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DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

WATER-SUPPLY PAPER 358

WATER RESOURCES OF THE
RIO GRANDE BASIN

1888-1913

BY

ROBERT FOLLANSBEE AND H. J. DEAN

INCLUDING

SURFACE WATER SUPPLY OF THE UNITED STATES, 1913
PART VIII, WESTERN GULF OF MEXICO BASINS

BY

ROBERT FOLLANSBEE, W. W. FOLLETT
AND GLENN A. GRAY



WASHINGTON
GOVERNMENT PRINTING OFFICE
1915

Monograph



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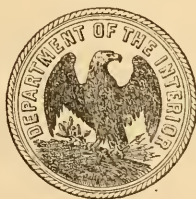
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WATER RESOURCES OF THE RIO GRANDE BASIN, 1888-1913, INCLUDING SURFACE WATER SUPPLY OF THE WESTERN GULF OF MEXICO BASINS, 1913.

By ROBERT FOLLANSBEE and H. J. DEAN.

SCOPE OF REPORT.

This volume, which is one of a series of 12 reports presenting results of measurements of flow made on streams in the United States during the year 1913, includes all data concerning the Rio Grande and its tributaries collected prior to September 30 of that year.

Systematic study of run-off in the Rio Grande basin was begun by the Federal Government near Embudo, N. Mex., soon after the passage of the act of October 2, 1888, which authorized the organization of the irrigation survey under the direction of the United States Geological Survey. A camp of instruction for hydrographers was established near Embudo, and at this camp and the gaging station near by, the methods of stream measurements now in general use were systematized. In the spring of 1889 additional stations were established on the Rio Grande near Del Norte, Colo., and El Paso, Tex. From this beginning the work of measuring the waters of the Rio Grande basin has been expanded not only by the Geological Survey acting alone but by the Survey in cooperation with the American section of the International Water Commission¹ and the State engineers of Colorado and New Mexico. At the end of September, 1913, records had been obtained at 93 gaging stations.

The present report contains not only all data concerning stream flow in the Rio Grande basin collected by the Survey and cooperating parties but also records furnished by individuals connected with private interests. Most of the records here assembled have been taken from the publications of the Geological Survey, but original estimates have been revised where later data have indicated errors. The most notable necessity for revisions was in the older estimates of winter flow of the Rio Grande at Del Norte and Lobatos, the figures given in the present report being considerably lower than those first published. Tables of daily discharge not heretofore published have been supplied from the original computations.

¹ Prior to July 1, 1910, International Boundary Commission.

The drainage area is stated in connection with the run-off data for only a few of the stations, and no estimates of run-off per square mile have been made, for the maps for the greater part of the basin are so poor and the unit run-off for different areas varies between limits so wide that such estimates would be of little value.

The results of studies of precipitation, evaporation, and sedimentation as factors in determining the value of reservoir sites for storage of flood waters, on which future development must largely depend, are also presented in this report.

COOPERATION AND ASSISTANCE.

The American section of the International Water Commission began the work of stream gaging in 1897, by taking over the station at El Paso, Tex., formerly maintained by the Geological Survey. In 1900 a number of stations on the lower Rio Grande and tributaries below El Paso were established by the American and Mexican sections of the Commission, and in 1901 the station on the Rio Grande at San Marcial was taken over from the Geological Survey. These stations have been maintained to the present time under the immediate direction of W. W. Follett, United States consulting engineer, through whom the chairman of the commission has furnished the records and to whom special acknowledgments are due.

A large part of the field data for the Pecos River basin was furnished by the United States Reclamation Service, by whom the stations were maintained.

Since 1909 the State engineer of Colorado has cooperated in the maintenance of the stations in Colorado and for 1912 and 1913 he has furnished all field data.

From 1907 to 1912 the work in New Mexico was carried on under the immediate supervision of the Territorial engineer. During the later part of 1912 a cooperative agreement was made with the State engineer and an office of the Geological Survey was established at Santa Fe in connection with the State engineer's office.

Acknowledgments are due also to the State engineers of Colorado and New Mexico for cooperation in making a complete seepage investigation of the Rio Grande from Del Norte, Colo., to El Paso, Tex., for use in this report.

The United States Forest Service has prepared the data used in compiling the statements regarding forestation in the drainage basin.

Mr. W. L. Rockwell, irrigation engineer, Department of Agriculture, furnished the records of evaporation at the United States Experiment farm near San Antonio, Texas.

Mr. R. H. Forbes, director of the Agricultural Experiment Station at Tucson, Ariz., furnished the records of evaporation near Phoenix, Ariz.

Acknowledgments are also due to a number of corporations and individuals for furnishing records, as noted in connection with each station affected.

The writers have assembled and reviewed the stream-flow data here presented and have made such changes in previously published figures as were necessary to reconcile apparent discrepancies. They have also reviewed and discussed the results of investigations of precipitation, seepage, evaporation, and sedimentation.

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DEFINITION OF TERMS.

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

“Second-foot” is an abbreviation for cubic foot per second and is the unit for the rate of discharge of water flowing in a stream 1 foot wide, 1 foot deep, at a rate of 1 foot per second. It is generally used as a fundamental unit from which others are computed by the use of the factors given in the accompanying table of equivalents.

“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 (depth in inches)” is the depth to which the drainage area would be covered if all the water flowing from it in a given period were conserved and uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in depth in inches.

An “acre-foot” is equivalent to 43,560 cubic feet and 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.

CONVENIENT EQUIVALENTS.

The following is a list of convenient equivalents for use in hydraulic computations:

Table for converting discharge in second-feet per square mile into run-off in depth in inches over the area.

Discharge (second-feet per square mile).	Run-off (depth in inches).				
	1 day.	28 days.	29 days.	30 days.	31 days.
1.....	0.03719	1.041	1.079	1.116	1.153
2.....	.07438	2.083	2.157	2.231	2.306
3.....	.11157	3.124	3.236	3.347	3.459
4.....	.14876	4.165	4.314	4.463	4.612
5.....	.18595	5.207	5.393	5.578	5.764
6.....	.22314	6.248	6.471	6.694	6.917
7.....	.26033	7.289	7.550	7.810	8.070
8.....	.29752	8.331	8.628	8.926	9.223
9.....	.33471	9.372	9.707	10.041	10.376

NOTE.—For part of month multiply the value for 1 day by the number of days.

Table for converting discharge in second-feet into run-off in acre-feet.

Discharge (second- feet).	Run-off (acre-feet).				
	1 day.	28 days.	29 days.	30 days.	31 days.
1.....	1.983	55.54	57.52	59.50	61.49
2.....	3.967	111.1	115.0	119.0	123.0
3.....	5.950	166.6	172.6	178.5	184.5
4.....	7.934	222.1	230.1	238.0	246.0
5.....	9.917	277.7	287.6	297.5	307.4
6.....	11.90	333.2	345.1	357.0	368.9
7.....	13.88	388.8	402.6	416.5	430.4
8.....	15.87	444.3	460.2	476.0	491.9
9.....	17.85	499.8	517.7	535.5	553.4

NOTE.—For part of month multiply value for 1 day by the number of days.

Table for converting discharge in second-feet into run-off in millions of cubic feet.

Discharge (second- feet).	Run-off (millions of cubic feet).				
	1 day.	28 days.	29 days.	30 days.	31 days.
1.....	0.0864	2.419	2.506	2.592	2.678
2.....	.1728	4.838	5.012	5.184	5.356
3.....	.2592	7.257	7.518	7.776	8.034
4.....	.3456	9.676	10.02	10.37	10.71
5.....	.4320	12.10	12.53	12.96	13.39
6.....	.5184	14.51	15.04	15.55	16.07
7.....	.6048	16.93	17.54	18.14	18.75
8.....	.6912	19.35	20.05	20.74	21.42
9.....	.7776	21.77	22.55	23.33	24.10

NOTE.—For part of month multiply the value for one day by the number of days.

Table for converting discharge in second-feet into run-off in millions of gallons.

Discharge (second- feet).	Run-off (millions of gallons).				
	1 day.	28 days.	29 days.	30 days.	31 days.
1.....	0.6463	18.10	18.74	19.39	20.04
2.....	1.293	36.20	37.48	38.78	40.08
3.....	1.939	54.30	56.22	58.17	60.12
4.....	2.585	72.40	74.96	77.56	80.16
5.....	3.232	90.50	93.70	96.95	100.2
6.....	3.878	108.6	112.4	116.3	120.2
7.....	4.524	126.7	131.2	135.7	140.3
8.....	5.170	144.8	149.9	155.1	160.3
9.....	5.817	162.9	168.7	174.5	180.4

NOTE.—For part of month multiply the value for one day by the number of days.

Table for converting velocity in feet per second into velocity in miles per hour.

[1 foot per second=0.681818 mile per hour, or two-thirds mile per hour, very nearly; 1 mile per hour=1.46666 feet per second. In computing the table the values 0.68182 and 1.4667 were used.]

Feet per second (units).	Miles per hour for tenths of foot per second.									
	0	1	2	3	4	5	6	7	8	9
0.....	0.000	0.068	0.136	0.205	0.273	0.341	0.409	0.477	0.545	0.614
1.....	.682	.750	.818	.886	.955	1.02	1.09	1.16	1.23	1.30
2.....	1.36	1.43	1.50	1.57	1.64	1.70	1.77	1.84	1.91	1.98
3.....	2.05	2.11	2.18	2.25	2.32	2.39	2.45	2.52	2.59	2.66
4.....	2.73	2.80	2.86	2.93	3.00	3.07	3.14	3.20	3.27	3.34
5.....	3.41	3.48	3.55	3.61	3.68	3.75	3.82	3.89	3.95	4.02
6.....	4.09	4.16	4.23	4.30	4.36	4.43	4.50	4.57	4.64	4.70
7.....	4.77	4.84	4.91	4.98	5.05	5.11	5.18	5.25	5.32	5.39
8.....	5.45	5.52	5.59	5.66	5.73	5.80	5.86	5.93	6.00	6.07
9.....	6.14	6.20	6.27	6.34	6.41	6.48	6.55	6.61	6.68	6.75

1 second-foot equals 40 California miner's inches (law of March 23, 1901).

1 second-foot equals 38.4 Colorado miner's inches.

1 second-foot equals 40 Arizona miner's inches.

1 second-foot equals 7.48 United States gallons per second; equals 448.8 gallons per minute; equals 646,317 gallons for one day.

1 second-foot for one year covers 1 square mile 1.131 feet or 13.572 inches deep.

1 second-foot for one year equals 31,536,000 cubic feet.

1 second-foot equals about 1 acre-inch per hour.

1 second-foot for one day equals 86,400 cubic feet.

1,000,000,000 (1 United States billion) cubic feet equals 11,570 second-feet for one day.

1,000,000,000 cubic feet equals 414 second-feet for one 28-day month.

1,000,000,000 cubic feet equals 399 second-feet for one 29-day month.

1,000,000,000 cubic feet equals 386 second-feet for one 30-day month.

1,000,000,000 cubic feet equals 373 second-feet for one 31-day month.

100 California miner's inches equals 18.7 United States gallons per second.

100 California miner's inches for one day equals 4.96 acre-feet.

100 Colorado miner's inches equals 2.60 second-feet.

100 Colorado miner's inches equals 19.5 United States gallons per second.

100 Colorado miner's inches for one day equals 5.17 acre-feet.

100 United States gallons per minute equals 0.223 second-foot.

100 United States gallons per minute for one day equals 0.442 acre-foot.

1,000,000 United States gallons per day equals 1.55 second-feet.

1,000,000 United States gallons equals 3.07 acre-feet.

1,000,000 cubic feet equals 22.95 acre-feet.

1 acre-foot equals 325,850 gallons.

1 inch deep on 1 square mile equals 2,323,200 cubic feet.

1 inch deep on 1 square mile equals 0.0737 second-foot per year.

1 foot equals 0.3048 meter.

1 mile equals 1.60935 kilometers.

1 mile equals 5,280 feet.

1 acre equals 0.4047 hectare.

1 acre equals 43,560 square feet.

1 acre equals 209 feet square, nearly.

1 square mile equals 2.59 square kilometers.

1 cubic foot equals 0.0283 cubic meter.

1 cubic foot of water weighs 62.5 pounds.

1 cubic meter per minute equals 0.5886 second-foot.

1 horsepower equals 550 foot-pounds per second.

1 horsepower equals 76.0 kilogram-meters per second.

1 horsepower equals 746 watts.

1 horsepower equals 1 second-foot falling 8.80 feet.

1½ horsepower equals about 1 kilowatt.

To calculate water power quickly: $\frac{\text{Sec.-ft.} \times \text{fall in feet}}{11} = \text{net horsepower on water wheel realizing 80 per cent of theoretical power.}$

EXPLANATION OF DATA.

The data presented in this report cover the years beginning October 1 and ending September 30, and not, as in previous reports, the calendar years. At the first of January in most parts of the country a large amount of precipitation for the preceding three months is stored, either as ground water in the form of snow, or in lakes. This stored water passes off in the streams during the spring break-up. At the end of September the only stored water available for run-off in the streams is possibly a small amount held in ground storage. Therefore, the run-off for a year, beginning with October 1, is practically all derived from precipitation occurring within that year.

The use of this climatic year in studies of stream flow is applicable only to work in the Temperate Zone, as south of about the twenty-eighth parallel of latitude precipitation is greatest during the summer months. The effect of the rainy season in Mexico is shown in the run-off data for all stations on the Rio Grande below El Paso, Tex.

For each regular current-meter gaging station the following data, so far as available, are given: Description of the station, list of discharge measurements, table of daily gage heights, table of daily discharge, table of monthly and yearly discharge and run-off. For stations located at weirs or dams the gage-height table is usually omitted.

In addition to statements regarding the location and installation of current-meter stations the descriptions give information in regard to

any conditions that may affect the constancy of the relation of gage height to discharge, covering such points as ice, logging, shifting channels, and backwater; also information regarding diversions which decrease the total flow at the measuring section. Statements are also made regarding the accuracy of the data.

The table of daily gage heights records the daily fluctuations of the surface of the river as found from the mean of the gage readings taken each day, usually in the morning and in the evening. The gage height given in the table represents the elevation of the surface of the water above the zero of the gage. All gage heights affected by the presence of ice in the streams or by backwater from obstructions are published as recorded, with suitable footnotes. The rating table is not applicable for such periods unless the proper corrections to the gage heights are known and applied. Attention is called to the fact that the zero of the gage is placed at an arbitrary datum and has no relation to zero flow or the bottom of the river. In general the zero is located somewhat below the lowest known flow, so that readings of negative values shall not occur.

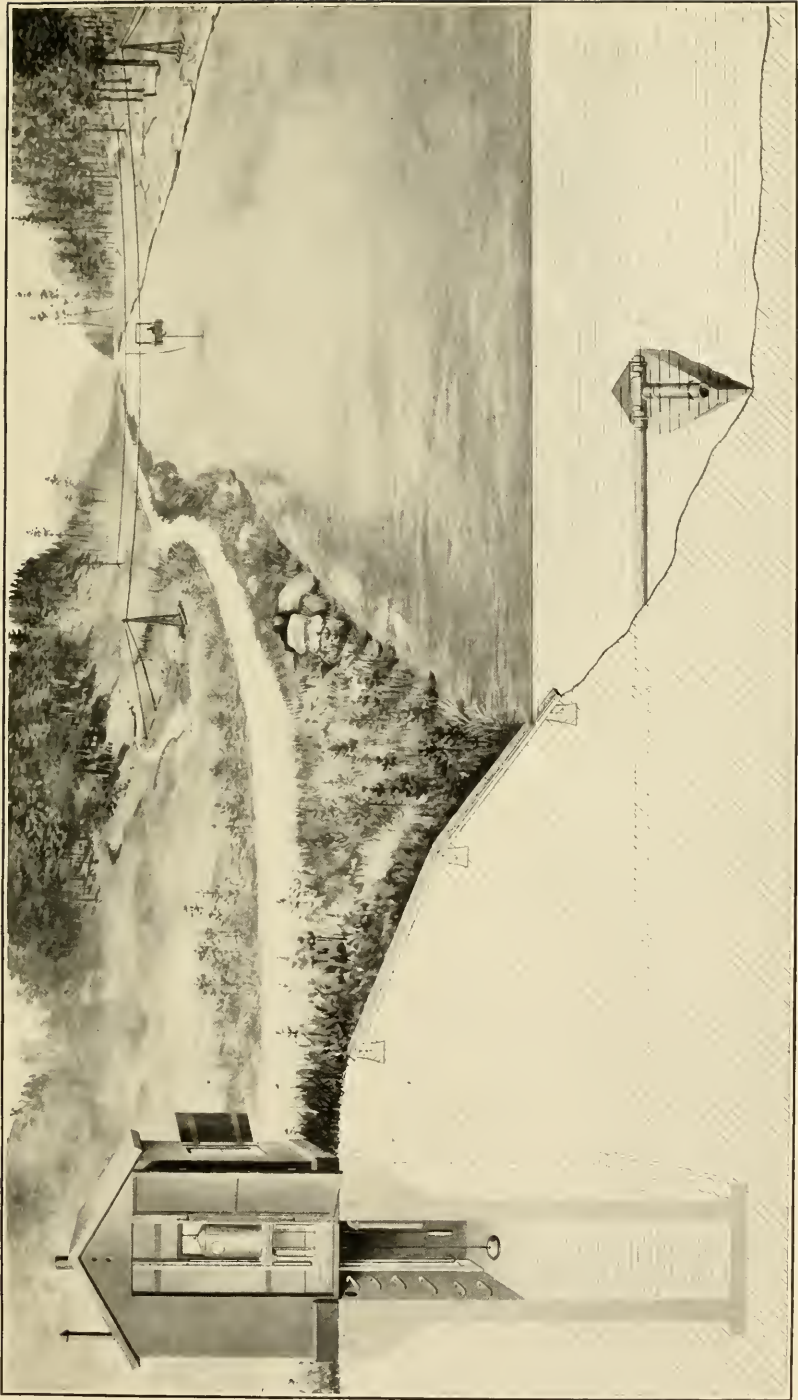
The discharge measurements and gage heights are the base data from which rating tables, daily discharge tables, and monthly discharge tables are computed.

The rating tables gives, either directly or by interpolation, the discharge in second-feet corresponding to every stage of the river recorded during the period for which it is applicable. It is not published in this report, but can be determined from the tables of daily gage heights and daily discharge as follows:

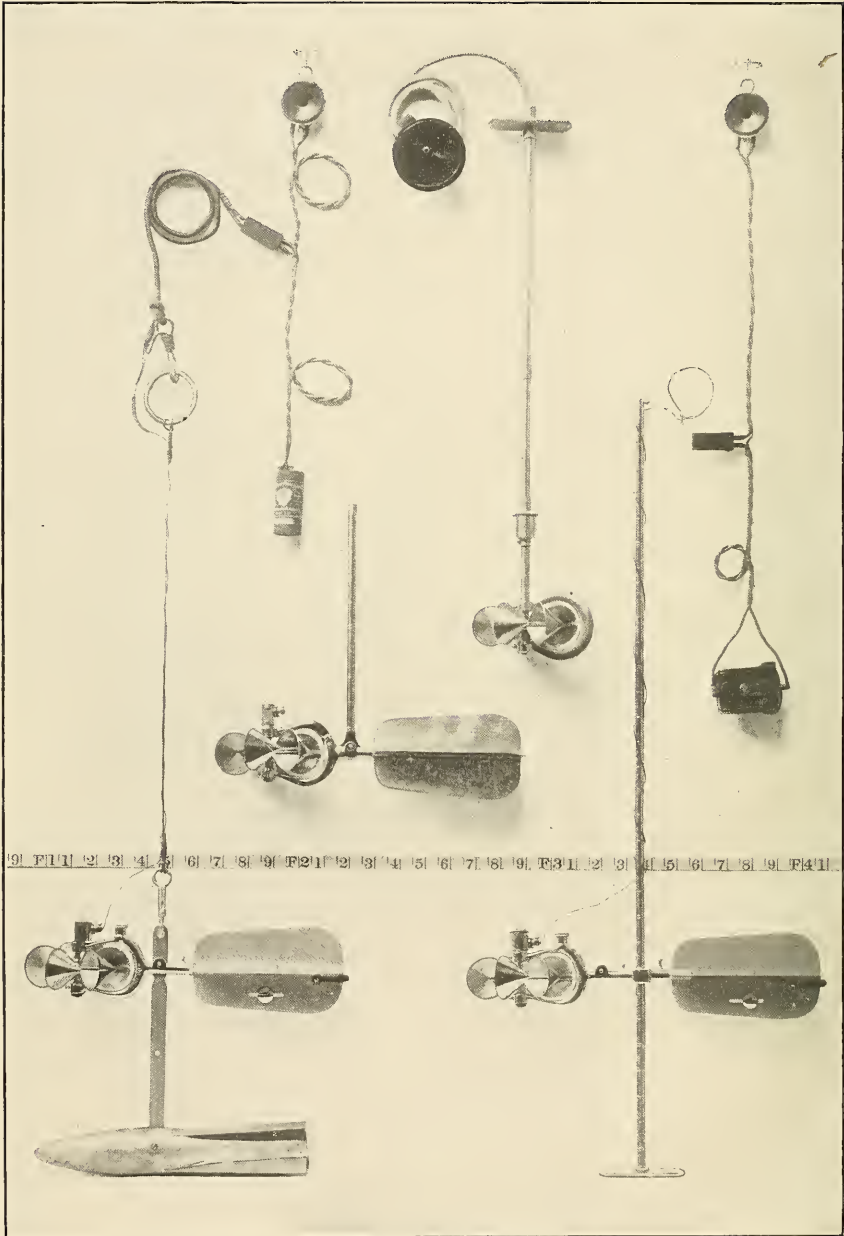
First plot the discharge measurements for the current and earlier years on cross-section paper, with gage heights in feet as ordinates and discharge in second-feet as abscissas. Then tabulate a number of gage heights taken from the daily gage-height table for the complete range of stage given and the corresponding discharges for the days selected from the daily discharge table and plot the values on cross-section paper. The last points plotted will define the rating curve used and will lie among the plotted discharge measurements. After drawing the rating curve a table can be developed by scaling off the discharge in second-feet for each tenth foot of gage height. These values should be so adjusted that the first difference shall always be increasing or constant except for known backwater periods.

The table of daily discharge gives the discharge in second-feet corresponding to the observed gage heights as determined from the rating tables.

In the table of monthly discharge, the column headed "Maximum" gives the mean flow, as determined from the rating table, for the day when the mean gage height was highest. As the gage height is the



TYPICAL GAGING STATIONS.



PRICE CURRENT METERS.

mean for the day, it does not indicate correctly the stage when the water surface was at crest height, and the corresponding discharge was consequently larger than given in the maximum column. Likewise in the column of "Minimum" the quantity given is the mean flow for the day when the mean gage height was lowest. The column headed "Mean" is the average flow in cubic feet for each second during the month. On this the computations for the remaining columns, which are defined on page 12, are based.

The field methods used in the collection of the data presented in this series of reports are described in the introductory sections of United States Geological Survey Water-Supply Papers 261 to 272, inclusive, "Surface water supply of the United States, 1909."

Plate I shows typical gaging stations. Plate II shows current meters used in the work.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS.

The accuracy of stream-flow data depends (1) on the permanence of channel and of the relation between discharge and stage, and (2) on the accuracy of observation of stage measurements of discharge, and interpretation of data.

In order to give engineers and others information regarding the probable accuracy of the computed results, footnotes are added to the daily discharge tables, stating the probable accuracy of the rating curves used, and an accuracy column is inserted in the monthly discharge table. For the rating curves "well defined" indicates, in general, that the rating is probably accurate within 5 per cent; "fairly well defined," within 10 per cent; "poorly defined" or "approximate," within 15 to 25 per cent. These notes are very general and are based on the plotting of the individual measurements with reference to the mean rating curve.

The accuracy column in the monthly discharge table does not apply to the maximum or minimum nor to any individual day, but to the monthly mean. It is based on the accuracy of the rating, the probable reliability of the observer, and knowledge of local conditions. In this column A indicates that the mean monthly flow is probably accurate within 5 per cent; B, within 10 per cent; C, within 15 per cent; D, within 25 per cent. Special conditions are covered by footnotes.

In general the base data collected each year by the Survey engineers are published not only to comply with the law but to afford any engineer the means of examining and adjusting to his own needs the results of the computations. The table of monthly discharge is so arranged as to give only a general idea of the flow at the station and should not be used for other than preliminary estimates. The deter-

minations of daily discharge allow more detailed studies of the variation in flow by which the period of deficiency may be determined.

It should be borne in mind that the observations in each succeeding year may be expected to throw new light on data already collected and published.

GENERAL FEATURES OF THE RIO GRANDE DRAINAGE BASIN.

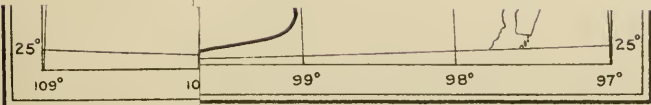
LOCATION AND BOUNDARIES.

The area nominally belonging to the Rio Grande basin comprises the San Luis Valley and the region westward to the Continental Divide in Colorado, the greater part of New Mexico (except the western fifth of the State, and an area in the northeast corner approximately 140 miles square), the western panhandle region in Texas, and a comparatively narrow strip along the lower river; in Mexico it comprises the greater part of the State of Chihuahua, large parts of Coahuila and Nuevo Leon, and small parts of Durango and Tamaulipas. (See Pl. III.)

In Colorado the boundaries of the basin are clearly marked by the almost continuous ring of mountains separating it from the Arkansas basin on the east and the Colorado basin on the north and west.

In New Mexico the boundaries are much less sharply defined, especially on the western border which reaches the high plateaus or mesas that characterize the greater part of the western section of the State and that commonly are either without surface drainage channels or form closed basins draining toward the center. In general, however, the western boundary may be said to coincide with the Cejita Blanca Range, Chacre Mesa, Zuni Mountains, and the west end of the Datil and Black ranges. From the northeast corner of Grant County the boundary line runs southwest to Bear Mountain, whence it takes a southerly direction to the Mexican line. The eastern boundary in New Mexico is more clearly marked. As far south as Las Vegas it consists of the extension of the Sangre de Cristo Range; southeastward from Las Vegas it is well defined by the divides between the lines of natural drainage, until it reaches the high plateau region in Roosevelt County, where it again becomes indefinite, as this region of high plains is devoid of surface drainage lines. Beyond the region of high plateaus, which does not extend east of the one hundred and second meridian, the boundary is fairly well defined to the Gulf, lying parallel to the Pecos at a distance of about 50 miles to the east, and below the mouth of the Pecos roughly paralleling the Rio Grande at an average distance of 30 miles.

In Mexico the boundary of the nominal drainage area coincides with the mountain ranges in the western part of the State of Chi-



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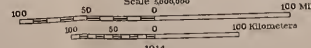
GAGING STATIONS.

No.	STREAM.	LOCATION.
1.	Rio Grande	Thermite Bridge near Creede, Colo.
2.	Rio Grande	Creede, Colo.
3.	Rio Grande	Del Norte, Colo.
4.	Rio Grande	Alamosa, Colo.
5.	Rio Grande	Alamosa, N. Mex.
6.	Rio Grande	Buchanan, N. Mex.
7.	Rio Grande	San Marcial, N. Mex.
8.	Rio Grande	El Paso, Tex.
9.	Rio Grande	Fort Hancock, Tex.
10.	Rio Grande	Priddy, Tex.
11.	Rio Grande	Langtry, Tex.
12.	Rio Grande	Langtry, Tex.
13.	Rio Grande	Langtry, Tex.
14.	Rio Grande	Langtry, Tex.
15.	Rio Grande	Langtry, Tex.
16.	Rio Grande	Langtry, Tex.
17.	Rio Grande	Roma, Tex.
18.	Rio Grande	Roma, Tex.
19.	Clear Creek	Creede, Colo.
20.	South Fork of Rio Grande	South Fork, Colo.
21.	San Luis Creek	Villa Grove, Colo.
22.	Rever Creek	White Pine, Colo.
23.	Saguache River	Saguache, Colo.
24.	Rio Alamosa	Monte Vista, Colo.
25.	Rio Alamosa	Tarocco reservoir, La Jara, Colo.
26.	Compa Creek	Magpie, Colo.
27.	Rio San Antonio	Orin, Colo.
28.	Compa Creek	Orin, Colo.
29.	Rio Colorado	Quartz, N. Mex.
30.	Rio Colorado	Quartz, N. Mex.
31.	Rio Colorado	Quartz, N. Mex.
32.	Rio Colorado	Quartz, N. Mex.
33.	Rio Colorado	Quartz, N. Mex.
34.	Rio Colorado	Quartz, N. Mex.
35.	Rio Colorado	Quartz, N. Mex.
36.	Rio Colorado	Quartz, N. Mex.
37.	Rio Colorado	Quartz, N. Mex.
38.	Rio Colorado	Quartz, N. Mex.
39.	Rio Colorado	Quartz, N. Mex.
40.	Rio Colorado	Quartz, N. Mex.
41.	Rio Colorado	Quartz, N. Mex.
42.	Rio Colorado	Quartz, N. Mex.
43.	Rio Colorado	Quartz, N. Mex.
44.	Rio Colorado	Quartz, N. Mex.
45.	Rio Colorado	Quartz, N. Mex.
46.	Rio Colorado	Quartz, N. Mex.
47.	Rio Colorado	Quartz, N. Mex.
48.	Rio Colorado	Quartz, N. Mex.
49.	Rio Colorado	Quartz, N. Mex.
50.	Rio Colorado	Quartz, N. Mex.
51.	Rio Colorado	Quartz, N. Mex.
52.	Rio Colorado	Quartz, N. Mex.
53.	Rio Colorado	Quartz, N. Mex.
54.	Rio Colorado	Quartz, N. Mex.
55.	Rio Colorado	Quartz, N. Mex.
56.	Rio Colorado	Quartz, N. Mex.
57.	Rio Colorado	Quartz, N. Mex.
58.	Rio Colorado	Quartz, N. Mex.
59.	Rio Colorado	Quartz, N. Mex.
60.	Rio Colorado	Quartz, N. Mex.
61.	Rio Colorado	Quartz, N. Mex.
62.	Rio Colorado	Quartz, N. Mex.
63.	Rio Colorado	Quartz, N. Mex.
64.	Rio Colorado	Quartz, N. Mex.
65.	Rio Colorado	Quartz, N. Mex.
66.	Rio Colorado	Quartz, N. Mex.
67.	Rio Colorado	Quartz, N. Mex.
68.	Rio Colorado	Quartz, N. Mex.
69.	Rio Colorado	Quartz, N. Mex.
70.	Rio Colorado	Quartz, N. Mex.
71.	Rio Colorado	Quartz, N. Mex.
72.	Rio Colorado	Quartz, N. Mex.
73.	Rio Colorado	Quartz, N. Mex.
74.	Rio Colorado	Quartz, N. Mex.
75.	Rio Colorado	Quartz, N. Mex.
76.	Rio Colorado	Quartz, N. Mex.
77.	Rio Colorado	Quartz, N. Mex.
78.	Rio Colorado	Quartz, N. Mex.
79.	Rio Colorado	Quartz, N. Mex.
80.	Rio Colorado	Quartz, N. Mex.
81.	Rio Colorado	Quartz, N. Mex.
82.	Rio Colorado	Quartz, N. Mex.
83.	Rio Colorado	Quartz, N. Mex.
84.	Rio Colorado	Quartz, N. Mex.
85.	Rio Colorado	Quartz, N. Mex.

LEGEND

- 47* Gaging station
(Numbers refer to those in list)
- 16 Lines of equal rainfall
(Figures show rainfall in inches per year)
- Areas having no outside drainage

MAP OF RIO GRANDE DRAINAGE BASIN



huahua. It turns eastward in the northern part of the State of Durango and takes a generally easterly course to the Gulf at the mouth of the Rio Grande. As in the United States, however, the effective drainage area of the river is considerably reduced by the large nonproducing areas.

TOPOGRAPHY.

The topographic features of the area drained by the Rio Grande range in variety from mountain peaks 14,000 feet and more in elevation to the low plains bordering the Gulf. The most important area as regards water supply is the mountainous part of the Colorado section above San Luis Valley, where the Rio Grande and its tributaries flow through narrow valleys whose sides extend up to the crest of the Continental Divide. San Luis Valley is a high level plateau at an elevation ranging from 7,500 to 8,000 feet.

The New Mexico section of the basin is a high plateau region traversed from north to south by more or less parallel mountain ranges that form long, narrow valleys, some of which are completely inclosed. In this area elevations range from 13,000 feet in the mountains near Santa Fe to less than 4,000 feet in the valleys of the Rio Grande and Pecos.

Below El Paso, in the trans-Pecos region of Texas, there is a mountainous area that probably extends into the Mexican part of the basin and that, in Texas, attains altitudes of 7,000 to 8,000 feet. East and south of the trans-Pecos region the country gradually becomes smoother, passing from the high-plateau region to the Coastal Plain by crossing the fall line below the mouth of the Pecos. The Coastal Plain is characteristically a region of comparatively low relief, but its surface is broken by occasional undulations and hills of considerable height.

CLOSED BASINS.

As the Rio Grande as far south as El Paso and beyond traverses the high plateau or intermountain region, the drainage boundaries include many areas from which neither the river nor its tributaries receive any surface run-off.

SAN LUIS VALLEY.

The nonproducing area nearest the headwaters is found in San Luis Valley, in Colorado, north of the Rio Grande. The drainage from the entire northern portion of the valley flows into a group of lakes, of which the San Luis is the largest. As these lakes have no surface outlet, the water is lost by evaporation or possibly in part by seepage. "The old overflow drainage course to the Rio Grande still exists, but it has been so blocked and concealed by incipient

sand dunes as to be very difficult to trace, except in its general features."¹ The drainage area included in this nonproductive basin is approximately 2,700 square miles.

BASINS BETWEEN RIO GRANDE VALLEY AND PECOS BASIN.

Beginning about 25 miles south of Santa Fe and extending as far south as El Paso, there is a wide strip of country stretching from within a few miles of the Rio Grande valley eastward to the Guadalupe, Sacramento, and Jicarilla mountains and the Sierra Blanca. This area is divided lengthwise by the Organ and San Andreas mountains, the Sierra Oscura, and the Chupadera Mesa into two distinct basins, each draining toward the center and having no outlet for surface drainage. The western division comprises the Jornada del Muerto ("journey of death," so called by the earliest travelers from its desert wastes), which is separated from the Rio Grande valley by the mountain ranges paralleling it. Within this area, which is an almost level plain, surface waters from the mountains drain toward the center but sink into the porous soil before reaching very far out on the plain. There are no cross-drainage channels.

The eastern division includes at the north Estancia Valley a closed depression comprising an area of approximately 2,000 square miles, without perennial streams except tiny ones in the mountains that sink as soon as they reach the plain, and the Encino and Pinos Wells basins, lying east of Estancia Valley. Owing to the relatively elevated position of this area it is possible that some of the ground water may find its way into the lower adjacent regions.² South of Estancia Valley is the Tularosa Basin, 150 miles in maximum length, 60 miles in maximum width, and containing approximately 6,000 square miles.³ Southeast of the Tularosa Basin, and separated from it by the Hueco Mountains, is a large nonproducing area which stretches to the Guadalupe Mountains on the east and nearly to the Rio Grande in El Paso, Culberson, Jeff Davis, and northern Presidio counties in Texas, and which is another practically closed basin, draining toward a central area where the water is lost by absorption and evaporation.⁴

The nonproducing area between the Rio Grande and Pecos valleys above El Paso comprises approximately 13,000 square miles.

¹ Siebenthal, C. E., *Geology and water resources of the San Luis Valley, Colorado*: U. S. Geol. Survey Water-Supply Paper 240, p. 12, 1910.

² Meinzer, O. E., *Geology and water resources of Estancia Valley, New Mexico*: U. S. Geol. Survey Water-Supply Paper 275, 1911.

³ Meinzer, O. E., *Geology and water resources of Tularosa Basin, New Mexico*: U. S. Geol. Survey Water-Supply Paper 343, 1914.

⁴ Richardson, G. B., *U. S. Geol. Survey Geol. Atlas, El Paso folio (No. 166)*.

BASINS WEST OF RIO GRANDE.

Across the Rio Grande from the Jornada is another closed basin, known as La Mesa, which extends from a point near Las Cruces southward into Mexico, sloping gently to the south. West of La Mesa is a closed basin several hundred square miles in area, which is drained by Mimbres River, an interior stream. Thus, it may be considered that the western boundary of the effective drainage area follows the Mimbres Range and then turns eastward, reaching nearly to the Rio Grande and paralling that stream within a few miles to the Mexican line.

BASIN EAST OF PECOS RIVER IN NEW MEXICO.

The Rio Grande basin in southeastern New Mexico comprises a part of the plateau area known as the High Plains and contributes no surface drainage to the river, for the rainfall is quickly evaporated or absorbed. The western edge of the High Plains area lies roughly parallel to the Pecos at a distance of 15 to 20 miles. The strip of area between the edge of the High Plains and the Pecos is almost devoid of drainage channels extending to the river, as the streams quickly lose themselves in the soil. Thus practically no surface run-off reaches the Pecos from the area lying to the east in Chaves and Eddy counties, N. Mex. Farther south, in Texas, the drainage lines are somewhat better developed, insuring the entrance into the Pecos of surface drainage from the eastern part of its basin.

BASINS IN MEXICO.

The region known as La Mesa in New Mexico extends southward into Mexico and merges with other nonproducing areas, cutting down the effective area from which surface run-off is secured to a comparatively narrow strip along the western side of the Rio Grande from Juarez nearly to the mouth of the Rio Conchos. East of the comparatively narrow area drained by Rio Conchos there is a large bolson or nonproducing area comprising many hundred square miles in the southeastern part of Chihuahua, western part of Coahuila, and northern part of Durango. These two regions comprise approximately one-third of the nominal drainage area of the Rio Grande in Mexico.

PRECIPITATION.

PERIODS COVERED BY RECORDS.

Relatively so few rainfall records of any considerable length are available for this section of the country that, in order to obtain a uniform basis for determining the distribution of rainfall throughout

the Rio Grande Basin, it was necessary to use the comparatively short period of 10 years, from 1903 to 1912, inclusive, but even this period was too long to include more than three or four stations in the Colorado portion of the area, so it has not been possible to show graphically the distribution in that section.

The part of the basin in New Mexico is fairly well covered with 36 10-year records and with sufficient records of greater length to enable comparison between the 10-year mean and the station mean for periods ranging from 30 to 54 years. The following table shows this comparison:

Comparison between 10-year mean and station mean in New Mexico.

Station.	Length of record.	Station mean.	10-year mean.	Discrepancy.
	Years.	Inches.	Inches.	Inches.
Santa Fe.....	54	14.7	13.4	-1.3
Fort Union.....	47	18.5	18.4	-.1
Albuquerque.....	30	7.5	8.3	+.8
Fort Wingate.....	42	14.5	15.6	+1.1
San Marcial.....	41	9.2	9.8	+.6
Fort Stanton.....	35	16.4	16.1	-.3
Fort Bayard.....	39	15.2	16.7	+1.5
Mesilla Park.....	49	8.6	8.3	-.3

From this table it is seen that at no point does the mean for the 10-year period differ from the station mean for 30 years or more by as much as 2 inches.

The part of Texas drained by the Rio Grande is so sparsely settled that it has been impossible to obtain records covering the 10-year period from 1903 to 1912 at more than a dozen points within or bordering it. But as the distribution of rainfall is more uniform in Texas than in the upper part of the Rio Grande basin, these records are sufficient to show the distribution approximately. The following table shows the comparison between the 10-year mean and the station mean for the long-time records available:

Comparison between 10-year mean and station mean in Texas.

Station.	Length of record.	Station mean.	10-year mean.	Discrepancy.
	Years.	Inches.	Inches.	Inches.
El Paso.....	50	9.1	9.4	+0.3
Fort Stockton.....	30	15.2	13.7	-1.5
Eagle Pass.....	34	21.0	18.2	-2.8
Fort Clark.....	33	22.4	20.5	-1.9
San Antonio.....	39	28.0	24.5	-3.5
Fort McIntosh.....	37	19.8	20.2	+.4
Corpus Christi.....	25	25.7	24.3	-1.4
Brownsville.....	40	26.9	25.4	-1.5

From this table it appears that the precipitation in the 10-year period ranged from 1.5 to 3.5 inches below the normal, except at Fort McIntosh and El Paso, where it was slightly above.

DISTRIBUTION.

The records of precipitation in the Colorado part of the Rio Grande basin are few and for the most part scattering, especially at the higher altitudes. The longest record is that at San Luis (elevation 7,794) in the eastern part of the San Luis Valley, and this is continuous only since 1891. At Marshall Pass (elevation 10,856) there is an 8-year record; at Cumbres (elevation 10,015), a 5-year record; at Hermit (elevation 9,843), a 3-year record; and at Antelope Springs (elevation 8,902), a 3-year record. The remaining records are either at lower altitudes or are too meager to be of much value.

The existing data show the mean annual precipitation to be heaviest on the Conejos Mountains on the western boundary. The annual precipitation at Platoro (elevation 10,015) is upward of 22 inches, and at Cumbres (elevation 10,800) observations in 1877 and 1878 showed a mean precipitation of 36 inches. In the upper part of the basin, although the altitudes are nearly as great, the precipitation is somewhat less, as shown by a mean of 16 inches for 2 years at Hermit (elevation 9,843) and a mean of 16 inches for 8 years at Marshall Pass (elevation 10,856). The greater precipitation in the Conejos Mountains is probably due to the fact that to the west there are no large mountain masses to induce precipitation before reaching the Conejos Range, as in the case of the mountains bounding the headwater streams.

The precipitation rapidly decreases with the altitude, falling from the values just given to a mean ranging from 7 to 9 inches in the San Luis Valley, where the elevation ranges between 7,500 and 8,000 feet. The influence of the Sangre de Cristo Range, located on the eastern border of the area, in inducing rainfall, especially during the prevailing periods of easterly winds, is seen by the increased precipitation as these mountains are approached. At Blanca (elevation 7,865) the mean for 3 years is nearly 10 inches, and at San Luis (elevation 7,794) the mean for 22 years is 11.6 inches. Two years' record at La Veta Pass (approximate elevation 9,500) gives a mean precipitation of about 20 inches.

To show graphically the mean annual distribution of rainfall throughout the New Mexico and Texas portions of the basin, lines of equal rainfall for variations of 2 inches have been drawn on the map (Pl. III). Altitude has such a marked influence on precipitation, especially in the upper parts of the basin, that it was necessary to take this into account so far as possible in showing the approxi-

mate position of these lines. In the eastern part of New Mexico the relation between the two is fairly well defined and is shown on the map. No attempt was made to show local areas of high precipitation due to detached mountain ranges as the data were too meager. For the higher altitude in the mountains northeast of Santa Fe, use was made of records as short as five and six years.

The lines show the mean distribution of rainfall in New Mexico for the 10-year period 1903-1912, which, as explained on page 22, will probably not differ more than 2 inches for the mean variation for a much longer period. The chief characteristics of the distribution are the narrow belts of low precipitation following the Rio Grande and Pecos Valleys and the two areas of high precipitation, one in the mountainous region just north of Las Vegas, where means of 24 inches were obtained, and the other in the area of high altitude on the western edge of the Pecos basin in Otero, Chaves, and Lincoln Counties, where a mean of 23 inches was recorded. For the remainder of the State the precipitation (with the exception of the isolated mountain ranges) ranges from 11 to 17 inches.

In Texas the lines of precipitation are not so well defined as in New Mexico and are probably several inches lower than the mean for a long-time period. It is seen that the precipitation increases fairly uniformly from 9 inches near El Paso to 19 inches at the mouth of the Pecos. From that point to the eastern edge of Starr County it rapidly increases to 25 inches at the mouth.

RELATION BETWEEN PRECIPITATION AND RUN-OFF.

Comparison between precipitation and run-off for the various parts of the United States has been made by Henry Gannett, of the United States Geological Survey, who found that where the annual precipitation is less than 20 inches no definite relation exists, as apparently the needs of vegetation require that much. With less than this amount of precipitation the run-off will depend almost entirely on the intensity of the rainfall rather than upon its total annual amount. Short violent storms will cause a comparatively large percentage of the precipitation to run off as surface water, whereas the same or even a larger total precipitation occurring as gentle showers may have practically no run-off, the water finding its way into underground channels, evaporating, or being absorbed by vegetation. As there are only a few points in the Rio Grande basin where the annual rainfall exceeds 20 inches, it is seen that no definite relation exists between precipitation and run-off. Any possible relation is still further complicated by diversion of the waters for irrigation and by the large nonproducing areas in the upper parts of the drainage area.

FORESTATION.¹

By far the greater part of the forested areas in the Rio Grande basin in Colorado, and to a somewhat less extent in New Mexico, are included in the national forests. Data concerning forested areas in Texas and Mexico are lacking, but in Texas, at least, these areas are relatively unimportant.

The headwater area in Colorado contains three national forests. Of these the Cochetopa lies in the basins of the Saguache and other tributaries of the San Luis, whose waters do not reach the Rio Grande at least as surface run-off, so that this forest may be disregarded in considering the effective area with respect to the Rio Grande. The San Isabel Forest may be disregarded for the same reason, as it embraces the northern part of the Sangre de Cristo range, from which no surface run-off reaches the Rio Grande. The Rio Grande Forest includes practically all the mountainous area in Colorado which contributes surface run-off to the Rio Grande, except a relatively small section in the southern part of the Sangre de Cristo range, from which the surface run-off per square mile is considerably less than from the other mountainous areas. The area of the Rio Grande Forest is 1,858 square miles.

Owing to a number of causes, such as areas above timber line, open parks and grassy plains within the timber, and areas burned over by forest fires not more than 59 per cent, or 1,100 square miles, of the area within the forest can be considered timbered. The various types of timber with the relative area of each are given in the following table:

Relative types of forest cover in Rio Grande Forest.

Commercial:	Percent of area.
Engelmann spruce.....	30
Douglas fir.....	3
Western yellow pine.....	3
Noncommercial: Piñon, willow, etc.....	5
Temporary: Aspen, gradually being replaced with commercial types by natural means.....	18
Miscellaneous (not forested):	
Burns (not restocking).....	10
Parks and meadows above timber line.....	5
Parks, meadows, etc., below timber line.....	23
Barren (above timber line).....	3
	100

The diversity of the forest cover varies with species and types. Tolerant species—those which endure much shade—will, of course, cause much more shade and permit a more dense growth than an intolerant species. The Engelmann spruce is very tolerant of shade,

¹ Prepared from data furnished by the U. S. Forest Service.

and yellow pine is most intolerant. In a scale of 10 the following table will probably illustrate very closely the density of the different types of forest cover:

Density of forest cover in Rio Grande Forest.

	Density (in a scale of 10).
Engelmann spruce.....	7
Douglas fir.....	5
Western yellow pine.....	3
Piñon.....	3
Willows and aspen.....	8

The foregoing tables indicate that the species having the greatest density of growth—namely, Engelmann spruce, willows, and aspens—cover nearly 1,000 square miles, and the species having a very much lighter growth cover 110 square miles. About 758 square miles within the forest lack forest cover.

In New Mexico the forested areas are found only in the mountainous sections, as on the plains the rainfall is too small to permit timber growth. In the area drained by the Rio Grande above El Paso the forested area amounts to approximately 10,000 square miles, of which 7,000 square miles are included in the national forests. It is impossible to give a close estimate of the amount of open land in the forests, but it is probably between 25 and 35 per cent. Assuming 30 per cent as land not timbered, the effective area within the 10,000 square miles would be reduced to 7,000 square miles. In these forests the denser species, such as spruce, willows, and aspens found in Colorado, comprise a very much smaller area of forest, and therefore the forests in New Mexico are much more open than those in Colorado. The many streams which sink into the ground before reaching the Rio Grande make it almost impossible to state with any degree of accuracy the effective forest area covering drainage basins whose waters actually reach the Rio Grande.

POPULATION.

The Rio Grande drains a section of the United States that is very sparsely settled. The following table, compiled from the reports of the Bureau of the Census, shows a population of the drainage by counties for 1910, 1900, and 1890, and the population per square mile:

Population in Rio Grande drainage basin.

County.	1910	1900	1890	Popu- lation per square mile, 1910.	County.	1910	1900	1890	Popu- lation per square mile, 1910.
COLORADO.					TEXAS.				
Hinsdale.....	646	1,609	862	0.7	El Paso.....	52,599	24,886	15,678	5.6
Mineral.....	1,239	1,913	.....	1.4	Reeves.....	4,392	1,847	1,247	1.6
Saguache.....	4,160	3,853	3,313	1.3	Loving.....	249	33	3	.3
Rio Grande.....	6,563	4,080	3,451	7.3	Winkler.....	442	60	18	.5
Costilla.....	5,498	4,632	3,491	3.1	Ector <i>a</i>	1,178	381	224	1.3
Conejos.....	11,285	8,794	7,193	8.1	Crane.....	331	51	15	.4
NEW MEXICO.					Ward.....	2,389	1,451	77	2.9
Rio Arriba <i>a</i>	16,624	13,777	11,534	2.8	Upton <i>a</i>	501	48	52	.4
Taos.....	12,008	10,889	9,868	5.3	Crockett.....	1,296	1,591	194	.4
San Miguel <i>a</i>	22,930	22,053	24,204	4.8	Pecos.....	2,071	2,360	1,326	.5
Santa Fe.....	14,770	14,658	13,562	7.5	Jeff Davis.....	1,678	1,150	1,394	.7
Sandoval.....	8,579	.....	.....	2.2	Presidio.....	5,218	3,673	1,698	1.4
McKinley <i>a</i>	12,963	.....	.....	2.4	Brewster.....	5,220	2,356	710	.9
Valencia <i>a</i>	13,320	13,895	13,876	2.4	Terrell.....	1,430	.....	.....	.5
Bernalillo.....	23,606	28,630	20,913	19.4	Valverde.....	8,613	5,263	2,874	2.8
Torrence.....	10,119	.....	.....	3.0	Sutton <i>a</i>	1,569	1,727	658	1.0
Guadalupe.....	10,927	5,429	.....	2.7	Kinney <i>a</i>	3,401	2,447	3,781	2.6
Roosevelt.....	12,064	.....	.....	5.3	Maverick <i>a</i>	5,151	4,066	3,698	4.1
Chaves.....	16,850	4,773	.....	1.8	Webb <i>a</i>	22,503	21,851	14,842	7.0
Lincoln.....	7,822	4,953	7,081	1.6	Zapata.....	3,809	4,760	3,562	3.0
Socorro <i>a</i>	14,761	12,195	9,595	1.0	Starr.....	13,151	11,469	10,749	4.9
Sierra.....	3,536	3,158	3,630	1.1	Hidalgo <i>a</i>	13,728	6,837	6,534	6.0
Luna.....	3,913	.....	.....	1.3	Cameron <i>a</i>	27,158	16,095	14,424	11.2
Dona Ana.....	12,893	10,187	9,191	3.4					
Otero.....	7,069	4,791	.....	1.1					
Eddy.....	12,400	3,229	.....	1.8					

a Not wholly within Rio Grande drainage basin.

In the headwater region, where mining is the chief industry, the population is about 1 per square mile and shows a decrease with the decline of that industry. The agricultural region, comprising Saguache, Rio Grande, Costilla, and Conejos counties, Colo., chiefly in the San Luis Valley, showed a substantial increase from 1900 to 1910 and, as might be expected, has a considerable denser population. The New Mexico part has shown a slow increase in population except in the southeastern quarter of the State, where the increase has been rapid, largely owing to the extension of irrigation, especially in Chaves and Eddy counties. The most thickly settled section is the north-central part of the State where irrigation has been carried on extensively for many years. Here the density is 5.3 per square mile for Taos, 7.5 for Santa Fe, 4.8 for San Miguel, and 19.4 for Bernalillo. The other sections where the density is from 1 to 3 per square mile are chiefly given over to stock raising, although in the valleys along the Rio Grande itself there are many thousand acres of irrigated land.

The most sparsely settled section of the entire drainage area is the trans-Pecos region of Texas and the counties bordering it on the east. Here the average density of population is less than 1.0 per square mile. Leaving the high plateau region and coming to the coastal plain the density increases from 2.6 per square mile in Kinney County to 4.1 in

Maverick, 7.0 in Webb—falls off to 3.0 in Zapata, increases to 4.9 in Starr and 6.0 in Hidalgo counties. In general, the rate of increase has been greater in Texas than in either New Mexico or Colorado.

THE RIVER.¹

GENERAL FEATURES.

The Rio Grande rises near the crest of the Continental Divide on the eastern slope of the San Juan Mountains in Colorado, at an elevation of approximately 12,500 feet above sea level, takes a general southeasterly course, and discharges into the Gulf of Mexico, a few miles east of Brownsville, Tex. From its source the river follows an easterly course through a narrow canyon-like valley nearly to Del Norte, where the steep sides of the valley recede to inclose the large, level park-like region known as the San Luis Valley, which extends for a distance of 150 miles north to south with maximum width of 50 miles, and through which the river flows for the most part between low banks. From Del Norte the general course of the Rio Grande is southeastward to Garland Junction, where it becomes southward.

Four miles above the Colorado-New Mexico line, at the lower end of San Luis Valley, the river enters a canyon locally known as the Rio Grande Canyon, which continues to the head of Espanola Valley near Embudo. This canyon increases in depth from 100 feet at the State line to 700 feet near the mouth of Rio Hondo and appears from above as a gash in an otherwise level mesa. The fall of the river through the canyon is about 30 feet per mile. For a large part of its remaining course the stream passes through a succession of valleys or erosion basins which are separated by rock canyons and are limited in form and size by the character of the material in which they were excavated.

From the lower end of the Rio Grande Canyon the river flows through Espanola Valley (which is 3 to 4 miles wide and extends to a point near San Ildefonso) and enters White Rock Canyon, a narrow gorge, about 20 miles long and in places 500 feet deep, which owes its existence to sheets of hard igneous rock that protect the underlying sands and gravels. The fall in this canyon is about 10 feet per mile.

At a point almost directly west of Santa Fe, the river enters Santo Domingo Valley, through which it flows to the upper end of San Felipe Canyon, 7 miles south of the Indian pueblo of Santo Domingo. This valley is 1 to 3 miles wide and contains about 13,000 acres of bottom land that has been irrigated for many years. The greater part of this land lies only a few feet above the bed of the river and is subject to frequent overflow.

¹ The description of the part of the drainage basin in New Mexico is taken largely from Lee, W. T., Water resources of the Rio Grande Valley in New Mexico: U. S. Geological Survey Water-Supply Paper 188, 1907.

Passing through San Felipe Canyon, which is a short gorge, the river enters Albuquerque Valley, through which it flows for a distance of about 35 miles until it reaches Isleta Narrows. Albuquerque Valley ranges in width from 1 to 5 miles and comprises approximately 70,000 acres of bottom land. It is bounded on both sides by steep bluffs of sand and gravel.

The narrowing at Isleta Narrows is caused by the presence of the hard igneous rock of an extinct volcanic cone west of Isleta. Below the narrows the river flows for 45 miles through Belen Valley, which extends to San Acacia and contains approximately 65,000 acres of bottom land.

From Belen Valley the river passes through San Acacia Gorge—a short, narrow gorge, 250 feet deep, cut through an arm of the lava sheet which crosses the river course—and enters Socorro Valley, which extends southward to San Marcial, a distance of 40 miles and comprises about 60,000 acres of bottom land.

Beginning a short distance below San Marcial is a narrow valley, about 40 miles long, which is cut in detritus and which differs from the others in being very narrow and having no bottom lands. This valley is the site of the Engle reservoir under construction by the United States Reclamation Service. A few miles north of Elephant Butte the river enters a narrow rock canyon which extends to the end of the Caballos Mountains and in which, opposite Elephant Butte, is the Engle dam site.

Below Elephant Butte Canyon the Rio Grande flows through Las Palomas Valley to Rincon, a distance of 50 miles. The bottom lands in this valley include approximately 26,000 acres. From Las Palomas Valley the river enters Selden Canyon, which is 18 miles long but is not so uniformly narrow as the previous canyons, containing about 8,000 acres of bottom land.

Emerging from Selden Canyon at old Fort Selden, the river enters Mesilla Valley, the largest of the erosion basins of the Rio Grande, extending southward 50 miles to The Pass. The valley has a maximum width of 8 miles and contains approximately 150,000 acres of bottom land. It is cut in unconsolidated sand and gravel, its floor being 300 feet lower than the mesa level.

Below Mesilla Valley, just above El Paso, the river flows through a narrow gorge about 90 feet deep, cut in a low ledge of hard rock.

From El Paso to its mouth the river forms the boundary between the United States and Mexico. For a distance of 100 miles below El Paso it flows in a broad lowland known as El Paso Valley, 250 feet below the general upland level. This plain becomes gradually narrower, until it terminates at a point 100 miles southeast of El Paso and the river cuts through a narrow gorge, 5 miles long, formed by the southeastern extension of the Quitman Mountains.

Below the canyon is another broad valley, 16 miles long, which terminates a few miles above the mouth of Glenn Creek. For the next 60 miles the river flows through a mountainous region where the valley is narrow and in many places gorgelike. Near Ruidoso the mountains recede, leaving a broad valley with comparatively gentle side slopes. This characteristic of the topography continues for the next 60 miles (measured in a straight line) until at a point about 20 miles below Presidio the river again enters a canyon. Thence to the fall line, near Del Rio, the river flows through a succession of canyons and narrow valleys, with an occasional area in which the mountains are sufficiently far apart to include valleys of considerable area.

From Del Rio to the mouth the river flows through the coastal plain region, which is characterized by comparatively low topographic relief, and a few miles east of Brownsville, Tex., it discharges into the Gulf of Mexico.

TRIBUTARIES.

Above San Luis Valley the tributaries of the Rio Grande are perennial mountain streams, the most important (named in descending order) being Pole, Lost Trail, Glear, Crooked, Calma, Willow, and Hot Spring creeks and the South Fork. Little water is diverted from the Rio Grande and its tributaries before it enters the valley, so the flow at that point represents the natural run-off from approximately 1,200 square miles of mountain area ranging from 8,000 to 14,000 feet in altitude.

Through San Luis Valley the Rio Grande received no perennial tributaries from the north and east as the run-off from the Saguache and tributaries which drain the northern part of the valley is lost by seepage and evaporation before reaching the river. The Trinchera and the Culebra, which enter from the east, together with the Costilla, which enters from the west just south of the Colorado-New Mexico line, are important tributaries during the spring run-off and after heavy rains but are dry during portions of the year. From the west are received the waters of Wolf, Los Pinos, and San Francisco creeks in the vicinity of Del Norte, and Rio Alamosa, La Jara Creek and Conejos River, none of which, although perennial streams, represents the natural run-off from its drainage area on account of the many irrigation diversions and the possible seepage losses in crossing the valley.

Between the State line and the mouth of Chama River the only perennial tributaries of importance are Rio Colorado, Rio Hondo, Embudo Creek, and Rio Taos. Chama River, which enters the Rio Grande at Chamita, is one of the most important tributaries of the upper river. From Chamita to Albuquerque the only noteworthy tributaries are Santa Cruz, Santa Clara, San Ildefonso, and Jemez

rivers. As the Santa Cruz and San Ildefonso have their source in the Sangre de Cristo Mountains they are probably perennial streams, although confirmatory records are lacking. The Jemez, which enters a short distance above Bernalillo, carries but little water to the Rio Grande except during the spring floods.

The effect that underground sources have upon the flow of the river is shown by the various seepage measurements made. (See p. 679.)

From Albuquerque to El Paso the Rio Grande has no important perennial tributaries. The largest flood stream is Rio Puerco, which drains a large area but is dry at its mouth the greater part of the year. There are many smaller flood-water tributaries, such as the Alamosa, Cuchillo, Negra, Palomaso, Seco, Las Animas, and Percha, all entering from the west. The drainage from the east with the exception of a very small part, is cut off by the interior basin known as the Jornada del Muerto (see p. 20). Throughout New Mexico, and, to a less extent, the trans-Pecos region of Texas, the tributary run-off comes chiefly in the form of flood flow following torrential rains. Noteworthy perennial tributaries are also lacking in the Texas part of the drainage basin between El Paso and the Pecos, which enters the Rio Grande about 40 miles northwest of Del Rio. Devils River, which is also a perennial stream enters a short distance above Del Rio. Below Devils River the basin is so narrow that tributaries are unimportant.

Little information is available regarding the Mexican part of the drainage area beyond the fact that the only noteworthy tributaries are Rio Conchos, which enters nearly opposite Presidio, and Rio Salado and Rio San Juan, which enter below Laredo.

GAGING STATION RECORDS.

RIO GRANDE AT THIRTYMILE BRIDGE, NEAR CREEDE, COLO.

Location.—In sec. 13, T. 40 N., R. 4 W., in the Rio Grande National Forest, about 30 miles southwest of Creede, a short distance above mouth of Squaw Creek.

Records available.—June 18, 1909, to September 30, 1913.

Drainage area.—163 square miles (measured from topographic sheets).

Gage.—Chain gage, 200 feet upstream from Thirtymile Bridge, washed out October 5, 1911. The flood of this date changed the mouth of Squaw Creek, making it enter above the gaging station. For that reason when the records were resumed April 8, 1912, a vertical staff gage was established a quarter of a mile above the old site and above the new mouth of Squaw Creek. The relation between the gages was not determined.

Channel.—Apparently permanent at new site.

Discharge measurements.—Made from car and cable, except during low stages, when they are made by wading.

Winter flow.—Ice causes backwater during the winter months and records are discontinued.

Diversions.—So far as known no water is diverted above the station, and therefore the records represent the natural run-off.

Storage.—A short distance above the station the San Luis Valley irrigation district is constructing a reservoir of 43,000 acre-feet capacity which, when completed, will materially modify the flow of the river. During the low water of 1912 the operation of the reservoir gates controlled the flow somewhat, and during 1913 the flow was almost wholly controlled.

Accuracy.—Owing to the high altitude at this point it is possible that at certain seasons of the year the alternate melting and freezing may cause considerable diurnal fluctuation. For this reason the mean daily gage height taken from morning and evening readings may not represent accurately the true mean for the day. With this exception, conditions are favorable for accurate results and the records as a whole are considered good.¹

Cooperation.—Station maintained in cooperation with Mr. J. C. Ulrich, of the San Luis Valley irrigation district, by whom the field data were furnished.

Discharge measurements of Rio Grande at Thirtymile Bridge, near Creede, Colo., in 1909-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1909.		<i>Fect.</i>	<i>Sec.-ft.</i>	1911.		<i>Fect.</i>	<i>Sec.-ft.</i>
June 19	Freeman and Pennock	5.90	1,440	June 1	B. S. Clayton	5.68	981
21	O. P. Pennock	5.50	1,220	3	O. P. Pennock	5.88	1,120
24	do	5.30	1,050	4	do	6.18	1,260
26	do	5.05	910	6	do	6.45	1,480
29	do	4.90	880	8	do	7.14	1,880
30	do	4.78	806	July 25	B. S. Clayton	4.62	551
July 4	do	4.75	840	26	do	4.49	507
8	do	4.12	494	Aug. 9 ^b	Wimmer and French	3.32	182
11	do	3.70	366				
15	Pennock and Vandemoer	3.48	315	1912.			
18	do	3.20	241	June 2	Follansbee and Sievers	6.75	1,630
21	do	3.45	303	6	C. H. Sievers	7.30	2,470
22	do	4.12	531	12	do	5.65	916
29	do	3.38	285	18	do	5.10	604
Aug. 8 ^a	do	3.00	205	21	do	5.85	990
10	do	2.90	179	29	do	5.90	1,010
25	do	3.12	250	July 18	do	4.78	448
1910.				19	do	5.00	596
June 21	Pennock and Evans	4.20	457	23	do	5.23	628
24	O. P. Pennock	3.98	389	29	do	5.45	827
27	do	3.70	318	Aug. 6	do	4.40	282
July 18	do	2.90	164	24	do	3.10	24
20	do	2.80	146	Sept. 4	do	3.72	103
21	do	2.75	145	20	do	3.60	80
22	do	2.70	135	23	do	3.50	67
26	do	2.60	123				
Aug. 3	do	2.70	137	1913.			
16	do	2.47	105	Mar. 29	C. H. Sievers	2.75	3.70
24	do	2.39	96	Apr. 15	do	2.86	7.21
26	do	2.25	85	19	do	2.96	10.4
27	do	2.21	82	20	do	3.20	27.7
Sept. 8	do	2.17	80	20	do	3.35	42.0
12	I. G. Ferguson	2.17	56	21	do	3.80	96.1
12	do	2.17	57	May 30	do	6.00	1,200
12	do	2.17	57	June 2	do	4.29	262
19	do	2.18	59	2	do	4.65	420
Oct. 21	O. P. Pennock	2.28	64	2	do	4.49	349
Nov. 21	do	2.22	65	2	do	4.80	489
25	do	2.22	65	2	do	4.90	539
28	do	2.33	73	3	do	5.07	654
1911.				3	do	5.32	828
Apr. 23	O. P. Pennock	3.26	237	3	do	5.21	751
May 3	do	3.38	254	18	do	4.41	309
5	do	4.16	462	18	do	4.91	541
6	do	4.47	577	18	do	4.82	511
8	do	4.81	681	18	do	4.71	443
10	do	4.68	609	July 14	do	4.85	534
20	do	4.54	571	17	do	4.92	586
24	do	5.35	914	18	do	5.13	712
26	do	5.19	827	19	do	5.20	759
31	do	5.49	958	Aug. 3	Follansbee and Sievers	4.71	432
				4	C. H. Sievers	4.85	517
				4	do	4.71	434

^a Measurement not satisfactory, meter not working well.

^b Poor measurement.

¹During 1912-13 the natural storage afforded by the reservoir largely eliminated the diurnal fluctuations.

Dailygage height, in feet, of Rio Grande at Thirtymile Bridge, near Creede, Colo., for 1909-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.					1910.				
1.....		4.7	3.15	3.5	1.....		3.6	2.9	2.35
2.....		4.55	3.25	3.4	2.....		3.5	2.75	2.25
3.....		4.55	3.1	3.4	3.....		3.45	2.65	2.55
4.....		4.7	3.2	3.6	4.....		3.4	2.9	2.45
5.....		4.85	3.1	6.15	5.....		3.4	3.25	2.3
6.....		4.6	3.2	5.75	6.....		3.3	2.9	2.2
7.....		4.4	3.05	5.2	7.....		3.25	2.75	2.2
8.....		4.15	3.0	4.8	8.....		3.2	2.7	2.15
9.....		4.1	3.0	4.5	9.....		3.1	2.7	2.15
10.....		3.85	2.9	4.3	10.....		3.0	2.7	2.1
11.....		3.8	3.2	4.2	11.....		3.0	2.75	2.1
12.....		3.7	3.25	4.4	12.....		2.95	2.75	2.15
13.....		3.6	3.15	4.2	13.....		3.0	2.6	2.4
14.....		3.5	3.1	4.05	14.....		2.95	2.6	2.3
15.....		3.45	3.05	3.9	15.....		2.95	2.5	2.3
16.....		3.35	3.4	3.8	16.....		2.9	2.45	2.3
17.....		3.3	3.1	3.7	17.....		2.9	2.45	2.2
18.....	6.2	3.25	3.1	3.6	18.....	4.15	2.85	2.4	2.25
19.....	5.9	3.2	3.2	3.5	19.....	4.3	2.85	2.4	2.4
20.....	5.65	3.2	3.6	3.45	20.....	4.3	2.8	2.4	2.45
21.....	5.5	3.55	3.4	3.35	21.....	4.2	2.75	2.4	2.4
22.....		4.3	3.3	3.25	22.....	4.1	2.75	2.35	2.45
23.....		3.6	3.35	3.2	23.....	4.0	2.75	2.4	2.35
24.....	5.3	3.85	3.25	3.15	24.....	3.9	2.7	2.4	2.25
25.....	5.15	3.55	3.15	3.1	25.....	3.8	2.65	2.3	2.2
26.....	5.05	3.8	3.15	3.05	26.....	3.7	2.6	2.25	2.2
27.....	4.9	3.9	3.3	3.0	27.....	3.75	2.6	2.2	2.2
28.....	4.9	3.55	3.2	2.9	28.....	4.2	2.8	2.2	2.15
29.....	5.0	3.4	3.6	2.85	29.....	4.0	2.6	2.25	2.15
30.....	4.8	3.3	3.5	2.85	30.....	3.65	3.3	2.2	2.1
31.....		3.2	3.5		31.....		3.35	2.4	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	2.1	2.0						3.2	5.95	5.4	3.8	2.8
2.....	2.2	2.0						3.3	6.0	6.05	3.7	2.8
3.....	2.25	2.1						3.35	6.05	6.15	3.7	2.85
4.....	2.2	2.2						3.75	6.35	5.8	3.55	2.85
5.....	2.15	2.0						4.15	6.6	5.5	3.45	2.8
6.....	2.05	1.9						4.4	6.7	5.4	3.4	2.75
7.....	2.05	1.9						4.5	6.7	5.4	3.35	2.7
8.....	2.05	1.8						4.7	7.15	5.2	3.25	2.65
9.....	2.05	1.9						4.9	7.25	4.95	3.2	2.65
10.....	2.05	1.9						4.75	6.85	4.85	3.35	2.65
11.....	2.0	1.95						4.45	6.85	4.7	3.25	2.6
12.....	2.05	1.95						4.55	6.65	4.65	3.15	2.65
13.....	2.0	2.05						4.6	6.3	6.05	3.15	3.1
14.....	2.1	2.2						4.3	6.2	5.6	3.1	2.9
15.....	2.2	2.05						4.3	6.1	5.3	3.15	2.9
16.....	2.9	2.0						4.35	6.2	5.05	3.3	2.85
17.....	2.6	1.85						4.65	6.0	4.8	3.15	2.75
18.....	2.5	1.9						5.0	6.0	4.8	3.1	2.7
19.....	2.5	2.1						5.05	6.3	5.1	3.05	2.8
20.....	2.35	1.85						4.55	6.1	4.95	3.0	2.75
21.....	2.1	1.95						4.5	6.4	4.9	3.1	2.65
22.....	2.3	2.0					3.15	4.8	6.2	4.75	3.7	2.65
23.....	2.25	1.9					3.2	5.2	6.1	4.75	3.4	3.25
24.....	2.25	2.0					3.15	5.5	5.9	4.6	3.15	2.8
25.....	2.3	2.0					3.1	5.45	5.6	4.6	3.05	2.7
26.....	2.35	1.95					3.35	5.3	5.5	4.45	3.0	3.35
27.....	2.25	1.9					3.45	5.05	5.6	4.3	3.05	3.3
28.....	2.1	1.9					3.6	5.25	5.6	4.3	3.0	3.2
29.....	2.1	2.0					3.5	5.35	5.4	4.1	2.95	3.35
30.....	2.0	1.95					3.3	5.5	5.7	4.0	2.85	4.3
31.....	2.0							5.65		3.9	2.8	

Daily gage height, in feet, of Rio Grande at Thirtymile Bridge, near Creede, Colo., for 1909-1913—Continued.

Day.	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.											
1	5.0						3.99	6.50	5.60	4.90	3.95
2	4.75						4.25	6.80	4.85	4.75	3.83
3	4.35						4.10	7.05	5.80	4.65	3.80
4	3.95						3.74	7.60	5.05	4.55	3.80
5							3.81	7.60	4.85	4.50	3.78
6								4.05	7.20	4.95	4.40
7								4.30	7.10	5.20	4.35
8							3.52	4.45	6.80	5.15	4.25
9							3.71	4.30	6.80	5.10	4.20
10							3.78	4.10	6.50	5.15	4.15
11								3.50	4.20	6.40	5.10
12								3.42	4.50	5.70	5.05
13								3.55	4.90	5.70	4.95
14								3.67	4.70	5.60	4.95
15								3.65	3.85	6.00	4.95
16								3.55	4.60	6.00	4.95
17								3.64	4.85	5.70	4.85
18								3.65	5.40	5.20	4.80
19								3.58	5.75	5.50	4.95
20								3.46	5.80	5.65	4.85
21								3.60	6.10	5.85	4.75
22								3.55	6.20	5.80	4.75
23								3.60	6.20	5.85	5.10
24								3.48	6.30	5.90	4.85
25								3.63	6.40	6.00	4.95
26								3.33	6.60	5.90	4.85
27								3.49	6.60	5.80	4.85
28								3.44	6.50	5.80	4.75
29								3.72	6.80	6.00	5.30
30								3.86	7.20	5.90	5.30
31									6.70	5.05	4.20
1912-13.											
1	3.52	3.28				2.78	4.15	3.65	4.80	4.43	3.72
2	3.58					2.80	4.18	4.28	4.90	4.65	3.72
3	3.60					2.81	4.20	5.25	5.00	4.70	3.70
4	3.60	2.60				2.82	4.15	5.40	5.00	4.80	3.68
5	3.68	2.60				2.82	4.15	5.40	5.00	4.80	3.78
6	3.70	2.60				2.82	4.15	5.25	5.05	4.50	3.95
7	3.74	2.60				2.82	4.15	4.87	4.90	4.38	4.02
8	3.68	2.60				2.82	4.16	4.75	4.85	4.35	4.02
9	3.60	2.60				2.82	4.17	4.75	4.90	4.36	4.02
10	3.60	2.55				2.82	4.18	4.51	5.00	4.36	4.02
11	3.40	2.55			2.75	2.82	4.30	4.38	5.00	4.36	4.02
12	3.28	2.60			2.75	2.82	4.90	4.38	5.00	4.35	4.03
13	3.00	2.65			2.75	2.82	5.60	4.38	5.00	4.34	4.03
14	3.75	2.65			2.75	2.86	5.60	4.38	4.85	4.38	4.03
15	3.75	2.60			2.75	2.86	5.40	4.38	4.85	4.41	4.03
16	3.60	2.60			2.75	2.88	5.05	4.38	4.90	4.44	3.96
17	3.50	2.60			2.75	2.88	4.80	4.40	4.99	4.40	3.83
18	3.50	2.60			2.75	2.89	4.77	4.60	5.15	4.39	3.77
19	3.20	2.60			2.75	3.02	4.77	5.20	5.15	4.38	3.77
20	3.70	2.60			2.75	3.30	4.77	5.20	5.00	4.34	3.77
21	3.60	2.60			2.75	3.60	4.77	5.10	5.05	4.26	3.70
22	3.50	2.60			2.75	3.95	4.77	5.10	5.00	4.29	3.64
23	3.60	2.60			2.75	4.10	4.90	5.00	4.75	4.27	3.64
24	3.20	2.60			2.75	4.10	4.60	4.80	4.70	4.24	3.64
25	3.80	2.60			2.75	4.10	3.65	4.12	4.75	4.23	3.64
26	3.55	2.70			2.75	4.10	5.50	3.34	4.70	4.12	3.64
27	3.63	2.85			2.75	4.10	6.00	3.09	4.55	3.84	3.64
28	3.70	2.85			2.75	4.10	6.00	4.08	4.48	3.65	3.64
29	3.58	2.85			2.75	4.12	6.00	4.70	4.44	3.63	3.64
30	3.70	2.80			2.75	4.15	5.40	4.80	4.33	3.63	3.64
31	3.30				2.75		3.82		4.33	3.68	

Daily discharge, in second-feet, of Rio Grande at Thirtymile Bridge, near Creede, Colo., for 1909-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.					1910.				
1		788	230	316	1		291	149	76
2		717	252	289	2		267	126	65
3		717	220	289	3		256	112	99
4		788	241	345	4		245	149	87
5		861	220	1,610	5		245	213	70
6		740	241	1,360	6		223	149	60
7		648	210	1,040	7		213	126	60
8		540	201	836	8		203	119	56
9		520	201	694	9		183	119	56
10		426	184	604	10		165	119	51
11		409	241	561	11		165	126	51
12		376	252	648	12		157	126	56
13		345	230	561	13		165	105	81
14		316	220	500	14		157	105	70
15		302	210	444	15		157	93	70
16		276	289	409	16		149	87	70
17		264	220	376	17		149	87	60
18	1,640	252	220	345	18	448	141	81	65
19	1,450	241	241	316	19	501	141	81	81
20	1,300	241	345	302	20	501	133	81	87
21	1,210	330	289	276	21	465	126	81	81
22	1,170	604	264	252	22	431	126	76	87
23	1,130	345	276	241	23	399	126	81	76
24	1,100	426	252	230	24	369	119	81	65
25	1,010	330	230	220	25	341	112	70	60
26		962	409	230	26	315	105	65	60
27		886	444	204	27	328	105	60	60
28		886	330	241	28	465	133	60	56
29		936	289	345	29	399	105	65	56
30		836	264	316	30	303	223	60	51
31			241	316	31		234	81	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1	51	43						213	1,140	880	313	105
2	60	43						235	1,160	1,210	287	105
3	65	51						246	1,190	1,260	287	113
4	60	60						344	1,350	1,080	251	113
5	56	43						458	1,560	930	228	105
6	47	36						537	1,620	880	217	98
7	47	36						571	1,620	880	206	92
8	47	30						641	1,880	790	185	86
9	47	36						715	1,950	678	175	86
10	47	36						659	1,700	641	206	86
11	43	40						554	1,700	587	185	81
12	47	40						588	1,560	570	165	86
13	43	47						605	1,360	1,210	165	155
14	51	60						505	1,300	980	155	121
15	60	47						505	1,240	830	165	121
16	149	43						521	1,300	717	195	113
17	105	33						623	1,180	623	165	98
18	93	36						753	1,180	623	155	92
19	93	51						773	1,360	735	146	105
20	76	33						588	1,240	678	137	98
21	51	40						571	1,410	659	155	86
22	70	43					203	677	1,300	605	287	86
23	65	36					213	835	1,240	605	217	185
24	65	43					203	973	1,140	553	165	105
25	70	43					193	949	980	553	146	92
26	76	40					246	879	930	503	137	206
27	65	36					269	773	980	455	146	195
28	51	36					305	857	980	455	137	175
29	51	43					281	902	880	395	129	206
30	43	40					235	973	1,030	367	113	455
31	43							1,050		339	105	

Daily discharge, in second-feet, of Rio Grande at Thirtymile Bridge, near Creede, Colo., for 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12												
1	697							162	1,460	865	500	152
2	605							240	1,750	478	432	122
3	471							195	2,040	980	388	115
4	353							103	2,860	575	345	115
5								118	2,860	478	325	111
6								180	2,250	525	290	105
7								255	2,110	650	262	105
8							68	308	1,750	625	240	101
9							97	255	1,750	600	225	111
10							111	195	1,460	625	210	115
11							65	225	1,380	600	195	135
12							53	325	920	575	195	128
13							72	500	920	525	180	115
14							90	410	865	525	388	105
15							88	128	1,100	525	308	95
16							72	365	1,100	525	240	92
17							86	478	920	478	308	88
18							88	755	650	455	290	88
19							77	950	810	525	255	86
20							59	980	892	478	210	80
21							80	1,170	1,010	432	80	77
22							72	1,240	980	432	25	72
23							80	1,240	1,010	600	25	70
24							62	1,310	1,040	478	25	77
25							84	1,380	1,100	525	25	80
26							43	1,550	1,040	478	65	77
27							64	1,550	980	478	128	80
28							56	1,460	980	432	478	72
29							99	1,750	1,100	700	410	72
30							130	2,250	1,040	700	290	70
31								1,650		575	225	
1912-13												
1	68	38				3	4	210	94	500	314	107
2	77	27				3	5	219	253	555	420	107
3	80	15				3	5	219	700	610	445	103
4	80	4				3	6	210	850	610	500	99
5	92	4				3	6	210	850	610	500	120
6	95	4				3	6	210	760	640	345	158
7	103	4				3	6	210	538	555	292	175
8	92	4				3	6	213	473	528	280	175
9	80	4				3	6	216	473	555	284	175
10	80	2				3	6	219	350	610	284	175
11	50	2				4	6	260	292	610	284	175
12	38	4				4	6	555	292	610	280	178
13	80	6				4	6	970	292	610	276	178
14	105	6				4	7	970	292	528	292	178
15	105	4				4	7	850	292	528	304	178
16	80	4				4	8	640	292	555	318	160
17	65	4				4	8	500	300	605	300	131
18	65	4				4	9	483	395	700	296	118
19	32	4				4	14	483	730	700	292	118
20	95	4				4	39	483	730	610	276	118
21	80	4				4	84	483	670	640	246	103
22	65	4				4	158	483	670	610	257	92
23	80	4				4	195	555	610	473	249	92
24	32	4				4	195	395	500	445	239	92
25	115	4				4	195	94	201	473	235	92
26	72	8				4	195	910	44	445	201	92
27	84	14				4	195	1,210	18	370	133	92
28	95	14				4	195	1,210	190	336	94	92
29	77	14				4	201	1,210	445	318	90	92
30	95	12				4	210	850	500	272	90	92
31	40					4		128		272	99	

NOTE.—Discharge determined from well-defined rating curve, except June 9-24, 1911, when the indirect method for shifting channels was used. Discharge interpolated June 22 and 23, 1909, and Nov. 2 and 3, 1912. Discharge estimated Mar. 1-10, 1913.

Monthly discharge of Rio Grande at Thirtymile Bridge, near Creede, Colo., for 1909-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909.					
June 18-30.....	1,640	836	1,120	28,900	A.
July.....	861	241	444	27,300	A.
August.....	345	184	248	15,200	A.
September.....	1,610	176	467	27,800	A.
The period.....				99,200	
1910.					
June 18-30.....	501	303	405	10,400	A.
July.....	291	105	172	10,600	A.
August.....	213	60	101	6,210	A.
September.....	99	51	67.4	4,010	A.
The period.....				31,200	
1910-11.					
October.....	149	43	62.5	3,840	A.
November.....	60	33	41.5	2,470	B.
April 22-30.....	305	193	239	4,270	A.
May.....	1,050	213	648	39,800	A.
June.....	1,950	880	1,320	78,600	A.
July.....	1,260	339	718	44,100	A.
August.....	313	105	185	11,400	A.
September.....	455	81	128	7,620	A.
1911-12.					
October 1-4.....	697	353	532	4,220	A.
April 8-30.....	130	43	78.1	3,560	A.
May.....	2,250	103	764	47,000	A.
June.....	2,860	650	1,340	79,700	A.
July.....	980	432	563	34,600	A.
August.....	478	25	244	15,000	A.
September.....	152	70	97.0	5,770	A.
1912-13.					
October.....	115	32	77.3	4,750	A.
November.....	38	2	7.7	458	A.
March.....	4	3	3.7	228	C.
April.....	210	4	66.3	3,950	A.
May.....	1,210	94	512	31,500	A.
June.....	850	18	439	26,100	A.
July.....	700	272	532	32,700	B.
August.....	500	90	275	16,900	A.
September.....	178	92	129	7,680	B.

RIO GRANDE NEAR CREEDE, COLO.

Location.—In the Rio Grande National Forest, at highway bridge about sec. 8, T.

41 N., R. 1 E., one-quarter mile from Wason siding, and 3 miles east of Creede.

Nearest tributary, Willow or Goblin Creek, enters a short distance upstream.

Records available.—April 24, 1907, to September 30, 1913.

Drainage area.—705 square miles.

Gage.—An automatic recording gage, referred to the same datum as the chain gage used previously.

Channel.—Practically permanent.

Discharge measurements.—Made from bridge.

Winter flow.—River frozen over during winter months; ice causes backwater at gage and discharge measurements are made to determine the winter flow.

Diversions.—There are no court decrees for diversions from the Rio Grande above this station, but for diversions of 39 second-feet from tributaries. There are no reservoirs on the river between this station and the one at Thirtymile Bridge, but a large one is being built on Clear Creek, which enters between.

Accuracy.—Records good.

Cooperation.—Since 1911 this station has been maintained in cooperation with the United States Forest Service and the State engineer. The records for 1912 and 1913 were furnished complete by the State engineer.

Discharge measurements of Rio Grande near Creede, Colo., in 1907-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 24	R. I. Meeker	1.45	759	Jan. 19	G. H. Russell	0.44	170
May 15	W. B. Freeman	1.67	962	Feb. 25	Turner and Clayton	.16	156
June 14	do.	4.38	4,350	Mar. 28	B. S. Clayton	.42	219
26	do.	4.49	4,260	Apr. 28	do.	1.74	982
July 22	do.	2.88	2,090	May 31	do.	3.45	2,560
Aug. 30	C. L. Chatfield	2.30	1,460	June 2	do.	3.82	3,230
Oct. 9	J. B. Stewart	.86	281	27	O. M. Wimmer	2.90	2,010
Nov. 9	W. B. Freeman	.47	230	July 27	B. S. Clayton	2.40	1,420
1908.				Aug. 11	Wimmer and French	1.43	571
Mar. 29	J. B. Stewart	.37	196	Sept. 8	B. S. Clayton	.92	431
May 17	W. B. Freeman	2.10	1,220	Oct. 2	H. B. Waha	2.60	1,840
June 12	J. B. Stewart	3.35	2,750	12	B. S. Clayton	2.17	1,320
July 14	do.	1.69	897	Dec. 20	do.	.58	220
Nov. 16	W. B. Freeman	-.05	86	1912.			
16	do.	.21	150	Jan. 19	B. S. Clayton	1.46	191
1909.				Feb. 24	do.	.64	138
May 18	W. B. Freeman	3.39	2,800	Apr. 2	do.	.05	120
June 17	do.	3.90	3,260	May 11	do.	1.58	858
20	do.	4.13	3,400	June 4	C. C. Hezmalhalch	4.69	4,930
Aug. 5	G. H. Russell	1.22	588	July 10	do.	2.08	1,230
Oct. 6	do.	1.05	546	Aug. 21	do.	1.35	654
Dec. 10	do.	.88	233	Sept. 12	C. E. Turner	.85	363
1910.				Nov. 14	do.	.11	126
Jan. 25	J. B. Stewart		169	1913.			
Feb. 21	G. H. Russell		152	Jan. 24	C. E. Turner		90
Apr. 14	do.	1.10	548	Feb. 7	do.		81
May 24	do.	2.37	1,560	Mar. 21	do.	0.02	111
June 26	do.	1.51	788	May 24	C. O. Crisman	2.40	1,460
Aug. 2	do.	.80	396	June 19	do.	2.55	1,600
13	Christianson and Grieve	.78	363	Aug. 25	do.	1.25	568
Sept. 1	I. G. Ferguson	.55	277	Sept. 22	do.	0.60	230
23	do.	.30	233				
Oct. 10	E. O. Christianson	.30	210				
20	Christianson and Hez- malhalch	.60	290				
Dec. 10	G. H. Russell	.31	180				

NOTE.—The following measurements were made with ice present: Dec. 10, 1909; Jan. 25, Feb. 21, 1910, Jan. 19, Feb. 25, Dec. 20, 1911; Jan. 19, Feb. 24, 1912; Jan. 24, and Feb. 7, 1913.

Daily gage height, in feet, of Rio Grande near Creede, Colo., for 1907-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1907.							1907.						
1		1.58	2.70	5.40	2.22	1.98	16	1.90			1.88	1.20	
2		1.55	2.70	5.32	2.20	1.95	17	2.45	4.90		1.72	1.22	
3		1.58	2.80	5.25	2.15	1.85	18	2.50	4.78		1.58	1.22	
4		1.60	3.15	5.22	2.08	1.75	19	2.88	4.55		1.60	1.20	
5		1.55	3.70	5.10	2.12	1.40	20	3.45	4.15		1.58	1.18	
6		1.50	3.85	5.08	1.98	1.42	21	3.90	3.90	3.00	1.48	1.15	
7		1.45	4.10	5.02	2.02	1.35	22	3.95		3.02	1.48	1.10	
8		1.40		4.85	1.90	1.32	23	4.20		2.80	1.42	1.00	
9		1.40		4.78	1.82	1.32	24	1.45	3.90		2.68	1.40	1.05
10		1.50		4.55	1.75	1.35	25	1.58	3.25	4.05	2.72	1.42	.95
11		1.85		4.60	1.70	1.28	26	1.55	3.00	4.40	3.00	1.48	.92
12		2.15			2.05	1.28	27	1.62	2.98	4.85	2.88	1.38	1.00
13		2.05	4.20		2.38	1.25	28	1.60	2.85	4.88	2.65	1.38	.98
14		1.75	4.50		2.15	1.22	29	1.58	2.70	5.05	2.58	1.50	.92
15		1.75			1.95	1.22	30	1.52	2.68	5.08	2.40	2.28	.92
							31				2.30	2.15	

Daily gage height, in feet, of Rio Grande near Creede, Colo., for 1907-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1	0.90	0.65	0.48			0.3	0.4	1.6	2.8	2.3	1.9	1.1
2	.85	.62	.45			.3	.5	1.9	2.85	2.3	2.4	1.1
3		.60	.45			.3	.5	1.9	2.95	2.2	1.9	.9
4		.58	.42			.25	.5	1.9	2.85	2.2	1.8	.8
5		.60	.48				.5	1.75	2.8	2.05	1.6	.85
6		.55	.50				.55	1.75	3.0	2.0	1.55	.8
7	.80	.58	.45				.6	1.7	2.75	2.0	1.5	.75
8	.82	.55	.48				.5	1.8	2.4	1.8	1.45	.7
9	.82	.58	.45				.6	1.9	3.0	1.7	1.65	.65
10	.85	.52	.48				.65	1.75	3.8	1.75	1.55	.7
11	.85	.50	.52			.3	.8	1.6	3.9	1.9	1.45	.7
12	.82	.45	.50			.3	.85	1.5	3.6	1.8	1.35	.7
13	.75	.50	.58			.3	.9	1.5	3.6	1.75	1.25	.7
14	.75	.45	.60			.3	1.1	1.4	3.6	1.7	1.35	.65
15	.75	.45				.3	1.2	1.4	3.55	1.7	1.35	.65
16	.70	.42				.3	1.3	1.8	3.6	1.7	1.3	.6
17	.68	.42				.3	1.6	2.0	3.6	1.6	1.45	.6
18	.70	.42				.3	1.65	2.5	3.2	1.55	2.05	.65
19	.65	.40				.3	1.7	2.85	2.65	1.45	1.85	.55
20	.65	.45				.3	1.65	3.0	2.7	1.4	1.75	.55
21	.62	.40				.35	1.45	2.5	2.9	1.3	1.6	.55
22	.62	.42				.3	1.35	2.5	2.9	1.3	1.55	.5
23	.68					.3	1.35	2.1	2.9	1.3	1.45	.55
24	.72					.35	1.25	1.9	2.95	1.3	1.4	.55
25	.72	.45				.4	1.2	1.8	3.0	1.4	1.25	.55
26	.68	.45				.4	1.0	2.2	2.85	1.35	1.25	.5
27	.62	.40				.4	.95	2.0	2.8	1.4	1.2	.65
28	.62	.40				.3	1.0	1.95	2.7	1.2	1.2	.55
29	.62	.42				.35	1.0	1.95	2.55	1.2	1.3	.5
30	.62	.42				.4	1.0	2.7	2.5	1.2	1.2	.55
31	.62					.4		2.6		1.6	1.1	
1908-9.												
1	.5	.35						1.45	2.45	2.7	1.15	1.35
2	.5	.4					.25	1.65	3.0	2.6	1.35	1.35
3	.55	.35					.25	1.7	4.15	2.65	1.25	1.5
4	.55	.35					.25	1.95	5.15	2.55	1.25	1.65
5	.45	.35					.25	2.5	5.65	2.95	1.25	2.85
6	.5	.35					.35	2.85	5.75	2.75	1.25	3.95
7	.45	.35					.35	3.05	4.95	2.45	1.2	3.65
8	.45	.3					.35	3.15	4.95	2.2	1.15	3.7
9	.45	.4					.55	3.0	4.8	2.05	1.15	3.7
10	.45	.35					.55	2.95	4.6	1.95	1.35	3.05
11	.45	.3					.55	2.95	4.5	1.85	1.25	2.75
12	.5	.35					.55	2.75	4.5	1.65	1.25	2.6
13	.5	.3					.55	3.0	4.5	1.65	1.25	2.25
14	.55	.25					.7	3.0	4.0	1.5	1.2	2.25
15	.5	.25					.75	3.1	4.3	1.45	1.25	2.05
16	.45	.08					.75	3.15	4.45	1.35	1.3	1.9
17	.55	.25					.75	3.3	4.25	1.25	1.2	1.8
18	.55	.2					.75	3.55	4.35	1.25	1.2	1.65
19	.55	.2					2.35	3.55	4.2	1.25	1.25	1.55
20	.55	.2					2.15	3.6	4.15	1.25	1.35	1.55
21	.5	.2					1.7	3.65	3.95	1.85	1.4	1.45
22	.4	.15					1.4	3.15	3.7	2.35	1.25	1.35
23	.35	.2					1.5	2.85	3.65	2.4	1.35	1.35
24	.4	.2					1.5	2.7	3.4	2.25	1.35	1.35
25	.35	.2						2.9	3.25	1.7	1.25	1.25
26	.35	.15						2.85	3.25	1.7	1.15	1.15
27	.35	.15					1.45	3.35		1.75	1.15	1.05
28	.35	.25					1.75	3.6	2.85	1.65	1.45	1.05
29	.35	.15					1.65	3.45	2.85	1.45	1.45	1.05
30	.4	.05					1.45	2.9	2.75	1.35	1.45	1.05
31	.35									1.25	1.35	
1909-10.												
1	.95	.85				.45	1.25	2.35	4.55	1.45	.95	.5
2	.95	.85				.45	1.35	2.35	4.45	1.4	.85	.5
3	.95	.85				.45	1.15	2.5	3.6	1.3	.8	.5
4	1.0	.9				.5	1.2	2.55	3.6	1.2	.7	.5
5	1.05	.85				.5	1.15	2.6	3.7	1.2	.9	.5

Daily gage height, in feet, of Rio Grande near Creede, Colo., for 1907-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.....	1.05	0.8	.....	.....	.....	0.5	1.0	2.5	3.5	1.2	1.2	0.5
7.....	1.0	.85	.....	.....	.....	.5	1.0	2.75	3.25	1.1	.9	.5
8.....	1.0	.85	.....	.....	.....	.5	1.05	3.15	3.05	1.1	.....	.5
9.....	1.0	.8	.....	.....	.....	.55	1.1	4.0	3.15	1.0	.8	.55
10.....	1.0	.8	.....	.....	.....	.55	1.2	4.15	2.8	.95	.75	.55
11.....	1.0	.8	.....	.....	.....	.6	1.3	3.85	2.9	.95	.8	.55
12.....	.95	.75	.....	.....	.....	.6	1.4	3.45	2.45	.95	.85	.55
13.....	.95	.75	.....	.....	.....	.65	1.35	3.15	2.5	.9	.75	.55
14.....	.9	.7	.....	.....	.....	.9	1.0	2.9	2.55	.9	.75	.5
15.....	.95	.6	.....	.....	.....	1.1	1.05	2.75	2.45	.8	.7	.5
16.....	.95	.6	.....	.....	.....	1.3	.9	2.85	2.3	.75	.7	.5
17.....	.95	.55	.....	.....	.....	1.3	.95	2.95	2.15	.8	.6	.5
18.....	.95	.5	.....	.....	.....	1.25	1.0	2.85	2.05	.8	.6	.55
19.....	.9	.5	.....	.....	.....	1.25	1.2	2.95	1.95	.85	.6	.5
20.....	.9	.5	.....	.....	.....	1.25	1.5	2.85	2.0	.8	.5	.52
21.....	.9	.4	.....	.....	.....	1.3	1.7	2.95	1.9	.75	.6	.5
22.....	.9	.4	.....	.....	.....	1.3	1.65	3.0	1.95	.7	.55	.5
23.....	.9	.4	.....	.....	.....	1.25	1.9	2.95	1.75	.7	.5	.5
24.....	.9	.3	.....	.....	.....	1.35	1.95	2.6	1.7	.65	.55	.5
25.....	.9	.3	.....	.....	0.45	1.35	2.1	2.75	1.55	.65	.5	.5
26.....	.9	.3	.....	.....	.45	1.4	2.45	2.6	1.5	.7	.6	.45
27.....	.9	.....	.....	.....	.45	1.4	2.7	2.4	1.6	.6	.5	.4
28.....	.9	.2	.....	.....	.45	1.4	2.95	3.1	1.7	.65	.5	.4
29.....	.85	.2	.....	.....	.....	1.5	3.15	3.4	1.7	.6	.5	.4
30.....	.8	.....	.....	.....	.....	1.4	3.15	4.25	1.6	.8	.5	.35
31.....	.....	.....	.....	.....	.....	1.4	.....	4.6	.....	1.15	.5	.....
1910-11.												
1.....	.4	.45	0.3	.....	.2	.1	.8	1.45	3.6	3.35	2.0	1.15
2.....	.4	.45	.3	.....	.25	.1	.85	1.45	3.7	3.75	1.9	1.15
3.....	.4	.4	.3	.....	.3	.15	.85	1.5	3.65	3.5	1.85	1.15
4.....	.4	.5	.25	.....	.2	.1	.85	1.75	3.9	3.55	1.8	1.15
5.....	.35	.5	.3	.....	.....	.1	.75	2.2	4.15	3.15	1.7	1.15
6.....	.35	.4	.3	.....	.....	.05	.75	2.5	4.3	2.95	1.6	1.1
7.....	.35	.4	.3	.....	.....	.1	.7	2.55	4.25	3.1	1.55	1.0
8.....	.35	.4	.3	.....	.....	.1	.75	2.8	4.25	2.95	1.5	1.0
9.....	.3	.35	.3	.....	.1	.1	.7	3.05	4.6	2.7	1.45	.9
10.....	.3	.35	.3	.....	.2	.15	.75	3.1	4.45	2.55	1.45	.85
11.....	.3	.4	.25	.....	.2	.25	.7	2.75	4.3	2.4	1.5	.85
12.....	.3	.4	.25	.....	.2	.2	.75	2.7	4.2	2.35	1.45	.85
13.....	.3	.4	.3	.....	.15	.15	.7	2.7	3.95	2.95	1.45	.85
14.....	.35	.4	.2	.....	.2	.1	.7	2.85	3.9	3.5	1.4	1.0
15.....	.35	.4	.15	.....	.15	.1	.65	2.3	3.7	3.2	1.4	.95
16.....	.7	.35	.15	.....	.2	.15	.75	2.3	3.75	3.0	1.45	1.1
17.....	1.2	.25	.15	.....	.2	.2	.9	2.45	3.7	2.5	1.4	.95
18.....	.7	.25	.1	.....	.25	.15	.8	2.7	3.6	2.55	1.4	.85
19.....	.6	.4	.05	0.45	.2	.15	.9	2.95	3.65	2.45	1.35	.85
20.....	.55	.25	.15	.....	.2	.2	1.05	2.7	3.8	2.45	1.3	.95
21.....	.45	.2	.15	.....	.2	.3	1.15	2.65	3.6	2.45	1.3	.85
22.....	.5	.35	.15	.....	.2	.35	1.25	2.65	3.75	2.4	1.9	.8
23.....	.5	.35	.25	.....	.15	.25	1.3	2.95	3.45	2.4	1.8	.95
24.....	.5	.4	.3	.....	.2	.25	1.25	3.25	3.3	2.4	1.6	.9
25.....	.5	.45	.2	.....	.15	.35	1.25	3.3	3.1	2.4	1.5	.85
26.....	.5	.4	.2	.....	.1	.3	1.4	3.4	2.95	2.4	1.4	1.05
27.....	.5	.35	.2	.....	.05	.25	1.65	3.05	2.9	2.4	1.4	1.2
28.....	.45	.3	.15	.....	.05	.35	1.7	3.05	3.0	2.4	1.4	1.1
29.....	.45	.35	.....	.....	.....	.45	1.8	3.1	2.95	2.3	1.3	1.1
30.....	.45	.35	.....	.....	.....	.55	1.8	3.15	3.2	2.2	1.2	1.7
31.....	.45	.....	.....	.....	.....	.7	.....	3.4	.....	2.1	1.15	.....
1911-12.												
1.....	2.3	1.1	.....	.....	.....	.25	.05	1.75	4.3	3.15	2.0	1.0
2.....	2.3	1.1	.....	.....	.....	.2	.1	1.85	4.45	.....	1.9	.9
3.....	2.15	1.05	.....	.....	.....	.2	.3	1.75	4.65	.....	1.75	.85
4.....	1.85	1.0	.....	.....	.....	.15	.4	1.3	4.9	.....	1.65	.85
5.....	4.55	1.05	.....	.....	.....	.1	.45	1.35	4.85	.....	1.55	.8
6.....	5.15	1.05	.....	.....	.....	.35	.5	1.3	4.55	.....	1.5	.8
7.....	3.9	1.0	.....	.....	.....	.4	.6	1.6	4.45	.....	1.45	.75
8.....	3.25	1.1	.....	.....	.....	.35	.8	2.05	4.3	.....	1.4	.7
9.....	2.75	1.05	.....	.....	.....	.35	.95	2.05	4.2	.....	1.35	.7
10.....	2.5	1.05	.....	.....	.....	.55	1.1	1.75	4.0	2.05	1.3	.75

Daily gage height, in feet, of Rio Grande near Creede, Colo., for 1907-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.....	2.35	0.95	.....	.....	.....	0.4	1.05	1.8	3.9	1.95	1.25	0.75
12.....	2.2	.95	.....	.....	.....	.15	.9	2.15	3.55	1.95	1.3	.8
13.....	2.05	.95	.....	.....	.....	.....	.7	2.2	3.25	1.95	1.35	.8
14.....	1.95	1.0	.....	.....	.....	.....	.6	2.0	3.2	1.95	1.55	.8
15.....	1.85	.9	.....	.....	.....	.....	.65	1.7	3.35	1.95	1.75	.7
16.....	1.7	.95	.....	.....	.....	.....	.7	1.95	3.45	1.9	1.65	.7
17.....	1.65	.95	.....	.....	.....	.....	.75	2.5	3.25	1.85	1.6	.65
18.....	1.55	.9	.....	.....	.....	.....	.6	3.15	2.85	1.75	1.7	.6
19.....	1.45	.....	.....	.....	.....	.....	.55	3.65	2.75	1.8	1.5	.6
20.....	1.4	.....	0.58	.....	.....	.....	.45	3.85	2.85	1.9	1.5	.6
21.....	1.4	.....	.....	.....	.....	.....	.35	4.1	3.1	1.75	1.4	.6
22.....	1.4	.....	.....	.....	.....	.25	.3	4.15	3.15	1.85	1.15	.55
23.....	1.35	.....	.....	.....	.....	.25	.5	4.05	3.3	2.05	1.05	.5
24.....	1.3	.....	.....	.....	.....	.25	.85	4.2	3.3	2.1	1.0	.5
25.....	1.35	.....	.....	.....	.....	.25	1.1	4.45	3.25	2.0	.95	.5
26.....	1.3	.....	.....	.....	.....	.25	.9	4.45	3.15	2.0	.95	.5
27.....	1.3	.....	.....	.....	.....	.25	.9	4.35	3.05	2.1	.95	.5
28.....	1.25	.....	.....	.....	.....	.15	.95	4.5	3.05	2.0	1.0	.5
29.....	1.2	.....	.....	.....	.....	.2	1.35	4.7	3.2	2.15	1.0	.45
30.....	1.15	.....	.....	.....	.....	.2	1.65	4.8	3.25	2.35	.95	.45
31.....	1.15	.....	.....	.....	.....	.15	.....	4.55	.....	2.2	.95	.....
1912-13.												
1.....	.5	.6	.....	.....	.....	.....	1.4	1.2	2.05	1.75	1.4	.85
2.....	.5	.4	.....	.....	.....	.....	1.25	1.0	2.0	1.85	1.4	.85
3.....	.5	.45	.....	.....	.....	.....	.95	.9	2.4	1.95	1.6	.8
4.....	.5	.4	.....	.....	.....	.....	.55	.85	2.6	1.9	1.5	.8
5.....	.6	.4	.....	.....	.....	.....	.4	.9	2.6	1.8	1.4	.95
6.....	.55	.35	.....	.....	.....	.....	.6	1.05	2.3	1.75	1.35	1.0
7.....	.8	.3	.....	.....	.....	.....	.55	1.35	2.15	1.85	1.3	1.0
8.....	.9	.25	.....	.....	.....	.....	.2	1.6	2.05	1.8	1.3	1.15
9.....	.8	.2	.....	.....	.....	.....	.0	1.7	2.2	1.8	1.3	1.2
10.....	.7	.2	.....	.....	.....	.....	.1	1.65	2.5	2.0	1.3	1.1
11.....	.6	.15	.....	.....	.....	.....	.15	1.85	2.3	1.8	1.3	1.0
12.....	.6	.15	.....	.....	.....	.....	.35	2.05	2.15	1.75	1.3	1.0
13.....	.6	.15	.....	.....	.....	.....	.55	2.25	2.1	1.75	1.3	1.0
14.....	.6	.1	.....	.....	.....	.....	.95	2.7	2.1	1.7	1.3	.95
15.....	.6	.1	.....	.....	.....	.....	.9	2.25	2.1	1.75	1.3	.9
16.....	.6	.1	.....	.....	.....	.....	.9	2.4	2.1	1.8	1.3	.85
17.....	.55	.1	.....	.....	.....	.....	1.05	2.3	2.2	1.8	1.3	.8
18.....	.6	.1	.....	.....	.....	.....	1.1	2.3	2.4	2.0	1.3	.75
19.....	.6	.1	.....	.....	.....	.....	1.1	2.3	2.6	2.05	1.3	.7
20.....	.6	.1	.....	.....	.....	.....	.95	2.15	2.45	2.0	1.3	.6
21.....	.55	.1	.....	.....	.....	.....	.9	2.1	2.3	2.0	1.25	.6
22.....	.55	.1	.....	.....	.....	.....	.85	2.15	2.15	2.0	1.3	.6
23.....	.55	.1	.....	.....	.....	.....	.9	2.45	2.1	2.0	1.25	.6
24.....	.55	.1	.....	.....	.....	.....	.85	2.85	2.0	1.9	1.2	.6
25.....	.55	.1	.....	.....	.....	.....	.75	2.25	1.75	1.8	1.2	.6
26.....	.6	.1	.....	.....	.....	.....	.8	2.8	1.4	1.8	1.2	.6
27.....	.55	.1	.....	.....	.....	.....	.8	3.2	1.3	1.7	1.05	.6
28.....	.95	.1	.....	.....	.....	.....	.9	3.1	1.4	1.65	.85	.65
29.....	.7	.1	.....	.....	.....	.....	1.05	3.1	1.7	1.55	.9	.7
30.....	.8	.1	.....	.....	.....	.....	1.2	3.15	1.7	1.55	.9	.75
31.....	.6	.....	.....	.....	.....	.....	.....	2.35	.....	1.45	.9	.....

