia, N. Mex.	3.77
July 8	....do.....	....do.....	....do.....	3.21
21	....do.....	....do.....	....do.....	.85
Aug. 12	....do.....	....do.....	....do.....	.85
14	....do.....	....do.....	....do.....	1.74
19	....do.....	....do.....	....do.....	1.24
26	....do.....	....do.....	....do.....	.92
Sept. 16	....do.....	....do.....	....do.....	.14
25	....do.....	....do.....	....do.....	.21
1937 May 4	Socorro acequia at end.	....do.....	E $\frac{1}{2}$ sec. 19, T. 3 S., R. 1 E., at outlet to Luis Lopez "C" interior drain, $\frac{1}{2}$ miles southeast of Socorro, N. Mex.	14.6
1936 Nov. 18	Apache drain.....	....do.....	NW $\frac{1}{4}$ sec. 25, T. 6 S., R. 1 W., just east of railroad, $\frac{1}{2}$ miles south of Elmendorf, N. Mex.	44.0
Dec. 8	....do.....	....do.....	....do.....	52.9
1937 Aug. 3	Pecos River.....	....do.....	SE $\frac{1}{4}$ sec. 9, T. 11 S., R. 25 E., about 300 feet above mouth of Rio Hondo and about 6 miles east of Roswell, N. Mex.	59.2
4	....do.....	....do.....	....do.....	50.5
3	....do.....	....do.....	NW $\frac{1}{4}$ sec. 10, T. 11 S., R. 25 E., about 800 feet below mouth of Rio Hondo and about 6 miles east of Roswell, N. Mex.	63.2
Aug. 4	....do.....	....do.....	....do.....	58.2
3	....do.....	....do.....	NW $\frac{1}{4}$ sec. 7, T. 14 S., R. 27 E., about 800 feet below Hagerman Bridge and about 2 miles east of Hagerman, N. Mex.	148
4	....do.....	....do.....	....do.....	127
Jan. 20	....dq.....	....do.....	NW $\frac{1}{4}$ sec. 2, T. 15 S., R. 26 E., $\frac{1}{2}$ mile above Lake Arthur Bridge and 3 miles east of Lake Arthur, N. Mex.	86.0
Mar. 23	....do.....	....do.....	500 feet below Red Bluff Dam and 4 miles north of Orla, Tex.	337
June 9	....do.....	....do.....	Peak discharge over spillway at Red Bluff Dam 4 miles north of Orla, Tex.	16,930
-	Tecolote Creek...	Pecos River.....	Near Chapelle, N. Mex.....	20,500
-	Gallinas River...	....do.....	Near Chapelle, N. Mex.....	21,400
June 3	Almogordo Creek.	....do.....	Near Guadalupe, N. Mex.....	24,800
3	Jackson Draw.....	....do.....	Near Fort Sumner, N. Mex.....	12,000
3	Yaso Creek.....	....do.....	Near Fort Sumner, N. Mex.....	8,720
May 28	Cienega del Mocho	....do.....	Near Roswell, N. Mex.....	49,600
June 1	Rio Hondo.....	....do.....	Riverside, N. Mex.....	24,900
1	Berrendo Creek...	Rio Hondo.....	Roswell, N. Mex.....	37,700
Sept. 28	Hagerman Canal at head.	....do.....	NE $\frac{1}{4}$ sec. 31, T. 10 S., R. 25 E., at head, $\frac{1}{2}$ miles east of Roswell, N. Mex.	41.5
Aug. 3	Rio Felix.....	Pecos River.....	NW $\frac{1}{4}$ sec. 8, T. 14 S., R. 26 E., above old highway bridge, $\frac{1}{2}$ miles above gaging station, $\frac{1}{2}$ miles northwest of Hagerman, N. Mex.	4.92
4	....do.....	....do.....	....do.....	4.58

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during water years 1935-36 and 1936-37.

Discharge computed by slope-area method at section in Salt Draw (Screwbean Creek) about 2,000 feet above confluence with Pecos River, 2 miles north of Orla, Tex., and 3 miles downstream from spillway. Discharge does not include 300-500 second-feet released directly to Pecos River through power house at dam.

Miscellaneous discharge measurements in western Gulf of Mexico basins during water year October 1936 to September 1937--Continued

Rio Grande Basin--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
1937				
July 16	Pump ditch.....	Rio Felix.....	NW $\frac{1}{4}$ sec. 3, T. 14 S., R. 26 E., at gaging station on Rio Felix $\frac{1}{2}$ mile below State Highway 2 and 1.6 miles north of Hagerman, N. Mex.	4.43
Aug. 7	....do.....	....do.....	....do.....	3.53
10	....do.....	....do.....	....do.....	3.82
14	....do.....	....do.....	....do.....	3.56
Sept. 25	....do.....	....do.....	....do.....	2.76
29	....do.....	....do.....	....do.....	3.18
Aug. 5	Walnut Draw.....	Pecos River.....	SE $\frac{1}{4}$ sec. 32, T. 15 S., R. 26 E., $\frac{1}{2}$ mile above mouth and 2 miles south of Lake Arthur, N. Mex.	.46
4	....do.....	....do.....	....do.....	†.46
1936				
Dec. 21	Comanche Springs.	Comanche Creek..	At main canal, $\frac{1}{2}$ mile below diversion dam at Fort Stockton, Tex.	**46.8
1937				
Feb. 4	....do.....	....do.....	....do.....	**47.8
Mar. 22	....do.....	....do.....	....do.....	**48.8
May 5	....do.....	....do.....	....do.....	**41.5
Aug. 16	....do.....	....do.....	....do.....	**39.4

\*Includes miscellaneous discharge measurements made in Rio Grande Basin during water years 1935-36 and 1936-37.

†Discharge estimated.

\*\*Total flow of springs.

Tularosa Valley Basin

Nov. 16	La Luz ditch.....	Alamogordo-La Luz ditch.	SW $\frac{1}{4}$ sec. 25, T. 15 S., R. 10 E., at head, $\frac{1}{2}$ mile above La Luz, N. Mex.	0.77
Dec. 18	....do.....	....do.....	....do.....	.91
Jan. 20	....do.....	....do.....	....do.....	1.22
Feb. 24	....do.....	....do.....	....do.....	.68
Mar. 19	....do.....	....do.....	....do.....	.64
Apr. 16	....do.....	....do.....	....do.....	.85
May 11	....do.....	....do.....	....do.....	.74
July 24	....do.....	....do.....	....do.....	.93
Aug. 19	....do.....	....do.....	....do.....	.88
Sept. 26	....do.....	....do.....	....do.....	.65

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