NOTE.—Ice present Dec. 1, 1907, to Mar. 10, 1908; Dec. 1, 1908, to Mar. 31, 1909; Dec. 1, 1909, to Feb. 24, 1910; Dec. 29, 1910, to Feb. 26, 1911; Nov. 19, 1911, to Feb. 29, 1912. Station discontinued during winter of 1912-13.

Daily discharge, in second-feet, of Rio Grande near Creede, Colo., for 1907-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1907.							1907.						
1		826	1,880	5,690	1,370	1,150	16		1,080	4,700	3,340	1,060	575
2		805	1,880	5,560	1,350	1,120	17		1,610	4,900	3,120	931	587
3		826	2,000	5,450	1,300	1,040	18		1,660	4,710	2,900	826	587
4		840	2,420	5,400	1,240	955	19		2,090	4,360	2,680	840	575
5		805	3,150	5,210	1,270	700	20		2,810	3,770	2,460	826	564
6		770	3,350	5,180	1,150	714	21		3,420	3,420	2,240	756	548
7		735	3,700	5,080	1,180	668	22		3,490	3,470	2,260	756	520
8		700	3,730	4,820	1,080	648	23		3,840	3,520	2,000	714	465
9		700	3,760	4,710	1,010	648	24		735	3,420	3,570	1,860	700
10		770	3,790	4,360	955	668	25		826	2,550	3,630	1,900	714
11		1,040	3,810	4,430	915	623	26		805	2,240	4,130	2,240	756
12		1,300	3,820	4,220	1,210	623	27		855	2,210	4,820	2,090	687
13		1,210	3,840	4,000	1,530	605	28		840	2,060	4,860	1,820	687
14		955	4,280	3,780	1,300	587	29		826	1,880	5,130	1,750	770
15		955	4,490	3,560	1,120	587	30		784	1,860	5,180	1,560	1,430
							31		1,870		1,450	1,300	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1907-8.													
1	415	300	233			175	205	840	2,000	1,450	1,080	520	
2	390	288	222			175	240	1,080	2,060	1,450	1,560	520	
3	385	280	222			175	240	1,080	2,180	1,350	1,080	415	
4	380	272	212			161	240	1,080	2,060	1,350	995	365	
5	375	280	233			161	240	955	2,000	1,210	840	390	
6	370	260	240			161	260	955	2,240	1,160	805	365	
7	365	272	222			170	280	915	1,940	1,160	770	342	
8	375	260	233			170	240	995	1,560	995	735	320	
9	375	272	222			170	280	1,080	2,240	915	878	300	
10	390	248	233			170	300	955	3,280	955	805	320	
11	390	240	248			175	365	840	3,420	1,080	735	320	
12	375	222	240			175	390	770	3,020	995	668	320	
13	342	240	272			175	415	770	3,020	955	605	320	
14	342	222	272			175	520	700	3,020	915	668	300	
15	342	222	280			175	575	700	2,950	915	668	300	
16	320	242				175	635	995	3,020	915	635	250	
17	312	212				175	840	1,160	3,020	840	735	280	
18	320	212				175	878	1,660	2,480	805	1,210	300	
19	300	205				175	915	2,060	1,820	735	1,040	260	
20	300	222				175	878	2,240	1,880	700	955	260	
21	288	205				190	735	1,660	2,120	635	840	260	
22	288	212				175	668	1,660	2,120	635	805	210	
23	312	212				175	668	1,260	2,120	635	735	260	
24	329	212				190	605	1,080	2,180	635	700	260	
25	329	222				205	575	995	2,240	700	605	260	
26	312	222				205	465	1,350	2,060	668	605	240	
27	288	205				205	440	1,160	2,000	700	575	300	
28	288	205				175	465	1,120	1,880	575	575	260	
29	288	212				190	465	1,120	1,720	575	635	240	
30	288	212				205	465	1,880	1,660	575	575	260	
31	288					205		1,770		840	520		
1908-9.													
1	240	190					161	742	1,610	1,880	555	678	
2	240	205					161	882	2,240	1,770	678	678	
3	260	190					161	920	3,770	1,820	615	775	
4	260	190					161	1,120	5,290	1,720	615	882	
5	222	190					161	1,660	6,090	2,180	615	2,060	
6	240	190					190	2,060	6,250	1,940	615	3,490	
7	222	190					190	2,300	4,970	1,610	585	3,080	
8	222	175					190	2,420	4,970	1,350	555	3,150	
9	222	205					260	2,240	4,740	1,210	555	3,150	
10	222	190					260	2,180	4,430	1,120	678	2,300	
11	222	175					260	2,180	4,280	1,040	615	1,940	
12	240	190					260	1,940	4,280	882	615	1,770	
13	240	175					260	2,240	4,280	882	615	1,400	
14	260	161					320	2,240	3,560	775	585	1,400	
15	240	161					342	2,360	3,980	742	615	1,210	

Daily discharge, in second-feet, of Rio Grande near Creede, Colo., for 1907-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
16.	222	116	.....	.....	.....	.....	342	2,420	4,200	678	645	1,080
17.	260	161	.....	.....	.....	.....	342	2,620	3,910	615	585	1,000
18.	260	147	.....	.....	.....	.....	342	2,950	4,060	615	585	882
19.	260	147	.....	.....	.....	.....	1,500	2,950	3,840	615	615	810
20.	260	147	.....	.....	.....	.....	1,300	3,020	3,770	615	678	810
21.	240	147	.....	.....	.....	.....	920	3,080	3,490	1,040	710	740
22.	205	134	.....	.....	.....	.....	710	2,420	3,150	1,500	615	678
23.	190	147	.....	.....	.....	.....	775	2,060	3,080	1,560	678	678
24.	205	147	.....	.....	.....	.....	775	1,880	2,740	1,400	678	678
25.	190	147	.....	.....	.....	.....	764	2,120	2,550	920	615	615
26.	190	134	.....	.....	.....	.....	753	2,060	2,550	920	555	550
27.	190	134	.....	.....	.....	.....	742	2,680	2,300	960	555	498
28.	190	161	.....	.....	.....	.....	960	3,020	2,060	882	742	498
29.	190	134	.....	.....	.....	.....	882	2,810	2,060	742	742	498
30.	205	109	.....	.....	.....	.....	742	2,120	1,940	678	742	498
31.	190	.....	.....	.....	.....	.....	.....	1,860	.....	615	678	.....
1909-10.												
1.	442	390	.....	.....	.....	222	618	1,500	4,360	748	445	240
2.	442	390	.....	.....	.....	222	682	1,500	4,200	715	395	240
3.	442	390	.....	.....	.....	222	555	1,660	3,020	650	370	240
4.	470	415	.....	.....	.....	240	585	1,720	3,020	585	330	240
5.	498	390	.....	.....	.....	240	555	1,770	3,150	585	420	240
6.	498	365	.....	.....	.....	240	470	1,660	2,880	585	585	240
7.	370	390	.....	.....	.....	240	470	1,940	2,550	525	420	240
8.	470	390	.....	.....	.....	240	498	2,420	2,300	525	400	240
9.	470	365	.....	.....	.....	260	525	3,560	2,420	470	370	260
10.	470	365	.....	.....	.....	260	585	3,770	2,000	448	348	260
11.	470	365	.....	.....	.....	280	650	3,350	2,120	448	370	260
12.	442	342	.....	.....	.....	280	715	2,810	1,610	448	395	260
13.	442	342	.....	.....	.....	302	682	2,420	1,660	420	348	260
14.	415	320	.....	.....	.....	420	470	2,120	1,720	420	348	240
15.	442	280	.....	.....	.....	525	498	1,940	1,610	370	325	240
16.	442	280	.....	.....	.....	650	420	2,060	1,450	348	325	240
17.	442	260	.....	.....	.....	650	445	2,180	1,300	370	280	240
18.	442	240	.....	.....	.....	618	470	2,060	1,210	370	280	260
19.	415	240	.....	.....	.....	618	585	2,180	1,120	395	280	240
20.	415	240	.....	.....	.....	618	780	2,060	1,160	370	240	248
21.	415	205	.....	.....	.....	650	915	2,180	1,080	348	280	240
22.	415	205	.....	.....	.....	650	880	2,240	1,120	325	260	240
23.	415	205	.....	.....	.....	618	1,080	2,180	955	325	240	240
24.	415	175	.....	.....	.....	682	1,120	1,770	915	302	260	240
25.	415	175	.....	.....	.....	682	1,260	1,940	812	302	240	240
26.	415	175	.....	.....	.....	715	1,610	1,770	780	325	280	222
27.	415	161	.....	.....	.....	715	1,880	1,560	845	280	240	205
28.	415	147	.....	.....	.....	715	2,180	2,360	915	302	240	205
29.	390	147	.....	.....	.....	780	2,420	2,740	915	280	240	205
30.	365	147	.....	.....	.....	715	2,420	3,910	845	370	240	190
31.	378	.....	.....	.....	.....	715	.....	4,430	.....	555	240	.....
1910-11.												
1.	205	222	175	.....	.....	120	370	728	2,880	2,560	1,120	542
2.	205	222	175	.....	.....	120	392	728	3,010	3,070	1,050	542
3.	205	205	175	.....	.....	132	392	760	2,940	2,740	1,010	542
4.	205	240	161	.....	.....	120	392	938	3,270	2,810	975	542
5.	190	240	175	.....	.....	120	348	1,290	3,620	2,310	900	542
6.	190	205	175	.....	.....	108	348	1,580	3,840	2,070	830	515
7.	190	205	175	.....	.....	120	325	1,630	3,770	2,240	795	465
8.	190	205	175	.....	.....	120	348	1,900	3,770	2,070	760	465
9.	175	190	175	.....	.....	120	325	2,180	4,310	1,790	728	415
10.	175	190	175	.....	.....	132	348	2,240	4,070	1,630	728	392
11.	175	205	161	.....	.....	160	325	1,840	3,840	1,480	760	392
12.	175	205	161	.....	.....	145	348	1,790	3,700	1,430	728	392
13.	175	205	175	.....	.....	132	325	1,740	3,340	2,070	728	392
14.	190	205	147	.....	.....	120	325	1,430	3,270	2,740	695	465
15.	190	205	134	.....	.....	120	305	1,380	3,010	2,370	695	440

Daily discharge, in second-feet, of Rio Grande near Creede, Colo., for 1907-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	325	190	134	.....	.....	132	348	1,380	3,070	2,120	728	515
17.....	585	161	134	.....	.....	145	415	1,520	3,010	1,580	695	440
18.....	325	161	121	.....	.....	132	370	1,790	2,880	1,630	695	392
19.....	280	205	109	.....	.....	132	415	2,070	2,940	1,520	662	392
20.....	260	161	134	.....	.....	145	490	1,790	3,140	1,520	630	440
21.....	222	147	134	.....	.....	175	542	1,740	2,880	1,520	630	392
22.....	240	190	134	.....	.....	192	600	1,740	3,070	1,480	1,050	370
23.....	240	190	161	.....	.....	160	630	2,070	2,680	1,480	975	440
24.....	240	205	175	.....	.....	160	600	2,430	2,500	1,480	830	415
25.....	240	222	147	.....	.....	192	600	2,500	2,240	1,480	760	392
26.....	240	205	147	.....	.....	175	695	2,620	2,070	1,480	695	490
27.....	240	190	147	.....	.....	160	865	2,180	2,010	1,480	695	570
28.....	222	175	134	.....	.....	192	900	2,180	2,120	1,480	695	515
29.....	222	190	125	.....	.....	228	975	2,240	2,070	1,380	630	515
30.....	222	190	125	.....	.....	265	975	2,310	2,370	1,290	570	900
31.....	222	.....	125	.....	.....	325	.....	2,620	.....	1,200	542	.....
1911-12.												
1.....	1,380	515	.....	.....	.....	165	120	950	4,290	2,530	1,180	460
2.....	1,380	515	.....	.....	.....	150	130	1,035	4,532	2,370	1,080	410
3.....	1,250	490	.....	.....	.....	150	180	950	4,862	2,210	950	385
4.....	1,010	465	.....	.....	.....	140	210	620	5,290	2,050	870	385
5.....	4,230	490	.....	.....	.....	130	225	655	5,205	1,880	795	360
6.....	5,170	490	.....	.....	.....	195	240	620	4,698	1,720	760	360
7.....	3,270	465	.....	.....	.....	210	280	830	4,532	1,560	725	340
8.....	2,430	515	.....	.....	.....	195	360	1,230	4,290	1,400	690	320
9.....	1,840	490	.....	.....	.....	195	435	1,230	4,130	1,300	655	320
10.....	1,580	490	.....	.....	.....	260	510	950	3,810	1,230	620	340
11.....	1,430	440	.....	.....	.....	210	485	990	3,650	1,130	590	340
12.....	1,290	440	.....	.....	.....	140	410	1,330	3,125	1,130	620	360
13.....	1,160	440	.....	.....	.....	140	320	1,380	2,675	1,130	655	360
14.....	1,090	465	.....	.....	.....	140	280	1,180	2,600	1,130	795	360
15.....	1,010	415	.....	.....	.....	150	300	910	2,825	1,130	950	320
16.....	900	440	.....	.....	.....	150	320	1,130	2,975	1,080	870	320
17.....	865	440	.....	.....	.....	150	340	1,690	2,675	1,035	830	300
18.....	795	415	.....	.....	.....	160	280	2,530	2,115	950	910	280
19.....	728	400	.....	.....	.....	160	260	3,275	1,990	990	760	280
20.....	695	400	.....	.....	.....	165	225	3,575	2,115	1,080	760	280
21.....	695	400	.....	.....	.....	165	195	3,970	2,460	950	690	280
22.....	695	350	.....	.....	.....	165	180	4,050	2,530	1,035	535	260
23.....	662	350	.....	.....	.....	165	240	3,890	2,750	1,230	485	240
24.....	630	300	.....	.....	.....	165	385	4,130	2,750	1,280	460	240
25.....	662	300	.....	.....	.....	165	510	4,532	2,675	1,180	435	240
26.....	630	300	.....	.....	.....	165	410	4,532	2,530	1,180	435	240
27.....	630	300	.....	.....	.....	165	410	4,370	2,390	1,280	435	240
28.....	600	300	.....	.....	.....	140	435	4,615	2,390	1,180	460	240
29.....	570	300	.....	.....	.....	150	655	4,950	2,600	1,330	460	225
30.....	542	300	.....	.....	.....	150	870	5,120	2,675	1,530	435	225
31.....	542	.....	.....	.....	.....	140	.....	4,698	.....	1,380	435	.....
1912-13.												
1.....	240	240	.....	.....	.....	.....	660	520	1,155	910	660	342
2.....	240	225	.....	.....	.....	.....	555	410	1,110	990	660	342
3.....	240	225	.....	.....	.....	.....	388	365	1,470	1,070	800	320
4.....	240	210	.....	.....	.....	.....	222	342	1,660	1,030	730	320
5.....	280	210	.....	.....	.....	.....	175	365	1,660	950	660	388
6.....	260	195	.....	.....	.....	.....	240	435	1,380	910	625	410
7.....	360	180	.....	.....	.....	.....	222	625	1,245	990	590	410
8.....	410	165	.....	.....	.....	.....	130	800	1,155	950	590	490
9.....	360	150	.....	.....	.....	.....	100	870	1,290	950	590	520
10.....	320	150	.....	.....	.....	.....	115	835	1,560	1,110	590	460
11.....	280	140	.....	.....	.....	.....	122	990	1,380	950	590	410
12.....	280	140	.....	.....	.....	.....	162	1,155	1,245	910	590	410
13.....	280	140	.....	.....	.....	.....	222	1,335	1,200	910	590	410
14.....	280	130	.....	.....	.....	.....	388	1,770	1,200	870	590	388
15.....	280	130	.....	.....	.....	.....	365	1,335	1,200	910	590	365

Daily discharge, in second-feet, of Rio Grande near Creede, Colo., for 1907-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
16.....	280	130					365	1,470	1,200	950	590	342
17.....	280	130					435	1,380	1,290	950	590	320
18.....	280	130					460	1,380	1,470	1,110	590	300
19.....	280	130					460	1,380	1,660	1,155	590	280
20.....	280	130					388	1,245	1,515	1,110	590	240
21.....	260	130					365	1,200	1,380	1,110	555	240
22.....	260	130					342	1,245	1,245	1,110	590	240
23.....	260	130					365	1,515	1,200	1,110	555	240
24.....	260	130					342	1,950	1,110	1,030	520	240
25.....	260	130					300	1,335	910	950	520	240
26.....	280	130					320	1,890	660	850	520	240
27.....	260	130					320	2,370	590	870	435	240
28.....	435	130					365	2,250	660	835	342	260
29.....	320	130					435	2,250	870	765	365	280
30.....	360	130					520	2,310	870	765	365	300
31.....	280							1,425		695	365	

NOTE.—Discharge determined from 3 well-defined rating curves which only varied slightly from year to year.

Discharge interpolated or estimated for days for which gage heights are missing.

Discharges for 1912-13 furnished by the State engineer.

Monthly discharge of Rio Grande near Creede, Colo., for 1907-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907.					
April 24-30.....	855	735	810	11,200	A.
May.....	3,840	700	1,660	102,000	A.
June.....	5,180	1,880	3,800	226,000	A.
July.....	5,690	1,450	3,460	213,000	A.
August.....	1,530	687	1,020	62,700	A.
September.....	1,150	425	629	37,400	A.
The period.....				652,000	
1907-8.					
October.....	415	288	337	20,700	A.
November.....	300	205	236	14,000	A.
December 1-15.....	280	212	239	7,110	A.
March.....	202	161	179	11,000	B.
April.....	915	205	483	28,700	A.
May.....	2,240	700	1,190	73,200	A.
June.....	3,420	1,560	2,310	137,000	A.
July.....	1,450	575	904	55,600	A.
August.....	1,560	520	795	48,900	A.
September.....	520	240	313	18,600	A.
1908-9.					
October.....	260	190	226	13,900	A.
November.....	205	109	163	9,700	B.
April.....	1,500	161	506	30,100	A.
May.....	3,080	742	2,180	134,000	A.
June.....	6,250	1,610	3,680	219,000	B.
July.....	2,180	615	1,140	70,100	A.
August.....	742	555	630	38,700	A.
September.....	3,490	498	1,280	76,200	A.
1909-10.					
October.....	498	365	435	26,700	A.
November.....	415	147	283	16,800	A.
January.....			a 180	11,100	D.
February.....			a 150	8,330	D.
March.....	780	222	483	29,700	A.
April.....	2,420	420	901	53,600	A.
May.....	4,430	1,500	2,320	143,000	A.
June.....	4,360	780	1,800	107,000	A.
July.....	748	280	436	26,800	A.
August.....	585	240	324	19,900	A.
September.....	260	190	238	14,200	A.

a Discharge based on two measurements made during the winter months.

Monthly discharge of Rio Grande near Creede, Colo., for 1907-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
October.....	585	175	231	14,200	A.
November.....	240	147	198	11,800	A.
December.....	175	.....	a 152	9,350	B.
January.....	a 170	.....	a 150	9,220	C.
February.....	a 170	.....	a 145	8,050	B.
March.....	325	108	155	9,530	A.
April.....	975	305	488	29,000	A.
May.....	2,620	728	1,790	110,000	A.
June.....	4,310	2,010	3,060	182,000	A.
July.....	3,070	1,200	1,860	114,000	A.
August.....	1,120	542	774	47,600	A.
September.....	900	370	474	28,200	A.
The year.....	4,310	.....	790	573,000	.....
1911-12.					
October.....	5,170	542	1,300	79,900	A.
November.....	b 515	.....	b 414	24,600	C.
December.....	b 300	.....	b 232	14,300	C.
January.....	.....	.....	b 181	11,100	.....
February.....	.....	.....	b 163	9,350	.....
March.....	210	130	164	10,100	.....
April.....	870	120	340	20,200	.....
May.....	5,120	620	2,450	151,000	.....
June.....	5,290	1,990	3,270	195,000	.....
July.....	2,530	950	1,370	84,500	.....
August.....	1,180	435	685	42,100	.....
September.....	460	225	310	18,500	.....
The year.....	5,290	.....	907	661,000	.....
1912-13.					
October.....	435	240	290	17,800	.....
November.....	240	130	153	9,080	.....
April.....	660	100	328	19,517	.....
May.....	2,370	342	1,250	76,860	.....
June.....	1,660	590	1,218	72,476	.....
July.....	1,155	695	964	59,274	.....
August.....	800	342	565	34,740	.....
September.....	520	240	333	19,815	.....

a Discharge based on two measurements made in January and February, 1911.

b Discharge based on three measurements made in December, 1911, and January and February, 1912.

RIO GRANDE NEAR DEL NORTE, COLO.

Location.—At highway bridge, about sec. 29, T. 40 N., R. 5 E., 6 miles west of Del Norte, a short distance below the mouth of Wolf Creek.

Records available.—April 16, 1908, to September 30, 1913. From July 1, 1889, to November 30, 1906, a station was maintained about 4 miles below the present station and just above Los Pinos Creek. The flow at the two points is not directly comparable, as a number of small streams contribute water during certain seasons, and a small amount of water is diverted for irrigation.

Drainage area.—Approximately 1,400 square miles.

Gage.—Automatic recording gage, the property of the State engineer, installed November 8, 1910. This gage is referred to the same datum as was the chain gage installed May 16, 1908. The gage datum used at the original station remained unchanged.

Channel.—Shifting from year to year.

Discharge measurements.—Made from bridge at present station and from car and cable at original site.

Winter flow.—River is frozen over during the winter months, and measurements are made to determine the approximate discharge.

Diversions.—There are court decrees for diversions of 101 second-feet from the Rio Grande between the Creede and Del Norte stations, and for diversions of 162 second-feet from intervening tributaries.

Cooperation.—Station maintained since 1910 in cooperation with the State engineer, who furnished complete the records for 1912 and 1913.

Discharge measurements of Rio Grande near Del Norte, Colo., in 1889-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1889.		<i>Feet.</i>	<i>Sec.-ft.</i>	1898.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 25	G. T. Quinby.....		2,130	Apr. 14	P. E. Harroun.....	3.27	1,970
June 25	do.....		1,870	May 28	do.....	3.23	1,800
July 17	do.....		685	June 23	do.....	5.25	5,180
Aug. 30	H. M. Dyar.....		372	Aug. 25	do.....	1.86	521
Oct. 11	do.....	1.49	227	Oct. 28	do.....	1.48	244
1890.				1899.			
Mar. 11	H. M. Dyar.....	2.24	540	Apr. 25	A. L. Fellows.....	2.42	1,000
25	do.....	2.13	434	May 24	do.....	2.92	1,480
28	do.....	2.08	455	June 29	do.....	2.10	734
Apr. 1	do.....	2.16	482	Aug. 21	do.....	1.58	387
3	do.....	1.97	393	1900.			
5	do.....	2.23	503	Mar. 30	A. L. Fellows.....	1.54	346
16	do.....	3.44	1,370	May 12	do.....	3.84	2,440
17	do.....	3.24	1,180	June 16	do.....	3.66	2,380
18	do.....	3.26	1,200	Aug. 18	do.....	1.34	221
21	do.....	3.30	1,250	1901.			
22	do.....	3.09	1,060	Sept. 10	A. L. Fellows.....	1.75	470
23	do.....	2.97	974	1902.			
26	do.....	2.84	909	Apr. 24	A. L. Fellows.....	1.90	493
28	do.....	2.88	910	July 8	J. E. Field.....	1.31	210
May 8	do.....	5.05	3,590	1903.			
12	do.....	4.88	3,240	Apr. 18	F. Cogswell.....	1.85	569
27	W. B. Lane.....	6.39	6,050	May 20	do.....	3.65	2,150
31	do.....	5.90	5,010	June 11	do.....	5.70	5,200
June 5	do.....	5.29	3,680	July 2	do.....	4.45	3,200
7	do.....	4.99	3,460	31	do.....	2.05	699
10	do.....	5.24	3,730	Sept. 14	do.....	1.90	592
14	do.....	5.42	4,230	Oct. 12	do.....	1.52	385
23	do.....	4.94	3,420	Nov. 9	do.....	1.40	269
26	do.....	4.91	3,100	1904.			
July 1	do.....	4.22	2,120	Apr. 1	G. B. Monk.....	1.15	209
3	do.....	4.02	1,960	May 5	do.....	1.80	584
21	do.....	3.24	1,230	June 20	do.....	1.90	687
24	do.....	3.04	1,070	25	do.....	1.85	618
26	do.....	2.88	932	July 14	do.....	1.40	259
29	do.....	2.66	769	20	do.....	1.30	245
1891.				30	do.....	1.70	420
Apr. 10	T. M. Bannon.....	2.20	527	Aug. 22	do.....	1.99	585
1892.				22	do.....	1.98	558
Oct. 27	T. M. Bannon.....	1.58	274	23	do.....	1.90	488
1894.				23	do.....	1.90	598
June 13 ^a	F. H. Newell.....	2.68	968	1905.			
Sept. 27	A. P. Davis.....	1.52	267	Apr. 20	R. I. Meeker.....	2.08	638
1895.				June 28	do.....	3.90	3,430
June 14	F. Cogswell.....	4.00	2,820	July 25	do.....	1.70	744
Oct. 13 ^a	do.....	1.80	414	Sept. 18	do.....	1.00	280
1896.				1906.			
June 22	F. Cogswell.....	1.90	492	Apr. 2	R. I. Mceker.....	1.15	383
July 27	do.....	1.70	385	29	do.....	2.42	1,470
Sept. 28	do.....	2.30	706	May 24	Murphy and Meeker...	4.90	5,000
Oct. 26	do.....	1.80	445	June 13	R. I. Meeker.....	6.30	7,730
1897.				Oct. 25	do.....	1.70	741
Apr. 26	F. Cogswell.....	3.00	1,510	1908.			
May 17	do.....	4.05	3,010	May 16 ^b	W. B. Freeman.....	2.27	1,370
June 29	do.....	5.45	4,900	June 11 ^b	J. B. Stewart.....	4.70	4,710
July 28	do.....	3.30	1,770	May 16	W. B. Freeman.....	2.32	1,450
July 26	do.....	2.00	640				
Aug. 30	do.....	1.55	373				
Oct. 25	do.....	2.66	1,110				

^a Measurements made at iron bridge, millrace, and canal and total taken as discharge of river.
^b Measurements made at old station discontinued in 1906.

Discharge measurements of Rio Grande near Del Norte, Colo., in 1889-1913—Continued.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1908.		<i>Feet.</i>	<i>Sec. ft.</i>	1911.		<i>Feet.</i>	<i>Sec. ft.</i>
June 11	J. B. Stewart.....	3.75	3,910	Jan. 20 ^a	G. H. Russell.....	1.98	287
July 13	do.....	1.95	1,320	Feb. 26 ^a	Clayton and Turner.....	.68	246
Nov. 17	W. B. Freeman.....	.60	163	Mar. 29	B. S. Clayton.....	1.04	431
				Apr. 29	do.....	2.55	1,960
1909.				June 3	do.....	4.27	5,300
May 17	do.....	3.58	3,730	July 5	do.....	3.74	3,850
June 21	do.....	4.27	4,960	Sept. 10	C. E. Turner.....	1.34	565
Aug. 4	G. H. Russell.....	1.60	840	Oct. 16	B. S. Clayton.....	2.15	1,390
Oct. 1	do.....	1.40	752				
				1912.			
1910.				Jan. 12 ^a	B. S. Clayton.....	1.58	400
Jan. 25 ^a	J. B. Stewart.....	.60	314	Feb. 25 ^a	do.....	1.30	265
Feb. 22 ^a	Thos. Grieve.....	2.65	291	Apr. 3	do.....	1.12	526
	G. H. Russell.....	2.65	283	9	do.....	1.46	731
Mar. 17	Thos. Grieve.....	1.28	618	May 12	do.....	2.90	2,420
Apr. 8	do.....	1.66	896	June 6	C. C. Hezmalhalch.....	4.81	6,200
15	G. H. Russell.....	1.60	918	Aug. 22	do.....	1.38	687
May 23	do.....	2.79	2,410	Sept. 14	C. E. Turner.....	1.10	459
June 27	do.....	1.87	1,080	Nov. 15	do.....	.59	206
July 31	do.....	1.41	736				
Aug. 8	Christianson and Grieve.....	1.18	551	1913.			
10	do.....	1.15	532	Jan. 25 ^a	C. E. Turner.....		165
Sept. 7	I. G. Ferguson.....	.80	320	Feb. 8 ^a	do.....		156
Oct. 18	Christianson and Hezmalhalch.....	1.14	492	May 24	C. O. Chrisman.....	3.12	2,963
Dec. 11	G. H. Russell.....	.78	296	June 21	do.....	2.68	2,284
				July 24	do.....	1.80	1,156
				Aug. 27	do.....	1.26	648
				Sept. 23	do.....	1.10	523

^a Ice present.

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913.

Day.	July.	Sept.	Day.	July.	Sept.	Day.	July.	Sept.
1889.			1889.			1889.		
1.....	0.90	1.24	11.....	0.90	1.52	21.....	0.90	1.50
2.....	.90	1.33	12.....	.90	1.50	22.....		1.26
3.....	.90	1.49	13.....	.90	1.38	23.....		1.23
4.....	.90	1.55	14.....	.90	1.34	24.....		1.15
5.....	.90	1.53	15.....	.90	2.20	25.....		1.15
6.....	.90	1.57	16.....	.90	3.00	26.....		1.15
7.....	.90	1.28	17.....	.90	2.75	27.....		1.15
8.....	.90	1.28	18.....	.90	3.00	28.....		1.35
9.....	.90	1.29	19.....	.90	1.50	29.....		1.15
10.....	.90	1.49	20.....	.90	1.00	30.....		1.15
						31.....		

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90												
1.....	1.23	1.75	1.90	1.83	2.65	2.55	2.14	4.00		4.20	2.85	2.10
2.....	1.33	1.80	1.89	1.95	2.62	2.77	2.06	4.36	6.15	4.10	2.90	2.10
3.....	1.15	1.80	1.86	1.97	2.63	2.35	2.00	4.61	6.05	4.00	2.70	2.10
4.....	1.15	1.80	1.80	2.00	2.63	2.05	2.07	4.69	5.47	3.95	2.65	2.10
5.....	1.15	1.80	1.80	2.10	2.73	1.95	2.20	4.78	5.29	4.00	2.55	2.10
6.....		1.80	1.75	1.80	2.72	1.87	2.24	4.90	5.20	4.00	2.45	2.05
7.....		1.80	1.70	1.93	2.76	1.92	2.27	4.96	4.97	4.00	2.35	2.05
8.....		1.80	1.77	1.95	2.80	1.83	2.31	5.02	5.05	4.00	2.30	2.05
9.....		1.79	1.75	2.00	2.85	2.00	2.37	5.05	5.13	4.00	2.25	2.05
10.....		1.80	1.60	2.10	2.85	2.00	2.42	5.01	5.24	4.00	2.15	2.00
11.....	1.49	1.80	1.60	2.00	2.85	2.24	2.47	4.94	5.32	4.05	2.10	2.00
12.....	1.45	1.80	1.50	2.05	2.70	2.20	2.57	4.87	5.38	3.90	2.30	1.95
13.....	1.45	1.80	1.50	2.05	2.70	2.20	2.68	4.94	5.52	3.85	2.45	1.95
14.....	1.45	1.80	1.42	2.05	2.65	2.20	2.78	4.85	5.43	3.75	2.35	1.90
15.....	1.47	1.80	1.40	2.35	2.65	2.20	3.05	5.10	5.35	3.70	2.35	1.90

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90.												
16.....	1.50	1.74	1.40	2.25	2.65	2.20	3.47	5.33	5.30	3.60	2.40	1.90
17.....	1.55	1.80	1.42	2.50	2.65	2.20	3.24	5.57	5.27	3.60	2.35	1.85
18.....	1.67	1.80	1.45	2.35	2.65	2.20	3.27	6.10	5.28	3.50	2.35	1.85
19.....	1.80	1.78	1.44	2.50	2.70	2.20	3.24	6.10	5.40	3.50	2.45	1.85
20.....	1.85	1.78	1.45	2.50	2.75	2.20	3.29	6.20	5.25	3.45	2.45	1.90
21.....	1.80	1.74	1.45	2.53	2.75	2.20	3.30	6.20	5.08	3.25	2.40	1.90
22.....	1.80	1.73	1.77	2.55	2.68	2.20	3.12	6.30	4.95	3.20	2.70	1.90
23.....	1.80	1.72	1.78	2.63	2.65	2.16	2.97	6.15	4.94	3.15	2.50	1.90
24.....	1.80	1.70	1.77	2.63	2.68	2.31	2.92	6.15	5.06	3.05	2.35	1.90
25.....	1.77	1.70	1.78	3.00	2.66	2.22	2.89	6.30	4.97	3.00	2.30	1.90
26.....	1.73	1.70	1.93	2.63	2.66	2.19	2.90	6.25	4.91	2.90	2.25	1.85
27.....	1.71	1.73	1.92	2.63	2.68	2.17	3.20	6.34	4.82	2.80	2.25	1.85
28.....	1.74	1.80	1.80	2.63	2.68	2.18	3.52	6.30	4.59	2.70	2.20	1.80
29.....	1.67	1.83	1.73	2.63	.....	2.29	3.67	6.20	4.47	2.75	2.15	1.80
30.....	1.63	1.90	1.72	2.73	.....	2.08	3.86	5.83	4.40	2.70	2.15	1.80
31.....	1.70	.....	1.82	2.70	.....	2.07	.....	5.90	.....	2.80	2.10	.....
1890-91.												
1.....	1.75	2.00	2.15	2.50	3.40	3.50	2.85	5.85	4.65	5.05	3.55	1.95
2.....	1.75	1.95	2.15	2.50	3.35	3.50	2.85	5.00	4.38	4.85	3.40	1.90
3.....	1.75	1.95	2.15	2.50	3.35	3.55	2.80	5.10	4.30	4.70	3.20	1.90
4.....	1.80	1.90	2.20	2.55	3.35	3.55	2.80	5.25	4.20	4.55	3.05	1.90
5.....	1.80	1.90	2.25	2.55	3.30	3.55	2.75	5.50	4.20	4.40	2.85	1.90
6.....	1.80	1.90	2.20	2.60	3.30	3.55	2.75	5.75	4.15	4.35	2.75	1.85
7.....	1.85	1.85	2.20	2.60	3.30	3.50	2.70	6.20	4.30	4.30	2.65	1.90
8.....	1.85	1.85	2.20	2.95	3.30	3.50	2.70	6.15	4.60	4.20	2.70	2.00
9.....	1.90	1.85	2.25	2.95	3.30	3.50	2.70	6.10	5.00	4.10	2.70	2.00
10.....	1.90	1.85	2.25	2.95	3.30	3.45	2.70	5.95	5.35	4.00	2.65	1.95
11.....	2.00	1.90	2.25	3.00	3.25	3.45	2.80	5.70	5.70	3.80	2.60	1.90
12.....	2.10	1.95	2.25	3.00	3.30	3.40	3.00	5.40	6.00	3.65	2.45	1.85
13.....	2.40	2.10	2.25	3.00	3.30	3.40	3.10	5.10	6.15	3.55	2.50	1.80
14.....	2.60	2.35	2.25	3.05	3.30	3.40	3.25	4.95	5.85	3.50	2.45	1.80
15.....	2.80	2.40	2.30	3.00	3.35	3.40	3.50	4.85	5.80	3.80	2.40	1.75
16.....	2.60	2.40	2.30	3.00	3.35	3.40	3.55	4.60	5.30	3.55	2.30	1.75
17.....	2.40	2.40	2.30	3.05	3.35	3.40	3.50	4.40	5.20	3.35	2.30	1.70
18.....	2.40	2.35	2.30	3.05	3.40	3.40	3.45	4.25	5.20	3.20	2.25	1.75
19.....	2.20	2.30	2.30	3.05	3.40	3.40	3.40	4.15	5.65	3.05	2.25	1.80
20.....	2.20	2.30	2.35	3.00	3.40	3.40	3.35	4.10	5.70	3.10	2.25	1.85
21.....	2.20	2.35	2.35	3.05	3.40	3.45	3.30	4.05	5.85	3.00	2.20	1.85
22.....	2.00	2.40	2.40	3.05	3.40	3.40	3.35	4.40	5.95	3.00	2.20	1.90
23.....	2.00	2.40	2.40	3.05	3.45	3.40	3.35	4.20	6.00	2.95	2.15	2.20
24.....	2.20	2.35	2.40	3.10	3.45	3.40	3.40	4.10	6.10	2.90	2.10	2.85
25.....	2.00	2.30	2.45	3.10	3.50	3.05	4.10	4.00	5.95	2.85	2.05	3.10
26.....	2.20	2.25	2.45	3.10	3.50	3.00	4.50	3.90	5.90	2.80	2.00	3.30
27.....	2.40	2.20	2.50	3.30	3.50	3.00	4.50	4.15	5.90	2.80	1.95	3.15
28.....	2.40	2.20	2.50	3.40	3.50	3.00	4.60	4.20	5.75	2.85	2.00	3.10
29.....	2.20	2.15	2.50	3.40	.....	2.95	4.65	4.30	5.60	3.00	2.00	3.05
30.....	2.00	2.15	2.50	3.40	.....	2.90	4.80	4.54	5.45	4.00	2.00	3.25
31.....	2.00	.....	2.50	3.35	.....	2.90	.....	4.70	.....	3.85	2.00	.....
1891-92.												
1.....	4.20	2.10	1.80	.....	.....	.....	1.85	4.20	4.20	3.10	2.40	1.75
2.....	4.35	2.10	1.80	.....	.....	.....	1.90	4.05	4.05	3.00	2.35	1.70
3.....	4.10	2.05	1.80	.....	.....	.....	2.00	4.00	4.20	2.95	2.35	1.70
4.....	3.75	2.05	3.05	.....	.....	.....	1.95	3.95	4.35	2.85	2.30	1.70
5.....	3.50	2.00	5.60	.....	.....	.....	1.90	3.90	4.30	2.70	2.25	1.70
6.....	3.35	2.00	5.45	.....	.....	.....	1.95	3.85	4.30	2.45	2.25	1.70
7.....	3.15	2.00	5.30	.....	.....	.....	2.10	3.85	4.45	2.50	2.20	1.65
8.....	3.10	1.95	5.10	.....	.....	.....	2.45	3.80	4.80	2.65	2.15	1.65
9.....	3.10	2.00	5.00	.....	.....	.....	2.60	3.65	4.75	3.00	2.30	1.65
10.....	2.95	2.00	4.80	.....	.....	.....	2.80	3.60	4.50	2.75	2.25	1.60
11.....	2.90	2.10	4.70	.....	.....	.....	2.90	3.70	4.10	2.60	2.00	1.60
12.....	2.85	2.05	4.45	.....	.....	.....	2.95	3.95	4.05	2.55	2.20	1.60
13.....	2.80	2.00	4.30	.....	.....	.....	3.00	4.05	4.00	2.55	2.15	1.60
14.....	2.75	2.00	4.20	.....	.....	.....	3.05	4.10	4.10	2.50	2.10	1.60
15.....	2.65	1.95	4.15	.....	.....	.....	3.40	4.10	4.20	2.45	2.05	1.60
16.....	2.60	1.95	4.10	.....	.....	.....	3.70	4.10	4.05	2.40	2.00	1.60
17.....	2.60	1.90	4.00	.....	.....	.....	3.80	4.05	4.15	2.40	2.00	1.60
18.....	2.50	1.90	3.95	.....	.....	.....	3.65	4.15	4.10	2.50	2.00	1.60
19.....	2.45	1.85	3.90	.....	.....	.....	3.40	4.30	4.20	2.35	2.00	1.60
20.....	2.40	1.80	3.86	.....	.....	.....	3.35	4.75	4.30	2.35	1.95	1.60

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
21.....	2.40	1.80	3.88	-----	-----	-----	3.25	4.80	4.40	2.30	1.95	1.55
22.....	2.35	1.80	4.00	-----	-----	1.70	3.15	4.95	4.25	2.40	1.95	1.55
23.....	2.35	1.75	4.10	-----	-----	1.70	3.10	5.25	4.10	2.35	1.90	1.55
24.....	2.30	1.75	4.15	-----	-----	1.75	3.00	5.70	4.05	2.45	1.90	1.55
25.....	2.30	1.80	4.10	-----	-----	1.75	3.10	5.60	4.00	2.55	1.90	1.55
26.....	2.25	1.80	4.05	-----	-----	1.75	3.20	5.50	3.90	2.60	1.90	1.55
27.....	2.20	1.80	4.10	-----	-----	1.80	3.35	5.20	3.75	2.65	1.85	1.55
28.....	2.20	1.80	4.05	-----	-----	1.80	3.65	5.05	3.60	2.90	1.80	1.55
29.....	2.15	1.80	4.00	-----	-----	1.80	3.90	4.95	3.40	2.80	1.80	1.55
30.....	2.10	1.80	4.00	-----	-----	1.85	4.30	4.80	3.15	2.60	1.80	1.55
31.....	2.10	-----	4.10	-----	-----	1.80	-----	4.40	-----	2.50	1.75	-----
1892-93.												
1.....	1.55	1.65	2.8	3.15	-----	-----	1.8	2.8	4.4	2.45	2.0	1.8
2.....	1.55	1.65	2.85	3.1	-----	-----	1.85	2.75	4.5	2.3	2.1	1.85
3.....	1.55	1.6	2.85	3.1	-----	-----	1.9	2.7	4.5	2.25	2.1	1.85
4.....	1.55	1.6	2.9	3.1	-----	-----	2.05	2.65	4.6	2.15	2.0	1.8
5.....	1.55	1.6	2.9	3.1	-----	-----	2.2	2.6	4.4	2.1	1.8	1.7
6.....	1.55	1.6	2.85	3.1	-----	-----	2.15	2.6	4.2	2.1	1.8	1.7
7.....	1.55	1.6	2.8	3.05	-----	-----	2.1	2.7	4.2	2.05	1.75	1.7
8.....	1.55	1.65	2.85	3.05	-----	-----	2.05	2.7	4.5	2.0	1.8	1.65
9.....	1.55	1.6	2.9	3.0	-----	-----	2.05	2.8	4.5	2.0	1.8	1.6
10.....	1.55	1.6	2.95	3.0	-----	-----	2.05	2.85	4.5	1.9	1.75	1.6
11.....	1.55	1.6	3.0	2.95	-----	-----	2.1	3.0	4.4	1.95	1.7	1.6
12.....	1.55	1.55	2.9	2.9	-----	-----	2.05	3.35	4.3	2.05	1.7	1.55
13.....	1.6	1.55	2.85	2.9	-----	-----	2.0	3.8	4.2	2.2	1.65	1.55
14.....	1.6	1.55	2.9	2.9	-----	-----	1.95	3.9	3.9	2.1	1.65	1.5
15.....	1.6	1.6	2.9	2.9	-----	-----	1.9	3.95	3.8	2.0	1.7	1.5
16.....	1.6	1.6	2.95	2.95	-----	-----	1.95	4.2	3.7	1.9	1.75	1.5
17.....	1.6	1.75	2.9	2.95	-----	-----	2.0	4.4	3.6	1.85	1.75	1.6
18.....	1.6	1.95	2.85	2.9	-----	-----	2.1	4.9	3.5	1.8	1.75	1.7
19.....	1.6	2.0	2.9	2.9	-----	-----	2.15	4.9	3.4	1.9	1.8	1.65
20.....	1.6	2.05	2.95	2.85	-----	-----	2.1	4.85	3.3	1.75	1.8	1.65
21.....	1.65	1.9	2.95	2.85	-----	-----	2.1	4.85	3.15	1.75	1.85	1.6
22.....	1.7	1.85	2.9	2.8	-----	-----	2.2	4.75	3.0	1.7	1.85	1.6
23.....	1.7	1.85	3.0	2.8	-----	-----	2.25	4.85	3.0	1.7	1.8	1.6
24.....	1.7	1.9	3.05	2.8	-----	-----	2.4	4.8	2.9	1.8	1.75	1.55
25.....	1.7	2.05	3.1	2.8	-----	-----	2.65	4.65	2.8	1.85	1.7	1.6
26.....	1.65	2.25	3.1	2.85	-----	-----	2.8	4.4	2.75	1.9	1.65	1.6
27.....	1.6	2.35	3.05	2.9	-----	-----	2.9	4.25	2.7	1.9	1.6	1.65
28.....	1.65	2.4	3.05	2.95	-----	-----	2.95	4.2	2.6	1.9	1.8	1.7
29.....	1.65	2.6	3.0	3.0	-----	-----	3.05	4.1	2.5	1.8	1.8	1.75
30.....	1.65	2.75	3.05	2.95	-----	-----	3.0	4.25	2.5	1.8	1.75	1.7
31.....	1.6	-----	3.1	2.9	-----	-----	-----	4.35	-----	1.95	1.8	-----
1893-94.												
1.....	1.75	1.55	1.85	-----	3.05	3.05	-----	-----	3.5	1.7	-----	1.7
2.....	1.7	-----	-----	2.85	-----	-----	2.05	3.1	-----	-----	1.65	-----
3.....	1.7	1.55	1.5	-----	3.05	3.1	-----	-----	3.4	1.7	-----	1.75
4.....	1.7	-----	-----	2.9	-----	-----	2.0	3.3	-----	-----	1.6	-----
5.....	-----	1.5	2.0	-----	3.0	3.1	-----	-----	3.3	1.7	-----	1.7
6.....	1.65	-----	-----	2.95	-----	-----	2.1	3.85	-----	-----	1.6	-----
7.....	-----	1.45	2.2	-----	3.0	3.0	-----	-----	3.3	1.7	-----	1.7
8.....	1.6	-----	-----	3.05	-----	-----	2.2	3.85	-----	-----	1.55	-----
9.....	-----	1.45	2.55	-----	2.95	3.0	-----	-----	3.1	1.7	-----	1.8
10.....	1.6	-----	-----	3.1	-----	-----	2.1	3.95	-----	-----	1.6	-----
11.....	-----	1.5	2.6	-----	3.0	2.95	-----	-----	2.9	1.7	-----	1.9
12.....	1.55	-----	-----	3.15	-----	-----	2.15	4.2	-----	-----	1.6	-----
13.....	-----	1.55	2.5	-----	3.0	2.9	-----	-----	2.8	1.6	-----	1.75
14.....	1.6	-----	-----	3.0	-----	-----	2.25	4.4	-----	-----	1.65	-----
15.....	-----	1.6	2.5	-----	3.0	3.05	-----	-----	2.6	1.55	-----	1.7
16.....	1.55	-----	-----	3.05	-----	-----	2.3	3.9	-----	-----	1.7	-----
17.....	-----	1.6	2.5	-----	2.95	3.15	-----	-----	2.4	1.65	-----	1.65
18.....	1.6	-----	-----	3.0	-----	-----	2.25	4.1	-----	-----	1.75	-----
19.....	-----	1.55	2.55	-----	2.9	2.95	-----	-----	2.3	1.9	-----	1.6
20.....	1.55	-----	-----	3.05	-----	-----	2.5	4.6	-----	-----	1.8	-----
21.....	-----	1.6	2.5	-----	2.95	27.0	-----	-----	2.3	1.85	-----	1.6
22.....	1.55	-----	-----	3.0	-----	-----	2.7	4.1	-----	-----	1.95	-----
23.....	-----	1.65	2.55	-----	3.0	2.25	-----	-----	2.1	1.8	-----	1.55
24.....	1.6	-----	-----	2.95	-----	-----	2.95	3.5	-----	-----	2.0	-----
25.....	-----	2.0	2.7	-----	3.0	2.15	-----	-----	2.0	1.75	-----	1.55

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1893-94.												
26	1.6			2.95			3.25	3.3			1.95	
27		2.1	2.8		3.0	2.1			1.95	1.65		1.5
28	1.55			3.0			3.6	3.4			1.8	
29		2.05	2.75			2.0			1.85	1.6		1.7
30	1.6			3.0			3.05	3.5			1.8	
31			2.7			2.05				1.6		
1894-95.												
1	1.75			2.24			2.18	3.98			2.72	
2		1.6	1.44		2.58	2.70			3.74	2.72		2.06
3	1.85			2.32			2.26	3.26			2.64	
4		1.6	1.46		2.64	2.62			3.56	2.64		1.96
5	1.8			2.48			2.34	3.32			2.46	
6		1.6	1.52		2.60	2.54			4.10	2.50		1.94
7	1.8			2.52			2.28	3.38			2.42	
8		1.6	1.58		2.58	2.48			4.46	2.56		1.86
9	1.75			2.44			2.74	3.74			2.40	
10		1.6	1.60		2.60	2.32			4.52	2.86		1.78
11	1.7			2.38			3.32	4.18			2.28	
12		1.6	1.58		2.64	2.12			4.68	3.12		1.82
13	1.65			2.44			3.72	4.24			2.18	
14		1.55	1.54		2.64	1.98			4.18	3.04		1.74
15	1.6			2.56			3.54	4.16			2.40	
16		1.5	1.58		2.66	2.06			3.96	2.88		1.72
17	1.6			2.62			3.82	4.02			2.24	
18		1.5	1.62		2.74	1.96			3.84	2.60		1.70
19	1.65			2.58			4.26	3.88			2.10	
20		1.45	1.68		2.70	1.88			3.64	2.42		1.78
21	1.7			2.46			4.10	3.76			2.04	
22		1.45	1.72		2.86	1.82			3.20	2.56		1.96
23	1.65			2.42			3.82	3.64			2.48	
24		1.5	1.76		2.82	1.74			3.00	2.60		1.92
25	1.65			2.38			4.14	3.50			2.22	
26		1.45	1.80		2.78	1.92			2.98	2.64		1.88
27	1.6			2.40			4.22	3.58			2.04	
28		1.4	2.02		2.74	2.18			3.02	2.58		1.82
29	1.65			2.46			4.18	3.52			2.16	
30		1.4	2.18			2.22			2.94	2.66		1.78
31	1.6			2.52				3.36			2.18	
1895-96.												
1		1.74	1.76	3.12	2.96	3.12	2.08	4.18	3.62	1.74	1.56	1.60
2	1.76											
3		1.70	2.56	3.24	3.02	3.18	2.14	4.56	3.38	1.70	1.52	1.50
4	1.80											
5		1.66	2.50	3.28	2.98	3.10	2.46	4.52	3.06	1.64	1.54	1.54
6	1.86											
7		1.68	2.54	3.16	2.86	3.14	3.08	4.30	2.88	1.62	1.52	1.48
8	1.90											
9		1.64	2.68	3.20	2.80	3.10	3.20	3.96	2.72	1.68	1.48	1.50
10	1.88											
11		1.60	2.94	3.22	2.90	3.04	3.02	3.66	2.52	1.64	1.46	1.74
12	1.80											
13		1.64	2.96	3.08	2.78	3.16	2.98	3.32	2.34	1.72	1.44	1.62
14	1.80											
15		1.66	2.98	3.12	2.72	3.02	3.04	3.24	2.20	1.70	1.42	1.58
16	1.78											
17		1.64	2.76	3.18	2.78	2.84	2.94	3.06	2.12	1.92	1.42	1.50
18	1.74											
19		1.68	2.70	3.26	3.20	2.76	2.76	3.22	2.10	2.22	1.44	1.52
20	1.78											
21		1.60	2.82	3.22	3.24	2.54	2.78	3.54	1.98	1.92	1.42	2.00
22	1.82											
23		1.68	2.96	3.16	3.18	2.50	3.04	3.80	1.92	1.80	1.46	2.28
24	1.84											
25		1.60	2.88	3.12	3.24	2.68	3.90	4.00	1.86	1.78	1.44	3.16
26	1.80											
27		1.62	3.02	3.06	3.20	2.54	4.22	4.08	1.82	1.70	1.40	2.68
28	1.78											
29		1.66	2.98	3.00	3.14	2.52	4.04	4.02	1.78	1.64	1.74	2.18
30	1.76											
31			3.04	2.98		2.50		3.94		1.58	1.62	

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
1	2.06	1.72					2.18	3.40	5.42	3.40	1.88	1.48
2				1.86								
3	2.00	1.64					2.24	3.52	5.30	3.56	1.90	1.54
4												
5	1.98	1.60	1.62				2.24	3.14	5.20	3.18	1.86	1.70
6												
7	1.94	1.58			2.78	2.98	2.16	3.86	4.42	2.76	1.92	2.00
8												
9	1.88	1.60		2.64			2.00	4.14	4.60	3.00	1.96	1.78
10												
11	1.86	1.72					1.96	4.08	4.78	2.84	1.84	1.76
12			1.80									
13	1.82	1.58			2.82	2.64	2.04	4.26	4.76	2.62	1.76	2.48
14												
15	1.94	1.56					2.24	4.48	4.82	2.50	1.72	2.12
16				2.52								
17	1.84	1.54					2.90	4.22	4.16	2.48	1.76	1.98
18												
19	1.82	1.52	1.72				3.46	4.50	3.84	2.32	1.70	2.02
20					2.84	2.98						
21	1.78	1.50					3.20	4.36	3.92	2.18	1.64	2.00
22												
23	1.78	1.54		2.72			2.60	5.12	4.00	2.14	1.60	2.06
24												
25	1.80	1.52					2.70	5.56	3.56	2.10	1.56	2.20
26			1.64									
27	1.84	1.48			2.76	2.04	2.94	5.70	3.16	1.98	1.54	2.46
28												
29	1.82	1.52					3.04	5.40	3.38	1.94	1.52	2.24
30		1.64		2.70								
31	1.76					2.12		5.58		1.92	1.50	
1897-98.												
1	2.22	2.36		2.72			2.48	4.06	4.96	3.56	2.00	1.66
2												
3	2.50	2.28					2.34	3.52	5.30	3.20	1.98	1.70
4			2.30									
5	3.36	2.26			2.96	2.86	2.38	3.60	4.96	3.28	1.94	1.64
6												
7	3.08	2.18					2.62	3.49	5.10	3.74	1.98	1.62
8				2.84								
9	3.54	2.14					2.88	3.52	4.64	3.56	2.00	1.60
10												
11	3.26	2.22	2.18				2.92	3.56	4.28	3.34	1.96	1.64
12					2.80	2.98						
13	3.38	2.12					3.00	3.60	4.52	3.38	1.88	1.62
14												
15	3.50	2.00		2.88			3.32	3.68	4.86	3.32	1.84	1.60
16												
17	3.24	1.98					3.54	3.64	5.20	3.12	1.86	1.60
18			2.86									
19	3.12	1.96			3.00	2.82	3.46	3.58	4.96	2.92	1.84	1.56
20												
21	2.96	1.94					3.42	3.42	5.00	2.78	1.80	1.54
22				2.90								
23	2.82	1.90					3.64	3.54	5.06	2.56	1.76	1.52
24												
25	2.66	1.86	2.72				3.72	3.66	4.78	2.46	1.74	1.50
26					2.94	3.26						
27	2.54	1.84					3.96	4.32	4.28	2.42	1.72	1.50
28												
29	2.46	1.88		2.86			4.20	4.70	3.84	2.18	1.70	1.50
30		1.92										
31	2.44		2.66			2.64		4.78		2.12	1.68	
1898-99.												
1	1.48	1.54	2.70				1.62	1.90	2.94	2.00	2.24	1.46
2												
3	1.48	1.46	2.72				1.48	1.82	2.62	2.12	2.20	1.50
4					2.64	2.82						
5	1.48	1.46					1.40	1.86	2.44	1.98	2.64	1.48

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1.												
11	1.52	1.32					1.56	3.62	3.60	1.96	1.64	1.78
12				2.24								
13	1.50	1.36					1.66	3.58	3.38	1.82	1.62	1.72
14												
15	1.52	1.30	2.38				1.90	3.84	3.10	1.76	1.54	1.64
16					2.42	1.94						
17	1.52	1.32					1.76	3.64	2.78	1.68	1.60	1.56
18												
19	1.50	1.36		2.18			2.08	4.58	3.02	1.64	1.76	1.52
20												
21	1.52	1.32					2.20	5.16	3.00	1.60	2.00	1.52
22			2.26									
23	1.54	1.38			2.36	1.42	2.16	3.64	3.06	1.62	1.76	1.48
24												
25	1.58	1.30					2.86	4.24	3.00	1.70	1.80	1.46
26				2.34								
27	1.54	1.42					3.18	4.42	2.84	1.86	1.78	1.44
28												
29	1.52	1.48	2.18				3.14	4.28	2.62	1.74	1.72	1.46
30						1.54						
31	1.48							3.94		1.68	1.90	
1901-2.												
1	1.40			1.68	1.60	1.68	1.40	2.84	2.66	1.26	1.10	1.34
2		1.44		1.62	1.66	1.60						
3	1.40			1.62	1.66	1.60	1.48	3.24	2.44	1.24	1.06	1.30
4				1.62	1.66	1.60						
5	1.38			1.58	1.66	1.60	1.60	2.86	2.34	1.24	1.06	1.24
6				1.58	1.66	1.60						
7			1.40	1.58	1.66	1.60	1.74	2.94	2.30	1.22	1.08	1.20
8				1.58	1.66	1.60						
9	1.46	1.44		1.58	1.62	1.34	2.00	2.86	2.24	1.26	1.08	1.14
10				1.58	1.62	1.34						
11	1.48			1.58	1.62	1.34	1.94	2.74	2.10	1.22	1.08	1.12
12				1.52	1.62	1.34						
13	1.42			1.52	1.62	1.34	1.86	2.72	2.14	1.20	1.14	1.10
14			1.48	1.52	1.62	1.34						
15	1.42			1.52	1.62	1.34	1.84	2.70	1.90	1.16	1.12	1.10
16		1.48		1.52	1.70	1.40						
17	1.40			1.52	1.70	1.40	1.82	2.64	1.78	1.10	1.08	1.10
18				1.52	1.70	1.40						
19	1.38			1.56	1.70	1.40	2.04	2.40	1.66	1.20	1.04	1.12
20				1.56	1.70	1.40						
21	1.36		1.62	1.56	1.70	1.40	2.46	2.16	1.50	1.20	1.00	1.40
22				1.56	1.70	1.40						
23	1.36	1.40		1.56	1.68	1.26	2.34	2.04	1.50	1.16	1.06	1.52
24				1.56	1.68	1.26						
25	1.38			1.56	1.68	1.26	1.86	2.00	1.42	1.12	1.96	1.52
26				1.60	1.68	1.26						
27	1.42		1.66	1.60	1.68	1.26	2.42	2.06	1.34	1.14	1.70	1.54
28				1.60	1.68	1.26						
29	1.42			1.60			2.46	2.64	1.30	1.14	1.48	1.50
30		1.38		1.60		1.36						
31	1.44		1.70	1.60		1.36		2.84		1.10	1.40	
1902-3.												
1	1.44	1.34	1.84				1.74	2.90	5.76	4.80	1.98	1.66
2												
3	1.46	1.36	2.00				1.56	3.32	5.84	4.26	1.92	1.74
4												
5	1.40	1.32	1.92				1.48	3.84	5.36	3.58	1.86	1.70
6												
7	1.40	1.32	1.96				1.46	4.02	5.42	3.32	1.80	2.10
8												
9	1.48	1.32	1.84				1.74	4.36	5.48	3.46	1.80	2.12
10												
11	1.44	1.30	1.80				1.88	4.54	5.74	3.42	1.76	1.82
12												
13	1.40	1.38	1.82				1.58	4.96	6.06	3.14	1.74	1.96
14												
15	1.38	1.32	1.84				1.84	5.64	6.12	3.00	1.70	1.88

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nóv.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....												
17.....	1.34	1.28	1.80				1.92	5.16	6.20	3.30	1.80	1.82
18.....												
19.....	1.30	1.28	1.82				1.88	3.92	6.00	2.96	1.76	1.78
20.....												
21.....	1.30	1.30	1.80				2.40	3.78	5.74	2.74	1.70	1.70
22.....												
23.....	1.32	1.30	1.78				2.86	3.34	5.82	2.60	1.74	1.68
24.....												
25.....	1.32	1.28	1.82				3.08	3.46	5.54	2.42	1.92	1.62
26.....												
27.....	1.26	1.34	1.86				2.98	3.72	5.20	2.34	1.96	1.60
28.....												
29.....	1.22	2.00	1.82				2.74	3.80	5.12	2.20	1.74	1.60
30.....												
31.....	1.30		1.80					5.12		2.06	1.70	
1903-4.												
1.....	1.62						1.15	2.25	2.20	1.70	1.80	2.60
2.....							1.25	2.25	2.20	1.70	1.90	2.50
3.....	1.66						1.26	2.50	2.10	1.65	1.85	2.38
4.....							1.25	1.85	2.50	1.60	1.88	2.35
5.....	1.70						1.31	1.80	2.00	1.58	1.95	2.20
6.....							1.35	1.80	2.00	1.51	1.80	2.10
7.....	1.66						1.35	2.10	2.00	1.50	1.75	2.10
8.....							1.31	2.40	2.20	1.49	1.80	2.00
9.....	1.64						1.31	2.30	2.25	1.46	1.85	1.95
10.....							1.39	2.50	2.20	1.45	1.75	1.90
11.....	1.58						1.50	2.70	2.10	1.45	1.80	1.90
12.....							1.65	3.00	2.10	1.46	1.85	1.85
13.....	1.52						1.91	3.35	2.10	1.41	1.90	1.85
14.....							2.50	3.40	2.00	1.40	1.90	1.80
15.....	1.52						2.20	2.95	2.00	1.35	1.90	1.75
16.....							2.50	2.85	2.00	1.32	1.88	1.80
17.....	1.50						2.40	2.65	2.10	1.35	1.85	1.80
18.....							2.45	3.00	2.10	1.39	2.30	1.75
19.....	1.50						2.55	3.25	2.50	1.33	2.35	1.70
20.....							2.35	3.50	1.95	1.30	2.20	1.70
21.....	1.48						2.20	2.75	1.95	1.31	2.50	1.70
22.....							1.95	2.70	2.50	1.33	2.00	1.70
23.....	1.46						1.85	2.75	2.00	1.48	1.95	1.90
24.....							1.75	2.75	1.95	1.39	2.00	2.10
25.....	1.44						1.80	2.65	1.85	1.50	2.00	1.95
26.....							2.30	2.60	1.75	1.50	2.20	1.90
27.....	1.42						2.65	2.50	1.80	1.52	2.25	1.90
28.....							2.94	2.40	1.80	1.50	2.20	1.90
29.....	1.40						2.75	2.30	1.75	1.49	2.15	2.50
30.....							2.40	2.30	1.70	1.70	2.50	2.90
31.....	1.42							2.30		1.72	2.50	
1904-5.												
1.....	3.60						1.5	3.8	6.25	3.2	1.95	1.2
2.....	3.10						1.45	3.9	6.7	3.05	1.9	1.2
3.....	2.90						1.5	3.2	6.9	2.9	1.9	1.2
4.....	2.70						1.45	2.9	7.0	2.75	1.8	1.25
5.....	2.60						1.45	2.8	7.05	2.55	1.85	1.25
6.....	2.70						1.55	2.6	6.1	2.35	1.9	1.3
7.....	3.60						1.7	2.7	6.2	2.3	1.9	1.25
8.....	4.00						1.8	2.9	6.45	2.25	1.85	1.2
9.....	4.35						2.5	3.4	6.4	2.2	1.75	1.2
10.....	3.85						2.5	3.25	6.3	2.15	1.6	1.25
11.....	3.60						2.1	2.8	6.0	2.1	1.7	1.2
12.....	3.50						2.0	2.9	5.9	2.0	1.75	1.15
13.....	3.30						1.95	3.1	5.7	2.0	1.6	1.1
14.....	3.25						2.0	3.1	5.7	1.95	1.55	1.1
15.....	3.15						2.1	3.7	5.65	1.95	1.45	1.1
16.....	3.00						2.15	4.2	5.55	1.8	1.4	1.05
17.....	2.90						2.15	4.9	5.2	1.85	1.35	1.0
18.....	2.80						2.1	5.1	5.0	1.85	1.3	1.0
19.....	2.70						2.3	5.6	4.8	1.9	1.25	1.0
20.....	2.60						2.1	5.7	4.7	1.9	1.25	1.0

Daily gage height, in feet, of Rio Grande, near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	2.60						2.5	5.5	4.6	1.95	1.2	1.0
22.....	2.50						2.15	5.8	4.2	2.0	1.15	1.0
23.....	2.40						2.2	6.2	4.1	1.9	1.15	1.0
24.....	2.35						2.1	6.0	4.0	1.8	1.2	1.0
25.....	2.35						2.1	6.5	3.85	1.7	1.3	1.1
26.....	2.20						2.1	6.0	3.75	1.65	1.25	1.2
27.....	2.15						2.4	5.9	3.45	1.6	1.25	1.15
28.....	2.10						2.6	6.0	3.9	1.7	1.2	1.1
29.....	2.50						3.0	4.5	3.65	1.8	1.25	1.05
30.....	2.00						3.25	4.9	3.5	2.15	1.3	2.27
31.....	2.00							5.6		2.0	1.25	
1905-6.												
1.....	1.9	1.1	1.0	1.0	1.0	1.15	1.2	2.25	4.2	3.5		1.45
2.....	1.6	1.1	1.0	1.0	1.0	1.1	1.15		4.5		2.1	
3.....	1.5	1.1	1.0	1.0	1.0	1.1	1.2	2.1	4.4	3.3		1.45
4.....	1.5	1.1	1.0	1.0	1.0	1.1	1.1		4.1		2.0	
5.....	1.4	1.1	1.0	1.0	1.0	1.0	1.1	3.1	4.5	3.1		1.4
6.....	1.4	1.1	1.0	1.0	1.0	1.0	1.2		5.25		1.95	
7.....	1.35	1.1	1.0	1.0	1.0	1.05	1.3	3.5	5.35	2.9		1.2
8.....	1.3	1.1	1.0	1.0	1.0	1.1	1.4		4.95		1.8	
9.....	1.25	1.1	1.0	1.0	1.0	1.1	1.35	4.1	5.2	2.6		1.2
10.....	1.25	1.1	1.0	1.0	1.0	1.1			5.7		1.7	
11.....	1.2	1.1	1.0	1.0	1.15	1.0	1.6	4.35	6.0	2.9		1.15
12.....	1.2	1.0	1.0	1.0	1.25	1.0			6.2		1.65	
13.....	1.2	1.0	1.0	1.0	1.4	.9	1.5	3.7	6.55	2.7		1.2
14.....	1.2	1.0	1.0	1.0	1.5	1.0			6.15		1.7	
15.....	1.2	1.0	1.0	1.0	1.6	1.0	1.75	3.45	6.0	3.05		1.6
16.....	1.2	1.0	1.0	1.0	1.65	1.0			6.0		1.6	
17.....	1.2	1.0	1.0	1.0	1.7	1.05	2.0	4.5	5.9	2.55		1.7
18.....	1.25	1.0	1.0	1.0	1.7	.9			5.4		1.6	
19.....	1.25	1.0	1.0	1.0	1.75	1.0	2.3	5.4	4.9	2.4		1.7
20.....	1.2	1.0	1.0	1.0	1.8	1.05			4.6		1.6	
21.....	1.2	1.0	1.0	1.0	1.7	1.0	2.5	5.9	4.4	2.3		1.65
22.....	1.2	1.0	1.0	1.0	1.7	1.1			4.3		1.6	
23.....	1.2	1.0	1.0	1.0	1.7	1.1	3.2	5.7	4.3	2.35		1.6
24.....	1.2	1.0	1.0	1.0	1.6	1.1		4.9	4.15		1.65	
25.....	1.2	.8	1.0	1.0	1.4	1.1	3.1	4.3	3.7	2.85		1.65
26.....	1.2	.8	1.0	1.0	1.4	1.1		3.9	3.55		1.6	
27.....	1.2	.8	1.0	1.0	1.4	1.1	2.7	4.1	3.5	2.75		2.5
28.....	1.2	.9	1.0	1.0	1.3	1.1		4.3	3.45		1.6	
29.....	1.2	1.0	1.0	1.0	1.2	1.1	2.45	4.3	3.35	2.7		2.4
30.....	1.15	1.0	1.0	1.0		1.0		4.15	3.45		1.5	
31.....	1.15		1.0	1.0		1.1		4.05		2.25		

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1906.								
1.....	2.35		11.....	1.8		21.....		1.65
2.....		1.75	12.....		1.5	22.....		1.2
3.....	2.3		13.....	1.7		23.....	1.7	
4.....		1.75	14.....		1.5	24.....		1.05
5.....	2.2		15.....	1.7		25.....	1.7	
6.....		1.65	16.....		1.45	26.....		1.0
7.....	2.0		17.....	1.75		27.....	1.75	
8.....		1.6	18.....		1.4	28.....		1.0
9.....	1.9		19.....	1.7		29.....	1.7	
10.....		1.55	20.....		1.2	30.....		1.05
						31.....	1.75	

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1908.							1908.						
1			3.1	2.5	1.9	1.2	16	2.1	2.3	3.7	1.95	1.5	0.95
2		2.6	3.1	2.4	2.15	1.15	17		2.6	3.65	1.9	1.65	.9
3			3.2	2.25	2.2	1.15	18	2.3	2.85	3.3	1.8	2.1	.85
4			3.25	2.2	2.0	1.1	19		2.3	2.95	1.75	2.05	.85
5		2.0	3.1	2.2	1.85	1.1	20		3.5	2.9	1.65	1.95	.8
6			3.1	2.15	1.85	1.05	21	2.1	2.9	2.9	1.6	1.9	.8
7		2.1	3.0	2.05	1.75	1.0	22		2.95	3.0	1.6	1.75	.85
8			2.8	2.05	1.85	1.0	23		2.8	2.95	1.6	1.8	.85
9			3.0	1.95	1.7	.95	24		2.5	2.9	1.6	1.65	.85
10			3.5	1.9	1.6	.95	25	2.0	2.4	2.95	1.6	1.55	.85
11			3.85	1.9	1.6	.95	26		2.5	3.5	1.6	1.55	1.05
12			3.75	1.95	1.55	.95	25		2.5	3.3	1.55	1.55	.95
13		2.1	3.7	1.9	1.45	.9	28	1.8	2.4	3.25	1.5	1.45	.95
14			3.65	1.85	1.5	.95	29		2.35	2.85	1.4	1.4	.9
15			3.65	1.9	1.55	.95	30	1.9	2.7	2.7	1.4	1.3	.9
							31		3.2		1.65	1.3	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1	0.9	0.8						1.8	2.85	3.05	1.55	1.85
2	.9	.8						1.9	3.2	2.95	1.5	1.75
3	.9	.8						2.25	3.85	2.95	1.55	1.75
4	.9	.75						2.65	4.4	2.9	1.55	1.85
5	.9	.75						3.2	4.9	2.9	1.6	2.2
6	.9	.75						3.5	5.15	3.15	1.5	4.3
7	.85	.75						3.65	5.0	2.9	1.5	4.25
8	.85	.8						4.0	4.9	2.6	1.4	3.45
9	.85	.8						3.35	4.8	2.45	1.4	3.0
10	.85	.75						3.3	4.7	2.3	1.35	2.75
11	.8	.7						3.4	4.6	2.15	1.45	2.6
12	.8	.65						3.35	4.4	2.05	1.4	2.45
13	.8	.7						3.4	4.5	1.9	1.5	2.65
14	.8	.7						3.4	4.2	1.85	1.5	2.55
15	.75	.6						3.15	4.2	1.8	1.45	2.45
16	.75	.65						3.35	4.3	1.75	1.5	2.3
17	.8	.65						3.55	4.25	1.7	1.5	2.2
18	.85	.65						3.95	4.3	1.65	1.45	2.1
19	.9	.65						4.05	4.25	1.6	1.45	2.0
20	.85	.65						3.9	4.35	1.6	1.65	1.95
21	.85	.65						3.55	4.25	1.6	1.75	1.85
22	.85	.7						3.45	4.05	1.7	1.55	1.8
23	.75	.65						3.35	4.0	2.1	1.65	1.75
24	.75	.65						3.25	3.95	2.25	1.65	1.65
25	.85	.65					1.7	3.1	3.8	2.05	1.8	1.6
26	.8	.65					1.8	3.15	3.8	1.85	1.6	1.6
27	.75	.6					2.1	3.55	3.5	2.1	1.65	1.55
28	.8	.6					2.3	3.85	3.35	1.95	1.65	1.5
29	.8	.7					2.25	3.4	3.2	1.75	2.05	1.45
30	.8	.7					2.0	3.1	3.3	1.65	1.95	1.4
31	.8							3.05		1.6	1.9	.....
1909-10.												
1	1.4	1.0	0.95				1.3	3.4	4.2	1.8	1.4	.95
2	1.35	1.05	1.0		2.6	2.7	1.3	3.2	4.1	1.65	1.25	.95
3	1.35	1.1	1.0				1.4	3.0	4.1	1.6	1.15	.9
4	1.35	1.05	1.0		2.6	2.7	1.35	2.9	4.0	1.65	1.05	.9
5	1.65	1.0	1.0				1.35	3.15	3.8	1.55	1.35	.9
6	1.7	1.0	.95		2.6	2.7	1.4	2.95	3.65	1.5	1.4	.85
7	1.7	1.0	.95				1.45	3.05	3.45	1.45	1.25	.8
8	1.65	1.0	1.0		2.5	1.4	1.6	3.25	3.3	1.4	1.15	.8
9	1.5	1.0	1.0			1.25	1.6	3.65	3.2	1.35	1.15	.75
10	1.5	1.05	1.05		2.5	1.2	1.6	4.0	3.1	1.3	1.15	.75

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	1.45	1.0	1.05	.....	.....	1.15	1.75	4.3	2.95	1.3	1.15	0.75
12.....	1.45	.95	.95	.....	2.5	1.05	1.8	4.4	2.9	1.3	1.3	.75
13.....	1.4	.95	1.0	.....	.....	1.15	1.8	4.15	2.85	1.3	1.25	.75
14.....	1.4	.9	1.0	.....	2.5	1.15	1.75	4.0	2.8	1.3	1.2	.75
15.....	1.35	.9	1.0	.....	.....	1.2	1.55	3.5	2.8	1.3	1.2	.8
16.....	1.3	.8	.95	.....	2.6	1.2	1.45	3.45	2.8	1.2	1.1	.85
17.....	1.3	.75	1.05	.....	.....	1.25	.....	3.3	2.55	1.15	1.05	.85
18.....	1.3	.75	1.05	.....	2.6	1.3	1.6	3.25	2.4	1.15	1.0	.8
19.....	1.25	.85	.....	.....	.....	1.4	1.7	3.2	2.35	1.15	1.0	.8
20.....	1.25	1.0	.....	.....	2.6	1.4	1.95	3.2	2.3	1.1	1.0	.95
21.....	1.25	1.1	.....	.....	.....	1.5	2.2	3.1	2.25	1.1	1.05	.9
22.....	1.2	1.0	.....	.....	2.65	1.6	2.15	2.9	2.2	1.05	1.05	.9
23.....	1.2	1.0	.....	.....	.....	1.85	2.2	2.75	2.1	1.05	1.0	.9
24.....	1.15	1.1	.....	.....	2.6	1.85	2.4	2.7	2.0	1.1	1.0	.85
25.....	1.15	1.1	.....	2.6	.....	1.95	2.65	2.95	1.9	1.1	1.0	.8
26.....	1.15	1.0	.....	.....	2.6	1.85	2.95	3.0	1.85	1.05	.95	.8
27.....	1.1	1.0	.....	2.4	.....	1.6	3.35	3.15	1.85	1.0	.9	.75
28.....	1.1	1.05	.....	.....	2.7	1.55	3.4	3.6	1.8	.95	.85	.75
29.....	1.1	1.0	.....	2.4	.....	1.5	3.7	4.15	1.95	1.0	.8	.75
30.....	1.1	1.0	.....	.....	.....	1.4	3.7	4.3	1.9	1.1	.9	.75
31.....	1.05	.....	.....	2.4	.....	1.3	.....	4.35	.....	1.4	.85	.....
1910-11.												
1.....	.75	.9	.6	.....	.65	0.65	1.45	2.05	4.1	3.75	2.25	1.6
2.....	.8	.9	.6	.....	.6	.75	1.45	2.0	4.25	3.85	2.15	1.55
3.....	.8	.9	.65	.....	.6	.75	1.45	2.1	4.2	4.05	2.2	1.55
4.....	.8	.9	.65	.....	.65	.75	1.5	2.3	4.35	3.95	2.0	1.55
5.....	.75	.9	.7	.....	.6	.65	1.4	2.65	4.35	3.6	1.9	1.55
6.....	.75	.9	.5	.....	.55	.65	1.3	3.1	4.45	3.5	1.8	1.5
7.....	.75	.9	.5	.....	.65	.6	1.2	3.45	4.45	3.35	1.8	1.4
8.....	.75	.85	.55	.....	.65	.65	1.2	3.6	4.5	3.3	1.75	1.35
9.....	.7	.85	.65	.....	.65	.7	1.2	3.95	4.8	3.0	1.6	1.3
10.....	.7	.85	.65	.....	.7	.85	1.25	3.85	4.75	2.9	1.6	1.3
11.....	.7	.85	.7	.....	.7	1.0	1.25	3.45	4.65	2.8	1.6	1.3
12.....	.7	.85	.7	.....	.7	.8	1.3	3.3	4.55	2.7	1.4	1.3
13.....	.7	.8	.65	.....	.65	.7	1.3	3.3	4.4	2.7	1.6	1.3
14.....	.7	.85	.6	.....	.6	.7	1.2	3.15	4.35	3.8	1.6	1.4
15.....	.7	.85	.5	.....	.65	.65	1.2	3.15	4.15	3.3	1.45	1.4
16.....	.85	.75	.55	.....	.6	.7	1.35	3.15	4.05	3.05	1.5	1.3
17.....	1.4	.7	.5	.....	.6	.75	1.65	3.25	3.95	2.9	1.55	1.3
18.....	1.15	.65	.5	.....	.6	.8	1.5	3.45	3.85	2.8	1.5	1.3
19.....	1.1	.75	.5	.....	.65	.75	1.55	3.65	3.9	2.95	1.55	1.4
20.....	1.0	.7	.55	2.0	.6	.85	1.75	3.4	3.95	3.1	1.5	1.5
21.....	.9	.6	.55	.....	.65	.8	1.95	3.15	4.05	3.05	1.6	1.35
22.....	.95	.65	.6	.....	.6	1.0	2.1	3.1	4.05	2.9	2.0	1.2
23.....	.95	.65	.55	.....	.7	.9	2.2	3.3	3.9	2.95	2.15	1.4
24.....	.95	.75	.6	.....	.65	.8	2.1	3.65	3.9	3.05	1.9	1.45
25.....	1.0	.65	.6	.....	.65	.95	2.0	3.85	3.7	2.9	1.8	1.5
26.....	1.0	.65	.6	.....	.65	.9	2.05	3.95	3.5	3.05	1.7	1.6
27.....	1.0	.65	.6	.....	.6	.75	2.35	3.75	3.45	2.85	1.9	1.8
28.....	1.0	.6	.6	.....	.6	.95	2.4	3.75	3.45	2.75	1.8	1.5
29.....	.95	.65	.....	.7	.....	1.1	2.5	3.75	3.4	2.75	1.8	1.5
30.....	.9	.55	.....	.65	.....	1.25	2.2	3.65	3.45	2.55	1.7	1.6
31.....	.9	.....	.....	.65	.....	1.35	.....	3.95	.....	2.4	1.6	.....
1911-12.												
1.....	2.75	1.45	1.15	.95	1.4	.....	.85	2.3	4.8	3.4	2.2	1.4
2.....	2.9	1.45	1.15	.95	1.4	1.2	.95	2.55	4.7	3.2	2.05	1.25
3.....	2.55	1.45	1.05	1.15	1.4	.....	1.1	2.35	5.0	2.85	1.9	1.15
4.....	2.3	1.3	1.05	.95	1.45	1.2	1.1	2.0	5.05	2.9	1.75	1.15
5.....	5.4	1.3	1.05	.9	1.4	1.2	1.1	1.95	5.15	2.65	1.8	1.15
6.....	6.0	1.3	1.05	.9	1.4	1.0	1.15	1.95	4.75	2.55	1.7	1.1
7.....	4.9	1.3	1.05	1.15	1.45	.95	1.3	2.2	4.65	2.55	1.6	1.1
8.....	4.1	1.3	1.05	1.3	1.45	.95	1.45	2.7	4.7	2.55	1.55	1.05
9.....	3.6	1.3	1.05	1.3	1.45	.95	1.5	2.95	4.65	2.5	1.5	1.1
10.....	3.2	1.3	1.05	1.25	1.4	.85	1.8	2.5	4.5	2.4	1.45	1.1

Daily gage height, in feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.....	3.1	1.3	1.0	1.25	1.35	0.8	1.55	2.4	4.45	2.4	1.35	1.1
12.....	2.8	1.3	1.0	1.25	1.35	.75	1.55	2.7	3.8	2.4	1.3	1.1
13.....	2.6	1.3	.9	1.25	1.3	.7	1.5	2.95	3.65	2.45	1.45	1.1
14.....	2.4	1.3	.85	1.3	1.3	.65	1.1	2.7	3.65	2.35	1.5	1.1
15.....	2.3	1.3	.85	1.3	1.3	.7	1.2	2.45	3.7	2.35	1.95	1.05
16.....	2.15	1.3	.95	1.35	1.3	.75	1.1	2.3	3.7	2.3	1.9	1.05
17.....	2.1	1.25	.95	1.35	1.3	.7	1.0	3.1	3.55	2.3	1.7	1.05
18.....	2.05	1.25	.95	1.4	1.25	.6	.95	3.7	3.2	2.15	1.85	1.0
19.....	1.95	1.25	.95	1.4	1.2	.75	.95	4.2	3.0	2.2	1.7	1.0
20.....	1.85	1.25	1.05	1.4	1.2	.85	.95	4.4	3.0	2.2	1.65	.95
21.....	1.7	1.25	1.05	1.4	1.2	.85	.85	4.65	3.1	2.0	1.55	.95
22.....	1.7	1.25	1.05	1.4	1.25	.8	.8	4.8	3.2	2.0	1.45	.95
23.....	1.7	1.25	1.0	1.35	.....	.8	.85	4.7	3.5	2.2	1.25	.95
24.....	1.7	1.25	1.0	1.45	.....	.7	1.15	4.75	3.65	2.25	1.2	.95
25.....	1.7	1.25	1.0	1.5	.....	.65	1.5	4.9	3.55	2.2	1.1	.9
26.....	1.65	1.25	1.0	1.5	1.25	.65	1.45	5.0	3.4	2.15	1.1	.9
27.....	1.65	.65	1.0	1.5	.....	.75	1.25	4.9	3.4	2.2	1.05	.9
28.....	1.65	.65	1.05	1.45	1.3	.75	1.4	5.0	3.35	2.2	1.1	.9
29.....	1.5	.7	1.05	1.45	.....	.8	1.5	5.05	3.45	2.4	1.5	.9
30.....	1.55	1.05	1.0	1.45	.....	.8	1.95	5.15	3.3	2.6	1.45	.9
31.....	1.5	.....	.95	1.4	.....	.8	.....	5.1	.....	2.35	1.5	.....
1912-13.												
1.....	.85	1.0	.....	.....	.....	.....	.....	2.15	2.75	2.0	1.4	1.0
2.....	.85	1.0	.....	.....	.....	.....	.....	2.05	2.75	1.9	1.4	1.0
3.....	.85	1.0	.....	.....	.....	.....	.....	1.85	2.8	1.95	1.6	1.05
4.....	.85	.95	.....	.....	.....	.....	.....	1.65	3.05	1.95	1.55	1.0
5.....	.95	.95	.....	.....	.....	.....	.....	1.8	3.0	1.9	1.55	1.0
6.....	.95	.9	.....	.....	.....	.....	.....	2.1	2.9	1.9	1.5	1.1
7.....	1.0	.85	.....	.....	.....	.....	.....	2.3	2.75	1.9	1.5	1.15
8.....	1.05	.85	.....	.....	.....	.....	.....	2.3	2.8	1.8	1.3	1.15
9.....	1.0	.85	.....	.....	.....	.....	.....	2.15	2.55	1.8	1.25	1.3
10.....	1.0	.75	.....	.....	.....	.....	.....	2.25	2.65	1.9	1.3	1.15
11.....	1.0	.75	.....	.....	.....	.....	.....	2.6	2.95	1.85	1.3	1.2
12.....	1.0	.7	.....	.....	.....	.....	.9	2.85	2.85	1.8	1.3	1.2
13.....	1.0	.65	.....	.....	.....	.....	1.15	3.2	2.7	1.75	1.5	1.15
14.....	.95	.65	.....	.....	.....	.....	1.5	3.1	2.55	1.7	1.4	1.1
15.....	.95	.55	.....	.....	.....	.....	1.9	2.8	2.55	1.65	1.35	1.1
16.....	.95	.55	.....	.....	.....	.....	1.8	2.8	2.6	1.7	1.4	1.1
17.....	.95	.55	.....	.....	.....	.....	2.1	2.85	2.6	1.7	1.35	1.05
18.....	.95	.55	.....	.....	.....	.....	1.85	2.85	2.6	1.7	1.35	1.0
19.....	.95	.55	.....	.....	.....	.....	1.7	2.9	2.8	2.0	1.35	.95
20.....	.95	.5	.....	.....	.....	.....	1.65	2.65	2.8	1.85	1.35	.95
21.....	.95	.5	.....	.....	.....	.....	1.75	2.6	2.7	2.0	1.4	.9
22.....	.9	.5	.....	.....	.....	.....	1.75	2.55	2.55	1.95	1.4	.8
23.....	.9	.45	.....	.....	.....	.....	1.6	2.9	2.5	1.95	1.4	1.0
24.....	.9	.45	.....	.....	.....	.....	1.35	3.1	2.5	1.8	1.35	1.05
25.....	.9	.45	.....	.....	.....	.....	1.35	3.1	2.3	1.75	1.35	1.0
26.....	.9	.45	.....	.....	.....	.....	1.4	3.0	2.0	1.75	1.3	.95
27.....	.9	.45	.....	.....	.....	.....	1.7	3.55	1.85	1.65	1.25	.95
28.....	.9	.45	.....	.....	.....	.....	1.95	3.5	1.8	1.6	1.15	.95
29.....	.9	.45	.....	.....	.....	.....	2.1	3.5	2.25	1.55	1.05	.9
30.....	.9	.45	.....	.....	.....	.....	2.2	3.5	2.15	1.55	1.05	.9
31.....	.95	.....	.....	.....	.....	.....	.....	3.35	.....	1.45	1.05	.....

NOTE.—Prior to 1899 there were no ice notes in the original records, and it is probable that the gage readings were taken to the top of the ice. The ice period for each winter is somewhat uncertain, but its beginning has been determined from the rise due apparently to backwater from ice which occurred either in November or December. Its ending has been determined from the drop in gage heights usually in March, which denote open-channel conditions, as the spring break-up is not attended by any considerable rise.

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90.												
1		308	364				470	1,990		2,260	895	450
2		326	360				432	2,490	5,560	2,120	930	450
3		326	349				404	2,860	5,360	1,990	796	450
4		326	326				436	2,980	4,300	1,920	764	450
5		326	326				500	3,130	3,970	1,990	700	450
6		326	308			353	522	3,320	3,820	1,990	640	427
7		326	290			372	538	3,420	3,430	1,990	688	427
8		326	315			337	560	3,510	3,560	1,990	554	427
9		322	308			404	604	3,560	3,710	1,990	527	427
10		326	258			404	622	3,500	3,890	1,990	475	404
11	227	326	258			522	652	3,380	4,030	2,060	450	404
12	214	326	228			500	711	3,270	4,130	1,860	554	384
13	214	326	278			500	783	3,380	4,380	1,800	640	384
14	214	326	206			500	849	3,240	4,220	1,680	582	364
15	229	326	200			500	1,040	3,650	4,080	1,620	582	364
16	228	304	200			500	1,380	4,040	3,990	1,510	610	364
17	243	326	206			500	1,180	4,480	3,940	1,510	582	345
18	280	326	214			500	1,210	5,460	3,960	1,410	582	345
19	326	319	211			500	1,180	5,460	4,170	1,410	640	345
20	345	319	214			500	1,230	5,650	3,900	1,360	640	364
21	326	304	214			500	1,230	5,650	3,620	1,200	610	364
22	326	301				500	1,090	5,850	3,400	1,150	796	364
23	326	298				430	979	5,560	3,380	1,110	670	364
24	326	290				560	944	5,560	3,580	1,040	582	364
25	315	290				511	923	5,850	3,430	1,000	554	364
26	301	290				495	930	5,750	3,340	930	527	345
27	293	301				485	1,150	5,930	3,190	862	527	345
28	304	326				490	1,430	5,850	2,840	795	500	326
29	280	337				549	1,590	5,650	2,660	765	475	326
30	268	364				441	1,810	4,950	2,550	795	475	326
31	290					436		5,080		860	450	
1890-91.												
1	307	404					896	3,240	2,920	3,560	1,460	384
2	307	384					896	3,480	2,550	3,240	1,320	364
3	307	384					862	3,650	2,400	3,000	1,150	364
4	326	364					862	3,900	2,260	2,780	1,040	364
5	326	364					829	4,350	2,260	2,550	896	364
6	326	364					829	4,800	2,190	2,480	829	345
7	345	345					796	5,650	2,400	2,400	764	364
8	345	345					796	5,560	2,850	2,260	796	404
9	364	345					796	5,400	3,480	2,120	796	404
10	384	345					796	5,120	4,080	1,990	764	385
11	404	365					862	4,710	4,710	1,740	732	364
12	450	384					1,000	4,170	5,270	1,560	640	345
13	610						1,070	3,650	5,560	1,460	670	326
14	732						1,190	3,400	4,980	1,410	640	326
15	862						1,410	3,220	4,890	1,740	610	308
16	732						1,460	2,850	3,990	1,400	554	308
17	610						1,410	2,550	3,820	1,280	554	290
18	610						1,360	2,330	3,820	1,150	527	308
19	500						1,320	2,190	4,620	1,040	527	326
20	500						1,280	2,120	4,710	1,070	527	345
21	500						1,230	2,060	4,980	1,000	500	345
22	404						1,280	2,550	5,180	1,000	500	364
23	404						1,280	2,260	5,270	965	475	500
24	500						1,320	2,120	5,460	930	450	896
25	404						2,120	1,990	5,180	896	427	1,070
26	500						2,700	1,860	5,080	862	404	1,230
27	610						2,700	2,190	5,080	862	384	1,110
28	610						2,800	2,260	4,800	896	404	1,080
29	500						2,920	2,400	4,530	1,000	404	1,040
30	404						3,160	2,780	4,260	1,990	404	1,190
31	404							3,000		1,800	404	
1891-92.												
1	2,260	450	326				345	2,260	2,260	1,070	610	308
2	2,480	450	326				364	2,060	2,060	1,000	582	290
3	2,120	427	326				404	1,990	2,260	965	582	290
4	1,680	427	326				385	1,926	2,480	896	554	290
5	1,410	404	326				364	1,860	2,400	796	527	290

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906,
1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
6	1,280	404					385	1,800	2,400	640	527	290
7	1,110	404					450	1,800	2,620	670	500	274
8	1,070	384					640	1,740	3,160	764	475	274
9	1,070	404					732	1,560	3,080	1,000	554	274
10	965	404					862	1,510	2,700	829	527	258
11	930	450					930	1,620	2,120	732	500	258
12	896	427					965	1,920	2,060	701	500	258
13	862	404					1,000	2,060	1,990	701	475	258
14	829	404					1,040	2,120	2,120	670	450	258
15	766	384					1,320	2,120	2,260	640	447	258
16	732	384					1,620	2,120	2,060	610	404	258
17	732	364					1,740	2,060	2,190	610	404	258
18	670	364					1,560	2,190	2,120	670	404	258
19	640	345					1,320	2,400	2,260	582	404	258
20	610	326					1,280	3,080	2,400	582	384	258
21	610	326					1,190	3,160	2,550	554	384	243
22	582	326				296	1,110	3,400	2,330	610	384	243
23	582	308				296	1,070	3,900	2,120	582	364	243
24	554	308				310	1,000	4,710	2,060	640	364	243
25	554	326				310	1,070	4,530	1,990	700	364	243
26	527	326				310	1,150	4,350	1,860	732	364	243
27	500	326				326	1,280	3,820	1,740	764	345	243
28	500	326				326	1,560	3,560	1,510	930	326	243
29	475	326				326	1,860	3,400	1,320	862	326	243
30	450	326				345	2,400	3,160	1,150	732	326	243
31	450					326		2,550		670	308	
1892-93.												
1	243	274					326	862	2,550	640	404	326
2	243	274					345	829	2,700	554	450	345
3	243	258					365	796	2,700	527	450	345
4	243	258					427	764	2,850	475	404	326
5	243	258					500	732	2,550	450	326	290
6	243	258					475	732	2,260	450	326	290
7	243	258					450	796	2,260	427	308	290
8	243	274					427	796	2,700	404	326	274
9	243	258					427	862	2,700	404	326	258
10	243	258					427	896	2,700	364	308	258
11	243	258					450	1,000	2,550	384	290	258
12	243	243					427	1,280	2,400	427	290	243
13	258	243					404	1,740	2,260	500	274	243
14	258	243					384	1,860	1,860	450	274	228
15	258	258					364	1,920	1,740	404	290	228
16	258	258					384	2,260	1,620	364	308	228
17	258						404	2,550	1,510	345	308	258
18	258						450	3,320	1,410	326	308	290
19	258						475	3,320	1,320	364	326	274
20	258						450	3,240	1,230	308	326	274
21	274						450	3,240	1,110	308	345	258
22	290						500	3,080	1,000	290	345	258
23	290						527	3,240	1,000	290	326	258
24	290						610	3,160	930	326	308	243
25	290						764	2,920	862	345	290	258
26	274						862	2,550	829	364	274	258
27	258						930	2,330	796	364	258	274
28	274						965	2,260	732	364	326	290
29	274							1,040	2,120	670	326	326
30	274							1,000	2,330	670	326	308
31	258								2,480		384	326
1893-94.												
1	308	243					560	1,450	1,980	365	328	365
2	290						560	1,480	1,920	365	340	378
3	290	243	228				545	1,600	1,850	365	328	390
4	290						530	1,720	1,780	365	315	378
5		228					560	2,090	1,720	365	315	365
6	274						590	2,460	1,720	365	315	365
7		214					622	2,460	1,720	365	304	365
8	258						655	2,460	1,600	365	292	390
9		214					622	2,530	1,480	365	304	415
10	258						590	2,600	1,360	365	315	442

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1893-94.												
11.....		228					606	2,780	1,250	365	315	470
12.....	243						622	2,970	1,200	340	315	430
13.....		243					656	3,120	1,140	315	328	390
14.....	258						690	3,270	1,040	304	340	378
15.....		258					708	2,900	950	292	352	365
16.....	243						725	2,530	872	316	365	352
17.....		258					708	2,680	795	340	378	340
18.....	258						690	2,820	760	405	390	328
19.....		243					780	3,200	725	470	402	315
20.....	243						870	3,570	725	456	415	315
21.....		258					955	3,200	725	442	458	315
22.....	243						1,040	2,820	658	428	500	304
23.....							1,170	2,400	590	415	515	292
24.....	258						1,300	1,980	560	402	530	292
25.....						622	1,480	1,850	530	390	515	292
26.....	258					606	1,660	1,720	515	365	500	281
27.....						590	1,880	1,780	500	340	458	270
28.....	243					560	2,110	1,850	471	328	415	318
29.....						530	1,760	1,920	442	315	415	365
30.....	258					545	1,420	1,980	404	315	415	378
31.....						560		1,980		315	390	
1894-95.												
1.....	390	315	240				642	2,640	2,060	1,180	1,060	604
2.....	416	315	250				670	2,160	2,310	1,060	1,020	566
3.....	442	315	250				697	1,670	2,180	1,020	986	536
4.....	428	315	250				725	1,710	2,060	986	913	506
5.....	415	315					753	1,750	2,440	928	840	500
6.....	415	315					732	1,780	2,820	870	825	494
7.....	415	315					711	1,820	3,090	894	810	471
8.....	402	315					896	2,060	3,360	918	802	448
9.....	390	315					1,080	2,310	3,400	1,060	795	426
10.....	378	315					1,420	2,620	3,450	1,210	753	405
11.....	365	315					1,750	2,940	3,570	1,360	711	416
12.....	352	315					2,020	2,980	3,690	1,500	676	426
13.....	340	304				560	2,280	3,030	3,320	1,460	642	406
14.....	328	292				518	2,160	2,970	2,940	1,410	718	355
15.....	315	281				542	2,030	2,910	2,780	1,320	795	380
16.....	315	270				566	2,220	2,800	2,610	1,230	739	375
17.....	315	270				536	2,420	2,700	2,530	1,090	683	370
18.....	328	270				506	2,740	2,600	2,440	950	636	365
19.....	340	260				482	3,060	2,500	2,310	880	590	385
20.....	352	260				459	2,940	2,420	2,170	810	572	405
21.....	365	250				442	2,820	2,330	1,880	864	554	456
22.....	352	250				426	2,620	2,250	1,600	918	704	506
23.....	340	260				406	2,420	2,170	1,480	934	855	494
24.....	340	270				385	2,650	2,080	1,360	950	762	482
25.....	340	260				434	2,880	1,980	1,350	968	669	470
26.....	328	250				482	2,940	2,030	1,340	986	612	459
27.....	315	240				562	3,000	2,080	1,360	960	554	442
28.....	328	230				642	2,970	2,040	1,380	934	592	426
29.....	340	230				656	2,940	2,010	1,340	967	629	416
30.....	328	230				669	2,790	1,900	1,290	1,000	636	405
31.....	315					656		1,800		1,030	642	
1895-96.												
1.....	400	385					578	2,940	2,140	385	297	315
2.....	395	375					597	3,220	1,980	375	288	292
3.....	405	365					616	3,510	1,820	365	279	270
4.....	415	355					728	3,486	1,620	350	284	279
5.....	432	345					840	3,450	1,430	335	288	288
6.....	448	350					1,150	3,280	1,330	330	284	275
7.....	459	355					1,460	3,120	1,230	325	279	262
8.....	470	345					1,530	2,860	1,140	340	270	266
9.....	464	335					1,600	2,610	1,060	355	262	270
10.....	459	325					1,490	2,400	973	345	258	328
11.....	437	315					1,380	2,190	886	335	254	385
12.....	415	325					1,360	1,970	820	355	250	355
13.....	415	335					1,340	1,750	753	375	246	325
14.....	415	340					1,380	1,700	704	370	242	316
15.....	410	345					1,410	1,650	655	365	238	306

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906,
1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
21	1,400	598					2,150	2,150	4,760	1,310	468	287
22												
23	1,230	570					2,500	2,340	4,860	1,090	440	274
24												
25	1,090	542					2,630	2,540	4,380	996	426	260
26												
27	1,010	542					3,020	3,110	3,540	960	412	260
28												
29	932	570					3,410	4,250	2,820	756	398	260
30		570										
31	932							4,380		708	384	
1898-99.												
1	247	287					405	606	1,510	678	868	31
2												
3	247	234					342	537	1,160	753	829	342
4												
5	247	234					280	571	1,030	678	1,210	342
6												
7	247	247					280	642	1,070	753	988	280
8												
9	301						342	791	1,250	642	753	280
10												
11	328						470	2,320	1,350	606	678	280
12												
13	301						571	2,250	1,450	537	571	280
14												
15	287						606	1,810	1,160	571	503	753
16												
17	260						715	1,810	1,070	571	537	571
18												
19	234						753	1,750	988	1,300	470	437
20												
21	220						791	1,560	907	791	405	405
22												
23	247						907	1,400	829	678	405	342
24												
25	260					642	1,030	1,620	753	571	373	342
26												
27	260						907	1,510	1,070	571	342	311
28												
29	234						868	1,400	753	678	342	280
30												
31	234					437		1,450		868	280	
1899-1900.												
1							384	553	5,380	978	258	198
2												
3							384	624	4,630	895	258	198
4		437										
5							417	812	4,100	854	320	258
6												
7	342						450	1,060	3,880	734	320	228
8												
9							352	1,420	3,350	660	258	384
10												
11		405					320	2,480	2,900	624	258	289
12												
13							384	2,480	2,550	553	228	258
14	606											
15							384	2,280	2,150	518	198	198
16												
17							417	3,500	2,340	450	198	198
18		405										
19							384	3,950	1,850	384	198	198
20												
21	537						484	3,050	1,730	417	228	198
22												
23							384	3,280	1,620	384	198	198
24												
25							518	4,480	1,520	352	198	320

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-1900.												
26												
27							484	5,000	1,280	320	198	352
28	470											
29							518	5,450	1,020	320	169	352
30												
31								5,150		289	169	
1900-1.												
1	384	320					352	2,550	2,220	1,060	417	629
2												
3	384	320					320	2,030	1,970	978	320	484
4												
5	352	289					289	1,520	1,910	853	417	895
6												
7	352	258					352	1,460	2,090	734	518	629
8												
9	352	289					384	1,520	2,750	660	518	518
10												
11	320	198					352	2,220	2,220	629	417	518
12												
13	320	228					417	2,220	1,970	518	384	450
14												
15	320	198					588	2,550	1,620	489	352	417
16												
17	320	198					484	2,280	1,330	450	384	352
18												
19	320	228					734	3,650	1,520	417	484	320
20												
21	320	198					812	4,480	1,520	384	660	320
22												
23	352	258				258	773	2,280	1,570	384	484	320
24												
25	384	198					1,380	3,130	1,520	450	518	289
26												
27	352	258					1,730	3,350	1,370	553	518	289
28												
29	320						1,680	3,200	1,150	489	450	258
30						352						
31	320							2,600		450	588	
1901-2.												
1	258						265	1,380	1,190	184	112	237
2		289										
3	258						324	1,790	1,020	184	90	210
4												
5	258						385	1,380	934	184	90	184
6												
7	289						484	1,480	893	159	112	159
8		289										
9	289					237	660	1,380	852	184	112	135
10						237						
11	320					237	621	1,280	735	159	112	112
12						237						
13	258					237	553	1,280	773	159	135	112
14						237						
15	258					237	553	1,240	588	135	112	112
16		320				265						
17	258					265	518	1,190	518	112	112	112
18						265						
19	258					265	697	976	417	159	90	112
20						265						
21	228					265	1,020	773	324	159	69	265
22						265						
23	228	258				184	934	697	324	135	90	324
24						184						
25	228					184	553	600	265	112	624	324

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906,
1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
26.						184						
27.	258					184	976	697	237	135	450	354
28.						184						
29.	258					184	1,020	1,190	210	135	324	324
30.		258				237						
31.	289					237		1,350		112	265	
1902-3.												
1.	294	237					481	1,390	5,300	3,720	650	428
2.												
3.	294	237					364	1,800	5,430	2,920	606	481
4.												
5.	265	210					316	2,370	4,640	2,070	564	454
6.												
7.	265	210					304	2,600	4,740	1,800	522	740
8.												
9.	324	210					481	3,060	4,840	1,940	522	755
10.												
11.	294	210					578	3,320	5,270	1,900	495	536
12.												
13.	265	265					377	3,980	5,800	1,620	481	635
14.												
15.	265	210					550	5,100	5,900	1,480	454	578
16.												
17.	237	210					606	4,310	6,020	1,780	522	536
18.												
19.	210	210					578	2,470	5,700	1,450	495	508
20.												
21.	210	210					965	2,300	5,270	1,250	454	454
22.												
23.	210	210					1,350	1,820	5,400	1,120	481	441
24.												
25.	210	210					1,560	1,940	4,940	981	606	402
26.												
27.	184						1,470	2,230	4,380	920	635	389
28.												
29.	159						1,250	2,320	4,240	815	481	389
30.												
31.	210							4,240		710	454	
1903-4.												
1.	402						195	850	815	465	535	1,140
2.							225	850	815	465	605	1,050
3.	428						229	1,050	745	435	570	954
4.							225	570	1,050	405	591	930
5.	454						249	535	675	373	640	815
6.							265	535	675	351	535	745
7.	428						265	745	675	345	500	745
8.							249	970	815	339	535	675
9.	415						249	890	850	321	570	640
10.							285	1,050	815	315	500	605
11.	377						345	1,220	745	315	535	605
12.							435	1,510	745	321	570	570
13.	340						612	1,860	745	295	605	570
14.							1,050	1,920	675	290	605	535
15.	340						815	1,460	675	265	605	500
16.							1,050	1,360	675	253	591	535
17.	328						970	1,180	745	265	570	535
18.							1,010	1,510	745	285	890	500
19.	328						1,090	1,760	1,050	257	930	465
20.							930	2,040	640	245	815	465
21.	316						815	1,270	640	249	1,050	465
22.							640	1,220	1,050	257	675	465
23.	304						570	1,270	675	333	640	605
24.							500	1,270	640	285	675	745
25.	292						535	1,180	570	345	675	640
26.							890	1,140	500	345	815	605
27.	281						1,180	1,050	535	357	850	605
28.							1,450	970	535	345	815	605
29.	269						1,270	890	500	339	780	1,050
30.							970	890	465	465	1,050	1,410
31.	281							890		479	1,050	

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.	2,160						345	2,400	6,600	2,390	905	380
2.	1,610						318	2,520	8,270	2,180	860	380
3.	1,410						345	1,710	9,230	1,980	860	380
4.	1,220						318	1,410	9,760	1,780	780	410
5.	1,140						318	1,320	10,000	1,540	820	410
6.	1,220						375	1,140	7,790	1,320	860	440
7.	2,160						465	1,220	8,030	1,260	860	410
8.	2,640						535	1,410	8,630	1,200	820	380
9.	3,100						1,050	1,920	8,510	1,150	740	380
10.	2,460						1,050	1,760	8,270	1,100	630	410
11.	2,160						745	1,320	7,550	1,050	700	380
12.	2,040						675	1,410	7,330	950	740	355
13.	1,810						640	1,610	6,890	950	630	330
14.	1,760						675	1,610	6,890	905	595	330
15.	1,660						745	2,280	6,780	905	530	330
16.	1,510						780	2,890	6,560	780	500	310
17.	1,410						780	3,870	5,810	820	470	290
18.	1,320						745	4,170	5,400	820	440	290
19.	1,220						890	4,990	5,010	860	410	290
20.	1,140						745	5,190	4,820	860	410	290
21.	1,140						1,050	4,810	4,630	905	380	290
22.	1,050						780	5,410	3,930	950	355	290
23.	970						815	6,450	3,760	860	355	290
24.	930						745	5,890	3,600	780	380	290
25.	930						745	7,460	3,360	700	440	330
26.	815						745	5,890	3,200	665	410	380
27.	780						970	5,640	2,740	630	410	355
28.	745						1,140	5,890	3,440	700	380	330
29.	1,050						1,510	3,310	3,040	780	410	310
30.	675						1,760	3,870	2,820	1,100	440	1,230
31.	675							4,990		950	410	
1905-6.												
1.	860	330					415	1,270	3,940	2,860	1,200	565
2.	630	330					390	1,200	4,420	2,720	1,120	565
3.	560	330					415	1,120	4,260	2,580	1,070	565
4.	560	330					365	1,720	3,780	2,440	1,020	548
5.	500	330					365	2,310	4,420	2,310	999	530
6.	500	330					415	2,580	5,690	2,180	978	472
7.	470	330					470	2,860	5,870	2,050	909	415
8.	440	330					530	3,320	5,170	1,860	840	415
9.	410	330					500	3,780	5,600	1,670	798	415
10.	410	330					588	3,980	6,500	1,860	755	402
11.	380	330					675	4,180	7,040	2,050	735	390
12.	380	290					638	3,660	7,400	1,920	715	402
13.	380	290				280	600	3,150	7,670	1,800	735	415
14.	380	290				320	699	2,970	7,310	2,020	755	545
15.	380	290				320	798	2,790	7,040	2,240	715	675
16.	380	290				320	909	3,600	7,040	1,920	675	715
17.	380	290				342	1,020	4,420	6,860	1,610	675	755
18.	410	290				280	1,170	5,190	5,960	1,520	675	755
19.	410	290				320	1,320	5,960	5,090	1,440	675	755
20.	380	290				342	1,440	6,410	4,580	1,380	675	735
21.	380	290				320	1,550	6,860	4,260	1,320	675	715
22.	380	290				365	2,000	6,680	4,100	1,350	675	695
23.	380	290				365	2,440	6,500	4,100	1,380	695	675
24.	380	290				365	2,380	5,090	3,860	1,680	715	695
25.	380	220				365	2,310	4,100	3,150	1,980	695	715
26.	380	220				365	2,060	3,460	2,930	1,920	675	1,130
27.	380	220				365	1,800	3,780	2,860	1,860	675	1,550
28.	380					365	1,640	4,100	2,790	1,830	675	1,500
29.	380					365	1,490	4,100	2,650	1,800	638	1,440
30.	355					320	1,380	3,860	2,790	1,540	600	1,410
31.	355					365		3,700		1,270	582	

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906,
1908-1913—Continued.

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1906.			1906.			1906.		
1.....	1,380	798	11.....	840	619	21.....	715	415
2.....	1,350	798	12.....	797	600	22.....	735	415
3.....	1,320	798	13.....	755	600	23.....	755	378
4.....	1,270	798	14.....	755	600	24.....	755	342
5.....	1,220	756	15.....	755	582	25.....	755	331
6.....	1,120	715	16.....	776	565	26.....	776	320
7.....	1,020	695	17.....	798	548	27.....	798	320
8.....	975	675	18.....	776	530	28.....	776	320
9.....	930	656	19.....	755	470	29.....	755	331
10.....	885	638	20.....	735	415	30.....	776	342
						31.....	798	.....

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1908.							1908.						
1.....		1,300	2,690	1,770	1,100	505	16.....	1,120	1,530	3,830	1,150	740	340
2.....		1,670	2,690	1,650	1,360	470	17.....	1,220	1,900	3,730	1,100	870	310
3.....		1,670	2,870	1,470	1,420	470	18.....	1,320	2,270	3,060	1,000	1,300	282
4.....		1,020	2,960	1,420	1,200	435	19.....	1,320	3,060	2,440	960	1,250	282
5.....		1,020	2,690	1,420	1,050	435	20.....	1,120	3,440	2,350	870	1,150	255
6.....		1,070	2,690	1,360	1,050	402	21.....	1,120	2,350	2,350	825	1,100	255
7.....		1,120	2,520	1,250	960	370	22.....	1,120	2,440	2,520	825	960	282
8.....		1,120	2,190	1,250	1,050	370	23.....	1,070	2,190	2,440	825	1,000	282
9.....		1,120	2,520	1,150	915	340	24.....	1,020	1,770	2,350	825	870	282
10.....		1,120	3,440	1,100	825	340	25.....	1,020	1,650	2,440	825	782	282
11.....		1,120	4,130	1,100	825	340	26.....	1,020	1,770	3,440	825	782	402
12.....		1,120	3,930	1,150	782	340	27.....	840	1,770	3,060	782	782	340
13.....		1,120	3,830	1,100	700	310	28.....	840	1,650	2,960	740	700	340
14.....		1,120	3,730	1,050	740	340	29.....	885	1,590	2,270	660	660	310
15.....		1,530	3,730	1,100	782	340	30.....	930	2,040	2,040	660	580	310
							31.....		2,870		870	580	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	310	255	.....	.....	.....	.....	.....	1,060	2,420	2,720	832	1,110
2.....	310	255	.....	.....	.....	.....	.....	1,160	2,970	2,560	790	1,020
3.....	310	255	.....	.....	.....	.....	.....	1,560	4,140	2,560	832	1,020
4.....	310	230	.....	.....	.....	.....	.....	2,120	5,260	2,490	832	1,110
5.....	310	230	.....	.....	.....	.....	.....	2,970	6,320	2,490	875	1,490
6.....	310	230	.....	.....	.....	.....	.....	3,500	6,870	2,880	790	5,050
7.....	282	230	.....	.....	.....	.....	.....	3,770	6,540	2,490	790	4,940
8.....	282	255	.....	.....	.....	.....	.....	4,430	6,320	2,040	710	3,410
9.....	282	255	.....	.....	.....	.....	.....	3,230	6,100	1,830	710	2,640
10.....	282	230	.....	.....	.....	.....	.....	3,140	5,890	1,620	672	2,260
11.....	255	205	.....	.....	.....	.....	.....	3,320	5,680	1,430	750	2,040
12.....	255	182	.....	.....	.....	.....	.....	3,230	5,260	1,320	710	1,830
13.....	255	205	.....	.....	.....	.....	.....	3,320	5,470	1,160	790	2,120
14.....	255	105	.....	.....	.....	.....	.....	3,320	4,840	1,110	790	1,970
15.....	230	160	.....	.....	.....	.....	.....	2,880	4,840	1,060	750	1,830
16.....	230	182	.....	.....	.....	.....	.....	3,230	5,050	1,020	790	1,620
17.....	255	182	.....	.....	.....	.....	.....	3,590	4,940	965	790	1,490
18.....	282	182	.....	.....	.....	.....	.....	4,340	5,050	920	750	1,370
19.....	310	182	.....	.....	.....	.....	.....	4,530	4,940	875	750	1,260
20.....	282	182	.....	.....	.....	.....	.....	4,240	5,160	875	920	1,210
21.....	282	182	.....	.....	.....	.....	.....	3,590	4,940	875	1,020	1,110
22.....	282	205	.....	.....	.....	.....	.....	3,410	4,530	965	832	1,060
23.....	230	182	.....	.....	.....	.....	.....	3,230	4,430	1,370	920	1,020
24.....	230	182	.....	.....	.....	.....	.....	3,060	4,340	1,560	920	920
25.....	282	182	.....	.....	.....	.....	.....	965	2,800	4,050	1,320	1,060
26.....	255	182	.....	.....	.....	.....	.....	1,060	2,880	4,050	1,110	875
27.....	230	160	.....	.....	.....	.....	.....	1,370	3,590	3,500	1,370	920
28.....	255	160	.....	.....	.....	.....	.....	1,620	4,140	3,230	1,210	920
29.....	255	205	.....	.....	.....	.....	.....	1,560	3,320	2,970	1,020	1,320
30.....	255	205	.....	.....	.....	.....	.....	1,260	2,800	3,140	920	1,210
31.....	255	.....	.....	.....	.....	.....	.....	2,720	.....	.....	875	1,160

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July	Aug.	Sept.
1909-10.												
1	710	425	398				635	3,320	4,840	1,060	710	398
2	672	458	425				635	2,970	4,630	920	598	398
3	672	490	425				710	2,640	4,630	875	525	370
4	672	458	425				674	2,490	4,430	832	458	370
5	920	425	425				674	2,880	4,050	832	672	370
6	965	425	398				710	2,560	3,770	790	710	345
7	965	425	398				750	2,720	3,410	750	598	320
8	920	425	425			710	875	3,060	3,140	710	525	320
9	790	425	425			598	875	3,770	2,970	672	525	295
10	790	458	458			560	875	4,430	2,800	635	525	295
11	750	425	458			525	1,010	5,050	2,560	635	525	295
12	750	398	398			458	1,060	5,260	2,490	635	635	295
13	710	398	425			525	1,060	4,740	2,420	635	598	295
14	710	370	425			525	1,010	4,430	2,340	635	560	295
15	672	370	425			560	832	3,500	2,340	635	560	320
16	635	320	398			560	750	3,410	2,340	560	490	345
17	635	295	458			598	810	3,140	1,970	525	458	345
18	635	295	458			635	875	3,060	1,760	525	425	320
19	598	345	400			710	965	2,970	1,690	525	425	320
20	598	425	400			710	1,210	2,970	1,620	490	425	398
21	598	490	350			790	1,490	2,800	1,560	490	458	370
22	560	425	350			875	1,430	2,490	1,490	458	458	370
23	560	425	350			1,110	1,490	2,260	1,370	458	425	370
24	525	490	350			1,110	1,760	2,190	1,260	490	425	345
25	525	490	350			1,210	2,120	2,560	1,160	490	425	320
26	525	425	350			1,110	2,560	2,640	1,110	458	398	320
27	490	425	350			875	3,230	2,880	1,110	425	370	295
28	490	458	350			832	3,320	3,680	1,060	398	345	295
29	490	425	350			790	3,860	4,740	1,210	425	320	295
30	490	425	350			710	3,860	5,050	1,160	490	370	295
31	458		350			635		5,160		710	345	
1910-11.												
1	295	370	225				750	1,320	4,920	3,920	1,520	810
2	320	370	225				750	1,260	5,250	4,100	1,400	765
3	320	370	248				750	1,370	5,160	4,480	1,460	765
4	320	370	248				790	1,650	5,470	4,280	1,220	765
5	295	370	270				710	2,150	5,470	3,590	1,110	765
6	295	370	180				635	2,870	5,650	3,400	1,000	720
7	295	370	180				560	3,470	5,630	3,140	1,000	635
8	295	345	202				560	3,740	5,740	3,060	955	595
9	270	345	248			270	560	4,420	6,450	2,570	810	555
10	270	345	248			345	598	4,220	6,250	2,420	810	555
11	270	345	270			425	598	3,480	6,000	2,260	810	555
12	270	345	270			320	635	3,240	5,780	2,120	635	555
13	270	320	248			270	635	3,230	5,450	2,120	810	555
14	270	345	225			270	560	2,980	5,330	3,960	810	635
15	270	345	180			248	560	2,980	4,920	3,060	678	635
16	345	295	202			270	672	3,000	4,680	2,650	720	555
17	710	270	180			295	920	3,180	4,480	2,420	765	555
18	525	248	180			320	790	3,540	4,280	2,260	720	555
19	490	295	180			295	832	3,920	4,350	2,490	765	635
20	425	270	202			345	1,010	3,450	4,450	2,730	720	720
21	370	225	202			320	1,210	3,030	4,630	2,650	810	595
22	395	248	225			425	1,370	2,950	4,620	2,420	1,220	480
23	395	248	202			370	1,490	3,320	4,330	2,490	1,400	635
24	395	295	225			320	1,370	3,950	4,310	2,650	1,110	678
25	425	248	225			398	1,260	4,350	3,910	2,420	1,000	720
26	425	248	225			370	1,320	4,550	3,500	2,650	905	810
27	425	248	225			295	1,690	4,200	3,410	2,340	1,110	1,000
28	425	225	225			398	1,760	4,200	3,410	2,190	1,000	720
29	395	248				490	1,900	4,200	3,280	2,190	1,000	720
30	370	202				598	1,490	4,040	3,380	1,910	905	810
31	370					672		4,620		1,710	810	
1911-12.												
1	2,190	678		350	300	265	340	1,560	6,170	3,320	1,430	680
2	2,420	678		350	300	265	392	1,900	5,950	2,960	1,260	578
3	1,910	678		375	300	265	480	1,625	6,610	2,350	1,100	512
4	1,580	555		350	325	265	480	1,200	6,720	2,430	955	512
5	10,700	555		325	300	265	480	1,150	6,940	2,040	1,000	512

Daily discharge, in second-feet, of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.	14,000	555	.....	325	300	250	512	1,150	6,060	1,900	910	480
7.	6,370	555	.....	375	325	250	610	1,430	5,840	1,900	830	480
8.	4,540	555	.....	375	325	250	715	2,120	5,950	1,900	790	450
9.	3,580	555	.....	400	325	250	750	2,520	5,840	1,830	750	480
10.	2,900	555	.....	400	300	270	1,000	1,830	5,520	1,690	715	480
11.	2,730	555	.....	400	275	270	790	1,690	5,420	1,690	645	480
12.	2,260	555	.....	400	275	292	790	2,120	4,080	1,690	610	480
13.	1,980	555	.....	400	265	270	750	2,520	3,780	1,760	715	480
14.	1,710	555	.....	350	265	250	480	2,120	3,780	1,620	750	480
15.	1,580	555	.....	350	265	270	545	1,760	3,880	1,620	1,150	450
16.	1,400	555	.....	325	265	292	480	1,560	3,880	1,560	1,100	450
17.	1,340	518	.....	275	265	270	420	2,780	3,600	1,560	910	450
18.	1,280	518	.....	300	240	230	392	3,880	2,960	1,370	1,050	420
19.	1,160	518	.....	300	215	292	392	4,890	2,600	1,430	910	420
20.	1,060	518	.....	300	215	340	392	5,310	2,600	1,430	870	392
21.	905	518	.....	300	215	340	340	5,840	2,780	1,200	790	392
22.	905	518	.....	300	240	315	315	6,170	2,960	1,200	715	392
23.	905	518	.....	275	265	315	340	5,950	3,500	1,430	578	392
24.	905	518	.....	325	265	270	512	6,060	3,780	1,500	545	392
25.	905	518	.....	350	265	250	750	6,390	3,600	1,430	480	365
26.	858	518	.....	350	240	250	715	6,610	3,320	1,370	480	365
27.	858	.....	.....	350	240	292	578	6,390	3,320	1,430	450	365
28.	858	.....	.....	325	265	292	680	6,610	3,230	1,430	480	365
29.	720	.....	.....	325	265	315	750	6,720	3,410	1,690	750	365
30.	765	.....	.....	325	.....	315	1,150	6,940	3,140	1,970	715	365
31.	720	.....	.....	300	.....	315	.....	6,830	.....	1,620	750	.....
1912-13.												
1.	340	420	.....	.....	.....	.....	.....	1,465	2,340	1,280	720	470
2.	340	420	.....	.....	.....	.....	.....	1,340	2,340	1,170	720	470
3.	340	420	.....	.....	.....	.....	.....	1,118	2,420	1,225	875	498
4.	340	392	.....	.....	.....	.....	.....	920	2,850	1,225	835	470
5.	392	392	.....	.....	.....	.....	.....	1,065	2,770	1,170	835	470
6.	392	365	.....	.....	.....	.....	.....	1,400	2,590	1,170	795	525
7.	420	340	.....	.....	.....	.....	.....	1,660	2,340	1,170	795	555
8.	450	340	.....	.....	.....	.....	.....	1,660	2,420	1,065	650	555
9.	420	240	.....	.....	.....	.....	.....	1,465	2,025	1,065	618	650
10.	420	292	.....	.....	.....	.....	.....	1,595	2,180	1,170	650	555
11.	420	292	.....	.....	.....	.....	.....	2,100	2,680	1,118	650	585
12.	420	270	.....	.....	.....	.....	410	2,505	2,505	1,065	650	585
13.	420	250	.....	.....	.....	.....	555	3,140	2,260	1,015	795	555
14.	392	250	.....	.....	.....	.....	795	2,950	2,025	965	720	525
15.	392	212	.....	.....	.....	.....	1,170	2,420	2,025	920	685	525
16.	392	212	.....	.....	.....	.....	1,065	2,420	2,100	965	720	525
17.	392	212	.....	.....	.....	.....	1,400	2,505	2,100	965	685	498
18.	392	212	.....	.....	.....	.....	1,118	2,505	2,100	965	685	470
19.	392	212	.....	.....	.....	.....	965	2,590	2,420	1,280	685	435
20.	392	195	.....	.....	.....	.....	920	2,180	2,420	1,118	685	435
21.	392	195	.....	.....	.....	.....	1,015	2,100	2,260	1,280	720	410
22.	392	195	.....	.....	.....	.....	1,015	2,025	2,025	1,225	720	410
23.	365	180	.....	.....	.....	.....	875	2,590	1,950	1,225	720	470
24.	365	180	.....	.....	.....	.....	685	2,950	1,950	1,065	685	498
25.	365	180	.....	.....	.....	.....	685	2,950	1,160	1,015	685	470
26.	365	180	.....	.....	.....	.....	720	2,770	1,280	1,015	650	435
27.	365	180	.....	.....	.....	.....	965	3,805	1,118	920	618	435
28.	365	180	.....	.....	.....	.....	1,225	3,710	1,065	875	555	435
29.	365	180	.....	.....	.....	.....	1,400	3,710	1,595	835	498	410
30.	365	180	.....	.....	.....	.....	1,530	3,710	1,465	835	498	410
31.	392	.....	.....	.....	.....	.....	.....	3,425	.....	758	498	.....

NOTE.—Daily discharge determined from various rating curves, for the most part well defined. Discharge for 1894 to 1896 revised since being published originally. Discharge records for 1912 and 1913 furnished complete by the State engineer.

Monthly discharge of Rio Grande near Del Norte, Colo., for 1889-1906; 1908-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1889-90.					
October 11-31.....	345	214	278	17,100	
November.....	364	290	319	19,000	
December.....			a 248	15,200	
January.....			a 220	13,500	
February.....			a 200	11,100	
March.....			a 445	27,400	
April.....	1,380	404	913	54,300	
May.....	5,930	1,990	4,330	206,000	
June.....	5,560	2,550	3,810	227,000	
July.....	2,260	765	1,520	93,200	
August.....	930	450	612	37,600	
September.....	450	326	383	22,800	
The period.....				804,000	
1890-91.					
October.....	862	307	470	28,900	
November.....	404		a 340	20,200	
December.....			a 300	18,400	
January.....			a 275	16,900	
February.....			a 250	13,900	
March.....			a 435	26,700	
April.....	3,160	796	1,410	83,900	
May.....	5,650	1,860	3,280	202,000	
June.....	5,560	2,190	4,150	247,000	
July.....	3,560	862	1,690	104,600	
August.....	1,460	384	663	40,500	
September.....	1,230	290	527	31,400	
The year.....	5,650		1,150	834,000	
1891-92.					
October.....	2,480	450	844	51,900	
November.....	450	308	374	22,300	
December.....			a 310	19,100	
January.....			a 275	16,900	
February.....			a 250	14,400	
March.....			316	19,400	
April.....	2,400	345	1,050	62,300	
May.....	4,710	1,510	2,600	160,000	
June.....	3,160	1,150	2,190	130,000	
July.....	1,070	554	740	45,500	
August.....	610	308	444	27,300	
September.....	308	243	262	15,600	
The year.....	4,710		805	585,000	
1892-93.					
October.....	290	243	259	15,900	
November.....	274		a 240	14,300	
December.....			a 175	10,800	
January.....			a 160	9,840	
February.....			a 175	9,720	
March.....			a 250	15,400	
April.....	1,040	326	533	31,700	
May.....	3,320	732	1,940	120,000	
June.....	2,850	670	1,750	104,000	
July.....	640	290	395	24,300	
August.....	450	258	324	19,900	
September.....	345	228	270	16,100	
The year.....	3,320		539	392,000	
1893-94.					
October.....	308	243	263	16,200	
November.....			a 240	14,300	
December.....			a 175	10,800	
January.....			a 175	10,800	
February.....			a 175	9,720	
March.....			a 300	18,400	
April.....	2,110	530	922	54,900	
May.....	3,570	1,450	2,390	147,000	
June.....	1,980	404	1,070	63,700	
July.....	470	292	365	22,400	
August.....	530	292	383	23,600	
September.....	470	270	355	21,100	
The year.....	3,570		568	413,000	

a Revised since being published originally.

Monthly discharge of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1894-95.					
October.....	442	315	359	22, 100	
November.....	315	230	282	16, 800	
December.....			a 225	13, 800	
January.....			a 200	12, 300	
February.....			a 190	10, 600	
March.....			a 435	26, 700	
April.....	3, 060	642	2, 000	119, 000	
May.....	3, 030	1, 670	2, 290	141, 000	
June.....	3, 690	1, 290	2, 330	139, 000	
July.....	1, 500	810	1, 050	64, 600	
August.....	1, 060	554	735	45, 200	
September.....	604	365	418	26, 700	
The year.....	3, 690		879	638, 000	
1895-96.					
October.....	470	385	419	25, 800	
November.....	385	315	342	20, 400	
December.....			a 300	18, 400	
January.....			a 275	16, 900	
February.....			a 270	15, 500	
March.....			a 500	30, 700	
April.....	3, 000	578	1, 530	91, 000	
May.....	3, 510	1, 430	2, 450	151, 000	
June.....	2, 140	395	867	51, 600	
July.....	669	306	395	24, 300	
August.....	385	230	268	16, 500	
September.....	1, 550	262	499	29, 700	
The year.....	3, 510		676	492, 000	
1896-97.					
October.....	566	395	454	27, 900	
November.....	375	262	305	18, 100	
December.....			a 225	13, 800	
January.....			a 225	13, 800	
February.....			a 200	11, 100	
March.....			a 440	27, 100	
April.....	2, 110	598	1, 070	63, 500	
May.....	5, 230	1, 660	3, 540	217, 000	
June.....	4, 830	1, 660	3, 390	202, 000	
July.....	2, 260	570	1, 110	68, 100	
August.....	598	354	475	29, 200	
September.....	972	354	631	37, 500	
The year.....	5, 230		1, 010	729, 000	
1897-98.					
October.....	2, 260	756	1, 470	90, 500	
November.....	860	542	665	39, 600	
December.....			a 390	24, 000	
January.....			a 325	20, 000	
February.....			a 300	16, 700	
March.....			a 450	27, 700	
April.....	3, 410	890	1, 910	114, 000	
May.....	4, 380	2, 150	2, 720	167, 000	
June.....	5, 270	2, 820	4, 390	261, 000	
July.....	2, 660	708	1, 640	101, 000	
August.....	614	384	509	31, 300	
September.....	398	260	319	19, 000	
The year.....	5, 270		1, 250	912, 000	
1898-99.					
October.....	328	220	259	16, 000	
November.....			a 220	13, 100	
December.....			a 180	11, 100	
January.....			a 180	11, 100	
February.....			a 180	10, 000	
March.....			a 300	18, 400	
April.....	1, 030	280	618	36, 800	
May.....	2, 320	537	1, 380	84, 700	
June.....	1, 510	753	1, 090	64, 900	
July.....	1, 300	537	703	43, 200	
August.....	1, 210	280	597	36, 700	
September.....	753	280	370	22, 000	
The year.....	2, 320		506	368, 000	

a Revised since being published originally.

Monthly discharge of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1899-1900.					
October.....			a 475	29,200	
November.....			a 400	23,800	
December.....			a 205	12,600	
January.....			a 150	9,220	
February.....			a 190	10,600	
March.....			a 250	15,400	
April.....	518	320	418	24,900	
May.....	5,450	553	2,850	175,000	
June.....	5,350	1,020	2,690	160,000	
July.....	978	289	546	33,600	
August.....	320	169	228	14,000	
September.....	354	198	255	15,200	
The year.....	5,450		724	524,000	
1900-1901.					
October.....	384	320	342	21,000	
November.....	320	198	251	14,900	
December.....			a 200	12,300	
January.....			a 200	12,300	
February.....			a 175	9,720	
March.....			a 225	13,800	
April.....	1,730	289	710	42,200	
May.....	4,480	1,460	2,570	158,000	
June.....	2,750	1,150	1,780	116,000	
July.....	1,060	384	594	36,500	
August.....	660	320	464	28,500	
September.....	895	258	446	26,500	
The year.....	4,480		663	492,000	
1901-2.					
October.....	320	228	262	16,100	
November.....			283	16,800	
December.....			a 175	10,800	
January.....			a 160	9,840	
February.....			a 150	8,330	
March.....			a 230	14,100	
April.....	1,030	265	638	38,000	
May.....	1,790	660	1,170	71,900	
June.....	1,190	210	618	36,800	
July.....	184	112	152	9,350	
August.....	624	69	180	11,100	
September.....	354	112	206	12,300	
The year.....	1,790		352	255,000	
1902-3.					
October.....	324	159	242	14,900	
November.....			a 217	12,900	
December.....			a 200	9,840	
April.....	1,560	304	748	44,500	
May.....	5,100	1,390	2,830	174,000	
June.....	6,020	4,240	5,190	309,000	
July.....	3,720	710	1,660	102,000	
August.....	650	454	526	32,300	
September.....	755	389	515	30,600	
1903-4.					
October.....	454	269	349	21,500	
April.....	1,450	195	652	38,800	
May.....	2,040	535	1,160	71,200	
June.....	1,050	465	716	42,600	
July.....	479	245	336	20,700	
August.....	1,050	500	689	42,400	
September.....	1,410	465	692	41,200	
1904-5.					
October.....	3,100	675	1,450	89,100	
April.....	1,760	318	760	45,200	
May.....	7,460	1,140	3,410	210,000	
June.....	10,000	2,740	6,090	362,000	
July.....	2,390	630	1,090	67,100	
August.....	905	355	578	35,500	
September.....	1,230	290	376	22,400	

a Revised since being published originally.

Monthly discharge of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1905-6.					
October.....	860	355	430	26,400	
November.....	330	220	296	17,600	
December.....			a 200	12,300	
January.....			a 180	11,100	
February.....			a 180	10,000	
March.....			a 305	18,800	
April.....	2,440	365	1,090	64,900	
May.....	6,860	1,120	3,830	236,000	
June.....	7,670	2,650	4,970	296,000	
July.....	2,860	1,270	1,880	116,000	
August.....	1,200	582	775	47,700	
September.....	1,550	390	719	42,800	
The year.....	7,670		1,240	900,000	
1906.					
October.....	1,380	715	891	54,800	
November.....	798	320	546	32,500	
December.....			a 300	18,400	
1908.					
Apr. 16-30.....	1,320	840	1,060	31,600	B.
May.....	3,440	1,020	1,690	104,000	A.
June.....	4,130	2,040	2,930	174,000	A.
July.....	1,770	660	1,070	65,800	A.
August.....	1,420	580	931	57,200	A.
September.....	505	255	345	20,500	A.
The period.....				453,000	
1908-9.					
October.....	310	230	271	16,700	A.
November.....	255	160	205	12,200	A.
Apr. 25-30.....	1,620	965	1,310	15,600	A.
May.....	4,530	1,060	3,180	196,000	A.
June.....	6,870	2,420	4,770	284,000	A.
July.....	2,880	875	1,520	93,500	A.
August.....	1,320	672	864	53,100	A.
September.....	5,050	710	1,660	98,800	A.
1909-10.					
October.....	965	458	661	40,600	B.
November.....	490	295	418	24,900	B.
December.....	458	350	397	24,400	C.
January.....			321	19,700	D.
February.....			293	16,300	C.
March.....	1,210		646	39,700	B.
April.....	3,860	635	1,400	83,300	A.
May.....	5,260	2,190	3,410	210,000	A.
June.....	4,840	1,060	2,420	144,000	A.
July.....	1,060	398	618	38,000	A.
August.....	710	320	493	30,300	A.
September.....	398	295	333	19,800	A.
The year.....	5,260		951	691,000	
1910-11.					
October.....	710	270	362	22,300	A.
November.....	370	202	305	18,100	A.
December.....	270	180	218	13,400	B.
January.....			248	15,200	C.
February.....			239	13,300	B.
March.....	672		336	20,700	A.
April.....	1,900	560	958	57,000	A.
May.....	4,620	1,260	3,320	204,000	A.
June.....	6,450	3,280	4,820	287,000	A.
July.....	4,480	1,710	2,800	172,000	A.
August.....	1,520	635	967	59,500	A.
September.....	1,000	555	668	39,700	A.
The year.....	6,450		1,270	922,000	

a Revised since being published originally.

Monthly discharge of Rio Grande near Del Norte, Colo., for 1889-1906, 1908-1913—
Continued.

Month.	Discharge in second-feet.			Run-off total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October.....	14,000	720	2,450	151,000	A.
November.....	678	.....	543	32,300	A.
December.....	.....	.....	407	25,000	B.
January.....	400	275	340	20,900	
February.....	325	215	272	15,700	
March.....	340	230	279	17,100	
April.....	1,150	315	577	34,400	
May.....	6,940	1,150	3,730	229,000	
June.....	6,940	2,600	4,370	260,000	
July.....	3,320	1,200	1,750	108,000	
August.....	1,430	450	812	49,900	
September.....	680	365	447	26,600	
The year.....	14,000	.....	1,330	970,000	
1912-13.					
October.....	450	340	385	23,700	
November.....	420	180	262	15,600	
December.....	.....	.....	175	10,800	
April 12-30.....	1,530	410	974	36,717	
May.....	3,805	920	2,347	144,310	
June.....	2,860	1,065	2,110	125,553	
July.....	1,280	758	1,069	65,731	
August.....	875	498	687	42,242	
September.....	650	410	491	29,217	

NOTE.—A study of the winter discharge measurements and gage heights during the winter period from 1910 to 1913 shows that the flow decreases slowly to February when it reaches a minimum, and remains low until the ice breaks up. This is due to the high altitude of the drainage area above the stations, which prevent practically any precipitation from entering the streams during that period—the ground water being the chief source of supply. With this as a basis and as comparison with the records at Embudo which are practically free from ice, winter estimates for the earlier years have been made by gradually reducing the discharge from that at which the river froze over in the fall. It is not intended that these earlier winter estimates should be considered as reliable in determining the minimum flow in the Rio Grande, but rather that they should be used in connection with the total yearly flow.

Discharge records for 1912 and 1913 furnished by the State engineer.

RIO GRANDE AT ALAMOSA, COLO.

Location.—At the railroad bridge half a mile east of Alamosa. The nearest tributary is Rio Alamosa, which enters about 6 miles below.

Records available.—Discharge measurements and gage heights September 28, 1894, to December 31, 1895. Miscellaneous measurements, 1903 and 1910. Complete records, May 15 to December 6, 1912, April 29 to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made from highway bridge a quarter of a mile above the railroad bridge.

Diversion.—Below most of the large diversions from the Rio Grande in Colorado.

Accuracy.—Data insufficient for estimates of discharge except for 1912.

Cooperation.—During 1912 and 1913 the station was maintained by the United States Reclamation Service, by which the complete records were furnished.

Discharge measurements of Rio Grande at Alamosa, Colo. in 1894-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1894.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 28	A. P. Davis.....		11	Aug. 12	Stannard and Robinson	5.34	21.2
1895.				Sept. 30	Stannard and Sivesind.	5.63	132
June 16	F. Cogswell.....	5.18	1,180	Nov. 7	do.....	6.02	316
Oct. 14	do.....		92	1913.			
1903.				May 6	Stannard and Robinson	4.88	63.8
Sept. 13	F. Cogswell.....		56	8	do.....	4.54	25.8
Oct. 11	do.....		15	9	do.....	5.07	126
Nov. 8	do.....		83	14	do.....	6.06	414
1910.				17	do.....	5.22	160
Aug. 16			13	20	do.....	5.04	117
Sept. 25			9.4	22	do.....	4.64	36.0
1912.				26	do.....	5.88	303
May 15	French and Robinson..	6.84	805	29	do.....	6.50	576
20	do.....	9.00	2,620	31	do.....	6.59	640
23	do.....	10.31	4,350	June 2	do.....	5.33	169
25	do.....	10.18	4,050	6	do.....	5.55	244
29	do.....	10.53	4,310	12	do.....	7.12	981
June 3	do.....	10.09	3,700	13	do.....	7.43	1,180
13	do.....	9.40	2,680	18	do.....	6.69	695
19	do.....	8.87	2,130	20	do.....	6.96	835
July 3	C. B. Sampson.....	8.74	2,200	23	do.....	6.30	465
30	Stannard and Robinson	6.26	246	26	do.....	5.71	204
31	do.....	6.88	636	July 6	do.....	4.44	15.7
Aug. 3	do.....	6.30	276	10	do.....	4.36	11.2
9	do.....	5.44	42.2	26	do.....	4.25	7.8
				Aug. 7	J. D. Stannard.....	4.25	8.3
				11	Stannard and Robinson	4.11	2.5
				Sept. 5	do.....	4.48	22.2

Daily gage height, in feet, of Rio Grande at Alamosa, Colo., for 1894-95, 1912-13.

Day.	Sept.	Oct.	Nov.	Dec.	Day.	Sept.	Oct.	Nov.	Dec.
1894.					1894.				
1.....		2.25	2.1	3.1	16.....		2.1	2.8	3.0
2.....		2.1	2.1	3.1	17.....		2.1	2.9	3.0
3.....		2.2	2.2	3.1	18.....		2.1	2.9	3.0
4.....		2.25	2.2	3.0	19.....		2.1	2.9	3.0
5.....		2.2	2.35	3.0	20.....		2.1	2.95	3.0
6.....		2.1	2.6	3.0	21.....		2.1	2.95	3.2
7.....		2.1	2.75	3.0	22.....		2.1	2.9	3.2
8.....		2.1	2.8	3.0	23.....		2.1	3.0	3.2
9.....		2.1	2.8	3.0	24.....		2.1	3.0	3.2
10.....		2.1	2.8	3.0	25.....		2.1	3.0	3.2
11.....		2.1	2.8	3.0	26.....		2.1	3.0	3.2
12.....		2.1	2.8	3.0	27.....		2.1	3.0	3.2
13.....		2.1	2.75	3.0	28.....		2.1	3.0	3.2
14.....		2.1	2.8	3.0	29.....		2.1	3.0	3.2
15.....		2.1	2.8	3.0	30.....	2.25	2.15	3.1	3.2
					31.....		2.1	3.1	3.2

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1895.												
1.....	3.2	3.2	3.6	4.32	4.0	4.0	3.0	3.1	3.3	3.0	2.0	2.0
2.....	3.2	3.2	3.6	4.35	4.0	4.6	3.0	3.1	3.0	3.0	2.0	2.0
3.....	3.2	3.2	3.65	4.42	3.1	5.0	3.0	3.1	3.0	3.0	2.0	2.0
4.....	3.2	3.2	3.65	4.46	3.6	4.55	3.0	3.1	3.0	3.0	2.0	2.0
5.....	3.2	3.2	3.65	4.52	3.0	4.1	3.0	3.1	3.0	3.0	2.0	2.0
6.....	3.2	3.2	3.7	4.6	3.0	5.0	3.0	3.9	3.0	3.0	2.0	2.0
7.....	3.2	3.2	3.7	4.67	2.1	5.3	3.0	3.6	3.0	3.0	2.0	2.0
8.....	3.2	3.2	3.75	4.7	2.9	5.75	3.0	3.6	3.0	3.0	2.0	2.0
9.....	3.2	3.2	3.75	4.75	3.2	6.0	3.0	3.3	3.0	3.0	2.0	2.0
10.....	3.2	3.2	3.9	4.8	3.6	6.0	3.3	3.0	2.9	3.0	2.0	2.0

Daily gage height, in feet, of Rio Grande at Alamosa, Colo., for 1894-95, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
11.....	3.2	3.2	3.9	4.85	4.0	6.15	3.6	3.0	2.9	3.0	2.0	2.0
12.....	3.2	3.2	3.95	4.9	4.0	6.15	4.0	3.0	2.9	3.0	2.0	2.0
13.....	3.2	3.2	3.95	4.97	4.6	5.95	4.9	3.0	2.9	3.0	2.0	2.0
14.....	3.2	3.2	3.9	5.4	4.5	5.75	4.9	3.0	2.9	2.9	2.0	2.0
15.....	3.2	3.2	3.85	5.8	4.0	5.35	4.9	3.0	2.9	2.8	2.0	2.0
16.....	3.2	3.2	3.8	5.0	3.6	5.4	4.6	3.0	2.9	2.6	2.0	2.0
17.....	3.2	3.4	3.9	4.1	3.4	4.55	4.4	3.0	2.9	2.4	2.0	2.0
18.....	3.2	3.4	3.9	5.3	3.6	4.7	4.4	3.0	2.9	2.2	2.0	2.0
19.....	3.2	3.4	3.95	5.8	3.6	4.2	4.0	3.0	2.9	2.0	2.0	2.0
20.....	3.2	3.4	3.95	6.6	3.6	3.5	3.1	3.0	3.0	2.0	2.0	2.0
21.....	3.2	3.45	3.95	6.6	3.2	3.9	3.1	3.0	3.0	2.0	2.0	2.0
22.....	3.2	3.45	4.0	6.0	3.2	3.6	3.1	3.0	3.0	2.0	2.0	2.0
23.....	3.2	3.5	4.0	5.6	3.4	3.3	4.0	3.0	3.0	2.0	2.0	2.0
24.....	3.2	3.5	4.0	4.9	3.8	3.0	4.6	3.0	3.0	2.0	2.0	2.0
25.....	3.2	3.5	4.05	4.6	3.6	3.0	4.3	3.0	3.0	2.0	2.0	2.0
26.....	3.2	3.55	4.05	5.0	3.6	2.9	4.0	3.0	3.0	2.0	2.0	2.0
27.....	3.2	3.55	4.1	5.15	3.6	2.9	4.0	3.0	3.0	2.0	2.0	2.0
28.....	3.2	3.6	4.15	5.0	3.6	2.9	4.0	3.0	3.0	2.0	2.0	2.0
29.....	3.2	.....	4.2	4.1	3.4	3.0	4.0	3.0	3.0	2.0	2.0	2.0
30.....	3.2	.....	4.2	4.1	3.6	3.0	4.0	3.0	3.0	2.0	2.0	2.0
31.....	3.2	.....	4.25	.....	3.45	.....	4.0	3.6	.....	2.0	.....	2.0

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1912.						1912.					
1.....	10.69	9.12	6.90	5.41	16.....	6.42	8.93	6.06	5.60	5.94	
2.....	10.32	9.02	6.55	5.45	17.....	7.01	9.19	6.00	6.02	5.84	
3.....	10.09	8.75	6.42	5.42	18.....	7.66	9.19	5.84	5.88	5.82	
4.....	10.24	8.25	6.18	5.29	19.....	8.29	9.18	5.78	5.85	5.78	
5.....	10.46	8.04	5.85	5.30	20.....	9.08	8.64	5.72	5.92	5.62	
6.....	10.49	7.68	5.76	5.20	21.....	9.42	8.55	5.66	5.84	5.58	
7.....	10.36	7.32	5.58	5.18	22.....	9.86	8.64	5.62	5.75	5.56	
8.....	10.13	7.08	5.52	5.17	23.....	10.18	8.81	5.70	5.62	5.56	
9.....	10.04	6.90	5.46	5.17	24.....	10.23	9.25	5.70	5.48	5.52	
10.....	10.02	6.70	5.38	5.17	25.....	10.08	9.52	5.70	5.42	5.48	
11.....	9.89	6.48	5.34	5.17	26.....	10.30	9.40	5.80	5.36	5.49	
12.....	9.74	6.26	5.30	5.28	27.....	10.42	9.30	5.89	5.29	5.56	
13.....	9.54	6.20	5.30	5.44	28.....	10.52	9.22	5.85	5.28	5.66	
14.....	9.11	6.10	5.36	5.72	29.....	10.39	9.16	6.32	5.28	5.66	
15.....	6.84	8.89	6.08	5.34	5.78	30.....	10.39	9.04	6.26	5.30	5.64
.....	31.....	10.59	6.81	5.36

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	5.62	6.02	6.00	.....	.....	.....	.....	5.94	6.22	4.94	4.29	4.18
2.....	5.58	5.96	6.00	.....	.....	.....	.....	5.78	5.39	4.77	4.28	4.16
3.....	5.74	5.95	6.00	.....	.....	.....	.....	5.30	5.05	4.44	4.25	4.32
4.....	5.76	6.01	5.91	.....	.....	.....	.....	5.15	4.94	4.44	4.25	4.54
5.....	5.78	6.11	5.85	.....	.....	.....	.....	4.94	4.96	4.42	4.24	4.48
6.....	5.80	6.07	5.72	.....	.....	.....	.....	4.87	5.42	4.42	4.19	4.47
7.....	5.93	6.03	.....	.....	.....	.....	.....	4.66	5.22	4.40	4.25	4.44
8.....	5.98	6.02	.....	.....	.....	.....	.....	4.60	4.93	4.37	4.20	4.44
9.....	6.02	6.00	.....	.....	.....	.....	.....	5.06	4.85	4.36	4.14	4.40
10.....	6.04	6.03	.....	.....	.....	.....	.....	4.84	4.80	4.35	4.12	4.70
11.....	6.00	6.02	.....	.....	.....	.....	.....	4.64	5.02	4.30	4.13	4.65
12.....	5.98	6.02	.....	.....	.....	.....	.....	4.66	7.19	4.35	4.15	4.65
13.....	5.93	6.02	.....	.....	.....	.....	.....	5.10	7.43	4.60	4.14	4.64
14.....	5.90	5.96	.....	.....	.....	.....	.....	5.94	7.20	4.50	4.15	4.65
15.....	5.86	5.93	.....	.....	.....	.....	.....	5.82	6.95	4.40	4.14	4.60

Daily gage height, in feet, of Rio Grande at Alamosa, Colo., for 1894-95, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
16.....	5.80	5.96						5.32	6.82	4.40	4.15	4.59
17.....	5.74	6.02						5.22	6.79	4.45	4.14	4.53
18.....	5.72	6.07						5.18	6.65	4.46	4.16	4.47
19.....	5.68	5.90						5.08	6.68	4.48	4.16	4.44
20.....	5.65	5.84						5.03	6.92	4.50	4.18	4.42
21.....	5.65	5.84						4.70	6.90	4.50	4.20	4.40
22.....	5.64	5.84						4.63	6.63	4.46	4.20	4.40
23.....	5.63	5.82						4.59	6.30	4.50	4.18	4.48
24.....	5.61	5.91						5.04	6.09	4.56	4.19	4.44
25.....	5.57	5.92						5.50	5.90	4.31	4.18	4.45
26.....	5.56	5.95						5.64	5.70	4.24	4.39	4.45
27.....	5.64	5.96						5.00	5.47	4.23	4.26	4.45
28.....	5.52	5.98						6.12	5.24	4.20	4.20	4.58
29.....	5.58	5.99					6.03	6.44	5.10	4.16	4.18	4.65
30.....	6.02	6.00					5.98	6.52	4.94	4.17	4.19	4.78
31.....	5.98							6.62		4.30	4.16	

Daily discharge, in second-feet, of Rio Grande at Alamosa, Colo., for 1912-13.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1912.						1912.					
1.....		4,740	2,550	720	40	16.....	472	2,330	297	98	245
2.....		4,170	2,430	537	50	17.....	797	2,640	271	280	201
3.....		3,830	2,120	472	43	18.....	1,170	2,640	201	218	192
4.....		4,050	1,620	352	16	19.....	1,660	2,630	174	205	174
5.....		4,380	1,460	205	17	20.....	2,500	2,010	148	236	106
6.....		4,430	1,190	165	10	21.....	2,920	1,910	122	201	91
7.....		4,230	962	91	8	22.....	3,500	2,010	106	161	84
8.....		3,890	820	70	6	23.....	3,960	2,190	139	106	84
9.....		3,760	720	53	6	24.....	4,040	2,710	139	58	70
10.....		3,730	614	34	6	25.....	3,810	3,050	139	43	58
11.....		3,550	502	25	6	26.....	4,140	2,900	183	29	61
12.....		3,340	392	17	15	27.....	4,320	2,770	223	16	84
13.....		3,070	362	17	48	28.....	4,480	2,670	205	15	122
14.....		2,540	315	29	148	29.....	4,280	2,600	422	15	122
15.....	688	2,280	306	25	174	30.....	4,280	2,460	392	17	114
						31.....	4,580		671	29	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	106	280	271					330	440	84.2	11.9	5.6
2.....	91	253	271					279	177	58.1	11.3	4.7
3.....	157	249	271					156	104	22.5	9.5	13.9
4.....	165	275	231					124	84.2	22.5	9.5	31.0
5.....	174	320	205					84.2	87.8	21.0	8.9	25.5
6.....	183	302	148					72.5	184	21.0	6.0	24.8
7.....	240	284						44.2	138	19.5	9.5	22.5
8.....	262	280						37.0	82.4	17.4	6.5	22.5
9.....	280	271						106	69.5	16.7	3.8	19.5
10.....	289	284						68.0	62.0	16.0	2.9	49.0
11.....	271	280						41.8	98.8	12.5	3.4	43.0
12.....	262	280						44.2	1,010	16.0	4.2	43.0
13.....	240	280						114	1,200	37.0	3.8	41.8
14.....	227	253						330	1,020	27.0	4.2	43.0
15.....	209	240						291	836	19.5	3.8	37.0
16.....	183	253						161	752	19.5	4.2	36.0
17.....	167	280						138	733	23.2	3.8	30.0
18.....	148	302						130	650	24.0	4.7	24.8
19.....	131	227						110	667	25.5	4.7	22.5
20.....	118	201						101	815	27.0	5.6	21.0

Daily discharge, in second-feet, of Rio Grande at Alamosa, Colo., for 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
21.....	118	201	.....	.....	.....	.....	.....	49.0	802	27.0	6.5	19.5
22.....	114	201	.....	.....	.....	.....	.....	40.6	638	24.0	6.5	19.5
23.....	110	192	.....	.....	.....	.....	.....	36.0	474	27.0	5.6	25.5
24.....	102	231	.....	.....	.....	.....	.....	103	386	33.0	6.0	22.5
25.....	87	236	.....	.....	.....	.....	.....	203	316	13.2	5.6	23.2
26.....	84	249	.....	.....	.....	.....	.....	240	256	8.9	18.8	23.2
27.....	77	253	.....	.....	.....	.....	.....	95.0	196	8.3	10.1	23.2
28.....	70	262	.....	.....	.....	.....	.....	398	143	6.5	6.5	35.0
29.....	91	267	.....	.....	.....	.....	363	539	114	4.7	5.6	43.0
30.....	280	271	.....	.....	.....	.....	344	579	84	5.2	6.0	59.4
31.....	262	.....	.....	.....	.....	.....	.....	632	.....	12.5	4.7	.....

Monthly discharge of Rio Grande at Alamosa, Colo., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1912.				
May 15-31.....	4,580	472	3,040	103,000
June.....	4,740	1,910	3,120	189,000
July.....	2,550	106	651	40,000
August.....	720	15	146	8,980
September.....	245	6	80	4,760
The period.....				343,000
1912-13.				
October.....	289	70	171	10,500
November.....	320	192	259	15,400
December 1-6.....	271	148	233	2,770
May.....	632	36	183	11,300
June.....	1,200	62	420	25,000
July.....	84	5	23	1,390
August.....	19	3	6	405
September.....	59	5	28	1,700

RIO GRANDE NEAR LOBATOS,¹ COLO.

Location.—At highway bridge in sec. 22, T. 33 N., R. 11 E., 10 miles east of Lobatos, and a few miles above the Colorado-New Mexico line, 7 miles below mouth of Conejos River.

Records available.—June 28, 1899, to September 30, 1913.

Drainage area.—7,700 square miles.

Gage.—Bristol automatic gage installed March 23, 1910, by the State engineer. Original gage a vertical staff. Chain gage used from July 10, 1903, to March 23, 1910. All gages are referred to the same datum.

Channel.—River at this point flows in a gash cut in lava rock; bed shifts from year to year.

Discharge measurements.—Made from bridge or by wading.

Winter flow.—Ice causes backwater varying in amount during the winter months, and measurements are made to determine the discharge.

Diversions.—There are court decrees for diversions from the Rio Grande of 5,134 second-feet between the Del Norte station and this one. There are also decrees for diversions from the following tributaries: Minor tributaries above Alamosa, 464 second-feet; Alamosa and tributaries, 2,116 second-feet; Conejos and tributaries, 3,464 second-feet; Culebra and tributaries, 177 second-feet.

Cooperation.—Since 1911 station has been maintained in cooperation with the State engineer, who furnished the complete records for 1912 and 1913.

¹ Originally known as Rio Grande at Cenicero, Colo.

Discharge measurements of Rio Grande near Lobatos, Colo., in 1899-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1899.		<i>Fect.</i>	<i>Sec.-ft.</i>	1908.		<i>Fect.</i>	<i>Sec.-ft.</i>
June 28	A. L. Fellows.....	0.90	20	Oct. 8	Thomas Grieve, jr.....	1.50	236
Aug. 24	do.....	1.00	31	Dec. 2	J. B. Stewart.....	a2.20	243
Nov. 28	do.....	1.80	297				
1900.				1909.			
Mar. 29	A. L. Fellows.....	1.60	236	Feb. 13	J. B. Stewart.....	a2.20	390
June 22	do.....	1.80	420	Mar. 26	do.....	1.90	480
May 10	do.....	2.00	594	May 16	Freeman and Stewart.....	4.60	3,900
Aug. 16	do.....	.75	18	June 22	W. B. Freeman.....	5.01	4,310
				Aug. 2	G. H. Russell.....	1.40	170
				Sept. 29	do.....	2.62	1,140
1901.				Nov. 12	J. B. Stewart.....	2.05	500
Sept. 9	A. L. Fellows.....	1.20	87	Dec. 19	G. H. Russell.....	a2.28	280
				1910.			
1902.				Jan. 27	J. B. Stewart.....	a2.65	438
July 9	A. L. Fellows.....	.60	6	Feb. 23	G. H. Russell.....	2.70	366
				Apr. 9	W. B. Freeman.....	2.68	1,210
1903.				May 26	G. H. Russell.....	2.68	1,220
Apr. 16	F. Cogswell.....	1.65	328	June 24	do.....	1.20	138
May 19	do.....	3.60	2,660	July 15	J. B. Stewart.....	.65	24
June 10	do.....	5.10	4,950	Aug. 19	Ferguson and Christian- son.....	1.15	124
June 30	do.....	5.10	4,930	Sept. 10	Comstock and Chris- tianson.....	.75	42
July 29	do.....	1.60	306	Oct. 13	J. B. Stewart.....	1.88	51
Aug. 23	do.....	1.05	73	Nov. 8	Mathias.....	1.40	212
Sept. 11	do.....	1.00	56	Dec. 13	G. H. Russell.....	a 1.86	331
Oct. 9	do.....	1.00	67				
Nov. 6	do.....	1.10	91	1911.			
1904.				Jan. 26	G. H. Russell.....	a 1.94	449
May 4	G. B. Monk.....	.80	24	Feb. 23	Clayton & Turner.....	a 2.00	331
May 13	do.....	.80	25	Mar. 7	G. H. Russell.....	1.73	426
May 26	do.....	.70	14	Mar. 27	B. S. Clayton.....	1.70	385
June 9	do.....	.70	16	Apr. 19	G. H. Russell.....	1.38	194
June 18	do.....	.80	28	Apr. 27	B. S. Clayton.....	2.57	1,140
June 27	do.....	.70	16	May 29	do.....	3.62	2,310
July 21	do.....	.70	14	July 3	do.....	4.81	3,990
July 29	do.....	.70	14	Sept. 2	I. G. Ferguson.....	2.40	833
Aug. 24	do.....	1.20	121	Oct. 7	B. S. Clayton.....	2.25	719
				Oct. 9	do.....	6.72	7,100
1905.				Oct. 18	do.....	3.62	2,280
Apr. 21	R. I. Meeker.....	2.45	801	1912.			
June 23	do.....	4.25	3,340	Jan. 18	B. S. Clayton.....	a 3.00	510
July 26	do.....	1.12	67	Feb. 28	do.....	2.45	460
Sept. 22	do.....	1.00	46	May 13	do.....	3.38	2,020
				June 9	C. C. Hezmalhalch.....	6.50	6,790
1906.				July 12	do.....	1.75	410
May 1	R. I. Meeker.....	2.80	1,260	Aug. 23	do.....	1.60	276
May 23	do.....	5.80	6,220	Nov. 16	C. E. Turner.....	1.75	370
June 14	do.....	6.50	7,740				
Oct. 26	do.....	2.60	1,009	1913.			
				Jan. 26	C. E. Turner.....	(a)	230
1907.				Feb. 10	do.....	(a)	224
Apr. 23	R. I. Meeker.....	3.70	2,570	Mar. 20	do.....	(a)	391
May 14	W. B. Freeman.....	3.42	2,180	May 16	C. O. Crisman.....	2.42	904
June 12	Freeman and Chatfield.....	6.35	6,640	May 31	do.....	2.71	1,100
July 31	W. B. Freeman.....	3.76	2,720	June 28	do.....	1.72	285
Oct. 8	J. B. Stewart.....	2.12	635	July 28	do.....	1.00	69
				Aug. 1	Robt. Follansbee.....	.78	40
1908.				Aug. 29	C. O. Crisman.....	.80	44
Mar. 28	J. B. Stewart.....	2.20	711	Sept. 29	do.....	1.18	114
May 19	W. B. Freeman.....	2.35	803				
June 10	J. B. Stewart.....	2.26	765				
July 12	do.....	1.45	240				

a Ice present.

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1899.					1899.				
1.....		0.78	1.0	1.0	16.....		1.0	1.0	2.1
2.....		.9	1.0	1.0	17.....		1.0	1.0	2.0
3.....		.88	.9	1.0	18.....		.98	1.0	1.4
4.....		.9	.9	1.0	19.....		1.0	1.0	1.5
5.....		1.0	1.4	1.0	20.....		1.0	.9	1.5
6.....		.9	1.4	1.0	21.....		1.02	.9	1.5
7.....		.9	1.3	1.0	22.....		1.08	1.0	1.4
8.....		.9	1.4	1.0	23.....		1.5	1.0	1.4
9.....		.9	1.4	1.0	24.....		1.5	1.0	1.4
10.....		.85	1.3	1.0	25.....		1.35	.95	1.3
11.....		.8	1.3	1.0	26.....		1.3	.9	1.3
12.....		.8	1.3	1.0	27.....		1.2	.9	1.3
13.....		.85	1.3	1.1	28.....		0.9	1.1	1.0
14.....		.9	1.2	1.1	29.....		.9	1.1	1.0
15.....		1.0	1.1	1.6	30.....		.8	1.1	1.0
					31.....		1.0	1.0	1.3

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.....	1.3	1.5	1.8	2.0	2.0	2.5	1.6	1.8	5.0	1.1	0.8	0.7
2.....	1.3	1.5	1.8	2.0	2.0	2.6	1.6	1.9	4.8	1.0	.8	.7
3.....	1.2	1.6	1.8	2.0	2.3	2.6	1.6	1.9	4.7	1.0	.8	.8
4.....	1.4	1.6	1.7	2.0	2.0	2.4	1.7	1.9	4.6	.9	.8	.8
5.....	1.3	1.6	1.6	2.0	2.0	2.1	1.7	1.9	4.5	.9	.8	.9
6.....	1.2	1.6	1.5	2.0	2.0	2.1	1.8	1.9	4.2	.9	.8	.9
7.....	1.2	1.6	1.6	2.0	2.0	2.1	1.8	1.9	4.0	.9	.8	.9
8.....	1.2	1.7	1.6	2.0	2.6	2.2	1.8	2.0	3.9	.9	.8	.9
9.....	1.3	1.7	1.7	2.0	2.6	2.0	1.8	2.0	3.8	.9	.8	.9
10.....	1.3	1.8	1.6	2.0	2.0	2.0	1.8	2.1	3.8	.9	.8	1.0
11.....	1.4	1.7	1.6	2.0	2.0	2.1	1.8	2.2	3.7	.9	.8	.9
12.....	1.3	1.7	1.7	2.0	2.0	2.1	1.8	2.7	3.6	.9	.8	1.0
13.....	1.3	1.7	1.7	2.0	2.0	2.1	1.8	2.8	3.2	.9	.8	1.0
14.....	1.2	1.8	1.8	2.0	2.0	2.1	1.7	2.9	3.0	.9	.8	.9
15.....	1.3	1.8	1.9	2.0	.9	2.1	1.7	2.9	2.9	.9	.8	.9
16.....	1.3	1.7	2.0	2.0	.8	2.1	1.7	2.9	2.7	.9	.8	.9
17.....	1.4	1.7	2.0	2.0	2.4	2.0	1.7	2.9	2.5	.9	.8	.9
18.....	1.4	1.7	2.0	2.0	2.4	1.9	1.7	2.8	2.4	.9	.8	.9
19.....	1.4	1.7	2.0	2.0	2.4	1.9	1.6	3.0	2.2	.9	.8	.9
20.....	1.4	1.7	2.0	2.0	2.4	1.9	1.6	3.1	2.0	.9	.8	.9
21.....	1.4	1.7	2.0	2.0	2.4	1.9	1.5	3.8	1.9	.8	.8	.9
22.....	1.4	1.8	2.0	2.0	2.4	1.8	1.6	3.5	1.8	.8	.8	.9
23.....	1.4	1.8	2.0	2.0	2.4	1.8	1.6	3.3	1.8	.8	.8	.9
24.....	1.4	1.8	2.0	2.0	2.4	1.7	1.8	3.1	1.6	.8	.8	.9
25.....	1.5	1.8	2.0	2.6	2.4	1.7	1.8	3.1	1.6	.8	.8	.9
26.....	1.5	1.8	2.0	2.3	2.4	1.7	1.8	3.4	1.5	.8	.8	.9
27.....	1.5	1.8	2.0	2.0	2.4	1.7	1.9	3.9	1.5	.8	.8	.9
28.....	1.5	1.8	2.0	2.0	2.5	1.6	1.9	4.4	1.4	.8	.8	.9
29.....	1.5	1.8	2.0	2.0		1.6	1.8	4.8	1.3	.8	.8	.9
30.....	1.5	1.8	2.0	2.6		1.6	1.8	5.0	1.2	.8	.8	.9
31.....	1.5		2.0	2.0		1.6		5.0		.8	.7	
1900-1901.												
1.....	.9	1.1	1.8	2.0	2.0	1.9	1.3	2.7	3.4	1.6	1.4	1.1
2.....	.9	1.1	1.8	2.0	2.0	2.1	1.3	3.4	3.0	1.6	1.0	1.1
3.....	.9	1.1	1.8	2.0	2.0	2.1	1.4	3.6	3.0	1.5	.9	1.1
4.....	.9	1.1	1.9	2.0	2.0	2.2	1.4	3.3	2.9	1.5	.9	1.0
5.....	.9	1.1	1.9	2.0	2.0	2.2	1.5	2.8	2.9	1.4	.9	1.0
6.....	.9	1.1	2.0	2.0	2.0	2.1	1.5	2.7	2.9	1.1	1.1	1.0
7.....	.9	1.1	2.0	2.0	2.0	2.1	1.5	2.7	2.8	1.3	1.1	1.0
8.....	.9	1.1	2.0	2.0	2.0	2.0	1.5	2.7	3.0	1.3	1.2	1.0
9.....	.9	1.1	2.0	2.0	2.0	1.9	1.4	2.7	3.2	1.3	1.2	1.0
10.....	.9	1.1	2.0	2.0	2.0	1.9	1.4	2.7	3.2	1.2	1.2	1.1
11.....	.9	1.1	2.0	2.0	2.0	1.8	1.3	2.7	3.0	1.2	1.2	1.1
12.....	.9	1.1	2.0	2.0	2.0	1.7	1.3	2.8	3.0	1.2	1.2	1.1
13.....	.9	1.1	2.0	2.0	2.0	1.7	1.3	2.9	2.7	1.2	1.1	1.1
14.....	.9	1.1	2.0	2.0	2.0	1.7	1.3	3.1	2.6	1.2	1.1	1.1
15.....	.9	1.1	2.0	2.0	2.0	1.6	1.3	3.1	2.6	1.2	1.1	1.1

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
16.	0.9	1.1	2.0	2.0	2.0	1.6	1.3	3.1	2.5	1.2	1.1	1.1
17.	.9	1.1	2.0	2.0	2.0	1.6	1.3	3.1	2.5	1.2	1.1	1.0
18.	.9	1.2	2.0	2.0	2.0	1.6	1.3	2.9	2.3	.9	1.1	1.0
19.	1.0	1.3	2.0	2.0	2.0	1.6	1.3	2.9	2.0	.9	1.1	1.0
20.	1.0	1.9	2.0	2.0	2.0	1.6	1.3	3.0	2.0	.8	1.1	1.0
21.	1.0	1.8	2.0	2.0	2.0	1.7	1.3	3.6	2.0	.8	1.1	1.0
22.	1.0	1.8	2.0	2.0	2.0	1.7	1.4	4.0	2.0	.8	1.0	1.0
23.	1.0	1.7	2.0	2.0	2.0	1.7	1.5	4.3	2.0	.8	1.0	1.1
24.	1.0	1.6	2.0	2.0	2.0	1.6	1.6	3.9	2.0	.8	1.0	1.1
25.	1.0	1.6	2.0	2.0	2.0	1.6	1.8	3.9	2.0	.8	1.1	1.0
26.	1.0	1.6	2.0	2.0	1.9	1.5	2.0	3.5	1.9	.9	1.1	1.0
27.	1.0	1.7	2.0	2.0	1.8	1.4	2.4	3.4	1.9	.9	1.1	1.0
28.	1.0	1.5	2.0	2.0	1.9	1.3	2.5	3.5	1.8	.9	1.1	1.0
29.	1.0	1.5	2.0	2.0	2.0	1.3	2.5	3.5	1.7	1.0	1.1	1.1
30.	1.1	1.8	2.0	2.0	2.0	1.3	2.5	3.5	1.6	1.1	1.1	1.1
31.	1.1		2.0	2.0		1.3		3.4		1.2	1.1	
1901-2.												
1.	1.1	1.1	1.4	1.0	2.1	2.4	1.5	1.4	1.8	.8	.8	.7
2.	1.1	1.0	1.4	1.8	2.1	2.5	1.6	1.6	1.7	.8	.8	.7
3.	1.1	1.0	1.5	1.8	2.0	2.6	1.6	1.7	1.6	.8	.8	.7
4.	1.1	1.0	1.5	1.8	2.0	2.6	1.6	1.8	1.5	.8	.8	.7
5.	1.1	1.0	1.5	1.8	2.0	3.0	1.6	1.9	1.5	.8	.8	.7
6.	1.1	1.0	1.6	1.8	2.0	3.0	1.6	1.9	1.4	.8	.8	.7
7.	1.1	1.0	1.6	1.8	2.0	2.6	1.6	1.9	1.4	.8	.8	.7
8.	1.1	1.0	1.6	1.8	2.0	2.5	1.7	1.9	1.4	.8	.8	.8
9.	1.1	1.0	1.6	1.8	2.0	2.4	1.7	1.9	1.4	.8	.8	.8
10.	1.1	1.0	1.7	1.8	2.0	1.7	1.8	1.9	1.3	.8	.8	.8
11.	1.1	1.0	1.7	1.8	2.0	1.7	1.8	1.9	1.3	.8	.8	.8
12.	1.1	1.0	1.7	1.8	2.0	1.7	1.9	1.9	1.3	.8	.8	.9
13.	1.1	1.0	1.7	1.8	2.0	1.7	1.9	1.9	1.3	.8	.8	.9
14.	1.0	1.0	1.7	1.8	2.1	1.7	1.9	1.9	1.3	.8	.8	.9
15.	1.0	1.0	1.8	1.9	2.2	1.7	1.8	2.0	1.2	.8	.8	.9
16.	1.0	1.0	1.8	1.9	2.2	1.7	1.8	2.0	1.2	.8	.8	.9
17.	1.0	1.0	1.8	1.9	2.2	1.9	1.8	1.9	1.2	.8	.7	.9
18.	1.0	1.1	1.8	1.9	2.3	1.7	1.7	1.9	1.2	.8	.7	.9
19.	1.0	1.1	1.8	1.9	2.3	1.7	1.7	1.9	1.2	.8	.7	.9
20.	1.0	1.1	1.8	1.9	2.4	1.6	1.7	1.9	1.2	.8	.7	.9
21.	1.0	1.2	1.8	1.9	2.4	1.6	1.7	1.9	1.2	.8	.6	.9
22.	1.0	1.2	1.8	2.1	2.4	1.6	1.7	1.9	1.1	.8	.6	.9
23.	1.0	1.3	1.8	2.1	2.4	1.6	1.7	1.9	1.1	.8	.6	.9
24.	1.0	1.4	1.8	2.1	2.4	1.6	1.9	1.9	1.1	.8	.6	.9
25.	1.0	1.4	1.8	2.1	2.4	1.6	1.5	1.9	1.0	.8	.6	.9
26.	1.2	1.4	1.8	2.1	2.4	1.9	1.5	2.0	1.0	.8	.6	.9
27.	1.2	1.4	1.8	2.1	2.4	1.7	1.5	2.0	.9	.8	.7	.9
28.	1.1	1.4	1.8	2.1	2.4	1.6	1.5	2.0	.9	.8	.7	.9
29.	1.1	1.4	1.8	2.1		1.6	1.5	2.0	.8	.8	.7	.9
30.	1.1	1.4	1.8	2.1		1.6	1.5	1.9	.8	.8	.7	.9
31.	1.1		1.8	2.1		1.5		1.8		.8	.7	
1902-3.												
1.	.9	.9	.9	.8	.8	.8	1.8	1.9	3.4	4.8	1.2	1.1
2.	.9	.9	.9	.8	.8	.8	1.8	2.0	3.8	4.5	1.1	1.0
3.	.9	.9	.9	.8	.8	.8	1.8	2.8	4.1	4.3	1.2	1.0
4.	.9	.9	.9	.8	.8	.8	1.8	2.9	4.5	4.0	1.0	1.0
5.	.9	.9	.9	.8	.8	.8	1.7	3.0	4.5	3.8	.9	1.0
6.	.9	.9	.9	.8	.8	.8	1.7	3.0	4.5	3.3	.9	1.0
7.	.9	.9	.9	.8	.8	.8	1.7	3.0	4.5	2.8	.7	1.0
8.	.9	.9	.9	.8	.8	.8	1.7	3.4	4.6	2.4	.9	1.0
9.	1.0	.8	.9	.8	.8	.8	1.6	3.4	5.0	2.3	.8	1.1
10.	1.0	.8	1.0	.8	.8	.8	1.6	3.4	5.1	2.3	.7	1.1
11.	1.0	.8	1.0	.8	.8	.8	1.6	3.5	5.2	2.2	.9	1.1
12.	1.0	.9	1.0	.8	.8	.8	1.6	3.6	5.8	2.2	.7	1.2
13.	1.0	.9	1.0	.8	.8	.8	1.6	3.7	6.2	2.1	.7	1.2
14.	1.0	.9	1.0	.8	.8	.8	1.6	3.8	7.0	1.9	.9	1.2
15.	.9	.9	1.0	.8	.8	.8	1.5	3.8	7.2	1.8	.7	1.2
16.	.9	.9	1.0	.8	.8	.8	1.5	4.2	8.0	1.8	.8	1.2
17.	.9	.9	1.0	.8	.8	.8	1.5	4.4	8.0	1.7	.9	1.2
18.	.9	.9	1.0	.8	.8	.8	1.5	4.1	10.0	1.8	.8	1.2
19.	.9	.9	1.0	.8	.8	.8	1.5	3.7	7.8	2.1	.9	1.2
20.	.9	.9	1.0	.8	.8	.8	1.5	3.4	7.8	2.2	.8	1.2

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
21.....	0.8	0.9	01.0	0.8	0.8	0.8	1.5	2.9	7.7	1.9	0.9	1.2
22.....	.8	.9	1.0	.8	.8	.8	1.5	2.6	7.3	1.9	.9	1.2
23.....	.8	.9	1.0	.8	.8	.8	1.5	2.5	7.2	1.9	.9	1.2
24.....	.8	.9	1.0	.8	.8	.8	1.5	2.4	6.6	1.9	.9	1.1
25.....	.9	.9	1.0	.8	.8	.8	1.5	2.2	6.2	1.7	1.1	1.1
26.....	.9	.9	1.0	.8	.8	.8	1.5	2.4	6.0	1.8	1.0	1.1
27.....	.9	.9	1.0	.8	.8	.8	1.6	2.8	5.8	1.8	1.1	1.1
28.....	.9	.9	.8	.8	.8	.9	1.6	2.6	5.5	2.0	1.1	1.1
29.....	.9	.9	.7	.8	.8	.9	1.7	2.7	5.2	1.6	1.0	1.1
30.....	.9	.9	.7	.8	.8	1.2	1.8	2.8	5.2	1.4	.9	1.1
31.....	.9	.8	.8	.8	.8	1.4	.8	3.0	.7	1.3	1.0	.8
1903-4.												
1.....	1.1	1.0	1.6	1.6	1.6	1.6.	.9	.7	.7	.7	.7	1.4
2.....	1.1	1.1	1.6	1.6	1.6	1.6	.9	.7	.7	.7	.7	1.4
3.....	1.1	1.1	1.6	1.6	1.6	1.5	.9	.7	.7	.7	.7	1.6
4.....	1.1	1.1	1.6	1.6	1.6	1.4	.9	.8	.7	.7	.75	1.8
5.....	1.1	1.1	1.6	1.6	1.6	1.4	.9	.8	.7	.7	.8	1.85
6.....	1.0	1.1	1.6	1.6	1.6	1.3	.9	.8	.75	.7	.9	1.8
7.....	1.0	1.1	1.6	1.6	1.6	1.2	.9	.8	.7	.7	.9	1.75
8.....	1.0	1.1	1.6	1.6	1.7	1.2	.9	.8	.75	.7	.9	1.7
9.....	1.0	1.2	1.6	1.6	1.5	1.2	.9	.8	.85	.7	1.55	1.55
10.....	1.0	1.4	1.6	1.6	1.6	1.1	.9	.8	.8	.7	2.2	1.5
11.....	1.0	1.5	1.6	1.6	1.6	1.1	.9	.8	.8	.9	.9	1.5
12.....	1.0	1.6	1.6	1.6	1.6	1.1	.8	.8	.8	.9	.9	1.35
13.....	1.0	1.4	1.6	1.6	1.6	1.1	.8	.8	.8	.8	.9	1.3
14.....	1.0	1.4	1.6	1.6	1.6	1.1	.9	.8	.8	.7	.9	1.3
15.....	1.0	1.4	1.6	1.6	1.6	1.1	.9	.8	.8	.7	.9	1.2
16.....	1.0	1.5	1.6	1.6	1.6	1.1	.9	.9	.8	.7	.9	1.2
17.....	1.0	1.6	1.6	1.6	1.9	1.1	2.0	.8	.8	.7	.9	1.2
18.....	1.0	1.5	1.6	1.6	1.9	1.1	2.0	.85	.8	.7	1.9	1.2
19.....	1.0	1.6	1.6	1.6	2.0	1.1	2.2	.8	.8	.7	1.9	1.2
20.....	1.0	1.6	1.6	1.6	2.1	1.1	2.1	.8	.8	.7	2.05	1.2
21.....	1.0	1.6	1.6	1.6	2.1	1.1	2.0	.7	.8	.7	1.0	1.1
22.....	1.0	1.6	1.6	1.6	2.1	1.2	2.0	.75	.8	.7	1.0	1.1
23.....	1.0	1.6	1.6	1.6	2.1	1.2	.9	.7	.7	.9	1.0	1.1
24.....	1.0	1.6	1.6	1.6	2.0	1.2	.8	.7	.7	.7	1.1	1.1
25.....	1.0	1.6	1.6	1.6	2.0	1.2	.8	.7	.7	.7	1.2	1.1
26.....	1.0	1.6	1.6	1.6	1.9	1.2	.8	.7	.7	.7	1.2	1.1
27.....	1.0	1.6	1.7	1.6	1.9	1.2	.8	.7	.7	.7	1.15	1.1
28.....	1.0	1.6	1.6	1.6	1.8	1.0	.8	.7	.7	.7	1.2	1.1
29.....	1.0	1.6	1.6	1.6	1.7	1.0	.8	.7	.7	.7	1.2	1.2
30.....	1.0	1.6	1.6	1.6	1.6	1.0	.7	.7	.7	.7	1.15	1.5
31.....	1.0	.8	1.6	1.6	.8	.9	.7	.7	.7	.7	1.4	.8
1904-5.												
1.....	2.9	2.1	.9	2.6	2.75	3.0	2.0	3.6	6.25	2.9	1.25	1.1
2.....	3.0	2.0	.9	2.6	2.8	3.15	2.0	4.4	6.5	2.7	1.35	1.2
3.....	2.95	2.0	.9	2.6	2.8	3.2	2.0	4.65	7.05	2.55	1.7	1.15
4.....	3.0	.9	2.0	2.6	2.8	3.2	2.0	4.55	7.85	2.2	1.7	1.2
5.....	2.9	.9	2.0	2.6	2.8	3.2	1.95	4.25	8.25	2.1	1.7	1.2
6.....	2.7	.9	2.0	2.6	2.8	3.15	1.9	3.65	8.75	2.0	1.7	1.2
7.....	2.6	.9	2.0	2.6	2.8	2.1	1.9	3.45	8.85	1.85	1.6	1.2
8.....	2.9	.9	2.0	2.6	2.8	2.3	1.9	3.3	9.05	1.7	1.6	1.2
9.....	3.3	.9	2.0	2.6	2.8	2.5	1.95	3.4	8.85	1.6	1.65	1.2
10.....	3.75	.9	2.1	2.6	2.8	2.5	2.05	3.55	8.6	1.5	1.6	1.2
11.....	3.95	1.45	2.1	2.6	2.8	2.5	2.1	3.7	8.45	1.4	1.6	1.2
12.....	3.95	1.45	2.2	2.6	2.8	2.6	2.4	3.5	8.1	1.4	1.6	1.2
13.....	3.7	2.0	2.2	2.6	2.8	2.6	2.4	3.4	7.6	1.4	1.6	1.1
14.....	3.5	2.0	2.35	2.6	2.8	2.5	2.4	3.6	6.8	1.3	1.45	1.1
15.....	3.2	2.0	2.4	2.6	2.8	2.4	2.3	3.6	6.7	1.3	1.4	1.1
16.....	3.2	2.0	2.45	2.6	2.8	2.45	2.2	4.1	6.4	1.3	1.35	1.1
17.....	3.0	2.0	2.5	2.6	2.8	2.45	2.25	4.7	6.3	1.3	1.3	1.0
18.....	3.0	2.0	2.6	2.6	2.8	2.45	2.3	5.1	6.05	1.3	1.3	1.0
19.....	2.9	2.0	2.6	2.6	2.8	2.4	2.4	5.9	5.8	1.3	1.3	1.0
20.....	2.8	2.0	2.6	2.6	2.8	2.4	2.5	6.6	5.15	1.2	1.2	1.0
21.....	2.6	2.0	2.6	2.6	2.8	2.4	2.5	7.0	4.9	1.2	1.2	1.0
22.....	2.6	2.0	2.6	2.6	2.8	2.3	2.55	7.2	4.5	1.2	1.2	1.0
23.....	2.5	2.0	2.6	2.6	2.8	2.2	2.6	7.7	4.0	1.2	1.2	1.0
24.....	2.5	2.0	2.6	2.6	2.8	2.1	2.6	7.95	3.65	1.2	1.2	1.0
25.....	2.4	2.0	2.6	2.6	2.8	2.0	2.6	8.0	3.55	1.2	1.2	1.0

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
26.....	2.2	2.0	2.6	2.6	2.8	2.0	2.6	8.4	3.5	1.2	1.3	1.0
27.....	2.2	2.0	2.6	2.6	2.8	2.0	2.6	8.15	3.5	1.2	1.2	1.0
28.....	2.1	2.0	2.6	2.6	2.85	2.1	2.7	8.0	3.3	1.2	1.2	1.0
29.....	2.1	2.0	2.6	2.6	-----	2.0	3.0	7.7	3.2	1.2	1.2	1.0
30.....	2.1	.9	2.6	2.6	-----	2.0	3.3	7.1	3.0	1.2	1.2	1.0
31.....	2.1	-----	2.6	2.6	-----	2.0	-----	6.7	-----	1.2	1.2	-----
1905-6.												
1.....	1.0	1.3	1.9	2.2	2.4	2.6	1.5	2.85	3.85	2.9	2.85	1.6
2.....	1.0	1.3	1.9	2.2	2.4	2.6	1.5	2.65	3.65	2.8	2.7	1.6
3.....	1.0	1.3	1.9	2.2	2.4	2.6	1.4	2.6	4.0	2.9	2.6	1.6
4.....	1.5	1.4	1.9	2.2	3.0	2.6	1.4	2.7	4.0	2.9	2.55	1.6
5.....	1.5	1.4	1.9	2.2	3.0	2.3	1.4	2.7	4.0	2.9	2.5	1.6
6.....	1.4	1.4	1.9	2.2	3.0	2.3	1.4	3.1	4.15	3.0	2.4	1.6
7.....	1.5	1.4	1.9	2.2	3.0	2.0	1.4	3.45	4.55	3.0	2.4	1.6
8.....	1.5	1.5	1.9	2.2	3.0	1.8	1.4	3.6	4.85	3.0	2.3	1.6
9.....	1.4	1.5	1.9	2.2	3.0	1.8	1.4	4.05	4.09	3.0	2.25	1.6
10.....	1.4	1.5	2.0	2.2	3.0	1.8	1.4	4.25	4.95	3.1	2.2	1.6
11.....	1.3	1.6	2.0	2.2	2.95	1.8	1.4	4.55	5.15	3.2	2.15	1.6
12.....	1.3	1.6	2.0	2.2	2.9	1.8	1.75	4.7	5.45	3.2	2.1	1.6
13.....	1.2	1.6	2.05	2.3	2.9	1.8	1.9	4.6	5.9	3.2	2.1	1.6
14.....	1.2	1.6	2.2	2.3	2.9	1.8	1.8	4.3	6.4	3.3	2.0	1.6
15.....	1.2	1.6	2.2	2.3	2.8	1.8	1.7	4.0	6.65	3.3	2.0	1.6
16.....	1.1	1.6	2.2	2.3	2.8	1.8	1.75	3.9	6.7	3.4	1.9	1.6
17.....	1.1	1.6	2.2	2.3	2.8	1.8	1.8	3.9	6.75	3.45	1.85	1.6
18.....	1.1	1.6	2.2	2.3	2.8	1.8	1.9	3.9	6.55	3.3	1.75	1.7
19.....	1.1	1.6	2.2	2.4	2.8	1.8	2.05	4.3	6.3	3.2	1.65	1.85
20.....	1.1	1.6	2.2	2.4	2.8	1.8	2.25	4.8	5.85	3.1	1.6	1.85
21.....	1.1	1.6	2.2	2.4	2.8	1.8	2.45	5.2	5.15	2.95	1.55	1.9
22.....	1.1	1.6	2.2	2.4	2.8	1.8	2.65	5.3	4.55	2.8	1.5	1.9
23.....	1.1	1.6	2.2	2.4	2.8	1.8	2.95	5.55	4.3	2.7	1.5	2.0
24.....	1.1	1.7	2.2	2.4	2.8	1.8	3.45	6.0	4.05	2.6	1.6	2.05
25.....	1.1	1.7	2.2	2.4	2.8	1.8	3.7	5.85	3.85	2.6	1.6	2.15
26.....	1.1	1.7	2.2	2.4	2.6	1.8	3.7	5.45	3.6	2.6	1.6	2.35
27.....	1.2	1.7	2.2	2.4	2.6	1.8	3.55	5.45	3.25	2.7	1.6	2.4
28.....	1.3	1.9	2.2	2.4	2.6	1.8	3.35	4.0	3.05	2.7	1.6	2.5
29.....	1.3	1.6	2.2	2.4	-----	1.8	3.15	3.9	2.9	3.0	1.6	2.8
30.....	1.3	1.85	2.2	2.4	-----	1.75	3.0	3.85	2.9	3.1	1.6	3.0
31.....	1.3	-----	2.2	2.4	-----	1.6	-----	3.9	-----	3.0	1.6	-----
1906-7.												
1.....	3.0	2.7	-----	2.3	2.2	2.1	2.5	3.2	4.7	6.7	3.55	3.75
2.....	3.0	2.7	-----	2.3	2.2	2.1	2.5	3.3	4.5	6.85	3.4	3.8
3.....	2.9	2.8	-----	2.3	2.2	2.1	2.45	3.3	4.4	7.0	3.5	3.55
4.....	2.8	2.75	-----	2.3	2.2	2.1	2.3	3.15	4.75	6.95	3.6	3.25
5.....	2.75	2.7	-----	2.3	2.2	2.05	2.45	3.0	5.1	6.85	3.65	3.15
6.....	2.7	2.7	-----	2.3	2.2	2.05	2.6	3.15	5.45	6.65	3.45	3.0
7.....	2.6	2.6	-----	2.3	2.2	2.1	2.6	3.05	5.65	6.5	3.3	2.95
8.....	2.6	2.6	-----	2.3	2.2	2.1	2.4	2.95	5.95	6.4	3.2	2.9
9.....	2.55	2.6	-----	2.3	2.2	2.1	2.55	2.9	6.2	6.35	3.15	2.8
10.....	2.55	2.6	-----	2.3	2.2	2.0	2.8	2.9	6.3	6.15	3.05	2.7
11.....	2.4	2.5	-----	2.3	2.2	2.0	2.95	2.9	6.3	5.95	3.0	2.7
12.....	2.35	2.5	-----	2.3	2.2	2.1	3.2	3.0	6.32	5.75	2.9	2.6
13.....	2.25	2.5	-----	2.3	2.2	2.1	3.6	3.1	6.15	5.50	2.8	2.55
14.....	2.15	2.5	-----	2.3	2.2	2.1	4.05	3.3	6.15	5.30	2.8	2.5
15.....	2.1	2.5	-----	2.3	2.2	2.1	4.3	3.3	6.35	5.55	3.15	2.4
16.....	2.1	2.5	-----	2.3	2.2	2.0	4.5	3.15	6.7	5.65	3.25	2.4
17.....	2.1	2.55	-----	2.3	2.2	2.0	4.4	3.15	6.8	5.6	3.1	2.4
18.....	2.1	2.6	-----	2.3	2.2	2.1	4.3	3.45	6.8	5.35	3.0	2.4
19.....	2.1	2.65	-----	2.3	2.2	2.1	4.2	3.85	6.8	5.0	2.9	2.4
20.....	2.1	2.4	-----	2.3	2.2	2.25	4.05	4.1	6.94	4.55	2.9	2.4
21.....	2.25	2.3	-----	2.3	2.2	2.7	3.8	4.8	6.89	4.3	2.9	2.5
22.....	2.35	2.3	-----	2.3	2.2	2.95	3.8	5.25	6.69	4.2	3.0	2.4
23.....	2.45	2.3	-----	2.3	2.2	3.0	3.65	5.75	6.44	4.2	3.0	2.4
24.....	2.5	2.3	-----	2.3	2.2	3.0	3.5	6.15	6.19	3.95	2.9	2.35
25.....	2.6	-----	-----	2.3	2.2	2.9	3.35	6.4	6.04	3.6	2.8	2.3
26.....	2.6	-----	-----	2.3	2.2	2.85	3.1	6.35	6.04	3.6	2.7	2.3
27.....	2.7	-----	-----	2.3	2.1	2.75	3.0	6.05	6.24	3.85	2.8	2.3
28.....	2.7	-----	-----	2.3	2.1	2.7	2.95	5.45	6.33	4.05	2.9	2.3
29.....	2.7	-----	-----	2.3	-----	2.65	2.9	5.05	6.48	4.05	2.95	2.3
30.....	2.75	-----	-----	2.3	-----	2.6	3.0	4.8	6.58	3.9	3.1	2.15
31.....	2.7	-----	-----	2.3	-----	2.55	-----	4.75	-----	3.75	3.3	-----

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1	2.1	2.0	1.8	.....	.....	1.95	2.1	1.95	2.1	2.55	1.0	2.1
2	2.1	2.0	1.8	.....	.....	2.0	2.1	2.1	2.1	2.35	1.5	2.0
3	2.1	2.0	1.8	.....	.....	2.05	2.1	2.2	2.25	2.2	2.1	1.9
4	2.1	2.0	1.8	.....	.....	2.1	2.0	2.3	2.4	2.2	2.55	1.85
5	2.1	2.0	1.8	.....	.....	2.15	2.0	2.45	2.4	2.05	2.1	1.8
6	2.1	2.0	1.7	.....	.....	2.2	1.95	2.3	2.3	2.0	1.95	1.8
7	2.2	2.0	1.7	.....	.....	2.2	1.95	2.25	2.35	1.85	1.9	1.7
8	2.15	1.9	1.7	.....	.....	2.15	1.9	2.1	2.25	1.8	1.8	1.7
9	2.15	1.9	1.7	.....	.....	2.1	1.9	2.1	2.2	1.7	1.8	1.7
10	2.15	1.9	1.7	.....	.....	2.0	1.9	2.2	2.3	1.55	1.8	1.6
11	2.1	1.9	1.7	.....	.....	2.0	1.9	2.15	2.45	1.5	1.75	1.6
12	2.1	1.9	1.7	.....	.....	2.0	1.9	2.1	2.85	1.4	1.6	1.6
13	2.1	1.9	1.8	.....	.....	2.0	1.9	2.0	3.25	1.25	1.65	1.6
14	2.1	1.9	2.45	.....	.....	2.05	1.95	2.0	3.4	1.25	1.6	1.55
15	2.0	1.9	2.4	.....	.....	2.05	2.0	2.0	3.4	1.4	1.65	1.5
16	2.0	1.9	2.4	.....	.....	2.1	2.1	1.95	3.35	1.65	1.75	1.5
17	2.0	1.9	2.4	.....	.....	2.1	2.2	2.0	3.25	1.85	1.9	1.5
18	2.0	1.95	2.4	.....	.....	2.2	2.25	2.15	2.95	1.8	1.9	1.5
19	2.0	1.9	2.4	.....	.....	2.25	2.4	2.45	2.85	1.6	2.05	1.5
20	2.0	1.9	2.4	.....	.....	2.4	2.4	2.65	2.75	1.4	2.35	1.5
21	2.0	1.9	2.4	.....	.....	2.4	2.4	2.85	2.55	1.5	2.55	1.5
22	2.0	1.9	2.4	.....	.....	2.3	2.35	2.7	2.35	1.4	2.7	1.5
23	2.0	2.0	2.4	.....	.....	2.3	2.3	2.6	2.2	1.3	2.7	1.45
24	2.0	1.95	2.4	.....	.....	2.3	2.4	2.5	2.2	1.3	2.6	1.4
25	2.0	1.9	2.4	.....	.....	2.3	2.4	2.5	2.2	1.2	2.5	1.4
26	2.0	1.9	2.4	.....	.....	2.3	2.3	2.5	2.2	1.1	2.45	1.5
27	2.0	1.8	2.4	.....	.....	2.3	2.1	2.4	2.25	1.05	2.4	1.5
28	2.0	1.8	2.4	.....	.....	2.3	2.1	2.25	2.85	1.0	2.3	1.45
29	2.0	1.8	2.4	.....	.....	2.2	2.0	2.0	3.0	1.0	2.2	1.5
30	2.0	1.8	2.4	.....	.....	2.2	1.8	2.0	2.8	1.0	2.15	1.5
31	2.0	.....	2.4	.....	.....	2.2	.....	2.0	.....	1.0	2.1	.....
1908-9.												
1	1.5	1.8	.....	2.3	1.85	1.95	1.9	2.9	3.65	3.1	1.4	3.1
2	1.55	1.75	.....	2.3	1.85	1.65	1.9	2.65	3.4	2.95	1.3	3.05
3	1.5	1.7	.....	2.3	1.85	1.75	1.9	2.65	3.4	2.75	1.3	3.1
4	1.5	1.7	.....	2.3	1.85	1.9	1.9	2.95	3.65	2.6	1.3	3.0
5	1.5	1.7	.....	2.3	1.9	1.95	1.9	3.35	4.15	2.6	1.2	3.1
6	1.5	1.7	.....	2.3	1.95	1.95	1.9	4.0	5.4	2.7	1.2	3.6
7	1.5	1.65	.....	2.3	1.95	1.95	1.9	4.6	5.95	2.7	1.15	4.35
8	1.5	1.55	.....	2.3	2.0	1.95	1.9	5.05	6.4	2.8	1.2	4.8
9	1.45	1.45	.....	2.3	2.05	1.95	1.9	5.15	6.65	2.6	1.25	4.9
10	1.55	1.4	.....	2.3	2.05	2.05	1.9	5.2	6.7	2.4	1.3	5.0
11	1.55	1.4	.....	2.3	2.05	1.95	1.9	5.05	6.55	2.3	1.4	4.7
12	1.55	1.3	.....	2.3	2.05	2.1	1.9	4.95	6.35	2.1	1.45	4.35
13	1.55	1.3	.....	2.3	2.2	2.05	1.85	4.85	6.1	1.9	1.4	4.1
14	1.5	1.2	.....	2.3	2.15	1.85	1.85	4.75	5.85	1.8	1.4	4.1
15	1.5	1.25	.....	2.35	2.15	1.95	2.2	4.85	5.65	1.6	1.4	3.9
16	1.5	1.3	.....	2.35	2.15	2.05	2.2	4.8	5.35	1.5	1.4	3.9
17	1.5	1.45	.....	2.35	2.05	2.05	2.2	4.4	4.9	1.4	1.4	3.75
18	1.55	1.7	.....	2.35	1.95	1.95	2.45	4.5	5.0	1.3	1.6	3.6
19	1.6	1.7	.....	2.35	1.95	1.95	3.4	4.85	5.1	1.3	1.7	3.5
20	1.6	1.7	.....	2.3	1.95	1.95	4.0	5.0	5.2	1.3	1.8	3.4
21	1.6	1.7	.....	2.3	1.95	1.95	4.05	5.1	5.15	1.1	1.9	3.25
22	1.6	1.6	.....	2.3	2.05	1.95	3.65	5.0	5.0	1.1	1.9	3.15
23	1.6	1.6	.....	2.25	2.05	1.95	3.35	4.55	4.85	1.1	2.5	3.0
24	1.6	1.6	.....	2.2	2.05	1.95	3.0	4.3	4.55	1.1	2.2	2.85
25	1.6	1.65	.....	2.1	2.05	1.95	2.8	3.95	4.35	1.15	2.25	2.85
26	1.7	1.6	.....	2.0	2.05	1.95	2.7	3.7	4.2	1.8	2.4	2.8
27	1.7	1.7	.....	2.0	2.05	1.95	2.6	3.65	4.0	2.0	2.4	2.7
28	1.75	1.7	.....	1.9	2.05	1.95	2.65	3.85	3.85	1.75	2.5	2.7
29	1.75	1.9	.....	1.85	.....	1.95	2.85	4.1	3.65	1.6	2.65	2.65
30	1.8	1.9	.....	1.85	.....	1.95	3.15	4.1	3.45	1.6	2.9	2.6
31	1.85	.....	.....	1.85	.....	1.9	.....	3.75	.....	1.5	3.0	.....
1909-10.												
1	2.5	1.9	2.15	2.75	2.7	2.9	2.7	5.5	4.2	1.0	.7	.8
2	2.5	1.9	2.2	2.75	2.7	2.7	2.7	5.45	4.35	.9	.6	.8
3	2.45	2.0	2.1	2.2	2.6	2.2	2.7	5.1	4.2	.9	.6	.8
4	2.35	2.0	2.1	2.3	2.6	2.2	2.7	4.7	3.9	.9	.6	.7
5	2.3	2.0	2.4	2.35	2.6	2.3	2.7	4.55	3.7	.8	.7	.7

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.....	2.4	2.0	2.3	2.35	2.6	2.3	2.7	4.3	3.6	0.8	0.7	0.7
7.....	2.55	2.0	2.35	2.35	2.5	2.45	2.7	4.2	3.4	.7	.7	.7
8.....	2.8	2.0	2.35	2.4	2.6	2.6	2.65	4.1	2.85	.7	.7	.7
9.....	2.8	2.0	2.4	2.8	2.5	2.6	2.7	4.15	2.65	.7	.7	.8
10.....	2.8	2.0	2.4	2.35	2.7	2.65	2.75	4.35	2.45	.7	.75	.75
11.....	2.7	2.0	2.4	2.45	2.6	2.7	2.75	4.7	2.35	.7	.85	.75
12.....	2.55	2.0	2.3	2.35	2.6	2.55	2.85	5.0	2.25	.7	.9	.75
13.....	2.55	2.1	2.3	2.45	2.4	2.55	3.1	5.25	2.25	.7	1.0	.75
14.....	2.55	2.1	2.3	2.5	2.3	2.7	3.1	5.4	2.15	.7	1.1	.8
15.....	2.5	2.1	2.4	2.35	2.2	2.7	3.1	5.35	2.05	.7	1.2	.8
16.....	2.4	2.1	2.3	2.6	2.1	2.7	3.05	5.4	1.95	.6	1.2	.8
17.....	2.4	2.0	2.15	2.9	2.2	2.7	3.0	5.15	1.8	.6	1.15	.8
18.....	2.35	1.95	2.3	2.8	2.5	2.65	3.0	4.7	1.7	.6	1.2	.8
19.....	2.25	1.9	2.3	2.8	2.6	2.7	2.9	3.85	1.5	.6	1.2	.8
20.....	2.25	1.85	2.1	2.9	2.6	2.75	3.1	3.7	1.55	.6	1.2	.8
21.....	2.2	1.95	2.3	2.9	2.7	2.8	3.2	3.65	1.4	.6	1.1	.9
22.....	2.2	2.1	2.15	2.9	2.7	2.9	3.45	3.4	1.45	.6	1.1	.9
23.....	2.2	2.1	2.35	2.9	2.7	2.9	3.45	3.25	1.35	.6	1.1	.85
24.....	2.15	2.2	2.15	2.8	2.7	3.1	3.55	3.05	1.35	.6	1.0	.85
25.....	2.1	2.2	2.05	2.8	2.8	3.3	3.85	2.85	1.3	.6	1.0	.8
26.....	2.1	2.2	2.3	2.7	2.8	3.35	4.15	2.7	1.15	.6	1.0	.75
27.....	2.1	2.2	2.2	2.7	2.8	3.3	4.55	2.85	1.0	.6	1.0	.8
28.....	2.1	2.1	2.3	2.6	2.8	3.15	4.75	3.05	1.0	.6	.9	.8
29.....	2.0	2.1	2.2	2.65	-----	3.1	5.15	3.25	1.0	.6	.9	.8
30.....	1.95	2.2	2.2	3.0	-----	2.95	5.45	3.55	1.0	.65	.85	.8
31.....	1.95	-----	2.2	2.7	-----	2.8	-----	4.05	-----	.95	.85	-----
1910-11.												
1.....	.8	1.4	1.55	2.1	1.8	1.9	1.7	2.7	-----	3.45	3.55	2.4
2.....	.7	1.4	1.6	-----	1.8	1.9	1.7	2.5	-----	3.75	3.3	2.35
3.....	.7	1.4	1.6	-----	1.8	1.9	1.75	2.4	-----	4.6	2.9	2.25
4.....	.8	1.4	1.65	-----	1.8	2.0	1.8	2.55	-----	5.0	2.6	2.2
5.....	.8	1.4	1.55	-----	1.9	1.8	1.8	2.75	-----	5.4	2.3	2.2
6.....	.8	1.4	1.25	-----	1.8	1.8	1.75	3.05	-----	5.5	2.1	2.15
7.....	.8	1.4	1.65	-----	1.7	1.7	1.65	3.4	4.9	5.5	1.8	2.2
8.....	.8	1.4	1.85	-----	1.7	1.65	1.6	3.85	4.95	5.3	1.5	2.15
9.....	.8	1.3	1.85	-----	1.7	1.65	1.55	4.35	5.15	5.05	1.35	2.1
10.....	.8	1.3	1.8	-----	1.6	1.7	1.5	4.75	5.45	4.85	1.2	2.0
11.....	.85	1.3	1.75	-----	1.6	1.7	1.45	4.8	5.65	4.5	1.2	1.9
12.....	.85	1.3	1.75	-----	1.6	1.8	1.45	4.5	5.8	4.2	1.1	1.95
13.....	.8	1.35	1.9	-----	1.7	1.85	1.4	3.95	5.9	4.05	1.0	1.9
14.....	.8	1.35	1.8	-----	1.7	1.85	1.4	3.5	5.7	4.05	.95	1.95
15.....	.9	1.35	2.3	2.1	1.7	1.8	1.25	3.5	5.35	4.3	.95	2.1
16.....	.9	1.35	2.0	2.1	1.7	1.75	1.25	3.5	5.25	4.55	.95	2.15
17.....	.9	1.4	1.9	2.0	1.8	1.7	1.2	3.4	5.05	4.55	.90	2.15
18.....	.9	1.5	1.9	2.0	1.8	1.7	1.3	3.25	4.9	4.45	1.05	2.15
19.....	1.0	1.55	1.9	2.0	1.4	1.65	1.35	3.3	4.7	4.35	1.05	2.1
20.....	1.3	1.5	2.05	1.8	1.8	1.7	1.4	3.5	4.7	4.55	1.05	2.1
21.....	1.3	1.5	2.0	1.8	1.8	1.7	1.45	3.45	4.7	4.7	1.05	2.25
22.....	1.4	1.55	2.15	1.8	2.1	1.7	1.65	3.15	4.9	4.9	1.15	2.35
23.....	1.5	1.55	1.9	1.8	2.0	1.75	1.95	2.9	5.2	4.7	1.25	2.35
24.....	1.5	1.55	1.85	1.8	2.0	1.8	2.15	2.9	5.3	4.5	1.95	2.3
25.....	1.5	1.6	2.05	1.9	2.0	1.8	2.2	-----	5.3	4.45	2.5	2.2
26.....	1.5	1.65	1.95	1.9	2.0	1.75	2.2	-----	4.9	4.45	2.45	2.2
27.....	1.5	1.6	1.95	1.9	2.0	1.7	2.6	-----	4.3	4.3	2.5	2.2
28.....	1.5	1.6	1.0	1.8	2.0	1.65	2.9	-----	4.15	4.3	2.5	2.3
29.....	1.5	1.6	-----	1.7	-----	1.65	2.95	3.6	3.7	4.3	2.6	2.45
30.....	1.5	1.55	-----	1.7	-----	1.65	3.0	-----	3.55	4.0	2.65	2.55
31.....	1.5	-----	-----	1.8	-----	1.65	-----	-----	-----	3.8	2.5	-----
1911-12.												
1.....	2.7	2.9	-----	-----	3.0	2.6	2.0	2.55	7.3	4.5	2.15	1.3
2.....	3.4	2.8	-----	-----	3.0	2.6	2.05	3.05	7.15	4.45	2.1	1.4
3.....	3.9	2.8	-----	-----	3.0	2.4	2.05	3.55	6.9	4.25	2.0	1.4
4.....	4.0	2.7	-----	-----	3.15	2.5	2.25	3.75	6.75	3.85	1.9	1.4
5.....	4.05	2.6	-----	-----	3.15	2.4	2.6	3.3	6.65	3.5	1.75	1.3
6.....	4.95	2.6	-----	-----	3.0	2.4	2.75	3.0	6.6	3.3	1.6	1.3
7.....	6.65	-----	-----	2.6	3.0	2.45	2.65	2.9	6.8	2.9	1.5	1.2
8.....	6.6	-----	-----	2.6	3.0	2.45	2.65	3.15	6.8	2.45	1.4	1.2
9.....	6.6	-----	-----	2.9	2.9	2.2	2.8	3.55	6.55	2.2	1.3	1.2
10.....	6.95	-----	-----	2.9	2.8	2.25	2.85	3.85	6.4	2.1	1.2	1.2

Daily gage height, in feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11	6.55			2.9	2.9	2.2	3.0	3.7	6.1	1.95	1.1	1.2
12	5.9			2.9	2.9	2.2	2.9	3.5	6.0	1.7	1.1	1.2
13	5.25			2.9	2.8	2.25	2.65	3.45	5.65	1.5	1.1	1.2
14	4.7			2.95	2.8	2.15	2.5	3.5	5.35	1.35	1.15	1.2
15	4.3			3.0	2.8	2.1	2.35	3.75	5.0	1.45	1.1	1.25
16	3.9			3.0	2.8	2.1	2.2	3.6	4.8	1.35	1.2	1.3
17	3.7			3.0	2.75	2.15	2.4	3.65	4.75	1.45	1.35	1.6
18	3.6			3.0	2.8	2.15	2.4	3.95	4.75	1.4	1.5	1.6
19	3.55			3.0	2.7	2.2	2.35	4.65	4.65	1.4	1.65	1.5
20	3.45			3.0	2.7	2.3	2.25	5.45	4.4	1.35	1.6	1.5
21	3.3			3.0	2.6	2.35	2.1	6.35	4.2	1.25	1.6	1.5
22	3.15			2.95	2.4	2.35	2.0	6.6	4.05	1.25	1.7	1.4
23	3.1			3.0	2.3	2.2	1.9	6.95	4.15	1.3	1.7	1.5
24	3.1			2.95	2.2	2.15	1.9	7.1	4.5	1.3	1.6	1.5
25	3.0			2.95	2.2	2.15	1.9	7.1	4.8	1.3	1.45	1.45
26	3.0			3.05	2.8	2.15	2.0	7.1	4.95	1.15	1.6	1.45
27	2.95			3.05		2.0	2.0	7.35	4.9	1.3	1.8	1.4
28	3.0			3.0		2.05	2.05	7.5	4.8	1.3	1.7	1.45
29	3.05			3.0	2.6	2.1	2.0	7.6	4.7	1.3	1.6	1.45
30	3.0			3.0		2.15	2.25	7.35	4.55	1.4	1.5	1.45
31	2.95			3.15		2.15		7.4		1.7	1.4	
1912-13.												
1	1.45	1.7					2.8	2.95	2.85	1.4	.8	.75
2	1.45	1.75					2.7	2.9	2.55	1.35	.8	.7
3	1.45	1.75					2.6	2.65	2.3	1.3	.75	.7
4	1.45	1.8					2.6	2.25	2.15	1.3	.7	.75
5	1.5	1.8					2.35	2.1	2.05	1.1	.7	.8
6	1.5	1.8					2.05	2.3	2.1	1.0	.65	.9
7	1.5	1.8					2.0	2.3	2.05	.9	.65	.9
8	1.7	1.8					2.1	2.4	1.95	.85	.7	.85
9	1.7	1.8					2.4	2.25	2.0	.8	.65	.85
10	1.7	1.8					2.2	2.2	2.05	.8	.65	.85
11	1.7	1.8					2.1	2.2	2.3	.8	.6	.85
12	1.7	1.8					1.95	2.35	2.55	.7	.65	.9
13	1.7	1.8					1.85	2.45	3.2	.7	.7	.95
14	1.7	1.75					1.8	2.65	3.25	.75	.75	.95
15	1.7	1.8					2.15	2.6	3.0	.7	.8	.95
16	1.65	1.8					2.4	2.5	2.95	.7	.75	.95
17	1.6	1.8					2.55	2.1	2.75	.7	.7	.9
18	1.65	1.8					2.7	2.0	2.65	.7	.7	.95
19	1.6	1.8					2.9	2.1	2.6	.7	.7	.9
20	1.55	1.8					2.8	2.1	2.5	.8	.7	.9
21	1.5	1.75					2.85	2.0	2.6	.75	.7	.9
22	1.5	1.7					2.9	1.9	2.6	.85	.75	.9
23	1.5	1.7					2.8	1.75	2.5	.9	.85	.95
24	1.5	1.7					2.6	1.7	2.25	1.25	.85	1.0
25	1.5	1.6					2.6	1.9	2.2	1.35	.9	1.0
26	1.5	1.6					2.4	2.1	1.95	1.2	.85	1.05
27	1.5	1.4					2.25	2.4	1.85	1.1	.85	1.05
28	1.5	1.4					2.35	2.35	1.7	.95	.8	1.15
29	1.5	1.7					2.7	2.6	1.55	1.0	.8	1.1
30	1.5	1.6					2.95	2.65	1.45	.9	.8	1.1
31	1.7							2.7		.9	.8	

NOTE.—The earlier records contained no notes in regard to ice, and the gage heights taken when the river was frozen over were probably read to the surface of the ice. From the best available evidence it is probable that backwater from ice occurred as follows: Nov. 22, 1899, to Mar. 4, 1900; Nov. 18, 1900, to Mar. 8, 1901; Nov. 18, 1901, to Mar. 9, 1902; Dec. 10-27, 1902; Nov. 11, 1903, to Mar. 6, 1904; Nov. 13, 1904, to Mar. 6, 1905; Nov. 8, 1905, to Mar. 7, 1906; Nov. 25, 1906, to Mar. 4, 1907; Dec. 14, 1907, to Feb. 29, 1908; Nov. 18, 1908, to Mar. 1, 1909; Dec. 5, 1909, to Mar. 2, 1910; Dec. 7, 1910, to Feb. 28, 1911; Nov. 7, 1911, to Mar. 2, 1912. Station discontinued during winter of 1912-13.

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1899.					1899.				
1		12	31	31	16		31	31	423
2		20	31	31	17		31	31	381
3		20	20	31	18		31	31	129
4		20	20	31	19		31	31	170
5		31	129	31	20		31	20	170
6		20	129	31	21		31	20	170
7		20	93	31	22		46	31	129
8		20	129	31	23		170	31	129
9		20	129	31	24		170	31	129
10		16	93	31	25		111	25	93
11		12	93	31	26		93	20	93
12		12	93	31	27		65	20	93
13		16	93	46	28		20	46	93
14		20	65	46	29		20	46	93
15		31	46	212	30		12	46	93
					31		31	31	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1	93	170					250	390	4,700	54	12	8
2	93	170					250	475	4,380	34	12	8
3	65	212					250	475	4,220	34	12	12
4	129	212					315	475	4,070	20	12	12
5	93	212					315	475	3,920	20	12	20
6	65	212					390	475	3,470	20	12	20
7	65	212					390	475	3,170	20	12	20
8	65	254					390	565	3,020	20	12	20
9	93	254					390	565	2,870	20	12	20
10	93	297					390	660	2,870	20	12	34
11	129	254					390	760	2,720	20	12	20
12	93	254					390	1,310	2,570	20	12	34
13	93	254					390	1,430	1,970	20	12	34
14	65	297					315	1,560	1,690	20	12	20
15	93	297					315	1,560	1,560	20	12	20
16	93	254					315	1,560	1,310	20	12	20
17	129	254					315	1,560	1,080	20	12	20
18	129	254					315	1,430	965	20	12	20
19	129	254					250	1,690	760	20	12	20
20	129	254					250	1,830	565	20	12	20
21	129	254					195	2,870	475	12	12	20
22	129					390	250	2,420	390	12	12	20
23	129					390	250	2,120	390	12	12	20
24	129					315	390	1,830	250	12	12	20
25	170					315	390	1,830	250	12	12	20
26	170					315	390	2,270	195	12	12	20
27	170					315	475	3,020	195	12	12	20
28	170					250	475	3,770	150	12	12	20
29	170					250	390	4,380	112	12	12	20
30	170					250	390	4,700	80	12	12	20
31	170					250		4,700		12	8	
1900-1901.												
1	20	54					112	1,310	2,270	250	150	54
2	20	54					112	2,270	1,690	250	34	54
3	20	54					150	2,570	1,690	195	20	54
4	20	54					150	2,120	1,560	195	20	34
5	20	54					195	1,430	1,560	150	20	34
6	20	54					195	1,310	1,560	150	54	34
7	20	54					195	1,310	1,430	112	54	34
8	20	54					195	1,310	1,690	112	80	34
9	20	54					150	1,310	1,970	112	80	34
10	20	54					150	1,310	1,970	80	80	54
11	20	54					112	1,310	1,690	80	80	54
12	20	54				315	112	1,430	1,690	80	80	54
13	20	54				315	112	1,560	1,310	80	54	54
14	20	54				315	112	1,830	1,190	80	54	54
15	20	54				250	112	1,830	1,190	80	54	54

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
16.	20	54				250	112	1,830	1,080	80	54	54
17.	20	54				250	112	1,830	1,080	80	54	34
18.	20					250	112	1,560	865	20	54	34
19.	34					250	112	1,560	565	20	54	34
20.	34					250	112	1,690	565	12	54	34
21.	34					315	112	2,570	565	12	54	34
22.	34					315	150	3,170	565	12	34	34
23.	34					315	195	3,620	565	12	34	54
24.	34					250	250	3,020	565	12	34	54
25.	34					250	390	3,020	565	12	54	34
26.	34					195	565	2,420	475	20	54	34
27.	34					150	965	2,270	475	20	54	34
28.	34					112	1,080	2,420	390	20	54	34
29.	34					112	1,080	2,240	315	34	54	54
30.	54					112	1,080	2,420	250	54	54	54
31.	54					112		2,270		80	54	
1901-2.												
1.	54	54					195	150	390	12	12	8
2.	54	34					250	250	315	12	12	8
3.	54	34					250	315	250	12	12	8
4.	54	34					250	390	195	12	12	8
5.	54	34					250	475	195	12	12	8
6.	54	34					250	475	150	12	12	8
7.	54	34					250	475	150	12	12	8
8.	54	34					315	475	150	12	12	12
9.	54	34					315	475	150	12	12	12
10.	54	34				315	390	475	112	12	12	12
11.	54	34				315	390	475	112	12	12	12
12.	54	34				315	475	475	112	12	12	20
13.	54	34				315	475	475	112	12	12	20
14.	34	34				315	475	475	112	12	12	20
15.	34	34				315	390	565	80	12	12	20
16.	34	34				315	390	565	80	12	12	20
17.	34	34				415	390	475	80	12	8	20
18.	34					315	315	475	80	12	8	20
19.	34					315	315	475	80	12	8	20
20.	34					250	315	475	80	12	8	20
21.	34					250	315	475	80	12	6	20
22.	34					250	315	475	54	12	6	20
23.	34					250	315	475	54	12	6	20
24.	34					250	475	475	54	12	6	20
25.	34					250	195	475	34	12	6	20
26.	80					475	195	565	34	12	6	20
27.	80					315	195	565	20	12	8	20
28.	54					250	195	565	20	12	8	20
29.	54					250	195	565	12	12	8	20
30.	54					250	195	475	12	12	8	20
31.	54					195		390		12	8	
1902-3.												
1.	20	20	20	25	25	25	462	556	2,380	4,460	112	84
2.	20	20	20	25	25	25	462	656	2,930	4,000	84	60
3.	20	20	20	25	25	25	462	1,600	3,380	3,680	112	60
4.	20	20	20	25	25	25	462	1,740	4,000	3,220	60	60
5.	20	20	20	25	25	25	376	1,860	4,000	2,930	40	60
6.	20	20	20	25	25	25	376	1,860	4,000	2,260	40	60
7.	20	20	20	25	25	25	376	1,860	4,000	1,600	14	60
8.	20	20	20	25	25	25	376	2,380	4,150	1,110	40	60
9.	34	12	20	25	25	25	300	2,380	4,780	990	25	84
10.	34	12	34	25	25	25	300	2,380	4,940	990	14	84
11.	34	12	34	25	25	25	300	2,520	5,100	874	40	84
12.	34	20	34	25	25	25	300	2,660	6,060	874	14	112
13.	34	20	34	25	25	25	300	2,790	6,700	762	14	112
14.	34	20	34	25	25	25	300	2,930	7,980	556	40	112
15.	20	20	34	25	25	25	236	2,930	8,300	462	14	112
16.	20	20	34	25	25	25	236	3,530	9,580	462	25	112
17.	20	20	34	25	25	25	236	3,840	9,580	376	40	112
18.	20	20	34	25	25	25	236	3,380	12,800	462	25	112
19.	20	20	43	25	25	25	236	2,790	9,260	762	40	112
20.	20	20	34	25	25	25	236	2,380	9,260	874	25	112

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
21.....	12	20	34	25	25	25	236	1,740	9,100	556	40	112
22.....	12	20	34	25	25	25	236	1,360	8,460	556	40	112
23.....	12	20	34	25	25	25	236	1,230	8,300	556	40	112
24.....	12	20	34	25	25	25	236	1,110	7,340	556	40	84
25.....	20	20	34	25	25	25	236	874	6,700	376	84	84
26.....	20	20	34	25	25	25	236	1,110	6,380	462	60	84
27.....	20	20	34	25	25	25	300	1,600	6,060	462	84	84
28.....	20	20	12	25	25	40	300	1,360	5,580	656	84	84
29.....	20	20	8	25	.....	40	376	1,480	5,100	300	60	84
30.....	20	20	8	25	.....	112	462	1,600	5,100	184	40	84
31.....	20	.....	12	25	.....	184	.....	1,860	.....	144	60	.....
1903-4.												
1.....	84	60	.....	.....	.....	.....	42	14	14	14	14	203
2.....	84	84	.....	.....	.....	.....	42	14	14	14	14	203
3.....	84	84	.....	.....	.....	.....	42	14	14	14	14	306
4.....	84	84	.....	.....	.....	.....	42	26	14	14	20	432
5.....	84	84	.....	.....	.....	.....	42	26	14	14	26	468
6.....	60	84	.....	.....	.....	.....	42	26	20	14	42	432
7.....	60	84	.....	.....	.....	121	42	26	14	14	42	399
8.....	60	84	.....	.....	.....	121	42	26	20	14	42	366
9.....	60	112	.....	.....	.....	121	42	26	34	14	279	279
10.....	60	184	.....	.....	.....	88	42	26	26	14	751	252
11.....	60	.....	.....	.....	.....	88	42	26	26	42	42	252
12.....	60	.....	.....	.....	.....	88	26	26	26	42	42	181
13.....	60	.....	.....	.....	.....	88	26	26	26	26	42	159
14.....	60	.....	.....	.....	.....	88	42	26	26	14	42	159
15.....	60	.....	.....	.....	.....	88	42	26	26	14	42	121
16.....	60	.....	.....	.....	.....	88	42	42	26	14	42	121
17.....	60	.....	.....	.....	.....	88	580	26	26	14	42	121
18.....	60	.....	.....	.....	.....	88	580	34	26	14	503	121
19.....	60	.....	.....	.....	.....	88	751	26	26	14	503	121
20.....	60	.....	.....	.....	.....	88	662	26	26	14	621	121
21.....	60	.....	.....	.....	.....	88	580	14	26	14	62	88
22.....	60	.....	.....	.....	.....	121	580	20	26	14	62	88
23.....	60	.....	.....	.....	.....	121	42	14	14	42	62	88
24.....	60	.....	.....	.....	.....	121	26	14	14	14	88	88
25.....	60	.....	.....	.....	.....	121	26	14	14	14	121	88
26.....	60	.....	.....	.....	.....	121	26	14	14	14	121	88
27.....	60	.....	.....	.....	.....	121	26	14	14	14	104	88
28.....	60	.....	.....	.....	.....	62	26	14	14	14	121	88
29.....	60	.....	.....	.....	.....	62	26	14	14	14	121	121
30.....	60	.....	.....	.....	.....	62	14	14	14	14	104	252
31.....	60	.....	.....	.....	.....	42	.....	14	.....	14	203	.....
1904-5.												
1.....	1,580	662	.....	.....	.....	.....	475	2,270	7,220	1,350	105	90
2.....	1,730	580	.....	.....	.....	.....	475	3,590	7,750	1,110	138	65
3.....	1,660	580	.....	.....	.....	.....	475	4,040	8,900	950	290	78
4.....	1,730	42	.....	.....	.....	.....	475	3,860	10,600	630	290	90
5.....	1,580	42	.....	.....	.....	.....	440	3,320	11,400	550	290	90
6.....	1,310	42	.....	.....	.....	.....	405	2,340	12,500	475	290	90
7.....	1,180	42	.....	.....	.....	550	405	2,070	12,700	375	240	90
8.....	1,580	42	.....	.....	.....	715	405	1,840	13,100	290	240	90
9.....	2,190	42	.....	.....	.....	900	440	1,980	12,700	240	265	90
10.....	2,890	42	.....	.....	.....	900	512	2,190	12,200	195	240	90
11.....	3,200	.....	.....	.....	.....	900	550	2,420	11,800	155	240	90
12.....	3,200	.....	.....	.....	.....	1,000	805	2,120	11,100	155	240	90
13.....	2,810	.....	.....	.....	.....	1,000	805	1,980	10,100	155	240	65
14.....	2,500	.....	.....	.....	.....	900	805	2,270	8,380	120	175	65
15.....	2,040	.....	.....	.....	.....	805	715	2,270	8,170	120	155	65
16.....	2,040	.....	.....	.....	.....	852	630	3,070	7,540	120	138	65
17.....	1,730	.....	.....	.....	.....	852	672	4,130	7,330	120	120	45
18.....	1,730	.....	.....	.....	.....	852	715	4,890	6,800	120	120	45
19.....	1,580	.....	.....	.....	.....	805	805	6,490	6,280	120	120	45
20.....	1,440	.....	.....	.....	.....	805	900	7,960	4,980	90	90	45
21.....	1,180	.....	.....	.....	.....	805	900	8,800	4,510	90	90	45
22.....	1,180	.....	.....	.....	.....	715	950	9,240	3,770	90	90	45
23.....	1,060	.....	.....	.....	.....	630	1,000	10,300	2,900	90	90	45
24.....	1,060	.....	.....	.....	.....	550	1,000	10,800	2,340	90	90	45
25.....	951	.....	.....	.....	.....	475	1,000	10,900	2,190	90	90	45

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
26.....	751					475	1,000	11,700	2,120	90	120	45
27.....	751					475	1,000	11,200	2,120	90	90	45
28.....	662					550	1,110	10,900	1,840	90	90	45
29.....	662					475	1,470	10,300	1,710	90	90	45
30.....	662					475	1,840	9,010	1,470	90	90	45
31.....	662					475		8,170		105	90	
1905-6.												
1.....	45	120					195	1,290	2,660	1,350	1,290	240
2.....	45	120					195	1,050	2,340	1,230	1,110	240
3.....	45	120					155	1,000	2,900	1,350	1,000	240
4.....	195	155					155	1,110	2,900	1,350	950	240
5.....	195	155					155	1,110	2,900	1,350	900	240
6.....	155	155					155	1,590	3,150	1,470	805	240
7.....	195	155					155	2,050	3,860	1,470	805	240
8.....	195	195				345	155	2,270	4,410	1,470	715	240
9.....	155	195				345	155	2,980	4,510	1,470	672	240
10.....	155	195				345	155	3,320	4,600	1,590	630	240
11.....	120	240				345	155	3,860	4,980	1,710	590	240
12.....	120	240				345	318	4,130	5,570	1,710	550	240
13.....	90	240				345	405	3,950	6,490	1,710	550	240
14.....	90	240				345	345	3,410	7,540	1,840	475	240
15.....	90	240				345	290	2,900	8,060	1,840	475	240
16.....	65	240				345	318	2,740	8,170	1,980	405	240
17.....	65	240				345	345	2,740	8,280	2,050	375	240
18.....	65	240				345	405	2,740	7,860	1,840	318	290
19.....	65	240				345	512	3,410	6,330	1,710	265	375
20.....	65	240				345	672	4,320	6,380	1,590	240	375
21.....	65	240				345	852	5,080	4,980	1,410	217	405
22.....	65	240				345	1,050	5,270	3,860	1,230	195	405
23.....	65	240				345	1,410	5,770	3,410	1,110	195	475
24.....	65	290				345	2,050	6,700	2,980	1,000	240	517
25.....	65	290				345	2,420	6,380	2,660	1,000	240	590
26.....	65	290				345	2,420	5,570	2,270	1,000	240	760
27.....	90	290				345	2,190	5,570	1,770	1,110	240	805
28.....	120	405				345	1,910	2,900	1,530	1,110	240	900
29.....	120	240				345	1,650	2,740	1,350	1,470	240	1,230
30.....	120	375				318	1,470	2,660	1,350	1,590	240	1,470
31.....	120					240		2,740		1,470	240	
1906-7.												
1.....	1,470	1,110				550	900	1,870	4,190	8,170	2,380	2,680
2.....	1,470	1,110				550	900	2,010	3,860	8,480	2,150	2,750
3.....	1,350	1,230				550	852	2,010	3,700	8,800	2,300	2,380
4.....	1,230	1,170				550	715	1,800	4,280	8,700	2,450	1,940
5.....	1,170	1,110				512	852	1,600	4,890	8,480	2,520	1,800
6.....	1,110	1,110				512	1,000	1,800	5,570	8,060	2,220	1,600
7.....	1,000	1,000				550	1,000	1,660	5,970	7,750	2,010	1,540
8.....	1,000	1,000				550	805	1,540	6,600	7,540	1,870	1,470
9.....	950	1,000				550	950	1,470	7,120	7,440	1,800	1,350
10.....	950	1,000				475	1,230	1,470	7,330	7,020	1,660	1,230
11.....	805	900				475	1,410	1,470	7,330	6,600	1,600	1,230
12.....	760	900				550	1,710	1,600	7,370	6,180	1,470	1,110
13.....	672	900				550	2,270	1,730	7,020	5,670	1,350	1,060
14.....	590	900				550	2,980	2,010	7,020	5,270	1,350	1,000
15.....	550	900				550	3,410	2,010	7,440	5,770	1,800	900
16.....	550	900				475	3,770	1,800	8,170	5,970	1,940	900
17.....	550	950				475	3,700	1,800	8,380	5,870	1,730	900
18.....	550	1,000				550	3,540	2,220	8,380	5,370	1,600	900
19.....	550	1,050				550	3,380	2,820	8,380	4,700	1,470	900
20.....	550	805				672	3,140	3,220	8,670	3,940	1,470	900
21.....	672	715				1,110	2,750	4,360	8,570	3,540	1,470	1,000
22.....	760	715				1,410	2,750	5,180	8,150	3,380	1,600	900
23.....	852	715				1,470	2,520	6,180	7,620	3,380	1,600	900
24.....	900	715				1,470	2,300	7,020	7,100	2,980	1,470	850
25.....	1,000					1,350	2,080	7,540	6,780	2,450	1,350	800
26.....	1,000					1,290	1,730	7,440	6,780	2,450	1,230	800
27.....	1,110					1,170	1,600	6,800	7,200	2,820	1,350	800
28.....	1,110					1,110	1,540	5,570	7,390	3,140	1,470	800
29.....	1,110					1,060	1,470	4,800	7,710	3,140	1,540	800
30.....	1,170					1,000	1,600	4,360	7,920	2,900	1,730	660
31.....	1,110					950		4,280		2,680	2,010	

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1	615	530	400			495	615	495	615	1,060	63	615
2	615	530	400			530	615	615	615	850	250	530
3	615	530	400			572	615	705	752	705	615	460
4	615	530	400			615	530	800	900	705	1,060	430
5	615	530	400			660	530	950	900	572	615	400
6	615	530	345			705	495	800	800	530	495	400
7	705	530	345			705	495	752	850	430	460	345
8	660	460	345			660	460	615	752	400	400	345
9	660	460	345			615	460	615	705	345	400	345
10	660	460	345			530	460	705	800	272	400	295
11	615	460	345			530	460	660	950	250	372	295
12	615	460	345			530	460	615	1,410	205	295	295
13	615	460				530	460	530	1,940	144	320	295
14	615	460				572	495	530	2,150	144	295	272
15	530	460				572	530	530	2,150	205	320	250
16	530	460				615	615	495	2,080	320	372	250
17	530	460				615	705	530	1,940	430	460	250
18	530	495				705	752	660	1,540	400	460	250
19	530	460				752	900	950	1,410	295	572	250
20	530	460				900	900	1,170	1,290	205	850	250
21	530	460				900	900	1,410	1,060	250	1,060	250
22	530	460				800	850	1,230	850	205	1,230	250
23	530	530				800	800	1,110	705	163	1,230	228
24	530	495				800	900	1,000	705	163	1,110	205
25	530	460				800	900	1,000	705	125	1,000	205
26	530	460				800	800	1,000	705	91	950	250
27	530	400				800	615	900	752	77	900	250
28	530	400				800	615	752	1,410	63	800	228
29	530	400				705	530	530	1,600	63	705	250
30	530	400				705	400	530	1,350	63	660	250
31	530					705		530		63	615	
1908-9.												
1	250	400				350	460	1,470	2,480	1,730	205	1,730
2	272	372				320	460	1,170	2,130	1,540	165	1,660
3	250	345				372	460	1,170	2,130	1,290	165	1,730
4	250	345				460	460	1,540	2,480	1,110	165	1,600
5	250	345				495	460	2,060	3,220	1,110	135	1,730
6	250	345				495	460	2,990	5,200	1,230	135	2,410
7	250	320				495	460	3,920	6,120	1,230	122	3,530
8	250	272				495	460	4,630	6,920	1,350	135	4,230
9	250	228				495	460	4,790	7,370	1,110	150	4,390
10	272	205				572	460	4,870	7,460	900	165	4,550
11	272	205				495	460	4,630	7,190	800	205	4,070
12	272	163				615	460	4,470	6,830	615	228	3,530
13	272	163			390	572	430	4,310	6,380	460	205	3,140
14	250	125			380	430	430	4,150	5,940	400	205	3,140
15	250	144			380	495	705	4,310	5,610	295	205	2,920
16	250	163			380	572	705	4,230	5,110	250	205	2,840
17	250	228			370	572	705	3,600	4,390	205	205	2,630
18	272	240			370	495	950	3,760	4,550	165	295	2,410
19	295	240			370	495	2,130	4,310	4,710	165	345	2,270
20	295	240			370	495	2,990	4,550	4,870	165	400	2,130
21	295	240			380	495	3,060	4,710	4,790	110	460	1,920
22	295	240			380	495	2,480	4,550	4,550	110	460	1,800
23	295	240			380	495	2,060	2,840	4,310	110	1,000	1,600
24	295	240			380	495	1,600	3,450	3,840	110	705	1,410
25	295	240			380	495	1,350	2,920	3,530	122	752	1,410
26	345	240			380	495	1,230	2,560	3,300	400	900	1,350
27	345	240			380	495	1,110	2,480	2,990	530	900	1,230
28	372	240			380	495	1,170	2,770	2,770	372	1,000	1,230
29	372	240				495	1,410	3,140	2,480	295	1,170	1,170
30	400	240				495	1,800	3,140	2,200	295	1,470	1,110
31	430					460		2,630		250	1,600	
1909-10.												
1	1,000	460	660				1,230	5,360	3,300	85	30	45
2	1,000	460	705				1,230	5,280	3,530	65	20	45
3	950	530	615			705	1,230	4,710	3,300	65	20	45
4	850	530	615			705	1,230	4,070	2,840	65	20	30
5	800	530	600			800	1,230	3,840	2,560	45	30	30

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.	900	530	600			800	1,230	3,450	2,410	45	30	30
7.	1,060	530	600			950	1,230	3,300	2,130	30	30	30
8.	1,350	530	570			1,110	1,170	3,140	1,410	30	30	30
9.	1,350	530	570			1,110	1,230	3,220	1,170	30	30	45
10.	1,350	530	570			1,170	1,290	3,530	950	30	38	38
11.	1,230	530	550			1,230	1,290	4,070	850	30	55	38
12.	1,060	530	550			1,060	1,410	4,550	752	30	65	38
13.	1,060	615	500			1,060	1,730	4,950	752	30	85	38
14.	1,060	615	500			1,230	1,730	5,200	660	30	110	45
15.	1,000	615	450			1,230	1,730	5,110	572	30	135	45
16.	900	615	450			1,230	1,660	5,200	495	20	135	45
17.	900	530	400			1,230	1,600	4,790	400	20	122	45
18.	850	495	300			1,170	1,600	4,070	345	20	135	45
19.	752	460	250			1,230	1,470	2,770	250	20	135	45
20.	752	430	300			1,290	1,730	2,560	272	20	135	45
21.	705	495	300			1,350	1,860	2,480	205	20	110	65
22.	705	615	300			1,470	2,200	2,130	228	20	110	65
23.	705	615	300			1,470	2,200	1,920	185	20	110	55
24.	660	705	300			1,730	2,340	1,660	185	20	85	55
25.	615	705	300			1,990	2,770	1,410	165	20	85	45
26.	615	705	300			2,060	3,220	1,230	122	20	85	38
27.	615	705	300			1,990	3,840	1,410	85	20	85	45
28.	615	615	300			1,800	4,150	1,600	85	20	65	45
29.	530	615	300			1,730	4,790	1,920	85	20	65	45
30.	495	705	300			1,540	5,280	2,340	85	24	55	45
31.	495		300			1,350		3,060		75	55	
1910-11.												
1.	45	205	272			460	345	1,200	2,780	2,060	2,200	900
2.	30	205	295			460	345	1,000	2,960	2,460	1,870	850
3.	30	205	295			460	372	900	3,150	3,700	1,410	752
4.	45	205	320			530	400	1,050	3,340	4,310	1,100	705
5.	45	205	272			400	400	1,250	3,520	4,950	800	705
6.	45	205	250			400	372	1,580	3,710	5,110	615	660
7.	45	205	250			345	320	2,000	4,150	5,110	400	705
8.	45	205	300			320	295	2,600	4,230	4,790	250	660
9.	45	165	300			320	272	3,320	4,550	4,390	185	615
10.	45	165	300			345	250	3,920	5,030	4,080	135	530
11.	55	165	300			345	228	4,000	5,350	3,550	135	460
12.	55	165	300			400	228	3,550	5,590	3,100	110	495
13.	45	185	330			430	205	2,740	5,750	2,880	85	460
14.	45	185	330			430	205	2,130	5,430	2,880	75	495
15.	65	185	330			400	150	2,130	4,870	3,250	75	615
16.	65	185	300			372	150	2,130	4,710	3,620	75	660
17.	65	205	300			345	135	2,000	4,390	3,620	65	660
18.	65	250	300			345	165	1,810	4,150	3,480	98	660
19.	85	272	300			320	185	1,870	3,850	3,320	98	615
20.	165	250	300			345	205	2,130	3,850	3,620	98	615
21.	165	250	300			345	228	2,060	3,850	3,850	98	752
22.	205	272	300			345	320	1,600	4,150	4,150	122	850
23.	250	272	300			372	490	1,410	4,630	3,550	150	850
24.	250	272	300			400	660	1,410	4,790	3,550	495	800
25.	250	295	30			400	705	1,650	4,790	3,480	1,000	705
26.	250	320	250			372	705	1,810	4,150	3,480	950	705
27.	250	295	250			345	1,100	1,980	3,250	3,250	1,000	705
28.	250	295	250			320	1,410	2,140	3,000	3,250	1,000	800
29.	250	295	250			320	1,460	2,320	2,390	3,250	1,100	950
30.	250	272	250			320	1,520	2,410	2,200	2,810	1,150	1,050
31.	250		250			320		2,590		2,530	1,000	
1911-12.												
1.	1,200	1,410				475	530	1,050	8,140	3,550	660	165
2.	2,000	1,300				475	572	1,580	7,870	3,480	615	205
3.	2,670	1,300				460	572	2,200	7,420	3,180	530	205
4.	2,810	1,200				470	753	2,460	7,150	2,600	460	205
5.	2,880	1,100				480	1,100	1,870	6,980	2,130	372	165
6.	4,230	1,100				480	1,250	1,520	6,890	1,870	295	165
7.	6,985					480	1,150	1,410	7,240	1,410	250	135
8.	6,890					500	1,150	1,690	7,240	950	205	135
9.	6,890					500	1,300	2,200	6,800	705	165	135
10.	7,510					500	1,360	2,600	6,550	615	135	135

Daily discharge, in second-feet, of Rio Grande near Lobatos, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.....	6,800					550	1,520	2,390	6,070	495	110	135
12.....	5,750					550	1,410	2,130	5,910	345	110	135
13.....	4,710					550	1,150	2,060	5,350	250	110	135
14.....	3,850					575	1,000	2,130	4,870	185	122	135
15.....	3,250					615	850	2,460	4,310	227	110	150
16.....	2,670					615	705	2,260	4,000	185	135	165
17.....	2,390					660	900	2,320	3,920	227	185	295
18.....	2,260					660	900	2,740	3,920	205	250	295
19.....	2,200					705	850	3,780	3,750	205	320	250
20.....	2,060					800	753	5,030	3,400	185	295	250
21.....	1,870					850	615	6,470	3,100	150	295	250
22.....	1,630					850	530	6,890	2,880	150	345	205
23.....	1,630					705	460	7,510	3,020	165	345	250
24.....	1,630					660	460	7,780	3,550	165	295	250
25.....	1,520					660	460	7,780	4,000	165	228	228
26.....	1,520					660	530	7,780	4,230	122	295	228
27.....	1,460					530	530	8,230	4,150	165	400	205
28.....	1,520					572	572	8,500	4,000	165	345	228
29.....	1,580					615	530	8,680	3,850	165	295	228
30.....	1,520					660	753	8,230	3,620	205	250	228
31.....	1,460					660		8,320		345	205	.....
1912-13.												
1.....	228	345					1,300	1,465	1,355	205	45	38
2.....	228	372					1,200	1,410	1,050	185	45	30
3.....	228	372					1,100	1,150	800	165	38	30
4.....	228	400					1,100	752	660	165	30	38
5.....	250	400					850	615	572	110	30	45
6.....	250	400					572	800	615	85	25	65
7.....	250	400					530	800	572	65	25	65
8.....	345	400					615	900	495	55	30	55
9.....	345	400					900	752	530	45	25	55
10.....	345	400					705	705	572	45	25	55
11.....	345	400					615	705	800	45	20	55
12.....	345	400					495	850	1,050	30	25	65
13.....	345	400					430	950	1,750	30	30	75
14.....	345	372					400	1,150	1,810	38	38	75
15.....	345	400					660	1,100	1,520	30	45	75
16.....	320	400					900	1,000	1,465	30	38	75
17.....	295	400					1,050	615	1,250	30	30	65
18.....	320	400					1,200	530	1,150	30	30	75
19.....	295	409					1,410	615	1,100	30	30	65
20.....	272	400					1,300	615	1,000	45	30	65
21.....	250	372					1,355	530	1,100	38	30	65
22.....	250	345					1,410	460	1,100	55	38	65
23.....	250	345					1,300	372	1,000	65	55	75
24.....	250	345					1,100	345	752	150	55	85
25.....	250	295					1,100	460	705	185	65	85
26.....	250	295					900	615	495	135	55	98
27.....	250	205					752	900	430	110	55	98
28.....	250	205					850	850	345	75	45	122
29.....	250	345					1,200	1,100	272	85	45	110
30.....	250	295					1,465	1,150	228	65	45	110
31.....	345							1,200	.....	65	45	.....

NOTE.—The discharges for 1899 are based on a rating curve not well defined. The estimates for 1900 to 1902, inclusive, have been revised since being published originally and are based on a fairly well defined rating curve. The 1903 discharges are based on a rating curve that is not well defined, and they are probably too large between 200 and 3,000 second-feet. The 1904 discharges are based on a rating curve that is well defined below 600 second-feet but somewhat uncertain above. The discharges from March, 1905, to Apr. 16, 1907, are based on a well-defined curve. The discharge from Apr. 17, 1907, to November, 1908, are based on a curve that is well defined above 200 second-feet. The 1909 and 1910 discharges are based on a well-defined rating curve. The 1911 discharges are based on a well-defined rating curve. Discharges of 1912 and 1913 were furnished by the State engineer.

Monthly discharge of Rio Grande near Lobatos, Colo., for 1899-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1899.					
July.....	170	12	42	2,580	
August.....	129	20	53	3,200	
September.....	423	31	102	6,070	
1899-1900. ^a					
October.....	170	65	117	7,190	
November.....	297	170	259	15,400	
December.....			255	15,700	
January.....			200	12,300	
February.....			250	13,900	
March.....			300	18,400	
April.....	475	195	339	20,200	
May.....	4,700	390	1,730	106,000	
June.....	4,700	80	1,810	108,000	
July.....	54	12	19.2	1,180	
August.....	12	8	11.9	732	
September.....	34	8	20.1	1,200	
The year.....	4,700	8	443	320,000	
1900-1901. ^a					
October.....	54	20	27.2	1,670	
November.....			55.0	3,270	
December.....			275	16,900	
January.....			250	15,400	
February.....			250	13,900	
March.....	760	112	362	22,300	
April.....	1,080	112	283	16,800	
May.....	3,020	1,310	2,010	124,000	
June.....	2,270	250	1,110	66,000	
July.....	250	12	80.8	4,979	
August.....	150	12	55.4	3,410	
September.....	54	34	43.3	2,580	
The year.....	3,620	12	400	291,000	
1901-2. ^a					
October.....	80	34	47.9	2,950	
November.....			35.0	2,080	
December.....			150	9,220	
January.....			180	11,100	
February.....			160	8,890	
March.....			305	18,800	
April.....	475	195	308	18,300	
May.....	565	150	464	28,500	
June.....	390	12	112	6,660	
July.....	12	12	12.0	738	
August.....	12	6	9.7	595	
September.....	20	8	16.1	958	
The year.....	565	6	150	109,000	
1902-3. ^a					
October.....	34	12	21.7	1,330	
November.....	20	12	19.2	1,140	
December.....	34	8	26.8	1,650	
January.....	25	25	25	1,540	
February.....	25	25	25	1,390	
March.....	184	25	34	2,090	
April.....	462	236	314	18,700	
May.....	3,840	556	2,010	124,000	
June.....	12,800	2,380	6,380	379,000	
July.....	4,460	144	1,180	72,400	
August.....	112	14	47	2,890	
September.....	112	60	90	5,360	
The year.....	12,800	8	848	611,000	
1903-4.					
October.....	84	60	64	3,940	
November.....			a 140	8,330	
December.....			a 120	7,380	
January.....			a 120	7,380	
February.....			a 110	6,330	
March.....			a 110	6,760	
April.....	751	14	153	9,100	
May.....	42	14	21.5	1,320	
June.....	34	14	20.3	1,210	

^a Revised since originally published. Estimates for 1900, 1901, and 1902 were revised completely.

Monthly discharge of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903-4.					
July.....	42	14	17.5	1,080	
August.....	751	14	140	8,610	
September.....	468	88	196	11,700	
The year.....	751	14	101	73,100	
1904-5.					
October.....	3,200	662	1,590	97,800	
November.....			a 300	17,900	
December.....			a 300	18,400	
January.....			a 350	21,500	D.
February.....			a 325	18,000	D.
March.....			898	55,200	C.
April.....	1,840	405	773	46,000	B.
May.....	11,700	1,840	5,690	350,000	A.
June.....	13,100	1,470	7,220	430,000	A.
July.....	1,350	90	272	16,700	B.
August.....	290	90	163	10,000	B.
September.....	90	45	64.4	3,830	B.
The year.....	13,100	45	1,500	1,090,000	
1905-6.					
October.....	195	45	102	6,270	B.
November.....	405	120	229	13,600	C.
December.....			a 250	15,400	D.
January.....			a 275	16,000	D.
February.....			a 270	15,000	D.
March.....			a 340	20,900	C.
April.....	2,420	155	761	45,300	B.
May.....	6,700	1,000	3,330	205,000	A.
June.....	8,280	1,350	4,370	260,000	A.
July.....	2,050	1,000	1,470	90,400	A.
August.....	1,290	195	503	30,900	B.
September.....	1,470	240	423	25,200	B.
The year.....	8,280	45	1,030	745,000	
1906-7.					
October.....	1,470	550	923	56,800	B.
November.....	1,230		954	45,400	C.
December.....			a 500	30,700	D.
January.....			a 500	30,700	B.
February.....			a 525	29,200	B.
March.....	1,470	475	779	47,900	B.
April.....	3,770	715	1,960	117,000	A.
May.....	7,540	1,470	3,270	201,000	A.
June.....	8,670	3,700	6,900	411,000	B.
July.....	8,800	2,450	5,440	334,000	B.
August.....	2,520	1,230	1,740	107,000	A.
September.....	2,750	660	1,230	73,200	A.
The year.....	8,800		2,060	1,480,000	
1907-8.					
October.....	705	530	576	35,400	A.
November.....	530	400	473	28,100	A.
December.....			358	22,000	C.
March.....	900	495	678	41,700	A.
April.....	900	400	629	37,400	A.
May.....	1,410	495	765	47,000	A.
June.....	2,150	615	1,150	68,400	A.
July.....	1,060	63	316	19,400	A.
August.....	1,230	63	624	38,400	A.
September.....	615	205	306	18,200	A.
1908-9.					
October.....	430	250	289	17,800	A.
November.....	400	125	250	14,900	C.
December.....			a 240	14,800	C.
January.....			a 300	18,400	C.
February.....			a 350	19,400	C.
March.....	615	320	490	30,100	A.
April.....	3,060	430	1,060	63,100	A.
May.....	4,870	1,170	3,460	213,000	A.
June.....	7,460	2,130	4,520	269,000	A.
July.....	1,730	110	667	37,300	A.
August.....	1,600	122	466	28,700	A.
September.....	4,550	1,110	2,360	140,000	A.
The year.....	7,460		1,200	867,000	

a Revised since being published originally.

Monthly discharge of Rio Grande near Lobatos, Colo., for 1899-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
October.....	1,350	495	869	53,400	A.
November.....	705	430	569	33,900	A.
December.....	705	300	441	27,100	C.
January.....			390	24,000	C.
February.....			355	19,700	C.
March.....	2,060		1,240	76,200	A.
April.....	5,280	1,170	2,030	121,000	A.
May.....	5,360	1,230	3,370	207,000	A.
June.....	3,530	85	1,010	60,100	A.
July.....	85	20	32.9	2,020	A.
August.....	135	20	74.2	4,560	A.
September.....	65	30	43.3	2,580	A.
The year.....	5,360	20	869	632,000	
1910-11.					
October.....	250	30	121	7,440	A.
November.....	320	165	228	13,600	A.
December.....	330	250	289	17,800	C.
January.....			370	22,800	
February.....			380	21,100	
March.....	530	320	375	23,100	
April.....	1,520	135	461	27,400	
May.....	4,000	900	2,090	129,000	
June.....	5,750	2,200	4,090	243,000	
July.....	5,110	2,060	3,600	222,000	
August.....	2,200	65	579	35,600	
September.....	1,050	460	699	41,600	
The year.....	5,750	30	1,110	804,000	
1911-12.					
October.....	7,510	1,200	3,140	193,000	
November.....			800	47,000	
December.....			500	30,700	
January.....			497	30,600	
February.....			486	28,000	
March.....	850	460	597	36,700	
April.....	1,520	460	840	50,000	
May.....	8,680	1,050	4,260	262,000	
June.....	8,140	2,880	5,140	306,000	
July.....	3,550	122	805	49,500	
August.....	660	110	282	17,300	
September.....	295	135	196	11,700	
The year.....	8,680	110	1,460	1,060,000	
1912-13.					
October.....	345	228	283	17,400	
November.....	400	205	364	21,600	
December.....			300	18,400	
April.....	1,465	400	959	57,064	
May.....	1,465	345	821	50,481	
June.....	1,810	228	885	52,661	
July.....	205	30	80	4,919	
August.....	65	20	38	2,336	
September.....	122	30	69	4,106	

NOTE.—A study of the winter discharge measurements and gage heights from 1908 to 1912 shows that the winter estimates for the earlier years were too large. The evidence regarding the winter flow at the Lobatos station now shows that the flow increases gradually from the time the river freezes over until January, and from that time gradually decreases until the winter breakup. This evidence is corroborated by the measurements made during the winters of 1908-1909, 1909-1910, 1910-1911, 1911-1912. Measurements made in 1913 apparently contradict the above evidence, probably because both ice measurements in 1913 were made after periods of severe cold weather, when the flow was temporarily reduced below the average amount.

Subsequent to 1910 the winter estimates have been based almost directly on the discharge measurements. From 1899 to 1903 the estimates were based chiefly on the flow at Embudo which was practically unaffected by ice, an allowance ranging from 150 to 250 second-feet being made for the increased flow between the two points. From 1904 to 1909 the winter estimates were based chiefly on the low-water flow in the fall before the river froze over. Comparison being made with the same conditions at the Del Norte station.

Prior to 1910 the winter estimates are uncertain owing to insufficient data, and can only be considered approximate. Those for 1904 to 1909 are only roughly approximate and have been given merely to complete the yearly record.

Records for 1911-13 furnished by the State engineer.

RIO GRANDE AT EMBUDO, N. MEX.

Location.—At Santa Barbara Tie & Pole Co.'s bridge, a few hundred feet below the Denver & Rio Grande Railroad eating house at Embudo, at the mouth of the box canyon at the entrance to Espanola Valley, near sec. 27, T. 23 N., R. 9 E. The nearest tributary, Santa Barbara Creek, joins the Rio Grande about 3 miles above the station.

Records available.—December 21, 1888, to December 31, 1903; September 8, 1912, to September 30, 1913.

Drainage area.—Approximately 10,100 square miles.

Gage.—Automatic recording. From January 1 to February 28, 1889, a gage was maintained 1 mile above Embudo, but moved to a point 1,500 feet above the site of the present gage March 1, 1889, and used until December 3, 1903. The datum of this gage remained unchanged from March 1, 1889, to December 31, 1903. On September 8, 1912, an automatic gage was installed which was referred to a new datum.

Channel.—Subject to a change during flood stages, but fairly permanent at low stages.

Discharge measurements.—By wading at low stages and from a cable during flood and medium stages.

Winter flow.—Relation between gage height and discharge during the winter months little, if any, affected by ice.

Diversions.—Between Lobatos station and Embudo the Rio Grande flows through a canyon, so that there is practically no diversions from the river.

Accuracy.—Estimates of daily discharge for 1912 can be considered only fair; those for 1913 are good.

Cooperation.—During 1912 and 1913 station maintained in cooperation with the State engineer; prior to that date by the United States Geological Survey alone.

Discharge measurements of Rio Grande at Embudo, N. Mex., in 1889-1903, 1912-13.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1888.		<i>Fect.</i>	<i>Sec.-ft.</i>	1889.		<i>Fect.</i>	<i>Sec.-ft.</i>
Dec. 21	J. B. Williams	1.40	419	July 14	G. T. Quinby	8.77	796
21	do.....	1.20	406	24	do.....	8.55	613
22	do.....	1.30	416	Aug. 21	do.....	7.59	185
				Sept. 1	W. J. Dyar.....	7.69	219
				Oct. 22	do.....	7.90	296
1889.							
Jan. 3	J. B. Williams	1.40	419	1890.			
5	do.....	1.30	407	Mar. 13	W. J. Dyar.....	8.67	600
12	do.....	1.40	395	15	do.....	8.51	546
14	F. Harrison.....	1.50	438	Apr. 9	do.....	9.60	1,320
30	do.....	1.70	542	11	do.....	9.81	1,530
31	do.....	1.70	531	12	do.....	9.91	1,660
Feb. 1	do.....	1.60	459	14	do.....	10.58	2,500
9	do.....	1.56	462	30	do.....	10.69	2,370
22	do.....	8.40	531	May 1	do.....	10.77	2,440
23	R. Robertson.....	8.35	460	2	do.....	10.87	2,410
Mar. 5	T. M. Bannon.....	8.53	584	3	do.....	11.19	2,920
6	do.....	8.56	586	5	do.....	11.72	3,860
7	R. S. Tarr.....	8.66	618	6	do.....	11.92	4,160
21	R. Robertson.....	8.97	862	July 10	W. B. Lane.....	10.20	2,180
22	W. A. Farish.....	8.95	826	11	do.....	10.17	1,710
23	R. P. Irving.....	8.93	819	17	do.....	9.70	1,180
28	R. Robertson.....	8.80	726	18	do.....	9.77	1,360
30	F. Harrison.....	8.81	721				
Apr. 1	do.....	9.05	890	1891.			
2	do.....	9.15	1,120	Apr. 8	T. M. Bannon.....	9.42	1,310
3	T. M. Bannon.....	9.31	1,110	Dec. 10	do.....	8.50	575
5	R. P. Irving.....	9.47	1,490				
6	R. Robertson.....	9.81	1,690	1892.			
9	L. B. Kendall.....	10.20	2,100	Oct. 30	T. M. Bannon.....	7.80	335
29	J. B. Williams.....	12.00	3,930	30	do.....	7.80	313
July 12	G. T. Quinby.....	8.18	447	Nov. 1	do.....	7.80	353
13	do.....	8.08	401				

Discharge measurements of Rio Grande at Embudo, N. Mex., in 1889-1903, 1912-13—Con.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1894.		<i>Fect.</i>	<i>Sec.-ft.</i>	1902.		<i>Fect.</i>	<i>Sec.-ft.</i>
Sept. 30	A. P. Davis	7.70	284	Jan. 21	P. E. Harroun	7.5	386
Oct. 1	do.	9.30	1,140	Feb. 10	do.	7.6	422
1895.				Mar. 28	O. B. Powell	7.8	410
Feb. 2	A. P. Davis	7.98	464	Apr. 9	do.	8.2	631
4	do.	8.01	453	12	do.	8.5	773
Apr. 8	P. E. Harroun	9.40	1,180	15	do.	8.4	771
May 14	do.	11.20	3,220	18	do.	8.3	667
July 27	do.	9.90	1,670	23	do.	8.4	741
Aug. 19	do.	8.80	908	26	do.	8.1	604
Oct. 26	do.	8.10	494	29	do.	8.1	632
Nov. 28	do.	8.40	617	May 3	do.	8.3	715
1896.				6	do.	8.5	849
Sept. 7	P. E. Harroun	7.30	213	9	do.	8.6	900
Oct. 29	do.	7.80	342	13	do.	8.8	1,100
Nov. 20	C. C. Babb	8.11	436	16	do.	8.5	901
21	do.	8.11	431	20	do.	8.3	814
Dec. 14	P. E. Harroun	7.90	427	24	do.	7.8	471
1897.				27	do.	8.1	611
Feb. 27	P. E. Harroun	7.90	414	31	do.	8.7	990
Mar. 19	do.	8.80	672	June 4	do.	8.6	917
June 10	do.	12.20	5,120	7	do.	8.3	697
23	do.	10.55	2,740	10	do.	7.8	450
July 11	do.	9.50	1,530	13	do.	7.5	364
24	do.	8.30	640	17	do.	7.2	240
Aug. 12	do.	7.40	312	21	do.	7.0	196
29	do.	7.60	273	25	do.	6.9	179
Sept. 13	do.	7.60	296	28	do.	6.9	152
Oct. 8	do.	9.60	1,500	July 1	do.	6.8	147
25	do.	9.70	1,510	4	do.	6.8	140
1898.				8	do.	6.8	137
Sept. 18	P. E. Harroun	7.70	271	12	do.	6.8	140
Oct. 6	do.	7.50	265	15	do.	6.8	144
28	do.	7.60	284	19	do.	6.9	150
1899.				22	do.	7.1	192
Apr. 7	P. E. Harroun	8.20	710	25	do.	6.8	154
20	do.	9.50	1,630	29	do.	6.9	164
May 4	do.	8.60	967	Aug. 1	do.	6.8	158
30	do.	8.10	745	5	do.	6.8	156
Sept. 4	do.	7.00	183	8	do.	7.2	236
Oct. 27	do.	7.58	412	13	do.	7.0	191
1900.				16	do.	6.9	161
Apr. 10	P. E. Harroun	7.90	529	19	do.	6.8	152
21	do.	7.65	495	23	do.	7.0	176
May 23	do.	11.00	3,580	26	do.	8.2	785
30	do.	11.70	6,140	29	do.	7.1	227
June 6	do.	11.20	4,790	Sept. 2	do.	7.0	198
15	do.	10.20	2,380	6	do.	6.9	166
22	do.	8.55	840	9	do.	6.9	164
27	do.	8.00	587	12	do.	6.9	167
Aug. 3	do.	7.00	179	16	do.	6.9	165
29	do.	6.90	167	19	do.	6.9	169
Sept. 25	do.	7.20	244	23	do.	7.2	250
Nov. 8	do.	7.30	282	26	do.	7.1	223
Dec. 4	do.	7.50	353	30	do.	7.1	239
1901.				Oct. 2	do.	7.1	217
Feb. 21	P. E. Harroun	7.95	543	6	do.	7.2	217
Mar. 27	do.	7.70	399	10	do.	7.2	227
Apr. 8	do.	7.80	477	14	do.	7.2	238
24	do.	8.20	679	17	do.	7.2	229
July 11	do.	7.30	267	21	do.	7.2	228
25	do.	7.50	338	24	do.	7.2	240
Aug. 23	do.	7.40	339	28	do.	7.2	230
Sept. 6	do.	7.50	381	31	do.	7.2	217
24	do.	7.25	274	Nov. 4	do.	7.2	218
Oct. 9	do.	7.40	358	7	do.	7.2	219
24	do.	7.40	342	11	do.	7.2	226
Nov. 6	do.	7.40	350	14	do.	7.2	228
19	do.	7.40	336	18	do.	7.1	225
Dec. 5	do.	7.65	439	21	do.	7.3	235
19	do.	7.60	420	25	do.	7.3	247
				28	do.	7.1	218
				Dec. 2	do.	7.2	252
				5	do.	7.1	225
				9	do.	7.2	246
				12	do.	7.3	246
				16	do.	7.3	244
				20	do.	7.5	316
				23	do.	7.3	268
				27	do.	7.3	266
				31	do.	7.2	249

Discharge measurements of Rio Grande at Embudo, N. Mex., in 1889-1903, 1912-13—Con.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1903.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 3	O. B. Powell.....	7.5	322	May 25	O. B. Powell.....	9.4	1,680
6	do.....	7.4	310	27	do.....	9.6	1,750
9	do.....	7.4	307	29	do.....	9.7	1,830
13	do.....	7.6	406	June 1	do.....	10.2	2,580
16	do.....	7.4	320	3	do.....	11.2	4,780
20	do.....	7.4	353	5	do.....	11.7	5,050
23	do.....	7.4	366	8	do.....	12.1	5,900
26	do.....	7.4	345	10	do.....	12.8	6,940
29	do.....	7.4	376	13	do.....	13.6	9,060
Feb. 2	do.....	7.3	291	15	do.....	15.0	12,700
5	do.....	7.2	279	17	do.....	15.5	14,100
9	do.....	7.4	335	19	do.....	15.8	15,900
13	do.....	7.6	430	22	do.....	15.2	12,800
16	do.....	7.4	328	24	do.....	14.5	10,300
25	do.....	7.6	432	26	do.....	13.9	9,260
28	do.....	7.4	331	29	do.....	13.0	7,460
Mar. 2	do.....	7.6	437	July 3	do.....	11.5	3,660
5	do.....	8.3	787	7	do.....	10.1	1,860
9	do.....	8.2	704	10	do.....	9.2	1,200
11	do.....	8.0	592	13	do.....	9.1	1,150
13	do.....	8.2	707	16	do.....	8.7	921
16	do.....	8.4	696	20	do.....	9.1	1,090
18	do.....	8.4	729	24	do.....	8.5	870
21	do.....	8.3	743	27	do.....	8.3	754
24	do.....	8.0	559	30	do.....	8.3	707
26	do.....	8.6	896	Aug. 21	F. Cogswell.....	7.6	274
28	do.....	8.4	779	Sept. 17	do.....	7.7	378
31	do.....	8.6	976	Oct. 15	do.....	7.6	296
Apr. 5	do.....	8.5	911	Nov. 11	do.....	7.78	435
7	do.....	8.0	589				
9	do.....	8.4	732	1912.			
11	do.....	8.4	745	Sept. 8	Gray and O'Brien.....	2.40	321
14	do.....	8.3	679	25	R. L. Cooper.....	2.60	399
16	do.....	8.3	693	Oct. 8	Gray and Powers.....	2.80	461
20	do.....	8.4	729	29	J. E. Powers.....	2.65	432
22	do.....	8.5	853	Dec. 10	do.....	2.70	445
24	do.....	8.7	919				
28	do.....	9.8	2,060	1913.			
30	do.....	9.5	1,780	Jan. 23 ^a	J. E. Powers.....	2.88	454
May 2	do.....	9.5	1,820	Feb. 14	do.....	2.75	454
6	do.....	10.1	2,390	Mar. 25	do.....	3.31	765
9	do.....	10.4	2,690	Apr. 2	do.....	3.41	906
12	do.....	10.9	3,200	25	do.....	4.35	1,620
14	do.....	11.2	3,560	May 26	do.....	3.55	988
18	do.....	11.8	4,080	June 26	do.....	3.49	977
20	do.....	11.4	3,760	Aug. 20	Gray and Powers.....	2.17	274
22	do.....	10.1	2,160				

^a Ice present.

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889.												
1.....				1.31	1.49	8.45	9.10	12.04	12.80	9.25	7.78	7.80
2.....				1.25	1.40	9.50	9.19	11.84	12.94	9.05	7.60	7.65
3.....				1.30	1.54	8.50	9.29	11.61	12.80	8.91	7.69	7.63
4.....				1.32	1.63	8.51	9.30	11.58	12.37	8.74	7.64	7.62
5.....				1.37	1.51	8.57	9.50	11.50	12.06	8.61	7.62	7.61
6.....				1.35	1.50	8.58	9.80	11.48	11.92	8.51	7.60	7.60
7.....				1.36	1.49	8.67	10.00	11.60	11.84	8.42	7.60	7.60
8.....				1.34	1.46	8.71	10.10	11.50	11.82	8.34	7.58	7.66
9.....				1.22	1.54	8.75	10.20	11.42	11.65	8.39	7.59	7.59
10.....				1.39	1.45	8.86	10.10	11.27	11.47	8.40	7.60	7.57
11.....				1.31	1.49	8.95	10.14	11.18	11.21	8.20	7.70	7.58
12.....				1.44	1.53	9.00	10.18	11.01	10.91	8.22	7.71	7.57
13.....				1.45	1.47	9.04	10.23	10.70	10.63	8.09	7.77	7.60
14.....				1.55	1.57	9.12	10.16	10.73	10.38	8.75	7.71	7.65
15.....				1.55	1.59	9.11	10.13	10.61	10.35	8.18	7.66	7.65

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889.												
16	.....	.....	.....	1.51	1.55	9.18	10.17	10.62	10.35	8.19	7.62	7.60
17	.....	.....	.....	1.45	1.57	9.04	10.30	10.83	10.32	8.05	7.61	7.64
18	.....	.....	.....	1.35	1.50	9.06	10.45	10.87	10.25	7.90	7.63	7.63
19	.....	.....	.....	1.42	1.45	9.07	10.57	10.72	10.13	8.10	7.63	7.63
20	.....	.....	.....	1.41	1.56	9.02	10.60	10.56	10.01	7.97	7.58	7.63
21	.....	.....	.....	1.49	1.51	8.96	10.54	10.53	9.97	7.95	7.56	7.71
22	.....	.....	.....	1.59	1.53	8.94	10.40	10.75	10.09	8.09	7.59	7.71
23	.....	.....	.....	1.47	1.63	8.95	10.40	11.05	10.05	7.87	7.63	7.69
24	.....	.....	.....	1.53	1.60	8.94	10.47	11.24	10.05	8.08	7.58	7.68
25	.....	.....	.....	1.47	1.78	8.88	10.64	11.49	10.03	8.09	7.58	7.70
26	.....	.....	.....	1.47	1.74	8.82	11.06	11.69	9.92	7.89	7.58	7.70
27	.....	.....	.....	1.50	1.68	8.80	11.23	11.81	9.73	7.86	7.76	7.71
28	.....	.....	.....	1.48	1.66	8.79	11.68	12.07	9.63	7.75	7.59	7.76
29	.....	.....	.....	1.55	.....	8.81	11.95	12.24	9.54	8.51	7.56	7.81
30	.....	.....	.....	1.55	.....	8.82	12.10	12.34	.....	8.05	7.73	7.76
31	.....	.....	.....	1.61	.....	8.96	.....	12.55	.....	7.73	7.75	.....
1889-90.												
1	7.76	7.93	8.26	7.96	8.52	7.98	9.05	10.77	13.22	10.75	9.20	8.75
2	7.76	7.88	8.28	7.85	8.55	8.25	9.18	10.93	13.20	10.60	9.40	9.30
3	7.76	7.90	8.28	7.95	8.53	8.40	9.21	11.23	13.00	10.55	9.30	8.76
4	7.74	7.95	8.34	8.18	8.57	8.50	9.12	11.48	12.93	10.35	9.40	8.65
5	7.75	7.85	8.33	8.30	8.68	8.58	9.10	11.77	12.85	10.35	9.25	8.60
6	7.74	7.82	8.49	8.29	8.72	9.12	9.10	11.93	12.60	11.10	9.15	8.60
7	7.74	7.78	8.56	8.25	8.60	9.00	9.19	12.13	12.35	10.05	9.10	8.60
8	7.75	7.83	8.58	8.20	8.57	8.85	9.38	12.26	12.10	10.10	9.05	8.60
9	7.75	7.94	8.61	8.37	8.45	9.30	9.56	12.35	11.95	10.15	9.05	8.60
10	7.76	8.00	8.61	8.38	8.48	9.27	9.67	12.53	11.67	10.30	9.00	8.55
11	7.78	8.00	8.55	8.39	8.57	9.13	9.80	12.55	11.60	10.10	8.95	8.55
12	7.79	7.97	8.56	8.38	8.30	8.98	9.90	12.40	11.68	10.25	8.90	8.55
13	7.80	7.95	8.65	8.22	8.00	8.76	10.26	12.40	11.70	10.20	8.80	8.50
14	7.84	7.95	8.54	8.24	8.28	8.62	10.68	12.43	11.80	10.05	8.80	8.50
15	7.86	8.03	8.53	8.23	8.40	8.66	11.00	12.51	11.85	9.85	8.80	8.50
16	7.92	7.95	8.55	8.18	8.45	8.64	11.20	12.50	11.95	9.75	8.75	8.50
17	7.95	7.96	8.55	8.12	8.57	8.67	11.20	12.40	11.93	9.75	8.75	8.50
18	7.92	8.05	8.56	8.18	8.33	8.73	11.07	12.65	11.83	9.75	8.75	8.50
19	7.91	8.11	8.59	8.16	8.60	8.86	10.95	12.76	11.80	9.70	8.80	8.50
20	7.91	8.20	8.50	8.20	8.65	8.90	10.85	12.93	11.73	9.58	10.30	8.50
21	7.90	8.14	8.40	7.97	8.68	8.87	10.89	13.00	11.70	9.50	9.05	8.55
22	7.90	8.18	8.08	8.14	8.70	8.89	10.83	13.15	11.65	9.48	8.95	8.55
23	7.91	8.19	8.26	8.10	8.68	8.90	10.69	13.26	11.45	9.40	8.85	8.55
24	7.92	8.23	8.19	8.20	8.56	8.92	10.63	13.30	11.30	9.30	8.80	8.55
25	7.95	8.30	8.58	8.16	8.40	8.93	10.67	13.31	11.30	9.40	8.85	8.55
26	7.96	8.31	8.47	8.22	8.24	8.99	10.86	13.33	11.20	9.30	8.80	8.55
27	7.95	8.39	8.41	8.32	8.18	9.02	10.85	13.36	11.20	9.30	8.80	8.55
28	7.96	8.36	8.64	8.45	8.17	8.95	10.85	13.42	11.15	9.20	8.75	8.55
29	7.95	8.34	8.56	8.53	.....	8.94	10.65	13.46	11.05	9.20	8.75	8.50
30	7.95	8.33	8.48	8.47	.....	8.96	10.70	13.47	10.85	9.20	8.75	8.55
31	7.98	.....	8.06	8.53	.....	9.00	.....	13.42	.....	9.15	8.75	.....
1890-91.												
1	8.55	8.6	8.75	8.8	8.65	8.8	8.9	13.2	12.35	11.9	9.45	7.95
2	8.55	8.6	8.75	8.8	8.65	9.6	8.9	13.4	12.3	11.8	9.4	8.2
3	8.55	8.6	8.75	8.75	8.65	9.5	8.9	13.6	12.3	11.65	9.45	8.15
4	8.55	8.6	8.75	8.75	8.65	9.15	8.9	13.75	12.25	11.6	9.9	8.1
5	8.55	8.65	8.8	8.7	8.65	8.95	8.9	13.8	12.15	11.6	9.95	8.05
6	8.55	8.65	8.8	8.7	8.65	8.95	9.15	13.8	12.0	11.4	9.9	8.0
7	8.55	8.7	8.8	8.7	8.6	8.9	9.2	14.1	11.85	11.3	9.85	8.0
8	8.55	8.75	8.8	8.7	8.6	8.9	9.7	14.45	11.9	11.2	9.75	8.0
9	8.6	8.75	8.75	8.65	8.6	8.85	9.3	15.15	12.0	11.1	9.6	8.0
10	8.6	8.75	8.75	8.65	8.6	8.85	9.4	15.3	12.1	11.0	9.5	8.0
11	8.6	8.75	8.7	8.65	8.6	8.85	9.8	15.2	12.4	11.9	9.35	8.0
12	8.65	8.75	8.75	8.65	8.65	8.8	10.2	14.4	13.1	10.8	9.25	7.95
13	8.65	8.7	8.75	8.65	8.65	8.8	10.3	13.8	13.45	10.55	9.2	7.95
14	8.7	8.7	8.8	8.7	8.65	8.8	10.35	13.65	13.55	10.3	9.1	7.95
15	8.7	8.7	8.8	8.7	8.65	8.8	10.7	13.55	13.6	10.1	9.0	7.95
16	8.7	8.65	8.8	8.7	8.65	8.85	10.5	13.35	13.45	10.2	8.9	7.95
17	8.7	8.65	8.8	8.7	8.7	9.0	10.6	13.0	13.05	10.05	8.9	7.95
18	8.7	8.65	8.75	8.65	8.8	9.0	10.6	12.9	12.7	10.05	8.95	7.95
19	8.65	8.6	8.75	8.65	8.8	8.95	10.6	12.75	12.4	10.0	8.85	7.95
20	8.65	8.65	8.75	8.65	8.7	9.0	10.65	12.5	12.35	10.0	8.75	7.95

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1890-91.												
21.....	8.65	8.7	8.8	8.6	8.65	9.05	10.75	12.6	12.6	9.85	8.6	7.95
22.....	8.65	8.8	8.8	8.6	8.65	9.1	10.6	12.6	12.6	9.85	8.5	8.15
23.....	8.65	8.85	8.8	8.6	8.75	9.4	10.75	12.55	12.8	9.6	8.35	8.55
24.....	8.65	8.85	8.8	8.6	9.25	9.35	10.8	12.6	13.0	9.7	8.15	8.3
25.....	8.6	8.85	8.8	8.6	8.9	9.25	11.25	12.45	13.0	9.5	8.05	8.6
25.....	8.6	8.85	8.75	8.6	8.8	9.15	11.8	12.25	13.0	9.4	8.05	8.9
27.....	8.6	8.8	8.75	8.6	8.75	9.1	12.2	12.2	12.95	9.4	8.0	10.1
28.....	8.6	8.8	8.8	8.6	8.75	9.1	12.5	12.2	12.5	8.55	8.0	9.1
29.....	8.6	8.8	8.8	8.6	.....	9.05	12.75	12.25	12.25	9.5	8.0	8.6
30.....	8.6	8.75	8.8	8.65	.....	9.0	13.1	12.25	12.05	.45	8.0	8.1
31.....	8.6	.....	8.8	8.65	.....	9.0	.....	12.35	.....	9.45	7.95	.....
1891-92.												
1.....	7.7	9.1	8.9	8.4	8.6	8.75	8.95	12.85	12.35	9.55	7.8	7.4
2.....	7.6	9.1	9.0	8.35	8.5	8.75	9.0	13.85	12.1	9.35	7.9	7.4
3.....	10.75	9.05	8.95	8.4	8.35	8.85	9.15	13.1	11.9	9.15	7.85	7.45
4.....	11.3	9.05	8.7	8.4	8.35	8.9	9.15	13.1	11.8	9.0	7.8	7.45
5.....	11.15	9.05	8.35	8.45	8.5	9.0	9.1	13.05	11.85	8.9	7.7	7.5
6.....	10.95	9.05	8.0	8.3	8.55	9.0	9.15	12.8	12.0	8.75	7.65	7.45
7.....	10.8	9.0	8.35	8.35	8.5	9.0	9.25	12.5	11.9	8.65	7.6	7.45
8.....	10.6	9.0	8.2	8.4	8.5	9.0	9.35	12.3	11.7	8.6	7.6	7.45
9.....	10.45	9.0	8.1	8.4	8.45	9.05	9.5	12.1	11.75	8.9	7.6	7.4
10.....	10.35	8.95	8.3	8.4	8.45	9.1	10.0	12.0	11.95	8.9	7.65	7.4
11.....	10.15	8.95	8.4	8.4	8.45	9.2	10.3	11.9	11.9	8.55	7.65	7.45
12.....	10.15	8.95	8.4	8.35	8.5	9.3	10.9	11.9	11.7	8.4	7.6	7.45
13.....	10.05	8.9	8.4	8.45	8.5	9.5	11.2	12.0	11.4	8.3	7.6	7.45
14.....	10.0	8.9	8.6	8.4	8.5	9.6	11.3	12.2	11.1	8.3	7.55	7.45
15.....	9.9	8.9	8.6	8.4	8.5	9.65	11.6	12.2	11.0	8.2	7.55	7.45
16.....	9.85	8.9	8.55	8.4	8.45	9.7	11.81	12.2	10.85	8.25	7.55	7.45
17.....	9.8	8.8	8.55	8.3	8.45	9.65	12.05	12.15	10.85	8.35	7.5	7.45
18.....	9.76	8.75	8.5	8.3	8.5	9.15	12.22	12.05	10.75	8.4	7.5	7.45
19.....	9.7	8.7	8.5	8.25	8.55	9.45	12.4	11.95	10.65	8.4	7.5	7.45
20.....	9.7	8.7	8.45	8.3	8.6	9.45	12.4	11.95	10.6	8.1	7.5	7.45
21.....	9.65	8.7	8.45	8.3	8.6	9.4	12.1	12.1	10.55	8.0	7.45	7.45
22.....	9.6	8.7	8.4	8.25	8.6	9.4	11.8	12.25	10.5	8.0	7.5	7.45
23.....	9.45	8.7	8.45	8.3	8.65	9.25	11.5	12.4	10.5	8.0	7.5	7.45
24.....	9.35	8.6	8.45	8.4	8.7	9.2	11.3	12.45	10.5	8.0	7.5	7.45
25.....	9.35	8.4	8.45	8.25	8.65	9.15	11.2	12.65	10.6	8.0	7.5	7.45
26.....	9.3	8.55	8.4	8.2	8.75	9.05	11.6	12.9	10.4	8.0	7.5	7.5
27.....	9.25	8.7	8.4	8.35	8.75	9.0	11.9	13.0	10.2	7.95	7.5	7.5
28.....	9.25	8.6	8.5	8.35	8.7	9.0	12.05	13.0	10.05	7.85	7.5	7.45
29.....	9.25	8.8	8.35	8.4	8.7	9.0	12.25	12.95	9.8	7.85	7.5	7.45
30.....	9.2	8.8	8.3	8.45	.....	9.0	12.5	12.7	9.7	7.9	7.45	7.45
31.....	9.15	.....	8.4	8.6	.....	9.0	.....	12.5	.....	7.9	7.45	.....
1892-93.												
1.....	7.45	7.8	8.2	7.9	8.15	8.05	8.75	10.65	11.5	8.25	7.7	7.9
2.....	7.45	7.8	8.3	7.9	8.15	8.05	8.85	10.55	11.6	8.15	8.5	7.8
3.....	7.45	7.8	8.35	8.0	8.15	8.2	9.1	10.2	11.6	8.0	8.5	7.75
4.....	7.45	7.8	8.2	8.0	8.05	8.3	9.25	10.0	11.6	7.85	7.8	8.0
5.....	7.5	7.8	8.1	8.0	8.15	8.3	9.35	9.9	11.6	7.75	7.75	7.9
6.....	7.5	7.9	8.05	8.0	8.25	8.25	9.45	10.0	11.6	7.7	7.6	7.8
7.....	7.5	7.9	8.1	8.05	8.2	8.3	9.6	10.15	11.5	7.6	7.55	7.85
8.....	7.5	7.9	7.8	8.05	8.15	8.3	9.7	10.05	11.3	7.6	7.6	7.85
9.....	7.5	7.9	7.5	8.0	8.2	8.35	9.75	9.9	11.3	7.6	7.65	7.8
10.....	7.5	7.9	7.9	8.05	8.25	8.4	9.65	9.75	11.5	7.55	7.55	7.8
11.....	7.5	7.85	7.85	8.0	8.3	8.25	9.6	9.65	11.6	9.3	7.5	7.8
12.....	7.5	7.95	7.9	8.0	8.2	8.15	9.5	9.7	11.6	7.7	7.45	7.75
13.....	7.55	8.0	7.85	7.95	8.3	8.2	9.45	10.25	11.5	7.5	7.4	7.7
14.....	7.6	8.05	7.95	7.9	8.3	8.2	9.3	11.05	11.2	7.45	7.4	7.75
15.....	7.6	8.05	7.95	7.95	8.1	8.4	9.2	11.65	11.1	7.4	7.4	7.7
16.....	7.65	8.05	7.9	8.0	8.05	8.25	9.1	11.7	10.9	7.4	7.4	7.7
17.....	7.65	8.05	7.9	8.0	8.15	8.2	9.05	11.75	10.6	7.35	7.4	7.75
18.....	7.65	7.9	7.95	7.95	8.2	8.25	9.0	11.9	10.4	7.35	7.5	7.95
19.....	7.65	7.75	7.9	7.9	8.25	8.35	9.1	12.4	10.3	7.35	7.45	7.85
20.....	7.7	8.0	7.9	7.85	8.25	8.4	9.2	12.65	10.1	7.3	7.7	7.85
21.....	7.7	8.05	7.95	7.9	8.25	8.55	9.45	12.6	9.9	7.35	7.65	7.85
22.....	7.7	8.1	7.9	8.05	8.25	8.7	9.55	12.45	9.75	7.5	7.7	7.8
23.....	7.75	8.1	7.85	7.95	8.2	8.7	9.6	12.2	9.6	7.4	7.6	7.8
24.....	7.75	8.1	7.85	7.95	8.2	8.7	9.85	11.85	9.4	7.45	7.55	7.8
25.....	7.75	8.05	7.95	7.95	8.1	8.65	10.4	11.55	9.15	7.5	7.6	7.8

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1892-93.												
26	7.75	7.85	7.9	8.0	8.2	8.5	10.55	11.4	8.95	7.55	7.6	7.8
27	7.75	7.8	7.9	8.0	8.2	8.4	10.55	11.4	8.8	7.8	7.7	8.15
28	7.75	7.95	7.95	8.0	8.0	8.4	10.4	11.5	8.7	7.5	8.2	8.25
29	7.8	8.0	8.0	8.0	-----	8.4	10.3	11.35	8.6	7.4	7.8	8.25
30	7.8	8.15	8.0	8.0	-----	8.55	10.35	11.3	8.45	7.45	7.85	8.2
31	7.8	-----	7.95	8.05	-----	8.65	-----	11.35	-----	7.6	8.05	-----
1893-94.												
1	8.20	8.00	-----	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
2	8.15	8.00	-----	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
3	8.20	7.95	-----	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
4	8.20	7.95	8.02	8.00	7.95	-----	-----	-----	-----	-----	-----	-----
5	8.20	-----	8.01	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
6	8.15	-----	7.98	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
7	8.20	-----	7.98	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
8	8.10	-----	8.01	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
9	8.05	-----	8.00	7.95	7.95	-----	-----	-----	-----	-----	-----	-----
10	8.10	-----	7.98	7.90	7.95	-----	-----	-----	-----	-----	-----	-----
11	8.05	-----	7.97	7.90	7.90	-----	-----	-----	-----	-----	-----	-----
12	8.00	-----	7.97	7.90	7.90	-----	-----	-----	-----	-----	-----	-----
13	8.00	-----	7.95	7.90	7.95	-----	-----	-----	-----	-----	-----	-----
14	8.05	-----	7.98	7.90	8.00	-----	-----	-----	-----	-----	-----	-----
15	8.05	-----	8.00	7.90	8.00	-----	-----	-----	-----	-----	-----	-----
16	8.00	-----	7.96	7.90	8.00	-----	-----	-----	-----	-----	-----	7.10
17	8.00	-----	7.95	7.95	8.00	-----	-----	-----	-----	-----	-----	7.10
18	8.00	-----	7.94	7.95	8.00	-----	-----	-----	-----	-----	-----	7.10
19	8.00	-----	7.92	7.95	8.00	-----	-----	-----	-----	-----	-----	7.10
20	8.00	-----	7.93	7.95	8.05	-----	-----	-----	-----	-----	-----	7.10
21	8.00	-----	7.93	7.95	8.00	-----	-----	-----	-----	-----	-----	7.10
22	8.00	-----	7.95	7.95	8.00	-----	-----	-----	-----	-----	-----	7.10
23	8.05	-----	7.94	7.95	8.00	-----	-----	-----	-----	-----	-----	-----
24	8.00	-----	7.95	7.95	8.00	-----	-----	-----	-----	-----	-----	-----
25	8.00	-----	7.95	7.95	8.00	-----	-----	-----	-----	-----	-----	-----
26	8.00	-----	7.95	7.95	8.00	-----	-----	-----	-----	-----	-----	-----
27	8.00	-----	7.94	8.00	8.00	-----	-----	-----	-----	-----	-----	-----
28	8.00	-----	7.95	8.00	8.00	-----	-----	-----	-----	-----	-----	-----
29	8.00	-----	7.94	7.95	-----	-----	-----	-----	-----	-----	-----	-----
30	8.00	-----	7.95	7.95	-----	-----	-----	-----	-----	-----	-----	7.10
31	8.00	-----	7.92	7.95	-----	-----	-----	-----	-----	-----	-----	-----
1894-95.												
1	9.55	7.08	8.00	7.95	8.10	8.55	9.90	11.07	11.28	8.95	9.73	9.38
2	8.08	7.08	8.00	7.93	8.05	8.45	9.75	11.95	11.30	9.10	10.03	9.18
3	8.05	7.08	8.00	8.08	7.93	8.48	9.15	10.48	11.48	8.93	9.88	9.08
4	8.03	7.08	7.09	7.98	7.90	8.50	8.95	10.18	11.73	8.83	9.78	8.98
5	8.02	7.08	7.09	7.95	7.90	8.50	8.58	9.83	11.75	8.73	9.78	8.88
6	8.01	7.08	8.00	7.98	-----	8.48	8.33	9.83	11.83	8.73	9.73	8.78
7	8.00	7.08	7.09	8.03	-----	8.57	8.67	9.98	11.93	8.38	9.63	8.68
8	7.09	7.09	7.09	7.93	-----	8.68	9.08	9.93	11.95	8.58	9.48	8.60
9	7.09	7.08	7.09	7.95	-----	8.78	9.50	9.93	12.03	9.30	9.23	8.53
10	7.08	7.08	7.09	7.98	7.93	8.88	9.75	10.03	12.20	9.85	9.20	8.43
11	7.08	7.09	7.09	7.93	7.93	8.75	9.90	10.18	12.38	9.68	9.30	8.40
12	7.08	7.09	8.00	8.03	7.98	8.65	10.25	10.48	12.43	9.78	9.00	8.35
13	7.08	7.09	8.00	8.03	8.03	8.63	10.60	10.85	12.35	9.58	9.25	8.30
14	7.08	7.09	8.00	8.05	8.00	8.55	11.00	11.13	12.15	9.53	10.05	8.25
15	7.08	7.09	8.01	8.08	8.08	8.53	11.17	11.23	11.80	9.93	9.60	8.20
16	7.08	7.09	8.01	8.13	7.95	8.48	11.33	11.18	11.48	9.95	9.23	8.15
17	7.08	8.00	8.00	8.23	7.93	8.43	11.25	11.13	11.30	9.80	8.95	8.15
18	7.08	8.00	7.09	8.13	8.05	8.50	11.38	11.88	11.05	9.65	8.85	8.13
19	7.09	8.00	8.02	8.00	8.13	8.48	11.63	10.63	10.85	9.63	8.83	8.13
20	-----	7.09	8.01	8.03	8.13	8.48	11.88	10.48	10.60	9.60	8.73	8.17
21	7.08	7.09	8.00	8.05	8.13	8.50	11.95	10.65	10.25	9.65	8.63	8.10
22	7.08	7.09	8.01	8.07	8.05	8.50	11.78	10.85	9.93	9.78	8.53	8.10
23	7.09	8.00	8.01	8.13	8.18	8.53	11.68	10.00	9.65	9.82	8.48	8.10
24	8.03	8.00	8.03	8.08	8.30	8.63	11.75	11.03	9.45	10.00	8.58	8.50
25	8.04	8.00	8.01	8.03	8.43	8.68	11.45	11.08	9.28	9.88	8.58	8.13
26	8.04	7.09	8.00	7.98	8.48	8.80	11.43	11.10	9.15	9.80	8.58	8.20
27	7.08	7.09	7.09	8.05	8.48	8.93	11.33	11.08	9.08	9.98	8.63	8.15
28	7.08	7.09	7.09	8.03	8.53	9.03	11.18	11.13	8.98	9.80	8.78	8.13
29	7.08	8.00	7.09	8.05	-----	9.23	11.03	11.23	8.80	9.75	9.23	8.08
30	7.08	8.00	7.09	8.13	-----	9.50	11.13	11.25	8.78	9.40	9.18	8.05
31	7.08	-----	7.09	8.17	-----	9.68	-----	11.30	-----	10.65	9.28	-----

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
1.....	8.05	8.20	8.25	8.35	8.30	8.50	9.50	10.70	9.15	7.30	7.30	7.30
2.....	8.05	8.20	8.20	8.25	8.30	8.50	9.50	10.65	8.95	7.30	7.30	7.30
3.....	8.05	8.23	8.08	8.20	8.10	8.55	9.50	10.45	8.80	7.30	7.30	7.30
4.....	8.25	8.30	8.00	8.35	8.00	8.40	9.45	10.55	8.45	7.30	7.30	7.30
5.....	8.28	8.40	8.00	8.30	8.05	8.35	9.55	10.85	8.40	7.30	7.30	7.30
6.....	8.18	8.40	8.00	8.20	8.20	8.35	9.70	11.00	8.25	7.30	7.30	7.30
7.....	8.15	8.40	8.00	8.30	8.20	8.40	10.05	10.90	8.20	7.30	7.30	7.30
8.....	8.10	8.40	8.00	8.35	8.30	8.35	10.10	10.65	8.00	7.30	7.30	7.30
9.....	8.10	8.40	8.10	8.30	8.30	8.30	10.10	10.40	7.90	7.30	7.30	7.30
10.....	8.05	8.40	8.18	8.30	8.20	8.40	10.20	10.25	7.75	7.30	7.30	7.30
11.....	8.05	8.40	8.20	8.50	8.15	8.50	10.30	10.10	7.60	7.30	7.30	7.30
12.....	8.05	8.40	8.20	8.55	8.10	8.60	10.30	9.85	7.60	7.30	7.30	7.30
13.....	8.05	8.40	8.20	8.10	8.20	8.55	10.30	9.65	7.50	9.65	7.30	7.30
14.....	8.05	8.33	8.23	8.00	8.25	8.65	10.30	9.60	7.50	7.30	7.30	7.30
15.....	8.05	8.23	8.25	8.00	8.10	8.70	10.30	9.50	7.50	7.30	7.30	7.30
16.....	8.05	8.20	8.15	8.10	8.05	8.75	10.30	9.40	7.50	7.30	7.30	7.30
17.....	8.05	8.23	8.10	8.05	8.20	8.75	10.30	9.40	7.40	7.45	7.30	7.30
18.....	8.05	8.27	8.08	8.10	8.25	8.60	10.30	9.40	7.40	7.50	7.30	7.30
19.....	8.03	8.37	8.00	8.00	8.25	9.10	10.05	9.25	7.35	7.50	7.30	7.30
20.....	8.00	8.52	7.90	8.00	8.30	9.10	9.90	9.10	7.30	7.60	7.30	7.30
21.....	8.00	8.60	8.15	8.00	8.20	9.05	9.70	9.00	7.30	8.70	7.45	7.30
22.....	8.00	8.60	8.30	8.10	8.25	8.85	9.70	8.90	7.30	7.30	7.60	7.20
23.....	8.05	8.60	8.30	8.10	8.20	9.15	9.70	8.90	7.30	8.05	7.40	7.30
24.....	8.05	8.60	8.23	8.10	8.25	9.35	9.70	8.90	7.30	8.00	7.40	7.30
25.....	8.05	8.57	8.25	8.00	8.30	9.55	9.80	8.90	7.30	7.40	7.35	7.30
26.....	8.10	8.47	8.25	8.00	8.30	9.60	9.80	9.00	7.30	7.40	7.30	7.30
27.....	8.10	8.37	8.28	8.10	8.40	9.70	9.95	9.50	7.30	7.50	7.30	7.30
28.....	8.13	8.30	8.23	8.20	8.45	10.10	10.65	9.50	7.30	7.50	7.30	7.45
29.....	8.15	8.25	8.30	8.25	8.45	10.30	10.80	9.50	7.30	7.40	7.30	7.30
30.....	8.15	8.25	8.25	8.25	8.25	10.20	10.80	9.50	7.30	7.40	7.30	8.70
31.....	8.15	.....	8.25	8.30	.....	10.00	.....	9.50	7.30	7.30	7.30	.....
1896-97.												
1.....	9.3	7.5	8.1	7.7	7.7	8.1	8.8	10.85	13.85	9.9	7.6	7.6
2.....	8.65	7.4	8.1	7.7	7.7	8.25	8.75	11.15	13.9	9.8	7.6	7.6
3.....	7.45	7.4	8.0	7.7	7.8	8.2	8.7	11.25	13.75	9.75	7.6	7.7
4.....	7.5	7.3	8.0	7.7	7.85	8.2	8.7	11.6	13.35	9.65	7.5	7.6
5.....	7.5	7.3	8.0	7.7	7.9	8.05	8.75	11.55	12.95	9.6	7.45	7.55
6.....	7.5	7.3	8.0	7.7	7.9	7.95	8.7	11.35	12.45	9.5	7.4	7.5
7.....	7.5	7.3	8.0	7.7	7.9	7.9	8.9	11.35	12.1	9.35	7.5	7.5
8.....	7.5	7.3	8.0	7.7	7.9	7.9	8.9	11.3	12.1	9.55	7.55	7.5
9.....	7.5	7.4	8.0	7.7	7.9	8.1	9.05	11.4	12.1	9.7	7.6	7.5
10.....	7.5	7.45	7.9	7.7	7.9	8.2	9.1	11.65	12.1	9.5	7.5	7.5
11.....	7.5	7.5	7.9	7.7	7.95	8.05	9.15	12.0	12.3	9.5	7.5	7.6
12.....	7.5	7.5	7.9	7.7	7.95	8.25	9.3	12.0	12.35	9.55	7.4	7.6
13.....	7.5	7.6	7.9	7.7	7.9	8.25	9.3	11.85	12.45	9.65	7.4	7.65
14.....	7.5	7.4	7.9	7.8	7.9	8.3	9.3	11.9	12.4	9.65	7.35	7.6
15.....	7.5	7.4	7.9	7.9	7.95	8.25	9.45	11.95	12.4	10.36	7.3	7.6
16.....	7.5	7.55	7.9	7.9	7.8	8.3	9.5	12.15	12.35	10.0	7.4	7.7
17.....	7.5	7.95	7.85	7.9	7.95	8.4	9.55	12.2	12.25	9.5	7.5	7.7
18.....	7.5	8.3	7.8	7.9	7.9	8.4	9.95	12.25	12.0	9.5	7.45	7.75
19.....	7.5	8.4	7.8	7.95	7.9	8.4	10.3	12.55	11.7	9.35	7.4	7.8
20.....	8.0	8.4	7.8	8.0	7.9	8.5	10.35	13.05	11.2	9.05	7.4	7.8
21.....	7.85	8.35	7.8	8.0	7.85	8.6	10.7	13.4	11.0	8.8	8.9	7.8
22.....	7.7	8.5	7.8	8.0	7.85	8.6	10.7	13.4	10.75	8.7	7.6	7.85
23.....	7.7	8.5	7.8	8.0	7.9	8.45	10.75	13.2	10.5	8.55	7.6	7.9
24.....	7.7	8.35	7.8	8.0	7.8	8.2	10.6	13.1	10.45	8.3	7.6	7.85
25.....	7.7	8.25	7.8	8.0	7.8	8.45	10.45	13.1	10.4	8.1	7.55	7.95
26.....	7.7	8.2	7.8	7.85	8.15	8.45	10.3	13.5	10.4	8.0	7.5	8.0
27.....	7.7	8.2	7.8	7.7	7.9	8.6	10.5	13.55	10.4	8.0	7.5	8.0
28.....	7.7	8.1	.....	7.7	8.0	8.8	10.75	13.9	10.3	7.85	7.55	8.0
29.....	7.7	8.1	.....	7.7	.....	8.95	10.85	14.0	10.2	7.8	7.6	8.1
30.....	7.7	8.1	.....	7.7	.....	9.0	10.75	13.8	10.85	7.75	7.6	8.1
31.....	7.7	.....	.....	7.7	.....	8.85	.....	13.8	.....	7.65	7.6	.....
1897-98.												
1.....	8.2	9.5	8.7	8.4	8.0	8.35	8.5	11.05	10.95	10.2	8.95	7.7
2.....	8.3	9.5	8.5	8.3	8.0	8.3	8.6	11.0	11.0	10.0	8.85	7.7
3.....	8.3	9.5	8.5	8.3	8.0	8.25	8.6	10.95	11.05	9.9	8.8	7.7
4.....	9.05	9.5	8.4	8.3	8.0	8.25	8.65	10.7	11.5	9.55	8.6	7.7
5.....	8.45	9.6	8.2	8.3	8.0	8.35	8.7	10.5	11.7	9.7	8.6	7.7

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
6.....	8.3	9.6	8.3	8.3	8.0	8.4	8.8	10.4	11.7	9.55	8.6	7.7
7.....	8.6	9.5	8.2	8.2	8.0	8.45	8.9	10.35	11.6	9.5	8.6	7.7
8.....	9.6	9.5	8.25	8.2	8.0	8.5	8.9	10.25	11.6	9.8	8.4	7.7
9.....	9.8	9.5	8.4	8.2	8.0	8.6	8.95	10.15	11.4	10.2	8.4	7.7
10.....	9.8	9.5	8.4	8.2	8.0	8.6	9.0	10.0	11.3	10.45	8.3	7.9
11.....	10.1	9.5	8.3	8.2	8.0	8.7	9.4	9.95	11.25	10.3	8.0	7.9
12.....	10.2	9.5	8.4	8.3	8.0	8.75	9.8	9.8	11.05	10.35	8.0	7.9
13.....	10.15	9.5	8.3	8.3	8.0	8.85	9.95	9.7	10.9	11.2	7.9	7.9
14.....	10.1	9.5	8.1	8.2	8.0	8.8	10.1	9.65	10.6	11.3	8.0	7.9
15.....	10.15	9.5	8.2	8.3	8.0	8.75	10.4	9.6	10.5	11.1	8.0	7.9
16.....	10.2	9.5	8.3	8.3	8.0	8.7	10.6	9.6	10.3	11.7	7.9	7.9
17.....	10.2	9.4	8.3	8.25	8.0	8.6	10.9	9.65	10.3	11.55	7.9	7.9
18.....	10.25	9.35	8.4	8.0	8.0	8.5	11.0	9.8	10.5	11.9	7.9	7.8
19.....	10.3	9.2	8.3	8.0	8.05	8.55	11.0	9.7	10.75	11.8	7.9	7.8
20.....	10.25	9.0	8.3	8.0	8.1	8.6	11.0	9.65	11.1	11.55	7.8	7.8
21.....	10.15	9.0	8.4	7.95	8.15	8.55	11.05	9.8	11.45	11.5	7.7	7.8
22.....	9.55	8.9	8.3	7.9	8.2	8.5	11.1	9.7	11.4	11.0	7.7	7.8
23.....	10.15	8.85	8.2	7.95	8.25	8.5	11.1	9.7	11.3	10.7	7.7	7.8
24.....	9.95	8.8	8.3	8.0	8.35	8.6	10.85	9.6	11.3	10.4	7.7	7.8
25.....	9.7	8.7	8.4	8.0	8.4	8.55	10.8	9.55	11.2	10.1	7.7	7.7
26.....	9.7	8.7	8.3	8.0	8.35	8.55	10.9	9.6	11.2	9.9	7.7	7.7
27.....	9.9	8.7	8.3	8.0	8.5	8.6	10.95	9.85	11.0	9.55	7.7	7.7
28.....	10.15	8.7	8.3	8.0	8.5	8.6	10.8	10.2	10.85	9.15	7.7	7.7
29.....	9.9	8.7	8.3	8.0	-----	8.5	10.8	10.35	10.6	8.95	7.7	7.7
30.....	9.6	8.7	8.3	8.0	-----	8.5	10.8	10.5	10.35	8.7	7.7	7.7
31.....	9.5	-----	8.4	8.0	-----	8.5	-----	10.85	-----	9.1	7.7	-----
1898-99.												
1.....	7.7	7.75	7.75	7.5	7.6	7.7	8.4	9.2	7.9	7.2	7.2	7.0
2.....	7.5	7.8	7.8	7.6	7.6	7.7	8.3	9.0	7.85	7.2	7.25	7.0
3.....	7.5	7.85	7.8	7.6	7.6	7.8	8.3	8.8	7.8	7.15	7.2	7.0
4.....	7.5	7.9	7.8	7.6	7.7	7.8	8.3	8.6	7.8	7.1	7.2	7.0
5.....	7.5	7.9	7.8	7.6	7.7	7.85	8.2	8.45	7.8	7.1	7.3	7.0
6.....	7.5	7.9	7.8	7.7	7.7	7.9	8.2	8.25	7.6	7.1	7.25	7.0
7.....	7.5	7.9	7.8	7.85	7.7	8.0	8.2	8.2	7.35	7.1	7.2	7.0
8.....	7.5	7.9	7.8	7.9	7.8	8.05	8.1	8.2	7.0	7.1	7.2	7.1
9.....	7.8	7.9	7.8	7.9	7.8	8.15	8.1	8.2	6.9	7.1	7.2	7.1
10.....	7.8	7.9	7.8	7.9	7.85	8.2	8.1	8.2	6.85	7.1	7.3	7.1
11.....	7.75	7.9	7.8	7.9	7.9	8.2	8.1	8.2	6.7	7.05	7.25	7.1
12.....	7.7	7.9	7.8	7.9	7.8	8.25	8.2	8.3	6.6	7.0	7.2	7.1
13.....	7.6	7.9	7.9	7.9	7.9	8.3	8.5	8.65	6.7	7.0	7.2	7.15
14.....	7.6	7.95	7.9	7.8	7.8	8.35	8.65	8.8	6.95	7.1	7.2	7.2
15.....	7.6	7.9	7.9	7.8	7.8	8.5	8.8	9.0	7.0	7.25	7.25	7.3
16.....	7.55	7.95	7.9	7.7	7.8	8.65	8.8	9.1	7.0	7.4	7.3	8.15
17.....	7.5	8.0	7.9	7.7	7.8	8.7	8.85	9.2	7.0	7.6	7.3	7.9
18.....	7.5	8.0	7.9	7.7	7.7	8.7	9.05	9.2	7.0	7.6	7.15	7.85
19.....	7.5	7.9	7.9	7.7	7.7	8.7	9.35	9.15	7.0	8.1	7.1	7.8
20.....	7.5	7.85	7.9	7.7	7.7	8.65	9.35	9.0	7.0	7.9	7.1	7.65
21.....	7.5	7.75	7.8	7.7	7.7	8.6	9.3	9.0	7.0	7.6	7.1	7.6
22.....	7.5	7.7	7.8	7.7	7.7	8.45	9.25	8.8	7.0	7.6	7.1	7.5
23.....	7.5	7.7	7.75	7.7	7.7	8.4	9.2	8.75	7.0	7.55	7.0	7.5
24.....	7.5	7.6	7.75	7.7	7.7	8.3	9.2	8.5	7.1	7.5	7.0	7.5
25.....	7.55	7.6	7.7	7.6	7.7	8.3	9.3	8.2	7.1	7.45	7.0	7.4
26.....	7.6	7.6	7.6	7.6	7.7	8.3	9.4	8.2	7.1	7.35	7.0	7.4
27.....	7.6	7.6	7.6	7.6	7.7	8.3	9.4	8.1	7.0	7.2	7.0	7.3
28.....	7.6	7.7	7.55	7.6	7.7	8.35	9.3	8.1	7.15	7.15	7.0	7.3
29.....	7.6	7.7	7.5	7.6	-----	8.4	9.2	8.1	7.2	7.1	7.0	7.3
30.....	7.7	7.7	7.5	7.6	-----	8.35	9.2	8.0	7.2	7.1	7.0	7.3
31.....	7.7	-----	7.5	7.6	-----	8.4	-----	8.0	-----	7.2	7.0	-----
1899-1900.												
1.....	7.3	7.6	7.85	7.7	7.8	7.9	7.8	7.8	11.9	7.75	7.1	6.9
2.....	7.3	7.6	7.85	7.7	7.8	8.05	7.8	7.9	11.75	7.7	7.1	6.9
3.....	7.35	7.6	7.8	7.7	7.8	8.4	7.8	8.1	11.65	7.7	7.0	7.6
4.....	7.4	7.6	7.8	7.7	7.8	8.35	7.8	8.15	11.45	7.75	7.0	7.45
5.....	7.4	7.65	8.0	7.7	7.8	8.3	7.8	8.2	11.4	7.75	7.0	7.4
6.....	7.4	7.7	7.85	7.7	7.8	8.3	7.9	8.25	11.35	7.7	7.0	7.2
7.....	7.4	7.75	7.7	7.7	7.85	8.3	7.9	8.25	11.3	7.7	7.0	7.15
8.....	7.4	7.8	7.7	7.7	7.9	8.3	7.9	8.2	11.3	7.6	7.0	7.1
9.....	7.4	7.8	7.8	7.65	7.8	8.3	7.9	8.45	11.2	7.55	7.0	7.1
10.....	7.4	7.8	8.0	7.6	7.8	8.3	7.9	8.9	11.2	7.45	7.0	7.1

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
11.....	7.4	7.8	7.6	7.5	7.8	8.3	7.9	9.35	11.0	7.3	7.0	7.1
12.....	7.4	7.8	7.6	7.5	7.8	8.3	7.8	9.6	10.85	7.2	7.0	7.3
13.....	7.4	7.8	7.6	7.6	7.8	8.3	7.8	9.95	10.6	7.2	7.0	7.4
14.....	7.4	7.8	7.7	7.65	7.8	8.3	7.8	10.1	10.35	7.2	7.0	7.35
15.....	7.5	7.85	7.6	7.7	7.8	8.3	7.8	10.1	10.2	7.15	7.0	7.25
16.....	7.5	7.9	7.6	7.8	7.8	8.3	7.8	10.1	10.05	7.1	7.0	7.2
17.....	7.5	7.9	7.7	7.8	7.8	8.3	7.8	10.0	9.6	7.1	7.0	7.2
18.....	7.5	7.9	7.7	7.8	7.8	8.3	7.75	9.9	9.2	7.1	7.0	7.2
19.....	7.5	7.9	7.7	7.85	7.8	8.3	7.7	10.3	9.05	7.1	7.0	7.2
20.....	7.5	7.9	7.7	7.9	7.8	8.3	7.6	11.3	8.85	7.0	7.0	7.2
21.....	7.5	7.95	7.7	7.9	7.8	8.05	7.6	10.45	8.65	7.0	7.0	7.2
22.....	7.5	8.0	7.7	7.9	7.8	8.0	7.6	11.15	8.5	7.0	6.95	7.2
23.....	7.5	8.0	7.7	7.85	7.8	7.9	7.6	11.0	8.5	7.05	6.9	7.2
24.....	7.5	8.0	7.7	7.8	7.8	7.85	7.6	10.8	8.4	7.1	6.9	7.1
25.....	7.5	8.1	7.7	7.8	7.8	7.8	7.7	10.8	8.25	7.1	6.9	7.15
26.....	7.5	8.1	7.7	7.8	7.8	7.8	7.75	10.9	8.1	7.1	6.9	7.2
27.....	7.5	8.0	7.7	7.8	7.8	7.8	7.8	11.35	8.0	7.1	6.9	7.2
28.....	7.5	8.0	7.7	7.8	7.8	7.8	7.8	11.65	7.9	7.1	6.9	7.2
29.....	7.6	7.9	7.7	7.8	-----	7.8	7.8	11.75	7.8	7.1	6.9	7.2
30.....	7.6	7.9	7.7	7.8	-----	7.8	7.8	12.0	7.8	7.1	6.9	7.2
31.....	7.6	-----	7.7	7.85	-----	7.8	-----	11.95	-----	7.1	6.9	-----
1900-1901.												
1.....	7.2	7.3	7.6	7.5	7.7	8.1	7.6	10.1	10.95	7.95	7.7	7.55
2.....	7.2	7.2	7.55	7.5	7.7	8.1	7.65	10.55	10.7	7.8	7.65	7.5
3.....	7.2	7.2	7.45	7.5	7.7	8.1	7.7	10.75	10.55	7.8	7.5	7.55
4.....	7.2	7.2	7.4	7.5	7.7	8.1	7.7	10.9	10.35	7.6	7.5	7.6
5.....	7.2	7.2	7.4	7.45	7.7	8.1	7.7	10.4	10.15	7.7	7.65	7.55
6.....	7.2	7.2	7.4	7.4	7.7	8.15	7.7	9.95	10.05	7.55	7.6	7.5
7.....	7.2	7.2	7.4	7.45	7.7	8.2	7.7	9.85	10.05	7.5	7.7	7.5
8.....	7.2	7.3	7.4	7.5	7.7	8.2	7.75	9.75	10.05	7.5	8.8	7.5
9.....	7.2	7.3	7.3	7.5	7.7	8.2	7.8	9.75	10.25	7.4	8.3	7.8
10.....	7.2	7.3	7.3	7.5	7.7	8.1	7.7	9.8	10.35	7.35	8.0	7.75
11.....	7.2	7.3	7.3	7.5	7.7	8.1	7.7	10.0	10.3	7.3	7.95	7.65
12.....	7.2	7.3	7.35	7.55	7.6	8.05	7.7	10.15	10.15	7.3	7.65	7.6
13.....	7.2	7.3	7.45	7.6	7.6	8.0	7.7	10.25	10.0	7.2	7.6	7.55
14.....	7.2	7.3	7.55	7.6	7.6	8.0	7.7	10.4	9.75	7.2	7.5	7.5
15.....	7.2	7.3	7.6	7.6	7.6	8.0	7.7	10.5	9.6	7.25	7.65	7.5
16.....	7.2	7.3	7.6	7.6	7.6	8.0	7.7	10.55	9.45	7.25	7.9	7.4
17.....	7.2	7.3	7.6	7.6	7.6	8.0	7.75	10.45	9.3	7.2	7.6	7.4
18.....	7.2	7.35	7.6	7.5	7.7	8.0	7.75	10.4	9.05	7.2	7.6	7.4
19.....	7.2	7.4	7.6	7.5	7.85	8.0	7.75	10.55	8.85	7.1	7.5	7.35
20.....	7.2	7.5	7.55	7.5	8.05	7.8	7.85	10.75	8.75	7.15	7.5	7.3
21.....	7.2	7.55	7.5	7.55	8.1	7.7	7.9	11.2	8.7	7.15	7.5	7.3
22.....	7.2	7.6	7.5	7.6	8.15	7.7	7.9	11.75	8.7	7.1	7.45	7.3
23.....	7.2	7.6	7.5	7.6	8.15	7.7	7.9	12.0	8.7	7.55	7.4	7.3
24.....	7.2	7.6	7.5	7.65	8.15	7.7	8.0	11.8	8.65	8.3	7.45	7.3
25.....	7.2	7.6	7.5	7.7	8.15	7.6	8.4	11.45	8.5	7.85	7.5	7.3
26.....	7.3	7.65	7.5	7.7	8.1	7.6	8.75	11.2	8.6	7.7	8.1	7.3
27.....	7.3	7.75	7.55	7.7	8.1	7.6	9.45	10.95	8.45	9.95	7.45	7.3
28.....	7.3	7.8	7.6	7.7	8.1	7.6	9.75	10.95	8.25	7.85	7.4	7.3
29.....	7.3	7.75	7.6	7.7	-----	7.6	9.8	11.0	8.15	7.7	7.3	7.3
30.....	7.3	7.7	7.6	7.7	-----	7.65	9.95	11.0	7.95	7.7	7.35	7.3
31.....	7.3	-----	7.6	7.7	-----	7.6	-----	11.0	-----	7.7	7.7	-----
1901-2.												
1.....	7.3	7.4	7.7	7.6	7.4	8.0	7.7	8.1	9.1	6.8	6.8	7.0
2.....	7.3	7.4	7.7	7.7	7.7	7.9	7.75	8.2	9.0	6.8	6.8	7.05
3.....	7.3	7.4	7.65	7.65	7.5	8.0	7.8	8.3	8.85	6.8	6.8	7.0
4.....	7.3	7.4	7.65	7.7	7.5	8.0	7.8	8.4	8.65	6.8	7.2	7.0
5.....	7.3	7.4	7.8	7.65	7.55	7.85	7.8	8.4	8.55	6.8	7.4	7.0
6.....	7.75	7.4	7.8	7.65	7.55	7.85	7.85	8.45	8.45	6.8	7.6	6.95
7.....	7.55	7.4	7.8	7.65	7.6	7.85	7.9	8.5	8.25	6.8	7.0	6.9
8.....	7.5	7.4	7.65	7.7	7.55	7.85	8.05	8.5	8.1	6.8	7.2	6.9
9.....	7.45	7.4	7.65	7.7	7.6	8.05	8.25	8.55	7.9	6.8	7.05	6.9
10.....	7.4	7.4	7.45	7.7	7.6	8.1	8.3	8.6	7.8	6.8	6.9	6.9
11.....	7.4	7.5	7.5	7.65	7.6	8.15	8.55	8.75	7.7	6.8	7.65	6.9
12.....	7.4	7.45	7.55	7.6	7.65	8.0	8.55	8.8	7.6	6.8	7.15	6.9
13.....	7.4	7.4	7.55	7.65	7.7	7.9	8.55	8.8	7.55	6.8	7.05	6.9
14.....	7.35	7.4	7.5	7.55	7.6	7.95	8.5	8.8	7.35	6.8	7.0	6.9
15.....	7.3	7.4	7.5	7.65	7.65	7.9	8.4	8.7	7.25	6.8	7.0	6.9

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16.....	7.3	7.4	7.45	7.65	7.65	7.8	8.4	8.55	7.2	6.8	6.9	6.9
17.....	7.3	7.4	7.55	7.65	7.75	7.8	8.4	8.4	7.15	6.9	7.05	6.9
18.....	7.3	7.4	7.6	7.6	7.75	7.7	8.3	8.4	7.1	6.9	6.95	6.9
19.....	7.3	7.4	7.6	7.6	7.8	8.0	8.4	8.35	7.05	6.9	6.85	6.95
20.....	7.3	7.4	7.6	7.7	7.7	8.2	8.4	8.25	7.0	7.35	6.8	7.05
21.....	7.3	7.4	7.6	7.6	7.9	8.1	8.5	8.15	7.0	7.3	6.85	8.75
22.....	7.3	7.4	7.6	7.55	7.85	8.1	8.45	8.05	7.0	7.0	7.0	7.4
23.....	7.3	7.4	7.65	7.5	7.85	8.0	8.45	7.95	7.0	6.9	7.15	7.25
24.....	7.35	7.4	7.65	7.6	7.85	7.95	8.35	7.8	6.9	6.85	7.15	7.15
25.....	7.4	7.4	7.6	7.6	7.9	7.95	8.25	7.7	6.9	6.9	7.5	7.1
26.....	7.4	7.5	7.55	7.6	8.0	7.85	8.1	7.75	6.9	6.9	8.25	7.1
27.....	7.55	7.65	7.6	7.5	8.05	7.8	8.1	8.0	6.9	6.9	7.45	7.1
28.....	7.4	7.7	7.55	7.6	8.0	7.8	8.1	8.2	6.9	6.9	7.2	7.1
29.....	7.4	7.7	7.6	7.6	.....	7.95	8.1	8.35	6.8	6.9	7.1	7.1
30.....	7.4	7.7	7.65	7.6	.....	7.85	8.1	8.55	6.8	6.9	7.1	7.1
31.....	7.4	.....	7.65	7.5	.....	7.7	.....	8.8	.....	6.8	7.0	.....
1902-3.												
1.....	7.1	7.2	7.2	7.3	7.35	7.6	8.8	9.45	10.15	12.15	8.25	7.6
2.....	7.1	7.2	7.2	7.35	7.3	7.5	9.15	9.5	10.55	11.9	8.2	7.6
3.....	7.25	7.2	7.2	7.4	7.3	7.65	8.55	9.65	11.1	11.45	8.05	7.6
4.....	7.2	7.2	7.15	7.45	7.3	7.95	8.35	9.75	11.6	11.0	7.9	7.6
5.....	7.2	7.2	7.15	7.35	7.3	8.65	8.5	9.85	11.7	10.75	7.7	7.6
6.....	7.2	7.2	7.2	7.35	7.45	9.8	8.2	10.0	11.8	10.45	7.65	7.6
7.....	7.2	7.2	7.25	7.25	7.4	9.5	8.65	10.1	11.85	10.1	7.55	7.7
8.....	7.2	7.2	7.25	7.3	7.45	8.2	8.1	10.25	12.1	9.7	7.5	7.6
9.....	7.2	7.2	7.2	7.4	7.45	8.25	8.35	10.4	12.6	9.4	7.45	7.6
10.....	7.2	7.2	7.2	7.4	7.45	7.95	8.4	10.6	12.85	9.25	7.4	7.6
11.....	7.2	7.25	7.2	7.4	7.5	8.15	8.35	10.75	13.0	9.15	7.4	7.6
12.....	7.2	7.5	7.3	7.35	7.5	8.35	8.45	10.9	13.1	9.1	7.25	7.65
13.....	7.2	7.25	7.3	7.5	7.5	8.25	8.25	11.05	13.6	9.1	7.25	7.6
14.....	7.2	7.25	7.3	7.35	7.5	8.35	8.3	11.15	14.1	9.0	7.3	7.6
15.....	7.2	7.2	7.2	7.5	7.55	8.55	8.4	11.3	15.05	8.85	7.3	7.7
16.....	7.2	7.2	7.2	7.35	7.4	8.45	8.25	11.6	15.3	8.7	7.3	7.7
17.....	7.2	7.2	7.2	7.4	7.5	8.55	8.3	11.8	15.5	8.65	7.2	7.7
18.....	7.2	7.1	7.2	7.3	7.5	8.5	8.45	11.75	15.6	8.75	7.2	7.7
19.....	7.2	7.15	7.5	7.35	7.55	8.35	8.3	11.45	15.8	8.8	7.3	7.7
20.....	7.2	7.2	7.5	7.35	7.6	8.35	8.4	11.1	15.7	8.8	7.55	7.7
21.....	7.2	7.25	7.4	7.35	7.6	8.2	8.35	10.5	15.4	8.85	7.6	7.7
22.....	7.2	7.3	7.45	7.25	7.6	8.25	8.45	10.1	15.15	8.9	7.8	7.7
23.....	7.3	7.3	7.35	7.35	7.6	8.25	8.55	9.95	14.8	8.75	7.7	7.7
24.....	7.2	7.35	7.45	7.35	7.65	8.3	8.75	9.6	14.5	8.45	7.95	7.7
25.....	7.2	7.25	7.45	7.25	7.6	8.6	9.05	9.4	14.25	8.1	7.7	7.7
26.....	7.25	7.1	7.35	7.4	7.6	8.5	9.35	9.4	13.9	8.15	7.7	7.7
27.....	7.3	7.1	7.35	7.4	7.6	8.5	9.6	9.55	13.55	8.35	7.7	7.7
28.....	7.25	7.1	7.4	7.4	7.5	8.4	9.75	9.7	13.3	8.45	7.75	7.7
29.....	7.2	7.15	7.35	7.4	.....	8.35	9.65	9.7	12.9	8.5	7.7	7.7
30.....	7.2	7.2	7.3	7.3	.....	8.3	9.55	9.8	12.6	8.35	7.65	7.7
31.....	7.2	.....	7.3	7.4	.....	8.4	.....	9.85	.....	8.25	7.6	.....
Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	
1903.												
1.....	7.7	7.6	8.0	11.....	7.6	7.78	7.6	21.....	7.6	7.88	7.4	
2.....	7.65	7.6	8.0	12.....	7.6	7.8	7.6	22.....	7.6	7.95	7.4	
3.....	7.65	7.6	8.0	13.....	7.6	7.78	7.6	23.....	7.6	8.0	7.4	
4.....	7.6	7.6	7.9	14.....	7.6	7.75	7.6	24.....	7.6	8.0	7.35	
5.....	7.6	7.6	7.75	15.....	7.6	7.85	7.6	25.....	7.6	8.05	7.3	
6.....	7.6	7.6	7.6	16.....	7.6	7.88	7.55	26.....	7.6	8.08	7.25	
7.....	7.6	7.6	7.55	17.....	7.6	7.80	7.5	27.....	7.6	8.1	7.05	
8.....	7.6	7.6	7.65	18.....	7.6	7.83	7.45	28.....	7.6	8.05	7.0	
9.....	7.6	7.65	7.65	19.....	7.6	7.85	7.4	29.....	7.6	8.0	6.9	
10.....	7.6	7.65	7.6	20.....	7.6	7.80	7.4	30.....	7.6	8.0	6.75	
								31.....	7.6	.....	6.45	

Daily gage height, in feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Con.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1	.....	2.70	2.90	2.98	2.55	2.68	2.73	3.28	4.79	4.50	2.68	2.06	2.06
2	.....	2.70	3.00	2.95	2.60	2.66	2.80	3.42	4.79	4.44	2.55	2.04	2.05
3	.....	2.70	3.02	2.95	2.60	2.66	2.82	3.68	4.73	4.21	2.45	2.05	2.03
4	.....	2.68	3.02	2.80	2.60	2.65	2.84	4.11	4.47	3.87	2.39	2.03	2.03
5	.....	2.70	3.00	2.82	2.60	2.72	2.85	4.22	4.09	3.67	2.30	1.99	2.11
6	.....	2.75	3.02	2.75	2.60	2.72	2.89	4.10	3.86	3.48	2.28	1.97	2.14
7	.....	2.75	3.08	2.55	2.60	2.73	2.94	3.86	3.91	3.40	2.25	1.95	2.12
8	2.42	2.80	3.10	2.58	2.60	2.70	3.01	3.69	4.11	4.48	2.21	1.95	2.20
9	2.38	2.84	3.10	2.75	2.60	2.72	3.07	3.83	4.21	3.51	2.18	1.93	2.23
10	2.39	2.90	3.08	2.75	2.60	2.70	3.11	3.82	4.06	3.42	2.31	1.91	2.25
11	2.37	2.95	3.10	2.72	2.60	2.70	3.14	3.65	4.03	3.93	2.27	1.90	2.19
12	2.42	3.00	3.10	2.68	2.60	2.70	3.20	3.46	4.09	4.38	2.13	2.17	2.19
13	2.42	3.04	3.12	2.65	2.60	2.68	3.23	3.36	4.21	4.49	2.07	2.35	2.16
14	2.45	3.02	3.10	2.68	2.60	2.70	3.20	3.33	4.30	4.92	2.05	2.04	2.16
15	2.47	3.02	3.12	2.68	2.60	2.72	3.20	3.39	4.39	4.85	2.01	2.03	2.15
16	2.49	3.01	3.08	2.70	2.60	2.72	3.02	3.58	4.31	4.66	1.99	1.99	2.18
17	2.53	2.98	2.98	2.68	2.60	2.75	3.12	4.13	4.14	4.46	1.97	2.03	2.22
18	2.55	2.98	3.00	2.60	2.45	2.77	3.17	4.31	3.89	4.39	1.96	2.04	2.23
19	2.60	2.95	3.02	2.62	2.48	2.79	3.15	4.50	3.78	4.31	1.99	2.22	2.19
20	2.60	2.89	3.00	2.68	2.48	2.79	3.16	4.66	3.82	4.12	2.03	2.25	2.15
21	2.60	2.86	3.00	2.70	2.53	2.74	3.22	4.60	3.86	4.09	2.13	2.08	2.15
22	2.60	2.82	2.88	2.70	2.58	2.77	3.22	4.62	3.74	4.16	2.05	2.17	2.37
23	2.58	2.80	2.85	2.70	2.69	2.73	3.30	4.65	3.62	4.16	2.10	2.25	3.00
24	2.55	2.79	2.95	2.70	2.68	2.72	3.33	4.50	3.51	3.97	2.22	2.19	2.63
25	2.58	2.79	2.98	2.60	2.58	2.82	3.32	4.34	3.44	3.72	2.16	2.20	2.46
26	2.60	2.70	2.95	2.60	2.60	2.74	3.19	4.26	3.55	3.48	2.36	2.22	2.47
27	2.60	2.70	2.85	2.55	2.61	2.79	3.12	4.09	3.80	3.34	2.46	2.17	2.44
28	2.68	2.70	2.75	2.50	2.62	2.76	3.14	3.99	4.22	3.19	2.37	2.15	2.45
29	2.70	2.68	2.65	2.50	2.63	.....	3.16	4.09	4.19	3.06	2.23	2.14	2.44
30	2.70	2.68	2.75	2.50	2.63	.....	3.14	4.51	4.41	2.87	2.16	2.13	2.43
31	.....	2.70	.....	2.55	2.64	.....	3.17	.....	4.49	.....	2.11	2.10	.....

NOTE.—The old records contain no notes concerning ice. The flow for the winter months, computed as for open-channel conditions, compared with the winter flow at the Lobatos station and the intervening tributaries shows substantial agreement, indicating that if ice is present the effects are slight.

Gage height slightly affected by ice Dec. 21, 1912, to Jan. 17, 1913.

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889.												
1	398	447	537	970	4,340	5,450	1,100	253	260
2	385	420	562	1,050	4,090	5,660	925	192	207
3	395	466	562	1,140	3,750	5,450	813	222	202
4	400	504	567	1,150	3,710	4,800	696	205	200
5	413	544	600	1,350	3,610	4,360	620	199	195
6	408	450	604	1,650	3,580	4,170	567	192	192
7	410	447	653	1,860	3,740	4,060	522	192	192
8	405	438	676	1,970	3,610	4,030	484	186	212
9	379	466	725	2,080	3,510	3,800	507	189	189
10	418	435	777	1,970	3,310	3,570	512	192	184
11	398	447	842	2,010	3,210	3,240	420	225	186
12	432	462	880	2,070	3,000	2,880	430	229	184
13	435	441	916	2,110	2,630	2,550	376	250	192
14	470	478	988	2,040	2,670	2,280	705	229	209
15	470	486	979	2,000	2,530	2,240	412	212	209
16	454	470	1,040	2,050	2,540	2,240	416	199	192
17	435	478	916	2,190	2,790	2,210	360	195	205
18	408	450	934	2,360	2,830	2,140	300	203	202
19	426	435	943	2,490	2,650	2,000	380	203	202
20	423	474	898	2,520	2,480	1,870	328	186	202
21	447	454	850	2,450	2,440	1,820	320	181	229
22	486	462	835	2,300	2,690	1,960	376	189	229
23	441	504	842	2,300	3,050	1,920	288	203	222
24	462	490	835	2,380	3,280	1,920	372	186	218
25	441	576	801	2,560	3,600	1,890	376	186	225

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889.												
26.....				441	556	749	3,060	3,860	1,770	296	186	225
27.....				450	526	735	3,270	4,010	1,580	284	245	229
28.....				444	517	729	3,840	4,380	1,480	243	189	246
29.....				470	.....	742	4,210	4,620	1,390	567	181	264
30.....				470	.....	749	4,420	4,760	.....	360	236	246
31.....				495	.....	850	.....	5,080	.....	230	243	.....
1889-90.												
1.....	246	312	447	324	573	330	842	2,670	5,750	2,640	960	636
2.....	246	292	456	260	489	380	944	2,870	5,720	2,450	1,130	1,040
3.....	246	300	456	320	578	446	968	3,260	5,560	2,380	1,040	636
4.....	239	320	484	412	599	496	896	3,580	5,470	2,140	1,130	578
5.....	243	280	480	465	659	539	880	3,960	5,360	2,140	1,000	550
6.....	239	268	557	465	683	896	880	4,170	5,040	1,860	920	550
7.....	239	253	594	443	615	804	952	4,430	5,720	1,800	880	550
8.....	243	272	604	420	599	699	1,070	4,600	4,390	1,860	842	550
9.....	243	316	620	498	537	1,040	1,290	4,720	4,200	1,910	842	550
10.....	246	340	620	503	552	1,020	1,400	4,950	3,830	2,080	804	523
11.....	253	340	588	507	599	904	1,530	4,980	3,740	1,860	768	523
12.....	257	328	594	503	465	790	1,640	4,780	3,840	2,020	732	523
13.....	260	320	643	429	344	642	2,040	4,780	3,910	1,970	666	496
14.....	276	320	583	438	456	561	2,550	4,820	4,000	1,800	666	496
15.....	284	352	578	433	512	584	2,960	4,920	4,060	1,580	666	496
16.....	308	320	588	412	537	572	3,220	4,910	4,200	1,470	636	496
17.....	320	324	588	388	599	589	3,220	4,780	4,170	1,470	636	496
18.....	308	360	594	412	479	615	3,050	5,100	4,404	1,470	636	496
19.....	304	384	610	404	615	706	2,840	5,250	4,000	1,430	666	496
20.....	304	420	562	420	642	732	2,770	5,470	3,910	1,330	2,080	496
21.....	300	396	512	328	659	712	2,820	5,560	3,870	1,230	842	523
22.....	300	412	372	396	670	725	2,740	5,750	3,800	1,230	768	523
23.....	304	416	447	380	659	732	2,560	5,798	3,540	1,130	699	523
24.....	308	432	416	420	594	746	2,490	5,850	3,335	1,040	666	523
25.....	320	465	604	404	512	754	2,540	5,860	3,350	1,130	699	523
26.....	324	470	547	429	438	797	2,780	5,890	3,220	1,040	660	523
27.....	320	507	517	474	412	819	2,770	5,930	3,220	1,040	660	523
28.....	324	493	637	537	408	768	2,770	6,010	3,160	960	636	523
29.....	320	484	594	610	.....	761	2,510	6,060	3,020	960	636	496
30.....	320	479	552	547	.....	775	2,580	6,070	2,770	960	636	523
31.....	332	.....	364	578	.....	804	.....	6,010	.....	920	636	.....
1890-91.												
1.....	523	550	636	666	578	735	732	5,820	4,720	4,130	1,300	320
2.....	523	550	636	666	578	1,450	732	6,080	4,650	4,000	1,250	420
3.....	523	550	636	636	578	1,350	732	6,340	4,650	3,800	1,300	400
4.....	523	550	636	636	578	1,020	732	6,540	4,580	3,740	1,750	380
5.....	523	578	660	606	578	840	732	6,600	4,460	3,740	1,800	360
6.....	523	578	660	606	578	840	920	6,600	4,260	3,480	1,750	340
7.....	523	606	660	606	550	805	960	6,990	4,060	3,350	1,700	340
8.....	523	636	660	606	550	805	1,430	7,450	4,130	3,230	1,600	340
9.....	550	636	636	578	550	770	1,150	8,290	4,260	3,110	1,500	340
10.....	550	636	636	578	550	770	1,250	8,590	4,390	2,990	1,350	340
11.....	550	636	606	578	550	770	1,650	8,420	4,780	2,870	1,200	340
12.....	578	636	636	578	578	735	2,080	7,380	5,690	2,750	1,100	320
13.....	578	606	636	578	578	735	2,190	6,600	6,140	2,460	1,060	320
14.....	606	606	660	606	578	735	2,240	6,500	6,280	2,190	970	320
15.....	606	606	660	606	578	735	2,630	6,280	6,340	1,970	880	320
16.....	606	578	660	606	578	770	2,410	6,020	6,140	2,080	805	320
17.....	606	578	636	606	606	880	2,520	5,560	5,620	1,920	805	320
18.....	606	578	636	578	666	880	2,520	5,430	5,170	1,920	840	320
19.....	578	555	636	578	666	840	2,520	5,240	4,780	1,860	770	320
20.....	578	578	636	578	606	880	2,780	4,910	4,720	1,860	700	320
21.....	578	606	660	550	578	925	2,690	5,040	5,040	1,700	615	320
22.....	578	660	660	550	578	970	2,520	5,040	5,040	1,700	565	400
23.....	578	699	660	550	636	1,250	2,690	4,980	5,300	1,450	490	590
24.....	578	699	660	550	.....	1,000	1,200	2,750	5,040	5,560	1,550	465
25.....	550	699	660	550	732	1,100	3,290	4,840	5,560	1,350	360	615
26.....	550	699	636	550	666	1,020	4,000	4,580	5,560	1,250	360	840
27.....	550	660	636	550	636	970	4,520	4,520	5,500	1,250	340	2,020
28.....	550	660	660	550	636	970	4,910	4,520	4,910	1,400	340	1,020
29.....	550	660	660	550	.....	925	5,240	4,580	4,580	1,350	340	615
30.....	550	636	660	578	.....	880	5,690	4,580	4,320	1,300	340	380
31.....	550	.....	660	578	.....	880	.....	4,720	.....	1,300	320	.....

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
1.....	225	976	805	515	615	700	860	5,360	4,720	1,400	260	140
2.....	195	970	880	490	565	700	880	6,660	4,390	1,200	300	140
3.....	1,600	925	840	515	490	770	1,020	5,690	4,130	1,020	280	152
4.....	3,350	925	670	515	490	805	1,020	5,690	4,300	880	260	152
5.....	3,170	925	490	540	565	880	970	5,620	4,060	805	225	165
6.....	2,930	925	340	465	590	880	1,020	5,300	4,260	700	210	152
7.....	2,750	880	450	490	565	880	1,100	4,910	4,370	640	195	152
8.....	2,520	880	420	515	565	880	1,200	4,650	3,870	615	195	152
9.....	2,360	880	380	515	545	925	1,350	4,390	3,940	880	195	152
10.....	2,240	840	465	515	540	970	1,860	4,260	4,200	805	210	140
11.....	2,020	840	515	515	540	1,060	2,190	4,130	4,130	590	210	152
12.....	2,020	840	515	490	565	1,150	2,870	4,130	3,870	515	195	152
13.....	1,920	805	515	540	565	1,350	3,230	4,260	3,480	465	195	152
14.....	1,860	805	615	515	565	1,450	3,350	4,520	3,110	465	180	152
15.....	1,750	805	615	575	565	1,500	3,740	4,520	2,990	420	180	152
16.....	1,700	805	590	515	540	1,550	4,000	4,520	2,810	440	180	152
17.....	1,650	935	590	465	540	1,500	4,320	4,460	2,810	490	165	152
18.....	1,600	700	565	465	565	1,020	4,580	4,320	2,690	515	165	152
19.....	1,550	670	565	440	590	1,300	4,780	4,200	2,580	515	165	152
20.....	1,550	670	530	465	615	1,300	4,780	4,200	2,520	380	165	152
21.....	1,500	670	530	465	615	1,250	4,390	4,390	2,460	340	155	152
22.....	1,450	670	515	440	615	1,250	4,000	4,580	2,410	340	165	152
23.....	1,300	670	530	465	640	1,100	3,610	4,780	2,410	340	165	152
24.....	1,200	615	530	515	670	1,060	3,350	4,840	2,410	340	165	152
25.....	1,200	515	530	440	640	1,020	3,230	5,100	2,520	340	165	152
26.....	1,150	590	515	420	700	925	3,740	5,430	2,300	340	165	165
27.....	1,100	670	515	490	700	880	4,130	5,560	2,080	320	165	165
28.....	1,100	615	565	490	670	880	4,320	5,560	1,920	280	165	152
29.....	1,100	735	490	515	670	880	4,580	5,460	1,650	280	165	152
30.....	1,060	735	465	540	.....	880	4,910	5,170	1,550	300	152	152
31.....	1,020	.....	575	615	.....	880	.....	4,910	.....	300	152	.....
1892-93.												
1.....	152	260	420	300	400	360	700	2,580	3,610	440	225	300
2.....	152	260	465	300	400	360	770	2,460	3,740	400	565	260
3.....	152	266	490	340	400	420	970	2,080	3,740	340	565	240
4.....	152	260	420	340	360	465	1,100	1,860	3,740	280	260	340
5.....	165	260	380	340	400	465	1,200	1,750	3,740	240	240	300
6.....	165	300	360	340	440	440	1,300	1,860	3,740	225	195	260
7.....	165	300	380	360	420	465	1,450	2,020	3,610	195	180	280
8.....	165	300	261	360	400	465	1,550	1,920	3,350	195	195	280
9.....	165	300	165	340	420	490	1,600	1,720	3,350	195	210	260
10.....	165	300	300	360	440	515	1,500	1,600	3,610	180	180	260
11.....	165	280	280	340	465	440	1,450	1,500	3,740	1,150	165	260
12.....	165	320	300	340	420	400	1,350	1,550	3,740	225	150	240
13.....	180	340	280	320	465	420	1,300	2,140	3,610	165	140	225
14.....	195	360	320	300	465	420	1,150	3,050	3,230	150	140	240
15.....	195	360	320	320	380	515	1,000	3,800	3,110	140	140	225
16.....	210	360	300	340	360	440	970	3,870	2,870	140	140	225
17.....	210	360	300	340	400	420	925	3,980	2,520	130	140	240
18.....	210	300	320	320	420	440	880	4,130	2,300	130	165	320
19.....	210	243	300	300	440	490	970	4,780	2,190	130	150	280
20.....	225	340	300	280	440	515	1,060	5,100	1,970	115	225	280
21.....	225	360	320	300	440	590	1,300	5,040	1,750	130	210	280
22.....	225	380	300	360	440	670	1,400	4,840	1,600	165	225	260
23.....	245	380	280	320	420	670	1,460	4,520	1,450	140	195	260
24.....	245	380	280	320	420	670	1,700	4,060	1,250	150	180	260
25.....	245	360	320	320	380	640	2,300	3,680	1,020	165	195	260
26.....	245	280	300	340	420	565	2,460	3,480	840	180	195	260
27.....	245	260	300	340	420	515	2,460	3,480	735	260	225	400
28.....	245	320	320	340	340	515	2,300	3,610	670	165	420	440
29.....	266	340	340	340	.....	515	2,190	3,420	615	140	260	440
30.....	260	400	340	340	.....	590	2,240	3,350	540	150	280	420
31.....	260	.....	320	360	.....	640	.....	3,420	.....	195	360	.....

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1893-94.						1893-94.					
1.....	420	340	.....	320	320	16.....	340	.....	325	300	340
2.....	400	340	.....	320	320	17.....	340	.....	320	320	340
3.....	420	320	.....	320	320	18.....	340	.....	315	320	340
4.....	420	320	350	340	320	19.....	340	.....	310	320	340
5.....	420	.....	345	320	320	20.....	340	.....	310	320	360
6.....	400	.....	330	320	320	21.....	340	.....	310	320	340
7.....	420	.....	330	320	320	22.....	340	.....	320	320	340
8.....	380	.....	345	320	320	23.....	360	.....	315	320	340
9.....	360	.....	340	320	320	24.....	340	.....	320	320	340
10.....	380	.....	330	300	320	25.....	340	.....	320	320	340
11.....	360	.....	330	300	300	26.....	340	.....	320	320	340
12.....	340	.....	330	300	300	27.....	340	.....	315	340	340
13.....	340	.....	320	300	320	28.....	340	.....	320	340	340
14.....	360	.....	330	300	340	29.....	340	.....	315	320	.....
15.....	360	.....	340	300	340	30.....	340	.....	320	320	.....
						31.....	340	.....	310	320	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1894-95.												
1.....	1,400	261	340	440	500	680	1,650	3,070	3,350	875	1,460	1,150
2.....	735	261	340	432	480	640	1,480	4,290	3,380	960	2,020	1,020
3.....	565	261	340	492	432	652	990	2,320	3,630	365	1,630	948
4.....	465	261	300	452	420	660	875	1,960	3,980	815	1,520	890
5.....	420	261	300	440	420	660	692	1,570	4,010	765	1,520	840
6.....	380	261	340	452	420	652	592	1,570	4,120	765	1,460	790
7.....	340	261	300	472	424	688	735	1,740	4,260	612	1,460	740
8.....	300	300	300	432	428	740	948	1,680	4,290	692	1,220	700
9.....	300	261	300	440	430	790	1,240	1,680	4,400	1,090	1,040	672
10.....	261	261	300	452	432	840	1,480	1,790	4,660	1,590	1,020	632
11.....	261	300	300	432	432	775	1,650	1,960	4,912	1,410	1,090	620
12.....	261	300	340	472	452	725	2,040	2,320	4,980	1,520	900	600
13.....	261	300	340	472	472	715	2,470	2,780	4,870	1,310	1,020	580
14.....	261	300	340	480	460	680	2,900	3,150	4,590	1,270	1,810	560
15.....	261	300	380	492	492	672	3,280	3,280	4,080	1,680	1,330	540
16.....	261	300	380	512	440	652	3,420	3,210	3,630	1,700	1,040	520
17.....	261	340	340	552	432	632	2,040	3,150	3,380	1,540	875	520
18.....	261	340	300	512	480	660	3,490	4,190	3,040	1,380	825	512
19.....	300	340	420	460	512	652	3,840	2,510	2,780	1,360	815	512
20.....	280	300	380	472	512	652	4,190	2,320	2,470	1,330	765	528
21.....	261	300	340	480	512	660	4,290	2,530	2,040	1,380	715	500
22.....	261	300	380	488	480	660	4,050	2,780	1,680	1,520	672	500
23.....	300	340	380	512	532	672	3,910	1,760	1,380	1,560	652	500
24.....	465	340	465	492	580	715	4,010	3,020	1,200	1,760	692	660
25.....	515	340	380	472	632	740	3,590	3,080	1,080	1,620	692	512
26.....	515	300	340	452	652	800	3,560	3,110	990	1,540	692	540
27.....	261	300	300	480	652	865	3,420	3,080	948	1,740	715	520
28.....	261	300	300	472	672	918	3,210	3,150	890	1,540	790	512
29.....	261	340	300	480	.....	1,040	3,020	3,280	800	1,480	1,040	492
30.....	261	340	300	372	.....	1,240	3,150	3,310	790	1,160	1,010	480
31.....	261	.....	300	528	.....	1,410	.....	3,380	.....	2,530	1,080	.....
1895-96.												
1.....	480	540	560	620	580	660	1,240	2,590	1,020	210	210	210
2.....	480	540	540	580	580	660	1,240	2,590	900	210	210	210
3.....	480	552	492	540	500	700	1,240	2,350	800	210	210	210
4.....	560	580	460	620	460	620	1,240	2,470	660	210	210	210
5.....	572	620	460	580	500	620	1,330	2,850	620	210	210	210
6.....	532	620	460	540	540	620	1,430	2,980	580	210	210	210
7.....	520	620	460	580	540	620	1,870	2,850	540	210	210	210
8.....	500	620	460	620	580	620	1,870	2,590	460	210	210	210
9.....	500	620	500	580	580	580	1,870	2,220	420	210	210	210
10.....	480	620	532	580	540	620	1,980	2,100	380	210	210	210
11.....	480	620	540	660	540	660	2,100	1,870	310	210	210	210
12.....	480	620	540	700	500	700	2,100	1,650	310	210	210	210
13.....	480	620	540	500	540	700	2,100	1,430	275	1,430	210	210
14.....	480	592	552	460	580	750	2,100	1,330	275	210	210	210
15.....	480	552	560	460	500	750	2,100	1,240	275	210	210	210

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903,
1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
16.....	480	540	520	500	500	800	2,100	1,160	275	210	210	210
17.....	480	552	500	500	540	800	2,100	1,160	240	275	210	210
18.....	480	568	492	500	580	700	2,100	1,160	240	275	210	210
19.....	480	608	460	460	580	960	1,870	1,090	240	275	210	210
20.....	460	668	420	460	530	960	1,650	960	210	310	210	210
21.....	460	700	520	460	540	960	1,430	900	210	750	275	210
22.....	460	700	580	500	580	850	1,430	850	210	210	310	210
23.....	480	700	580	500	540	1,020	1,430	850	210	500	240	210
24.....	480	700	572	500	580	1,160	1,430	850	210	460	240	210
25.....	480	688	560	460	580	1,330	1,540	850	210	240	240	210
26.....	500	648	560	460	580	1,330	1,540	900	210	240	210	210
27.....	500	608	572	500	620	1,430	1,760	1,240	210	275	210	210
28.....	512	580	552	540	660	1,870	2,590	1,240	210	275	210	275
29.....	520	560	580	580	660	2,100	2,720	1,240	210	240	210	345
30.....	520	560	560	580	580	1,980	2,720	1,240	210	240	210	580
31.....	520	.....	480	580	.....	1,760	.....	1,240	.....	210	.....	.....
1896-97.												
1.....	1,090	275	500	375	375	465	750	3,180	7,530	1,920	360	305
2.....	750	240	500	375	375	512	725	3,610	7,600	1,820	360	305
3.....	275	240	460	375	390	495	700	3,760	7,380	1,770	360	330
4.....	275	210	460	375	400	495	700	4,260	6,800	1,670	330	305
5.....	275	210	460	375	410	450	725	4,190	6,220	1,620	317	295
6.....	275	210	460	375	410	420	700	3,900	5,500	1,530	305	285
7.....	275	210	460	375	410	410	805	3,900	4,990	1,390	330	285
8.....	275	210	460	375	410	410	805	3,830	4,990	1,580	345	285
9.....	275	240	460	375	410	465	835	3,980	4,990	1,720	360	285
10.....	275	275	460	375	410	495	830	4,340	4,990	1,530	330	285
11.....	275	275	460	375	420	450	965	4,840	5,280	1,530	330	305
12.....	275	275	460	375	420	512	1,070	4,840	5,350	1,580	305	305
13.....	275	310	460	375	410	512	1,070	4,630	5,500	1,670	305	317
14.....	275	240	460	390	410	530	1,070	4,700	5,420	1,670	295	305
15.....	275	240	460	410	400	512	1,190	4,770	5,420	2,460	285	305
16.....	275	310	460	410	390	530	1,240	5,060	5,350	2,040	305	330
17.....	275	460	460	410	420	565	1,280	5,140	5,210	1,530	330	330
18.....	275	580	380	410	410	565	1,640	5,210	4,840	1,530	317	345
19.....	275	620	380	420	410	565	2,400	5,640	4,410	1,390	305	360
20.....	460	620	380	435	410	605	2,460	6,370	3,680	1,130	305	360
21.....	420	620	380	435	400	650	2,960	6,880	3,400	940	1,020	360
22.....	345	660	380	435	400	650	2,960	6,880	3,080	870	305	375
23.....	345	660	380	435	410	585	3,080	6,580	2,670	775	305	390
24.....	345	620	380	435	390	495	2,820	6,440	2,600	630	305	375
25.....	345	580	380	435	390	585	2,600	6,440	2,530	535	295	407
26.....	345	540	380	400	480	585	2,400	7,020	2,530	495	285	425
27.....	345	540	.....	375	410	650	2,670	7,090	2,530	495	285	425
28.....	345	500	.....	375	435	750	3,080	7,600	2,400	442	295	425
29.....	345	500	.....	375	.....	835	3,180	8,740	2,270	425	305	460
30.....	345	500	.....	375	.....	865	3,080	7,460	3,180	407	305	460
31.....	345	.....	.....	375	.....	775	.....	7,460	.....	375	305	.....
1897-98.												
1.....	495	1,340	745	605	425	582	660	3,470	3,320	2,260	987	310
2.....	535	1,340	630	560	425	560	725	3,400	3,400	2,010	912	310
3.....	535	1,340	630	560	425	537	725	3,320	3,470	1,900	875	310
4.....	977	1,340	580	560	425	537	762	2,960	4,120	1,520	725	310
5.....	605	1,440	495	560	425	582	800	2,680	4,410	1,680	725	310
6.....	535	1,440	535	560	425	605	875	2,540	4,410	1,520	725	310
7.....	685	1,340	495	515	425	630	950	2,470	4,260	1,460	725	310
8.....	1,440	1,340	515	515	425	660	950	2,330	4,260	1,790	605	310
9.....	1,620	1,340	580	515	425	725	987	2,200	3,980	2,260	605	310
10.....	1,620	1,340	580	515	425	725	1,020	2,010	3,830	2,610	560	385
11.....	1,920	1,340	535	515	425	800	1,360	1,960	3,760	2,400	425	385
12.....	2,040	1,340	580	560	425	837	1,790	1,960	3,470	2,470	425	385
13.....	1,980	1,340	535	560	425	912	1,960	1,680	3,250	3,680	385	385
14.....	1,920	1,340	460	515	425	875	2,130	1,620	2,820	3,830	425	385
15.....	1,980	1,340	495	560	425	837	2,540	1,570	2,680	3,540	425	385
16.....	2,040	1,340	535	560	425	800	2,820	1,570	2,400	4,410	385	385
17.....	2,040	1,260	535	537	425	725	3,250	1,620	2,400	4,190	385	385
18.....	2,060	1,220	580	425	425	660	3,400	1,790	2,680	4,700	385	345
19.....	2,150	1,090	535	425	447	690	3,400	1,680	3,030	4,560	385	345
20.....	2,090	940	535	425	470	725	3,400	1,620	3,540	4,190	345	345

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903,
1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
21.....	1,980	940	580	405	492	690	3,470	1,790	4,050	4,120	310	345
22.....	1,390	870	535	385	515	660	3,540	1,680	3,980	3,400	310	345
23.....	1,980	840	495	405	537	660	3,540	1,680	3,830	2,960	310	345
24.....	1,770	805	535	425	582	725	3,180	1,570	3,830	2,540	310	345
25.....	1,530	745	580	425	605	690	3,100	1,520	3,680	2,130	310	310
26.....	1,530	745	535	425	582	690	3,250	1,570	3,680	1,900	310	310
27.....	1,720	745	535	425	660	725	3,320	1,840	3,400	1,520	310	310
28.....	1,980	745	535	425	660	725	3,100	2,200	3,180	1,140	310	310
29.....	1,720	745	535	425	.....	660	3,100	2,470	2,820	987	310	310
30.....	1,440	745	535	425	.....	660	3,100	2,680	2,470	800	310	310
31.....	1,340	.....	580	425	.....	660	.....	3,180	.....	1,100	310	.....
1898-99.												
1.....	310	327	327	375	420	465	825	1,400	560	255	255	185
2.....	265	345	345	420	420	465	765	1,250	535	255	272	185
3.....	265	365	345	420	420	510	765	1,100	510	237	255	185
4.....	265	385	345	420	465	510	765	960	510	220	255	185
5.....	265	385	345	420	465	535	710	857	510	220	290	185
6.....	265	385	345	465	465	560	710	737	420	220	272	185
7.....	265	385	345	535	465	610	710	710	310	220	255	185
8.....	265	385	345	560	510	635	660	710	185	220	255	220
9.....	345	385	345	560	510	685	660	710	150	220	255	220
10.....	345	385	345	560	535	710	660	710	132	220	290	220
11.....	327	385	345	560	560	710	660	710	85	202	272	220
12.....	310	385	345	560	510	737	710	765	65	185	255	220
13.....	285	385	385	560	560	765	890	995	85	185	255	238
14.....	285	405	385	510	510	795	995	1,100	167	220	255	255
15.....	285	385	385	510	510	890	1,100	1,250	185	272	272	290
16.....	275	405	385	465	510	995	1,100	1,320	185	330	290	685
17.....	265	425	385	465	510	1,030	1,140	1,400	185	420	290	560
18.....	265	425	385	465	465	1,030	1,200	1,400	185	420	238	535
19.....	265	385	385	465	465	1,030	1,510	1,360	185	660	220	510
20.....	265	365	385	465	465	995	1,510	1,250	185	560	220	442
21.....	265	327	345	465	465	960	1,480	1,250	185	420	220	420
22.....	265	310	345	465	465	857	1,440	1,100	185	420	220	375
23.....	265	310	327	465	465	825	1,400	1,060	185	398	185	375
24.....	265	285	327	465	465	765	1,400	890	220	375	185	375
25.....	275	285	310	420	465	765	1,480	710	220	352	185	330
26.....	285	285	285	420	465	765	1,550	710	220	310	185	330
27.....	285	285	285	420	465	765	1,550	660	185	255	185	290
28.....	285	310	275	420	465	795	1,480	660	238	238	185	290
29.....	285	310	265	420	.....	825	1,400	660	255	220	185	290
30.....	310	310	265	420	.....	795	1,400	610	255	220	185	290
31.....	310	.....	265	420	.....	825	.....	610	.....	255	185	.....
1899-1900.												
1.....	290	420	535	435	475	520	475	475	5,220	455	210	150
2.....	290	420	535	435	475	588	475	520	4,940	435	210	150
3.....	310	420	510	435	475	765	475	610	4,750	435	180	395
4.....	330	420	510	435	475	738	475	635	4,390	455	180	335
5.....	330	442	610	435	475	710	475	660	4,300	455	180	315
6.....	330	465	535	435	475	710	520	685	4,210	435	180	245
7.....	330	488	465	435	475	710	520	685	4,120	435	180	228
8.....	330	510	465	435	475	710	520	660	4,120	395	180	210
9.....	330	510	510	415	475	710	520	792	3,950	375	180	210
10.....	330	510	610	395	475	710	520	1,100	3,950	335	180	210
11.....	330	510	420	355	475	710	520	1,480	3,610	280	180	210
12.....	330	510	420	355	475	710	475	1,730	3,370	245	180	280
13.....	330	510	420	395	475	710	475	2,110	2,980	245	180	315
14.....	330	510	465	415	475	710	475	2,290	2,620	245	180	298
15.....	375	535	420	435	475	710	475	2,290	2,420	228	180	262
16.....	375	560	420	475	475	710	475	2,290	2,230	210	180	245
17.....	375	560	465	475	475	710	475	2,170	1,730	210	180	245
18.....	375	560	465	475	475	710	455	2,050	1,350	210	180	245
19.....	375	560	465	498	475	710	435	2,550	1,220	210	180	245
20.....	375	560	465	520	475	710	395	4,120	1,060	180	180	245

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903,
1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
21.....	375	585	465	520	475	588	395	2,760	915	180	180	245
22.....	375	610	465	520	457	565	395	3,860	820	180	165	245
23.....	375	610	465	498	475	520	395	3,610	820	195	150	245
24.....	375	610	465	475	475	498	395	3,290	765	210	150	210
25.....	375	660	465	475	475	475	435	3,290	685	210	150	228
26.....	375	660	465	475	475	475	455	3,450	610	210	150	245
27.....	375	610	465	475	475	475	475	4,210	565	210	150	245
28.....	375	610	465	475	475	475	475	4,750	520	210	150	245
29.....	420	560	465	475	.....	475	475	4,940	475	210	150	245
30.....	420	560	465	475	.....	475	475	5,410	475	210	150	245
31.....	420	.....	465	498	.....	475	.....	5,320	.....	210	150	.....
1900-1901.												
1.....	245	280	395	315	400	620	350	2,290	3,530	532	460	400
2.....	245	245	375	315	400	620	375	2,900	3,130	450	440	380
3.....	245	245	335	315	400	620	400	3,210	2,900	450	380	400
4.....	245	245	315	315	400	620	400	3,450	2,620	350	380	420
5.....	245	245	315	298	400	620	400	2,690	2,360	400	440	400
6.....	245	245	315	280	400	650	400	2,110	2,230	332	420	380
7.....	245	245	315	298	400	680	400	2,000	2,230	315	460	380
8.....	245	280	315	315	400	680	425	1,880	2,230	315	1,040	380
9.....	245	280	280	315	400	680	450	1,880	2,480	280	745	500
10.....	245	280	280	315	400	620	400	1,940	2,620	270	590	480
11.....	245	280	280	315	400	620	400	2,170	2,550	260	568	440
12.....	245	280	298	332	350	590	400	2,360	2,360	260	440	420
13.....	245	280	335	350	350	560	400	2,480	2,170	240	420	400
14.....	245	280	375	350	350	560	400	2,690	1,880	240	380	380
15.....	245	280	395	350	350	560	400	2,830	1,730	250	440	380
16.....	245	280	395	350	350	560	400	2,900	1,580	250	545	340
17.....	245	280	395	350	350	560	425	2,760	1,440	240	420	340
18.....	245	298	395	315	400	560	425	2,690	1,220	240	420	340
19.....	245	315	395	315	478	560	425	2,900	1,080	220	380	320
20.....	245	355	375	315	590	450	478	3,210	1,010	230	380	300
21.....	245	375	355	332	620	400	505	3,950	980	230	380	300
22.....	245	395	355	350	650	400	505	4,940	980	220	360	300
23.....	245	395	355	350	650	400	505	5,410	980	332	340	300
24.....	245	395	355	375	650	400	560	5,030	950	740	360	300
25.....	245	395	355	400	650	350	800	4,390	860	478	380	300
26.....	280	415	355	400	620	350	1,010	3,950	920	400	640	300
27.....	280	455	375	400	620	350	1,580	3,530	830	2,110	360	300
28.....	280	475	395	400	620	350	1,880	3,530	710	522	340	300
29.....	280	455	395	400	.....	350	1,940	3,610	650	460	300	300
30.....	280	435	395	400	.....	375	2,110	3,610	532	460	320	300
31.....	280	.....	395	400	.....	350	.....	3,610	.....	460	460	.....
1901-2.												
1.....	300	340	460	420	360	570	450	630	1,360	145	160	200
2.....	300	340	460	460	460	530	480	670	1,270	145	160	215
3.....	300	340	440	440	390	570	500	715	1,140	140	160	200
4.....	300	340	440	460	390	570	500	775	960	140	235	200
5.....	300	340	500	440	405	515	500	775	880	140	310	200
6.....	480	340	500	440	405	515	515	810	810	140	410	180
7.....	400	340	500	440	420	515	530	850	670	140	190	165
8.....	380	340	440	460	405	515	585	850	600	140	235	165
9.....	360	340	440	460	420	585	650	875	500	140	200	165
10.....	340	340	360	460	420	600	670	900	450	140	160	165
11.....	340	380	380	440	420	620	800	1,050	420	140	430	165
12.....	340	360	400	420	440	570	800	1,100	390	140	225	165
13.....	340	340	400	440	460	530	800	1,100	380	140	200	165
14.....	320	340	380	405	420	550	790	1,100	300	140	190	165
15.....	300	340	380	440	440	530	770	1,030	260	145	190	165
16.....	300	340	360	440	440	500	760	930	240	145	160	165
17.....	300	340	400	440	480	500	740	860	230	150	200	165
18.....	300	340	420	420	480	460	670	860	220	150	180	165
19.....	300	340	420	420	500	570	740	820	210	150	160	180
20.....	300	340	420	460	460	630	750	780	200	280	150	215
21.....	300	340	420	420	530	600	790	710	200	260	160	1,050
22.....	300	340	420	405	515	600	770	640	200	180	175	340
23.....	300	340	440	390	515	570	770	570	200	165	230	270
24.....	320	340	440	420	515	540	720	470	190	160	230	240
25.....	340	340	420	420	530	520	670	420	180	165	410	225

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
26.....	340	380	400	420	570	470	610	445	170	165	820	225
27.....	400	440	420	390	585	440	620	560	160	165	390	225
28.....	340	460	400	420	570	410	630	670	150	165	270	230
29.....	340	460	420	420	.....	490	630	780	140	165	225	235
30.....	340	400	440	420	.....	460	630	900	130	165	225	240
31.....	340	.....	440	390	.....	440	.....	1,090	.....	155	200	.....
1902-3.												
1.....	225	220	240	275	325	440	1,170	1,770	2,490	5,450	672	320
2.....	215	220	250	285	290	380	1,480	1,820	3,370	4,770	645	320
3.....	240	220	250	300	290	460	950	1,960	4,580	3,580	562	320
4.....	220	220	240	320	290	610	820	2,060	5,000	2,920	480	320
5.....	220	220	240	290	290	1,000	910	2,160	5,050	2,570	370	320
6.....	220	220	250	295	355	1,900	720	2,200	5,250	2,210	345	320
7.....	220	220	260	270	335	1,660	610	2,390	5,360	1,800	297	320
8.....	220	220	260	280	355	710	630	2,540	5,900	1,550	275	320
9.....	225	220	245	305	355	730	710	2,690	6,650	1,340	255	320
10.....	225	220	245	305	355	570	740	2,890	7,070	1,240	235	320
11.....	225	230	245	305	380	670	720	3,040	7,460	1,180	235	320
12.....	230	310	245	295	350	790	760	3,200	7,740	1,150	185	345
13.....	230	240	245	360	380	730	660	3,380	9,060	1,150	185	320
14.....	235	240	245	300	380	750	680	3,500	10,300	1,090	200	320
15.....	235	230	240	360	405	790	740	3,640	12,800	1,000	200	370
16.....	230	230	240	300	330	720	660	3,910	13,500	920	200	370
17.....	230	230	240	325	380	800	680	4,080	14,100	890	170	370
18.....	230	225	240	300	380	780	760	4,040	14,700	940	170	370
19.....	230	230	315	320	405	730	680	3,800	15,900	960	200	370
20.....	230	230	315	330	430	730	730	3,400	15,300	960	297	370
21.....	230	235	290	335	430	680	700	2,650	13,700	980	320	370
22.....	230	240	300	285	430	710	790	2,160	12,600	1,010	425	370
23.....	260	240	280	340	430	710	850	2,060	11,300	950	370	370
24.....	240	260	300	335	455	740	970	1,820	10,300	840	507	370
25.....	235	240	300	285	430	900	1,280	1,680	9,860	670	370	370
26.....	250	220	280	345	430	840	1,590	1,680	9,260	690	370	370
27.....	260	220	280	350	430	840	1,580	1,740	8,560	780	370	370
28.....	245	220	290	360	380	780	2,010	1,830	8,060	810	397	370
29.....	225	225	280	375	.....	750	1,920	1,830	7,260	820	370	370
30.....	220	230	270	325	.....	720	1,830	1,910	6,660	730	345	370
31.....	220	.....	270	360	.....	800	.....	1,950	.....	680	320	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1903.											
1.....	370	320	535	11.....	320	414	320	1903.	320	480	235
2.....	345	320	535	12.....	320	425	320	22.....	320	507	235
3.....	345	320	535	13.....	320	414	320	23.....	320	535	235
4.....	320	320	480	14.....	320	397	320	24.....	320	535	217
5.....	320	320	397	15.....	320	452	320	25.....	320	562	200
6.....	320	320	320	16.....	320	496	297	26.....	320	579	185
7.....	320	320	297	17.....	320	425	275	27.....	320	590	132
8.....	320	320	345	18.....	320	442	255	28.....	320	562	120
9.....	320	345	345	19.....	320	452	235	29.....	320	535	96
10.....	320	345	320	20.....	320	425	235	30.....	320	535	67
								31.....	320	.....	35

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1.....	.....	432	528	562	400	428	452	803	1,940	1,720	430	258	259
2.....	.....	430	570	549	400	421	487	919	1,950	1,680	373	256	257
3.....	.....	428	578	549	400	422	495	1,120	1,900	1,510	343	257	255
4.....	.....	420	578	488	400	416	508	1,430	1,700	1,250	324	254	254
5.....	.....	427	570	496	400	444	515	1,520	1,420	1,100	300	250	269
6.....	.....	447	578	468	390	447	535	1,420	1,240	957	296	248	270
7.....	.....	447	604	390	390	451	570	1,250	1,290	900	289	246	266
8.....	329	461	612	401	390	439	610	1,120	1,430	958	281	246	282
9.....	313	477	612	468	390	447	653	1,220	1,510	979	275	244	290
10.....	317	500	604	468	390	437	681	1,210	1,400	919	302	242	286

Daily discharge, in second-feet, of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Continued.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
11.....	309	522	612	456	380	437	707	1,090	1,370	1,300	294	241	278
12.....	329	542	612	440	380	435	749	947	1,420	1,640	269	369	277
13.....	329	562	620	428	380	428	770	869	1,510	1,720	259	356	274
14.....	340	553	612	440	380	440	747	846	1,580	2,040	257	255	272
15.....	348	558	620	440	360	448	750	896	1,640	1,990	253	254	272
16.....	356	555	604	448	360	447	624	1,040	1,590	1,850	250	250	276
17.....	372	545	562	440	360	460	696	1,450	1,450	1,700	248	255	284
18.....	380	545	570	409	342	470	711	1,580	1,260	1,650	247	256	285
19.....	399	535	578	417	351	478	688	1,720	1,190	1,580	250	310	278
20.....	399	512	570	440	351	479	691	1,840	1,210	1,440	254	293	271
21.....	399	498	572	440	368	457	727	1,800	1,240	1,420	272	261	271
22.....	399	489	520	410	386	471	719	1,820	1,160	1,470	257	276	370
23.....	391	481	508	410	432	450	772	1,840	1,060	1,470	265	291	649
24.....	380	477	549	410	427	449	787	1,720	979	1,330	283	278	409
25.....	391	480	562	400	386	497	773	1,610	931	1,140	273	279	345
26.....	399	445	549	400	393	456	684	1,550	1,010	964	320	284	350
27.....	396	445	508	400	397	479	646	1,420	1,200	857	344	274	340
28.....	427	448	468	390	402	462	664	1,350	1,520	740	318	272	340
29.....	434	442	428	390	406	.....	683	1,410	1,490	648	286	270	338
30.....	432	440	468	390	406	.....	675	1,730	1,660	525	273	268	336
31.....	.....	448	.....	400	410	.....	718	.....	1,720	.....	264	264	.....

NOTE.—Daily discharge determined as follows: 1889 to 1894, from a rating curve that is not well defined on account of shifting channel and any single estimate may be 10 per cent or more in error, but these errors are compensating; 1895 and 1896, from a rating curve somewhat better defined than that for 1889 to 1894; 1897, from three fairly well-defined rating curves, the first used from Jan. 1 to Apr. 18, the second from Apr. 19 to Aug. 21, and the third from Aug. 22 to Dec. 31; 1898, from a rating curve not well defined above 1,000 second-feet; 1899, from a well-defined curve. Estimates for 1900 and 1901 have been revised. Those for 1900 are based on a rating curve well defined below 3,500 second-feet; those for 1901 are based on two well-defined rating curves, one used from Jan. 1 to July 27, and the other used for the remainder of the year. Daily discharges for 1902 and 1903 were furnished by the International Water Commission and are based almost directly on the discharge measurements. Daily discharge for 1912 determined from two fairly well-defined rating curves, and that for 1913 from a curve well defined except for the period Mar. 17 to Apr. 1, when the indirect method for shifting channels was used. The daily values for 1913 represent the mean of 24 hourly discharges and not the discharge obtained from the daily mean gage height. Dec. 21, 1912, to Jan. 17, 1913, estimated on account of ice.

Monthly discharge of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1889.					
January.....	495	379	431	26,500	
February.....	576	420	473	26,300	
March.....	1,040	537	784	48,200	
April.....	4,420	970	2,260	135,000	
May.....	5,080	2,440	3,430	211,000	
June.....	5,660	1,390	2,920	174,000	
July.....	1,100	236	471	29,000	
August.....	253	181	206	12,700	
September.....	264	184	212	12,600	
The period.....				675,000	
1889-90.					
October.....	332	239	283	17,400	
November.....	507	253	366	21,800	
December.....	620	364	542	33,300	
January.....	610	260	437	26,900	
February.....	683	344	553	30,700	
March.....	1,040	330	682	41,900	
April.....	3,220	842	2,080	124,000	
May.....	6,070	2,670	4,960	305,000	
June.....	5,750	2,770	4,110	244,000	
July.....	2,640	920	1,590	98,000	
August.....	1,130	636	814	50,100	
September.....	1,940	496	545	32,400	
The year.....	6,070	239	1,410	1,030,000	

Monthly discharge of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13- Contd.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1890-91.					
October.....	606	523	562	34,600	*
November.....	609	550	616	36,700	
December.....	660	636	648	40,000	
January.....	666	550	586	36,000	
February.....	1,000	550	616	34,200	
March.....	1,450	735	917	56,400	
April.....	5,690	732	2,370	141,000	
May.....	8,550	4,520	5,960	367,000	
June.....	6,340	4,060	5,040	300,000	
July.....	4,130	1,250	2,360	145,000	
August.....	1,800	320	933	57,400	
September.....	2,020	320	469	27,900	
The year.....	8,550	320	1,760	1,280,000	
1891-92.					
October.....	3,350	195	1,680	103,000	
November.....	976	515	778	46,300	
December.....	880	340	553	34,000	
January.....	615	420	497	30,600	
February.....	700	490	596	34,300	
March.....	1,550	700	1,050	64,600	
April.....	4,910	860	2,980	177,000	
May.....	6,660	4,130	4,890	301,000	
June.....	4,720	1,550	3,150	187,000	
July.....	1,400	280	538	33,100	
August.....	300	152	191	11,700	
September.....	165	140	152	9,040	
The year.....	6,660	140	1,420	1,030,000	
1892-93.					
October.....	266	152	202	12,400	
November.....	400	243	317	18,900	
December.....	490	165	324	19,900	
January.....	360	280	332	20,400	
February.....	465	340	415	23,000	
March.....	670	360	501	30,800	
April.....	2,460	700	1,440	85,400	
May.....	5,100	1,500	3,120	192,000	
June.....	3,740	540	2,530	151,000	
July.....	1,150	115	226	13,900	
August.....	565	140	230	14,100	
September.....	440	225	287	17,100	
The year.....	5,100	115	827	599,000	
1893-94.					
October.....	420	340	363	22,300	
November.....			^a 330	19,600	
December.....			^a 320	19,700	
January.....	340	300	318	19,600	
February.....	360	300	330	18,300	
1894-95.					
October.....	1,400	261	679	41,800	
November.....	340	261	299	17,800	
December.....	465	300	338	20,800	
January.....	552	432	475	29,200	
February.....	672	420	503	27,900	
March.....	1,410	632	759	46,500	
April.....	4,290	592	2,540	151,000	
May.....	4,290	1,570	2,680	165,000	
June.....	4,980	790	3,020	180,000	
July.....	2,530	612	1,340	82,100	
August.....	2,020	652	1,080	66,400	
September.....	1,150	480	636	37,800	
The year.....	4,980	261	1,200	866,000	
1895-96.					
October.....	572	460	494	30,400	
November.....	700	540	611	36,400	
December.....	580	420	534	32,800	
January.....	700	460	532	32,700	

^a Estimated.

Monthly discharge of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Contd.

Month.	Discharge in second-feet.			Run-off total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1895-96.					
February.....	660	460	551	31,700	
March.....	2,100	580	957	58,800	
April.....	2,720	1,240	1,800	107,000	
May.....	2,980	850	1,600	98,300	
June.....	1,020	210	367	21,800	
July.....	1,430	210	299	18,400	
August.....	310	210	249	15,300	
September.....	580	210	228	13,600	
The year.....	2,980	210	685	497,000	
1896-97.					
October.....	1,090	275	349	21,500	
November.....	660	210	395	23,500	
December.....	500	380	414	25,500	
January.....	435	375	394	24,200	
February.....	480	375	408	22,700	
March.....	865	410	561	34,500	
April.....	3,180	700	1,700	101,000	
May.....	8,740	3,180	5,440	335,000	
June.....	7,600	2,270	4,620	275,000	
July.....	2,460	375	1,270	78,300	
August.....	1,020	285	338	20,800	
September.....	460	285	344	20,500	
The year.....	8,740	210	1,350	982,000	
1897-98.					
October.....	2,150	495	1,540	94,600	
November.....	1,440	745	1,140	67,700	
December.....	745	460	551	33,900	
January.....	605	385	488	30,000	
February.....	660	425	471	26,200	
March.....	912	537	695	42,700	
April.....	3,540	660	2,240	133,000	
May.....	3,470	1,520	2,150	132,000	
June.....	4,410	2,400	3,480	207,000	
July.....	4,700	800	2,570	158,000	
August.....	987	310	478	29,400	
September.....	385	310	338	20,100	
The year.....	4,700	310	1,350	975,000	
1898-99.					
October.....	345	265	283	17,400	
November.....	425	285	357	21,200	
December.....	385	265	339	20,800	
January.....	560	375	470	28,900	
February.....	560	420	481	26,700	
March.....	1,030	465	761	46,800	
April.....	1,550	660	1,090	64,900	
May.....	1,400	610	956	58,800	
June.....	560	65	249	14,800	
July.....	660	185	297	18,300	
August.....	290	185	236	14,500	
September.....	685	185	309	18,400	
The year.....	1,550	65	486	352,000	
1899-1900.					
October.....	420	290	356	21,900	
November.....	660	420	535	31,800	
December.....	610	420	478	29,400	
January.....	520	355	453	27,900	
February.....	475	475	475	26,400	
March.....	765	475	628	38,600	
April.....	520	395	467	27,800	
May.....	5,410	475	2,410	148,000	
June.....	5,220	475	2,440	145,000	
July.....	455	180	281	17,300	
August.....	210	150	173	10,600	
September.....	395	150	248	14,800	
The year.....	5,410	150	745	540,000	

Monthly discharge of Rio Grande at Embudo, N. Mex., for 1889-1903, 1912-13—Contd.

Month.	Discharge in second-feet.			Run-off (total in acro-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1900-1901.					
October.....	280	245	252	15,500	
November.....	475	245	324	19,300	
December.....	395	250	354	21,800	
January.....	400	250	343	21,100	
February.....	650	350	466	25,900	
March.....	680	350	518	31,900	
April.....	2,110	350	652	38,800	
May.....	5,410	1,880	3,130	192,000	
June.....	3,530	532	1,720	102,000	
July.....	2,110	220	407	24,800	
August.....	1,040	300	451	27,700	
September.....	500	300	359	21,400	
The year.....	5,410	220	748	542,000	
1901-2.					
October.....	480	300	331	20,400	
November.....	460	340	357	21,200	
December.....	500	360	425	26,100	
January.....	460	390	430	26,400	
February.....	585	360	462	25,700	
March.....	630	410	532	32,700	
April.....	800	450	661	39,400	
May.....	1,100	420	798	49,100	
June.....	1,360	130	440	26,200	
July.....	280	140	158	9,720	
August.....	820	150	246	15,200	
September.....	1,050	165	228	13,600	
The year.....	1,360	130	422	306,000	
1902-3.					
October.....	260	215	231	14,200	
November.....	310	220	231	13,700	
December.....	315	240	264	16,200	
January.....	375	270	317	19,500	
February.....	455	290	375	20,800	
March.....	1,900	350	788	48,400	
April.....	2,010	610	987	58,700	
May.....	4,080	1,680	2,570	158,000	
June.....	15,900	2,490	8,970	534,000	
July.....	5,450	670	1,510	92,600	
August.....	672	170	334	20,500	
September.....	370	320	348	20,700	
The year.....	15,900	170	1,410	1,020,000	
1903.					
October.....	370	320	323	19,900	
November.....	590	320	434	25,800	
December.....	535	35	283	17,400	
1912.					
September 8-30.....	434	309	373	17,000	C.
1912-13.					
October.....	562	420	484	29,800	C.
November.....	620	428	564	33,600	C.
December.....	562	390	440	27,100	C.
January.....	432	342	387	23,800	C.
February.....	497	416	450	25,000	A.
March.....	787	452	661	40,600	A.
April.....	1,840	803	1,350	80,300	A.
May.....	1,950	931	1,420	87,300	A.
June.....	2,040	525	1,310	78,000	A.
July.....	430	247	289	17,800	A.
August.....	369	241	276	17,000	A.
September.....	649	254	307	18,300	A.
The year.....	2,040	241	662	479,000	

NOTE.—With the exception of Dec. 21, 1912, to Jan. 17, 1913, the flow for the winter months has been computed as for open channel conditions. (See footnote to daily gage heights.)

RIO GRANDE NEAR BUCKMAN,¹ N. MEX.

Location.—At the Denver & Rio Grande Railroad bridge, at the head of White Rock Canyon, 4 miles above Buckman, 2 miles below the Indian village of San Ildefonso, about sec. 18, T. 19 N., R. 8 E. The nearest stream is Tesuque Creek, which enters near San Ildefonso. There is an arroyo just above the station.

Records available.—February 1, 1895, to December 31, 1905; June 23, 1909, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording gage installed in June, 1910. The original gage was located on the left bank, 180 feet above the bridge. On March 30, 1904, a vertical staff gage was established at the bridge at a datum 2.02 feet higher than the original datum. The datum of the present gage is the same as that of the gage established in 1904.

Channel.—Shifting, as a result of scour and fill of sand on lava boulders.

Discharge measurements.—Made from car and cable originally located near the gage, but moved 3 miles below the gage in 1910. No diversions or important tributaries between the two points.

Winter flow.—Only slightly affected by ice.

Diversions.—Between Embudo and Buckman the bottom lands in Espanola Valley are irrigated extensively. In 1896 W. W. Follett, of the International Water Boundary Commission, reported that ditches having a capacity of 406 second-feet diverted water from the Rio Grande between the two points.

Accuracy.—Prior to the flood in October, 1911, conditions were favorable for accurate results, but the flood caused considerable change which was not fully covered by field work. Thus the estimates from October, 1911, to May 1, 1912, can not be considered better than fair. The records thereafter can be considered good.

Cooperation.—Station maintained in cooperation with the State engineer during 1912 and 1913.

Discharge measurements of Rio Grande near Buckman, N. Mex., in 1895-1905, 1909-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1895.		<i>Fect.</i>	<i>Sec.-ft.</i>	1898.		<i>Fect.</i>	<i>Sec.-ft.</i>
Feb. 1	P. E. Harroun.....	4.6	6.2	May 19	P. E. Harroun.....	7.0	2,670
Apr. 19	.....do.....	9.8	5,170	Sept. 17	.....do.....	4.7	269
May 11	.....do.....	8.0	4,250	Oct. 7	.....do.....	4.6	258
June 5	.....do.....	9.1	6,690	Oct. 29	.....do.....	5.0	368
July 23	.....do.....	6.6	2,100				
Aug. 21	.....do.....	5.5	933	1899.			
Sept. 10	.....do.....	5.1	739	Apr. 6	P. E. Harroun.....	5.9	978
Oct. 24	.....do.....	4.9	629	Sept. 2	.....do.....	3.7	110
Nov. 30	.....do.....	4.9	639	Oct. 24	.....do.....	5.15	482
1896.				1900.			
Sept. 4	P. E. Harroun.....	4.1	263	Apr. 9	P. E. Harroun.....	6.0	830
Oct. 21	.....do.....	4.7	401	May 20	.....do.....	5.7	666
Nov. 18	C. C. Babb.....	5.07	493	May 22	.....do.....	9.8	4,730
Dec. 11	P. E. Harroun.....	5.1	594	May 29	.....do.....	10.2	6,180
1897.				June 5	.....do.....	10.0	6,030
Feb. 25	P. E. Harroun.....	4.9	487	June 13	.....do.....	8.4	3,260
Mar. 17	.....do.....	5.83	1,000	June 21	.....do.....	6.35	1,100
May 15	.....do.....	10.5	10,900	June 26	.....do.....	5.5	663
June 9	.....do.....	8.8	6,790	Aug. 2	.....do.....	4.1	158
June 22	.....do.....	7.2	3,470	Nov. 10	.....do.....	5.0	356
July 10	.....do.....	5.9	1,760	Dec. 6	.....do.....	5.1	464
July 23	.....do.....	5.2	995	1901.			
Aug. 11	.....do.....	4.8	406	Mar. 8	P. E. Harroun.....	5.7	934
Aug. 28	.....do.....	4.2	266	Apr. 10	.....do.....	5.4	670
Sept. 12	.....do.....	5.7	1,040	Apr. 26	.....do.....	7.4	2,380
Sept. 24	.....do.....	5.2	637	July 10 ^a	.....do.....	4.7	233
Oct. 7	.....do.....	6.1	1,580	July 27	.....do.....	6.0	1,250
Oct. 24	.....do.....	7.0	2,710	Aug. 7	.....do.....	6.1	1,250

^a Approximate.

¹ In earlier reports this station was designated as near Rio Grande, San Ildefonso, and Watertank.

Discharge measurements of Rio Grande near Buckman, N. Mex., in 1895-1905,
1909-1913—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Fect.</i>	<i>Sec.-ft.</i>	1902.		<i>Fect.</i>	<i>Sec.-ft.</i>
Aug. 22	P. E. Harroun.....	5.25	624	Nov. 13	P. E. Harroun.....	5.0	403
Sept. 5	do.....	5.3	647	17	do.....	4.7	278
26	do.....	4.6	299	21	do.....	4.7	295
Oct. 11	do.....	5.05	447	24	do.....	4.9	399
26	do.....	4.9	358	27	do.....	4.6	273
Nov. 8	do.....	4.9	385	Dec. 1	do.....	4.5	276
21	do.....	4.9	431	4	do.....	4.4	245
Dec. 7	do.....	5.3	575	8	do.....	4.8	347
				11	do.....	4.8	320
1902.				15	do.....	4.8	335
Jan. 23	P. E. Harroun.....	5.0	484	18	do.....	4.4	264
Feb. 12	do.....	5.05	485	22	do.....	4.6	267
Mar. 31	do.....	5.3	518	26	do.....	4.7	337
Apr. 3	do.....	5.3	519	29	do.....	4.7	282
7	do.....	6.7	1,240				
10	do.....	7.5	1,740	1903.			
14	do.....	7.9	2,250	Jan. 2	O. B. Powell.....	4.7	337
17	do.....	7.5	1,950	5	do.....	4.8	362
22	do.....	7.6	2,190	8	do.....	4.8	335
25	do.....	6.5	1,330	12	do.....	4.8	346
28	do.....	6.6	1,400	15	do.....	4.8	368
May 2	do.....	6.5	1,160	19	do.....	4.8	371
5	do.....	6.6	1,270	22	do.....	4.8	361
8	do.....	6.3	1,110	27	do.....	5.0	430
12	do.....	6.7	1,270	31	do.....	4.9	364
15	do.....	6.7	1,390	Feb. 3	do.....	5.0	436
19	do.....	6.1	895	6	do.....	4.8	333
23	do.....	5.6	633	10	do.....	5.0	425
26	do.....	5.2	516	14	do.....	5.1	452
28	do.....	7.4	1,880	17	do.....	4.9	338
30	do.....	6.6	1,560	24	do.....	5.4	636
June 2	do.....	6.6	1,450	27	do.....	5.2	493
6	do.....	5.8	857	Mar. 3	do.....	5.0	382
9	do.....	5.5	672	6	do.....	7.9	2,630
12	do.....	5.0	421	10	do.....	5.9	929
16	do.....	4.7	332	12	do.....	7.4	1,920
19	do.....	4.3	180	14	do.....	7.3	1,780
23	do.....	4.0	123	17	do.....	6.3	1,090
27	do.....	3.0	85	20	do.....	5.9	844
30	do.....	3.6	71	23	do.....	6.0	854
July 3	do.....	3.5	62	25	do.....	6.3	984
7	do.....	3.6	78	27	do.....	6.4	1,230
10	do.....	3.8	125	30	do.....	6.4	1,260
14	do.....	3.8	93	Apr. 2	do.....	11.4	9,270
17	do.....	3.8	110	4	do.....	7.0	1,720
21	do.....	5.0	419	6	do.....	6.5	1,300
24	do.....	5.0	416	8	do.....	6.7	1,580
28	do.....	4.3	208	10	do.....	7.4	2,200
31	do.....	4.0	112	13	do.....	7.1	1,950
Aug. 4	do.....	4.2	148	15	do.....	6.9	1,760
7	do.....	4.7	233	18	do.....	7.5	2,130
11	do.....	6.15	2,010	21	do.....	7.0	1,770
14	do.....	4.6	241	23	do.....	7.9	2,730
18	do.....	4.3	172	25	do.....	8.9	3,770
21	do.....	3.9	106	27	do.....	9.1	4,450
25	do.....	8.1	2,850	29	do.....	9.1	4,650
28	do.....	6.0	848	May 1	do.....	8.9	4,370
Sept. 1	do.....	4.5	232	4	do.....	9.6	5,620
4	do.....	4.1	150	8	do.....	10.3	6,740
8	do.....	4.1	139	13	do.....	11.0	8,570
11	do.....	3.8	85	16	do.....	11.2	8,650
15	do.....	4.0	117	19	do.....	10.8	6,850
18	do.....	3.8	122	21	do.....	9.6	5,670
21	do.....	10.7	6,590	23	do.....	8.8	4,540
25	do.....	4.7	309	26	do.....	8.6	4,390
29	do.....	4.7	250	28	do.....	8.7	4,540
Oct. 2	do.....	4.6	255	31	do.....	8.7	4,670
6	do.....	4.7	325	June 2	do.....	9.6	6,470
9	do.....	4.7	276	4	do.....	10.2	7,110
13	do.....	4.7	265	6	do.....	10.5	7,790
16	do.....	4.7	294	9	do.....	12.2	11,700
20	do.....	4.7	276	12	do.....	12.0	9,640
23	do.....	4.7	268	16	do.....	12.6	15,400
27	do.....	4.6	266	18	do.....	12.6	15,500
30	do.....	4.7	285	20	do.....	12.5	15,100
Nov. 3	do.....	4.7	282	23	do.....	11.4	13,900
6	do.....	4.7	264	25	do.....	10.8	12,300
10	do.....	4.7	261	27	do.....	10.5	11,500

Discharge measurements of Rio Grande near Buckman, N. Mex., in 1895-1905, 1909-1913—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1909.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 2	O. B. Powell	8.8	5,500	June 22	J. B. Stewart	5.75	6,860
6	do.	7.1	3,280	Aug. 2	do.	2.15	603
9	do.	6.3	2,300	27	do.	3.70	2,040
11	do.	6.8	2,640				
14	do.	5.9	1,820	1910.			
18	do.	6.2	1,990	June 17	C. D. Miller	3.08	1,230
22	do.	5.8	1,720	July 23	do.	a 1.05	149
25	do.	5.1	781	Aug. 11	do.	1.75	336
28	do.	5.0	729	18	J. B. Stewart	1.77	369
31	do.	4.7	647	Oct. 26	do.	2.20	603
Aug. 22	F. Cogswell	4.1	376	Nov. 26	C. B. Digby	a 2.0	524
Sept. 16	do.	4.05	367	Dec. 27	do.	2.14	548
Oct. 14	do.	4.0	364				
Nov. 12	do.	4.12	423	1911.			
				Feb. 8	C. B. Digby	a 2.50	725
1904.				Mar. 15	G. H. Russell	3.38	1,400
Apr. 30	G. B. Monk	2.30	526	Apr. 15	R. L. Cooper	3.45	1,250
May 7	do.	2.00	418	May 4	Freeman and Waha	5.80	4,420
18	do.	2.05	413	17	W. B. Freeman	7.35	7,200
23	do.	1.90	398	June 12	R. L. Cooper	7.35	6,970
June 6	do.	1.50	330	Aug. 5	W. B. Freeman	4.15	2,010
14	do.	1.40	184	Oct. 30	A. S. Kirkpatrick	4.50	3,410
29	do.	1.50	203				
July 16	do.	1.20	77	1912.			
23	do.	2.55	621	May 10	R. H. Fletcher	7.50	7,740
Aug. 27	do.	3.10	723	June 7	Carroll and Kirkpatrick	9.20	13,600
27	do.	3.04	640	Aug. 2	Gray and Redding	2.58	670
Oct. 4	do.	4.00	2,600	Sept. 2	Gray and O'Brien	2.15	609
5	do.	4.00	2,540	Oct. 6	A. S. Kirkpatrick	3.60	670
7	do.	3.90	2,480	Nov. 5	do.	3.50	605
7	do.	4.10	2,540	Dec. 9	do.	b 3.20	530
17	do.	4.50	2,920				
28	do.	3.30	1,280	1913.			
Nov. 7	do.	2.80	767	Jan. 26	A. S. Kirkpatrick	b 3.25	590
				Feb. 25	J. E. Powers	3.38	637
1905.				Mar. 21	do.	3.79	802
Apr. 26	R. I. Meeker	5.45	4,130	Apr. 13	A. S. Kirkpatrick	3.90	3,470
June 9	do.	4.45	2,900	May 7	Emerson and Powers	5.23	3,470
30	do.	4.25	2,480	27	Dean and Emerson	4.00	1,960
July 28	do.	2.15	644	June 28	A. S. Kirkpatrick	2.78	1,010
29	do.	2.0	512	July 26	Gray and Powers	2.30	320
Sept. 21	do.	1.62	230	Aug. 7	Gray and O'Brien	1.90	174
				26	King and Powers	2.31	305
				Sept. 20	Emerson and Powers	2.20	264

a Gage height taken from automatic gage chart.

b Gage height affected by ice.

NOTE.—Beginning with 1904, gage heights refer to a new datum. Measurements during 1909 were made from the railroad bridge and are liable to error.

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
1						6.15	6.75	8.85	8.75	5.95	6.65	5.8
2						5.9	6.5	8.6	9.0	5.95	6.55	5.8
3					4.6	5.9	6.35	8.2	9.3	6.0	6.45	5.55
4					4.55	5.4	6.3	7.9	9.3	6.0	6.30	5.55
5					4.55	5.3	6.4	7.7	9.2	5.75	6.45	5.45
6					4.55	5.4	6.35	7.4	9.0	5.7	6.45	5.35
7					4.55	5.85	6.4	7.25	8.9	5.6	6.7	5.35
8					4.6	5.75	6.25	7.25	8.9	5.7	6.65	5.30
9					4.6	5.75	6.9	7.5	9.2	5.65	6.9	5.25
10					4.8	5.8	7.4	7.65	9.3	6.3	6.3	5.15
11					4.6	5.8	8.0	8.0	9.3	6.8	6.0	5.1
12					4.65	5.85	8.55	8.5	9.25	7.6	6.55	5.0
13					4.45	5.45	9.1	8.8	9.25	6.7	6.35	5.0
14					4.35	5.4	9.7	8.55	9.2	6.7	6.65	4.95
15					4.45	5.25	9.45	8.65	9.0	6.6	6.85	4.9

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
16.					4.5	5.25	9.3	8.45	8.7	6.55	6.3	4.8
17.					4.6	5.1		8.55	8.25	6.5	5.9	4.8
18.					4.75	5.1		8.35	7.9	6.35	5.5	4.7
19.					4.65	5.1	9.8	8.0	7.65	6.15	5.45	4.8
20.					4.9	5.75		7.6	7.45	6.0	5.55	4.9
21.					4.85	5.5	9.8	7.85	7.1	5.9	5.65	4.9
22.					4.85	5.8	9.8	8.3	6.8	5.95	5.35	4.8
23.					4.85	6.0	9.8	8.5	6.5	6.0	5.15	4.8
24.					4.9	7.0	9.3	8.7	6.25	6.3	5.05	4.8
25.					5.1	6.9	9.05	8.65	6.1	6.3	5.2	4.8
26.					5.3	6.8	9.0	8.5	6.0	6.4	5.4	4.95
27.					6.0	6.6	9.0	8.45	5.75	6.3	5.5	4.95
28.					6.1	6.7	9.1	8.4	5.85	6.3	5.65	4.9
29.						6.85	9.1	8.25	5.9	6.15	5.85	4.9
30.						6.75	8.95	8.55	5.8	7.45	5.85	4.9
31.						7.0		8.85		8.1	5.85	
1895-96.												
1.	4.9	5.1	5.15	5.0			6.65	8.25	6.3	4.2		4.25
2.	4.8	5.05	5.25	4.9			6.5	7.95	6.25	4.3	4.1	4.2
3.	4.8	5.1	5.15	5.05			6.45	7.85	6.1	4.25	4.1	4.15
4.	5.3	5.15	4.55	5.15		5.5	6.45	7.9	5.9	4.25	4.0	4.10
5.	5.4	5.35	4.85			5.35	6.4	8.1	5.65	4.2	4.0	4.10
6.	5.4	5.3	4.7			5.3	6.55	8.15	5.4	4.25	3.98	4.18
7.	5.4	5.25	4.8			5.25	6.85	8.35	5.3	4.1	3.9	4.2
8.	5.4	5.35	4.9			5.4	7.02	8.5	5.2	4.1	3.9	4.05
9.	5.3	5.4	5.05			5.4	7.5	8.35	5.0	4.08	3.9	4.0
10.	5.0	5.25	5.1			5.45	7.6	7.75	4.85	4.03	3.9	4.35
11.	4.9	5.25	5.25			5.55	7.8	7.45	4.7	4.0	3.88	4.55
12.	5.0	5.3	5.25			5.55	7.87	7.25	4.55	4.0	3.83	4.95
13.	4.9	5.45	5.3			5.7	7.8	7.1	4.5	4.6	3.85	4.4
14.	4.9	5.4	5.35			5.8	7.65	7.0	4.5	5.1	3.8	4.4
15.	5.0	5.4	5.35			5.85	7.8	6.9	4.48	4.3	3.8	4.3
16.	5.0	5.35	5.25			5.7	7.8	6.55	4.3	4.65	3.8	4.2
17.	4.9	5.25	5.2		5.2	5.75	7.95	6.45	4.25	4.85	3.8	4.2
18.		5.2	5.15		5.2	5.65	7.9	6.3	4.2	4.7	3.8	4.8
19.		5.3	5.2		5.2	5.6	7.75	6.0	4.2	5.4	3.8	4.3
20.		5.4	5.2		5.2	5.52	7.5	5.95	4.15	4.75	3.8	4.45
21.		5.45	5.2		5.2	5.8	7.45	5.85	4.1	5.0	3.8	4.5
22.		5.5	5.25		5.2	5.8	7.6	5.8	4.1	5.4	3.73	4.4
23.		5.5	5.25			5.95	7.7	5.8	4.05	5.15	3.7	4.4
24.		5.5	5.15			6.25	7.6	5.85	4.0	4.95	4.33	4.45
25.		5.45	4.95			6.4	7.85	6.0	4.0	4.65	3.95	4.35
26.		5.45	4.9			6.65	7.95	6.25	4.25	4.65	3.9	4.25
27.	4.9	5.45	4.85			6.95	8.15	6.35	4.1	4.5	4.0	4.2
28.	4.95	5.25	4.85			7.2	8.35	6.4	4.1	4.25	4.0	4.3
29.	4.9	4.95	4.85			7.25	8.4	6.35	4.15	4.2	4.0	5.35
30.	5.0	5.05	4.85			7.15	8.45	6.45	4.2	4.3	4.0	5.1
31.	5.15		4.9			6.9		6.3		4.25	4.13	
1896-97.												
1.	4.85	4.8	4.4	5.0	4.95	5.2	6.1	9.5	10.5	6.5	4.7	4.4
2.	4.8	4.8	4.7	4.75	4.95	5.25	6.1	10.0	10.5	6.3	4.55	4.2
3.	4.75	4.8	4.9	4.7	5.1	5.9	6.0	10.35	10.2	6.1	4.0	4.45
4.	4.7	4.75	4.9	4.65	5.1	6.3	6.05	10.9	10.2	6.0	4.9	4.3
5.	4.65	4.7	4.8	4.35	4.95	5.4	6.0	10.55	9.7	6.0	4.7	4.2
6.	4.6	4.7	4.9	4.3	5.0	5.15	6.6	9.95	9.25	6.0	4.9	4.2
7.	4.53	4.58	4.95	4.85	5.0	5.15	7.25	9.8	9.0	5.9	4.8	4.8
8.	4.95	4.58	5.0	4.75	5.0	5.22	7.4	10.05	8.9	5.9	4.8	4.5
9.	4.85	4.65	5.05	4.7	4.95	5.8	6.85	10.4	8.8	5.8	4.8	5.05
10.	5.0	4.7	5.05	4.85	5.0	5.7	6.8	10.55	8.9	6.15	4.8	5.45
11.	4.8	4.7	5.05	5.0	5.0	5.55	7.1	10.85	9.0	6.2	4.8	5.35
12.	4.7	5.0	5.0	5.05	4.9	5.4	7.25	10.6	9.1	6.2	4.8	5.7
13.	4.8	5.1	5.05	5.0	5.0	5.4	7.4	10.5	9.2	6.05	5.15	5.9
14.	4.9	5.1	5.1	4.9	5.05	5.35	7.4	10.5	9.25	6.0	4.55	6.7
15.	5.0	5.1	4.95	5.05	4.9	5.2	7.75	10.45	9.2	6.1	4.5	5.6
16.	4.98	5.1	5.0	5.05	4.82	5.62	8.25	10.55	8.95	6.2	4.3	5.2
17.	4.75	5.1	5.1	4.85	4.9	5.85	8.3	10.4	8.6	7.0	5.85	4.95
18.	4.65	5.1	5.0	4.7	4.95	5.65	8.7	10.3	8.35	7.0	5.25	5.0
19.	4.75	5.1	4.85	4.65	5.0	5.6	8.95	12.35	8.2	6.35	5.0	5.05
20.	4.7	5.1	4.75	4.6	5.05	5.65	9.15	12.25	7.7	5.95	4.7	5.1

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
21.....	4.7	5.1	4.8	4.7	5.1	5.5	9.3	11.7	7.45	5.65	4.6	5.1
22.....	4.75	5.1	4.8	4.65	4.9	5.55	9.25	11.6	7.25	5.35	5.25	5.1
23.....	5.15	5.1	4.8	4.8	4.85	5.35	9.45	11.25	7.05	5.2	4.85	5.2
24.....	5.0	5.1	4.75	4.8	4.9	5.25	9.15	10.8	6.95	5.2	4.75	5.3
25.....	5.0	5.15	4.7	4.8	4.95	5.45	9.1	10.6	6.85	5.1	4.65	5.3
26.....	4.9	5.13	4.55	4.85	5.05	5.75	9.2	10.9	6.5	4.95	4.5	5.3
27.....	4.9	4.95	-----	4.85	5.05	6.35	9.8	10.9	6.65	4.75	4.3	5.35
28.....	5.05	4.85	-----	4.7	5.05	6.4	9.82	11.0	6.75	4.6	4.2	5.5
29.....	4.9	4.3	-----	4.7	-----	6.85	9.4	11.0	6.6	4.45	4.2	5.4
30.....	4.8	4.35	-----	4.95	-----	6.8	9.4	10.9	6.55	4.4	5.25	5.4
31.....	4.8	-----	-----	5.0	-----	6.32	-----	11.2	-----	4.3	4.5	-----
1897-98.												
1.....	5.4	6.2	5.15	4.95	4.95	5.5	5.25	8.9	7.75	6.35	5.3	4.65
2.....	5.45	6.2	5.15	4.95	4.95	5.38	5.15	8.2	7.75	6.0	5.3	4.8
3.....	5.4	6.2	5.05	4.95	4.9	5.3	5.15	8.1	7.65	6.0	5.05	4.9
4.....	5.5	6.2	4.8	5.1	4.9	5.3	5.3	7.75	7.65	5.85	4.85	5.65
5.....	7.4	6.2	4.8	5.2	5.0	5.4	5.35	7.65	7.9	5.95	4.8	5.55
6.....	6.35	6.1	4.8	5.05	5.0	5.45	5.5	7.35	8.1	5.75	4.8	5.54
7.....	6.25	6.0	4.05	5.1	5.1	5.4	5.7	7.2	7.7	7.15	4.7	4.35
8.....	6.6	5.9	5.2	5.1	5.15	5.4	5.7	7.2	7.55	7.1	6.7	4.3
9.....	7.0	5.8	5.2	5.0	5.2	5.45	5.85	7.2	7.55	7.55	6.9	4.3
10.....	7.55	5.75	5.3	5.0	5.1	5.5	6.2	7.25	7.55	6.75	6.5	5.2
11.....	7.2	5.7	5.3	5.05	5.05	5.65	6.85	7.25	7.55	6.65	5.95	5.1
12.....	7.15	5.75	5.35	5.25	5.1	5.7	7.25	7.3	7.5	6.45	5.6	4.95
13.....	7.1	5.8	4.8	5.15	5.15	5.65	7.7	7.3	7.45	8.05	5.4	4.8
14.....	7.0	5.8	4.8	4.9	5.08	5.65	7.7	7.45	7.45	8.25	5.25	4.7
15.....	6.9	5.9	4.7	4.9	5.15	5.45	8.05	7.55	7.25	8.3	5.05	4.7
16.....	6.6	5.9	4.8	4.8	5.2	5.35	8.1	7.35	6.8	8.7	4.55	4.7
17.....	6.7	5.8	5.2	4.8	5.25	5.15	8.75	7.25	6.95	8.45	5.25	4.7
18.....	7.05	5.8	5.0	4.9	5.4	5.25	9.1	7.2	6.95	7.85	5.4	4.7
19.....	7.1	5.7	4.95	4.8	5.35	5.4	8.8	7.1	7.3	7.75	5.25	4.7
20.....	7.0	5.7	5.0	4.8	5.3	5.4	8.85	7.0	7.65	7.95	5.15	4.7
21.....	6.85	5.7	4.95	4.8	5.35	5.3	8.85	6.85	7.8	7.6	5.05	4.7
22.....	6.7	5.7	4.7	4.8	5.3	5.25	8.8	6.7	7.75	6.95	4.95	4.7
23.....	6.35	5.6	4.5	4.85	5.3	5.2	8.85	6.8	7.45	6.75	4.9	4.7
24.....	6.55	5.6	4.8	4.9	5.25	5.1	9.1	6.5	8.0	6.65	4.9	4.7
25.....	6.5	5.6	4.9	4.9	5.33	5.15	9.2	6.55	7.75	6.65	6.8	4.7
26.....	6.5	5.6	4.8	5.0	5.38	5.25	9.25	6.6	7.75	6.1	5.2	4.7
27.....	6.5	5.6	4.85	4.9	5.43	5.2	9.2	6.75	7.35	5.9	4.9	4.7
28.....	6.4	5.6	4.9	5.0	5.48	5.2	9.3	6.8	7.35	5.75	5.0	4.7
29.....	6.3	5.45	4.9	5.1	-----	5.1	9.2	6.95	6.95	5.45	4.9	4.6
30.....	6.3	5.25	5.0	5.2	-----	5.25	9.1	7.3	6.6	5.45	4.7	4.6
31.....	6.3	-----	5.0	5.0	-----	5.3	-----	7.5	-----	5.35	4.65	-----
1898-99.												
1.....	4.5	5.0	6.0	4.65	5.4	5.65	6.2	7.15	5.6	4.2	5.0	3.6
2.....	4.5	5.0	6.0	4.65	5.35	6.0	6.2	7.15	5.55	4.2	4.8	3.6
3.....	4.6	5.2	5.8	4.65	5.35	5.9	6.05	6.95	5.45	4.3	4.7	3.6
4.....	4.6	5.3	5.8	4.75	5.15	5.8	6.15	6.75	5.45	4.3	6.75	3.65
5.....	4.6	5.4	5.6	4.85	5.3	5.8	6.1	6.6	5.45	4.1	5.5	3.6
6.....	4.6	5.4	5.55	4.75	5.2	5.85	5.9	6.5	5.35	4.0	5.0	3.6
7.....	4.6	5.3	5.55	4.85	5.3	5.85	5.85	6.45	5.25	4.0	6.35	3.55
8.....	4.6	5.4	5.6	4.95	5.3	5.9	6.05	6.35	5.2	3.9	5.45	4.0
9.....	5.6	5.4	5.5	5.1	5.45	6.15	5.95	6.35	5.05	4.4	5.45	4.25
10.....	5.5	5.4	5.4	5.0	5.45	6.05	6.05	6.3	5.4	4.2	4.8	4.75
11.....	5.3	5.4	5.4	4.95	5.45	6.25	6.3	6.3	5.1	4.2	4.75	4.95
12.....	5.2	5.5	5.4	5.0	5.35	6.25	6.45	6.45	5.05	4.2	4.65	4.35
13.....	5.0	5.4	5.4	4.95	5.2	6.2	6.65	6.4	5.0	4.0	4.6	4.3
14.....	5.0	5.3	5.4	5.0	5.75	6.2	6.95	6.65	4.9	4.4	4.55	4.3
15.....	4.9	5.3	5.4	5.05	5.5	6.25	7.3	7.15	4.85	4.55	4.4	9.3
16.....	4.9	5.3	5.4	5.05	5.4	5.85	7.2	7.35	4.6	5.0	4.35	9.4
17.....	5.0	5.3	5.4	5.0	5.5	6.15	7.65	7.4	4.65	5.05	4.3	6.55
18.....	5.0	5.3	5.55	5.0	5.45	6.4	8.15	7.15	4.5	7.8	4.15	5.85
19.....	5.0	5.3	5.5	5.0	5.5	6.3	8.3	6.9	4.45	6.8	4.2	5.45
20.....	4.95	5.3	5.4	5.05	5.45	6.35	8.3	6.75	4.4	6.3	4.15	5.25
21.....	4.95	5.3	5.55	5.05	5.5	6.3	7.95	6.75	4.3	5.7	4.1	5.15
22.....	5.0	5.4	5.5	5.0	5.5	6.25	7.7	6.75	4.2	5.3	4.0	5.25
23.....	5.0	5.4	5.4	5.0	5.5	6.2	7.75	6.4	4.2	5.3	3.9	5.0
24.....	4.95	5.4	5.4	5.0	5.55	6.15	7.85	6.25	4.3	5.15	3.75	5.05
25.....	5.0	5.5	5.4	5.05	5.8	6.2	7.9	6.1	4.4	5.25	3.85	4.95

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905,
1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
26.....	5.0	5.7	5.4	5.1	5.5	6.45	8.05	6.1	4.65	5.2	3.8	4.85
27.....	5.0	5.7	5.4	5.2	5.5	6.65	7.95	5.95	4.5	5.3	3.7	4.85
28.....	5.0	6.0	5.4	5.25	5.65	6.6	7.75	6.0	4.4	5.35	3.75	4.75
29.....	5.0	6.0	5.4	5.25	.....	6.55	7.5	5.85	4.2	5.0	3.7	4.75
30.....	5.0	6.05	5.25	5.35	.....	6.45	7.15	5.8	4.35	5.05	3.6	4.65
31.....	5.0	.....	5.2	5.4	.....	6.4	.....	5.7	.....	6.05	3.6	.....
1899-1900.												
1.....	4.7	5.3	5.65	5.55	5.5	5.7	5.75	6.35	10.45	5.05	4.15	4.0
2.....	4.7	5.25	5.6	5.4	5.5	5.65	5.9	6.6	10.4	4.95	4.1	4.0
3.....	4.7	5.3	5.6	5.4	5.5	5.9	6.25	6.75	10.3	4.8	4.1	4.15
4.....	4.85	5.4	5.6	5.7	5.5	5.9	6.0	6.6	10.2	5.45	4.1	4.7
5.....	5.1	5.4	5.35	5.65	5.5	6.15	6.0	6.8	10.0	5.5	4.1	6.2
6.....	5.05	5.45	5.0	5.45	5.5	6.25	6.1	7.45	9.55	5.35	4.2	5.55
7.....	5.05	5.5	5.25	5.6	5.6	6.15	5.95	7.4	9.3	5.1	4.2	10.0
8.....	5.0	5.55	5.4	5.5	5.6	6.0	6.0	7.25	9.15	5.0	4.2	7.3
9.....	4.95	5.55	5.65	5.65	5.35	6.0	6.1	7.65	8.9	5.05	4.3	6.25
10.....	4.9	5.55	5.45	5.6	4.95	6.0	6.05	8.0	8.85	4.85	4.45	5.8
11.....	4.85	5.6	5.25	5.55	5.25	6.0	5.85	8.35	8.8	4.7	4.8	5.2
12.....	4.85	5.55	5.15	5.3	5.55	6.25	5.8	8.8	8.6	4.65	4.25	5.4
13.....	4.85	5.55	5.4	5.6	5.5	6.35	5.75	8.95	8.35	4.6	4.2	5.6
14.....	4.8	5.55	5.4	5.55	5.55	6.6	5.8	8.95	8.05	4.45	4.15	5.4
15.....	4.8	5.9	5.15	5.65	5.55	6.85	5.95	8.85	7.55	4.35	4.2	5.05
16.....	5.0	5.7	4.85	5.65	5.55	6.55	5.95	8.7	7.45	4.25	4.15	4.9
17.....	5.0	5.75	5.1	5.65	5.35	6.45	5.85	8.5	7.15	4.25	4.1	4.8
18.....	5.05	5.7	5.4	5.55	5.35	6.4	5.85	8.4	6.95	4.2	4.1	4.85
19.....	4.95	5.7	5.65	5.45	5.45	6.2	5.75	9.15	6.65	4.2	4.1	4.95
20.....	5.05	5.7	5.55	5.4	5.55	5.95	5.75	9.55	6.35	4.1	4.1	4.95
21.....	5.1	5.7	5.4	5.5	5.55	5.95	5.9	9.6	6.25	4.15	4.1	4.85
22.....	5.15	5.7	5.3	5.6	5.5	5.95	6.75	9.75	6.15	4.1	4.1	4.75
23.....	5.15	5.8	5.45	5.6	5.45	5.85	6.6	9.75	6.4	4.15	4.0	4.75
24.....	5.15	5.8	5.5	5.55	5.6	5.85	6.35	9.35	5.85	4.25	4.0	4.7
25.....	5.2	5.8	5.45	5.6	5.55	5.8	6.25	9.25	5.9	4.2	4.0	4.7
26.....	5.2	5.75	5.45	5.55	5.55	5.75	6.15	9.4	5.7	4.25	3.9	4.7
27.....	5.3	5.75	5.4	5.55	5.7	5.65	6.0	9.9	5.45	4.2	3.9	4.7
28.....	5.3	5.75	5.4	5.5	5.65	5.75	6.2	9.95	5.35	4.2	3.9	4.8
29.....	5.3	5.7	5.45	5.4	.....	5.65	6.5	10.2	5.15	4.15	3.9	4.8
30.....	5.25	5.7	5.45	5.35	.....	5.55	6.25	10.4	5.8	4.2	3.9	4.8
31.....	5.25	.....	5.65	5.5	.....	5.55	.....	10.45	.....	4.2	3.9	.....
1900-1901.												
1.....	4.8	5.0	5.2	4.9	5.05	5.6	5.05	9.75	9.15	5.35	5.9	5.45
2.....	4.8	4.9	5.2	4.75	5.15	5.65	5.1	10.15	8.85	5.3	5.05	5.0
3.....	4.9	4.9	5.2	4.75	5.15	5.75	5.1	9.9	8.45	5.4	5.0	4.8
4.....	4.9	4.9	5.25	4.85	5.05	5.95	5.2	9.4	8.3	5.2	4.3	6.25
5.....	4.8	4.95	5.15	4.9	5.1	5.8	5.2	9.05	8.15	5.2	6.4	5.45
6.....	4.8	4.95	5.15	4.9	5.15	5.8	5.2	8.8	7.95	5.1	6.15	5.2
7.....	4.75	4.9	5.25	5.05	5.15	5.75	5.2	8.85	7.85	5.1	6.0	5.25
8.....	4.75	4.95	5.3	5.15	5.25	5.65	5.15	8.85	7.65	5.05	6.85	4.95
9.....	4.75	4.9	5.25	5.15	5.25	5.8	5.3	8.8	7.65	4.9	5.65	6.95
10.....	4.7	4.9	5.35	4.9	5.15	5.6	5.25	8.8	7.75	4.9	5.4	7.1
11.....	4.7	4.95	5.35	4.95	5.15	5.65	5.4	8.75	7.7	4.85	5.4	5.65
12.....	4.75	4.9	5.3	4.95	5.15	5.45	5.25	8.8	7.65	4.7	5.3	5.25
13.....	4.75	4.9	5.3	4.85	5.15	5.4	5.25	8.7	7.45	4.7	5.2	5.15
14.....	4.8	4.9	5.25	5.05	5.15	5.3	5.45	9.35	7.15	5.55	5.2	5.05
15.....	4.95	4.85	5.2	4.95	5.2	5.3	5.7	9.45	7.05	4.7	5.25	4.95
16.....	4.95	4.9	5.2	5.05	5.2	5.2	5.8	9.5	7.0	5.25	5.4	4.85
17.....	5.0	4.85	5.05	4.95	5.15	5.6	5.9	9.25	6.85	4.7	5.45	4.8
18.....	4.95	4.85	4.9	5.05	5.15	5.55	5.7	9.25	6.7	4.65	5.25	4.75
19.....	4.95	4.9	5.1	4.95	5.25	5.6	5.7	9.35	6.45	4.55	6.8	4.8
20.....	4.95	5.05	5.05	4.9	5.85	5.4	5.65	9.4	6.3	4.55	6.95	4.75
21.....	4.9	5.15	5.15	4.9	5.95	5.4	5.9	9.95	6.3	4.6	5.4	4.75
22.....	5.0	5.2	5.15	4.9	5.95	5.4	6.2	10.4	6.3	5.15	4.95	4.6
23.....	4.95	5.15	5.05	5.05	5.95	5.45	6.75	10.35	6.25	4.9	4.75	4.55
24.....	5.0	5.15	4.9	5.15	5.7	5.3	6.85	10.25	6.15	4.95	4.75	4.6
25.....	4.95	5.2	4.85	5.15	5.65	5.3	7.35	9.4	6.15	6.15	5.2	4.65
26.....	5.0	5.15	4.9	5.15	5.65	5.2	8.1	9.4	6.0	6.15	4.95	4.55
27.....	5.1	5.2	5.05	5.25	5.55	5.15	8.65	9.2	5.95	6.95	5.2	4.6
28.....	5.05	5.35	5.0	5.2	5.7	5.15	8.7	9.2	5.9	5.8	5.05	4.55
29.....	5.0	5.25	5.0	5.25	.....	5.1	8.75	9.1	5.7	7.1	4.95	4.55
30.....	5.0	5.25	5.0	5.15	.....	5.05	9.25	9.1	5.55	6.6	4.9	4.55
31.....	5.0	.....	4.95	4.95	.....	5.0	.....	9.15	.....	6.6	6.05	.....

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905,
1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	4.65	5.05	5.1	5.0	4.95	5.15	5.25	6.4	6.7	3.55	5.1	4.45
2.....	4.65	5.05	5.1	5.05	4.95	5.1	5.35	6.4	6.7	3.6	4.25	4.4
3.....	4.75	5.0	5.1	5.0	4.95	5.1	5.5	6.4	6.45	3.55	4.1	4.3
4.....	4.8	5.0	5.0	5.1	4.9	5.1	5.5	6.5	6.15	3.5	4.05	4.1
5.....	4.75	4.95	5.1	5.1	4.95	5.1	5.55	6.5	6.0	3.5	5.6	4.1
6.....	6.6	5.0	5.2	5.1	4.95	5.0	6.05	6.35	5.75	3.55	6.35	3.95
7.....	5.55	4.9	5.3	5.05	4.95	5.0	6.2	6.35	5.7	3.55	4.7	4.15
8.....	5.6	4.9	5.15	5.05	5.05	5.05	6.95	6.4	5.6	3.55	4.8	4.15
9.....	5.3	4.95	5.0	5.05	5.05	5.05	7.55	6.55	5.45	3.9	4.5	3.95
10.....	5.0	5.0	4.9	5.1	5.05	5.25	7.8	6.55	5.15	4.75	4.25	3.9
11.....	4.95	5.0	5.0	5.1	5.05	5.55	8.05	6.75	5.05	3.65	5.9	3.8
12.....	4.95	5.1	4.85	5.0	5.05	5.55	8.45	7.2	4.95	3.7	5.3	3.9
13.....	4.9	5.15	4.8	5.0	5.05	5.4	8.1	7.35	5.15	3.8	4.7	3.9
14.....	4.85	5.05	4.7	5.05	5.0	5.4	7.95	6.9	4.95	3.65	4.75	3.9
15.....	4.75	5.0	4.5	5.05	5.0	5.25	7.55	6.65	4.75	3.6	4.5	3.95
16.....	4.8	4.9	4.55	5.05	5.0	5.2	7.15	6.45	4.65	3.5	4.25	3.85
17.....	4.8	4.85	4.6	5.0	5.05	5.2	7.55	6.25	4.5	4.25	4.5	3.85
18.....	4.85	4.9	4.75	5.15	5.15	5.1	7.65	6.2	4.35	4.5	4.3	3.9
19.....	4.85	4.9	5.2	5.1	5.1	5.45	7.65	6.2	4.3	6.15	4.15	4.05
20.....	4.9	4.9	5.1	5.1	5.15	5.6	7.9	6.05	4.15	7.8	4.0	6.2
21.....	4.85	4.9	5.1	5.1	5.05	5.6	7.8	5.95	4.1	5.2	3.9	10.6
22.....	4.95	4.85	5.0	5.0	5.15	5.75	7.5	5.85	4.0	5.45	4.9	7.35
23.....	4.9	4.85	4.9	4.95	5.2	5.65	6.75	5.5	3.95	4.35	5.55	5.8
24.....	4.9	4.8	5.1	5.0	5.2	5.55	6.6	5.3	3.9	4.55	6.35	4.9
25.....	4.95	4.9	5.05	4.95	5.2	5.4	6.6	5.25	3.95	4.45	7.6	4.8
26.....	4.9	4.9	5.05	5.0	5.35	5.35	6.6	5.2	3.85	4.45	7.25	4.75
27.....	4.8	4.9	4.9	4.75	5.35	5.4	6.55	7.8	3.75	4.35	6.15	4.6
28.....	4.95	5.05	4.75	4.8	5.25	5.25	6.5	7.25	3.6	4.3	5.6	4.6
29.....	4.95	5.1	4.85	4.95	.....	5.35	6.45	7.05	3.6	4.25	5.15	4.7
30.....	5.0	5.1	4.9	5.0	.....	5.3	6.45	6.65	3.6	4.15	4.95	4.65
31.....	5.05	.....	5.15	4.95	.....	5.3	.....	6.65	.....	4.05	4.7	.....
1902-3.												
1.....	4.65	4.7	4.5	4.6	5.05	5.0	7.55	8.9	9.3	9.3	4.45	3.95
2.....	4.6	4.7	4.65	4.7	4.95	5.05	11.45	9.15	9.6	8.85	4.35	3.8
3.....	4.7	4.7	4.5	4.65	4.95	5.1	9.15	9.5	9.95	8.4	4.25	3.8
4.....	4.7	4.6	4.4	4.65	4.75	5.45	7.0	9.6	10.3	7.85	4.15	3.85
5.....	4.8	4.65	4.7	4.7	4.7	7.6	6.7	9.85	10.55	7.45	4.95	3.8
6.....	4.7	4.65	4.7	4.75	4.75	8.7	6.6	10.2	10.55	7.1	4.0	4.4
7.....	4.7	4.7	4.75	4.8	4.65	7.25	6.45	10.35	10.85	6.75	4.15	4.45
8.....	4.65	4.7	4.75	4.8	4.8	6.15	6.5	10.4	11.3	6.4	4.25	4.8
9.....	4.7	4.7	4.75	4.85	5.05	6.15	6.8	10.75	12.25	6.45	4.05	4.5
10.....	4.7	4.7	4.75	4.9	5.15	6.2	7.3	10.95	12.6	6.05	4.05	4.15
11.....	4.7	4.6	4.75	4.9	5.05	6.15	7.3	11.15	12.1	6.8	4.0	4.0
12.....	4.7	5.05	4.75	4.9	5.0	7.0	7.35	11.2	12.0	6.15	4.2	4.15
13.....	4.65	5.0	4.9	4.85	5.05	7.3	7.0	11.2	12.85	5.9	4.0	4.0
14.....	4.65	5.0	4.9	4.85	4.95	7.1	6.65	11.35	13.4	5.8	4.7	4.05
15.....	4.7	4.9	4.9	4.8	5.15	6.8	6.85	11.9	13.4	5.6	4.3	4.0
16.....	4.7	4.85	4.65	4.9	4.75	6.55	7.1	11.5	12.75	5.55	4.0	4.05
17.....	4.7	4.7	4.1	4.9	4.95	6.3	7.0	11.7	12.6	6.1	5.3	4.05
18.....	4.7	4.7	4.45	4.9	4.95	6.2	7.4	11.4	12.55	6.15	4.4	3.95
19.....	4.6	4.7	5.05	4.9	5.0	6.2	7.3	10.75	12.7	5.7	4.15	3.95
20.....	4.7	4.7	4.65	4.85	5.15	5.95	6.85	10.05	12.5	6.2	4.0	3.95
21.....	4.7	4.7	4.65	4.75	5.25	5.8	7.0	9.7	12.15	6.1	4.2	4.0
22.....	4.7	4.8	4.65	4.85	5.15	5.85	7.35	9.25	11.7	5.7	4.15	3.95
23.....	4.7	4.9	4.65	4.8	5.25	5.85	7.7	8.75	11.4	5.55	4.05	3.95
24.....	4.7	4.9	4.65	4.85	5.45	6.05	8.35	8.5	11.1	5.3	4.05	4.05
25.....	4.6	4.9	4.75	5.0	5.65	6.25	8.8	8.6	10.85	5.05	4.3	4.0
26.....	4.6	4.7	4.8	5.1	5.3	6.3	9.2	8.85	10.6	4.95	4.15	3.95
27.....	4.6	4.7	4.8	5.0	5.25	6.4	9.2	8.9	10.5	5.05	4.0	3.9
28.....	4.6	4.65	4.9	5.0	5.15	6.4	10.0	8.7	10.05	5.05	3.95	4.0
29.....	4.65	4.6	4.7	5.0	.....	6.85	10.0	8.7	9.75	4.85	3.95	4.2
30.....	4.7	4.6	4.6	4.95	.....	6.6	8.8	8.8	9.55	4.75	4.1	4.05
31.....	4.7	.....	4.6	5.0	.....	6.7	.....	8.9	.....	4.65	4.05	.....

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905,
1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	4.0	4.05	4.45	3.85	3.85	4.6	3.8	4.25	1.55	1.55	5.15	5.3
2.....	4.05	4.05	4.4	3.95	3.9	4.55	3.75	4.25	1.55	1.5	5.8	5.2
3.....	4.0	4.0	4.3	3.85	3.95	4.55	3.8	4.05	1.5	1.45	6.15	5.15
4.....	3.95	4.05	4.25	3.85	3.95	4.3	3.8	4.05	1.5	1.4	5.4	4.95
5.....	3.95	4.05	4.4	3.95	4.1	4.35	3.8	4.05	1.45	1.4	5.05	5.25
6.....	4.0	4.05	3.9	3.95	4.15	4.25	3.7	4.0	1.4	1.4	5.4	5.6
7.....	4.0	4.05	3.8	3.85	4.2	4.25	3.55	4.05	1.45	1.3	6.1	5.75
8.....	4.0	4.05	3.85	3.85	4.2	4.2	3.45	4.05	1.5	1.2	6.45	5.7
9.....	4.0	4.05	4.0	3.95	4.1	4.15	3.4	4.25	1.4	1.2	5.45	5.65
10.....	3.95	4.05	4.2	3.95	3.95	4.0	3.4	4.35	1.45	1.2	4.55	5.4
11.....	4.0	4.1	4.25	4.05	4.05	3.95	3.3	4.25	1.4	1.2	4.6	5.25
12.....	3.95	4.15	4.25	4.1	4.05	3.95	3.3	4.25	1.45	1.1	4.25	5.1
13.....	4.0	4.15	4.15	4.15	4.15	4.0	3.35	4.2	1.55	1.1	4.1	5.15
14.....	4.0	4.25	4.25	4.05	4.1	3.9	3.7	4.15	1.6	1.1	4.1	5.0
15.....	4.0	4.2	4.15	3.9	4.1	3.9	5.0	4.25	1.6	1.2	6.05	5.0
16.....	4.0	4.25	4.0	4.1	4.1	3.85	5.2	4.25	1.75	2.05	5.95	4.95
17.....	4.0	4.25	4.0	4.1	4.2	3.85	5.15	4.25	1.95	1.3	6.0	4.85
18.....	4.0	4.2	3.95	4.1	4.3	3.7	5.1	4.25	2.05	1.3	7.45	4.7
19.....	4.0	4.25	4.1	4.1	4.35	3.6	5.1	2.15	1.9	1.3	7.45	4.75
20.....	4.0	4.2	4.15	4.05	4.35	3.6	5.15	2.05	2.0	1.7	6.45	7.35
21.....	4.0	4.25	4.15	3.95	4.3	3.7	4.7	2.0	2.15	1.45	5.85	7.1
22.....	4.0	4.3	4.05	3.85	4.3	3.75	4.95	2.05	2.3	1.65	5.2	5.45
23.....	4.0	4.35	4.15	3.95	4.25	3.8	4.55	2.05	2.1	2.6	4.95	6.1
24.....	4.0	4.35	4.05	4.05	4.35	3.85	4.45	2.05	1.85	2.85	4.95	7.75
25.....	4.0	4.45	4.1	3.85	4.45	3.8	4.3	2.05	1.7	5.0	5.95	7.8
26.....	4.0	4.45	4.0	3.85	4.55	3.75	4.3	1.95	1.55	4.6	6.65	10.45
27.....	4.05	4.5	3.95	3.8	4.6	3.7	4.45	1.85	2.25	3.8	6.25	10.7
28.....	4.0	4.5	3.9	3.9	4.55	3.65	4.4	1.85	2.05	3.8	5.55	10.7
29.....	4.0	4.45	4.0	3.8	4.55	3.6	4.45	1.8	1.65	3.5	5.3	12.1
30.....	4.05	4.45	3.9	3.8	.....	3.6	4.4	1.65	1.75	3.45	4.8	9.95
31.....	4.0	.....	3.8	3.9	.....	3.75	.....	1.65	.....	3.75	6.0	.....
1904-5.												
1.....	18.2	3.05	2.7	2.31	2.1	3.88	3.62	7.85	9.3	4.05	3.25	1.6
2.....	6.15	3.0	2.7	2.36	2.45	4.38	3.72	8.45	9.1	3.85	2.65	1.6
3.....	4.7	2.9	2.7	2.36	2.55	4.33	3.77	8.95	9.2	3.65	3.1	1.6
4.....	4.15	2.9	2.7	2.26	2.8	4.48	3.72	8.75	9.5	3.5	2.8	1.6
5.....	4.05	2.8	2.6	2.26	2.55	4.98	3.57	7.6	10.2	3.25	2.7	1.9
6.....	3.95	2.8	2.6	2.26	2.55	4.78	3.62	7.4	10.5	3.05	2.8	2.0
7.....	4.75	2.8	2.35	2.26	2.4	4.88	3.77	7.3	10.45	2.85	3.0	1.9
8.....	8.25	2.75	2.2	2.36	2.45	4.93	4.22	6.65	10.7	2.65	2.9	1.8
9.....	6.9	2.7	2.35	2.36	2.45	4.58	4.42	7.6	11.1	2.5	2.6	1.8
10.....	5.75	2.8	2.35	2.46	2.4	4.38	4.87	7.45	10.4	2.45	2.4	1.8
11.....	5.5	2.8	2.35	2.36	2.49	4.38	4.96	6.8	10.05	2.25	2.6	1.8
12.....	5.5	2.8	2.25	2.46	2.49	4.43	4.96	7.05	9.65	2.2	2.5	1.7
13.....	5.45	2.7	2.2	2.36	2.24	4.08	5.16	7.2	9.4	2.05	2.4	1.7
14.....	5.15	2.65	2.25	2.16	2.19	4.18	5.06	7.4	9.05	2.0	2.3	1.7
15.....	5.45	2.7	2.35	2.06	2.24	4.73	4.91	8.2	8.45	2.0	2.2	1.7
16.....	4.75	2.8	2.35	2.31	2.54	4.63	4.86	8.8	8.15	1.9	2.0	1.7
17.....	4.5	2.8	2.25	2.31	2.49	4.58	4.96	9.65	7.7	1.85	1.9	1.7
18.....	4.35	2.9	2.35	2.46	2.44	4.48	5.06	10.5	7.5	1.8	1.8	1.6
19.....	4.15	2.9	2.4	2.36	2.44	4.08	5.36	11.1	7.15	1.8	1.6	1.6
20.....	4.0	2.8	2.4	2.36	2.49	4.03	5.46	11.6	6.85	1.85	1.5	1.6
21.....	3.85	2.8	2.4	2.35	2.54	4.17	5.31	11.5	6.45	2.1	1.3	1.6
22.....	3.85	2.75	2.4	2.4	2.54	4.17	6.01	11.45	6.3	2.2	1.0	1.6
23.....	3.8	2.8	2.45	2.35	2.59	4.02	6.01	11.5	5.95	2.2	.6	1.6
24.....	3.65	2.7	2.45	2.35	2.79	3.92	6.31	11.75	5.7	2.1	.6	1.6
25.....	3.6	2.7	2.45	2.4	3.04	3.82	5.36	11.8	5.45	2.2	2.0	1.8
26.....	3.5	2.7	2.35	2.35	3.49	3.87	5.41	11.5	5.15	2.2	1.8	2.0
27.....	3.4	2.75	2.3	2.3	3.64	4.12	5.61	11.25	4.9	2.05	1.8	2.1
28.....	3.3	2.8	2.15	2.3	3.69	4.17	6.26	10.9	4.75	2.2	1.7	1.9
29.....	3.35	2.8	2.05	2.35	.....	3.77	6.81	10.6	4.45	2.1	1.6	1.8
30.....	3.35	2.75	2.15	2.4	.....	3.67	7.31	10.5	4.25	2.75	1.6	1.8
31.....	3.1	.....	2.25	2.4	.....	3.57	.....	9.4	.....	3.45	1.6	.....

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905,
1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.											
1.....	2.1	1.9	2.3	11.....	1.8	1.9	2.2	21.....	1.7	2.2	2.2
2.....	1.9	1.9	2.3	12.....	1.8	2.2	2.3	22.....	1.7	3.0	2.3
3.....	1.9	1.9	2.2	13.....	1.8	2.2	2.3	23.....	1.9	3.0	2.3
4.....	1.8	2.0	2.2	14.....	1.8	2.2	2.3	24.....	1.9	2.5	2.3
5.....	1.8	2.0	2.2	15.....	1.7	2.2	2.3	25.....	1.9	2.4	2.3
6.....	1.8	2.0	2.2	16.....	1.7	2.2	2.3	26.....	1.9	2.4	2.1
7.....	1.8	2.2	2.2	17.....	1.7	2.2	2.3	27.....	1.9	2.3	1.9
8.....	1.8	2.0	2.2	18.....	1.7	2.2	2.3	28.....	1.9	2.3	1.9
9.....	1.8	1.9	2.2	19.....	1.7	2.2	2.2	29.....	1.9	2.4	1.9
10.....	1.8	1.9	2.2	20.....	1.7	2.2	2.2	30.....	1.9	2.3	1.9
								31.....	1.9	.....	1.9

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.									
1.....		4.7	2.2	4.0	16.....		3.3	2.5	5.25
2.....		4.35	2.0	4.2	17.....		3.1	2.6	5.15
3.....		4.2	2.2	4.1	18.....		2.8	3.2	4.95
4.....		4.2	2.35	4.0	19.....		2.6	3.75	4.75
5.....		4.0	2.75	4.75	20.....		2.15	3.95	4.55
6.....		4.35	2.85	6.0	21.....		2.05	5.8	4.45
7.....		4.1	2.40	5.85	22.....		2.2	3.85	4.3
8.....		3.95	2.25	5.95	23.....	6.65	2.4	3.55	4.2
9.....		4.05	2.1	6.15	24.....		6.4	2.25	3.8
10.....		3.9	2.0	6.1	25.....		5.95	2.5	3.7
11.....		3.5	2.05	6.3	26.....		5.8	2.7	3.95
12.....		3.35	2.3	5.95	27.....		5.65	2.6	3.85
13.....		3.25	2.4	5.75	28.....		5.4	2.4	3.75
14.....		3.15	2.4	5.55	29.....		5.15	2.5	3.85
15.....		3.0	2.5	5.35	30.....		4.85	2.25	3.75
					31.....		.....	2.15	4.15

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	3.35	2.3	2.05	2.25	2.15	3.7	4.5	9.3	5.5	1.9	1.6	1.8
2.....	3.0	2.2	2.25	2.35	2.25	4.1	4.4	9.15	5.7	1.4	1.6	1.8
3.....	2.9	2.25	2.25	2.45	2.25	4.1	4.35	8.75	5.75	1.2	1.55	1.75
4.....	2.9	2.25	2.35	2.65	2.05	4.55	4.45	8.35	5.7	1.2	1.55	1.5
5.....	2.8	2.1	2.5	2.45	1.9	4.7	4.4	7.95	5.55	1.2	1.6	1.4
6.....	2.85	2.2	2.45	2.25	1.95	4.8	4.4	7.95	5.35	1.15	1.6	1.35
7.....	3.55	2.1	2.35	2.35	1.85	4.55	4.45	7.7	5.15	1.05	1.6	1.3
8.....	3.75	2.05	2.25	2.05	1.8	4.5	4.55	7.65	4.9	1.0	1.6	1.3
9.....	3.25	2.0	2.15	2.0	1.75	4.65	4.55	7.45	4.5	1.05	1.75	1.2
10.....	3.45	1.9	1.95	1.9	1.8	4.7	5.05	7.1	4.1	1.1	1.8	1.1
11.....	3.65	1.8	2.0	1.85	1.9	4.55	5.2	7.85	3.9	1.1	2.0	1.1
12.....	3.65	1.85	1.85	1.95	2.0	4.3	5.05	7.25	3.8	1.1	2.5	1.1
13.....	3.50	1.75	2.05	2.0	2.1	4.4	5.25	7.5	3.6	1.2	2.1	1.1
14.....	3.45	1.8	2.1	2.0	2.2	4.3	5.45	7.8	3.5	1.3	2.2	1.1
15.....	3.35	1.7	2.0	1.9	2.05	4.5	5.65	8.1	3.4	1.15	2.0	1.1
16.....	3.25	1.75	1.95	1.95	2.05	4.55	5.55	8.1	3.3	1.25	1.9	1.1
17.....	3.25	1.75	1.85	2.15	1.95	4.55	5.35	7.7	3.1	1.15	1.9	1.1
18.....	3.2	1.85	1.9	2.15	1.85	4.7	5.25	7.4	2.95	1.1	1.75	1.15
19.....	2.95	1.8	1.95	2.25	1.85	4.7	5.15	7.0	2.9	1.0	1.75	1.5
20.....	2.85	1.7	1.95	2.3	1.85	4.85	5.5	6.45	2.8	1.0	1.75	1.85
21.....	2.8	1.75	2.05	2.2	1.85	5.05	5.8	5.55	2.65	1.0	1.8	1.6
22.....	2.7	1.7	2.15	2.05	2.0	5.05	6.35	5.3	2.5	1.0	1.8	2.0
23.....	2.65	1.75	2.25	2.05	2.1	5.3	6.35	5.3	2.5	.9	1.6	2.2
24.....	2.6	2.05	2.15	2.25	2.05	5.4	6.6	5.3	3.1	1.0	1.6	.....
25.....	2.5	2.05	2.05	2.3	7.2	5.6	7.1	4.95	3.15	1.05	1.6	.....
26.....	2.45	2.05	2.25	2.15	2.3	5.45	7.8	4.75	3.0	1.3	1.5	.....
27.....	2.4	2.2	2.15	2.15	2.8	5.35	8.35	4.5	2.85	1.3	1.4	.....
28.....	2.5	2.05	2.05	2.05	3.1	5.1	8.45	4.25	2.2	1.1	1.4	.....
29.....	2.3	2.2	2.15	2.25	.....	5.05	9.0	3.95	1.85	1.0	1.4	.....
30.....	2.3	2.05	2.05	2.1	.....	4.65	9.25	4.05	2.1	1.3	1.4	.....
31.....	2.3	.....	1.95	1.95	.....	4.45	.....	4.75	.....	1.6	1.4	.....

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....		2.2	2.0	2.25	3.05	2.55	4.05	.....	6.4	5.15	5.6	2.8
2.....		2.15	1.95	2.1	2.95	2.65	4.1	.....	6.45	5.5	5.3	3.25
3.....		2.25	1.9	2.1	2.9	2.75	4.25	.....	6.65	6.05	4.9	3.31
4.....		2.5	1.95	2.1	2.6	2.8	4.3	5.85	6.7	6.5	4.45	3.43
5.....		2.4	1.95	2.15	2.65	3.05	4.3	6.3	6.75	6.85	4.2	3.37
6.....			2.35	1.95	2.15	2.65	4.1	4.2	6.75	6.8	7.0	3.85
7.....			2.35	1.95	2.0	2.55	5.15	3.95	7.3	6.85	7.3	3.7
8.....			2.3	1.95	.....	2.5	4.15	3.85	8.0	6.8	7.25	3.35
9.....			2.3	1.95	.....	2.5	3.75	3.7	8.6	6.9	7.85	3.1
10.....			2.25	2.05	.....	2.5	3.95	3.5	8.95	7.0	6.5	2.85
11.....			2.1	2.15	.....	2.5	4.7	3.4	8.7	7.3	6.45	2.6
12.....			2.0	2.2	.....	2.45	4.25	3.45	8.3	7.4	6.0	2.65
13.....			1.95	2.25	.....	2.4	3.55	3.55	7.9	7.45	5.9	2.9
14.....			1.95	2.2	3.5	2.4	3.55	3.5	7.7	7.5	6.1	2.7
15.....			2.0	2.25	3.0	2.4	3.4	3.4	7.85	7.4	6.1	2.45
16.....			2.0	2.15	2.8	2.4	3.25	.....	7.8	7.15	6.2	2.3
17.....			2.0	2.0	2.9	2.45	3.25	.....	7.45	6.85	6.95	2.3
18.....			2.0	2.05	2.9	2.4	3.35	.....	7.2	6.7	6.35	2.3
19.....			2.0	1.95	2.7	2.4	3.45	.....	7.1	6.5	6.9	2.3
20.....			2.0	1.95	2.6	2.25	3.45	.....	6.95	6.35	7.9	2.35
21.....			2.0	1.9	2.5	2.25	3.55	.....	6.75	6.35	7.15	2.35
22.....			2.0	1.75	2.6	2.25	3.5	4.5	6.35	6.45	7.7	2.4
23.....			1.95	1.7	2.6	2.25	3.5	.....	6.15	6.6	7.2	2.4
24.....			2.0	1.95	2.55	2.3	3.25	.....	5.95	6.75	7.6	2.7
25.....	2.05		2.0	2.1	2.55	2.45	3.1	.....	6.1	6.8	7.4	2.9
26.....	2.1	2.0	2.15	2.6	2.5	3.2	.....	6.15	6.6	6.85	2.6	3.1
27.....	2.25	2.0	2.15	2.85	2.45	3.2	.....	6.45	6.25	6.7	2.5	3.05
28.....	2.3	2.0	2.1	2.85	2.5	3.05	.....	6.5	5.8	6.5	2.5	3.35
29.....	2.2	2.0	2.1	2.65	.....	3.15	6.35	6.4	5.45	6.75	2.6	3.27
30.....	2.2	2.0	2.1	2.75	.....	3.45	.....	6.4	5.15	6.35	2.7	4.2
31.....	2.2	.....	2.2	3.0	.....	3.65	.....	6.4	.....	5.9	2.7	.....
1911-12.												
1.....	5.1	4.3	3.2	2.90	2.50	2.50	3.85	5.65	9.44	.....	2.65	2.40
2.....	5.0	4.3	3.2	2.90	2.50	2.52	3.65	6.60	9.36	.....	2.60	2.10
3.....	5.1	4.15	3.2	2.90	2.50	2.53	3.62	7.23	9.40	.....	2.85	2.02
4.....	5.2	4.15	3.2	2.90	2.50	2.53	3.90	7.33	9.27	5.30	2.92	1.98
5.....	5.4	4.1	3.2	2.90	2.50	2.60	4.20	6.86	9.12	5.00	2.88	1.95
6.....		5.6	4.0	3.2	2.70	2.45	2.68	6.42	9.17	4.63	2.71	1.89
7.....		8.4	3.95	3.2	2.70	2.45	2.90	5.17	6.64	9.20	4.45	2.55
8.....		11.0	3.9	3.2	2.70	2.45	2.95	5.23	6.97	.....	4.05	2.46
9.....		9.2	3.95	3.2	2.70	2.45	3.15	4.98	7.36	.....	3.70	2.43
10.....		8.4	3.9	3.2	2.70	2.48	3.22	4.87	7.48	.....	3.40	2.40
11.....		7.8	3.9	3.2	2.70	2.50	3.60	5.01	7.28	.....	3.15	2.40
12.....		7.2	3.7	3.1	2.70	2.50	3.70	4.87	7.22	.....	2.97	2.40
13.....		6.8	3.6	3.1	2.70	2.50	3.35	4.81	7.07	.....	2.80	2.40
14.....		6.5	3.6	3.1	2.65	2.50	3.22	4.35	7.21	.....	2.65	2.48
15.....		6.1	3.6	3.0	2.50	2.50	3.00	4.04	7.04	.....	2.80	3.42
16.....			3.6	2.85	2.50	2.50	2.80	4.05	7.07	.....	3.04	2.87
17.....			3.65	2.85	2.50	2.50	2.80	4.11	7.35	.....	3.50	2.82
18.....			3.7	2.85	2.50	2.50	2.80	4.19	8.02	.....	2.60	2.82
19.....			3.65	2.85	2.50	2.50	2.95	4.05	8.94	.....	2.60	2.83
20.....			3.6	2.85	2.50	2.52	4.88	3.89	9.80	.....	2.60	2.81
21.....			3.6	2.85	2.50	2.50	6.09	3.69	10.92	.....	2.60	2.80
22.....			3.6	2.85	2.50	2.43	4.66	3.47	11.31	.....	2.60	2.79
23.....			3.65	2.85	2.50	2.43	4.32	3.35	11.38	.....	3.05	2.78
24.....			3.6	2.9	2.50	2.48	4.09	3.41	11.24	.....	2.70	2.78
25.....			3.5	2.9	2.50	2.50	3.73	3.96	10.71	.....	2.75	2.77
26.....			3.4	2.85	2.50	2.45	3.70	4.29	9.68	.....	3.05	2.78
27.....			3.3	2.9	2.50	2.30	3.80	4.13	9.50	.....	2.80	2.75
28.....			3.3	2.9	2.50	2.35	3.70	4.32	9.50	.....	2.55	2.75
29.....			3.25	2.9	2.50	2.50	3.60	4.40	9.47	.....	2.55	2.74
30.....			4.45	3.25	2.9	2.50	.....	3.72	5.02	9.46	.....	2.55
31.....			4.4	.....	2.9	2.50	.....	3.78	.....	9.45	.....	2.55
1912-13.												
1.....	3.27	3.42	3.42	3.50	3.36	3.35	4.10	5.97	4.35	2.78	2.42	2.28
2.....	3.34	3.59	3.45	3.50	3.45	3.40	4.50	5.95	4.31	2.74	2.39	2.28
3.....	3.32	3.60	3.45	3.50	3.32	3.47	4.72	5.62	4.17	2.73	2.35	2.27
4.....	3.33	3.60	3.40	3.50	3.28	3.50	4.90	5.08	3.93	2.72	2.31	2.26
5.....	3.69	3.60	3.35	3.50	3.34	3.51	4.82	4.82	3.72	2.72	2.18	2.25

Daily gage height, in feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
6.....	3.54	3.55	3.30	3.50	3.30	3.52	4.90	5.10	3.56	2.72	2.01	2.25
7.....	3.52	3.60	3.25	3.15	3.30	3.60	4.98	5.34	3.39	2.74	1.91	2.13
8.....	3.53	3.65	3.20	3.10	3.32	3.69	4.50	5.25	3.50	2.72	1.84	2.11
9.....	3.53	3.68	3.30	3.10	3.38	3.70	4.35	5.08	3.57	2.85	1.78	2.15
10.....	3.52	3.68	3.30	3.10	3.37	3.72	4.32	5.02	3.69	2.91	1.78	2.30
11.....	3.55	3.62	3.40	3.00	3.35	3.80	4.12	5.38	5.31	2.78	1.86	2.23
12.....	3.59	3.60	3.50	3.00	3.37	3.88	4.05	5.48	4.82	2.71	1.91	2.20
13.....	3.60	3.65	3.50	3.00	3.30	3.89	4.03	5.48	4.50	2.70	2.39	2.25
14.....	3.60	3.68	3.60	3.10	3.29	3.76	4.30	5.30	4.44	2.65	2.20	2.28
15.....	3.61	3.65	3.65	3.10	3.35	3.68	4.54	5.08	4.55	2.60	2.17	2.23
16.....	3.57	3.62	3.50	3.10	3.40	3.72	4.76	4.90	4.36	2.58	2.06	2.20
17.....	3.58	3.60	3.50	3.22	3.46	3.71	5.00	4.80	4.12	2.52	1.96	2.20
18.....	3.55	3.55	3.50	3.23	3.50	3.77	5.18	4.70	4.13	2.64	2.10	2.20
19.....	3.54	3.55	3.50	3.30	3.48	3.88	5.20	4.52	4.00	2.60	2.08	2.19
20.....	3.53	3.55	3.50	3.28	3.48	3.80	5.48	4.40	3.81	2.50	2.60	2.20
21.....	3.51	3.55	3.50	3.22	3.40	3.77	5.65	4.28	3.65	2.45	2.38	2.19
22.....	3.45	3.52	3.50	3.21	3.36	3.76	5.71	4.20	3.74	2.40	2.60	2.24
23.....	3.45	3.40	3.50	3.22	3.42	3.81	5.68	4.02	3.75	2.36	2.40	3.65
24.....	3.40	3.50	3.50	3.23	3.37	3.87	5.24	4.02	3.70	2.32	2.37	3.75
25.....	3.38	3.45	3.50	3.27	3.46	3.86	4.78	3.98	3.45	2.30	2.35	3.23
26.....	3.38	3.50	3.50	3.40	3.50	3.78	4.60	3.92	3.18	2.30	2.33	3.28
27.....	3.38	3.45	3.50	3.38	3.49	3.68	4.61	3.95	2.90	2.43	2.33	3.28
28.....	3.38	3.45	3.50	3.35	3.43	3.62	4.88	4.20	2.77	2.41	2.31	3.23
29.....	3.32	3.28	3.50	3.41	.....	3.60	5.38	4.36	2.86	2.30	2.30	3.22
30.....	3.38	3.22	3.50	3.38	.....	3.60	5.78	4.31	2.80	2.25	2.29	3.22
31.....	3.42	.....	3.50	3.41	.....	3.71	.....	4.38	.....	2.24	2.29	.....

NOTE.—Gage heights referred to new datum May 19 to July 24, 1904, and after Oct. 2, 1904.

Friez automatic gage removed Apr. 16, 1911, and replaced by a Barrett & Lawrence automatic gage May 4, 1911. Gage readings Apr. 22 and 29, 1911, refer to the staff gage attached to the float box. From Aug. 17 to Sept. 2 and Sept. 23 to Oct. 29, 1911, the automatic gage did not record satisfactorily. Gage heights Aug. 17 to Sept. 2 and Sept. 23 to Oct. 15, 1911, have been estimated from a hydrograph of the Rio Grande at Lobatos, with an additional allowance for tributary streams between Lobatos and Buckman. The crest gage height on Oct. 8, 1911, was 13.1 feet. Gage heights affected by ice Jan. 1-14 and Dec. 11-31, 1912. Gage was out of order June 8 to July 3, 1912.

Gage heights affected by ice Dec. 11, 1912, to Jan. 6, 1913.

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
1.....	1,490	2,280	6,060	5,820	1,290	2,140	1,160
2.....	1,250	1,930	5,470	6,430	1,290	2,000	1,160
3.....	480	1,250	1,730	4,620	7,200	1,340	1,860	973
4.....	455	880	1,670	4,070	7,200	1,340	1,670	973
5.....	455	830	1,800	3,730	6,940	1,120	1,860	910
6.....	455	880	1,730	3,250	6,430	1,080	1,860	855
7.....	455	1,200	1,800	2,940	6,180	1,000	2,210	855
8.....	480	1,120	1,610	3,020	6,180	1,080	2,140	830
9.....	480	1,120	2,490	3,410	6,940	1,040	2,490	805
10.....	580	1,160	3,250	3,650	7,200	1,670	1,670	755
11.....	480	1,160	4,250	4,250	7,200	2,350	1,340	730
12.....	505	1,200	5,360	5,250	7,070	3,570	2,000	680
13.....	405	910	6,680	5,930	7,070	2,210	1,740	680
14.....	355	880	8,330	5,360	6,940	2,210	2,140	655
15.....	405	805	7,610	5,580	6,430	2,070	2,420	630
16.....	430	805	7,200	5,140	5,700	2,000	1,670	580
17.....	480	730	7,650	5,360	4,720	1,930	1,250	580
18.....	555	730	8,100	4,920	4,070	1,740	940	530
19.....	505	730	8,630	4,250	3,650	1,500	910	580
20.....	630	805	8,630	3,570	3,330	1,340	973	630
21.....	605	940	8,630	3,980	2,790	1,250	1,040	630
22.....	605	1,160	8,630	4,820	2,350	1,300	855	580
23.....	605	1,340	8,630	5,250	1,930	1,340	755	580
24.....	630	2,640	7,200	5,700	1,610	1,670	705	580
25.....	730	2,490	6,560	5,580	1,440	1,670	780	580

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
26.....					830	2,350	6,430	5,250	1,340	1,800	880	655
27.....					1,340	2,070	6,430	5,140	1,120	1,670	940	655
28.....					1,440	2,210	6,680	5,030	1,200	1,670	1,040	630
29.....						2,420	6,680	4,720	1,250	1,490	1,200	630
30.....						2,280	6,300	5,360	1,160	3,330	1,200	630
31.....						2,640		6,060		4,430	1,200	
1895-96.												
1.....	630	730	755	540		750	2,210	4,820	1,680	290	280	310
2.....	580	705	805	490		750	1,940	4,250	1,680	310	270	290
3.....	580	730	755	590		750	1,940	4,070	1,440	310	270	290
4.....	830	755	455	645		840	1,940	4,250	1,210	310	255	270
5.....	880	855	605			765	1,810	4,430	1,010	290	255	270
6.....	880	830	530			705	2,070	4,620	765	310	255	290
7.....	880	805	580			705	2,490	5,030	705	270	240	290
8.....	880	855	630			765	2,640	5,250	645	270	240	270
9.....	830	880	705			765	3,410	5,030	540	270	240	255
10.....	680	805	730			840	3,570	3,900	490	255	240	330
11.....	630	805	805			920	3,900	3,410	400	255	240	375
12.....	680	830	805			920	4,070	3,090	375	255	225	540
13.....	630	910	830			1,010	3,900	2,790	350	375	240	330
14.....	630	880	855			1,110	3,730	2,640	350	590	225	330
15.....	680	880	855			1,210	3,900	2,490	350	310	225	310
16.....	680	855	805			1,010	3,900	2,070	310	375	225	290
17.....	630	805	805		645	1,110	4,250	1,940	310	490	225	290
18.....	630	780	780		645	1,010	4,070	1,680	290	400	225	440
19.....	630	830	755		645	920	3,900	1,320	290	765	225	310
20.....	630	880	780		645	840	3,410	1,320	290	440	225	350
21.....	630	910	780		645	1,110	3,410	1,210	270	540	225	350
22.....	630	940	805		645	1,110	3,570	1,110	270	765	210	330
23.....	630	940	805			1,320	3,730	1,110	270	645	210	330
24.....	630	940	755			1,680	3,570	1,210	255	540	310	350
25.....	630	910	655			1,810	4,070	1,320	255	400	255	330
26.....	630	910	630			2,210	4,250	1,680	310	400	240	310
27.....	630	910	605			2,640	4,620	1,810	270	350	255	290
28.....	655	805	605			2,940	5,030	1,810	270	310	255	310
29.....	630	655	605			3,090	5,030	1,810	290	290	255	765
30.....	680	705	605			2,940	5,250	1,940	290	310	255	590
31.....	755		630			2,490		1,680		310	270	
1896-97.												
1.....	490	440	330	550	530	630	1,300	8,500	10,900	2,480	370	320
2.....	440	440	400	450	530	650	1,300	9,700	10,900	2,220	300	260
3.....	440	440	490	430	590	1,100	1,200	10,500	10,200	1,980	100	335
4.....	400	440	490	410	590	1,550	1,250	11,900	10,200	1,860	540	290
5.....	400	400	440	300	530	710	1,200	11,000	8,980	1,860	370	260
6.....	375	400	490	290	550	610	1,980	9,580	7,900	1,860	540	260
7.....	350	375	540	490	550	610	3,320	9,220	7,300	1,740	420	460
8.....	540	375	540	450	530	630	3,640	9,820	7,060	1,740	420	350
9.....	490	400	590	430	530	1,000	2,480	10,700	6,820	1,620	420	575
10.....	540	400	590	490	550	900	2,380	11,000	7,060	2,040	420	820
11.....	440	400	590	550	550	790	3,010	11,700	7,300	2,100	420	745
12.....	400	540	540	570	510	710	3,320	11,100	7,540	2,100	420	1,060
13.....	440	590	590	550	550	710	3,640	10,900	7,780	1,920	840	1,320
14.....	490	590	590	510	570	690	3,610	10,900	7,900	1,860	300	2,360
15.....	540	590	540	570	510	630	4,370	10,800	7,780	1,980	280	950
16.....	540	590	540	570	470	820	5,500	11,000	7,180	2,100	200	650
17.....	440	590	590	490	510	1,050	5,620	10,700	6,340	3,190	1,260	525
18.....	400	590	540	430	530	860	6,580	10,400	5,740	3,190	680	550
19.....	440	590	490	410	550	820	7,180	15,300	5,380	2,280	550	575
20.....	400	590	440	390	570	860	7,660	15,100	4,360	1,800	420	600
21.....	400	590	440	430	590	760	8,020	13,780	3,910	1,440	380	600
22.....	440	590	440	410	510	790	7,900	13,500	3,580	1,080	680	600
23.....	645	590	440	470	490	690	8,380	12,700	3,260	900	480	650
24.....	540	590	440	470	510	650	7,660	11,600	3,110	900	440	710
25.....	540	645	400	470	530	735	7,540	11,100	2,970	780	400	710
26.....	490	590	375	490	570	950	7,780	11,900	2,480	600	350	710
27.....	490	540		490	570	1,620	9,220	11,900	2,690	395	290	745
28.....	590	490		430	570	1,690	9,220	12,100	2,830	320	260	860
29.....	490	310		430		2,480	8,260	12,100	2,620	260	260	780
30.....	440	330		530		2,380	8,260	11,900	2,550	240	680	780
31.....	440			550		1,550		12,600		200	350	

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
1	550	1,710	625	340	340	630	475	7,060	4,340	1,520	500	265
2	820	1,710	625	340	340	560	425	5,380	4,340	1,090	500	296
3	780	1,710	575	340	320	500	425	5,140	4,100	1,090	380	320
4	860	1,710	460	400	320	500	500	4,340	4,100	930	305	750
5	3,270	1,710	460	450	360	560	530	4,100	4,680	1,040	290	670
6	1,900	1,580	460	380	360	595	630	3,440	5,140	835	290	630
7	1,780	1,450	215	400	400	560	790	3,110	4,220	3,000	270	235
8	2,230	1,320	650	400	425	560	790	3,110	3,880	2,890	2,070	230
9	2,750	1,190	650	360	450	595	950	3,110	3,880	3,880	2,450	230
10	3,460	1,120	710	360	400	630	1,330	3,220	3,880	2,160	1,750	475
11	3,010	1,060	710	380	380	750	2,350	3,220	3,880	1,990	1,040	425
12	2,940	1,120	745	475	400	790	3,220	3,330	3,770	1,670	710	340
13	2,880	1,190	460	425	425	750	4,220	3,330	3,660	5,020	560	290
14	2,750	1,190	460	320	400	750	4,220	3,660	3,660	5,000	475	270
15	2,620	1,320	420	320	425	595	5,020	3,880	3,220	5,620	380	270
16	2,230	1,320	460	290	450	530	5,140	3,440	2,250	6,580	255	270
17	2,360	1,190	650	290	475	425	6,700	3,220	2,560	5,980	475	270
18	2,820	1,190	550	320	560	475	7,540	3,110	2,560	4,560	560	270
19	2,880	1,060	525	290	530	560	6,820	2,890	3,330	4,340	475	270
20	2,750	1,060	550	290	500	560	6,940	2,670	4,100	4,300	425	270
21	2,560	1,060	525	290	530	500	6,940	2,350	4,450	3,990	380	270
22	2,360	1,050	420	290	500	475	6,820	2,070	4,340	2,560	340	270
23	2,160	950	350	305	500	450	6,940	2,250	3,660	2,160	320	270
24	2,160	950	460	320	475	490	7,540	1,750	4,910	1,990	320	270
25	2,100	950	500	320	530	425	7,780	1,830	4,340	1,620	2,250	270
26	2,100	950	460	360	560	475	7,900	1,910	4,340	1,210	450	270
27	2,100	950	450	320	595	450	7,780	2,160	3,440	980	320	270
28	1,970	950	500	360	630	450	8,020	2,250	3,440	835	360	270
29	1,840	820	500	400	400	400	7,780	2,560	2,560	595	320	260
30	1,840	680	550	450	400	475	7,540	3,330	1,910	595	270	260
31	1,840	-----	550	360	-----	500	-----	3,770	-----	530	265	-----
1898-99.												
1	250	360	1,090	295	610	775	1,330	3,000	740	190	420	100
2	250	360	1,090	295	585	1,090	1,330	3,000	705	190	340	100
3	260	450	880	295	585	980	1,150	2,560	640	210	310	100
4	260	500	880	325	485	890	1,270	2,160	640	210	2,160	105
5	260	560	710	360	560	890	1,210	1,910	640	170	670	100
6	260	560	670	325	510	955	980	1,750	585	150	420	100
7	260	500	670	360	560	935	935	1,670	535	150	1,520	95
8	260	560	710	400	560	980	1,150	1,520	510	135	640	150
9	710	560	630	460	640	1,270	1,040	1,520	440	230	640	200
10	630	560	560	420	640	1,150	1,150	1,450	610	190	340	325
11	500	560	560	400	640	1,390	1,450	1,450	460	190	325	400
12	450	630	560	420	585	1,390	1,670	1,670	440	190	295	220
13	360	560	560	400	510	1,330	1,990	1,590	420	150	280	210
14	360	500	560	420	850	1,330	2,560	1,990	380	230	267	210
15	320	500	560	440	670	1,390	3,330	3,000	360	267	230	8,020
16	320	500	560	440	610	935	3,110	3,440	280	420	220	8,260
17	360	500	560	420	670	1,270	4,100	3,550	295	440	210	1,830
18	360	500	595	420	640	1,590	5,260	3,000	255	4,450	180	935
19	360	500	630	420	670	1,450	5,620	2,450	242	2,450	190	640
20	340	500	560	440	640	1,520	3,620	2,160	230	1,550	180	535
21	340	500	670	440	670	1,450	4,800	2,160	210	810	170	485
22	360	560	630	420	670	1,390	4,220	2,160	190	560	150	535
23	360	560	560	420	670	1,330	4,340	1,590	190	560	135	420
24	340	560	560	420	705	1,270	4,450	1,390	560	485	115	440
25	360	630	560	440	890	1,330	4,680	1,210	230	535	127	400
26	360	790	560	460	670	1,670	5,020	1,210	295	510	120	360
27	360	790	560	510	670	1,990	4,800	1,040	255	560	110	360
28	360	1,090	560	535	775	1,910	4,340	1,090	230	585	115	425
29	360	1,090	560	535	-----	1,830	3,770	935	190	420	110	425
30	360	1,150	475	585	-----	1,670	3,000	890	220	440	100	295
31	360	-----	450	610	-----	1,590	-----	810	-----	1,150	100	-----
1899-1900.												
1	310	560	775	600	580	670	695	1,070	7,500	460	170	130
2	310	535	740	550	580	645	770	1,240	7,320	425	160	130
3	310	560	740	550	580	770	1,000	1,350	6,950	370	160	170
4	360	610	740	670	580	770	830	1,240	6,600	620	160	1,060
5	460	610	585	645	580	925	830	1,390	6,030	650	160	1,220

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
6.....	440	640	420	565	580	1,000	890	1,900	5,100	580	180	670
7.....	440	670	535	625	625	925	800	1,860	4,650	480	180	6,030
8.....	420	705	610	580	625	830	830	1,740	4,400	440	180	1,530
9.....	400	705	775	645	535	830	890	2,070	4,000	460	220	1,030
10.....	380	705	640	625	420	830	860	2,350	3,930	390	260	780
11.....	360	740	535	600	500	830	745	2,700	3,850	330	370	530
12.....	360	705	485	520	600	1,000	720	3,170	3,550	315	200	610
13.....	360	705	610	625	580	1,070	695	3,350	3,150	300	180	690
14.....	340	705	610	600	600	1,240	720	3,350	2,730	260	170	610
15.....	340	980	485	645	600	1,430	800	3,230	2,080	230	180	460
16.....	420	810	360	645	600	1,200	800	3,060	1,980	200	170	410
17.....	420	850	460	645	535	1,130	745	2,840	1,680	200	160	370
18.....	440	810	610	600	535	1,090	745	2,740	1,520	180	160	390
19.....	400	810	775	565	565	960	695	3,600	1,280	180	160	425
20.....	440	810	705	550	600	800	695	4,600	1,100	160	160	425
21.....	460	810	610	580	600	800	670	4,320	1,030	170	160	390
22.....	485	810	560	625	580	800	1,350	4,600	970	160	160	350
23.....	485	890	640	625	565	745	1,240	4,600	1,130	170	130	350
24.....	485	890	670	600	625	745	1,070	3,900	810	200	130	330
25.....	510	890	640	625	600	720	1,000	3,980	840	180	130	330
26.....	510	850	640	600	600	695	925	3,980	740	200	110	330
27.....	560	850	610	600	670	645	830	5,000	620	180	110	330
28.....	560	850	610	580	645	695	960	5,150	580	180	110	370
29.....	560	810	640	550	.....	645	1,170	7,500	510	170	110	370
30.....	535	810	670	535	.....	600	1,000	7,250	780	180	110	370
31.....	535	.....	755	580	.....	600	.....	7,500	.....	180	110	.....
1900-1901.												
1.....	370	420	500	330	420	850	420	6,000	4,650	675	1,100	745
2.....	370	380	500	255	490	890	450	7,080	4,210	640	505	480
3.....	410	380	500	255	490	980	450	6,380	3,650	710	480	380
4.....	410	380	520	305	420	1,150	530	5,150	3,450	580	200	1,400
5.....	370	400	480	330	450	1,020	530	4,490	3,260	580	1,530	745
6.....	370	400	480	330	490	1,020	530	4,140	3,000	530	1,320	580
7.....	350	380	520	420	490	980	530	4,220	2,870	530	1,190	610
8.....	350	400	540	490	570	890	490	4,220	2,640	505	1,910	455
9.....	350	380	520	490	570	1,020	610	4,140	2,640	430	890	2,000
10.....	330	380	570	330	490	850	570	4,140	2,750	430	710	2,130
11.....	330	400	570	360	490	890	690	4,070	2,690	405	710	890
12.....	320	380	510	360	490	730	570	4,140	2,640	340	640	610
13.....	320	380	540	305	490	690	570	4,000	2,430	340	580	555
14.....	340	380	520	420	490	610	730	5,040	2,170	315	580	505
15.....	400	360	500	360	530	610	935	5,260	2,080	340	610	455
16.....	400	380	500	420	530	530	1,020	5,380	2,040	610	710	405
17.....	420	360	410	360	490	850	1,100	4,840	1,910	340	745	380
18.....	400	360	380	420	490	810	935	4,840	1,780	320	610	360
19.....	400	380	460	360	570	850	935	5,040	1,570	280	1,870	380
20.....	400	440	440	330	1,060	690	890	5,150	1,440	250	2,000	360
21.....	380	480	480	330	1,150	690	1,100	6,500	1,440	300	710	360
22.....	420	500	480	330	1,150	690	1,360	8,000	1,440	555	455	300
23.....	400	480	440	420	1,150	730	1,830	7,800	1,400	430	360	280
24.....	420	480	380	490	935	610	1,910	7,420	1,320	455	980	300
25.....	400	500	360	490	890	610	2,340	5,150	1,320	1,320	580	320
26.....	420	480	380	490	890	530	3,190	5,150	1,190	1,320	455	280
27.....	460	500	440	570	810	490	3,930	4,740	1,150	2,000	580	300
28.....	440	570	420	530	935	490	4,000	4,740	1,100	1,020	505	280
29.....	420	520	420	570	.....	450	4,070	4,560	935	2,120	455	280
30.....	420	520	420	490	.....	420	4,840	4,560	815	1,700	400	280
31.....	420	.....	400	360	.....	390	.....	4,650	.....	1,700	1,230	.....
1901-2.												
1.....	320	505	530	480	475	495	510	1,160	1,530	65	420	220
2.....	320	505	530	485	475	490	540	1,140	1,530	70	155	210
3.....	360	480	530	480	475	490	610	1,160	1,340	65	135	190
4.....	380	480	480	490	470	490	610	1,200	1,120	60	125	150
5.....	360	455	530	490	475	490	635	1,200	1,010	60	650	150
6.....	1,700	480	580	490	475	480	900	1,130	830	70	1,130	115
7.....	815	430	640	485	475	480	980	1,130	800	70	235	155
8.....	850	430	555	485	485	485	1,370	1,150	740	70	280	150
9.....	640	455	480	485	485	485	1,800	1,210	650	140	200	115
10.....	480	480	430	490	485	510	2,100	1,210	500	350	155	105

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905,
1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
11.....	455	480	450	490	485	635	2,500	1,300	450	80	1,600	85
12.....	455	530	405	480	485	635	3,200	1,670	400	85	940	100
13.....	430	555	380	480	485	560	2,600	1,820	500	95	340	100
14.....	405	505	340	485	480	560	2,340	1,490	400	80	370	100
15.....	360	480	260	485	480	510	1,880	1,350	340	75	220	110
16.....	380	430	260	485	480	500	1,620	1,190	310	65	160	110
17.....	380	405	300	480	485	500	2,050	1,020	260	230	220	115
18.....	405	430	360	495	495	490	2,280	980	200	300	170	120
19.....	405	430	580	490	490	585	2,280	980	180	1,120	145	150
20.....	430	430	530	490	495	660	2,830	880	150	2,200	120	955
21.....	405	430	530	490	485	660	2,600	820	140	520	105	6,460
22.....	455	405	480	480	495	735	1,960	770	125	650	360	1,830
23.....	430	405	430	475	500	685	1,460	610	115	220	640	730
24.....	430	380	530	480	500	635	1,400	550	105	280	1,130	360
25.....	455	430	505	475	500	560	1,400	530	115	250	2,300	330
26.....	430	430	505	480	540	540	1,400	520	95	250	1,950	310
27.....	380	430	430	455	540	560	1,360	2,230	80	220	970	260
28.....	455	505	360	460	510	510	1,340	1,790	70	210	700	240
29.....	455	530	405	475	540	540	1,320	1,720	70	195	520	250
30.....	480	530	430	480	520	520	1,320	1,590	70	160	440	240
31.....	505	530	555	475	480	520	1,590	1,590	130	340	.....	.....
1902-3.												
1.....	260	280	275	290	450	380	2,200	4,370	5,870	7,260	500	340
2.....	255	280	315	335	410	410	9,450	4,820	6,470	5,670	465	300
3.....	290	280	275	310	410	440	4,550	5,440	6,840	4,960	430	300
4.....	315	250	245	310	320	650	1,720	5,620	7,330	4,260	400	310
5.....	345	260	320	335	305	2,210	1,460	6,020	7,900	3,730	725	300
6.....	325	260	320	340	320	3,750	1,380	6,580	7,900	3,280	355	485
7.....	300	265	335	350	290	1,770	1,260	6,870	8,590	2,850	400	500
8.....	280	265	335	335	335	1,080	1,320	7,000	9,630	2,420	430	645
9.....	275	265	330	360	450	1,080	1,670	7,910	12,000	2,480	370	520
10.....	275	260	325	385	500	1,110	2,110	8,430	13,700	2,160	370	400
11.....	275	250	320	385	450	1,080	2,110	8,960	10,300	2,640	355	355
12.....	270	420	320	385	425	1,600	2,150	9,090	9,640	2,050	415	400
13.....	260	400	360	370	440	1,750	1,860	9,090	16,600	1,820	355	355
14.....	260	400	360	380	410	1,640	1,530	9,480	19,300	1,750	600	370
15.....	275	360	360	370	480	1,430	1,720	10,900	19,300	1,610	450	355
16.....	295	340	310	400	300	1,260	1,890	9,620	16,100	1,580	355	370
17.....	290	280	200	400	365	1,090	1,830	10,100	15,400	1,940	995	370
18.....	285	280	275	400	365	1,030	2,060	9,060	15,300	1,970	485	340
19.....	260	285	440	400	390	1,030	1,990	6,800	15,900	1,660	400	340
20.....	275	290	290	380	480	870	1,660	6,120	15,100	1,990	355	340
21.....	275	295	285	350	540	790	1,770	5,770	14,700	1,930	415	355
22.....	270	345	280	375	480	810	2,140	5,230	14,200	1,590	400	340
23.....	270	400	290	360	540	800	2,510	4,500	13,900	1,380	370	340
24.....	270	400	300	375	670	870	3,200	4,290	13,100	1,050	370	370
25.....	265	400	335	430	810	960	3,670	4,390	12,500	750	450	355
26.....	265	310	350	470	530	1,020	4,750	4,770	11,800	700	400	340
27.....	265	310	350	430	530	1,230	4,750	4,850	11,500	750	355	325
28.....	265	290	390	430	470	1,230	7,250	4,550	9,910	750	340	355
29.....	275	275	280	420	.....	1,590	7,250	4,580	8,860	690	340	415
30.....	285	275	260	390	.....	1,420	3,670	4,580	8,160	660	385	370
31.....	280	.....	260	410	.....	1,500	.....	4,970	.....	630	370	.....
1903-4.												
1.....	355	370	500	310	310	560	300	430	221	221	865	995
2.....	370	370	485	340	325	540	240	287	430	221	1,600	905
3.....	355	355	450	310	340	540	300	370	202	183	2,060	865
4.....	340	370	430	310	340	450	300	370	202	165	1,100	725
5.....	340	370	485	340	385	465	300	370	183	165	790	950
6.....	355	370	325	340	400	430	275	355	165	165	1,100	1,340
7.....	355	370	300	310	415	430	240	370	183	129	1,990	1,540
8.....	355	370	310	310	415	415	220	370	202	94	2,440	1,470
9.....	355	370	355	340	385	400	210	430	165	94	1,150	1,400
10.....	340	370	415	340	340	355	210	465	183	94	540	1,100
11.....	355	385	430	370	370	340	190	430	165	94	560	950
12.....	340	400	430	385	370	340	190	430	183	62	430	825
13.....	355	400	400	400	400	355	200	415	221	62	385	865
14.....	355	430	430	370	385	325	275	400	240	62	385	755
15.....	355	415	400	325	385	325	755	430	240	94	1,920	755

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
16.....	365	430	355	385	385	310	905	430	298	419	1,800	725
17.....	355	430	355	385	415	310	865	430	377	129	1,860	670
18.....	355	415	340	385	450	275	825	430	419	129	3,740	600
19.....	355	430	385	385	465	250	825	462	357	129	3,740	620
20.....	355	415	400	370	465	250	865	419	398	278	2,440	3,620
21.....	355	430	400	340	450	275	600	398	462	183	1,660	3,290
22.....	355	450	370	310	450	287	725	419	530	259	905	1,150
23.....	355	465	400	340	430	300	540	419	440	693	725	1,990
24.....	355	465	370	370	465	310	500	419	337	870	725	4,140
25.....	355	500	385	310	500	300	450	419	278	755	1,800	4,200
26.....	355	500	355	310	540	287	450	377	221	560	2,700	7,640
27.....	370	520	340	300	560	275	500	337	507	300	2,180	7,970
28.....	355	520	325	325	540	262	485	337	419	300	1,280	7,970
29.....	355	500	355	300	540	250	500	317	259	230	995	9,790
30.....	370	500	325	300	.....	250	485	259	298	220	645	7,000
31.....	355	.....	300	325	.....	287	.....	259	.....	287	1,860	.....
1904-5.												
1.....	17,700	1,040	759	687	750	2,100	1,810	8,880	12,500	2,290	1,430	330
2.....	7,190	994	759	722	785	2,690	1,920	10,300	12,000	2,060	925	330
3.....	3,760	909	759	722	855	2,630	1,980	11,600	12,200	1,840	1,290	330
4.....	2,630	909	759	656	1,040	2,810	1,920	11,100	13,000	1,680	1,040	330
5.....	2,440	831	693	656	855	3,470	1,760	8,320	14,800	1,430	960	460
6.....	2,240	831	693	656	855	3,190	1,810	7,880	15,700	1,240	1,040	510
7.....	3,860	831	554	656	750	3,330	1,980	7,660	15,500	1,080	1,200	460
8.....	12,900	735	484	722	785	3,400	2,490	6,330	16,200	925	1,120	410
9.....	9,200	759	554	722	785	2,930	2,730	8,320	17,400	820	890	410
10.....	6,150	831	554	792	750	2,690	3,320	7,990	15,400	785	750	410
11.....	5,550	831	554	722	813	2,690	3,440	6,630	14,400	650	890	410
12.....	5,550	831	507	792	813	2,750	3,440	7,140	13,500	620	820	370
13.....	5,440	759	484	722	644	2,330	3,740	7,450	12,700	535	750	370
14.....	4,730	726	507	596	614	2,450	3,590	7,880	11,800	510	680	370
15.....	5,440	759	554	540	644	3,130	3,370	9,710	10,300	510	620	370
16.....	3,860	831	554	687	848	3,000	3,300	11,200	9,590	460	510	370
17.....	3,340	831	507	687	813	2,930	3,440	13,400	8,540	435	460	370
18.....	3,030	909	554	792	778	2,810	3,590	15,700	8,100	410	410	330
19.....	2,630	909	579	722	778	2,330	4,050	17,400	7,340	410	330	330
20.....	2,340	831	579	722	813	2,270	4,210	18,900	6,730	435	290	330
21.....	2,060	831	579	715	848	2,430	3,970	18,600	5,940	560	210	330
22.....	2,060	735	579	750	848	2,430	5,140	18,400	5,660	620	120	330
23.....	1,970	831	606	715	883	2,250	5,140	18,600	5,030	620	40	330
24.....	1,720	759	606	715	1,030	2,140	5,680	19,400	4,600	560	40	330
25.....	1,650	759	606	750	1,240	2,030	4,050	19,500	4,190	620	510	410
26.....	1,520	759	554	715	1,670	2,090	4,130	18,600	3,720	620	410	510
27.....	1,400	795	530	680	1,830	2,370	4,450	17,800	3,360	535	410	560
28.....	1,290	831	462	680	1,890	2,430	5,590	16,800	3,160	620	370	460
29.....	1,340	831	419	715	.....	1,980	6,650	16,000	2,770	560	330	410
30.....	1,340	795	462	750	.....	1,870	7,680	15,700	2,530	1,000	330	410
31.....	1,080	.....	507	750	.....	1,760	.....	12,700	.....	1,630	330	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.											
1.....	560	460	680	11.....	410	460	620	21.....	.....	370	620
2.....	460	460	680	12.....	410	620	680	22.....	.....	370	1,200
3.....	460	460	620	13.....	410	620	680	23.....	.....	460	1,200
4.....	410	510	620	14.....	410	620	680	24.....	.....	460	820
5.....	410	510	620	15.....	370	620	680	25.....	.....	460	750
6.....	410	510	620	16.....	.....	370	620	26.....	.....	460	750
7.....	410	620	620	17.....	.....	370	620	27.....	.....	460	680
8.....	410	510	620	18.....	.....	370	620	28.....	.....	460	680
9.....	410	460	620	19.....	.....	370	620	29.....	.....	460	750
10.....	410	460	620	20.....	.....	370	620	30.....	.....	460	680
								31.....	.....	460	.....

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.					1909.				
1.....		3,210	636	2,370	16.....		1,620	865	3,950
2.....		2,780	500	2,600	17.....		1,420	950	3,810
3.....		2,600	636	2,480	18.....		1,130	1,520	3,540
4.....		2,600	747	2,370	19.....		950	2,100	3,280
5.....		2,370	1,080	3,280	20.....		601	2,320	3,020
6.....		2,780	1,180	5,140	21.....		533	4,800	2,900
7.....		2,480	785	4,880	22.....		636	2,210	2,720
8.....		2,320	672	5,060	23.....		6,330	785	1,880
9.....		2,420	566	5,400	24.....		5,850	672	2,150
10.....		2,260	500	5,310	25.....		5,060	865	2,040
11.....		1,830	533	5,670	26.....		4,800	1,040	2,320
12.....		1,670	709	5,060	27.....		4,560	950	2,210
13.....		1,570	785	4,720	28.....		4,170	785	2,100
14.....		1,470	785	4,400	29.....		3,810	865	2,210
15.....		1,320	865	4,100	30.....		3,400	672	2,100
					31.....		601	2,540	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1,670	709	533	672	601	2,040	2,960	12,500	4,320	440	295	386
2.....	1,320	636	672	747	672	2,480	2,840	12,100	4,640	230	295	386
3.....	1,220	672	672	825	672	2,480	2,780	11,100	4,720	180	278	362
4.....	1,220	672	747	995	533	3,020	2,900	10,100	4,640	180	278	260
5.....	1,130	566	865	825	440	3,210	2,840	9,120	4,400	180	295	230
6.....	1,180	636	825	672	470	3,340	2,840	9,120	4,100	169	295	218
7.....	1,880	566	747	747	413	3,020	2,900	8,540	3,800	148	295	205
8.....	2,100	533	672	533	386	2,960	3,020	8,430	3,470	138	295	205
9.....	1,570	500	601	500	362	3,140	3,020	7,990	2,960	148	362	180
10.....	1,780	440	470	440	386	3,210	3,660	7,240	2,480	158	386	158
11.....	1,990	386	500	413	440	3,020	3,870	8,880	2,260	158	500	158
12.....	1,990	413	413	470	500	2,720	3,660	7,560	2,150	158	865	158
13.....	1,830	362	533	500	566	2,840	3,940	8,100	1,930	180	566	158
14.....	1,780	386	566	500	636	2,720	4,240	8,770	1,830	218	636	158
15.....	1,670	337	500	440	533	2,960	4,560	9,470	1,720	169	500	158
16.....	1,570	362	470	470	533	3,020	4,400	9,470	1,620	192	440	158
17.....	1,570	362	413	601	470	3,020	4,100	8,540	1,420	169	440	158
18.....	1,520	413	440	601	413	3,210	3,940	7,880	1,270	158	362	169
19.....	1,270	386	470	672	413	3,210	3,800	7,030	1,220	138	362	260
20.....	1,180	337	470	709	413	3,400	4,320	5,950	1,130	138	362	413
21.....	1,130	362	533	636	413	3,660	4,800	4,400	995	138	386	295
22.....	1,040	337	601	533	500	3,660	5,770	4,020	865	138	386	500
23.....	994	362	672	533	566	4,020	5,770	4,020	865	120	295	636
24.....	950	533	601	672	533	4,170	6,230	4,020	1,420	138	295	.....
25.....	865	533	533	709	636	4,480	7,240	3,540	1,470	148	295	.....
26.....	825	533	672	601	709	4,240	8,770	3,280	1,320	205	260	.....
27.....	785	636	601	601	1,130	4,100	10,100	2,960	1,180	205	230	.....
28.....	865	533	533	533	1,420	3,730	10,300	2,660	636	158	230	.....
29.....	709	636	601	672	.....	3,660	11,700	2,320	413	138	230	.....
30.....	709	533	533	566	.....	3,140	12,300	2,420	566	205	230	.....
31.....	709	.....	470	470	.....	2,900	.....	3,280	.....	295	230	.....
1910-11.												
1.....		636	500	602	1,130	775	1,920	5,020	5,200	3,240	3,900	835
2.....		601	470	525	1,050	838	2,000	4,860	5,290	3,750	3,460	1,160
3.....		672	440	525	1,020	905	2,180	4,700	5,650	4,610	2,900	1,210
4.....		865	470	525	805	940	2,220	4,540	5,740	5,380	2,320	1,310
5.....		785	470	550	838	1,130	2,300	5,260	5,830	6,020	2,040	1,260
6.....		747	470	550	838	2,130	2,200	6,080	5,920	6,300	1,680	1,180
7.....		672	470	480	775	3,440	1,920	7,140	6,020	6,890	1,540	1,100
8.....		709	470	500	745	2,190	1,800	8,630	5,920	6,790	1,240	1,040
9.....		709	470	500	745	1,760	1,750	9,990	6,110	6,020	1,040	1,020
10.....		672	533	500	745	1,460	1,460	10,800	6,300	5,380	868	985
11.....		566	601	500	745	2,840	1,380	10,200	6,890	5,290	710	956
12.....		500	636	500	715	2,300	1,430	9,300	7,090	4,530	740	842
13.....		470	672	1,000	685	1,560	1,550	8,410	7,200	4,370	900	816
14.....		470	636	1,510	685	1,560	1,460	7,970	7,300	4,690	770	848
15.....		500	672	1,090	685	1,420	1,380	8,300	7,090	4,690	622	914

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.		500	601		685	1,200	1,540	8,190	6,590	4,860	540	1,070
17.		500	500	1,020	715	1,200	1,700	7,440	6,020	6,200	540	1,010
18.		500	533	1,020	685	1,260	1,870	6,940	5,740	5,120	540	978
19.		500	470	870	685	1,360	2,040	6,740	5,380	6,110	540	942
20.		500	470	805	602	1,360	2,210	6,460	5,120	8,150	568	921
21.		500	440	745	602	1,450	2,380	6,080	5,120	6,590	568	1,150
22.		500	361	805	602	1,400	2,550	5,350	5,290	7,720	595	1,050
23.		470	337	805	602	1,400	2,950	5,000	5,560	6,080	595	1,100
24.		500	470	775	630	1,200	3,350	4,660	5,830	7,510	770	1,100
25.	533	500	566	775	715	1,080	3,750	4,920	5,920	7,090	900	1,080
26.	566	500	601	805	745	1,160	4,150	5,000	5,560	6,020	710	1,040
27.	672	500	601	978	715	1,160	4,550	5,530	4,940	5,740	650	1,010
28.	709	500	566	978	745	1,050	4,950	5,620	4,210	5,380	650	1,240
29.	636	500	566	838		1,130	5,350	5,440	3,680	5,830	710	1,180
30.	636	500	566	905		1,360	5,180	5,440	3,240	5,120	770	2,040
31.	636		636	1,090		1,550		5,440		4,370	770	
1911-12.												
1.	3,170	3,010	1,510	900	760	760	1,840	4,200	14,800		745	720
2.	3,030	3,010	1,510	900	760	772	1,640	5,890	14,500		710	570
3.	3,170	2,800	1,510	900	760	778	1,620	7,120	14,700		885	520
4.	3,310	2,800	1,510	900	760	778	1,890	7,330	14,000	3,620	936	505
5.	3,600	2,740	1,510	850	760	820	2,220	6,380	13,100	3,170	916	500
6.	3,900	2,600	1,510	850	730	876	2,800	5,560	13,400	2,650	787	460
7.	9,260	2,550	1,510	800	730	1,030	3,490	5,970	13,600	2,420	700	430
8.	15,600	2,500	1,420	800	730	1,060	3,570	6,600		1,960	650	420
9.	13,000	2,550	1,420	800	730	1,220	3,220	7,400		1,590	620	400
10.	11,000	2,500	1,420	800	748	1,280	3,080	7,660		1,320	620	370
11.	9,640	2,500	1,420	800	760	1,600	3,260	7,230		1,120	620	350
12.	8,300	2,250	1,350	750	760	1,690	3,080	7,100		976	620	560
13.	7,450	2,050	1,350	750	760	1,380	2,990	6,800		850	630	1,000
14.	6,830	2,050	1,350	760	760	1,280	2,400	7,080		745	680	814
15.	6,050	2,050	1,200	760	760	1,100	2,040	6,740		850	1,360	750
16.	5,500	2,050	1,160	760	760	960	2,060	6,800		1,030	960	710
17.	5,000	2,100	1,160	760	760	960	2,120	7,380		1,400	920	720
18.	4,500	2,150	1,160	760	760	960	2,210	8,970		1,100	920	770
19.	4,000	2,100	1,160	760	760	1,060	2,060	12,200		710	960	840
20.	4,000	2,050	1,050	760	772	3,080	1,880	16,400		710	955	820
21.	4,000	2,050	1,050	760	760	4,960	1,680	21,200		710	960	800
22.	3,700	2,050	1,050	760	718	2,800	1,480	23,500		710	950	800
23.	3,700	2,100	1,050	760	718	2,360	1,380	23,800		1,040	950	770
24.	3,700	2,050	1,100	760	748	2,100	1,430	23,200		780	950	750
25.	3,700	1,920	1,100	760	760	1,720	1,960	20,700		815	940	700
26.	3,500	1,730	1,050	760	730	1,690	2,330	15,700		1,040	950	690
27.	3,500	1,630	1,100	760	640	1,790	2,140	15,000		850	925	680
28.	3,500	1,630	1,100	760	670	1,600	2,360	15,000		685	925	650
29.	3,500	1,550	1,100	760	760	1,600	2,460	14,800		685	940	650
30.	3,340	1,550	1,050	760		1,710	3,280	14,800		685	940	600
31.	3,260		1,010	760		1,770		14,800		685	1,100	
1912-13.												
1.	640	578	578	530	646	608	1,270	4,440	2,320	987	359	292
2.	670	664	590	530	690	630	1,620	4,440	2,290	938	343	292
3.	640	670	590	530	619	668	1,860	3,950	2,140	912	327	288
4.	600	670	570	530	597	680	2,080	3,180	1,900	893	307	285
5.	760	670	550	500	630	685	2,040	2,860	1,700	867	261	282
6.	650	640	530	500	608	685	2,160	3,260	1,560	847	207	282
7.	622	670	510	500	608	729	2,290	3,640	1,430	841	177	243
8.	628	700	490	480	614	776	1,840	3,480	1,520	809	156	237
9.	628	718	530	480	646	782	1,730	3,230	1,570	872	139	249
10.	622	718	530	480	641	788	1,740	3,150	1,680	893	139	299
11.	640	682	520	439	630	836	1,600	3,670	3,600	791	162	274
12.	664	670	520	439	641	880	1,570	3,820	2,920	731	177	264
13.	670	700	520	444	602	886	1,570	3,820	2,540	707	335	282
14.	670	718	540	490	592	800	1,840	3,550	2,460	656	264	292
15.	676	700	540	490	624	752	2,100	3,230	2,600	618	255	274
16.	652	682	540	495	652	770	2,360	2,990	2,370	591	222	264
17.	658	670	520	555	685	764	2,670	2,860	2,120	545	192	264
18.	640	640	510	565	707	794	2,910	2,740	2,130	591	234	264
19.	634	640	520	602	696	800	2,960	2,520	2,000	555	228	261
20.	628	640	520	592	690	806	3,370	2,380	1,810	490	424	264

Daily discharge, in second-feet, of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
21.....	616	640	520	565	646	788	3,660	2,250	1,660	454	331	261
22.....	590	622	520	560	624	787	3,780	2,160	1,750	418	424	278
23.....	590	570	500	570	658	840	3,760	1,980	1,700	387	339	1,020
24.....	570	610	500	575	630	900	3,150	1,980	1,720	355	327	1,120
25.....	562	590	510	597	680	918	2,600	1,940	1,500	334	319	787
26.....	562	610	510	674	696	894	2,400	1,880	1,290	320	311	817
27.....	562	590	510	658	690	858	2,440	1,910	1,100	371	311	835
28.....	562	590	510	641	652	846	2,790	2,160	1,000	363	303	805
29.....	538	522	510	674	.....	858	3,490	2,340	1,050	315	299	817
30.....	562	498	520	658	.....	882	4,140	2,280	1,000	296	296	877
31.....	578	.....	530	674	.....	976	.....	2,360	.....	288	296	.....

NOTE.—Daily discharge determined from rating curves which cover short periods and are for the most part not very well defined, and by the indirect method for shifting channels. During 1895 the discharge for days for which gage heights are missing was obtained by interpolation. Discharge estimated Dec. 11, 1912, to Jan. 6, 1913, on account of ice.

Monthly discharge of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1895.					
February.....	1,440	355	591	32,800	
March.....	2,640	730	1,370	84,300	
April.....	8,630	1,610	5,500	338,000	
May.....	6,060	2,940	4,620	284,000	
June.....	7,200	1,120	1,770	276,000	
July.....	4,430	1,000	1,480	109,000	
August.....	2,490	705	723	91,100	
September.....	1,160	530	685	43,000	
The period.....	.....	.....	.....	1,260,000	
1895-96.					
October.....	880	580	685	42,100	
November.....	940	655	834	49,600	
December.....	855	455	713	43,800	
January.....	.....	.....	600	36,900	
February.....	.....	.....	600	34,500	
March.....	3,090	705	1,320	81,200	
April.....	5,250	1,810	3,480	207,000	
May.....	5,250	1,110	2,700	166,000	
June.....	1,680	255	535	31,800	
July.....	765	255	412	25,300	
August.....	310	210	243	14,900	
September.....	765	255	299	17,800	
The year.....	5,250	.....	1,040	751,000	
1896-97.					
October.....	645	350	461	28,300	
November.....	645	310	498	29,600	
December.....	590	330	488	30,000	
January.....	570	290	467	28,700	
February.....	590	470	542	30,100	
March.....	2,480	610	988	60,800	
April.....	9,220	1,200	5,090	303,000	
May.....	15,300	8,500	11,400	702,000	
June.....	10,900	2,480	6,150	366,000	
July.....	3,190	200	1,580	97,300	
August.....	1,260	200	446	27,400	
September.....	2,360	260	680	40,500	
The year.....	15,300	200	2,400	1,740,000	
1897-98.					
October.....	3,460	550	2,220	136,000	
November.....	1,710	680	1,210	71,900	
December.....	745	215	524	32,200	
January.....	475	290	353	21,700	
February.....	630	320	449	24,900	

^a Estimated.

Monthly discharge of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1897-98.					
March.....	790	400	544	33,400	
April.....	8,020	425	4,470	266,000	
May.....	7,060	1,750	3,260	200,000	
June.....	5,140	1,910	3,760	224,000	
July.....	6,580	530	2,630	162,000	
August.....	2,450	255	637	39,200	
September.....	750	230	324	19,300	
The year.....	8,020	215	1,700	1,230,000	
1898-99.					
October.....	710	250	356	21,900	
November.....	1,150	360	598	35,600	
December.....	1,090	450	637	39,200	
January.....	610	295	423	26,000	
February.....	890	485	641	35,600	
March.....	1,990	775	1,320	81,200	
April.....	5,620	935	2,960	176,000	
May.....	3,550	810	1,910	118,000	
June.....	740	190	399	23,700	
July.....	4,450	135	596	36,600	
August.....	2,160	100	361	22,200	
September.....	8,260	95	893	53,100	
The year.....	8,260	95	924	669,000	
1899-1900.					
October.....	560	310	432	26,600	
November.....	980	535	756	45,000	
December.....	775	360	621	38,200	
January.....	670	520	598	36,800	
February.....	670	420	582	32,300	
March.....	1,430	600	859	52,800	
April.....	1,350	670	866	51,500	
May.....	7,500	1,070	3,440	212,000	
June.....	7,500	510	2,910	173,000	
July.....	650	160	297	18,300	
August.....	370	110	165	10,100	
September.....	6,030	130	716	42,600	
The year.....	7,500	110	1,020	739,000	
1900-1901.					
October.....	460	320	387	23,800	
November.....	570	360	425	25,300	
December.....	570	360	472	29,000	
January.....	570	255	397	24,400	
February.....	1,150	420	658	36,500	
March.....	1,150	390	742	45,600	
April.....	4,840	420	1,400	83,400	
May.....	8,000	4,000	5,190	319,000	
June.....	4,650	815	2,200	131,000	
July.....	2,120	280	729	44,800	
August.....	2,000	200	827	50,800	
September.....	2,120	280	580	34,500	
The year.....	8,000	200	1,170	848,000	
1901-2.					
October.....	1,700	320	491	30,200	
November.....	555	380	462	27,500	
December.....	640	260	463	28,500	
January.....	495	455	482	29,600	
February.....	540	475	489	27,200	
March.....	735	480	548	33,700	
April.....	3,200	510	1,640	97,600	
May.....	2,230	520	1,200	73,600	
June.....	1,530	70	474	28,200	
July.....	2,200	60	272	16,700	
August.....	2,300	105	556	34,200	
September.....	6,460	85	484	28,800	
The year.....	6,460	60	630	456,000	

Monthly discharge of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1902-3.					
October.....	345	255	279	17,200	
November.....	420	250	309	18,400	
December.....	440	200	313	19,200	
January.....	470	290	376	23,100	
February.....	810	290	445	24,700	
March.....	3,750	380	1,220	75,200	
April.....	9,450	1,260	2,900	172,000	
May.....	10,900	4,290	6,610	407,000	
June.....	19,300	5,870	11,900	709,000	
July.....	7,260	630	2,220	137,000	
August.....	995	340	432	26,600	
September.....	645	300	375	22,300	
The year.....	19,300	200	2,280	1,650,000	
1903-4.					
October.....	370	340	355	21,800	
November.....	520	355	423	25,200	
December.....	500	300	384	23,600	
January.....	400	300	340	20,900	
February.....	560	310	421	24,200	
March.....	560	250	347	21,300	
April.....	905	190	459	27,300	
May.....	465	259	393	24,200	
June.....	530	165	286	17,000	
July.....	870	62	246	15,100	
August.....	3,740	385	1,500	92,000	
September.....	9,790	600	2,490	148,000	
The year.....	9,790	62	637	461,000	
1904-5.					
October.....	17,700	1,080	4,110	253,000	
November.....	1,040	726	831	49,400	
December.....	759	419	576	35,400	
January.....	792	540	707	43,500	
February.....	1,890	614	929	51,600	
March.....	3,470	1,760	2,570	158,000	
April.....	7,680	1,760	3,680	219,000	
May.....	19,500	6,330	12,800	785,000	
June.....	17,400	2,530	9,620	573,000	
July.....	2,290	410	874	53,700	
August.....	1,430	40	629	38,700	
September.....	560	330	389	23,200	
The year.....	17,700	40	3,140	2,280,000	
1905.					
October.....	560	370	422	26,000	
November.....	1,200	460	638	38,000	
December.....	680	460	617	37,900	
1909.					
June 23-30.....	6,330	3,400	4,750	75,400	B.
July.....	3,210	533	1,540	94,700	B.
August.....	4,800	500	1,460	89,800	B.
September.....	5,670	1,720	3,410	203,000	B.
1909-10.					
October.....	2,100	709	1,320	81,200	B.
November.....	709	337	489	29,100	B.
December.....	865	413	578	35,500	B.
January.....	995	413	608	37,400	B.
February.....	1,420	362	563	31,300	B.
March.....	4,450	2,040	3,250	200,000	B.
April.....	12,800	2,780	5,120	305,000	B.
May.....	12,500	2,320	6,930	426,000	B.
June.....	4,720	413	2,190	130,000	C.
July.....	440	120	179	11,000	C.
August.....	865	230	360	22,100	C.
September 1-23.....	636	158	259	11,800	C.
The period.....				1,320,000	

Monthly discharge of Rio Grande near Buckman, N. Mex., for 1895-1905, 1909-1913—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
October 25-31.....	709	533	627	8,710	C.
November.....	865	470	568	33,800	C
December.....	672	337	525	32,300	C.
January.....	1,510	480	775	47,700	B.
February.....	1,130	602	748	41,500	B.
March.....	3,440	775	1,490	91,600	B.
April.....	5,350	1,380	2,520	150,000	C.
May.....	10,800	4,540	6,630	408,000	B.
June.....	7,300	3,240	5,720	340,000	B.
July.....	8,150	3,240	5,690	350,000	B.
August.....	3,900	540	1,139	69,500	B.
September.....	2,040	816	1,080	64,300	B.
The period.....				1,640,000	
1911-12.					
October.....	15,600	3,030	5,470	336,000	C.
November.....	3,010	1,550	2,220	132,000	B.
December.....	1,510	1,010	1,260	77,500	C.
January.....	900	750	790	48,600	C.
February.....	772	640	744	42,800	B.
March.....	4,960	760	1,540	94,700	B.
April.....	3,570	1,380	2,330	139,000	B.
May.....	23,800	4,200	11,400	701,000	B.
June 1-7.....	14,800	13,100	14,000	194,000	B.
July 4-31.....	3,620	685	1,230	68,300	B.
August.....	1,360	620	862	53,000	C.
September.....	1,000	350	644	38,300	C.
1912-13.					
October.....	760	538	622	38,200	B.
November.....	718	498	643	38,300	B.
December.....	590	490	528	32,500	C.
January.....	674	439	549	33,800	B.
February.....	707	592	646	35,900	B.
March.....	976	608	796	48,900	B.
April.....	4,140	1,270	2,460	146,000	B.
May.....	4,440	1,880	2,920	180,000	B.
June.....	3,600	1,000	1,880	112,000	B.
July.....	987	288	614	37,800	B.
August.....	424	139	273	16,800	B.
September.....	1,120	237	434	25,800	B.
The year.....	3,600	139	1,030	746,000	

RIO GRANDE NEAR SAN MARCIAL, N. MEX.

Location.—At the Atchison, Topeka & Santa Fe Railway bridge, 1 mile south of San Marcial, in sec. 19, T. 7 S., R. 1 W. No important tributaries enter in the immediate vicinity of the station.

Records available.—January 29, 1895, to September 30, 1913.

Gage.—Inclined staff gage established January 29, 1895, and carried away by flood in 1896. A wire gage was established in its place at the same datum. This was soon abandoned and the gage heights have since been measured with a graduated rod from the bridge deck to the water surface. The gage datum of the inclined staff and wire gages is still used.

Channel.—Sandy and very shifting; current broken by a number of bridge piers.

Discharge measurements.—Made from the downstream side of the bridge.

Diversions.—Between Buckman and San Marcial the bottom lands along the river are extensively irrigated. In 1896 W. W. Follett, of the International Boundary Commission, estimated that ditches having a capacity of 1,779 second-feet diverted water from the Rio Grande between these points.

Cooperation.—Station maintained since 1901 by the American section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1895.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 29 ^a	6.40	89	Feb. 24.....	7.80	701	June 18.....	7.80	1,136
Apr. 22.....	9.50	7,805	25.....	7.85	921	20.....	7.70	783
May 19.....	7.60	3,458	26.....	8.02	1,115	22.....	7.60	498
June 1.....	8.60	4,714	26.....	8.00	1,269	24.....	7.30	356
July 16.....	6.60	1,503	27.....	7.65	701	26.....	7.20	210
Sept. 5.....	6.90	626	Mar. 1.....	7.45	532	28.....	7.20	178
Oct. 1.....	5.30	15	4.....	7.35	329	30.....	6.90	80
Nov. 17.....	7.20	674	5.....	7.16	321	July 2.....	6.70	42
Dec. 14.....	7.20	602	7.....	7.30	370	3.....	7.00	150
			10.....	7.55	469	5.....	6.60	29
1896.			11.....	7.41	425	Aug. 20.....	10.85	9,112
Jan. 10.....	7.40	701	12.....	7.46	488	23.....	7.00	809
22.....	7.50	767	12.....	7.40	503	24.....	6.20	290
Feb. 14.....	7.30	570	14.....	7.40	390	26.....	6.10	219
May 28.....	7.00	203	15.....	7.32	359	28.....	6.40	284
Nov. 23 ^b	7.10	364	18.....	7.08	249	29.....	6.00	126
			19.....	6.99	150	30.....	6.10	120
1897.			20.....	6.87	118	Sept. 1.....	5.90	90
Feb. 21.....	7.40	344	22.....	6.75	90	2.....	6.30	186
Mar. 24.....	7.50	478	25.....	6.73	85	3.....	6.20	157
Apr. 9.....	7.50	800	26.....	6.63	63	3.....	6.00	94
20.....	8.50	3,165	27.....	6.52	50	4.....	6.20	159
May 5.....	10.20	8,679	29.....	6.39	25	5.....	7.70	1,463
19.....	10.00	10,403	30.....	6.33	25	6.....	6.65	388
June 7.....	9.60	9,141	Apr. 1.....	6.30	23	22.....	5.70	51
21.....	8.70	4,142	2.....	6.30	20	Oct. 7.....	6.80	517
29.....	8.10	2,811	2.....	6.30	22	28.....	6.30	101
July 8.....	7.40	1,053	4.....	6.10	11	Nov. 10.....	6.55	150
16.....	7.70	1,150	5.....	6.40	35	20.....	6.70	297
30.....	7.00	401	8.....	6.30	25	22.....	6.80	267
Aug. 9.....	6.60	188	9.....	6.20	12	23.....	6.70	239
18.....	5.20	5	11.....	6.00	6	25.....	6.90	233
26.....	5.60	23	12.....	6.05	9	27.....	6.80	244
Sept. 4.....	5.10	7	13.....	5.90	4	29.....	6.80	247
19.....	8.00	4,276	15.....	6.00	10	Dec. 2.....	6.80	273
Oct. 3.....	7.00	816	16.....	5.90	5	4.....	6.90	310
15.....	8.10	3,980	18.....	5.90	6	6.....	7.00	366
28.....	8.10	3,796	19.....	5.90	5	9.....	7.00	282
			21.....	6.90	146	11.....	7.25	398
1898.			22.....	7.10	209	17.....	6.90	260
May 16.....	8.80	2,943	23.....	7.10	185	19.....	6.80	181
Sept. 15.....	4.30	46	24.....	7.00	145	23.....	7.20	392
			26.....	6.80	85	26.....	7.10	309
1899.			26.....	8.00	1,009			
Apr. 3.....	7.30	715	27.....	8.00	998	1902.		
19.....	7.30	660	28.....	8.90	2,403	Jan. 1.....	7.2	389
25.....	7.70	1,609	29.....	9.10	2,946	3.....	7.15	348
May 2.....	7.60	1,403	30.....	9.10	3,419	6.....	7.3	469
17.....	6.60	199	May 1.....	9.10	3,419	7.....	7.4	238
Sept. 22.....	5.30	112	2.....	9.10	3,526	20.....	7.3	291
Oct. 12.....	4.40	6	3.....	9.70	4,696	Feb. 3.....	7.4	383
Dec. 17.....	6.20	263	4.....	9.90	5,847	5.....	7.4	425
			5.....	9.70	5,531	7.....	7.45	331
1900.			7.....	8.90	3,398	10.....	7.6	340
Apr. 6.....	5.83	20	8.....	8.90	3,421	12.....	7.4	358
18.....	6.70	170	9.....	8.90	3,647	14.....	7.4	266
27.....	5.85	6	10.....	8.90	2,877	17.....	7.5	296
May 19.....	8.00	2,074	11.....	8.60	3,074	20.....	7.4	279
27.....	7.90	2,979	12.....	8.80	3,252	22.....	7.4	294
June 3.....	9.40	6,855	13.....	9.00	3,428	24.....	7.4	298
10.....	8.50	3,166	14.....	9.10	3,516	28.....	7.4	222
18.....	7.70	1,410	15.....	9.20	4,238	Mar. 4.....	7.3	218
24.....	7.30	605	16.....	9.40	4,547	6.....	7.3	195
30.....	6.40	59	18.....	9.20	4,370	8.....	7.3	178
Sept. 11.....	8.05	3,474	20.....	9.20	4,241	10.....	7.1	157
Nov. 13.....	5.60	43	22.....	9.10	4,397	12.....	6.9	84
Dec. 20.....	6.80	198	23.....	9.30	4,873	15.....	6.5	49
			24.....	9.80	5,583	17.....	6.8	88
1901.			26.....	9.70	5,600	19.....	7.1	132
Feb. 5.....	7.12	421	28.....	9.30	4,469	21.....	7.0	84
6.....	7.25	368	30.....	9.10	3,597	27.....	7.1	113
8.....	7.30	368	June 1.....	9.40	4,326	29.....	7.2	113
9.....	7.25	353	2.....	9.80	4,884	31.....	7.1	115
11.....	7.47	563	4.....	8.90	3,795	Apr. 2.....	7.0	99
12.....	7.50	541	6.....	8.50	3,145	4.....	6.9	69
14.....	7.42	463	8.....	8.20	1,920	7.....	6.4	23
15.....	7.47	480	10.....	8.10	1,804	9.....	5.8	2
18.....	7.30	344	12.....	8.20	1,688	12.....	8.1	841
19.....	7.30	329	14.....	8.10	1,601	14.....	8.3	1,275
21.....	7.27	284	16.....	8.20	1,796	16.....	8.3	1,307
22.....	7.30	290						

^a Measurement made by A. P. Davis.^b Measurement made by C. C. Babb.

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1902.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 18.	8.3	1,157	Feb. 15.	7.2	306	Dec. 15.	7.9	301
22.	8.2	912	18.	7.3	480	19.	7.9	302
24.	8.3	1,441	22.	7.3	385	23.	8.0	317
26.	7.9	763	26.	7.4	582	26.	7.9	310
28.	7.7	575	Mar. 3.	7.15	396	31.	8.1	319
30.	7.9	583	6.	7.2	377			
May 2.	7.7	378	8.	8.95	2,594	1904.		
8.	7.4	221	10.	7.8	1,242	Jan. 4 ^a .	7.8	313
10.	7.5	250	14.	7.5	664	12 ^a .	8.0	298
12.	7.6	281	17.	7.7	747	16 ^a .	8.0	253
14.	7.7	298	19.	7.95	1,039	31.	7.8	305
16.	8.1	906	24.	7.3	396	Feb. 4.	7.8	302
20.	7.8	470	28.	7.7	703	8.	8.0	313
22.	7.5	325	Apr. 2.	7.8	855	12.	7.9	363
24.	7.4	232	6.	8.75	2,558	17.	7.7	331
26.	7.1	105	11.	8.5	1,715	21.	7.8	315
28.	6.6	33	15.	8.1	1,919	25.	7.8	350
29.	8.2	1,473	18.	8.3	1,158	29.	7.8	290
31.	7.7	773	23.	8.0	589	Mar. 4.	7.9	300
June 3.	7.4	451	27.	8.8	2,006	7.	7.9	202
5.	7.4	363	30.	9.35	3,471	10.	7.4	92
7.	7.2	191	May 4.	9.7	4,429	13.	7.2	77
9.	7.1	119	6.	9.8	4,966	16.	6.9	61
12.	6.7	42	10.	10.25	6,318	19.	6.4	26
Aug. 12.	7.35	198	13.	10.5	7,146	July 23.	8.75	932
14.	6.9	51	15.	10.4	6,370	23.	10.65	2,841
16.	7.5	243	18.	10.8	8,952	25.	7.9	352
18.	7.25	82	20.	10.7	8,236	25.	7.8	291
21.	8.25	2,385	23.	9.8	5,527	28.	8.2	495
27.	6.6	321	26.	8.7	2,793	31.	7.3	181
Sept. 2.	6.5	89	29.	8.9	3,284	Aug. 2.	7.85	612
4.	5.4	29	31.	8.8	2,711	5.	9.4	1,656
6.	5.0	10	June 3.	9.0	3,248	7.	9.2	1,357
23.	8.4	2,418	6.	9.9	6,202	10.	8.2	651
26.	6.3	497	10.	11.0	11,767	13.	7.2	188
28.	5.9	142	12.	12.4	17,082	16.	6.6	51
Oct. 3.	5.2	25	16.	12.35	17,046	Sept. 23.	9.5	610
6.	4.9	19	20.	12.5	17,864	26.	8.6	452
9.	5.0	17	24.	12.5	19,388	28.	10.2	2,529
12.	4.9	14	28.	10.5	5,214	Oct. 1.	12.0	8,753
15.	4.8	7	30.	10.4	5,708	3.	11.75	13,368
Nov. 30.	4.9	12	July 2.	9.8	3,005	7.	9.0	2,920
2.	5.0	13	5.	9.3	2,591	10.	12.6	21,584
4.	5.0	18	8.	8.7	1,919	13.	9.55	22,048
7.	5.1	17	12.	8.3	1,472	17.	8.7	1,602
10.	5.1	18	16.	8.1	1,017	21.	8.2	1,734
13.	5.2	31	19.	7.9	373	25.	8.2	1,422
16.	6.4	202	22.	8.3	555	29.	8.1	1,160
20.	6.0	117	25.	8.0	383	Nov. 2.	8.1	1,430
24.	5.9	122	28.	7.8	325	3.	8.1	1,318
28.	5.95	158	31.	7.7	245	5.	8.0	989
30.	6.0	156	Aug. 3.	7.5	75	7.	7.9	838
Dec. 3.	6.0	104	7.	7.1	22	10.	7.9	991
6.	6.1	134	11.	6.5	16	12.	7.9	872
9.	6.2	142	15.	6.9	18	15.	7.9	778
14.	6.3	151	18.	6.6	9	17.	7.8	689
17.	6.7	244	22.	7.0	31	19.	7.9	716
20.	6.3	80	26.	7.95	151	22.	8.0	818
22.	5.9	60	29.	6.9	15	24.	8.0	708
25.	6.5	289	31.	6.6	7	26.	8.0	696
28.	6.4	258	Sept. 10.	6.7	26	30.	8.0	654
31.	6.25	186	14.	6.5	9	Dec. 2.	8.0	661
			17.	6.6	10	5.	8.1	946
1903.			24.	6.8	33	8.	8.0	820
an. 3.	5.9	79	26.	8.15	284	11.	7.9	986
6.	5.6	57	30.	6.6	19	14.	7.8	798
10.	6.9	258	Oct. 4.	6.7	19	17.	7.8	525
13.	6.85	349	8.	6.6	13	23.	7.9	574
16.	6.6	310	Nov. 11.	6.7	28	28 ^a .	7.8	411
20.	6.8	351	14.	6.8	100	31 ^a .	7.7	357
23.	6.7	305	17.	7.0	73			
26.	6.6	254	20.	7.2	72	1905.		
30.	7.0	416	23.	7.3	149	Jan. 3.	7.8	528
Feb. 3.	6.9	343	27.	7.5	229	6.	8.0	684
6.	7.0	428	30.	7.7	275	9.	7.9	684
9.	6.9	368	Dec. 4.	7.9	333	12.	8.1	922
12.	7.1	334	9.	7.9	308			

^a Ice in river,

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1906.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 15.....	8.0	686	Aug. 24.....	5.6	6	Apr. 27.....	9.8	5,691
18.....	7.9	543	Sept. 7.....	7.3	321	30.....	9.5	5,256
21.....	8.0	651	9.....	6.7	150	May 3.....	9.0	4,149
24.....	7.9	536	11.....	6.5	93	6.....	9.0	4,395
27.....	7.9	590	25.....	5.6	52	9.....	10.0	7,381
31.....	8.0	675	27.....	6.7	231	12.....	10.4	9,075
Feb. 3.....	7.9	830	29.....	6.3	163	15.....	10.3	10,448
6 ^a	7.9	661	Oct. 5.....	5.9	157	18.....	10.1	9,649
9.....	8.1	1,019	6.....	5.9	151	20.....	10.4	8,951
12.....	8.0	768	8.....	5.8	125	22.....	10.9	10,799
15.....	8.1	671	11.....	5.6	83	25.....	10.8	10,157
18.....	8.0	831	14.....	5.7	97	28.....	10.6	9,211
21.....	8.1	796	17.....	5.7	80	31.....	9.55	6,513
24.....	8.0	740	20.....	5.7	84	June 3.....	9.1	5,316
28.....	8.5	2,287	23.....	5.8	95	7.....	9.3	5,297
Mar. 3.....	8.6	2,886	26.....	5.9	126	10.....	9.4	5,435
5.....	9.0	5,073	28.....	5.9	147	13.....	9.8	6,115
8.....	8.9	4,598	31.....	6.2	173	16.....	10.3	8,353
10.....	9.2	4,795	Nov. 3.....	6.2	175	19.....	10.7	8,476
12.....	8.6	3,344	9.....	7.1	740	23.....	9.7	6,346
15.....	8.4	3,125	11.....	7.05	667	29.....	8.4	2,811
18.....	9.3	3,806	14.....	7.0	582	July 2.....	7.9	1,713
21.....	8.8	2,721	17.....	6.8	479	5.....	8.5	2,314
24.....	9.0	2,972	20.....	6.8	481	8.....	8.8	2,722
27.....	8.6	2,198	23.....	7.0	607	11.....	8.4	2,188
Apr. 31.....	8.7	2,724	25.....	7.6	1,624	14.....	8.4	1,926
3.....	9.2	3,331	28.....	6.9	539	17.....	8.5	2,271
6.....	8.5	1,808	30.....	7.7	1,527	20.....	8.9	3,010
9.....	8.7	1,950	Dec. 3.....	7.3	815	23.....	8.2	1,667
12.....	9.6	3,911	6.....	7.2	533	26.....	8.0	1,170
15.....	9.6	4,006	9.....	7.2	593	29.....	7.9	1,074
18.....	9.1	3,840	12.....	7.2	603	31.....	8.4	1,429
21.....	9.4	4,288	15.....	7.5	770	Aug. 3.....	8.3	1,470
24.....	10.2	9,726	18.....	7.3	621	6.....	8.5	1,360
30.....	10.2	7,356	21.....	7.4	647	9.....	8.3	1,094
May 3.....	10.7	7,829	24.....	6.9	230	12.....	7.9	627
5.....	11.4	11,650	27.....	6.5	177	15.....	7.7	526
7.....	10.7.	10,955	30.....	6.5	186	18.....	7.6	422
9.....	10.0	11,058	1906.			21.....	7.6	222
11.....	10.3	8,694	Jan. 2.....	6.5	125	24.....	7.3	156
13.....	10.2	10,543	5.....	7.0	282	27.....	7.7	295
15.....	10.3	10,361	8.....	6.8	241	30.....	7.5	184
17.....	10.9	12,758	11.....	7.2	283	Sept. 2.....	7.5	174
19.....	11.6	16,097	14.....	7.2	514	5.....	7.0	70
21.....	12.5	17,607	17.....	7.9	1,249	8.....	6.7	41
23.....	12.8	26,810	20.....	7.9	1,312	11.....	6.2	10
25.....	12.7	24,142	23.....	7.1	613	25.....	6.4	13
28.....	13.2	25,577	26.....	7.2	487	28.....	9.3	4,434
31.....	13.1	20,264	29.....	7.4	803	30.....	7.5	1,149
June 3.....	11.9	19,973	31.....	7.1	648	Oct. 3.....	7.5	1,234
6.....	11.6	16,780	Feb. 3.....	7.3	623	6.....	7.7	1,382
9.....	12.7	15,071	6.....	7.5	703	9.....	7.8	1,177
12.....	12.5	19,162	9.....	7.4	633	12.....	7.7	909
15.....	10.9	11,702	12.....	7.7	794	15.....	7.7	1,001
18.....	9.7	13,726	15.....	7.8	874	18.....	7.8	877
21.....	9.4	9,000	18.....	7.6	778	22.....	7.9	1,077
24.....	8.7	6,345	21.....	7.7	721	25.....	8.1	1,387
26.....	8.4	4,271	24.....	7.6	658	28.....	8.2	1,070
28.....	8.2	3,505	27.....	7.6	779	31.....	8.3	1,405
30.....	8.0	2,641	Mar. 3.....	7.4	678	Nov. 3.....	8.5	1,550
July 3.....	7.6	1,598	6.....	7.6	692	6.....	8.4	1,617
6.....	7.4	1,143	9.....	7.5	579	9.....	8.5	1,546
9.....	7.2	784	12.....	7.6	751	12.....	8.5	1,486
12.....	6.8	466	15.....	7.8	980	15.....	8.5	1,423
15.....	6.6	274	18.....	7.9	1,030	20.....	8.4	1,235
18.....	6.4	188	21.....	7.8	785	26.....	8.0	898
21.....	6.2	177	24.....	7.7	516	29.....	8.1	1,015
24.....	6.3	158	27.....	7.9	742	Dec. 2.....	8.5	1,386
27.....	6.3	81	30.....	8.5	2,204	5.....	8.5	1,730
31.....	5.9	67	Apr. 3.....	7.7	1,207	8.....	8.7	1,892
Aug. 3.....	7.4	854	6.....	8.0	1,445	11.....	8.5	1,553
6.....	7.1	602	9.....	8.1	1,432	14.....	8.4	1,405
9.....	7.3	637	12.....	8.2	1,727	17.....	8.4	1,193
12.....	6.9	681	15.....	8.7	2,142	20.....	7.9	731
15.....	6.5	446	18.....	8.5	2,660	23.....	8.0	687
18.....	6.3	146	21.....	9.3	3,423	26.....	8.3	966
21.....	6.0	94	24.....	9.5	4,382	29.....	8.2	966
						31.....	8.4	1,114

^a Ice in river.

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	Aug. 18.	<i>Feet.</i>	<i>Sec.-ft.</i>	Mar. 1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
3.....	8.4	1,033	21.....	9.1	2,410	31.....	9.9	1,231
6.....	8.0	683	23.....	9.5	4,066	Apr. 3.....	9.7	795
9.....	8.4	901	25.....	9.0	2,171	6.....	9.7	865
12.....	8.4	1,139	27.....	10.4	5,540	9.....	9.9	1,093
15.....	8.3	970	30.....	10.6	5,701	12.....	10.1	1,648
18.....	8.7	1,423	Sept. 1.....	12.0	11,458	15.....	10.2	1,978
21.....	8.3	1,130	4.....	9.8	3,962	19.....	11.5	4,695
24.....	8.3	772	7.....	9.7	2,591	22.....	10.5	3,567
27.....	8.3	860	10.....	9.3	1,921	25.....	10.8	3,254
30.....	8.6	970	13.....	9.4	1,476	28.....	10.5	2,832
Feb. 2.....	8.7	1,110	16.....	9.4	1,442	30.....	10.2	2,154
5.....	8.7	1,350	19.....	9.6	2,064	May 3.....	10.1	1,578
8.....	8.6	1,187	21.....	10.7	5,276	6.....	10.9	3,862
11.....	8.7	1,227	22.....	11.7	6,871	9.....	10.1	2,104
14.....	8.6	1,062	25.....	9.1	1,649	12.....	10.4	2,113
17.....	8.5	1,066	28.....	9.0	1,082	15.....	10.6	2,409
20.....	8.7	1,190	30.....	9.2	1,000	18.....	10.6	2,413
23.....	8.8	1,305	Oct. 3.....	9.1	760	22.....	11.1	3,625
26.....	8.8	1,456	6.....	9.2	794	25.....	11.1	4,045
28.....	8.7	1,400	9.....	9.3	829	28.....	10.8	3,263
Mar. 3.....	8.6	1,239	12.....	9.2	814	31.....	10.3	2,189
6.....	8.6	952	15.....	9.4	894	June 3.....	10.3	1,918
9.....	8.6	903	18.....	9.5	988	6.....	10.4	1,813
12.....	8.7	1,190	21.....	9.6	893	9.....	10.5	1,679
15.....	8.8	1,147	24.....	9.9	1,591	12.....	10.2	1,281
18.....	8.4	713	27.....	9.3	1,450	15.....	10.2	1,201
21.....	8.6	1,135	30.....	9.2	1,416	18.....	10.5	2,094
23.....	9.35	2,425	Nov. 2.....	9.2	1,189	21.....	10.4	1,942
26.....	9.5	2,981	5.....	9.3	984	24.....	10.0	1,284
29.....	8.9	2,480	8.....	9.3	868	27.....	9.8	794
31.....	9.0	2,181	11.....	9.3	859	30.....	9.5	537
Apr. 3.....	9.0	1,856	14.....	9.3	913	July 3.....	9.9	891
6.....	9.0	1,918	17.....	9.5	1,009	6.....	9.7	648
9.....	9.0	2,160	20.....	9.4	905	9.....	9.9	905
12.....	9.0	1,878	23.....	9.6	998	12.....	9.1	229
14.....	9.8	3,754	26.....	9.5	948	15.....	9.65	536
16.....	10.7	5,810	29.....	9.5	700	17.....	10.2	1,366
19.....	10.4	5,708	Dec. 2.....	9.6	817	20.....	10.2	1,503
24.....	9.7	4,954	5.....	9.6	828	23.....	9.0	522
27.....	9.4	4,041	8.....	9.5	824	26.....	9.5	803
30.....	9.7	3,871	12.....	9.6	831	29.....	9.8	983
May 3.....	9.7	4,743	15.....	9.5	678	Aug. 31.....	9.5	565
6.....	9.7	4,339	18.....	9.3	602	3.....	9.5	569
9.....	9.55	3,904	21.....	9.4	586	6.....	11.4	3,462
12.....	9.4	3,854	24.....	9.5	617	9.....	10.6	2,530
15.....	9.7	4,269	27.....	9.6	738	12.....	9.2	474
18.....	9.7	4,093	30.....	9.5	599	15.....	12.3	4,987
21.....	10.0	5,164	1908.			18.....	9.8	961
22.....	10.7	6,318	Jan. 2.....	9.7	854	21.....	11.4	2,942
25.....	11.4	9,358	5.....	9.8	922	24.....	10.5	1,540
28.....	11.3	11,067	8.....	9.8	723	28.....	10.6	1,870
31.....	11.1	9,697	11.....	9.7	648	31.....	11.0	1,662
June 3.....	10.3	7,406	14.....	9.7	654	Sept. 3.....	10.2	968
7.....	10.3	8,804	17.....	9.8	687	6.....	10.1	586
9.....	10.9	9,660	20.....	9.8	736	9.....	9.9	374
12.....	10.7	9,344	23.....	9.7	663	12.....	9.8	218
15.....	10.5	9,508	26.....	9.7	581	15.....	9.4	103
18.....	10.9	9,342	30.....	9.7	686	Oct. 22.....	9.1	35
20.....	11.3	10,218	Feb. 3.....	9.6	710	25.....	9.2	7
21.....	11.6	11,679	5.....	9.6	631	28.....	9.4	71
24.....	10.5	9,207	8.....	9.6	610	31.....	9.9	203
27.....	10.2	7,652	11.....	10.0	830	Nov. 3.....	10.0	283
30.....	9.7	7,148	14.....	9.5	620	6.....	10.2	431
July 3.....	10.0	7,318	17.....	9.7	759	9.....	10.3	513
6.....	10.3	7,529	20.....	9.7	566	12.....	10.3	494
9.....	10.0	7,732	23.....	9.7	606	15.....	10.3	515
12.....	9.7	6,027	26.....	9.9	731	18.....	10.2	560
15.....	9.4	5,462	29.....	10.4	1,598	21.....	10.2	459
18.....	9.5	5,106	Mar. 3.....	10.2	1,029	24.....	10.1	373
21.....	9.2	4,111	6.....	9.6	1,291	27.....	10.0	419
24.....	8.7	3,273	10.....	10.0	1,009	30.....	10.5	672
27.....	8.9	3,138	13.....	9.7	1,321	Dec. 3.....	10.5	757
29.....	9.1	3,244	16.....	9.5	945	6.....	10.5	694
31.....	8.6	2,555	19.....	10.2	1,097	9.....	10.6	818
Aug. 3.....	8.9	2,595	22.....	10.4	1,803	12.....	10.5	786
6.....	8.8	2,780	25.....	10.0	1,504	15.....	10.4	576
9.....	8.6	2,152	28.....	9.9	1,192	18.....	10.5	546
12.....	8.3	1,698						569
15.....	8.2	1,139						

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1909.	<i>Feet.</i>	<i>Sec.-ft.</i>	1919.	<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 21.....	10.5	551	July 30.....	8.8	112	Mar. 27.....	11.8	3,298
24.....	10.4	594	Aug. 3.....	9.0	290	30.....	11.6	3,096
27.....	10.6	712	6.....	8.8	146	Apr. 3.....	11.2	2,053
30.....	10.3	498	9.....	8.9	185	6.....	11.3	2,353
1909.			12.....	9.2	241	9.....	11.4	2,228
Jan. 2.....	10.5	564	15.....	10.2	736	12.....	11.5	2,121
5.....	10.4	649	18.....	9.0	232	16.....	11.9	3,382
8.....	10.4	581	21.....	10.3	995	20.....	11.7	2,524
11.....	10.4	634	23.....	11.1	2,688	23.....	12.4	4,182
14.....	10.4	736	26.....	10.4	1,708	26.....	12.5	4,641
17.....	10.5	723	30.....	10.6	1,759	29.....	12.8	7,120
20.....	10.4	747	Sept. 2.....	10.3	1,086	May 4.....	13.1	7,989
23.....	10.5	774	5.....	10.6	1,457	7.....	12.7	6,560
26.....	10.5	686	6.....	11.3	2,488	10.....	12.2	5,366
29.....	10.3	634	9.....	11.6	4,225	13.....	12.1	4,728
31.....	10.5	753	12.....	12.0	4,199	16.....	12.6	6,571
Feb. 3.....	10.4	591	15.....	11.4	3,316	19.....	12.7	5,633
6.....	10.5	697	18.....	11.4	3,001	22.....	11.7	3,675
9.....	10.5	666	21.....	11.2	2,876	25.....	11.4	3,032
12.....	10.5	688	24.....	10.8	1,832	28.....	10.7	1,867
15.....	10.3	549	27.....	10.7	1,614	31.....	10.4	1,312
18.....	10.5	631	30.....	10.6	1,176	June 3.....	11.2	2,361
22.....	10.6	657	Oct. 3.....	10.5	914	6.....	11.4	2,980
25.....	10.6	615	7.....	10.4	764	9.....	11.0	1,944
28.....	10.4	529	10.....	11.1	2,029	12.....	10.5	940
Mar. 3.....	10.5	495	13.....	10.8	1,317	15.....	10.0	879
6.....	10.8	1,205	16.....	10.7	1,280	18.....	9.7	333
9.....	10.6	942	19.....	10.7	1,138	21.....	9.5	192
12.....	10.6	1,037	22.....	10.6	806	24.....	9.1	69
15.....	10.5	836	25.....	10.6	738	27.....	8.7	34
18.....	10.4	643	28.....	10.6	689	30.....	8.9	42
21.....	10.4	698	31.....	10.5	616	July 14.....	9.3	183
24.....	10.2	708	Nov. 3.....	10.5	623	17.....	8.5	7
27.....	10.4	913	9.....	10.5	590	29.....	8.9	35
30.....	10.6	1,082	12.....	10.5	584	31.....	8.5	4
Apr. 2.....	10.5	752	15.....	10.5	539	Aug. 3.....	9.5	151
6.....	10.6	854	18.....	10.6	778	6.....	9.3	95
9.....	10.6	1,127	21.....	10.7	660	9.....	9.0	43
12.....	10.4	847	24.....	10.65	618	11.....	10.3	719
15.....	10.6	867	27.....	10.85	973	14.....	9.2	30
18.....	11.0	1,141	4.....	10.9	883	17.....	8.4	7
21.....	11.9	4,074	7.....	10.65	875	20.....	8.4	4
24.....	12.0	3,696	10.....	10.7	936	24.....	9.3	70
27.....	11.3	2,904	13.....	10.7	582	28.....	9.4	84
30.....	11.25	2,737	16.....	10.7	515	31.....	9.5	168
May 3.....	11.5	3,135	1909.	10.85	604	Sept. 1.....	10.5	786
6.....	11.1	2,834	Jan. 1.....	11.4	1,627	4.....	8.9	25
9.....	12.5	6,340	4.....	11.5	1,527	7.....	8.6	3
12.....	12.2	6,976	7.....	11.55	276	20.....	8.9	12
15.....	12.4	7,242	10.....	10.55	472	24.....	9.65	117
18.....	12.1	6,503	13.....	10.7	988	26.....	8.7	9
21.....	12.2	6,622	16.....	11.0	1,157	28.....	8.4	4
24.....	12.3	6,751	19.....	10.9	1,370	Oct. 22.....	8.7	13
27.....	11.7	5,027	22.....	10.9	1,204	25.....	8.7	19
30.....	11.4	3,928	25.....	10.7	883	28.....	8.7	34
June 2.....	11.5	4,139	28.....	10.8	832	31.....	8.7	28
5.....	11.3	3,175	31.....	10.8	777	Nov. 3.....	8.8	53
8.....	12.1	4,937	Feb. 3.....	10.8	893	6.....	9.0	62
11.....	12.7	7,887	6.....	10.8	830	9.....	9.4	101
14.....	12.5	7,585	9.....	10.7	681	12.....	9.4	126
17.....	12.0	5,874	12.....	10.6	680	15.....	9.5	152
20.....	11.7	4,497	16.....	10.7	527	18.....	9.7	141
23.....	11.8	4,346	19.....	10.9	637	21.....	9.7	179
26.....	11.5	4,121	22.....	10.8	653	24.....	9.8	194
29.....	11.1	3,156	25.....	10.9	748	27.....	10.0	269
July 2.....	10.9	2,010	28.....	11.1	1,267	30.....	10.1	311
5.....	10.5	1,398	Mar. 3.....	11.1	1,502	Dec. 3.....	10.3	342
8.....	10.2	1,033	6.....	11.1	1,805	6.....	10.4	387
11.....	10.0	768	9.....	11.5	2,176	9.....	10.5	366
14.....	9.9	665	12.....	11.3	2,315	12.....	10.4	300
17.....	9.9	434	15.....	11.4	2,471	15.....	10.5	376
20.....	9.4	238	18.....	11.4	2,262	18.....	10.6	465
23.....	9.7	401	21.....	11.3	2,260	21.....	10.5	339
26.....	9.4	235	24.....	11.8	2,704	24.....	10.5	337
27.....	10.05	756				28.....	10.5	343
						31.....	10.5	350

NOTE.—River frozen over from Dec. 18 to Dec. 31, 1909.

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1911.	<i>Fct.</i>	<i>Sec.-ft.</i>	Sept. 1911.	<i>Fct.</i>	<i>Sec.-ft.</i>	May 1912.	<i>Fct.</i>	<i>Sec.-ft.</i>
10.....	10.5	41	18.....	9.9	503	12.....	12.7	5,646
11.....	10.8	542	21.....	10.4	1,000	16.....	13.15	6,159
14.....	11.0	595	24.....	9.9	564	19.....	12.8	7,562
17.....	11.0	793	27.....	10.2	654	22.....	13.6	9,474
22.....	10.9	749	30.....	10.7	1,285	25.....	14.1	13,153
25.....	10.7	643	Oct. 3.....	11.4	2,117	28.....	14.3	14,827
28.....	10.6	578	6.....	12.95	5,300	31.....	14.6	15,267
31.....	10.9	784	7.....	14.2	11,511	June 3.....	14.2	13,494
Feb. 3.....	10.7	847	10.....	14.0	11,528	6.....	14.1	12,197
6.....	10.9	795	13.....	13.2	9,435	9.....	14.0	12,872
9.....	10.8	659	16.....	12.1	4,799	12.....	13.3	10,323
12.....	10.7	582	19.....	11.3	3,215	15.....	12.9	7,337
15.....	10.8	522	22.....	11.3	3,046	18.....	11.9	5,983
18.....	10.9	655	25.....	11.1	2,527	21.....	11.5	4,787
22.....	10.8	680	29.....	11.6	3,745	24.....	11.7	5,142
25.....	10.7	466	31.....	11.5	3,066	27.....	11.7	4,708
Mar. 1.....	10.8	468	Nov. 3.....	11.6	2,670	30.....	11.8	4,918
4.....	10.9	626	6.....	11.5	2,361	July 3.....	11.5	4,229
7.....	10.9	620	9.....	11.3	2,329	6.....	11.2	3,192
9.....	12.6	3,649	12.....	11.2	2,175	9.....	10.6	2,041
12.....	11.4	1,699	15.....	11.1	1,611	12.....	9.7	860
14.....	11.9	3,130	18.....	11.1	1,536	15.....	9.5	810
17.....	10.8	1,245	21.....	11.1	1,466	18.....	9.9	1,019
20.....	11.0	1,428	24.....	11.0	1,597	21.....	9.5	971
23.....	11.3	1,716	27.....	11.0	1,467	24.....	10.9	2,218
31.....	10.8	836	30.....	10.9	1,334	27.....	10.4	1,777
Apr. 3.....	11.3	1,289	Dec. 3.....	10.5	818	29.....	9.9	1,092
6.....	11.5	1,653	6.....	11.0	1,278	31.....	9.4	558
9.....	11.4	1,672	9.....	11.1	1,403	Aug. 3.....	9.0	230
12.....	11.0	1,032	12.....	11.1	1,276	6.....	8.9	195
15.....	11.1	971	15.....	10.9	1,028	9.....	8.9	182
18.....	11.2	1,034	19.....	10.9	968	12.....	8.7	111
21.....	11.1	928	22.....	11.0	945	15.....	8.5	81
25.....	12.0	2,403	25.....	10.8	781	16.....	12.2	4,060
28.....	12.0	2,938	28.....	10.6	428	19.....	9.2	463
30.....	12.5	3,684	31.....	10.6	204	22.....	9.0	266
May 3.....	12.3	3,707	Jan. 1912.			25.....	8.8	193
6.....	12.3	3,754	Jan. 3.....	10.7	374	28.....	8.5	173
9.....	13.0	5,281	6.....	10.9	689	31.....	10.2	1,253
12.....	13.5	8,103	9.....	11.0	756	Sept. 3.....	9.5	512
16.....	13.9	6,508	12.....	10.9	969	6.....	8.9	117
19.....	12.5	5,651	15.....	11.1	1,232	9.....	8.5	52
22.....	12.4	5,219	18.....	11.2	1,159	12.....	8.4	23
25.....	11.7	3,540	21.....	11.1	1,057	15.....	8.6	36
28.....	12.0	3,817	24.....	10.9	843	18.....	8.2	14
31.....	12.2	4,073	28.....	11.1	996	Oct. 7.....	7.9	5
June 3.....	12.0	4,067	31.....	10.9	957	10.....	8.7	117
6.....	12.5	4,517	Feb. 3.....	11.0	949	13.....	8.9	86
9.....	12.2	4,290	6.....	11.0	765	16.....	9.0	153
13.....	12.6	5,218	9.....	10.8	793	19.....	9.2	208
16.....	12.7	5,817	12.....	11.0	754	22.....	9.3	262
19.....	12.5	4,574	15.....	10.9	746	25.....	9.5	268
22.....	12.3	4,217	18.....	11.0	713	28.....	9.5	267
25.....	11.8	3,968	21.....	11.0	742	31.....	9.4	237
27.....	12.5	4,163	24.....	11.1	877	Nov. 3.....	9.6	322
30.....	12.1	3,267	27.....	10.9	776	6.....	9.7	354
July 3.....	14.0	8,420	29.....	10.9	755	9.....	9.9	436
6.....	11.9	5,702	Mar. 3.....	10.9	626	12.....	10.1	434
10.....	12.7	5,750	6.....	11.0	629	15.....	10.1	402
14.....	12.8	6,000	9.....	11.1	749	18.....	10.1	599
15.....	13.6	10,200	12.....	11.4	1,495	21.....	10.1	561
19.....	12.5	5,997	15.....	11.2	848	24.....	10.0	566
22.....	13.2	9,874	19.....	10.8	785	27.....	10.2	568
27.....	12.9	7,456	22.....	12.3	3,292	30.....	10.2	549
29.....	12.0	5,007	25.....	11.7	2,651	Dec. 3.....	10.3	537
31.....	12.0	4,871	28.....	11.0	1,458	6.....	10.2	502
Aug. 3.....	11.2	3,201	31.....	10.9	1,227	9.....	10.1	487
6.....	10.4	1,290	Apr. 3.....	11.1	1,477	12.....	10.3	526
10.....	9.9	641	6.....	11.2	1,483	15.....	10.4	501
13.....	9.4	283	9.....	12.1	3,284	18.....	10.2	567
16.....	8.9	28	12.....	12.0	3,318	21.....	10.1	473
19.....	9.6	381	15.....	11.9	2,445	24.....	9.9	166
22.....	9.4	289	18.....	11.4	1,955	27.....	9.9	180
25.....	10.0	810	21.....	11.4	1,614	29.....	9.9	174
28.....	10.1	821	24.....	11.4	1,742	31.....	9.9	167
31.....	10.1	673	27.....	10.8	987	Jan. 1913.		
Sept. 3.....	10.0	609	30.....	11.6	1,885	3.....	9.9	214
6.....	9.9	546	May 3.....	12.0	2,882	16.....	10.1	175
9.....	9.9	556	6.....	12.8	6,429	19.....	10.7	567
12.....	9.9	609	9.....	12.5	4,251	22.....	10.6	777
15.....	9.9	479						

Discharge measurements of Rio Grande near San Marcial, N. Mex., in 1895-1913—Con.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
Jan. 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>	Apr. 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>	June 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
25.....	10.6	654	3.....	10.4	262	9.....	11.0	905
28.....	10.6	572	6.....	11.1	953	12.....	10.9	681
31.....	10.7	626	9.....	11.65	2,072	13.....	12.6	5,027
Feb. 3.....	10.7	608	12.....	11.1	1,100	16.....	11.2	1,787
6.....	10.6	576	15.....	10.8	1,015	19.....	11.2	1,509
9.....	10.7	704	18.....	11.0	1,225	22.....	11.2	1,458
12.....	10.8	811	22.....	12.3	3,352	25.....	11.2	1,295
15.....	10.7	723	25.....	12.0	3,521	28.....	11.1	1,204
19.....	10.7	729	28.....	11.3	1,905	30.....	12.4	3,203
22.....	10.7	730	30.....	11.1	1,592	July 3.....	10.0	371
25.....	10.6	670	May 3.....	12.3	4,011	6.....	9.5	95
28.....	10.4	565	6.....	11.6	2,449	Aug. 16.....	9.3	24
Mar. 3.....	10.5	512	9.....	11.9	2,577	22.....	9.0	4
6.....	10.5	624	12.....	11.7	2,793	24.....	9.5	17
9.....	10.7	647	15.....	11.9	2,874	30.....	9.0	5
13.....	10.7	618	18.....	11.4	1,807	Sept. 9.....	9.0	8
16.....	10.7	746	21.....	11.3	1,441	12.....	9.0	18
19.....	10.7	526	24.....	11.2	1,343	15.....	9.5	66
22.....	10.7	484	28.....	11.2	1,022	18.....	9.0	9
25.....	10.8	527	31.....	11.1	936	26.....	10.5	442
28.....	10.8	647	June 3.....	11.3	1,044	28.....	11.1	747
31.....	10.5	429	6.....	11.2	1,135	30.....	10.2	262

NOTE.—Measurements made by P. E. Harroun, C. W. Healey, W. D. Greet, W. W. Sentman, J. R. Nisbet, G. B. Monk, C. E. Mead, J. W. Broyles, D. H. West, G. W. King, and D. H. Armstrong.

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
1.....	5.8	6.8	7.7	9.0	8.0	7.0	8.75	8.0
2.....	5.75	7.05	7.45	8.75	8.3	7.0	9.0	7.5
3.....	6.25	7.35	7.5	8.5	8.4	6.45	7.85	7.35
4.....	6.4	7.35	7.4	8.35	8.5	6.4	8.45	7.0
5.....	6.2	7.35	7.3	8.05	8.5	6.35	8.55	6.9
6.....	6.2	7.15	7.4	7.6	8.7	6.3	7.4	6.8
7.....	6.25	7.0	7.5	7.5	8.9	6.3	7.55	6.8
8.....	6.25	6.95	7.5	7.35	8.9	6.25	7.3	6.7
9.....	6.25	7.05	7.1	7.15	8.5	6.25	8.1	6.5
10.....	6.3	6.8	7.0	6.95	8.5	7.15	8.15	6.5
11.....	6.2	6.8	7.1	6.95	8.6	9.35	7.4	6.55
12.....	6.25	6.9	7.55	7.05	8.7	9.2	7.35	6.5
13.....	6.25	6.95	7.8	7.25	8.9	7.6	7.25	6.75
14.....	5.2	6.95	8.35	7.6	8.6	7.0	7.8	6.45
15.....	5.15	6.85	8.8	7.85	8.5	6.35	7.75	6.1
16.....	5.1	6.95	8.95	7.9	8.25	6.55	7.35	6.0
17.....	5.15	6.9	9.0	7.8	8.2	6.3	7.0	5.7
18.....	5.95	6.8	8.95	7.65	8.0	6.2	6.45	5.6
19.....	6.0	6.7	9.0	7.6	8.0	6.35	6.75	5.45
20.....	6.25	6.55	9.2	7.6	8.0	6.5	6.25	5.0
21.....	6.3	6.7	9.4	7.45	7.3	6.5	6.5	5.0
22.....	6.45	6.85	9.4	7.45	7.3	7.25	6.5	4.8
23.....	6.6	6.65	9.5	8.0	7.0	7.5	6.45	4.7
24.....	6.65	6.6	9.45	7.85	7.0	8.35	6.6	4.7
25.....	6.6	6.5	9.1	8.4	6.3	8.55	6.4	4.6
26.....	6.5	6.75	8.65	8.0	6.7	8.0	6.65	4.5
27.....	6.65	6.95	8.5	8.4	6.75	7.2	6.5	4.5
28.....	6.75	7.1	8.5	8.05	7.1	7.5	7.05	4.25
29.....	6.4	.....	7.2	8.5	8.2	7.35	7.1	7.0	5.8
30.....	5.85	.....	7.4	8.65	8.35	7.0	7.1	7.95	5.7
31.....	5.5	.....	7.55	.....	8.15	.....	7.8	7.45	.....
1895-96.												
1.....	5.7	6.6	7.6	.....	7.45	7.2	8.6	9.0	7.3	5.6	6.0	5.5
2.....	5.7	6.6	7.5	.....	7.55	7.2	8.45	9.0	7.3	5.6	6.0	5.5
3.....	5.7	6.7	7.3	.....	7.5	7.2	8.3	8.5	7.5	5.6	6.0	5.5
4.....	5.8	6.75	7.0	.....	7.4	7.2	8.1	8.5	7.4	5.6	6.0	5.5
5.....	5.7	7.0	6.9	.....	7.4	7.2	7.9	8.5	7.4	7.0	6.0	5.5

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
6.....	6.8	7.0	6.9	-----	7.4	7.2	7.9	8.5	7.5	7.0	7.0	5.5
7.....	6.0	7.0	7.2	-----	7.35	7.2	8.0	8.5	7.0	6.6	6.65	5.5
8.....	6.5	7.0	7.2	-----	7.3	7.0	8.0	8.5	7.0	6.0	5.85	5.5
9.....	6.55	7.0	7.0	-----	7.3	7.0	8.1	8.7	7.0	6.0	-----	5.5
10.....	6.65	6.95	7.0	-----	7.3	7.1	8.2	8.7	6.65	6.0	-----	5.5
11.....	6.65	6.9	7.05	-----	7.3	7.1	8.3	8.7	6.4	6.0	-----	5.5
12.....	6.65	6.95	7.25	-----	7.3	7.1	8.4	8.7	6.2	6.0	-----	5.5
13.....	6.5	7.2	7.2	-----	7.3	7.0	8.7	8.5	6.0	6.0	-----	6.25
14.....	6.5	7.2	7.3	-----	7.3	7.0	8.9	8.5	6.0	6.0	-----	6.65
15.....	6.5	7.2	7.4	-----	7.5	7.2	8.9	8.3	6.0	6.0	-----	5.75
16.....	6.8	7.2	7.6	-----	7.4	7.2	8.6	8.2	6.0	6.0	5.5	5.5
17.....	6.75	7.2	7.6	-----	7.4	7.4	8.5	8.0	6.0	6.0	5.5	5.5
18.....	6.7	7.35	7.65	-----	7.4	7.4	8.6	7.5	6.0	6.55	5.5	5.5
19.....	6.7	7.4	7.6	-----	7.4	7.4	8.65	7.5	6.0	6.7	5.5	5.5
20.....	6.7	7.4	7.5	-----	7.4	7.58	8.4	7.5	5.9	7.5	5.5	7.5
21.....	6.7	7.3	7.5	-----	7.45	7.6	8.4	7.5	5.6	9.0	5.5	7.95
22.....	6.7	7.25	7.5	7.5	7.5	7.4	8.4	7.2	5.6	8.25	5.5	7.6
23.....	6.7	7.2	7.9	7.45	7.4	7.4	8.4	7.0	5.6	7.6	5.5	7.0
24.....	6.6	7.4	7.8	7.4	7.4	7.5	8.4	7.0	5.6	7.0	5.5	7.0
25.....	6.8	7.5	7.55	7.4	7.4	7.5	8.45	7.0	5.6	7.0	5.5	6.75
26.....	6.5	7.6	6.5	7.5	7.4	7.5	9.0	7.0	5.6	6.5	7.5	6.5
27.....	6.5	7.5	6.8	7.6	7.3	7.6	9.0	7.0	5.6	6.9	7.5	6.5
28.....	6.6	7.6	7.0	7.45	7.3	7.7	9.0	7.0	5.6	8.0	7.5	6.5
29.....	6.6	7.65	-----	7.4	7.3	7.9	9.0	7.0	5.6	8.0	7.45	6.5
30.....	6.5	7.6	-----	7.3	-----	7.9	9.0	6.95	5.6	7.5	6.9	6.5
31.....	6.7	-----	-----	7.4	-----	8.2	-----	7.1	-----	7.0	5.5	-----
1896-97.												
1.....	5.5	6.8	7.2	7.5	7.4	7.5	8.5	9.5	10.15	7.8	6.6	5.0
2.....	5.5	6.65	7.2	7.5	7.4	7.5	8.2	9.5	10.05	7.9	6.6	5.0
3.....	5.5	6.5	7.2	7.5	7.4	7.5	7.6	9.5	10.0	7.95	6.4	5.1
4.....	5.5	6.5	7.2	7.4	7.4	7.5	7.6	9.8	9.75	7.6	6.3	5.1
5.....	5.5	6.5	7.2	7.4	7.4	7.5	7.6	10.25	9.8	7.6	6.65	7.6
6.....	5.5	6.5	7.2	7.4	7.4	7.5	7.6	10.65	9.6	7.5	6.9	7.75
7.....	5.5	6.5	7.2	7.4	7.4	7.5	7.6	11.2	9.5	7.5	6.6	7.1
8.....	5.5	6.9	7.2	7.4	7.4	7.5	7.6	10.75	9.25	7.4	6.95	6.8
9.....	5.5	6.9	7.2	7.4	7.4	7.5	7.9	10.5	9.05	7.6	6.55	6.35
10.....	5.5	6.9	7.2	7.4	7.4	7.5	8.0	10.5	9.0	7.7	6.25	6.8
11.....	5.5	6.9	7.3	7.4	7.4	7.5	8.3	10.5	9.0	7.8	6.0	6.4
12.....	5.5	6.9	7.3	7.25	7.4	7.5	8.3	10.5	9.15	7.55	6.0	6.85
13.....	6.95	6.9	7.3	7.25	7.4	7.5	8.3	10.5	9.2	7.85	5.9	8.3
14.....	9.45	6.9	7.5	7.25	7.4	7.45	8.6	10.5	9.25	7.6	5.9	8.5
15.....	11.0	7.0	7.5	7.12	7.4	7.55	8.95	10.5	9.2	7.55	5.85	7.75
16.....	8.5	7.0	7.5	7.0	7.4	7.65	8.5	10.5	9.0	7.5	5.7	7.65
17.....	7.0	7.0	7.25	7.0	7.48	7.5	8.5	10.5	9.0	7.5	5.6	7.5
18.....	7.0	7.0	7.25	7.0	7.45	7.4	8.5	10.5	8.95	7.5	5.3	7.2
19.....	7.0	7.0	7.4	7.0	7.45	7.4	8.5	10.5	9.0	7.8	5.2	7.65
20.....	7.25	7.0	7.35	7.0	7.45	7.4	8.65	11.55	8.9	7.7	5.85	7.0
21.....	6.0	7.0	7.3	7.0	7.45	7.4	9.15	12.35	8.7	7.5	5.9	6.8
22.....	6.0	7.0	7.3	7.0	7.5	7.48	9.4	12.35	8.55	7.4	5.85	6.8
23.....	6.0	7.1	7.3	7.0	7.5	7.5	9.75	11.7	8.4	7.4	5.7	6.8
24.....	6.95	7.1	7.5	7.0	7.5	7.5	9.5	10.0	8.2	7.4	5.6	7.0
25.....	6.8	7.1	7.5	7.3	7.5	7.8	9.5	10.0	8.15	7.3	5.75	7.7
26.....	6.8	7.1	7.43	7.3	7.5	7.65	9.5	10.0	8.0	7.3	5.7	8.25
27.....	6.8	7.1	-----	7.3	7.5	7.6	9.5	10.0	7.85	7.3	5.65	8.15
28.....	6.8	7.1	-----	7.32	7.5	7.6	9.5	10.0	8.4	7.3	5.65	7.65
29.....	6.8	7.22	-----	7.4	-----	7.6	6.5	10.0	8.0	7.15	5.55	7.35
30.....	6.8	7.2	-----	7.4	-----	7.6	9.5	10.8	7.85	7.0	5.35	7.0
31.....	6.8	-----	-----	7.4	-----	7.7	-----	10.6	-----	6.8	5.0	-----
1897-98.												
1.....	7.0	8.0	7.9	7.7	7.8	7.8	7.4	9.85	8.2	8.5	6.65	4.4
2.....	7.0	8.0	7.8	7.7	8.0	7.8	7.4	9.65	8.15	8.6	6.55	4.3
3.....	6.9	8.0	7.7	7.6	7.9	7.4	7.4	9.45	8.5	8.3	6.4	4.0
4.....	6.9	7.9	7.7	7.6	7.8	7.8	7.4	9.1	8.4	8.55	6.3	4.0
5.....	8.45	7.9	7.7	7.6	7.7	7.8	7.4	8.9	8.4	8.35	6.2	3.8

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
6.....	9.4	8.0	7.8	7.6	7.7	7.8	7.4	8.8	8.25	8.4	6.0	3.8
7.....	8.55	8.0	7.9	7.7	7.7	7.8	7.6	8.7	8.65	8.35	6.0	3.8
8.....	8.1	8.0	7.7	7.7	7.7	7.7	7.6	8.6	8.5	7.95	6.6	3.8
9.....	8.25	7.9	7.7	7.7	7.8	7.7	7.6	8.6	8.3	7.75	6.0	3.8
10.....	11.0	8.0	7.7	7.7	7.8	7.7	7.7	8.6	8.8	8.25	7.5	5.4
11.....	9.15	8.0	7.7	7.7	7.9	7.8	8.1	8.7	8.6	7.65	7.75	7.55
12.....	8.65	7.8	7.7	7.7	7.9	7.8	8.25	8.6	8.75	7.6	6.9	5.6
13.....	8.4	7.6	7.7	7.7	7.9	7.8	8.35	8.55	8.85	7.4	6.35	4.9
14.....	8.3	7.6	7.7	7.7	7.8	7.8	8.6	8.55	8.7	9.3	6.0	4.65
15.....	8.2	7.6	7.8	7.7	7.8	7.9	8.6	8.65	8.65	8.65	5.85	4.3
16.....	8.1	7.6	7.8	7.7	7.7	7.9	8.8	8.8	8.6	10.4	5.7	4.0
17.....	8.0	7.8	7.7	7.7	7.7	7.8	9.0	8.75	8.45	10.75	5.5	3.8
18.....	8.0	7.8	7.7	7.7	7.6	7.7	9.3	8.6	8.2	10.25	5.5	3.8
19.....	8.0	7.9	7.7	7.7	7.6	7.7	9.6	8.5	8.4	8.35	6.0	3.6
20.....	8.2	7.9	7.7	7.7	7.7	7.7	9.9	8.5	8.3	7.95	6.3	3.6
21.....	8.3	7.9	7.7	7.7	7.7	7.7	9.8	8.4	8.2	7.8	6.1	3.6
22.....	8.4	7.9	7.7	7.7	7.6	7.7	9.5	8.2	8.6	7.7	5.75	3.6
23.....	8.3	7.9	7.7	7.7	7.8	7.7	9.2	8.0	8.5	7.65	5.5	3.6
24.....	8.2	7.8	7.7	7.6	7.9	7.6	9.7	8.0	8.6	7.6	5.25	3.6
25.....	8.2	7.8	7.7	7.5	7.8	7.6	9.7	7.9	8.5	7.5	5.0	.....
26.....	8.2	7.8	7.7	7.35	7.8	7.5	9.75	7.8	8.75	7.4	4.9	.....
27.....	8.2	7.8	7.7	6.8	7.8	7.5	9.65	7.7	8.75	7.3	4.8	.....
28.....	8.1	7.8	7.7	7.0	7.8	7.5	9.7	7.7	8.65	7.2	5.15	.....
29.....	8.1	7.8	7.7	7.45	.....	7.5	9.75	7.7	8.55	7.1	5.1	.....
30.....	8.2	7.9	7.7	7.7	.....	7.5	10.0	7.8	8.4	7.0	4.7	.....
31.....	8.2	.....	7.7	7.8	.....	7.4	.....	7.9	.....	6.8	4.5	.....
1898-99.												
1.....	.....	.....	6.8	6.95	6.9	6.7	7.0	7.7	6.0	.....	6.0	.....
2.....	.....	.....	7.0	6.75	6.65	6.7	7.15	7.65	5.8	.....	5.8	.....
3.....	.....	.....	6.8	6.5	6.7	6.6	7.3	7.5	5.7	.....	5.6	.....
4.....	.....	.....	6.55	6.6	6.7	6.5	7.1	7.4	5.6	.....	5.4	.....
5.....	.....	3.35	6.5	6.55	6.6	6.5	7.0	7.4	5.4	.....	5.65	.....
6.....	.....	3.8	6.6	6.6	6.5	6.7	6.9	7.3	5.25	.....	6.8	.....
7.....	.....	4.0	6.5	6.6	5.1	6.7	7.2	7.2	5.0	.....	7.15	.....
8.....	.....	4.2	6.4	6.75	4.5	6.5	7.0	7.2	.....	.....	7.55	.....
9.....	.....	4.55	6.3	6.55	4.5	6.8	6.9	7.2	.....	.....	6.95	5.35
10.....	.....	4.85	6.3	6.5	6.95	6.5	6.8	7.1	.....	.....	6.4	5.65
11.....	.....	5.05	6.2	6.60	6.6	6.5	6.7	7.0	.....	.....	6.1	5.0
12.....	.....	5.4	6.3	7.0	6.7	6.5	6.5	6.8	.....	.....	5.7	5.15
13.....	.....	5.7	6.5	6.7	5.9	6.6	6.4	6.7	.....	.....	5.3	5.5
14.....	.....	5.8	6.5	7.0	7.2	7.0	6.3	6.6	.....	.....	.....	5.05
15.....	.....	5.9	6.5	6.9	6.7	7.1	6.15	6.5	.....	3.6	.....	.....
16.....	.....	6.0	6.5	6.85	6.7	7.0	6.0	6.4	.....	3.6	.....	.....
17.....	.....	6.2	6.5	6.7	6.95	6.9	6.05	6.5	.....	3.6	.....	.....
18.....	.....	6.4	6.7	6.55	6.8	6.9	6.9	6.6	.....	3.6	.....	.....
19.....	.....	6.2	6.75	6.55	6.8	6.8	7.35	6.7	.....	9.05	.....	7.25
20.....	.....	6.2	7.0	6.55	6.8	6.5	7.8	7.45	.....	9.25	.....	6.05
21.....	.....	6.3	7.6	6.6	6.8	6.4	7.95	7.4	.....	7.6	.....	5.5
22.....	.....	6.4	7.25	6.5	6.8	6.4	7.95	7.3	.....	6.75	.....	5.15
23.....	.....	6.5	6.75	6.6	6.8	6.4	7.8	7.3	.....	6.25	.....	5.0
24.....	.....	6.3	6.5	6.7	6.7	6.4	7.7	7.2	.....	6.15	.....	5.0
25.....	.....	6.6	6.25	6.7	6.8	6.4	7.7	7.0	.....	7.6	.....	.....
26.....	.....	6.5	6.0	6.6	6.8	6.3	7.7	6.95	.....	7.5	.....	.....
27.....	.....	6.5	6.4	6.6	6.8	6.3	7.7	6.8	.....	6.55	.....	.....
28.....	.....	6.55	6.4	6.6	6.8	6.5	7.7	6.65	.....	6.3	.....	.....
29.....	.....	6.5	6.5	6.6	.....	6.7	7.8	6.55	.....	6.2	.....	.....
30.....	.....	6.6	6.7	6.6	.....	6.85	7.7	6.3	.....	6.25	.....	.....
31.....	.....	.....	6.9	6.65	.....	7.0	.....	6.2	.....	6.2	.....	.....
1899-1900.												
1.....	.....	5.0	6.5	6.75	6.8	6.7	6.4	6.5	9.05	6.1	4.3	3.3
2.....	.....	5.0	6.5	6.9	6.8	6.8	6.25	6.6	9.4	5.9	4.3	3.3
3.....	.....	5.1	6.5	6.9	6.75	6.8	6.2	6.6	9.5	5.8	4.2	3.3
4.....	.....	5.1	6.55	6.8	6.7	6.8	6.1	6.7	9.35	5.7	4.2	3.3
5.....	.....	5.2	6.55	6.8	6.85	6.8	6.0	6.7	9.4	5.7	4.1	3.3
6.....	.....	5.2	6.55	6.6	7.0	6.8	5.9	6.7	9.25	5.6	4.1	3.3
7.....	.....	5.3	6.55	6.5	6.9	6.8	5.8	6.7	9.0	5.7	4.1	3.3
8.....	.....	5.3	6.6	6.6	6.9	6.8	5.8	6.8	8.9	5.65	4.1	7.15
9.....	.....	5.4	6.6	6.65	6.9	6.8	6.35	7.25	8.75	5.4	4.1	9.2
10.....	.....	5.4	6.45	6.95	6.75	6.8	6.5	7.4	8.5	5.4	4.1	9.1

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
11.....	.....	5.5	6.6	6.9	6.7	6.95	6.6	7.4	8.45	5.3	3.9	8.0
12.....	.....	5.5	6.55	6.8	6.85	6.9	6.5	7.4	8.55	5.25	3.9	7.35
13.....	4.5	5.6	6.55	6.7	6.8	6.9	6.5	7.85	8.75	5.2	3.9	6.65
14.....	4.5	5.6	6.55	6.7	6.6	6.9	6.5	8.25	8.45	5.1	3.9	8.25
15.....	4.5	5.7	6.6	6.8	6.6	6.7	6.7	8.25	8.0	5.1	3.9	7.2
16.....	4.5	5.7	6.6	6.9	6.7	6.8	6.7	8.0	7.95	5.1	3.9	6.7
17.....	4.5	5.8	6.05	6.8	6.85	6.9	6.7	7.9	7.7	5.0	3.9	6.35
18.....	4.5	5.8	6.4	6.85	6.8	7.0	6.7	7.75	7.7	5.0	3.8	6.2
19.....	4.5	5.9	6.5	6.8	6.7	7.55	6.65	7.9	7.6	5.0	3.8	6.1
20.....	4.5	6.0	6.45	6.95	6.9	7.15	6.6	7.85	7.5	4.9	3.8	6.0
21.....	4.5	6.0	6.55	7.0	6.95	7.1	6.55	9.03	7.4	4.9	3.8	5.9
22.....	4.5	6.1	6.55	6.95	6.9	7.1	6.55	9.3	7.3	4.9	3.8	5.9
23.....	4.5	6.2	6.6	6.9	6.85	7.0	6.5	8.85	7.3	4.8	3.8	5.8
24.....	4.6	6.2	6.65	6.8	6.8	7.0	6.0	8.75	7.25	4.8	3.8	5.7
25.....	4.6	6.3	6.7	6.85	6.85	6.9	5.6	8.65	7.25	4.7	3.6	5.6
26.....	4.7	6.3	6.65	6.95	6.8	6.9	5.6	8.55	7.1	4.7	3.6	5.5
27.....	4.7	6.4	6.65	6.75	6.75	6.9	5.6	8.4	6.85	4.6	3.6	5.7
28.....	4.8	6.4	6.65	6.9	6.7	6.85	5.75	8.3	6.6	4.5	3.6	5.65
29.....	4.8	6.5	6.75	6.8	.....	6.7	6.5	8.55	6.5	4.5	3.6	5.4
30.....	4.9	6.5	6.85	6.9	.....	6.6	6.6	8.75	6.35	4.4	3.6	5.3
31.....	4.9	.....	6.8	6.9	.....	6.5	.....	8.95	.....	4.4	3.6	.....
1900-1901.												
1.....	5.3	5.2	6.45	5.35	7.1	7.4	6.3	9.1	9.35	6.8	7.95	5.95
2.....	5.2	5.3	6.45	6.2	7.1	7.3	6.3	9.1	9.7	6.65	7.15	6.05
3.....	5.1	5.3	6.4	6.65	7.1	7.3	6.2	9.65	9.25	6.75	6.8	5.95
4.....	5.0	5.5	6.5	6.9	7.15	7.35	6.2	9.8	9.0	6.8	6.35	6.15
5.....	5.0	5.5	6.5	6.95	7.15	7.2	6.3	9.7	8.6	6.55	6.25	7.0
6.....	4.9	5.5	6.6	6.7	7.15	7.25	6.2	9.2	8.45	6.25	6.15	7.0
7.....	4.9	5.6	6.6	6.6	7.25	7.3	6.4	8.85	8.4	5.9	8.5	6.55
8.....	4.9	5.6	6.6	6.3	7.35	7.4	6.3	8.85	8.5	5.95	7.75	6.35
9.....	4.8	5.6	6.7	6.8	7.35	7.45	6.25	8.85	8.1	5.7	7.85	7.27
10.....	4.8	5.7	6.7	6.9	7.2	7.5	6.15	8.9	8.15	5.55	8.1	9.17
11.....	4.7	5.7	6.7	7.25	7.4	7.45	5.95	8.65	8.05	5.4	7.3	9.65
12.....	4.7	5.7	6.7	7.1	7.5	7.4	6.0	8.6	8.2	5.3	7.0	8.4
13.....	4.6	5.7	6.7	7.3	7.45	7.45	5.95	8.95	8.15	5.2	6.8	7.6
14.....	4.6	5.7	6.7	7.15	7.45	7.4	6.05	9.1	8.1	5.1	6.6	6.95
15.....	4.5	5.7	6.7	7.15	7.4	7.3	5.9	9.2	8.1	7.5	6.65	6.55
16.....	4.5	5.8	6.7	7.15	7.3	7.3	5.85	9.4	8.2	6.6	6.55	6.4
17.....	4.4	5.8	6.7	7.2	7.35	7.2	5.95	9.25	7.9	5.8	6.35	6.3
18.....	4.6	5.8	6.7	7.2	7.3	7.1	5.9	9.2	7.75	5.35	6.5	6.15
19.....	4.6	5.8	6.7	7.3	7.25	7.0	5.9	9.3	7.75	5.3	6.95	6.0
20.....	4.7	5.9	6.7	7.25	7.3	7.9	5.85	9.2	7.7	5.2	9.96	5.9
21.....	4.7	5.9	6.7	7.15	7.35	6.8	6.8	9.2	7.65	5.1	8.55	5.75
22.....	4.7	5.9	6.7	7.2	7.3	6.8	7.15	9.1	7.5	5.0	7.35	5.7
23.....	4.8	6.0	6.7	7.2	7.25	6.8	7.1	9.3	7.35	5.75	6.9	5.6
24.....	4.8	6.0	6.85	7.2	7.55	6.8	7.0	9.65	7.2	7.1	6.35	5.5
25.....	4.9	6.1	6.85	7.1	7.85	6.75	6.9	9.7	7.2	9.8	6.25	5.4
26.....	4.9	6.1	6.85	7.15	7.95	6.65	7.4	9.6	7.15	8.1	6.15	5.3
27.....	5.0	6.2	6.95	7.15	7.65	6.5	7.95	9.45	7.1	7.9	6.35	5.1
28.....	5.0	6.2	6.9	7.1	7.5	6.5	8.75	9.15	7.1	8.5	6.25	5.0
29.....	5.1	6.3	6.5	7.2	.....	6.4	9.0	8.95	7.0	8.9	6.0	4.9
30.....	5.1	6.3	5.9	7.3	.....	6.4	9.15	9.05	6.85	8.7	6.05	4.9
31.....	5.2	.....	5.65	7.25	.....	6.4	.....	9.25	.....	9.1	5.95	.....
1901-2.												
1.....	4.9	6.6	6.8	7.25	7.35	7.35	7.1	7.8	7.5	.....	.....	6.35
2.....	5.35	6.55	6.8	7.15	7.3	7.5	7.0	7.65	7.4	.....	.....	6.4
3.....	5.1	6.7	6.9	7.25	7.35	7.45	6.9	7.6	7.35	.....	.....	5.7
4.....	5.0	6.7	6.9	7.35	7.45	7.35	6.85	7.55	7.4	.....	.....	5.45
5.....	4.9	6.7	7.0	7.35	7.4	7.35	6.7	7.35	7.4	.....	.....	5.15
6.....	5.35	6.7	6.95	7.3	7.5	7.3	6.55	7.45	7.3	.....	.....	5.05
7.....	7.1	6.7	7.0	7.3	7.45	7.3	6.4	7.4	7.2	.....	.....	.....
8.....	8.1	6.7	7.1	7.3	7.55	7.3	6.2	7.4	7.2	.....	.....	.....
9.....	7.15	6.7	6.9	7.15	7.5	7.2	5.8	7.65	7.15	.....	.....	.....
10.....	6.75	6.6	7.0	7.05	7.6	7.2	.....	7.55	7.05	.....	.....	.....
11.....	6.65	6.6	7.2	7.1	7.4	7.05	.....	7.5	6.85	.....	.....	.....
12.....	6.6	6.6	7.0	7.1	7.45	6.9	8.2	7.6	6.7	.....	7.0	.....
13.....	6.5	6.75	7.05	7.35	7.35	6.8	8.2	7.7	6.55	.....	7.05	.....
14.....	6.4	6.9	7.05	7.4	7.4	6.7	8.35	7.7	.....	.....	7.8	.....
15.....	6.4	8.07	6.95	7.4	7.4	6.5	8.35	7.75	.....	.....	8.5	.....

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16.....	6.4	7.65	6.95	7.35	7.5	6.5	8.4	8.5	-----	-----	7.55	-----
17.....	6.4	7.25	6.95	7.4	7.5	6.95	8.25	8.05	-----	-----	7.25	-----
18.....	6.3	6.9	6.9	7.4	7.55	7.1	8.3	7.8	-----	-----	7.2	-----
19.....	6.3	6.8	6.9	7.3	7.5	7.2	8.0	7.8	-----	-----	6.9	-----
20.....	6.3	6.7	6.9	7.35	7.45	7.2	8.15	7.75	-----	-----	6.65	-----
21.....	6.3	6.8	6.95	7.3	7.35	7.1	8.2	7.65	-----	-----	-----	-----
22.....	6.3	6.8	7.2	7.3	7.4	6.95	8.3	7.55	-----	-----	-----	6.2
23.....	6.3	6.75	7.25	7.35	7.4	6.75	8.45	7.45	-----	-----	-----	8.45
24.....	6.3	6.75	7.3	7.35	7.45	6.6	8.3	7.35	-----	-----	7.25	7.85
25.....	6.3	6.75	7.25	7.4	7.4	6.6	8.1	7.15	-----	-----	9.05	6.7
26.....	6.3	6.8	7.15	7.3	7.4	6.65	7.9	7.0	-----	-----	11.1	6.25
27.....	6.3	6.8	7.05	7.4	7.4	7.2	7.9	6.95	-----	-----	8.45	6.15
28.....	6.3	6.75	7.1	7.35	7.4	7.3	7.7	6.65	-----	-----	7.85	6.0
29.....	6.3	6.8	7.1	7.3	-----	7.25	7.85	8.2	-----	-----	7.45	5.85
30.....	6.3	6.9	7.15	7.35	-----	7.25	7.85	8.35	-----	-----	7.4	5.55
31.....	6.3	-----	7.2	7.35	-----	7.2	-----	7.65	-----	-----	6.65	-----
1902-3.												
1.....	5.35	5.0	6.0	6.25	7.0	7.3	7.9	9.35	8.85	10.0	7.7	-----
2.....	5.7	5.0	6.0	6.2	6.8	7.35	7.8	9.35	8.9	9.9	7.55	-----
3.....	5.25	5.0	6.0	5.85	6.9	7.2	8.0	9.35	9.0	9.7	7.55	-----
4.....	5.05	5.0	5.6	5.9	6.8	7.2	9.45	9.55	9.4	9.55	7.5	-----
5.....	5.0	5.0	5.7	5.85	6.95	7.15	9.9	9.7	9.65	9.35	7.4	-----
6.....	4.9	5.0	6.15	5.85	6.95	7.2	8.65	9.8	9.85	9.25	7.2	-----
7.....	4.8	5.1	6.15	5.85	7.1	7.05	8.35	9.7	9.95	8.9	7.2	-----
8.....	5.15	5.1	6.15	6.9	6.8	8.8	8.0	9.7	10.3	8.75	7.15	-----
9.....	5.1	5.1	6.2	6.75	6.85	8.5	8.0	9.95	10.95	8.5	6.85	6.45
10.....	5.0	5.1	6.25	6.8	6.95	7.8	7.95	10.15	10.8	8.3	6.65	6.7
11.....	4.95	5.1	6.3	6.85	6.95	7.4	8.25	10.3	10.75	8.2	6.5	6.85
12.....	4.9	5.1	6.3	6.6	7.1	7.45	8.5	10.3	12.25	8.3	6.8	6.65
13.....	4.9	5.2	6.3	6.7	7.0	7.3	8.35	10.45	11.95	8.25	6.7	6.6
14.....	4.9	5.2	6.3	6.6	7.15	7.5	8.5	10.55	11.7	8.25	6.7	6.55
15.....	4.8	5.8	6.5	6.55	7.2	7.9	8.1	10.45	11.7	8.25	7.05	6.5
16.....	4.8	6.3	6.9	6.65	7.05	7.9	7.95	10.45	12.3	8.1	6.6	6.4
17.....	-----	6.2	6.7	6.6	6.95	7.75	8.1	10.45	12.45	8.0	6.75	6.6
18.....	-----	6.05	6.6	6.6	7.25	7.75	8.3	10.8	12.6	7.9	6.6	6.5
19.....	-----	6.0	6.4	6.7	7.2	7.9	8.15	10.7	11.95	7.9	6.7	-----
20.....	-----	6.0	6.3	6.8	7.25	7.65	8.45	10.7	12.45	8.0	7.55	-----
21.....	-----	5.95	5.95	6.7	7.3	7.7	8.5	10.3	12.4	8.4	7.15	-----
22.....	-----	5.9	5.95	6.9	7.3	7.6	8.2	10.0	12.3	8.4	7.0	-----
23.....	-----	5.9	6.45	6.7	7.3	7.5	8.05	9.85	12.2	8.1	7.0	-----
24.....	4.8	5.85	6.55	6.7	7.3	7.35	8.2	9.15	12.4	8.05	7.35	7.0
25.....	4.8	5.8	6.5	6.75	7.2	7.3	8.3	8.95	11.6	8.0	7.1	6.55
26.....	4.8	5.7	6.4	6.8	7.35	7.4	8.7	8.7	11.05	7.9	7.6	8.45
27.....	4.8	5.7	6.45	6.8	7.4	7.45	8.85	8.7	10.7	7.9	7.9	7.1
28.....	4.8	5.8	6.5	7.05	7.4	7.75	9.35	8.8	10.55	7.85	7.15	6.75
29.....	4.9	6.0	6.7	7.05	-----	7.75	9.3	8.85	10.35	7.65	6.95	6.6
30.....	4.9	6.0	6.45	7.15	-----	7.9	9.35	8.8	10.3	7.7	6.85	6.6
31.....	4.9	-----	6.4	7.15	-----	8.0	-----	8.8	-----	7.75	6.6	-----
1903-4.												
1.....	7.5	-----	7.8	7.7	7.7	7.9	-----	-----	-----	-----	7.35	8.75
2.....	7.45	-----	7.8	7.7	7.8	7.9	-----	-----	-----	-----	7.65	8.8
3.....	6.9	-----	7.9	7.7	7.9	7.9	-----	-----	-----	-----	8.35	9.0
4.....	6.7	-----	7.9	7.7	7.8	7.9	-----	-----	-----	-----	8.65	8.3
5.....	6.6	-----	7.9	7.55	7.95	7.9	-----	-----	-----	-----	9.7	8.3
6.....	6.6	6.6	7.8	7.8	8.0	7.95	-----	-----	-----	-----	9.2	7.8
7.....	6.6	6.6	7.9	7.7	8.0	7.9	-----	-----	-----	-----	9.15	7.35
8.....	6.6	6.6	7.9	7.6	8.0	7.9	-----	-----	-----	-----	8.9	7.15
9.....	6.5	6.6	7.9	7.75	8.1	7.8	-----	-----	-----	-----	8.35	6.95
10.....	6.5	6.6	7.95	7.75	8.0	7.4	-----	-----	-----	-----	8.35	6.75
11.....	-----	6.7	8.0	7.85	8.0	7.5	-----	-----	-----	-----	8.25	-----
12.....	-----	6.7	7.95	8.0	7.9	7.4	-----	-----	-----	-----	8.0	-----
13.....	-----	6.8	7.9	7.8	7.8	7.3	-----	-----	-----	-----	7.5	-----
14.....	-----	6.8	8.0	7.8	7.8	7.2	-----	-----	-----	-----	7.3	-----
15.....	-----	6.9	7.95	7.9	7.8	7.1	-----	-----	-----	-----	6.85	-----
16.....	-----	6.9	7.8	8.0	7.8	6.9	-----	-----	-----	-----	6.6	-----
17.....	-----	7.0	7.6	7.95	7.7	6.8	-----	-----	-----	-----	6.4	-----
18.....	-----	7.1	7.6	7.95	7.7	6.6	-----	-----	-----	-----	7.45	-----
19.....	-----	7.1	7.85	7.95	7.7	6.4	-----	-----	-----	-----	8.45	-----
20.....	-----	7.2	7.8	8.05	7.7	-----	-----	-----	-----	-----	9.0	-----

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.
1903-4.												
21		7.2	7.9	8.2	7.8						8.1	7.95
22		7.3	7.9	8.05	7.85						9.05	7.95
23		7.3	8.0	8.0	7.8					8.9	9.35	9.1
24		7.4	8.0	7.95	7.85					8.85	9.9	9.0
25		7.4	7.9	7.9	7.8					8.1	8.8	9.35
26		7.5	7.9	7.9	7.85					8.45	8.95	8.6
27		7.5	7.9	7.8	7.8					8.9	9.45	9.1
28		7.6	8.05	7.25	7.8					8.2	9.8	10.4
29		7.6	7.9	7.25	7.8					7.45	8.8	10.5
30		7.7	7.9	7.7						7.2	8.5	11.7
31			8.0	7.8						7.3	8.45	
1904-5.												
1	11.95	8.2	8.0	7.7	8.0	8.8	8.85	10.35	12.6	8.05	6.75	
2	13.1	8.1	8.0	7.7	7.9	8.75	8.9	10.5	12.2	7.75	6.9	
3	12.7	8.1	8.0	7.8	7.9	8.65	9.1	10.65	11.95	7.6	7.15	
4	9.5	8.1	8.0	7.95	8.0	9.1	8.85	11.25	11.5	7.5	7.15	
5	8.9	8.0	8.1	8.0	8.0	9.05	8.65	11.5	11.45	7.45	7.0	
6	8.6	8.0	8.25	7.95	8.05	8.95	8.5	11.45	11.55	7.4	7.15	6.8
7	9.1	7.9	8.1	7.8	8.65	8.9	8.4	10.7	11.9	7.35	7.0	7.3
8	8.95	7.9	8.0	7.9	8.45	8.95	8.5	10.15	12.3	7.3	7.05	6.7
9	11.55	8.0	8.1	7.9	8.15	9.25	8.75	9.9	12.7	7.2	7.4	6.7
10	12.85	7.9	8.1	8.05	7.95	9.25	9.05	10.1	12.55	7.05	7.2	6.85
11	13.75	7.9	7.9	8.15	7.9	8.85	9.45	10.3	12.5	6.9	7.0	6.5
12	10.6	7.9	7.8	8.1	8.0	8.6	9.65	10.45	12.35	6.8	6.95	6.1
13	9.45	7.8	7.8	8.1	7.8	8.8	9.95	10.1	11.9	6.8	6.8	5.4
14	9.0	7.8	7.8	8.05	7.65	8.75	9.65	10.3	11.3	6.7	6.75	5.3
15	8.9	7.9	7.9	8.0	8.0	8.6	9.55	10.25	11.0	6.6	6.55	
16	8.75	7.8	7.9	8.0	7.9	8.65	9.7	10.65	10.4	6.6	6.45	
17	8.65	7.8	7.8	8.05	8.0	8.95	9.2	10.85	10.05	6.5	6.4	
18	8.65	7.8	7.9	7.9	8.0	9.2	9.1	11.1	9.7	6.4	6.3	
19	8.55	7.9	7.9	7.9	8.1	9.15	9.15	11.45	9.3	6.3	6.2	
20	8.4	8.0	7.9	7.8	8.25	9.15	9.3	11.85	9.4	6.2	6.1	
21	8.2	8.0	7.85	8.0	8.15	8.8	9.4	12.35	9.35	6.2	6.0	
22	8.3	8.0	7.8	8.0	8.05	8.7	9.5	12.75	9.0	6.1	5.85	
23	8.25	8.0	7.9	7.95	7.95	8.75	9.7	12.95	8.8	6.2	5.7	
24	8.1	8.0	7.9	7.9	8.0	9.0	10.3	13.05	8.7	6.35	5.6	
25	8.15	8.0	7.8	7.9	8.8	8.9	11.0	12.65	8.55	6.2		5.6
26	8.25	8.0	7.8	7.9	8.6	8.75	10.45	13.15	8.35	6.4		7.55
27	8.1	8.1	7.8	7.9	8.45	8.6	10.15	13.2	8.2	6.25		7.3
28	8.1	8.1	7.8	7.9	8.55	8.6	9.95	13.2	8.2	6.1		6.2
29	8.1	8.0	7.8	7.95		8.7	10.0	13.15	8.1	6.1		6.7
30	8.1	8.0	7.75	8.0		8.8	10.2	13.0	8.0	6.0		6.55
31	8.25		7.7	8.0		8.7		13.0		5.9		
1905-6.												
1	6.4	6.1	7.7	6.5	7.35	7.55	7.8	9.4	9.35	8.0	8.75	7.45
2	6.15	6.1	7.4	6.5	7.45	7.5	7.5	9.6	9.2	7.9	8.5	7.5
3	6.1	6.2	7.3	6.6	7.3	7.45	7.7	9.2	9.1	8.0	8.3	7.25
4	6.0	6.35	7.2	6.7	7.3	7.4	7.85	9.1	9.25	8.3	8.4	7.05
5	5.95	6.45	7.2	7.0	7.3	7.45	8.0	8.95	9.1	8.5	8.5	7.0
6	5.95	6.5	7.15	7.0	7.5	7.6	8.0	9.0	9.15	8.35	8.5	6.8
7	5.9	6.65	7.25	6.9	7.3	7.65	7.95	9.5	9.3	8.5	8.3	6.7
8	5.8	6.9	7.25	6.8	7.35	7.55	8.0	9.9	9.3	8.7	8.3	6.7
9	5.7	7.05	7.15	6.8	7.4	7.5	8.1	9.9	9.3	8.6	8.3	6.55
10	5.6	6.75	7.3	7.0	7.5	7.5	7.95	10.1	9.4	8.55	8.2	6.35
11	5.6	7.05	7.3	7.2	7.55	7.6	8.05	10.2	9.45	8.4	8.2	6.2
12	5.7	7.0	7.2	7.0	7.7	7.6	8.2	10.5	9.65	8.35	7.9	5.95
13	5.7	6.9	7.3	7.1	7.7	7.45	8.15	10.55	9.85	8.4	7.85	
14	5.7	6.95	7.3	7.2	7.8	7.55	8.25	10.45	9.95	8.4	7.8	
15	5.75	6.9	7.45	7.4	7.8	7.75	8.55	10.3	10.3	8.4	7.7	
16	5.7	6.8	7.5	7.65	7.75	7.8	8.55	10.1	10.35	8.5	7.95	
17	5.7	6.8	7.4	7.9	7.7	7.75	8.45	10.1	10.45	8.4	7.9	
18	5.7	6.8	7.3	7.95	7.6	7.9	8.5	10.1	10.6	8.45	7.6	
19	5.7	6.8	7.4	8.0	7.55	8.0	8.65	10.1	10.65	8.5	7.7	
20	5.7	6.8	7.4	7.9	7.6	7.9	8.8	10.4	10.4	8.7	7.6	
21	5.7	6.8	7.4	7.7	7.7	7.8	9.2	10.7	10.1	8.55	7.6	
22	5.8	6.9	7.25	7.5	7.55	7.75	9.45	10.9	9.95	8.1	7.6	
23	5.8	7.0	7.2	7.2	7.6	7.8	9.45	10.9	9.65	8.25	7.5	
24	5.75	8.65	6.9	7.1	7.6	7.7	9.5	10.8	9.3	8.2	7.3	
25	5.8	7.75	6.5	7.2	7.55	7.8	9.55	10.8	9.1	8.1	7.05	6.4

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26.....	5.9	7.6	6.4	7.2	7.5	7.9	9.95	10.75	9.0	8.0	7.5	6.75
27.....	5.9	7.3	6.5	7.1	7.6	7.9	9.85	10.6	8.75	8.0	7.75	6.95
28.....	5.95	6.95	6.5	7.2	7.5	8.55	9.55	10.5	8.45	7.9	7.7	10.4
29.....	6.05	6.95	6.5	7.4	-----	8.6	9.3	10.0	8.35	7.9	7.65	7.85
30.....	6.05	7.7	6.5	7.3	-----	8.5	9.4	9.8	8.15	8.2	7.5	7.45
31.....	6.15	-----	6.5	7.1	-----	8.2	-----	9.5	-----	8.4	7.55	-----
1906-7.												
1.....	7.4	8.3	8.6	8.3	8.7	8.7	8.9	9.75	10.8	9.9	8.85	11.75
2.....	7.3	8.4	8.5	8.3	8.65	8.6	9.0	9.7	10.65	9.95	8.7	10.3
3.....	7.55	8.5	8.4	8.4	8.8	8.6	8.9	9.65	10.25	10.0	8.9	9.9
4.....	7.7	8.4	8.45	8.4	8.8	8.5	8.85	9.6	10.05	10.05	9.2	9.7
5.....	7.7	8.5	8.55	8.3	8.7	8.5	8.85	9.7	10.0	10.05	9.0	9.6
6.....	7.7	8.4	9.1	8.0	8.55	8.6	9.0	9.7	9.9	10.3	8.8	9.8
7.....	7.85	8.4	9.35	8.15	8.5	8.5	9.2	9.7	10.15	10.2	8.6	9.7
8.....	7.85	8.45	8.85	8.2	8.6	8.5	9.15	9.65	10.6	10.2	8.85	9.65
9.....	7.8	8.5	8.6	8.4	8.7	8.6	8.9	9.6	10.9	9.9	8.5	9.45
10.....	7.8	8.4	8.5	8.4	8.7	8.6	8.8	9.5	10.7	9.85	8.45	9.3
11.....	7.75	8.5	8.5	8.4	8.7	8.7	9.05	9.4	10.65	9.85	8.3	9.3
12.....	7.7	8.5	8.4	8.4	8.6	8.7	8.95	9.4	10.6	9.7	8.3	9.5
13.....	7.7	8.5	8.5	8.3	8.55	8.6	9.2	9.4	10.65	9.7	8.3	9.4
14.....	7.7	8.5	8.4	8.3	8.6	8.75	9.6	9.6	10.6	9.45	8.3	9.35
15.....	7.7	8.5	8.4	8.3	8.5	8.8	10.0	9.7	10.5	9.4	8.2	9.5
16.....	7.75	8.5	8.5	8.3	8.55	8.7	10.6	9.65	10.5	9.5	8.15	9.35
17.....	7.9	8.5	8.4	8.3	8.5	8.55	10.6	9.7	10.55	9.5	8.05	9.5
18.....	7.8	8.5	8.15	8.55	8.6	8.4	10.65	9.65	10.8	9.5	8.0	9.5
19.....	7.8	8.4	8.1	8.65	8.6	8.35	10.4	9.7	11.0	9.4	8.3	9.7
20.....	7.8	8.45	7.95	8.5	8.7	8.5	10.4	10.0	11.25	9.35	8.55	10.2
21.....	7.85	8.4	7.9	8.3	8.8	8.6	10.5	10.1	11.6	9.2	9.0	10.4
22.....	7.9	8.25	8.0	8.3	8.85	8.6	10.6	10.7	11.3	9.2	9.6	11.05
23.....	8.0	8.0	8.0	8.4	8.8	9.3	10.0	11.0	10.9	9.1	9.3	9.65
24.....	8.0	7.9	8.15	8.3	8.7	9.45	9.7	11.3	10.6	8.65	8.9	9.2
25.....	8.1	8.0	8.3	8.4	8.8	9.45	9.75	11.3	10.45	8.6	9.05	9.15
26.....	8.1	8.0	8.3	8.55	8.8	9.45	9.6	11.6	10.35	8.9	9.0	9.0
27.....	8.2	8.1	8.25	8.3	8.7	9.3	9.3	11.3	10.1	8.85	10.2	9.0
28.....	8.2	8.05	8.25	8.3	8.7	9.1	9.1	11.4	9.85	9.1	9.65	9.0
29.....	8.3	8.1	8.2	8.55	-----	9.05	9.25	11.35	9.85	9.2	9.4	9.05
30.....	8.4	8.2	8.3	8.6	-----	9.25	9.65	11.4	9.75	8.7	10.05	9.2
31.....	8.3	-----	8.4	8.65	-----	9.05	-----	11.1	-----	8.55	12.05	-----
1907-8.												
1.....	9.15	9.4	9.6	9.5	9.8	9.7	9.9	10.2	10.3	9.65	9.65	10.2
2.....	9.15	9.25	9.6	9.65	9.65	10.15	9.65	10.2	10.45	9.5	9.6	10.1
3.....	9.1	9.1	9.6	9.7	9.6	10.2	9.7	10.1	10.3	9.95	10.8	10.1
4.....	9.1	9.2	9.6	9.7	9.7	9.9	9.7	10.3	10.3	9.75	10.4	10.0
5.....	9.1	9.3	9.6	9.8	9.6	9.8	9.7	10.8	10.4	9.8	10.8	10.1
6.....	9.15	9.4	9.6	9.9	9.75	9.6	9.65	10.95	10.4	9.7	10.25	9.9
7.....	9.1	9.3	9.6	9.8	9.8	9.6	9.5	10.55	10.4	9.7	9.6	9.8
8.....	9.1	9.3	9.5	9.8	9.95	9.6	9.6	10.3	10.4	9.7	9.25	9.7
9.....	9.3	9.3	9.5	9.7	9.75	9.6	9.8	10.1	10.5	9.8	10.7	9.8
10.....	9.1	9.2	9.5	9.7	9.55	9.9	10.0	10.2	10.4	9.55	10.7	9.7
11.....	9.1	9.3	9.5	9.7	9.5	9.7	10.15	10.2	10.3	9.45	10.1	9.5
12.....	9.2	9.35	9.6	9.7	9.5	9.7	10.1	10.35	10.2	9.15	9.8	9.4
13.....	9.35	9.4	9.6	9.6	9.55	9.7	10.0	10.4	10.2	9.1	9.95	9.3
14.....	9.4	9.3	9.6	9.7	9.65	9.55	10.1	10.45	10.2	9.1	9.85	9.3
15.....	9.4	9.3	9.55	9.8	9.7	9.5	10.2	10.6	10.2	9.35	10.75	9.15
16.....	9.45	9.4	9.5	9.7	9.85	9.5	10.1	10.45	10.25	9.45	11.35	8.95
17.....	9.5	9.45	9.5	9.8	9.75	9.5	10.2	10.4	10.45	10.6	10.95	8.75
18.....	9.5	9.5	9.3	9.8	9.6	9.7	10.4	10.5	10.45	10.85	10.6	-----
19.....	9.5	9.5	9.3	9.8	9.6	10.1	11.2	10.6	10.6	10.0	10.6	-----
20.....	9.7	9.4	9.25	9.8	9.7	10.2	10.85	10.6	10.45	10.5	10.4	-----
21.....	9.6	9.45	9.4	9.8	9.9	10.55	10.7	10.65	10.4	9.7	10.15	-----
22.....	9.45	9.6	9.5	9.75	9.9	10.3	10.5	11.1	10.4	9.4	10.25	-----
23.....	9.4	9.6	9.5	9.7	9.9	10.2	10.4	11.1	10.15	9.1	10.35	-----
24.....	10.3	9.6	9.5	9.7	10.2	10.2	10.5	10.9	10.0	9.0	10.55	-----
25.....	9.9	9.6	9.5	9.7	10.35	10.0	10.8	11.0	9.9	9.05	10.75	-----
26.....	10.05	9.5	9.5	9.7	10.4	9.9	10.75	11.0	9.8	9.3	10.7	-----
27.....	9.5	9.5	9.6	9.7	10.25	9.8	10.8	10.85	9.8	9.45	10.7	-----
28.....	9.4	9.5	9.7	9.8	10.35	9.9	10.55	10.8	9.7	9.65	10.9	-----
29.....	9.2	9.5	9.7	9.8	9.85	9.9	10.35	10.8	9.6	9.9	10.65	-----
30.....	9.25	9.5	9.55	9.7	-----	9.9	10.2	10.7	9.5	9.6	10.6	-----
31.....	9.0	-----	9.5	9.8	-----	9.9	-----	10.35	-----	9.5	10.25	-----

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.		10.1	10.4	10.45	10.45	10.45	10.5	11.4	11.5	10.9	8.55	10.5
2.		10.1	10.5	10.5	10.4	10.5	10.5	11.4	11.5	10.9	8.35	10.3
3.		10.2	10.5	10.4	10.4	10.5	10.5	11.4	11.55	10.75	8.65	10.65
4.		10.2	10.6	10.4	10.4	10.55	10.55	11.0	11.6	10.6	9.0	10.5
5.		10.3	10.5	10.4	10.4	10.7	10.6	10.8	11.4	10.5	9.05	10.6
6.		10.3	10.6	10.5	10.45	10.8	10.6	10.95	11.2	10.4	8.8	12.05
7.		10.3	10.5	10.5	10.35	10.8	10.65	11.55	11.2	10.3	8.95	13.3
8.		10.3	10.4	10.4	10.4	10.7	10.7	12.1	11.6	10.2	9.0	12.5
9.		10.3	10.5	10.4	10.45	10.6	10.6	12.5	12.4	10.5	8.95	11.6
10.		10.3	10.5	10.55	10.55	10.55	10.5	12.65	12.65	10.2	8.95	11.95
11.		10.3	10.4	10.45	10.5	10.55	10.4	12.5	12.65	10.0	9.05	12.2
12.		10.3	10.4	10.4	10.45	10.6	10.4	12.3	12.7	10.0	9.0	12.05
13.		10.3	10.4	10.4	10.5	10.6	10.5	12.1	12.7	10.05	8.95	11.8
14.		10.3	10.5	10.35	10.4	10.5	10.6	12.1	12.6	9.95	9.75	11.7
15.		10.3	10.5	10.4	10.3	10.5	10.6	12.3	12.25	9.9	9.9	11.4
16.		10.3	10.45	10.35	10.3	10.5	10.6	12.25	12.0	9.9	9.4	11.35
17.		10.2	10.55	10.5	10.4	10.4	10.6	12.2	11.95	9.9	9.45	11.35
18.		10.2	10.5	10.4	10.5	10.4	10.9	12.05	11.85	9.85	9.1	11.4
19.		10.2	10.45	10.45	10.4	10.5	11.15	12.1	11.7	9.75	9.2	11.35
20.		10.1	10.4	10.45	10.4	10.6	11.3	12.05	11.7	9.45	9.1	11.3
21.		10.1	10.45	10.5	10.45	10.45	11.85	12.15	11.9	9.4	10.4	11.2
22.	9.2	10.2	10.55	10.5	10.55	10.3	12.0	12.25	11.8	9.35	11.7	10.95
23.	9.25	10.15	10.5	10.5	10.55	10.2	11.95	12.3	11.8	9.55	11.25	10.8
24.	9.3	10.05	10.4	10.4	10.6	10.2	12.15	12.3	11.65	9.4	10.55	10.8
25.	9.4	10.05	10.4	10.45	10.6	10.35	11.8	12.25	11.45	9.05	10.1	10.85
26.	9.55	10.1	10.4	10.45	10.5	10.4	11.45	12.15	11.5	10.1	10.3	10.65
27.	9.75	10.35	10.55	10.5	10.5	10.4	11.3	11.85	11.35	10.0	10.6	10.7
28.	9.9	10.5	10.45	10.35	10.4	10.5	10.9	11.7	11.2	9.6	10.4	10.6
29.	9.9	10.6	10.35	10.35		10.5	10.7	11.3	11.1	9.1	10.35	10.6
30.	10.0	10.5	10.3	10.35		10.6	11.0	11.3	10.9	8.85	10.4	10.6
31.	10.0		10.4	10.5		10.6		11.5		8.8	10.5	
1909-10.												
1.	10.55	10.5	10.9	11.45	10.75	11.15	11.3	13.15	10.4	8.65	9.05	10.5
2.	10.5	10.5	10.85	11.4	10.7	11.15	11.3	13.25	10.8	8.45	9.5	9.4
3.	10.5	10.5	10.8	11.3	10.75	11.1	11.2	13.1	11.25		9.5	9.0
4.	10.45	10.6	10.65	11.45	10.8	11.1	11.15	13.05	11.5		9.4	9.4
5.	10.4	10.45	10.7	11.65	10.75	11.15	11.25	12.95	11.5		9.55	9.1
6.	10.4	10.4	10.8	11.6	10.75	11.1	11.25	12.85	11.4		9.4	8.85
7.	10.4	10.4	10.85	11.55	10.85	11.25	11.3	12.65	11.4		9.25	8.65
8.	10.4	10.35	10.9	11.5	10.85	11.4	11.25	12.5	11.25		9.1	
9.	10.4	10.5	10.75	10.75	10.7	11.35	11.35	12.5	11.0		9.0	
10.	11.15	10.5	10.7	10.5	10.8	11.35	11.5	12.2	10.95		8.8	
11.	10.75	10.5	10.6	10.55	10.7	11.3	11.6	12.1	10.75		10.2	
12.	10.8	10.4	10.55	10.55	10.6	11.35	11.5	12.2	10.45		10.8	
13.	10.8	10.45	10.65	10.65	10.6	11.4	11.5	12.2	10.25		9.55	
14.	10.8	10.5	10.95	10.75	10.7	11.5	11.6	12.25	10.15	8.85	9.25	
15.	10.8	10.5	10.95	10.85	10.7	11.4	11.9	12.35	10.0	9.2	9.2	
16.	10.7	10.45	10.9	11.05	10.7	11.35	11.85	12.55	9.85	9.2	9.0	
17.	10.7	10.45	10.75	11.05	10.75	11.4	11.9	12.6	9.8	8.65	8.55	
18.	10.7	10.55	10.7	10.95	10.8	11.4	11.85	12.6	9.7	8.4	8.55	
19.	10.7	10.55	10.9	10.9	10.85	11.3	11.65	12.7	9.7		8.45	
20.	10.7	10.55	10.7	10.85	10.95	11.3	11.7	12.55	9.65		8.4	8.6
21.	10.6	10.7	10.7	10.9	10.9	11.3	11.7	12.4	9.45			8.4
22.	10.6	10.7	10.7	10.9	10.8	11.45	11.7	11.85	9.3			
23.	10.6	10.65	10.7	10.9	10.85	11.6	12.15	11.55	9.2			8.45
24.	10.6	10.6	10.7	10.85	10.9	11.7	12.3	11.45	9.1		9.15	9.0
25.	10.6	10.7	10.7	10.75	10.9	11.8	12.45	11.4	8.95		8.75	9.1
26.	10.6	10.75	10.7	10.7	10.8	11.8	12.5	11.1	8.75			8.7
27.	10.6	10.75	10.7	10.75	11.1	11.8	12.5	10.85	8.7			8.55
28.	10.6	10.95	10.7	10.8	11.15	11.7	12.7	10.7	8.85		9.15	8.4
29.	10.6	11.05	10.85	10.8		11.6	12.75	10.55	8.9	8.9	8.65	
30.	10.5	10.9	11.15	10.7		11.6	12.95	10.45	8.9	8.6	8.65	
31.	10.5		11.4	10.7		11.45		10.4		8.5	9.5	
1910-11.												
1.		8.75	10.1	10.5	10.75	10.8	10.95	12.6	11.95	11.85	11.85	9.9
2.		8.8	10.2	10.2	10.7	10.9	11.15	12.35	12.3	11.8	11.5	9.95
3.		8.75	10.3		10.7	11.0	11.3	12.2	12.4	14.0	11.2	10.0
4.		8.85	10.35		10.85	10.9	11.4	12.1	12.2	14.1	10.95	10.05
5.		8.85	10.45		11.05	10.8	11.5	12.05	12.5	12.45	10.75	9.9

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
6.....		8.95	10.4		10.9	10.85	11.45	12.2	12.5	11.95	10.45	9.9
7.....		9.0	10.45		10.9	10.9	11.55	12.3	12.35	12.3	10.3	9.95
8.....		9.25	10.5		10.85	11.0	11.5	12.7	12.3	12.55	10.3	9.95
9.....		9.4	10.5		10.85	12.45	11.4	12.9	12.2	12.35	10.15	9.95
10.....		9.4	10.65	10.5	10.8	11.5	11.25	13.2	12.35	12.55	9.95	9.9
11.....		9.4	10.55	10.8	10.75	11.35	11.05	13.45	12.4	12.25	9.75	10.05
12.....		9.4	10.4	10.9	10.7	11.4	11.0	13.5	12.45	12.2	9.55	9.95
13.....		9.4	10.45	11.0	10.6	11.55	11.05	13.45	12.6	12.05	9.4	9.95
14.....		9.5	10.5	11.1	10.6	12.1	11.0	13.2	12.7	12.45	9.4	10.0
15.....		9.55	10.55	11.2	10.75	11.25	11.05	12.9	12.85	12.85	9.25	10.0
16.....		9.6	10.6	11.15	10.8	10.75	11.15	12.9	12.75	12.0	9.0	9.95
17.....		9.6	10.6	11.05	10.9	10.8	11.2	12.65	12.6	11.7	8.9	10.0
18.....		9.7	10.6	11.05	10.9	10.85	11.15	12.7	12.9	12.95	8.75	9.9
19.....		9.85	10.6	11.0	10.9	10.95	11.1	12.55	12.5	12.4	9.15	9.9
20.....		9.7	10.55	11.05	10.75	11.05	11.15	12.45	12.3	12.25	9.5	10.3
21.....		9.7	10.5	10.95	10.75	11.05	11.1	12.45	12.3	13.45	9.4	10.4
22.....	8.7	9.75	10.5	10.9	10.75	11.15	11.05	12.4	12.3	13.15	9.35	10.4
23.....	8.8	9.8	10.5	10.85	10.8	11.3	11.1	12.1	12.3	13.45	9.9	10.05
24.....	8.7	9.8	10.5	10.75	10.8	11.4	11.45	11.85	11.95	12.65	10.4	9.9
25.....	8.7	9.9	10.55	10.75	10.7	11.4	11.95	11.75	11.85	12.8	10.05	10.05
26.....	8.8	9.95	10.6	10.75	10.7	11.35	12.0	11.7	11.85	12.85	10.15	9.95
27.....	8.85	10.0	10.55	10.7	10.7	11.25	11.95	11.75	12.45	12.8	10.0	10.25
28.....	8.75	10.0	10.5	10.65	10.7	11.15	12.0	11.9	12.25	12.2	10.1	10.2
29.....	8.7	10.0	10.55	10.55		11.0	12.25	12.0	12.1	12.0	10.1	10.4
30.....	8.7	10.1	10.45	10.75		10.9	12.6	12.15	12.05	12.05	10.1	10.7
31.....	8.7		10.45	10.9		10.8		12.25		12.0	10.1	
1911-12.												
1.....	11.3	11.55	10.75	10.55	10.95	10.9	10.95	11.7	14.5	11.65	9.2	9.9
2.....	10.7	11.55	10.75	10.55	10.85	11.0	11.0	11.75	14.45	11.55	9.15	9.65
3.....	11.3	11.6	10.6	10.6	10.95	10.95	11.1	12.1	14.2	11.45	9.0	9.5
4.....	11.7	11.6	10.65	10.7	11.0	10.95	10.95	12.95	14.2	11.4	9.05	9.55
5.....	11.95	11.6	10.85	10.65	10.95	11.0	11.05	13.0	14.2	11.3	9.95	9.4
6.....	13.5	11.5	10.95	10.8	10.95	11.0	11.2	12.8	14.05	11.2	8.9	8.95
7.....	14.3	11.4	11.0	10.95	10.95	10.95	11.45	12.75	13.6	10.95	8.95	8.75
8.....	13.95	11.45	10.95	10.9	10.85	11.05	11.75	12.65	13.9	10.75	9.05	8.55
9.....	13.75	11.3	11.05	10.95	10.8	11.1	12.0	12.5	14.0	10.45	8.95	8.5
10.....	14.0	11.3	11.05	10.95	10.95	11.15	12.0	12.7	13.55	10.05	8.8	8.4
11.....	13.55	11.25	11.1	10.9	11.0	11.4	11.95	12.7	13.4	9.85	8.7	8.45
12.....	13.35	11.2	11.05	10.85	11.0	11.4	12.0	12.7	13.3	9.65	8.7	8.4
13.....	13.3	11.25	10.95	10.85	10.9	11.4	11.95	13.0	13.3	9.6	8.7	8.4
14.....	12.85	11.15	10.85	10.95	10.95	11.3	12.0	12.65	13.2	9.5	8.6	8.8
15.....	12.7	11.1	10.9	11.1	10.9	11.2	18.95	12.75	12.95	9.5	8.75	8.65
16.....	12.3	11.15	10.9	11.15	10.85	11.05	11.6	13.15	12.55	9.6	11.0	8.45
17.....	11.75	11.05	11.95	11.1	11.0	11.0	11.7	12.8	12.25	9.75	10.1	8.35
18.....	11.55	11.1	10.9	11.2	11.0	10.95	11.45	12.75	12.0	9.95	9.4	8.25
19.....	11.35	11.1	10.85	11.2	10.9	10.85	11.4	12.75	11.75	9.75	9.25	8.05
20.....	11.2	11.15	10.85	11.1	10.85	10.8	11.45	13.15	11.5	9.55	9.1	
21.....	11.15	11.1	10.9	11.1	11.0	10.8	11.4	13.2	11.5	9.5	9.0	
22.....	11.25	11.2	10.95	10.95	10.95	11.75	11.5	13.5	11.5	9.65	9.0	
23.....	11.05	11.05	11.0	10.85	11.0	12.4	11.5	13.7	11.5	10.55	9.0	
24.....	11.1	11.05	10.85	10.8	11.05	11.9	11.4	13.85	11.7	11.3	8.9	
25.....	11.1	11.1	10.8	10.75	11.05	11.7	11.4	14.15	11.6	10.4	8.8	
26.....	11.05	11.2	10.75	10.8	11.0	11.5	10.9	14.3	11.6	11.0	8.7	
27.....	11.1	11.05	10.65	10.8	10.9	11.25	10.8	14.3	11.7	10.4	8.6	
28.....	11.2	10.95	10.55	11.0	10.9	11.0	10.9	14.3	11.7	9.6	8.55	
29.....	11.4	10.85	10.55	11.05	10.9	11.0	11.45	14.3	11.7	9.85	8.7	
30.....	11.35	10.85	10.45	11.0		10.95	11.6	14.45	11.75	9.55	9.0	
31.....	11.5		10.55	10.9		10.9		14.6		9.4	9.6	
1912-13.												
1.....		9.45	10.2	10.55	10.75	10.4	10.45	11.15	11.15	11.1		
2.....		9.5	10.25	10.05	10.7	10.45	10.4	11.8	11.25	10.25		
3.....		9.6	10.3	9.9	10.65	10.45	10.4	12.25	11.3	10.05		
4.....		9.6	10.2	9.85	10.65	10.45	10.5	12.25	11.3	9.85		
5.....		9.6	10.3	9.8	10.6	10.5	10.7	12.0	11.4	9.65		
6.....		9.65	10.2		10.6	10.5	11.05	11.65	11.25	9.55		
7.....	7.9	9.75	10.15		10.7	10.55	11.2	11.45	11.15	9.3		
8.....	8.25	9.8	10.1		10.65	10.55	11.35	11.55	11.1	8.95		
9.....	8.55	9.85	10.1		10.7	10.65	11.6	11.9	11.0	8.65		9.0
10.....	8.7	9.95	10.2		10.75	10.7	11.75	11.75	11.15			9.15

Daily gage height, in feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913--
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
11.....	8.75	10.0	10.25	.....	10.75	10.65	11.35	11.7	11.05	.....	.....	9.05
12.....	8.8	10.05	10.3	.....	10.8	10.7	11.15	11.65	12.0	.....	.....	9.0
13.....	8.85	10.1	10.3	.....	10.75	10.65	10.95	11.7	13.0	.....	.....	9.15
14.....	8.9	10.05	10.4	.....	10.75	10.75	10.8	11.8	11.6	.....	.....	9.15
15.....	9.0	10.1	10.4	.....	10.7	10.75	10.8	11.9	11.25	.....	8.85	9.35
16.....	9.0	9.95	10.35	10.05	10.7	10.7	10.8	11.8	11.15	.....	9.2	9.35
17.....	9.1	10.1	10.25	10.3	10.65	10.65	10.9	11.6	11.2	.....	9.05	9.15
18.....	9.15	10.05	10.15	10.45	10.75	10.65	11.0	11.4	11.2	.....	8.85	9.0
19.....	9.2	10.0	10.15	10.7	10.7	10.7	11.15	11.3	11.3	.....	.....	8.85
20.....	9.2	10.1	10.1	10.75	10.65	10.65	11.55	11.4	11.2	.....	.....	.....
21.....	9.2	10.05	10.05	10.7	10.65	10.6	11.85	11.35	11.25	.....	.....	.....
22.....	9.3	10.05	9.95	10.6	10.7	10.65	12.35	11.3	11.2	.....	8.9	.....
23.....	9.3	10.0	9.9	10.6	10.6	10.65	12.45	11.2	11.45	.....	.....	9.25
24.....	9.35	10.05	9.85	10.55	10.7	10.7	12.35	11.15	11.5	.....	.....	9.45
25.....	9.45	10.05	9.9	10.55	10.65	10.75	12.05	11.2	11.2	.....	.....	9.15
26.....	9.5	10.1	9.8	10.6	10.6	10.75	11.7	11.2	11.15	.....	.....	10.0
27.....	9.5	10.15	9.85	10.55	10.55	10.8	11.45	11.2	11.1	.....	.....	10.6
28.....	9.5	10.2	9.9	10.55	10.4	10.8	11.3	11.2	11.2	.....	.....	11.2
29.....	9.5	10.15	9.85	10.6	.....	10.75	11.2	11.2	11.15	.....	.....	10.4
30.....	9.4	10.2	9.85	10.6	.....	10.65	11.1	11.15	11.15	.....	9.0	10.1
31.....	9.4	.....	9.9	10.7	.....	10.5	.....	11.1	.....	.....	.....	.....

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
1.....	560	1,840	3,370	6,260	4,710	2,180	5,500	.....
2.....	530	2,260	2,940	5,400	4,390	2,180	6,260	.....
3.....	1,020	2,770	3,030	4,730	4,560	1,280	3,620	.....
4.....	1,210	2,770	2,860	4,470	4,730	1,210	4,640	.....
5.....	960	2,770	2,690	3,960	4,730	1,140	4,880	.....
6.....	960	2,430	2,860	3,200	5,340	1,080	4,560	.....
7.....	1,020	2,180	3,030	3,030	5,960	1,080	4,880	.....
8.....	1,020	2,090	3,030	2,770	5,960	1,020	2,690	.....
9.....	1,020	2,260	2,350	2,430	4,730	1,020	4,050	.....
10.....	1,080	1,840	2,180	2,090	4,730	2,430	4,130	.....
11.....	960	1,840	2,350	2,090	5,040	7,340	2,860	.....
12.....	1,020	2,010	3,110	2,260	5,340	6,880	2,770	.....
13.....	1,020	2,090	3,540	2,940	5,960	3,200	2,600	.....
14.....	300	2,090	4,470	3,200	5,040	2,180	3,540	.....
15.....	290	1,920	5,650	3,620	4,730	1,140	3,450	.....
16.....	280	2,090	6,110	3,710	4,300	1,420	2,770	.....
17.....	290	2,010	6,260	3,540	4,220	1,080	2,180	.....
18.....	680	1,840	6,110	3,280	3,880	960	1,280	.....
19.....	730	1,670	6,260	3,200	3,880	1,140	1,750	.....
20.....	1,020	1,420	6,880	3,200	3,880	1,350	1,020	.....
21.....	1,080	1,670	7,490	2,940	2,690	1,530	1,350	.....
22.....	1,280	1,920	7,470	2,940	2,690	2,600	1,350	.....
23.....	1,500	1,580	7,800	3,880	2,180	3,030	1,280	.....
24.....	1,580	1,500	7,650	3,620	2,180	4,470	1,500	.....
25.....	1,500	1,350	6,570	4,560	1,080	4,880	1,210	.....
26.....	1,350	1,750	5,190	3,880	1,670	3,880	1,580	.....
27.....	1,580	2,090	4,730	4,220	1,750	2,520	1,350	.....
28.....	1,760	2,350	4,730	3,960	2,350	3,030	2,260	.....
29.....	2,520	4,730	4,220	2,770	2,350	2,180	.....
30.....	2,860	5,190	4,470	2,180	2,350	3,790	.....
31.....	3,120	.....	4,130	.....	3,540	2,940	.....
1895-96.												
1.....	760	460	3,500	4,800	580	0	0	0
2.....	885	460	3,010	4,800	580	0	0	0
3.....	820	460	2,520	3,170	820	0	0	0
4.....	700	460	1,900	3,170	700	0	0	0
5.....	700	460	1,400	3,170	700	240	0	0

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
6.					700	460	1,400	3,170	820	240	240	0
7.					644	460	1,400	3,170	240	45	58	0
8.					580	240	1,600	3,170	240	0	0	0
9.					580	240	1,600	3,820	240	0	0	0
10.				700	580	350	1,900	3,820	0	0	0	0
11.					580	350	2,200	3,820	0	0	0	0
12.					580	350	2,520	3,820	0	0	0	0
13.					580	240	2,850	3,170	0	0	0	0
14.					580	240	3,820	3,170	0	0	0	58
15.					820	460	4,470	2,520	0	0	0	0
16.					700	460	4,470	2,200	0	0	0	0
17.					700	700	3,500	1,600	0	0	0	0
18.					700	700	3,170	820	0	0	0	0
19.					700	700	3,500	820	0	70	0	0
20.					700	924	3,660	820	0	820	0	820
21.					760	950	2,850	820	0	4,800	0	1,500
22.				820	820	700	2,850	460	0	2,363	0	950
23.				760	700	700	2,850	240	0	950	0	240
24.				700	700	820	2,850	240	0	240	0	240
25.				700	700	820	2,850	240	0	240	0	85
26.				820	700	820	2,980	240	0	15	820	0
27.				950	580	950	4,800	240	0	150	820	0
28.				760	580	1,100	4,800	240	0	1,600	820	0
29.				700	580	1,400	4,800	240	0	1,600	760	0
30.				580		1,400	4,800	195	0	820	150	0
31.				700		2,200	4,800	350		240	0	
1896-97.												
1.	0	100	460	600	350	600	3,150	6,150	11,100	1,150	170	5
2.	0	58	460	600	350	600	2,400	6,150	10,900	1,900	170	5
3.	0	15	460	600	350	600	900	6,150	10,750	2,020	120	13
4.	0	15	460	350	350	600	900	7,200	9,620	1,200	110	13
5.	0	15	460	350	350	600	900	8,770	9,850	1,200	195	2,900
6.	0	15	460	350	350	600	900	10,200	8,950	1,000	330	3,420
7.	0	15	460	350	350	600	900	16,000	8,500	1,000	170	1,150
8.	0	150	460	350	350	600	900	13,800	7,370	850	365	520
9.	0	150	460	350	350	600	1,650	12,500	6,470	1,200	155	270
10.	0	150	460	350	350	600	1,900	12,500	6,250	1,400	105	520
11.	0	150	580	350	350	600	2,650	12,500	6,250	1,650	85	290
12.	0	150	580	295	350	600	2,650	12,500	6,920	1,100	85	585
13.	125	150	580	295	350	600	2,650	12,500	7,150	1,770	77	5,350
14.	6,260	150	820	295	350	475	3,400	12,500	7,370	1,200	77	6,050
15.	11,300	240	820	246	350	725	4,350	12,500	7,150	1,100	73	3,420
16.	3,180	240	820	200	350	975	3,150	12,500	6,250	1,000	61	3,420
17.	240	240	520	200	550	600	3,150	12,500	6,250	1,000	53	2,550
18.	240	240	520	200	475	350	3,150	12,500	6,020	1,000	29	1,500
19.	240	240	700	200	475	350	3,150	12,500	6,250	1,650	21	3,070
20.	520	240	640	200	475	350	3,520	17,800	3,800	1,400	73	800
21.	0	240	580	200	475	350	4,950	21,800	4,900	1,000	77	520
22.	0	240	580	200	600	550	3,800	21,800	4,220	850	73	520
23.	0	350	580	200	600	600	7,020	18,500	3,600	850	61	520
24.	195	350	820	200	600	600	6,150	10,800	2,800	850	53	800
25.	100	350	820	314	600	1,350	6,150	10,800	2,620	700	65	3,250
26.	100	350	760	314	600	975	6,150	10,800	2,150	700	61	5,180
27.	100	350	700	314	600	850	6,150	10,800	1,780	700	57	4,820
28.	100	350	700	321	600	850	6,150	10,800	3,600	700	57	3,070
29.	100	496	820	350		850	6,150	10,800	2,150	530	49	2,020
30.	100	460	820	350		850	6,150	12,600	1,780	400	33	975
31.	100		820	350		1,100		12,100		270	5	
1897-98.												
1.	800	3,500	3,100	1,000	1,090	1,090	775	10,200	1,540	2,000	394	48
2.	800	3,500	2,700	1,000	1,290	1,090	775	8,740	1,470	2,260	351	44
3.	650	3,500	2,400	915	1,180	1,180	775	7,285	2,000	1,680	290	40
4.	650	3,100	2,400	915	1,090	1,090	775	4,730	1,830	2,130	255	40
5.	5,300	3,100	2,400	915	1,090	1,090	775	3,400	1,830	1,760	223	36
6.	9,100	3,500	2,700	915	1,090	1,090	775	2,940	1,610	1,830	170	36
7.	5,700	3,500	3,100	1,000	1,090	1,090	915	2,570	2,420	1,760	170	36
8.	3,900	3,500	2,400	1,000	1,090	1,090	915	2,260	2,000	1,340	372	36
9.	4,500	3,100	2,400	1,000	1,090	1,090	915	2,260	1,680	1,040	170	36
10.	15,500	3,500	2,400	1,000	1,090	1,090	1,000	2,260	2,940	1,570	840	79

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
11.....	8,100	3,500	2,400	1,000	1,180	1,090	1,410	2,570	2,260	958	1,040	878
12.....	6,100	2,700	2,400	1,000	1,180	1,090	1,610	2,260	2,760	915	510	103
13.....	5,100	2,100	2,400	1,000	1,180	1,090	1,760	2,130	3,170	775	273	58
14.....	4,700	2,100	2,400	1,000	1,090	1,090	2,260	2,130	2,570	6,190	170	53
15.....	4,300	2,100	2,700	1,000	1,090	1,180	2,260	2,415	2,420	2,420	143	46
16.....	3,900	2,100	2,700	1,000	1,000	1,180	2,940	2,940	2,260	14,200	118	40
17.....	3,500	2,700	2,400	1,000	1,000	1,090	4,000	2,760	1,920	16,800	90	36
18.....	3,500	2,700	2,400	1,000	915	1,000	6,190	2,260	1,540	13,100	90	36
19.....	3,500	3,100	2,400	1,000	915	1,000	6,190	2,000	1,830	1,760	170	32
20.....	4,300	3,100	2,400	1,000	1,000	1,000	10,600	2,000	1,680	1,240	255	32
21.....	4,700	3,100	2,400	1,000	1,000	1,000	9,840	1,830	1,540	1,090	195	32
22.....	5,100	3,100	2,400	1,000	915	1,000	7,650	1,540	2,260	1,000	126	32
23.....	1,700	3,100	2,400	1,000	1,090	1,000	5,460	1,290	2,000	958	90	32
24.....	4,300	2,700	2,400	915	1,180	915	9,110	1,290	2,260	915	70	32
25.....	4,300	2,700	2,400	840	1,090	915	9,110	1,080	2,200	840	60	0
26.....	4,300	2,700	2,400	745	1,090	840	9,470	1,090	2,760	775	58	0
27.....	4,300	2,700	2,400	462	1,090	840	8,740	1,000	2,760	715	56	0
28.....	3,900	2,700	2,400	560	1,090	840	9,110	1,000	2,420	662	65	0
29.....	3,900	2,700	2,400	808	.....	840	9,470	1,000	2,130	610	63	0
30.....	4,300	3,100	2,400	1,000	.....	775	11,300	1,090	1,830	560	54	0
31.....	4,300	.....	2,400	1,090	.....	.....	.....	1,180	.....	462	50	.....
1898-99.												
1.....	0	0	462	560	540	460	580	1,610	130	0	130	0
2.....	0	0	560	480	445	460	645	1,500	104	0	104	0
3.....	0	0	462	400	460	430	720	1,190	91	0	78	0
4.....	0	0	351	430	460	400	480	980	78	0	52	0
5.....	0	27	330	415	430	400	420	980	52	0	84	0
6.....	0	36	372	430	400	460	370	770	32	0	104	0
7.....	0	40	330	430	165	460	575	610	0	0	550	0
8.....	0	44	290	480	75	400	420	610	0	0	1,290	0
9.....	0	51	255	415	75	500	370	610	0	0	385	46
10.....	0	57	255	400	560	400	330	490	0	0	182	84
11.....	0	61	223	430	430	400	295	420	0	0	143	0
12.....	0	79	255	580	460	400	240	295	0	0	91	20
13.....	0	118	230	460	285	430	220	250	0	0	39	65
14.....	0	134	330	580	670	580	205	220	0	0	0	6
15.....	0	152	330	540	460	620	183	195	0	0	0	0
16.....	0	170	330	520	460	580	160	182	0	0	0	0
17.....	0	223	330	460	560	540	167	195	0	0	0	0
18.....	0	290	372	415	500	540	370	220	0	0	0	0
19.....	0	223	439	415	500	500	780	250	0	4,230	0	690
20.....	0	223	560	415	500	400	1,870	1,080	0	4,660	0	198
21.....	0	255	915	430	500	375	2,220	980	0	1,400	0	132
22.....	0	290	688	400	500	375	2,220	770	0	273	0	90
23.....	0	330	439	430	500	375	1,860	770	0	162	0	72
24.....	0	255	330	460	460	375	1,620	610	0	150	0	72
25.....	0	372	239	460	500	375	1,620	420	0	1,400	0	0
26.....	0	330	170	430	500	350	1,620	385	0	1,190	0	0
27.....	0	330	290	430	500	350	1,620	295	0	207	0	0
28.....	0	351	290	430	500	400	1,620	235	0	169	0	0
29.....	0	330	330	430	.....	460	1,860	207	0	156	0	0
30.....	0	372	416	430	.....	520	1,620	169	0	162	0	0
31.....	0	.....	510	445	.....	580	.....	156	.....	156	0	.....
1899-1900.												
1.....	0	72	252	550	610	490	110	90	4,930	40	0	0
2.....	0	72	252	770	610	610	75	110	6,860	20	0	0
3.....	0	84	252	770	550	610	65	110	7,460	10	0	0
4.....	0	84	260	610	490	610	50	170	6,560	0	0	0
5.....	0	96	260	610	690	610	40	170	6,860	0	0	0
6.....	0	96	260	420	980	610	30	170	6,000	0	0	0
7.....	0	108	260	370	770	610	20	170	4,680	0	0	0
8.....	0	108	268	420	770	610	20	530	4,280	0	0	1,000
9.....	0	120	268	455	770	610	80	740	3,820	0	0	7,300
10.....	0	120	246	825	550	610	110	740	3,170	0	0	8,500
11.....	0	132	268	770	490	825	140	740	3,060	0	0	3,350
12.....	0	132	260	610	690	770	110	740	3,270	0	0	1,550
13.....	0	144	260	490	610	770	110	1,720	3,820	0	0	170
14.....	0	144	260	490	420	770	110	2,620	3,060	0	0	4,000
15.....	0	156	268	610	420	490	170	2,620	2,070	0	0	1,650

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
16.....	0	156	268	770	490	610	170	2,070	1,930	0	0	180
17.....	0	168	246	610	690	770	170	1,830	1,410	0	0	85
18.....	0	168	320	690	610	980	170	1,500	1,410	0	0	70
19.....	0	180	370	610	490	1,300	155	1,830	1,120	0	0	60
20.....	0	192	345	825	770	550	140	1,720	900	0	0	50
21.....	0	192	395	980	825	480	125	3,680	740	0	0	45
22.....	0	204	395	825	770	480	140	6,250	610	0	0	45
23.....	12	216	420	770	690	400	90	4,120	610	0	0	40
24.....	24	216	455	610	610	400	90	3,820	540	0	0	35
25.....	24	228	490	690	690	320	6	3,520	540	0	0	30
26.....	36	228	455	825	610	320	6	3,270	400	0	0	25
27.....	36	240	455	550	550	320	6	2,960	230	0	0	35
28.....	48	240	455	770	490	290	8	2,750	130	0	0	30
29.....	48	252	550	610	-----	220	90	3,270	90	0	0	20
30.....	60	252	690	770	-----	180	140	3,820	65	0	0	15
31.....	60	-----	610	770	-----	140	-----	4,460	-----	0	0	-----
1900-1901.												
1.....	15	10	90	-----	400	480	20	3,530	4,190	50	2,100	120
2.....	10	15	90	-----	400	280	20	3,620	4,740	30	900	140
3.....	5	15	100	-----	400	280	20	4,600	4,240	40	670	120
4.....	0	25	120	-----	420	330	20	5,400	3,750	50	360	230
5.....	0	25	120	-----	420	330	30	5,570	3,390	20	300	400
6.....	0	25	150	-----	370	350	20	3,700	3,150	10	230	810
7.....	0	30	150	-----	370	370	40	3,230	3,100	0	3,440	360
8.....	0	30	150	-----	400	410	30	3,440	1,790	0	1,590	200
9.....	0	30	180	-----	400	430	20	3,650	1,700	0	2,400	660
10.....	0	35	180	-----	340	450	20	2,880	1,800	0	2,450	3,020
11.....	0	35	180	-----	490	435	10	3,110	1,550	0	1,090	6,210
12.....	0	35	180	-----	540	420	10	3,160	1,800	0	810	3,160
13.....	0	35	180	-----	500	405	10	3,390	1,750	0	670	1,390
14.....	0	35	180	-----	490	390	10	3,490	1,600	0	550	750
15.....	0	35	180	-----	480	350	10	4,240	1,600	390	590	360
16.....	0	40	180	-----	400	350	0	4,550	1,800	370	520	290
17.....	0	40	180	-----	440	310	10	4,440	1,300	70	360	190
18.....	0	40	180	-----	340	260	10	4,370	930	40	460	140
19.....	0	40	180	-----	310	140	10	4,410	900	30	770	100
20.....	0	45	180	-----	330	100	0	4,240	790	20	5,865	80
21.....	0	45	180	-----	300	100	150	4,240	650	10	3,520	60
22.....	0	45	180	-----	290	100	220	4,350	450	0	1,140	50
23.....	0	50	180	-----	310	100	200	4,870	380	60	720	40
24.....	0	50	230	-----	500	100	170	5,380	230	880	360	30
25.....	0	60	230	-----	920	90	130	5,560	220	6,600	300	20
26.....	0	60	230	-----	1,000	70	590	5,370	190	2,450	230	20
27.....	0	70	280	-----	700	50	970	5,080	150	2,000	360	10
28.....	0	70	255	-----	580	50	2,300	4,420	150	3,450	300	0
29.....	5	80	120	-----	-----	30	3,330	3,400	140	4,430	130	0
30.....	5	80	45	-----	-----	30	3,560	3,530	60	3,950	140	0
31.....	10	-----	30	-----	-----	30	-----	3,910	-----	4,940	120	-----
1901-2.												
1.....	0	280	270	420	320	210	130	480	560	0	0	80
2.....	30	250	270	350	300	250	100	340	450	0	0	90
3.....	10	300	310	420	360	240	80	310	450	0	0	40
4.....	0	280	310	500	480	220	70	285	400	0	0	30
5.....	0	260	370	500	420	220	55	200	360	0	0	20
6.....	30	240	340	470	380	200	40	240	270	0	0	10
7.....	860	220	300	470	330	190	25	220	190	0	0	0
8.....	2,320	200	330	470	330	180	15	220	170	0	0	0
9.....	900	190	230	350	320	170	5	295	140	0	0	0
10.....	460	160	280	310	340	160	0	265	110	0	0	0
11.....	400	160	380	320	300	120	0	250	70	0	0	0
12.....	370	160	280	320	360	80	900	280	40	0	80	0
13.....	320	200	310	360	300	70	920	300	20	0	80	0
14.....	280	260	310	380	270	60	1,380	300	0	0	640	0
15.....	270	1,460	260	380	270	50	1,400	330	0	0	1,490	0
16.....	250	1,400	260	360	300	50	1,510	1,550	0	0	300	0
17.....	230	530	260	380	300	90	1,140	800	0	0	90	0
18.....	190	400	230	380	300	130	1,160	470	0	0	80	0
19.....	180	340	230	340	290	130	780	470	0	0	50	0
20.....	170	300	230	360	300	130	860	440	0	0	30	0

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
21.....	160	290	260	340	280	110	910	300	0	0	0	0
22.....	150	270	390	320	290	80	1,200	350	0	0	0	80
23.....	140	250	420	340	290	70	1,650	280	0	0	0	2,460
24.....	130	240	460	340	310	60	1,440	210	0	0	100	1,890
25.....	120	230	420	340	300	60	1,150	125	0	0	3,750	850
26.....	110	240	340	340	280	60	760	80	0	0	10,500	450
27.....	100	240	300	340	250	130	730	70	0	0	2,660	360
28.....	100	240	310	320	220	130	570	35	0	0	1,880	230
29.....	100	250	310	300	.....	120	620	1,470	0	0	1,380	100
30.....	100	270	340	320	.....	120	620	1,710	0	0	1,320	40
31.....	100	.....	390	320	.....	120	.....	740	.....	0	380	.....
1902-3.												
1.....	40	15	140	185	415	490	920	3,470	2,860	3,600	245	0
2.....	75	15	125	170	280	530	850	3,470	2,990	3,300	115	0
3.....	30	15	110	75	345	400	1,180	3,470	3,250	2,900	115	0
4.....	20	20	70	80	290	390	3,780	4,020	4,450	2,790	75	0
5.....	20	20	80	75	385	370	5,500	4,530	5,320	2,630	60	0
6.....	20	15	140	75	385	380	2,200	4,970	6,020	2,520	35	0
7.....	15	15	140	75	490	320	1,420	4,630	6,500	2,140	35	0
8.....	25	15	140	260	310	2,410	900	4,630	8,250	1,970	25	0
9.....	20	15	145	230	340	2,050	900	5,340	11,500	1,690	20	10
10.....	15	20	145	240	375	1,210	840	6,010	10,750	1,470	15	25
11.....	15	20	150	285	375	560	1,250	6,480	10,500	1,360	15	40
12.....	15	20	150	270	385	610	1,720	6,480	16,480	1,470	20	20
13.....	15	30	150	330	340	470	1,420	6,980	15,280	1,360	15	15
14.....	15	30	150	310	330	660	1,720	7,300	14,300	1,360	15	10
15.....	10	100	200	300	305	1,060	1,020	6,650	14,350	1,360	25	10
16.....	5	180	300	320	330	1,060	840	6,650	16,850	1,020	10	5
17.....	0	160	245	310	330	810	1,000	6,650	17,550	740	15	10
18.....	0	130	200	310	450	810	1,160	8,950	18,300	475	10	5
19.....	0	120	120	330	410	580	1,000	8,240	15,280	375	15	0
20.....	0	120	80	350	410	730	1,380	8,240	17,610	420	100	0
21.....	0	120	65	330	410	780	1,470	7,000	17,740	620	50	0
22.....	0	120	65	360	385	680	940	6,100	17,620	620	30	0
23.....	0	120	270	310	410	580	680	5,680	17,500	440	30	0
24.....	5	120	310	300	450	440	940	3,860	18,880	415	75	60
25.....	5	120	290	310	420	400	1,160	3,380	12,180	385	45	10
26.....	5	110	260	330	540	470	1,830	2,790	8,330	355	105	360
27.....	5	110	275	330	580	510	2,140	2,790	6,230	355	145	75
28.....	5	125	290	435	580	750	3,470	3,030	5,380	340	45	30
29.....	10	160	350	435	.....	750	3,320	3,150	5,370	240	20	20
30.....	10	160	275	475	.....	900	3,470	2,850	5,370	255	15	20
31.....	15	.....	260	475	.....	1,000	.....	2,720	.....	270	5	.....
1903-4.												
1.....	75	0	300	300	270	330	0	0	0	0	220	950
2.....	70	0	300	300	300	320	0	0	0	0	a450	970
3.....	35	0	330	300	330	310	0	0	0	0	950	1,050
4.....	20	0	335	a300	a300	a300	0	0	0	0	1,150	630
5.....	15	0	330	270	310	265	0	0	0	0	a2,110	630
6.....	15	10	310	310	315	245	0	0	0	0	1,360	380
7.....	15	10	320	290	315	a200	0	0	0	0	a1,320	200
8.....	15	20	315	270	a315	200	0	0	0	0	1,150	140
9.....	10	20	310	280	360	180	0	0	0	0	760	80
10.....	5	20	315	280	355	a90	0	0	0	0	a760	40
11.....	0	30	320	290	375	110	0	0	0	0	680	0
12.....	0	50	315	a300	a365	95	0	0	0	0	560	0
13.....	0	80	310	260	350	a85	0	0	0	0	a330	0
14.....	0	100	320	250	350	75	0	0	0	0	240	0
15.....	0	90	310	250	350	70	0	0	0	0	110	0
16.....	0	80	285	a250	350	a60	0	0	0	0	a50	0
17.....	0	70	260	250	a330	55	0	0	0	0	20	0
18.....	0	75	260	200	320	40	0	0	0	0	310	0
19.....	0	75	295	270	310	a25	0	0	0	0	830	0
20.....	0	75	290	310	300	0	0	0	0	0	1,220	0

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21.....	0	90	300	370	a315	0	0	0	0	0	600	300
22.....	0	130	300	315	335	0	0	0	0	0	1,280	300
23.....	0	150	315	300	335	0	0	0	0	a1,070	1,580	a50
24.....	0	190	315	290	355	0	0	0	0	1,020	1,150	510
25.....	0	190	310	280	a350	0	0	0	0	a490	1,080	580
26.....	0	230	310	280	350	0	0	0	0	680	1,180	a450
27.....	0	230	310	260	320	0	0	0	0	990	1,730	950
28.....	0	250	315	115	305	0	0	0	0	a500	2,260	a3,030
29.....	0	250	300	115	a295	0	0	0	0	230	1,080	3,280
30.....	0	275	300	270	-----	0	0	0	0	150	870	7,550
31.....	0	-----	315	a305	-----	0	-----	0	-----	a180	830	-----
1904-5.												
1.....	a8,550	1,330	660	370	730	4,090	2,910	7,500	19,360	2,770	405	0
2.....	18,400	a1,430	a660	400	780	3,790	2,970	7,630	19,660	1,990	495	0
3.....	a19,070	1,330	660	a530	a830	a3,190	a3,210	a7,790	a19,970	a1,600	a645	0
4.....	5,000	1,230	660	650	930	5,620	2,560	10,830	17,110	1,375	645	0
5.....	3,200	a990	a945	685	930	a5,350	2,120	a12,200	16,350	1,260	570	0
6.....	2,600	990	1,130	a625	a970	4,840	a1,810	12,120	a16,480	a1,145	a645	180
7.....	a3,000	a840	945	470	2,760	4,600	1,730	a10,950	15,810	1,045	570	a320
8.....	2,880	890	a820	570	2,130	a4,630	1,810	10,010	15,440	965	580	150
9.....	12,000	1,040	1,010	a570	a1,180	4,830	a2,050	a10,560	a15,070	a785	a700	a150
10.....	a24,000	a990	1,100	830	720	a4,920	2,720	9,630	15,930	665	670	195
11.....	33,000	930	a990	1,005	670	3,950	3,600	a8,690	17,390	545	645	a95
12.....	24,800	a870	880	a920	a770	a3,340	a4,030	10,620	a18,460	a465	a710	50
13.....	a21,750	740	840	920	500	3,560	4,690	a10,040	16,370	465	620	10
14.....	15,900	710	a800	800	290	3,500	4,090	10,700	13,570	370	590	5
15.....	11,100	a780	810	a690	a570	a3,340	a3,900	a10,160	a12,170	a275	a470	0
16.....	6,250	690	720	690	560	3,370	4,200	11,760	11,880	275	350	0
17.....	a1,550	a690	a525	760	740	3,540	3,900	a12,560	12,800	230	255	0
18.....	1,710	690	620	a545	a830	a3,600	a3,840	13,710	a13,730	a190	a145	0
19.....	1,770	a720	610	545	880	3,490	3,910	a15,380	10,950	185	125	0
20.....	1,780	820	600	440	980	3,490	4,140	16,550	10,170	180	110	0
21.....	a1,730	820	550	a650	a840	a2,720	a4,290	a17,350	a8,810	a175	a95	0
22.....	1,750	a820	500	650	770	2,600	4,840	23,400	7,480	170	60	0
23.....	1,620	770	a575	590	710	2,660	5,950	a28,600	6,720	165	25	0
24.....	1,390	a710	565	a535	a740	a2,970	a10,280	29,070	a6,340	a160	a5	0
25.....	a1,370	700	455	550	3,220	2,780	14,160	a23,540	5,300	120	0	a50
26.....	1,430	a700	440	570	2,600	2,490	9,210	28,000	a4,080	120	0	470
27.....	1,240	790	425	a590	2,130	a2,200	7,210	27,100	3,500	a85	0	a400
28.....	1,200	780	a410	590	a2,440	2,280	6,610	a25,580	a3,500	70	0	145
29.....	a1,160	660	410	630	-----	2,560	6,760	23,600	3,070	70	0	a230
30.....	1,120	a650	380	675	-----	2,840	a7,360	20,430	a2,640	65	0	210
31.....	1,230	-----	a355	a675	-----	a2,720	-----	a19,060	-----	a65	0	-----
1905-6.												
1.....	180	160	1,530	155	715	790	1,260	4,970	5,980	1,950	1,940	170
2.....	170	160	990	a125	720	760	1,110	5,380	5,590	a1,710	1,675	a175
3.....	165	a175	a815	155	a625	a730	a1,210	a4,560	a5,320	1,810	a1,470	125
4.....	160	220	680	185	625	620	1,330	4,430	5,560	2,110	1,480	80
5.....	a160	260	610	a280	625	610	1,450	4,210	5,060	a2,310	1,490	a70
6.....	a155	285	a505	280	a705	a690	a1,450	a4,390	5,050	2,110	a1,360	50
7.....	150	375	585	260	615	750	1,380	5,890	a5,300	2,310	1,095	40
8.....	a125	550	605	a240	625	630	1,390	7,080	5,300	a2,580	1,095	a40
9.....	105	a690	a565	240	a635	a580	a1,430	a7,080	5,300	2,450	a1,095	30
10.....	85	450	655	260	685	580	1,380	7,800	5,430	2,390	975	20
11.....	a85	a665	655	a285	710	750	1,530	8,230	5,520	a2,190	975	a10
12.....	95	580	a605	300	a795	a750	a1,730	a9,370	5,860	2,030	a625	5
13.....	95	510	660	405	795	580	1,690	10,080	a6,240	2,010	600	0
14.....	a95	a550	660	a515	875	700	1,770	10,340	6,820	a1,930	575	0
15.....	95	530	a740	720	a875	920	a2,020	a10,450	8,020	1,990	a525	0
16.....	85	480	770	980	850	980	2,250	9,780	a8,500	2,210	660	0
17.....	a80	a480	695	1,250	825	920	2,400	9,710	8,440	a2,110	615	0
18.....	80	480	a020	1,320	a780	a1,030	a2,660	a9,650	8,530	2,180	a420	0
19.....	85	480	645	1,390	710	1,110	2,800	8,850	a8,330	2,270	405	0
20.....	a85	a480	645	a1,310	700	950	2,940	a8,950	7,840	a2,640	290	0

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
21.....	85	480	a645	1,130	a720	a790	a3,320	10,060	7,200	2,340	a220	0
22.....	a95	540	515	950	630	680	3,910	a10,800	a6,880	2,050	220	0
23.....	95	a605	445	a700	660	690	4,100	10,700	6,200	a1,760	200	0
24.....	90	3,720	a230	560	a660	a520	a4,380	10,250	5,150	1,610	a150	0
25.....	105	a1,920	175	540	670	630	a4,670	a10,160	4,590	1,390	105	a15
26.....	a125	1,620	160	a185	680	740	6,000	9,890	4,330	a1,170	240	50
27.....	135	1,160	a175	525	a780	a740	5,840	9,330	3,680	1,170	a320	70
28.....	a150	a620	180	645	720	2,330	5,190	a8,910	2,930	a1,070	295	9,070
29.....	160	620	185	a805	-----	2,450	4,690	7,630	a2,710	1,070	270	1,790
30.....	160	a1,530	a185	755	-----	a2,200	4,970	7,130	2,310	a1,280	a185	a1,060
31.....	a170	-----	185	a650	-----	1,470	-----	a6,380	-----	1,450	210	-----
1906-7.												
1.....	1,110	1,410	1,480	1,010	1,080	1,300	1,950	4,260	8,840	7,260	2,810	a10,610
2.....	1,070	1,480	a1,390	980	a1,060	1,250	1,960	4,450	8,410	7,290	2,420	5,660
3.....	a1,270	a1,550	1,420	a1,035	1,290	a1,240	a1,740	a4,640	a7,330	a7,320	a2,590	4,300
4.....	1,380	1,520	1,560	1,035	1,370	1,040	1,700	4,410	7,010	7,350	3,200	a3,760
5.....	1,380	1,650	a1,770	945	a1,350	950	1,720	4,470	6,930	7,350	2,990	3,170
6.....	a1,380	a1,620	3,500	a685	1,180	a950	a1,920	a4,340	6,770	a7,530	a2,780	3,180
7.....	1,410	1,570	4,500	765	1,110	840	2,320	4,340	a8,040	7,600	2,360	a2,590
8.....	1,310	1,560	2,120	795	a1,190	820	2,320	4,190	9,210	7,860	2,650	2,510
9.....	a1,180	a1,550	1,750	a900	1,230	a900	a2,000	a4,050	a9,660	a7,530	a2,000	2,170
10.....	1,110	1,450	1,600	980	1,230	960	1,790	3,890	9,340	7,060	1,920	a1,920
11.....	1,010	1,510	a1,550	1,060	a1,230	1,130	2,040	3,770	9,260	6,700	1,700	1,710
12.....	a910	a1,490	1,450	a1,140	1,100	a1,190	a1,810	a3,850	a9,140	a6,030	a1,700	1,890
13.....	940	1,470	1,510	1,030	1,030	1,030	2,350	3,850	9,430	6,030	1,560	a1,480
14.....	970	1,450	a1,400	1,000	a1,060	1,140	a3,280	4,130	9,520	5,560	1,430	1,360
15.....	a1,000	a1,420	1,330	a970	1,020	a1,150	4,210	a4,270	a9,510	a5,460	a1,140	1,650
16.....	970	1,400	1,340	970	1,100	1,040	a5,580	4,410	9,190	5,460	1,090	a1,340
17.....	1,020	1,380	a1,190	970	a1,110	870	5,780	4,150	8,960	5,280	990	1,720
18.....	a880	1,360	960	a1,255	1,150	a710	6,200	a3,920	a9,120	a5,110	a950	1,790
19.....	910	1,250	915	1,385	1,150	740	a5,710	4,090	9,560	4,770	1,350	a2,360
20.....	940	a1,280	a780	1,275	a1,190	960	6,450	5,160	a10,110	4,610	1,680	3,820
21.....	1,010	1,240	690	a1,130	1,300	a1,130	7,500	a5,340	a11,680	a4,110	a2,280	a4,400
22.....	a1,080	1,110	730	1,010	1,360	1,250	7,500	a6,320	11,000	4,110	3,840	a5,840
23.....	1,210	900	a685	970	a1,300	a2,350	5,800	7,620	10,100	3,940	3,310	2,750
24.....	1,250	720	825	a770	1,270	2,710	a4,950	8,920	a9,430	a3,190	2,570	1,850
25.....	a1,390	900	965	860	1,410	2,790	5,110	a8,920	8,950	2,960	2,570	a1,750
26.....	1,250	a900	a965	995	a1,460	a2,880	4,650	10,860	8,430	3,290	a2,170	1,330
27.....	1,210	990	955	a860	1,400	2,810	a3,840	10,360	a7,550	a3,160	a5,050	1,190
28.....	a1,070	960	980	860	1,400	2,650	3,180	a11,470	7,290	3,240	3,960	a1,080
29.....	1,250	a1,010	a965	950	-----	a2,720	3,230	11,080	7,290	a3,400	3,380	940
30.....	1,430	1,100	1,040	a970	-----	2,810	a3,770	11,090	a7,190	2,690	a4,600	a1,000
31.....	a1,410	-----	a1,115	1,010	-----	a2,260	-----	a9,700	-----	a2,490	10,050	-----
1907-8.												
1.....	905	1,440	815	650	815	1,030	1,150	2,030	2,100	670	750	875
2.....	855	1,230	a815	a815	a750	1,260	825	1,900	2,220	535	690	675
3.....	a760	1,010	820	855	685	a1,290	a795	a1,580	a1,920	a950	a2,540	a585
4.....	760	1,000	825	855	740	1,150	820	2,150	1,810	710	2,050	480
5.....	760	a985	a830	a920	a630	1,100	840	3,570	1,890	770	a2,620	585
6.....	a775	1,020	840	935	705	a1,010	a815	a4,000	a1,810	a650	1,860	a375
7.....	760	905	850	790	695	1,010	635	3,090	1,720	650	1,000	270
8.....	760	a870	a825	a725	a770	1,010	750	2,540	1,630	650	a5,040	165
9.....	a830	865	815	650	690	1,010	a980	a2,100	a1,680	a820	a2,660	a220
10.....	800	780	810	650	600	a1,240	1,340	2,110	1,550	610	2,410	190
11.....	800	a860	800	a650	a620	1,040	1,700	1,960	1,420	525	1,440	130
12.....	a815	915	a830	650	620	990	a1,650	a2,040	a1,280	a270	a960	a105
13.....	875	975	805	580	655	a945	1,490	2,110	1,250	230	1,150	80
14.....	895	a915	785	a655	a725	935	1,730	2,190	1,230	230	1,020	80
15.....	a895	915	a720	710	695	1,000	a1,980	a2,410	a1,200	a370	a2,140	a45
16.....	940	960	680	630	735	a1,100	1,770	2,180	1,420	415	2,860	25
17.....	a990	a985	680	a685	a600	1,170	1,980	2,110	1,870	a1,970	2,240	10
18.....	990	1,010	a600	705	510	1,380	2,400	a2,260	a2,020	2,390	a1,690	0
19.....	990	1,010	585	720	520	a1,730	a4,070	2,410	2,250	1,160	1,710	0
20.....	1,190	a905	545	a735	a605	1,800	3,960	2,410	2,020	a1,750	1,370	0
21.....	a895	930	a585	735	730	2,010	3,790	2,530	a1,940	1,090	a950	0
22.....	820	1,000	615	700	730	a1,680	a3,570	a3,620	1,940	845	1,060	0
23.....	a795	a1,000	615	a665	a730	1,620	3,160	3,760	1,530	a600	1,190	0
24.....	2,230	1,000	a615	635	1,230	1,620	3,060	3,420	a1,280	520	a1,440	0
25.....	1,590	1,000	630	610	1,490	a1,500	a3,250	a3,800	1,080	550	1,570	0

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
26.....	1,740	a 950	645	a 580	a1,600	1,350	3,180	3,780	890	a 690	1,550	0
27.....	a1,520	865	a 740	605	1,490	1,190	3,250	3,390	a 790	775	1,550	0
28.....	1,490	780	800	715	1,640	a1,190	a2,900	a3,260	710	895	a1,620	0
29.....	1,420	a 700	780	740	a1,180	1,200	2,490	3,260	620	a1,120	1,360	0
30.....	a1,430	700	a 640	a 685	.....	1,220	a2,150	3,050	a 535	705	1,230	0
31.....	1,220	.....	600	765	.....	1,230	.....	2,300	.....	565	a1,010	.....
1908-9.												
1.....	0	355	685	555	685	525	870	2,980	4,130	2,260	60	1,550
2.....	0	355	715	a 565	620	525	a 750	2,980	a4,140	a2,010	20	a1,090
3.....	0	a 430	a 695	560	a 590	a 495	750	a2,980	4,050	1,780	a 145	1,520
4.....	0	430	770	605	605	680	800	2,760	3,960	1,550	290	1,330
5.....	0	515	745	a 650	620	970	855	2,610	a3,370	a1,400	325	a1,460
6.....	0	a 515	a 820	675	a 665	a1,200	a 855	a2,720	2,960	1,280	a 145	a5,110
7.....	0	505	785	655	595	1,200	995	3,960	2,960	1,150	205	9,490
8.....	0	500	755	a 580	615	1,070	1,140	5,340	a3,840	a1,030	225	7,010
9.....	0	a 495	a 785	a 580	a 635	a 940	a1,130	a6,340	6,220	1,420	a 205	a4,320
10.....	0	500	735	670	705	935	985	7,050	7,350	1,030	185	4,650
11.....	0	510	630	a 645	680	965	845	7,160	a7,740	a 770	205	4,880
12.....	0	a 515	a 575	670	a 660	a1,040	a 845	a7,180	7,990	770	a 165	a4,300
13.....	0	530	550	700	690	1,000	885	6,840	7,890	820	165	3,900
14.....	0	545	570	a 715	620	870	925	6,840	a7,730	a 715	515	3,760
15.....	0	a 560	a 545	720	a 550	a 835	a 865	a7,110	6,760	590	a 590	a3,320
16.....	0	560	530	680	550	805	865	6,870	5,940	510	400	3,140
17.....	0	460	585	a 725	590	675	865	6,750	a5,720	a 435	420	3,030
18.....	0	460	a 570	705	a 630	a 645	a1,070	a6,380	5,260	415	a 275	a3,000
19.....	0	460	540	745	605	745	1,630	6,500	4,660	375	350	2,970
20.....	0	375	505	a 765	605	845	2,120	6,440	a4,500	a 255	290	2,940
21.....	0	a 375	a 525	775	620	a 735	a3,910	a6,560	4,850	220	a1,050	a2,880
22.....	a 5	455	590	775	a 645	680	4,080	6,690	4,480	200	3,950	2,220
23.....	25	460	580	a 775	615	665	3,790	6,750	a4,350	a 315	a3,000	1,830
24.....	40	a 445	a 545	705	630	a 710	a4,000	a6,750	4,230	280	1,920	a1,830
25.....	a 70	445	565	695	a 615	825	3,470	6,610	4,080	140	1,290	1,940
26.....	110	470	590	a 665	570	885	3,070	6,320	a4,120	a 800	a1,570	1,510
27.....	160	a 600	a 690	685	570	a 915	a2,900	a5,460	3,760	a 700	1,760	a1,610
28.....	a 205	700	605	645	a 530	995	2,500	4,860	3,400	520	1,710	1,380
29.....	205	810	535	a 645	.....	995	2,300	3,890	a3,160	260	1,700	1,260
30.....	285	a 755	a 500	665	.....	a1,080	a2,540	a3,720	2,700	a 130	a1,710	a1,180
31.....	a 285	.....	550	a 755	.....	1,080	.....	4,120	.....	110	1,710	.....
1909-10.												
1.....	1,060	620	a 885	a1,730	835	1,400	2,310	8,130	1,310	20	85	a 785
2.....	940	620	900	1,530	775	1,470	2,310	8,420	1,840	5	150	260
3.....	a 915	a 625	915	1,230	a 835	a1,500	a2,050	7,990	a2,460	0	a 150	65
4.....	840	680	a 875	a1,430	870	1,600	1,900	a7,850	3,030	0	125	a 125
5.....	765	585	890	1,380	800	1,750	2,200	7,450	3,100	0	165	80
6.....	765	550	920	825	a 780	a1,800	a2,300	7,100	a2,980	0	a 125	45
7.....	a 765	545	a 935	a 275	815	1,940	2,230	a6,380	2,900	0	85	10
8.....	765	510	880	340	850	2,080	1,980	6,080	2,520	0	60	0
9.....	765	a 590	700	405	a 680	a2,040	a2,110	6,080	a1,940	0	a 45	0
10.....	a2,150	590	a 580	a 470	815	2,140	2,360	a5,370	1,840	0	a 25	0
11.....	1,200	590	500	595	745	2,200	2,490	4,950	1,440	0	a 680	0
12.....	1,320	a 555	450	715	a 680	a2,360	a2,120	5,140	a 940	0	1,220	0
13.....	a1,320	540	a 485	a 940	620	2,470	2,120	a5,030	915	0	295	0
14.....	1,320	555	665	1,020	645	2,630	2,440	5,280	900	a 95	a 75	0
15.....	1,320	a 540	665	1,070	585	a2,470	3,380	5,640	a 880	160	30	0
16.....	a1,280	570	a 635	a1,210	a 525	2,350	a3,220	a6,390	605	160	25	0
17.....	1,280	630	545	1,310	555	2,330	3,380	6,190	515	a 40	a 10	0
18.....	1,190	a 750	515	1,310	580	a2,260	3,160	5,810	a 335	5	10	0
19.....	a1,140	750	635	a1,370	a 610	2,200	2,310	a5,360	335	0	5	0
20.....	1,090	690	515	1,260	725	2,230	a2,520	5,340	300	0	a 5	a 10
21.....	855	a 660	515	1,260	715	a2,260	2,520	5,040	a 175	0	0	5
22.....	a 805	660	515	a1,200	a 655	2,390	2,520	a3,970	130	0	0	0
23.....	785	620	515	1,160	700	2,530	a3,590	3,350	100	0	0	5
24.....	760	a 575	515	1,070	750	a2,620	3,720	3,140	a 70	0	a 55	a 45
25.....	a 740	680	515	a 930	a 750	2,940	4,410	a3,080	55	0	15	55
26.....	720	745	515	840	650	3,100	a4,640	2,530	40	0	0	a 10
27.....	705	a 870	515	835	1,270	a3,300	4,870	2,120	a 35	0	0	5
28.....	a 690	1,040	515	a830	a1,370	3,200	6,300	a1,870	40	0	a 60	a 5
29.....	690	1,100	665	830	.....	3,100	a6,830	1,590	40	a 35	15	0
30.....	615	920	965	775	.....	a3,100	7,560	1,400	a 40	10	15	0
31.....	a 615	.....	1,210	a 775	.....	2,710	.....	1,310	a 5	a 170	.....	.....

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., for 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.	0	40	310	350	740	a 470	970	3,830	3,950	3,040	4,560	545
2.	0	55	325	170	770	570	1,150	3,730	4,390	2,820	3,830	575
3.	0	a 40	a 340	0	a 850	670	a1,290	a3,670	a4,520	a8,430	a3,200	a 610
4.	0	55	360	0	895	a 625	1,470	3,420	4,250	8,630	2,600	640
5.	0	55	410	0	985	545	1,650	3,360	4,520	6,440	2,090	545
6.	0	a 60	a 385	0	a 795	585	a1,560	a3,610	a4,520	a5,770	a1,390	a 545
7.	0	60	390	0	795	a 620	1,740	3,750	4,400	5,910	1,150	575
8.	0	85	395	0	730	800	1,720	4,630	4,370	5,980	1,120	575
9.	0	a 100	a 365	0	a 730	a3,380	a1,670	a5,060	a4,290	5,590	930	a 575
10.	0	110	470	a 40	670	1,870	1,430	6,340	4,600	a5,600	a 630	575
11.	0	115	405	a 540	620	1,620	1,110	7,570	4,750	5,300	535	680
12.	0	a 125	a 300	570	a 580	a1,700	a1,030	a8,100	4,910	5,250	390	a 640
13.	0	125	340	600	480	2,130	1,030	7,940	a5,220	5,100	a 280	595
14.	0	150	375	a 625	440	a3,700	925	7,150	5,520	a5,580	280	585
15.	0	a 160	a 415	760	a 490	2,020	920	6,190	5,970	a6,270	205	a 540
16.	0	155	450	800	540	1,160	1,000	a6,190	a5,870	5,230	a 80	515
17.	0	140	460	a 820	640	a1,240	1,030	5,910	5,720	4,780	30	555
18.	0	a 140	a 465	815	a 655	1,290	a1,000	6,000	6,120	7,720	15	a 605
19.	0	185	450	795	680	1,380	950	a5,740	a4,570	a5,850	a 185	505
20.	0	180	395	815	585	a1,480	975	5,480	4,320	5,620	335	900
21.	0	a 180	a 340	770	615	1,480	a 930	5,400	4,270	11,000	290	a1,000
22.	a 15	190	340	a 750	a 640	1,570	890	a5,220	a4,220	a9,650	a 265	1,000
23.	25	195	335	725	635	a1,720	970	4,530	4,220	10,870	725	695
24.	20	a 195	a 335	670	590	1,820	1,570	3,930	4,040	8,030	1,160	a 565
25.	a 20	230	370	a 670	a 465	1,820	a2,330	a3,640	a3,990	8,040	a 855	610
26.	35	250	405	675	400	1,710	2,580	3,540	3,980	7,750	885	580
27.	45	a 270	375	645	450	1,550	2,680	3,590	a4,150	a7,160	780	a 670
28.	a 40	270	a 345	a 610	440	1,390	a2,940	a3,720	3,690	5,550	a 820	655
29.	30	270	380	545	-----	1,160	3,310	3,820	3,370	a5,010	770	905
30.	30	a 310	320	680	-----	1,000	3,830	4,010	a3,190	4,990	725	a1,285
31.	a 30	-----	a 320	a 785	-----	a 835	-----	4,140	-----	a4,870	a 675	-----
1911-12.												
1.	2,000	2,980	1,140	195	970	710	1,290	2,150	14,820	4,570	395	955
2.	1,280	2,760	1,140	225	835	770	1,350	2,320	14,600	4,340	355	695
3.	a2,000	a2,670	a 950	a 295	a 900	a 675	a1,480	a3,230	a13,490	a4,130	a 230	a 510
4.	2,730	2,650	955	410	890	630	1,290	6,460	13,190	3,880	245	545
5.	3,240	2,630	1,140	400	775	630	1,370	6,880	12,900	3,540	210	445
6.	a7,940	a2,360	a1,230	a 590	a 715	a 630	a1,480	a 6,430	a12,050	a3,190	a 195	a 150
7.	11,780	2,340	1,280	420	790	570	1,980	5,880	11,020	2,710	210	95
8.	10,640	2,350	1,220	690	765	690	2,580	4,800	12,250	2,330	240	60
9.	a10,180	a2,330	a1,340	a 720	a 795	a 750	a3,080	a 4,250	a12,870	a1,850	a 200	a 50
10.	a11,530	2,300	1,300	810	865	825	3,160	5,180	11,230	1,320	145	25
11.	10,350	2,250	1,320	865	835	1,410	3,140	5,410	10,690	1,060	110	35
12.	9,830	a2,170	a1,220	a 920	a 755	a1,500	a3,320	a 5,650	a10,320	a 850	a 110	a 25
13.	a9,690	2,150	1,090	940	745	1,410	2,990	5,990	9,730	835	110	25
14.	7,940	1,830	965	1,060	750	1,130	2,870	5,590	8,830	810	95	105
15.	7,050	a1,610	a1,030	a1,230	a 745	a 850	a2,550	5,700	a 7,490	a 810	a 180	a 55
16.	5,400	1,690	1,010	1,220	650	825	2,150	a 6,160	6,860	860	a2,380	30
17.	4,110	1,460	1,050	1,120	760	815	2,250	6,280	6,460	940	1,430	25
18.	3,710	a1,540	985	a1,160	a 715	810	a2,000	6,840	a 6,120	a1,040	680	a 20
19.	a3,310	1,510	a 920	1,160	625	a 790	1,840	a 7,490	5,530	1,000	a 515	5
20.	2,910	1,590	875	1,060	585	785	1,780	8,400	4,790	975	365	0
21.	2,730	a1,470	885	a1,060	a 740	785	a1,610	8,520	a 4,790	a 970	285	0
22.	a2,920	1,780	a 895	895	675	a2,370	1,760	a 9,240	4,790	1,000	a 265	0
23.	2,400	1,590	945	790	740	3,460	1,800	10,430	4,790	1,870	265	0
24.	2,530	a1,690	820	a 735	a 810	2,880	a1,740	a 5,140	a 5,140	a3,020	230	0
25.	a2,530	1,700	a 780	730	850	a2,650	1,740	a13,350	4,800	1,780	a 195	0
26.	2,410	1,810	675	765	825	2,310	1,110	14,240	4,650	2,600	185	0
27.	2,530	a1,540	535	765	a 775	1,890	a 990	14,540	a 4,710	a1,780	180	0
28.	2,770	1,400	a 390	a 920	765	a1,460	1,100	a14,830	4,710	980	a 175	0
29.	a3,260	1,270	315	985	a 755	1,440	1,710	14,830	4,710	a1,040	235	0
30.	2,910	a1,270	160	975	-----	1,330	a1,880	15,050	a 4,810	720	325	0
31.	a3,070	-----	a 165	a 955	-----	a1,230	-----	a15,270	-----	a 560	a 790	-----
1912-13.												
1.	0	260	535	510	645	535	360	1,690	965	1,670	0	0
2.	0	285	535	275	615	525	290	3,010	1,020	665	0	0
3.	0	a 320	a 535	a 215	a 585	a 490	a 260	a3,910	a1,040	a 430	0	0
4.	0	335	500	200	590	530	360	3,900	1,110	290	0	0
5.	0	345	535	185	575	585	560	3,340	1,270	180	0	0

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near San Marcial, N. Mex., 1895-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
6.....	0	a 370	a 500	170	a 575	a 625	a 900	a2,560	a1,190	a 125	0	0
7.....	a 5	395	495	160	660	635	1,160	2,380	1,080	70	0	0
8.....	55	410	485	150	650	635	1,460	2,430	1,020	25	0	0
9.....	95	a 425	a 485	140	a 705	a 640	a1,970	a2,580	a 905	5	0	a 10
10.....	a 115	430	505	130	750	640	2,250	2,520	980	0	0	25
11.....	105	425	515	120	765	615	1,540	2,610	855	0	0	20
12.....	90	a 435	a 525	110	a 810	625	a1,190	a2,710	a3,230	0	0	a 15
13.....	a 75	425	510	100	765	a 600	1,060	2,790	a6,230	0	0	35
14.....	100	395	515	90	765	680	1,010	2,830	2,510	0	0	35
15.....	140	400	a 500	80	a 725	725	a1,010	a2,870	1,880	0	5	a 50
16.....	a 155	425	525	a 160	725	a745	1,010	2,060	a1,740	0	a 20	50
17.....	180	545	540	305	700	655	1,120	2,230	1,690	0	10	25
18.....	195	a 585	a 555	400	755	580	a1,220	a1,810	1,600	0	5	a 10
19.....	a 210	555	530	a 565	a 730	a 525	1,470	1,550	a1,610	0	0	5
20.....	215	575	490	680	705	490	2,130	1,700	1,490	0	0	0
21.....	225	545	a 455	740	705	460	2,620	a1,540	1,520	0	0	0
22.....	a 260	560	320	a 775	a 730	a 465	a3,430	1,440	a1,460	0	a 5	0
23.....	260	555	230	735	670	465	3,810	1,340	1,650	0	10	0
24.....	265	580	a 150	670	730	485	3,860	a1,290	1,650	0	a 15	0
25.....	a 265	560	165	a 630	a 700	a 505	a3,600	1,260	a1,300	0	10	0
26.....	265	560	145	625	670	545	2,830	1,180	1,250	0	0	a 290
27.....	265	a 555	a 165	575	645	605	2,250	1,100	1,200	0	0	490
28.....	a 265	560	- 175	a 550	a 565	a 645	a1,900	a1,020	a1,300	0	0	a 800
29.....	265	540	a 160	570	.....	595	1,750	1,020	1,280	0	0	372
30.....	235	a 550	155	570	.....	520	a1,590	980	a1,900	0	a 5	a 220
31.....	a 235	.....	a 165	a 625	.....	a 430	.....	a 935	.....	0	0	.....

a Date of measurement.

Monthly discharge of Rio Grande near San Marcial, N. Mex., for 1895-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1895.					1896-97.				
February.....	1,760	280	986	53,760	May.....	21,750	6,150	12,282	755,196
March.....	3,120	1,350	2,096	128,879	June.....	11,088	1,775	6,158	366,426
April.....	7,800	2,180	4,689	279,014	July.....	2,025	270	1,073	65,977
May.....	6,260	2,090	3,625	222,892	August.....	365	5	100	6,149
June.....	5,960	1,080	3,922	233,375	September.....	6,050	5	1,919	114,188
July.....	7,340	960	2,431	149,476	The year.....	21,750	0	2,340	1,700,000
August.....	6,260	1,020	2,913	179,113	1897-98.				
The period.....	.....	.....	.....	1,246,500	October.....	15,500	650	4,581	281,677
1896.					November.....	3,500	2,100	2,953	175,715
January 22-31.....	950	580	749	14,856	December.....	3,100	2,400	2,484	152,736
February.....	885	580	680	39,114	January.....	1,090	462	938	57,675
March.....	2,200	240	679	41,750	February.....	1,290	915	1,070	59,425
April.....	4,800	1,400	3,142	186,962	March.....	1,185	775	1,011	62,164
May.....	4,800	195	2,019	124,143	April.....	11,800	775	4,562	271,458
June.....	820	0	164	9,759	May.....	10,205	1,000	2,697	165,832
July.....	4,800	0	466	28,653	June.....	3,170	1,475	2,122	126,268
August.....	820	0	118	7,255	July.....	16,775	462	2,717	167,062
September.....	1,500	0	130	7,735	August.....	1,045	50	225	13,835
The period.....	.....	.....	.....	460,227	September.....	878	0	62	3,689
1896-97.					The year.....	16,775	0	2,120	1,540,000
October.....	11,300	0	742	45,624	1898-99.				
November.....	496	15	209	12,444	October.....	0	0	0	0
December.....	820	460	619	38,060	November.....	372	0	171	10,175
January.....	600	200	318	19,553	December.....	915	170	380	23,365
February.....	600	350	438	24,325	January.....	580	400	453	27,854
March.....	1,350	350	663	40,767	February.....	670	75	443	24,603
April.....	7,025	900	3,572	212,548	March.....	620	350	448	27,546

Monthly discharge of Rio Grande near San Marcial, N. Mex., for 1895-1913—Contd.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1898-99.					1903-4.				
April.....	2,220	160	909	54,089	February.....	375	270	329	18,902
May.....	1,610	156	570	35,048	March.....	330	0	99	6,060
June.....	130	0	16	952	April.....	0	0	0	0
July.....	4,655	0	462	28,407	May.....	0	0	0	0
August.....	1,295	0	104	6,395	June.....	0	0	0	0
September.....	690	0	49	2,916	July.....	1,070	0	171	10,532
The year.....	4,655	0	334	241,000	August.....	2,260	20	910	55,974
1899-1900.					September.....	7,550	0	752	44,727
October.....	60	0	11	676	The year.....	7,550	0	245	178,000
November.....	252	72	160	9,521	1904-5.				
December.....	690	246	355	21,828	October.....	33,000	1,120	7,534	463,240
January.....	980	370	660	40,582	November.....	1,430	650	870	51,769
February.....	980	420	632	35,099	December.....	1,130	355	679	41,752
March.....	1,300	140	540	33,203	January.....	1,005	370	636	39,114
April.....	170	6	89	5,296	February.....	3,220	290	1,150	63,868
May.....	6,250	90	2,010	123,590	March.....	5,620	2,200	3,544	217,904
June.....	7,460	65	2,687	159,888	April.....	14,160	1,730	4,695	279,392
July.....	40	0	2	123	May.....	29,070	7,500	15,649	962,221
August.....	0	0	0	0	June.....	19,970	2,640	12,004	714,268
September.....	8,500	0	943	56,112	July.....	2,770	65	582	35,782
The year.....	8,500	0	674	486,000	August.....	710	0	327	20,093
1900-1901.					September.....	470	0	89	5,276
October.....	15	0	2	123	The year.....	33,000	0	3,980	2,890,000
November.....	80	10	41	2,440	1905-6.				
December.....	280	30	164	10,084	October.....	180	80	120	7,349
January.....	450	39	341	20,907	November.....	3,720	160	713	42,397
February.....	1,000	290	458	25,468	December.....	1,530	160	559	34,344
March.....	480	30	246	15,114	January.....	1,390	125	594	36,496
April.....	3,590	0	398	23,683	February.....	875	615	715	39,689
May.....	5,570	2,880	4,165	256,126	March.....	2,450	520	925	56,866
June.....	4,740	60	1,616	96,178	April.....	6,000	1,110	2,742	163,140
July.....	6,600	0	964	59,286	May.....	10,800	4,210	8,143	500,707
August.....	5,805	120	1,066	65,534	June.....	8,530	2,310	5,799	345,664
September.....	6,210	0	632	37,607	July.....	2,640	1,070	1,924	118,314
The year.....	6,600	0	841	613,000	August.....	1,940	105	703	43,210
1901-2.					September.....	9,070	0	429	25,527
October.....	2,320	0	277	17,018	The year.....	10,800	0	1,950	1,410,000
November.....	1,460	160	337	20,053	1906-7.				
December.....	460	230	313	19,240	October.....	1,430	880	1,152	70,830
January.....	500	300	370	22,731	November.....	1,650	720	1,307	77,752
February.....	480	220	314	17,435	December.....	4,500	685	1,401	86,142
March.....	250	50	129	7,954	January.....	1,385	685	986	60,635
April.....	1,650	0	674	49,106	February.....	1,460	1,020	1,219	67,696
May.....	1,710	35	436	26,787	March.....	2,880	710	1,505	92,549
June.....	560	0	108	6,407	April.....	7,500	1,700	3,745	222,863
July.....	0	0	0	0	May.....	11,470	3,770	6,001	368,965
August.....	10,500	0	800	49,210	June.....	11,680	6,770	8,809	524,192
September.....	2,460	0	224	13,349	July.....	7,860	2,490	5,346	328,740
The year.....	10,500	0	332	240,000	August.....	10,050	950	2,692	165,521
1902-3.					September.....	10,610	940	2,704	160,899
October.....	75	0	13	823	The year.....	11,680	685	3,070	2,230,000
November.....	180	15	78	4,641	1907-8.				
December.....	350	65	184	11,286	October.....	2,230	760	1,048	64,453
January.....	475	75	280	17,197	November.....	1,440	700	949	56,489
February.....	550	280	395	21,927	December.....	850	545	727	44,707
March.....	2,410	320	761	46,790	January.....	935	580	710	43,636
April.....	5,500	680	1,681	100,007	February.....	1,640	510	834	47,970
May.....	8,950	2,720	5,178	318,367	March.....	2,010	935	1,258	77,375
June.....	18,880	2,860	11,100	660,476	April.....	4,070	635	2,083	123,927
July.....	3,600	240	1,266	77,841	May.....	4,000	1,580	2,688	165,263
August.....	245	5	50	3,064	June.....	2,250	535	1,521	90,516
September.....	360	0	24	1,438	July.....	2,390	230	796	48,952
The year.....	18,880	0	1,750	1,260,000	August.....	2,860	540	1,556	95,663
1903-4.					September.....	875	0	163	9,709
October.....	75	0	9	545	The year.....	4,070	0	1,190	869,000
November.....	275	0	93	5,534	1908-9.				
December.....	335	260	307	18,883	October.....	285	0	45	2,757
January.....	370	115	274	16,840	November.....	810	355	503	29,931
					December.....	820	500	625	38,410

Monthly discharge of Rio Grande near San Marcial, N. Mex., for 1895-1913—Contd.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1908-9.					1910-11.				
January.....	775	555	676	41,554	July.....	11,000	2,820	6,382	392,390
February.....	705	530	618	34,334	August.....	4,560	15	1,027	63,164
March.....	1,200	495	856	52,622	September.....	1,285	505	658	39,164
April.....	4,080	750	1,753	104,340	The year.	11,000	0	1,850	1,350,000
May.....	7,180	2,610	5,468	336,238	1911-12.				
June.....	7,890	2,700	4,873	289,983	October.....	11,780	1,280	5,086	312,754
July.....	2,260	110	782	48,080	November.....	2,980	1,270	1,957	116,469
August.....	3,950	20	856	52,661	December.....	1,340	160	927	56,975
September.....	9,490	1,090	3,009	179,048	January.....	1,230	195	818	50,311
The year.	9,490	0	1,670	1,210,000	February.....	970	585	772	44,430
1909-10.					1912-13.				
October.....	2,150	615	972	59,742	October.....	265	0	146	9,005
November.....	1,180	510	665	39,580	November.....	585	260	463	27,580
December.....	1,210	450	679	41,752	December.....	555	145	406	24,992
January.....	1,730	275	997	61,329	January.....	775	80	381	23,425
February.....	1,370	525	757	42,019	February.....	810	565	686	38,102
March.....	3,300	1,400	2,336	143,663	March.....	745	430	574	35,306
April.....	7,500	1,900	3,192	189,917	April.....	3,860	260	1,666	99,114
May.....	8,420	1,310	5,019	308,628	May.....	3,910	935	2,103	129,293
June.....	3,100	35	1,060	63,094	June.....	6,230	855	1,597	95,058
July.....	160	0	17	1,061	July.....	1,670	0	112	6,863
August.....	1,220	0	119	7,339	August.....	20	0	3	169
September.....	785	0	50	2,995	September.....	800	0	82	4,860
The year.	8,420	0	1,320	961,000	The year.	6,230	0	685	494,000

RIO GRANDE NEAR EL PASO, TEX.

Location.—Original station located at Old Fort Bliss, about 1,500 feet above the Mexican dam. Observations made from May 10, 1889, until end of June, 1893.

January 25, 1895, the station was reestablished at the pumping house of the Smelter Co., 3 miles north of El Paso. On May 1, 1897, it was moved 1 mile upstream to Courchesne's limekiln, its present location.

Records available.—May 10, 1889, to June 30, 1893; January 25, 1895, to September 30, 1913.

Drainage area.—Not measured.

Gage.—A vertical staff was used originally, but at the present location a number of inclined gages located at slightly different points but referred to the same datum have been used.

Channel.—Extremely shifting and subject to overflow.

Discharge measurements.—Made from car and cable.

Winter flow.—Relation between gage height and discharge not affected by ice.

Diversions.—Between San Marcial and El Paso the bottom lands along the river, chiefly in La Palomas and Mesilla valleys, are irrigated extensively. In 1896 W. W. Follett, of the International Water Commission, estimated that ditches having a capacity of 97.4 second-feet diverted water from Rio Grande between those points. The United States Reclamation Service is constructing a reservoir at Elephant Butte, which will have a capacity of 2,627,000 acre-feet, to be used in irrigating land in the Rio Grande valley.

Accuracy.—Owing to the shifting channel, discharge measurements are made very frequently, and the estimates of daily discharge based almost entirely on these.
Cooperation.—Since May 1, 1897, the station has been maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1889.	<i>Feet.</i>	<i>Sec.-ft.</i>	1896.	<i>Feet.</i>	<i>Sec.-ft.</i>	1897.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 20.....	6.85	2,889	Jan. 11.....	6.20	151	Oct. 25.....	8.80	1,463
21.....	6.75	2,600	Jan. 23.....	7.30	379	Oct. 29.....	8.80	1,406
23.....	6.65	2,457	Feb. 15.....	7.10	282	Nov. 1.....	8.90	1,654
June 1.....	6.95	3,224	Nov. 6.....	7.70	70	3.....	8.60	1,493
5.....	7.25	3,860	25.....	6.31	138	6.....	8.40	1,332
8.....	7.50	4,358				8.....	8.30	1,162
13.....	7.15	3,172	1897.			10.....	8.40	1,215
17.....	6.45	2,050	Feb. 22.....	6.60	195	13.....	8.40	1,242
21.....	6.10	1,028	Mar. 25.....	6.00	52	15.....	8.10	1,006
24.....	6.25	1,432	Apr. 10.....	7.00	242	17.....	7.90	882
26.....	6.60	1,926	May. 4.....	11.40	5,355	19.....	8.20	1,248
July 1.....	6.05	928	5.....	11.35	5,277	20.....	8.10	1,034
4.....	5.80	662	7.....	11.45	5,891	22.....	8.00	1,033
6.....	5.55	489	8.....	11.95	6,588	25.....	8.00	1,049
10.....	5.25	305	11.....	12.50	7,241	27.....	7.90	999
15.....	4.90	101	12.....	11.85	6,810	29.....	8.10	959
19.....	5.50	130	19.....	12.20	7,407	Dec. 1.....	8.10	886
22.....	4.75	69	21.....	12.40	8,099	3.....	7.80	917
24.....	4.20	46	22.....	12.80	9,803	6.....	7.60	645
27.....	4.10	30	23.....	13.40	8,816	8.....	7.50	534
Dec. 23.....	5.25	131	24.....	13.70	10,088	11.....	7.80	678
25.....	5.39	159	25.....	14.10	10,421	13.....	7.30	503
28.....	4.90	179	26.....	14.35	11,583	15.....	7.40	582
31.....	5.21	153	June 4.....	12.60	10,410	18.....	7.80	687
			7.....	12.30	9,448	20.....	7.60	657
1890.			11.....	10.70	7,175	22.....	7.00	467
Jan. 2.....	5.15	127	12.....	10.30	5,228	24.....	7.30	541
4.....	5.20	168	14.....	10.20	4,980	27.....	7.40	583
6.....	5.30	189	16.....	10.10	5,340	29.....	7.50	616
8.....	5.35	212	18.....	10.10	5,424			
11.....	5.25	198	19.....	10.20	5,446	1898.		
20.....	5.35	259	21.....	10.00	5,227	Jan. 3.....	7.00	458
22.....	5.15	180	23.....	9.60	4,100	5.....	7.20	471
25.....	5.10	224	25.....	8.90	2,809	7.....	7.60	640
28.....	5.30	201	26.....	8.40	2,474	10.....	7.50	630
30.....	5.20	281	July 1.....	10.40	5,617	12.....	7.40	513
Feb. 3.....	5.30	308	3.....	9.60	3,931	14.....	7.60	676
8.....	5.65	424	6.....	8.30	1,733	15.....	7.30	456
12.....	5.50	356	8.....	7.60	976	17.....	7.30	474
16.....	5.70	483	10.....	7.50	1,059	19.....	7.90	703
21.....	5.30	254	16.....	7.90	1,288	22.....	7.30	440
27.....	5.40	170	17.....	7.60	902	25.....	7.30	434
Mar. 4.....	5.40	163	19.....	7.50	865	28.....	7.10	400
17.....	6.25	1,092	24.....	6.90	716	29.....	7.00	361
26.....	6.00	730	26.....	6.70	508	31.....	6.70	207
Apr. 21.....	7.30	4,223	29.....	6.40	385	Feb. 2.....	7.10	404
May 9.....	7.50	4,376	31.....	6.20	302	4.....	8.10	862
29.....	8.40	7,170	Aug. 2.....	6.10	229	Mar. 2.....	7.40	361
June 9.....	7.90	6,382	4.....	5.80	100	20.....	7.40	405
16.....	7.00	3,389	6.....	5.70	68	22.....	7.10	280
22.....	7.10	3,920	9.....	5.60	57	24.....	6.80	192
July 2.....	6.60	2,482	11.....	5.50	50	27.....	6.60	120
Aug. 21.....	.....	413	13.....	5.90	178	28.....	6.50	136
26.....	6.20	1,153	14.....	5.80	130	31.....	6.30	99
			17.....	5.50	53	Apr. 1.....	6.30	96
1891.			19.....	7.00	495	3.....	6.10	63
Apr. 3.....	6.45	1,294	22.....	6.40	228	16.....	7.00	266
Dec. 17.....	5.50	309	Sept. 10.....	6.50	261	18.....	8.80	1,693
			12.....	6.65	308	21.....	9.80	2,461
1895.			14.....	7.20	702	22.....	10.30	3,093
Jan. 25.....	6.40	230	16.....	9.05	2,882	23.....	10.50	3,634
July 19.....	8.10	1,039	18.....	8.60	1,892	29.....	10.70	4,443
Sept. 6.....	7.90	761	20.....	8.20	1,042	May 2.....	11.00	5,218
21.....	5.70	76	23.....	7.20	555	3.....	11.40	6,059
Oct. 3.....	5.70	26	25.....	6.60	317	5.....	11.00	4,773
Nov. 21.....	6.90	392	27.....	6.65	347	7.....	10.40	3,623
Dec. 4.....	7.50	423	29.....	7.75	1,289	9.....	9.50	2,547
16.....	6.80	266	Oct. 2.....	7.50	599	14.....	9.00	1,184
27.....	7.42	386	22.....	8.55	1,403	17.....	9.10	1,769

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1898.	<i>Feet.</i>	<i>Sec.-ft.</i>	1899.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 19.....	9.10	1,884	Apr. 11.....	5.50	48	May 21.....	10.60	3,209
23.....	8.80	1,455	14.....	5.20	31	23.....	10.50	3,076
25.....	8.40	1,071	May 8.....	6.90	336	29.....	11.00	3,966
27.....	8.30	958	Dec. 14.....	5.40	94	June 5.....	10.60	3,316
30.....	7.60	627	16.....	5.30	70	7.....	10.20	2,585
June 2.....	7.50	522	18.....	5.10	48	10.....	9.10	1,642
4.....	7.80	605	20.....	5.10	47	15.....	8.30	834
6.....	8.50	1,137	23.....	5.20	56	18.....	8.20	795
7.....	9.50	2,640	26.....	5.30	72	July 29.....	8.20	877
9.....	9.00	1,961	28.....	5.50	101	Aug. 1.....	10.20	3,074
11.....	10.10	3,080	30.....	5.40	104	3.....	9.90	2,425
20.....	8.90	1,344	1900.			5.....	8.20	944
22.....	8.70	1,288	Jan. 3.....	5.40	90	10.....	9.20	1,729
24.....	8.80	1,484	6.....	5.40	93	12.....	9.00	1,339
27.....	9.80	2,674	9.....	5.40	89	23.....	10.10	2,962
30.....	9.60	2,153	11.....	5.80	151	Sept. 13.....	10.10	2,646
July 2.....	9.60	1,926	13.....	6.50	341	15.....	9.10	1,880
6.....	10.40	3,629	16.....	6.20	246	17.....	7.70	648
7.....	11.00	3,860	18.....	5.90	143	19.....	7.00	188
9.....	9.50	1,965	22.....	5.50	102	Oct. 26.....	7.10	389
12.....	9.90	3,105	24.....	5.60	111	Nov. 4.....	7.10	303
20.....	13.60	9,791	27.....	5.60	113	6.....	6.00	65
23.....	10.00	3,898	30.....	5.50	94	9.....	6.00	65
25.....	8.80	2,920	Feb. 1.....	5.50	100	18.....	7.70	721
27.....	8.40	1,891	3.....	5.40	90	Dec. 4.....	6.30	132
29.....	8.00	1,366	6.....	5.40	88			
Aug. 3.....	7.30	813	8.....	5.50	105	1902.		
6.....	7.20	637	10.....	5.60	108	Jan. 30.....	6.3	145
8.....	7.10	515	13.....	5.60	117	Feb. 1.....	6.4	165
11.....	7.60	803	15.....	5.50	101	Apr. 18.....	6.75	262
13.....	8.50	2,026	19.....	5.80	134	21.....	7.0	301
16.....	7.30	649	22.....	5.40	94	22.....	6.6	195
18.....	6.70	353	24.....	5.30	77	24.....	6.6	200
20.....	6.40	249	27.....	5.40	89	26.....	7.3	465
22.....	6.00	160	Mar. 3.....	4.50	13	28.....	7.3	441
25.....	5.90	122	May 17.....	6.50	518	30.....	6.3	145
27.....	5.70	111	18.....	7.50	908	May 2.....	5.85	64
29.....	6.30	253	22.....	7.50	769	5.....	5.4	19
31.....	5.80	122	26.....	9.30	2,120	7.....	5.2	5
Sept. 3.....	5.40	64	28.....	9.20	2,146	June 3.....	6.05	134
5.....	5.30	41	June 1.....	9.60	2,369	4.....	5.4	17
7.....	5.10	23	6.....	10.40	3,500	Aug. 27.....	9.0	1,578
10.....	5.20	25	9.....	10.40	3,319	28.....	6.3	937
12.....	5.00	18	10.....	10.30	2,686	29.....	9.8	2,050
15.....	5.90	185	13.....	9.50	1,680	31.....	9.0	1,190
17.....	5.50	84	18.....	8.30	957	Sept. 2.....	7.5	645
19.....	5.30	46	22.....	7.10	358	5.....	6.2	160
21.....	5.10	30	25.....	6.20	131	8.....	5.6	73
24.....	4.70	9	27.....	5.90	95	10.....	5.4	23
Dec. 6.....	5.40	79	30.....	5.40	17	13.....	5.1	5
19.....	5.50	96	Sept. 9.....	8.40	1,164	27.....	7.9	653
21.....	5.40	75	13.....	9.40	2,005	28.....	7.1	369
24.....	5.40	67	17.....	8.70	1,278	30.....	6.4	171
27.....	6.10	196	22.....	6.20	126	Oct. 2.....	6.0	101
29.....	5.80	125	1901.			3.....	5.9	85
			Feb. 5.....	5.70	96	4.....	5.6	52
1899.			9.....	5.60	71	6.....	5.5	47
Jan. 4.....	6.40	290	12.....	5.50	55	8.....	5.35	37
9.....	6.10	226	14.....	5.70	87	10.....	5.3	29
12.....	6.00	173	16.....	6.20	175	15.....	4.9	8
14.....	5.90	126	18.....	6.00	115	17.....	4.85	4
16.....	5.90	126	21.....	5.60	68	Dec. 22.....	5.9	117
18.....	6.40	244	23.....	5.50	57	24.....	5.6	80
21.....	6.30	249	28.....	6.80	288	26.....	5.2	34
23.....	6.10	181	Mar. 1.....	7.10	412	29.....	4.7	4
26.....	6.40	261	4.....	6.10	138			
28.....	6.20	187	16.....	5.50	58	1903.		
31.....	6.10	188	May 2.....	8.20	938	Jan. 6.....	5.0	26
Feb. 2.....	6.10	167	4.....	9.10	1,526	8.....	4.6	3
4.....	6.00	147	6.....	10.10	2,386	16.....	5.2	33
Mar. 8.....	6.30	216	8.....	10.40	3,185	19.....	5.0	24
11.....	6.00	144	11.....	9.90	2,166	27.....	5.25	39
13.....	5.80	112	14.....	9.70	1,983	Feb. 9.....	5.0	25
16.....	5.70	86	16.....	9.90	2,274	23.....	5.7	106
18.....	5.60	69	18.....	10.20	2,680	25.....	5.4	69
20.....	5.70	78	20.....	10.55	3,065	27.....	5.2	26
22.....	5.80	93				Mar. 3.....	5.3	46
25.....	5.60	66						

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 5.....	5.9	139	Dec. 19.....	4.05	61	Apr. 17.....	10.6	3,397
7.....	5.8	110	21.....	4.1	77	20.....	10.3	2,971
9.....	5.4	57	29.....	4.1	67	24.....	10.9	3,596
11.....	8.7	1,363	31.....	4.1	73	29.....	12.75	7,014
13.....	7.6	651	Aug. 1904.			May 2.....	11.4	5,170
17.....	6.9	423	10.....	5.8	579	6.....	12.5	6,490
19.....	7.8	747	12.....	5.2	311	9.....	13.5	9,755
21.....	7.3	554	14.....	4.9	215	12.....	11.5	5,847
24.....	7.0	375	16.....	4.4	112	16.....	12.0	6,098
27.....	6.2	203	18.....	3.9	34	20.....	12.3	6,065
29.....	5.8	156	20.....	3.6	15	23.....	13.9	9,717
31.....	5.5	110	25.....	4.2	74	25.....	14.6	9,859
Apr. 3.....	6.4	267	27.....	5.4	301	28.....	15.6	16,795
6.....	7.8	786	30.....	5.0	201	30.....	15.9	18,924
8.....	9.8	2,092	Sept. 3.....	5.2	204	June 2.....	16.1	20,722
10.....	8.45	889	12.....	4.2	37	6.....	14.35	15,993
12.....	7.8	817	13.....	5.5	293	9.....	14.8	17,609
15.....	8.4	897	15.....	4.4	47	12.....	14.9	23,683
17.....	8.3	884	17.....	4.4	48	15.....	14.9	23,591
20.....	7.45	388	24.....	4.4	48	18.....	13.85	16,935
22.....	7.9	608	26.....	4.4	48	21.....	12.4	7,312
24.....	7.95	661	28.....	5.2	210	25.....	11.1	5,724
27.....	7.8	561	30.....	5.9	428	27.....	10.5	4,565
29.....	8.95	1,438	Oct. 3.....	10.95	5,577	30.....	9.5	3,398
May 1.....	9.85	1,928	5.....	12.2	6,965	July 3.....	8.9	2,388
4.....	10.0	2,275	6.....	12.7	7,969	7.....	8.1	1,383
7.....	10.2	2,347	10.....	13.3	11,372	10.....	7.6	1,024
9.....	10.2	2,422	12.....	13.4	12,010	13.....	7.4	694
12.....	10.45	2,563	Nov. 7.....	7.4	990	16.....	7.1	471
13.....	10.75	2,989	11.....	7.0	774	19.....	6.8	415
15.....	10.9	3,290	12.....	7.0	901	22.....	6.7	386
18.....	12.0	5,064	14.....	7.0	778	25.....	6.8	435
20.....	12.4	5,443	17.....	6.9	739	28.....	6.8	410
22.....	11.9	4,872	21.....	6.6	554	31.....	6.5	261
25.....	11.7	4,254	24.....	6.7	582	Aug. 3.....	6.3	198
27.....	10.5	2,943	30.....	6.8	590	7.....	7.3	726
30.....	9.1	2,273	Dec. 3.....	6.8	622	10.....	7.0	572
June 1.....	9.1	2,416	6.....	7.65	1,008	12.....	7.7	979
4.....	9.0	1,698	9.....	7.5	918	15.....	6.8	488
6.....	9.4	2,544	12.....	7.2	837	18.....	6.4	300
9.....	10.4	3,467	15.....	6.8	620	21.....	6.2	199
12.....	11.75	5,503	18.....	6.6	469	24.....	6.0	146
15.....	13.3	10,343	21.....	6.6	489	27.....	5.8	99
17.....	13.5	12,157	24.....	6.5	491	30.....	5.6	56
19.....	14.05	16,387	28.....	* 6.4	417	Sept. 2.....	5.4	35
22.....	13.7	17,408	31.....	6.4	432	5.....	5.4	31
24.....	13.65	17,668	Jan. 1905.			8.....	5.4	32
26.....	13.2	16,384	3.....	6.4	367	11.....	5.3	27
29.....	12.75	12,530	8.....	6.3	384	12.....	6.2	140
July 2.....	11.4	9,831	11.....	7.2	765	14.....	5.9	112
5.....	10.3	6,873	14.....	7.6	1,014	17.....	5.7	77
7.....	9.2	3,238	18.....	7.2	769	20.....	5.5	47
10.....	8.1	2,533	21.....	7.0	625	23.....	5.25	19
12.....	7.4	1,794	24.....	6.4	461	26.....	5.2	16
14.....	6.9	1,252	28.....	6.7	538	29.....	6.2	153
16.....	6.4	942	31.....	6.5	458	Oct. 2.....	6.45	199
18.....	6.8	1,097	Feb. 3.....	6.6	488	5.....	6.0	130
20.....	6.0	561	7.....	6.6	490	8.....	5.8	90
22.....	5.85	497	10.....	7.0	668	11.....	5.6	59
24.....	6.45	1,107	12.....	7.6	1,017	14.....	5.5	44
27.....	5.8	472	15.....	6.8	587	17.....	5.4	24
29.....	5.4	401	19.....	7.2	721	20.....	5.3	23
31.....	5.1	239	21.....	8.0	1,258	23.....	5.85	31
Aug. 3.....	4.6	156	25.....	7.4	881	26.....	5.4	39
6.....	4.7	216	28.....	8.15	1,364	29.....	5.4	36
8.....	4.4	120	Mar. 3.....	9.2	2,562	Nov. 1.....	5.5	39
11.....	4.4	128	8.....	9.9	3,625	4.....	5.65	73
14.....	3.8	30	12.....	10.8	4,911	7.....	5.85	114
Sept. 29.....	4.4	118	15.....	9.8	3,445	10.....	6.2	202
Oct. 2.....	4.7	217	18.....	9.8	2,782	15.....	6.75	395
3.....	4.6	202	21.....	10.3	3,170	18.....	6.7	342
10.....	3.6	13	24.....	9.7	2,307	21.....	6.6	309
14.....	3.4	16	31.....	9.3	1,694	24.....	6.6	335
16.....	3.4	13	Apr. 3.....	9.9	2,060	27.....	8.05	1,426
19.....	3.4	12	6.....	9.9	2,222	30.....	8.35	1,588
Dec. 12.....	3.9	47	9.....	8.9	1,423	Dec. 3.....	8.2	1,349
16.....	4.0	48	14.....	10.35	2,932	6.....	7.25	691
						9.....	6.9	541

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1906.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 12	7.0	595	July 21	8.8	1,686	Mar. 3	8.0	951
15	7.0	572	24	8.8	1,509	6	7.85	824
18	7.0	581	27	8.1	1,056	9	7.7	585
21	6.95	550	29	8.0	995	12	7.6	597
24	6.9	454	31	7.9	678	15	7.9	827
27	6.9	486	Aug. 3	8.6	1,328	18	7.85	882
30	6.3	278	6	8.6	1,513	21	7.4	499
			9	8.0	1,144	24	7.4	509
1906.			12	8.0	747	27	8.95	2,058
Jan. 1	6.2	235	15	7.7	504	29	9.15	2,377
4	5.95	163	18	7.0	393	31	8.9	1,875
7	6.0	176	21	6.8	291	Apr. 3	8.65	1,742
10	6.0	177	24	6.6	251	6	8.45	1,437
13	6.3	240	27	6.0	122	9	8.4	1,414
16	6.3	242	30	7.35	577	12	8.4	1,333
18	7.25	553	Sept. 2	6.3	160	15	8.3	1,311
21	7.45	844	5	5.75	63	17	9.8	3,351
24	7.65	977	8	5.4	37	19	11.15	5,281
27	7.05	559	11	5.1	18	21	11.2	6,064
30	7.0	516	14	5.0	19	24	10.85	5,481
Feb. 2	7.0	526	17	4.95	10	27	9.95	3,747
5	6.9	435	20	4.95	8	30	9.45	2,915
8	7.0	496	24	5.0	7	May 3	10.55	4,140
11	7.3	597	27	4.8	12	6	10.0	3,723
14	7.4	717	30	6.0	156	9	10.0	3,746
17	7.6	823	Oct. 1	8.3	1,155	12	9.4	2,800
20	7.3	634	3	7.3	579	15	9.2	2,468
23	7.2	555	6	7.15	464	18	9.7	3,089
26	7.1	517	9	7.45	650	21	9.65	3,183
Mar. 2	7.0	515	12	7.4	685	25	11.05	5,275
5	6.9	427	15	7.15	542	28	12.1	7,423
8	6.9	394	18	7.05	506	30	12.6	8,993
11	6.9	403	21	7.15	528	June 2	12.55	9,781
14	6.7	270	24	7.1	526	5	11.4	7,136
17	6.8	280	27	7.6	849	8	11.2	5,776
20	7.25	553	30	7.1	493	11	11.8	6,928
23	7.1	497	Nov. 2	7.4	758	14	11.95	7,515
26	6.8	355	5	7.85	1,178	17	11.95	6,957
29	6.6	237	8	8.1	1,136	20	12.3	8,283
31	8.05	1,100	11	8.1	1,243	22	12.45	9,024
Apr. 2	8.2	1,283	14	8.1	1,150	24	13.05	10,753
5	7.5	752	17	7.9	1,011	27	11.95	7,866
8	7.75	936	20	8.1	1,106	30	11.1	5,503
11	7.5	742	24	8.0	1,013	July 3	10.9	5,262
14	8.2	1,146	27	7.6	545	8	11.3	7,651
17	8.55	1,468	29	7.6	638	12	11.0	6,665
20	8.05	1,168	Dec. 2	8.1	999	15	10.8	6,235
23	8.7	1,706	5	10.35	3,899	18	10.3	5,134
26	8.8	1,865	8	8.45	1,507	22	10.25	4,917
28	9.5	2,855	11	8.5	1,565	25	9.85	4,274
30	10.0	3,475	14	8.3	1,106	28	9.6	3,966
May 3	9.8	3,696	17	8.25	1,212	31	10.2	4,349
6	9.3	2,760	20	8.0	1,166	Aug. 3	9.15	3,611
9	9.55	2,909	23	7.5	775	6	9.0	2,476
12	10.6	4,832	26	7.2	598	9	9.0	2,244
15	11.45	5,901	29	7.75	942	12	8.65	2,163
18	11.95	7,329	31	7.8	812	15	8.3	1,133
20	11.55	6,388				18	7.8	723
23	11.8	7,135	1907.			21	7.95	622
26	12.3	8,312	Jan. 3	7.9	941	24	9.4	2,117
29	12.45	8,140	6	7.7	837	27	9.35	2,284
June 1	11.25	5,848	9	7.5	718	29	10.35	3,508
4	10.55	4,473	12	7.75	948	31	10.95	4,622
7	10.0	4,357	15	8.0	1,253	Sept. 2	12.85	8,036
10	10.0	3,701	19	8.4	1,399	3	13.5	10,562
13	10.25	3,733	22	8.1	1,208	5	10.55	4,111
16	11.0	4,843	25	7.8	961	8	9.55	2,605
19	11.5	5,875	29	7.6	632	11	9.0	1,835
22	11.85	6,500	31	7.7	658	14	8.65	1,396
25	10.95	4,801	Feb. 3	7.9	916	17	8.5	1,123
28	9.9	3,069	6	7.95	1,000	20	8.6	1,360
30	9.3	2,126	9	8.1	918	23	10.1	3,565
July 3	8.75	1,450	12	8.05	905	25	9.35	2,398
6	8.65	1,334	15	7.9	801	27	8.4	1,303
9	9.0	1,938	18	7.85	799	30	7.8	781
12	9.4	2,682	21	7.7	784	Oct. 3	7.6	560
15	8.7	1,586	24	7.8	751	6	7.65	531
18	8.85	1,771	28	7.85	819	9	7.55	488

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Oct. 1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1909.	<i>Feet.</i>	<i>Sec.-ft.</i>
12.....	7.35	421	June 3.....	8.65	1,1377	Apr. 12.....	8.6	721
15.....	7.45	489	6.....	8.35	898	15.....	7.8	267
18.....	7.75	529	9.....	8.3	808	18.....	7.9	260
21.....	7.85	837	12.....	8.1	663	21.....	7.6	129
24.....	7.95	852	15.....	7.6	363	24.....	11.25	3,834
27.....	8.55	1,467	18.....	7.5	218	27.....	10.55	3,089
30.....	8.65	1,488	22.....	8.6	932	30.....	9.5	1,625
Nov. 3.....	8.1	1,039	25.....	8.2	557	May 3.....	10.2	2,238
6.....	8.0	927	30.....	7.1	129	6.....	9.85	2,028
9.....	7.85	769	July 3.....	6.3	37	9.....	10.1	2,265
13.....	7.95	902	10.....	6.2	3	12.....	12.3	6,434
15.....	7.8	752	21.....	9.0	1,358	15.....	12.1	6,044
18.....	7.95	864	24.....	8.3	621	18.....	12.2	6,548
21.....	8.2	1,106	27.....	8.2	591	21.....	11.7	5,072
24.....	8.1	1,009	30.....	8.0	470	26.....	12.1	5,755
27.....	8.1	944	Aug. 2.....	8.05	417	30.....	10.7	3,580
30.....	8.0	759	5.....	8.15	529	June 3.....	10.6	3,194
Dec. 3.....	7.8	592	7.....	8.7	924	6.....	10.0	2,461
6.....	8.0	803	8.....	9.4	1,395	9.....	10.1	2,710
9.....	7.9	673	11.....	7.7	273	12.....	11.9	5,531
12.....	7.9	674	13.....	9.5	1,504	15.....	12.1	6,168
15.....	7.9	658	16.....	8.7	872	19.....	11.7	5,118
18.....	7.85	645	18.....	10.2	1,977	22.....	10.7	3,670
21.....	7.95	631	21.....	9.1	1,280	25.....	10.9	3,599
24.....	7.7	563	24.....	8.65	822	28.....	10.4	3,175
27.....	7.65	464	27.....	10.3	2,038	30.....	9.9	2,170
30.....	7.6	437	29.....	8.7	627	July 19.....	6.9	76
31.....	7.7	515	31.....	9.3	1,246	22.....	6.4	28
Jan. 1908.			Sept. 3.....	8.1	389	25.....	6.05	15
7.....	8.3	814	4.....	11.4	3,209	Aug. 21.....	6.1	23
10.....	8.1	666	7.....	7.7	229	24.....	6.0	14
13.....	8.0	528	10.....	7.2	79	25.....	9.35	1,864
16.....	7.6	385	13.....	6.7	23	28.....	8.25	741
19.....	7.75	432	16.....	6.5	22	31.....	8.5	1,070
22.....	7.9	519	Nov. 14.....	7.2	56	Sept. 3.....	8.0	584
25.....	7.9	504	17.....	7.2	117	6.....	7.95	593
28.....	7.85	484	21.....	7.3	180	9.....	11.95	5,574
31.....	7.85	456	24.....	7.3	157	12.....	11.45	4,480
Feb. 3.....	7.8	436	29.....	7.35	169	15.....	10.5	3,289
6.....	7.95	494	Dec. 3.....	8.1	524	18.....	10.0	2,360
9.....	7.9	481	6.....	7.85	331	22.....	9.4	1,674
12.....	8.2	808	10.....	7.5	209	24.....	8.9	1,107
15.....	7.9	532	13.....	8.1	516	27.....	8.75	1,059
18.....	8.0	521	16.....	7.7	256	30.....	8.2	690
21.....	7.95	566	19.....	7.5	202	Oct. 3.....	8.4	869
24.....	7.85	562	22.....	7.6	224	6.....	7.9	431
27.....	7.9	560	24.....	7.5	205	9.....	7.8	342
29.....	8.0	593	27.....	8.0	498	12.....	9.2	1,573
Mar. 3.....	8.3	770	31.....	8.2	557	16.....	8.3	754
6.....	8.2	784	1909.			18.....	8.4	604
9.....	8.2	523	Jan. 2.....	7.9	443	21.....	8.4	705
12.....	8.2	797	5.....	7.9	418	24.....	8.2	516
15.....	8.1	735	9.....	7.7	276	27.....	8.1	481
18.....	7.6	287	14.....	8.0	370	29.....	8.1	486
21.....	7.4	281	16.....	8.1	509	31.....	8.0	416
23.....	9.1	1,638	19.....	8.0	359	Nov. 3.....	8.1	401
26.....	8.65	1,120	Feb. 5.....	8.25	363	6.....	7.95	336
29.....	8.25	778	9.....	8.1	390	9.....	7.75	299
31.....	8.0	612	12.....	8.3	476	12.....	7.6	274
Apr. 3.....	8.1	603	15.....	8.2	392	15.....	7.9	364
6.....	7.9	507	18.....	7.8	224	18.....	7.8	358
9.....	7.5	264	21.....	8.1	329	21.....	7.7	288
12.....	7.7	384	25.....	7.5	145	24.....	8.3	555
15.....	8.5	937	28.....	7.3	163	27.....	8.0	399
18.....	9.0	1,577	Mar. 3.....	7.4	159	Dec. 1.....	8.2	506
21.....	10.5	3,323	6.....	7.1	33	5.....	8.4	779
24.....	9.9	2,715	9.....	8.1	470	9.....	8.4	463
27.....	9.8	2,464	13.....	9.15	1,084	12.....	8.2	364
30.....	9.6	1,876	16.....	8.8	858	15.....	7.8	233
May 3.....	8.9	1,341	20.....	7.6	230	19.....	8.3	475
6.....	8.7	1,134	24.....	8.1	433	24.....	7.5	191
17.....	9.1	1,615	28.....	8.05	358	28.....	7.2	146
21.....	8.6	1,092	31.....	7.8	186	31.....	6.95	101
24.....	9.7	2,385	Apr. 3.....	7.8	200	1910.		
28.....	10.2	3,094	6.....	7.4	113	Jan. 3.....	7.45	236
31.....	9.4	2,084	9.....	6.85	49	9.....	8.5	669

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 12	8.05	469	Mar. 24	9.1	1,031	Dec. 10	9.4	1,294
15	8.2	496	27	8.6	693	13	9.45	1,306
18	8.7	776	30	8.5	622	17	9.3	1,120
21	8.8	919	Apr. 3	8.0	193	20	9.15	841
24	8.95	1,038	9	9.2	1,125	23	9.05	698
28	8.5	667	16	8.3	289	26	9.15	829
31	8.4	567	19	7.6	116	30	8.95	710
Feb. 4	8.4	485	22	7.5	102			
7	8.6	506	26	7.9	167			
10	9.1	498	30	10.0	1,746	Jan. 1912.		
13	8.4	277	May 3	11.1	3,290	Jan. 4	8.35	240
17	8.45	275	6	10.4	2,464	7	8.3	281
20	8.2	179	10	10.9	3,118	10	8.6	505
23	9.2	500	14	12.8	6,295	13	8.95	771
26	7.9	133	16	13.05	7,443	18	9.2	801
Mar. 2	8.5	241	20	12.0	5,665	20	9.45	1,126
6	9.7	747	23	11.0	4,267	24	9.6	1,081
9	10.5	1,728	27	10.15	3,001	27	9.3	983
12	10.5	1,640	31	10.0	2,464	31	9.2	862
15	10.4	1,619	June 3	10.4	2,914	Feb. 3	9.2	785
18	10.3	1,519	6	10.2	2,936	6	8.8	614
21	10.5	1,711	9	10.9	3,815	9	8.9	622
24	10.4	1,619	12	11.1	4,014	12	8.95	555
27	10.55	1,808	15	11.5	4,631	16	8.8	395
31	10.9	2,320	17	11.8	5,112	20	8.8	502
Apr. 3	10.4	1,876	20	11.5	5,101	24	8.6	306
6	10.15	1,356	23	11.35	4,811	27	9.0	487
9	10.0	1,310	26	11.0	4,233	Mar. 1	8.95	541
12	10.2	1,383	29	10.8	3,763	5	8.9	440
15	10.35	1,640	July 2	10.5	3,120	8	8.4	253
18	10.9	2,114	5	11.9	5,180	12	10.75	2,273
22	10.4	1,733	6	13.9	9,715	16	9.3	1,042
25	10.8	2,204	8	11.9	6,342	19	9.0	802
28	11.6	3,366	11	13.5	8,800	22	8.6	473
30	12.2	4,866	13	12.3	6,978	25	11.8	4,257
May 3	12.9	6,967	16	11.9	6,205	28	9.9	1,832
6	12.9	7,573	19	11.4	5,127	31	9.15	976
9	11.8	5,531	21	12.3	6,777	Apr. 3	9.0	722
12	11.9	4,227	24	13.65	9,366	6	9.6	1,185
15	11.0	4,270	27	13.6	9,594	10	10.1	2,039
18	11.9	5,223	30	11.7	5,367	12	10.9	3,063
22	11.5	5,320	Aug. 4	10.2	2,944	15	10.5	2,529
25	9.9	2,537	7	9.2	1,676	18	10.3	2,390
28	9.4	1,594	10	8.4	744	21	9.6	1,494
31	8.85	1,012	13	7.7	325	24	9.8	1,642
June 4	8.1	460	16	7.2	120	28	8.95	683
8	9.8	1,597	20	6.7	12	May 4	9.4	1,000
12	9.1	946	23	6.5	8	8	12.5	5,529
16	8.0	338	26	6.5	6	11	11.45	4,087
19	6.8	38	29	6.5	10	15	12.5	5,433
22	6.8	41	31	7.0	77	18	12.55	5,866
25	6.2	6	Sept. 4	6.3	6	21	12.5	5,557
28	6.8	36	11	7.0	67	25	14.2	9,577
30	7.1	50	15	7.4	173	27	14.7	10,132
Dec. 7	6.6	22	20	7.15	134	29	15.05	12,050
27	6.7	24	23	8.6	914	31	15.6	15,312
			27	7.6	214	June 2	15.1	15,756
			30	7.5	119	4	14.7	13,947
1911.			Oct. 4	9.0	1,342	6	14.2	12,773
Jan. 6	6.5	8	8	11.95	5,578	9	13.5	10,208
17	8.1	277	10	13.8	9,706	12	13.8	11,180
21	8.7	597	14	13.7	9,121	15	12.9	9,297
26	7.8	174	17	12.2	6,542	18	11.9	6,544
28	7.7	162	21	10.6	3,493	21	11.3	5,293
Feb. 1	7.4	141	24	10.4	2,924	24	11.05	4,276
4	7.2	117	27	10.0	2,413	27	11.0	4,321
8	8.3	460	30	10.2	3,026	30	11.1	5,265
11	7.9	161	Nov. 3	10.4	2,874	July 3	11.05	5,171
14	7.9	170	6	10.05	2,550	6	10.4	3,799
17	7.3	130	9	10.1	2,566	9	9.7	2,704
20	8.3	274	12	9.6	1,867	12	8.9	1,585
23	8.55	325	15	9.65	1,752	15	8.3	628
27	8.1	272	19	9.55	1,677	18	8.0	331
Mar. 3	7.8	190	22	9.4	1,506	21	8.6	1,024
6	8.3	491	25	9.5	1,566	24	8.0	374
9	7.75	165	28	9.5	1,566	27	9.9	2,369
13	9.7	1,719	30	9.4	1,355	31	8.2	764
16	10.2	1,996	Dec. 3	9.2	1,306	Aug. 3	8.1	307
20	8.5	601	6	8.8	722	6	7.7	227

Discharge measurements of Rio Grande near El Paso, Tex., in 1889-1891, 1895-1913—
Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 9.....	7.1	57	Dec. 6.....	8.6	579	Mar. 28.....	7.5	31
17.....	7.95	397	9.....	8.6	589	31.....	7.5	29
19.....	9.15	1,301	12.....	8.9	642	Apr. 3.....	7.35	20
22.....	8.65	866	15.....	8.75	372	6.....	7.25	15
25.....	9.1	1,042	18.....	8.75	377	9.....	7.2	12
28.....	8.7	830	21.....	8.9	396	12.....	8.95	630
31.....	8.1	282	24.....	8.6	320	15.....	8.8	489
Sept. 3.....	10.05	2,099	27.....	8.4	269	18.....	8.6	261
6.....	8.8	674	31.....	7.8	130	21.....	8.9	581
9.....	8.0	289				24.....	10.5	2,553
12.....	8.05	254	1913.			27.....	11.05	3,412
15.....	7.7	127	Jan. 3.....	7.6	94	30.....	9.5	1,436
18.....	7.25	60	6.....	8.5	318	May 3.....	9.0	868
21.....	6.8	13	12.....	7.7	50	6.....	10.8	2,920
24.....	6.75	11	15.....	8.3	231	9.....	9.7	1,633
30.....	6.75	10	18.....	8.2	208	12.....	10.1	2,042
Oct. 3.....	6.75	9	21.....	7.8	119	15.....	9.7	1,375
6.....	6.65	7	24.....	9.05	725	18.....	10.3	1,973
9.....	6.6	5	27.....	8.9	684	21.....	9.6	1,413
12.....	6.6	5	31.....	8.7	661	24.....	9.4	1,122
15.....	6.6	5	Feb. 3.....	8.9	503	27.....	9.0	621
18.....	6.75	9	6.....	8.7	336	31.....	8.5	321
21.....	6.5	7	9.....	8.9	447	June 3.....	8.0	84
24.....	6.8	10	12.....	9.0	733	6.....	7.8	58
27.....	7.0	25	15.....	9.1	781	9.....	8.65	354
30.....	7.6	100	18.....	9.0	768	12.....	8.1	125
Nov. 3.....	7.8	95	21.....	8.6	742	15.....	12.1	4,512
6.....	7.8	108	24.....	8.8	552	18.....	9.15	964
9.....	7.8	126	26.....	8.8	593	21.....	9.1	834
12.....	8.1	196	28.....	8.9	681	24.....	9.0	775
15.....	8.3	302	Mar. 3.....	8.6	558	27.....	9.3	1,010
18.....	8.7	512	6.....	8.85	365	30.....	8.9	596
21.....	8.6	500	9.....	8.6	268	July 3.....	9.05	832
24.....	8.6	500	12.....	8.1	257	6.....	7.9	124
27.....	8.4	461	15.....	8.2	171	9.....	6.95	9
30.....	8.7	463	21.....	8.6	295			
Dec. 3.....	8.5	554	25.....	8.0	81			

NOTE.—Measurements were made by W. J. Dyar, H. P. Croft, A. P. Davis, P. E. Harroun, C. C. Babb, W. W. Follett, T. M. Courchesne, J. P. Hague, A. T. Wilcox, F. W. Carpenter, I. H. Huggett, E. E. Winter, Valmore Courchesne, W. L. Follett, J. Smith, J. D. Dillard, T. A. Stiles, E. G. Piper, W. C. Stewart, C. R. Folk, Carl Marquette, and W. K. Homan.

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913.

Day.	May.	June.	July.	Day.	May.	June.	July.	Day.	May.	June.	July.
1889.				1889.				1889.			
1.....	6.95	6.05	11.....	7.60	7.20	5.17	21.....	6.75	6.10	.....	.....
2.....	7.00	5.90	12.....	7.55	7.25	.....	22.....	6.75	5.95	.....	.....
3.....	7.05	5.82	13.....	7.50	7.15	.....	23.....	6.65	5.80	.....	.....
4.....	7.12	5.80	14.....	7.40	7.00	.....	24.....	6.62	6.25	.....	.....
5.....	7.25	5.57	15.....	7.30	6.70	.....	25.....	6.60	6.73	.....	.....
6.....	7.35	5.55	16.....	7.20	6.45	.....	26.....	6.60	6.60	.....	.....
7.....	7.45	5.45	17.....	7.00	6.45	.....	27.....	6.52	6.72	.....	.....
8.....	7.50	5.37	18.....	6.90	6.40	.....	28.....	6.62	6.45	.....	.....
9.....	7.42	5.32	19.....	6.85	6.40	.....	29.....	6.62	6.15	.....	.....
10.....	7.60	7.30	20.....	6.85	6.25	.....	30.....	6.65	6.10	.....	.....
							31.....	6.80	.....	.....	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90.												
1.....				5.15	5.20	5.60	5.70	7.30	8.40	6.70	5.90	6.20
2.....				5.15	5.17	5.50	5.80	7.25	8.37	6.60	6.05	5.75
3.....				5.20	5.30	5.50	5.90	7.10	8.32	6.60	6.10	5.50
4.....				5.20	5.20	5.45	6.00	7.10	8.27	6.55	6.10	5.30
5.....				5.15	5.22	5.40	6.00	7.15	8.22	6.50	6.05	5.20

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90.												
6.				5.30	5.48	5.40	6.00	7.25	8.15	6.40	6.05	5.50
7.				5.40	5.65	5.45	6.00	7.40	8.10	6.40	6.10	5.05
8.				5.35	5.65	5.30	6.00	7.45	8.00	6.20	6.15	5.10
9.				5.25	5.62	5.35	6.10	7.50	7.90	6.10	6.05	5.25
10.				5.20	5.67	5.40	6.05	7.60	7.90	6.05	5.95	5.90
11.				5.25	5.53	5.15	6.10	7.70	7.75	6.10	5.90	5.50
12.				5.15	5.50	4.80	6.20	7.75	7.65	6.10	6.05	5.20
13.				5.25	5.50	4.60	6.25	7.90	7.42	5.90	5.80	4.95
14.				5.30	5.57	4.40	6.25	8.05	7.17	5.75	5.60	4.95
15.				5.40	5.67	6.20	6.20	8.15	7.05	5.70	5.35	4.75
16.				5.40	5.68	6.25	6.35	8.20	7.00	5.60	5.30	4.70
17.				5.35	5.65	6.25	6.70	8.15	6.90	5.90	5.20	4.70
18.				5.35	5.57	6.10	7.10	8.15	6.90	5.90	5.20	4.60
19.				5.30	5.48	5.90	7.15	8.10	6.90	5.75	5.20	
20.			5.35	5.35	5.33	5.65	7.35	8.20	6.90	5.75	5.20	
21.			5.30	5.25	5.25	5.55	7.30	8.25	6.95	5.70	5.75	
22.			5.28	5.15	5.07	5.40	7.30	8.25	7.10	5.75	5.45	
23.			5.25	5.00	5.00	5.30	7.25	8.25	7.10	5.65	5.40	
24.			5.34	5.05	4.97	5.25	7.25	8.20	7.00	5.70	6.00	
25.			5.39	5.10	5.05	5.60	7.20	8.25	7.00	5.55	5.50	
26.			5.20	5.13	5.12	6.05	7.15	8.25	6.95	5.40	6.20	4.75
27.			4.90	5.11	5.43	5.90	7.15	8.25	6.95	5.35	6.70	4.95
28.			4.90	5.30	5.47	5.75	7.20	8.30	6.95	5.40	6.40	5.25
29.			5.04	5.33		5.65	7.15	8.40	7.00	5.5	6.75	5.40
30.			5.10	5.20		5.60	7.20	8.40	7.00	5.65	5.90	5.20
31.			5.21	5.20		5.65		8.40		5.85	5.80	
1890-91.												
1.	4.95	4.90	5.65	5.9	5.7	6.55	6.45	9.1	8.8	8.1	6.35	3.3
2.	4.70		5.70	5.85	5.7	7.15	6.4	9.3	8.75	8.0	6.5	3.1
3.			5.80	5.75	5.75	7.0	6.45	9.4	8.65	7.75	6.35	
4.			5.85	5.75	5.75	6.65	6.4	9.5	8.6	7.5	6.15	
5.			5.85	5.8	5.75	6.3	6.35	9.6	8.5	7.35	6.25	
6.			5.85	5.85	5.8	6.4	6.25	9.75	8.4	7.2	6.25	
7.			5.70	5.9	5.75	6.35	6.25	10.05	8.35	7.2	6.35	
8.			5.65	5.95	5.65	6.65	6.2	10.2	8.25	7.2	6.35	
9.			5.60	5.95	5.6	7.25	6.25	10.35	8.1	7.2	6.4	
10.			5.70	5.95	5.7	7.05	6.25	10.5	8.0	7.15	6.35	
11.		4.85	5.70	5.9	5.75	6.85	6.5	10.5	7.8	6.95	6.05	
12.		4.85	5.75	5.7	5.8	6.6	6.95	10.6	7.65	6.8	5.95	
13.		4.85	5.75	5.6	5.75	6.4	7.25	10.65	7.8	6.7	6.05	
14.		5.00	5.85	5.55	5.7	6.3	7.25	10.85	7.95	6.6	6.1	
15.		5.65	5.90	5.5	5.75	6.15	6.95	11.0	8.05	6.5	6.0	
16.		5.75	5.90	5.6	5.9	6.05	7.25	11.3	8.15	6.4	6.2	
17.		5.75	5.85	5.5	5.8	5.9	7.9	11.6	8.3	6.2	5.8	
18.		5.85	5.80	5.3	5.65	5.85	8.2	11.25	8.5	6.05	5.45	
19.		5.80	5.75	5.25	5.65	5.7	8.3	10.75	8.65	5.95	5.3	
20.		5.70	5.75	5.2	5.6	5.7	8.4	10.65	8.6	5.8	5.15	
21.		5.65	5.70	5.2	5.55	5.7	8.35	10.1	8.6	5.9	5.25	
22.		5.60	5.70	5.25	5.6	5.7	8.25	9.85	8.5	6.0	5.05	
23.	4.80	5.60	5.70	5.15	5.8	5.75	8.35	9.6	8.25	6.15	4.8	
24.	4.95	5.60	5.85	5.1	6.45	5.75	8.3	9.6	7.85	6.0	4.8	
25.	5.00	5.70	5.90	5.15	6.85	5.95	8.0	9.6	7.7	6.0	4.45	
26.	5.00	5.80	5.85	5.45	6.75	6.15	7.95	9.5	7.9	5.95	4.5	
27.	5.00	5.75	5.80	5.8	6.8	6.65	8.2	9.3	8.05	5.8	4.35	
28.	5.00	5.80	5.75	5.95	6.55	7.5	8.3	9.2	8.0	6.15	4.15	8.2
29.	5.00	5.70	5.70	5.9		7.45	8.55	9.05	8.05	6.2	4.0	9.2
30.	4.90	5.55	5.70	5.85		7.25	8.9	8.95	8.15	6.15	3.9	8.3
31.	4.90		5.85	5.75		6.85		8.8		5.85	3.8	
1891-92.												
1.	7.15	5.75	5.4	5.2	5.5	5.6	5.8	7.85	8.15	5.8	5.1	
2.	6.9	5.7	5.4	5.15	5.6	5.75	5.8	8.05	8.1	5.85	5.1	
3.	6.5	5.75	5.4	5.2	5.7	5.85	5.8	8.3	8.0	5.9	4.75	
4.	6.8	5.7	5.3	5.4	5.7	5.85	5.75	8.6	7.9	6.1		
5.	6.3	5.65	5.3	5.4	5.85	5.85	5.8	8.9	7.8	5.8		
6.	6.25	5.65	5.3	5.45	5.85	5.9	5.75	9.1	7.75	5.7		
7.	6.25	5.6	5.25	5.65	6.05	5.9	5.8	9.3	7.5	5.75		
8.	6.9	5.45	5.25	5.65	6.0	5.9	6.0	9.4	7.0	5.75		
9.	6.85	5.5	5.25	5.5	5.9	5.9	5.95	9.4	6.9	5.7		
10.	6.9	5.5	5.65	5.5	5.8	5.8	5.95	9.0	6.9	5.65		

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
11.....	6.8	5.5	5.75	5.5	5.8	5.75	5.95	8.7	6.85	5.9	.....	.....
12.....	6.5	5.5	5.65	5.55	5.75	5.9	5.8	8.6	6.75	6.75	.....	.....
13.....	6.45	5.5	5.55	5.6	5.8	5.95	5.7	8.55	6.75	6.85	.....	.....
14.....	6.4	5.5	5.65	5.7	5.85	6.0	5.75	8.45	7.0	6.4	.....	.....
15.....	6.35	5.5	5.8	5.7	5.8	5.9	6.95	8.35	7.0	6.5	.....	.....
16.....	6.35	5.5	5.45	5.75	5.7	5.8	7.3	8.2	7.05	6.4	.....	.....
17.....	6.3	5.5	5.45	5.5	5.65	5.8	7.4	8.4	7.0	5.9	.....	.....
18.....	6.25	5.45	5.8	5.5	5.6	5.75	7.5	8.35	6.9	5.8	.....	.....
19.....	6.25	5.45	5.6	5.5	5.45	5.85	7.65	8.3	6.85	5.4	.....	.....
20.....	6.15	5.5	5.6	5.3	5.55	6.2	7.85	8.1	6.8	5.5	.....	.....
21.....	6.15	5.5	5.65	5.35	5.5	6.6	8.1	7.95	6.8	5.9	.....	.....
22.....	6.15	5.45	5.75	5.4	5.6	6.4	8.35	7.7	6.45	6.15	.....	.....
23.....	6.1	5.5	5.6	5.4	5.6	6.3	8.5	7.9	6.0	5.8	.....	.....
24.....	6.0	5.5	5.7	5.45	5.55	6.2	8.4	7.95	6.0	5.2	.....	.....
25.....	6.05	5.5	5.65	5.45	5.6	5.8	8.1	7.7	6.0	4.55	.....	.....
26.....	6.05	5.5	5.65	5.65	5.6	6.0	7.9	7.95	6.0	.....	.....	.....
27.....	6.0	5.45	5.45	5.65	5.55	6.0	7.75	8.05	6.0	.....	.....	.....
28.....	5.85	5.4	5.5	5.65	5.6	6.0	7.5	8.05	5.95	.....	.....	.....
29.....	5.85	5.4	5.55	5.55	5.6	6.0	7.4	7.95	5.85	.....	.....	.....
30.....	5.8	5.35	5.5	5.55	.....	5.9	7.7	8.05	5.8	.....	.....	.....
31.....	5.75	.....	5.25	5.45	.....	5.85	.....	8.1	.....	.....	.....	.....
1892-93.												
1.....	.....	.....	.....	5.0	4.95	5.05	.....	6.8	5.9	.....	.....	.....
2.....	.....	.....	.....	.....	4.9	5.05	.....	6.6	5.9	.....	.....	.....
3.....	.....	.....	.....	.....	5.1	5.05	.....	6.9	5.8	.....	.....	.....
4.....	.....	.....	.....	5.05	4.9	5.0	.....	7.4	5.8	.....	.....	.....
5.....	.....	.....	.....	5.15	4.8	5.05	.....	8.1	5.65	.....	.....	.....
6.....	.....	.....	.....	5.05	4.8	5.0	.....	7.85	5.6	.....	.....	.....
7.....	.....	.....	.....	5.04	4.7	4.9	.....	7.25	5.55	.....	.....	.....
8.....	.....	.....	.....	5.05	4.65	.....	.....	6.8	5.5	.....	.....	.....
9.....	.....	.....	.....	5.1	4.65	.....	.....	6.75	5.6	.....	.....	.....
10.....	.....	.....	.....	5.05	5.05	.....	.....	6.8	5.55	.....	.....	.....
11.....	.....	.....	.....	5.1	5.1	.....	.....	6.95	5.5	.....	.....	.....
12.....	.....	.....	.....	5.05	5.05	.....	.....	6.95	5.45	.....	.....	.....
13.....	.....	.....	.....	5.1	4.95	.....	5.7	6.4	5.2	.....	.....	.....
14.....	.....	.....	.....	5.1	5.0	.....	5.8	6.35	5.2	.....	.....	.....
15.....	.....	.....	.....	5.0	5.15	.....	6.1	5.9	5.05	.....	.....	.....
16.....	.....	.....	.....	5.1	5.25	.....	7.1	6.0	5.1	.....	.....	.....
17.....	.....	.....	.....	5.05	5.2	.....	7.05	7.3	5.1	.....	.....	.....
18.....	.....	.....	.....	5.05	5.3	.....	7.0	8.15	5.1	.....	.....	.....
19.....	.....	.....	.....	5.05	5.55	.....	6.0	8.1	5.0	.....	.....	.....
20.....	.....	.....	.....	5.05	5.5	.....	5.8	8.1	4.75	.....	.....	.....
21.....	.....	.....	.....	5.05	5.4	.....	5.6	8.1	4.7	.....	.....	.....
22.....	.....	.....	.....	5.05	5.2	.....	5.4	7.95	4.65	.....	.....	.....
23.....	.....	.....	.....	5.0	5.15	.....	5.05	7.95	4.5	.....	.....	.....
24.....	.....	.....	.....	5.1	5.1	.....	4.85	8.0	4.25	.....	.....	.....
25.....	.....	.....	.....	5.1	5.1	.....	6.1	8.2	4.2	.....	.....	.....
26.....	.....	.....	.....	5.2	5.05	.....	6.1	7.9	4.2	.....	.....	.....
27.....	.....	.....	.....	5.2	5.0	.....	6.0	7.1	4.05	.....	.....	.....
28.....	.....	.....	.....	5.25	5.05	.....	6.3	6.9	4.05	.....	.....	.....
29.....	.....	.....	.....	5.2	.....	.....	6.95	6.6	4.0	.....	.....	.....
30.....	.....	.....	.....	5.1	.....	.....	7.0	6.35	3.9	.....	.....	.....
31.....	.....	.....	.....	5.05	.....	.....	.....	6.05	.....	.....	.....	.....
1895.												
1.....	.....	.....	.....	.....	.....	7.05	7.85	9.6	9.4	7.55	8.95	9.55
2.....	.....	.....	.....	.....	6.25	7.1	8.35	9.65	9.7	8.15	8.85	8.85
3.....	.....	.....	.....	.....	6.05	7.35	8.65	9.8	9.8	8.15	9.85	8.45
4.....	.....	.....	.....	.....	5.75	7.75	8.9	9.8	10.05	7.55	10.95	8.05
5.....	.....	.....	.....	.....	5.7	8.0	8.6	9.55	10.05	7.4	9.85	7.9
6.....	.....	.....	.....	.....	6.5	8.5	8.5	9.45	10.0	7.4	9.8	7.7
7.....	.....	.....	.....	.....	6.5	8.4	8.35	9.2	10.0	7.05	9.65	7.45
8.....	.....	.....	.....	.....	6.95	8.25	8.2	8.85	10.0	6.85	9.1	7.25
9.....	.....	.....	.....	.....	6.65	8.15	8.35	8.65	10.1	7.05	8.75	7.4
10.....	.....	.....	.....	.....	6.6	7.8	8.55	8.4	10.0	7.9	8.55	7.45
11.....	.....	.....	.....	.....	6.45	7.75	8.3	8.25	9.75	9.05	8.85	6.8
12.....	.....	.....	.....	.....	6.55	7.9	8.05	8.2	9.75	9.35	9.1	6.65
13.....	.....	.....	.....	.....	6.5	7.9	7.8	8.2	9.65	10.45	8.95	6.45
14.....	.....	.....	.....	.....	6.55	7.9	7.55	8.4	9.8	11.6	8.4	6.4
15.....	.....	.....	.....	.....	7.05	7.9	8.5	8.55	9.9	12.0	8.35	6.3

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895.												
16.	-----	-----	-----	-----	7.1	7.9	9.0	8.8	10.05	11.75	8.5	6.2
17.	-----	-----	-----	-----	7.55	7.85	9.7	9.1	9.95	9.25	8.75	6.1
18.	-----	-----	-----	-----	6.45	7.75	10.05	9.05	9.8	8.55	8.6	5.95
19.	-----	-----	-----	-----	6.0	7.5	10.25	9.15	9.6	8.15	8.65	5.8
20.	-----	-----	-----	-----	5.75	7.35	10.4	9.2	9.45	7.9	8.6	5.7
21.	-----	-----	-----	-----	5.7	7.15	10.3	9.25	9.2	7.6	8.2	5.65
22.	-----	-----	-----	-----	5.7	6.9	10.3	9.35	9.05	8.05	8.15	5.55
23.	-----	-----	-----	-----	5.6	6.7	10.55	9.3	8.85	8.1	7.65	5.45
24.	-----	-----	-----	-----	5.6	6.5	10.75	9.05	8.7	9.0	7.5	5.35
25.	-----	-----	-----	6.5	6.55	6.3	10.8	9.3	8.55	9.6	8.25	5.3
26.	-----	-----	-----	6.4	7.35	6.15	10.85	9.6	8.35	10.1	7.9	5.3
27.	-----	-----	-----	6.45	6.95	6.0	10.75	9.55	8.1	10.35	7.25	5.15
28.	-----	-----	-----	6.4	7.05	6.0	10.25	9.5	7.85	9.95	7.25	5.1
29.	-----	-----	-----	6.5	-----	5.85	9.8	9.45	8.05	8.9	7.4	5.05
30.	-----	-----	-----	6.6	-----	5.7	9.65	9.3	7.65	8.55	7.4	5.05
31.	-----	-----	-----	6.5	-----	7.4	-----	9.4	-----	8.3	8.25	-----
1895-96.												
1.	5.15	5.45	7.55	5.85	7.3	6.6	6.0	8.65	5.4	5.1	6.7	-----
2.	5.4	5.5	7.55	6.05	7.3	6.7	7.2	8.8	5.35	5.8	6.55	5.7
3.	5.4	5.5	7.5	5.95	7.3	6.85	8.55	8.8	5.35	5.25	6.4	5.25
4.	5.35	5.5	7.45	6.0	7.3	6.9	8.6	8.8	5.3	5.15	6.3	5.25
5.	5.35	5.5	7.35	5.95	7.3	6.8	8.45	8.8	5.3	5.1	6.05	5.05
6.	5.1	5.6	7.2	6.1	7.3	6.7	8.35	8.8	5.25	5.1	5.35	4.8
7.	5.1	5.6	7.1	6.2	7.35	6.7	8.15	8.8	5.2	4.9	5.55	-----
8.	5.05	5.7	6.9	6.3	7.5	6.7	7.9	8.7	5.25	-----	5.45	-----
9.	5.1	5.85	6.9	6.3	7.45	6.75	7.7	8.5	5.15	-----	5.35	-----
10.	5.1	5.9	6.95	6.25	7.35	7.7	7.55	8.5	5.15	-----	5.35	-----
11.	5.05	6.0	7.05	6.15	7.25	7.35	7.45	8.65	5.15	-----	5.25	-----
12.	5.1	6.3	7.0	6.4	7.2	7.3	7.3	8.75	4.95	-----	5.25	-----
13.	5.1	6.3	6.9	6.4	7.1	7.1	7.5	8.85	5.05	-----	5.2	-----
14.	5.1	6.4	6.8	7.35	7.1	7.0	8.05	8.75	5.1	-----	5.2	-----
15.	5.0	6.55	6.8	7.4	7.05	6.8	8.95	8.65	5.0	-----	5.0	-----
16.	5.0	6.6	6.8	7.4	7.2	6.5	8.9	8.55	4.8	-----	4.9	-----
17.	5.0	6.6	6.85	7.6	7.1	6.4	8.65	8.35	4.45	5.15	4.75	-----
18.	5.6	6.7	7.0	7.4	7.0	6.3	8.5	8.1	4.3	8.38	4.6	-----
19.	5.6	6.9	6.95	7.45	6.9	6.2	8.45	8.0	4.1	7.35	4.6	-----
20.	5.55	6.9	6.95	7.5	6.95	6.1	8.45	7.85	3.8	7.25	4.4	-----
21.	5.5	6.9	7.0	7.45	7.15	6.1	8.65	7.65	-----	7.1	4.3	-----
22.	5.5	6.9	7.25	7.3	7.25	6.1	8.9	7.3	-----	7.9	4.6	-----
23.	5.45	6.9	7.3	7.3	7.2	6.05	8.8	7.15	-----	7.7	4.4	5.5
24.	5.35	7.0	7.3	7.25	7.05	6.35	8.6	7.0	-----	9.6	-----	5.7
25.	5.25	7.0	7.25	7.35	7.0	6.75	8.4	6.85	-----	8.7	-----	7.35
26.	5.2	7.05	7.6	7.25	7.0	6.65	8.5	6.65	-----	8.2	-----	6.8
27.	5.2	7.4	7.4	7.3	7.0	6.35	8.45	6.45	-----	7.55	-----	6.2
28.	5.2	7.7	7.2	7.2	6.8	6.2	8.5	6.15	-----	7.1	-----	6.05
29.	5.2	7.75	7.15	7.2	6.7	6.1	8.55	5.95	-----	7.2	-----	6.0
30.	5.3	7.65	6.35	7.1	-----	6.0	8.55	5.7	-----	7.1	-----	5.75
31.	5.4	-----	6.1	7.35	-----	5.9	-----	5.45	-----	7.0	-----	-----
1896-97.												
1.	5.55	7.25	6.55	6.6	6.9	6.3	6.05	11.3	12.7	10.3	6.2	-----
2.	7.05	7.15	6.6	6.6	6.9	6.3	6.0	11.4	12.6	9.9	6.1	-----
3.	7.6	6.9	6.6	6.7	6.8	6.2	5.9	11.5	12.8	9.0	5.95	-----
4.	7.5	6.8	6.6	6.7	6.8	6.2	6.75	11.4	12.6	8.6	5.8	-----
5.	8.0	6.7	6.5	6.75	6.8	6.2	7.8	11.35	12.55	8.2	5.8	6.1
6.	7.45	6.65	6.5	6.8	6.8	6.15	7.5	11.4	12.55	8.2	5.7	5.95
7.	7.5	6.6	6.5	7.2	6.85	6.1	7.05	11.5	12.25	7.7	9.0	5.9
8.	7.3	6.6	6.6	6.95	6.8	6.0	7.0	12.0	11.95	7.55	5.6	6.4
9.	7.05	6.5	6.55	6.65	6.7	6.0	7.0	12.65	11.7	7.3	5.6	6.1
10.	7.4	6.4	6.55	6.45	6.75	5.9	7.0	13.4	11.05	7.6	5.6	6.6
11.	7.2	6.35	6.5	6.45	6.85	5.9	7.0	12.65	10.65	8.4	5.5	6.6
12.	7.0	6.3	6.4	6.2	6.85	5.8	7.95	11.75	10.3	7.9	5.4	6.7
13.	6.9	6.2	6.35	6.2	6.8	5.85	8.5	11.55	10.25	7.9	5.8	7.05
14.	7.0	6.1	6.4	6.2	6.8	6.35	8.4	11.7	10.15	7.9	5.8	7.4
15.	8.65	6.1	6.5	6.2	6.9	6.2	8.3	11.95	9.9	7.95	5.6	7.3
16.	10.15	6.1	6.4	6.2	6.85	6.2	8.3	12.05	10.1	7.85	5.7	9.1
17.	10.6	6.1	6.4	7.5	6.8	6.1	8.5	12.35	10.1	7.55	5.5	8.9
18.	10.55	6.1	6.35	8.25	6.8	6.05	8.6	12.35	10.15	7.45	5.5	8.6
19.	8.75	6.1	6.5	8.0	6.75	6.0	8.6	12.2	10.15	7.5	7.2	8.7
20.	8.15	6.1	6.7	7.6	6.7	6.0	8.8	12.1	10.1	7.2	6.8	8.1

a Location of gaging station changed.

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
21	7.75	6.1	6.7	7.35	6.6	6.0	9.05	12.6	10.05	6.9	6.5	7.9
22	7.65	6.1	6.7	7.3	6.6	6.35	9.15	12.8	9.75	7.2	6.4	7.5
23	7.55	6.1	6.7	7.2	6.5	6.3	9.8	13.25	9.55	7.7	6.1	7.2
24	7.3	6.1	6.7	7.2	6.5	6.2	10.05	13.8	9.2	6.9	5.9	7.0
25	7.75	6.3	6.65	7.2	6.45	6.0	10.15	14.15	8.8	6.75	5.7	6.7
26	8.1	6.3	6.7	7.1	6.5	5.85	10.25	14.45	8.35	6.7	5.5	6.5
27	8.0	6.4	.....	7.0	6.4	5.75	10.45	15.3	8.2	7.3	.....	6.7
28	8.2	6.6	.....	6.9	6.35	5.75	10.5	14.2	8.05	6.4	.....	7.15
29	7.7	6.55	.....	6.75	.....	5.6	10.45	13.35	8.05	6.3	.....	7.85
30	7.45	6.5	.....	6.8	.....	5.8	10.4	12.9	9.3	6.25	.....	8.35
31	7.25	.....	.....	6.8	.....	6.0	.....	12.7	.....	6.2	.....	.....
1897-98.												
1	7.85	8.9	8.1	.....	6.85	7.45	6.3	10.9	7.5	9.5	7.5	5.55
2	7.4	8.7	8.0	.....	7.05	7.35	6.3	11.0	7.5	9.5	7.5	5.4
3	7.0	8.6	8.0	.....	7.3	7.45	6.1	11.3	7.55	9.4	7.3	5.4
4	6.65	8.5	7.95	.....	8.05	7.35	5.95	11.3	7.95	9.45	7.05	5.35
5	6.45	8.45	7.85	.....	8.3	7.55	5.75	10.95	8.2	9.3	7.35	5.3
6	6.35	8.4	7.85	.....	8.05	7.25	5.55	10.7	8.7	10.6	7.15	5.2
7	6.15	8.4	7.7	.....	7.9	7.3	5.4	10.2	9.4	10.6	7.1	5.25
8	7.0	8.35	7.55	.....	8.1	7.2	5.4	9.8	9.25	9.65	7.05	5.25
9	10.15	8.4	7.7	.....	8.1	7.3	5.3	9.55	9.25	9.6	8.05	5.2
10	9.55	8.4	7.9	.....	7.8	7.3	5.3	9.4	9.9	9.75	7.5	5.15
11	9.45	8.4	8.0	.....	7.55	7.5	5.3	9.4	10.1	9.55	7.5	5.2
12	10.6	8.4	7.75	.....	7.5	7.6	5.2	9.35	10.05	10.0	7.1	4.95
13	11.15	8.4	7.35	.....	7.8	7.5	5.1	9.1	9.9	9.6	8.45	4.75
14	10.0	8.25	7.4	.....	7.7	7.45	5.1	8.95	9.8	9.3	7.95	4.55
15	9.2	8.1	7.35	.....	7.65	7.5	5.2	9.0	9.8	9.15	7.55	5.85
16	8.9	8.1	7.4	.....	7.7	7.4	6.75	9.0	9.5	9.05	7.25	5.65
17	8.65	7.95	7.4	.....	7.75	7.55	8.55	9.05	9.35	10.6	7.0	5.45
18	8.75	8.0	7.8	.....	7.55	7.8	8.75	9.1	9.25	11.7	6.65	5.35
19	8.7	8.15	7.75	.....	7.4	7.7	9.15	9.1	9.15	13.55	6.55	5.25
20	8.6	8.1	7.55	.....	7.35	7.45	9.6	9.1	8.85	13.65	6.35	5.1
21	8.6	8.15	7.25	.....	7.3	7.25	9.95	9.05	8.7	13.0	6.15	5.05
22	8.55	8.05	7.0	.....	7.2	7.1	10.4	8.9	8.7	10.95	6.0	4.9
23	8.6	8.1	7.2	.....	7.1	7.0	10.5	8.75	8.8	9.75	6.0	4.8
24	8.85	8.05	7.35	.....	7.1	6.9	10.8	8.65	8.95	9.1	6.0	4.7
25	8.8	7.95	7.5	.....	7.15	6.9	10.7	8.45	9.65	9.05	5.9	4.6
26	8.7	7.85	7.5	.....	7.7	6.75	10.6	8.3	9.8	8.9	5.85	4.55
27	8.7	7.95	7.4	.....	7.65	6.6	10.8	8.25	9.6	8.4	5.7	4.5
28	8.8	7.95	7.5	.....	7.55	6.5	10.7	8.05	9.6	8.3	5.75	4.45
29	8.8	8.1	7.6	.....	.....	6.4	10.7	7.8	9.65	7.95	6.15	4.4
30	8.8	8.0	7.35	.....	.....	6.3	10.75	7.55	9.65	7.9	5.95	4.3
31	8.7	.....	7.2	.....	.....	6.3	.....	7.5	.....	7.8	5.75	.....
1898-99.												
1	4.2	4.0	4.1	6.15	6.1	6.25	6.05	7.45	.....	.....	5.7	.....
2	4.2	4.0	4.4	6.2	6.1	6.15	5.5	7.6	.....	.....	5.0	.....
3	4.2	4.0	4.65	6.4	6.0	6.2	5.05	7.5	.....	.....	5.0	.....
4	4.2	4.0	4.7	6.4	6.0	6.15	5.05	7.4	.....	.....	4.9	.....
5	4.2	4.0	4.95	6.25	5.9	6.2	5.05	7.3	.....	.....	4.85	.....
6	4.2	4.0	5.3	6.15	6.25	6.2	5.0	7.1	.....	.....	4.65	.....
7	4.2	4.0	5.5	6.1	6.5	6.25	4.95	6.85	.....	.....	4.45	.....
8	4.2	4.0	5.6	6.1	6.3	6.3	5.1	6.85	.....	.....	4.15	.....
9	4.2	4.0	5.6	6.1	6.4	6.2	5.25	6.55	.....	.....	.....	.....
10	4.2	4.0	5.6	6.1	6.4	6.1	5.4	6.3	.....	.....	.....	.....
11	4.2	4.0	5.6	6.0	6.4	6.0	5.5	6.0	.....	.....	.....	.....
12	4.2	4.0	5.6	6.0	6.3	5.9	5.4	5.85	.....	.....	.....	.....
13	4.2	4.0	5.6	5.9	5.9	5.8	5.25	5.65	.....	.....	.....	.....
14	4.2	4.0	5.7	5.9	6.2	5.8	5.2	5.7	.....	.....	.....	.....
15	4.2	4.0	5.55	5.9	6.0	5.75	5.1	5.55	.....	.....	.....	.....
16	4.2	4.0	5.4	5.9	6.0	5.7	5.1	5.4	.....	.....	.....	.....
17	4.2	4.0	5.3	6.2	6.0	5.65	5.1	5.5	.....	.....	.....	.....
18	4.2	4.0	5.35	6.4	6.05	5.6	4.9	5.15	.....	4.45	.....	.....
19	4.2	4.0	5.5	6.4	6.2	5.6	4.9	4.95	.....	5.35	.....	.....
20	4.1	4.0	5.4	6.4	6.1	5.7	4.9	4.85	.....	6.6	.....	.....
21	4.1	4.0	5.4	6.3	6.2	5.8	4.95	4.8	.....	7.9	.....	.....
22	4.1	4.0	5.3	6.3	6.5	5.8	5.0	4.7	.....	9.05	.....	.....
23	4.0	4.0	5.3	6.1	6.55	5.65	5.35	4.6	.....	9.05	.....	.....
24	4.0	4.0	5.35	6.2	6.35	5.6	7.45	4.6	.....	8.4	.....	.....
25	4.0	4.0	5.3	6.25	6.3	5.6	7.6	4.6	.....	8.2	.....	.....

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
26	4.0	4.0	6.15	6.35	6.3	5.45	7.5	4.6	-----	7.85	-----	-----
27	4.0	4.1	6.15	6.3	6.25	5.45	7.3	4.6	-----	7.55	-----	-----
28	4.0	4.1	5.95	6.2	6.2	5.5	7.2	4.6	-----	6.9	-----	-----
29	4.0	4.1	5.85	6.2	-----	5.4	7.3	4.6	-----	6.7	-----	-----
30	4.0	4.1	5.95	6.1	-----	5.4	7.3	4.55	-----	6.65	-----	-----
31	4.0	-----	6.0	6.1	-----	5.75	-----	4.5	-----	6.35	-----	-----
1899-1900.												
1	-----	-----	-----	5.4	5.5	5.15	4.3	4.3	9.65	5.1	-----	-----
2	-----	-----	-----	5.4	5.4	4.9	4.3	4.3	9.65	5.0	-----	-----
3	-----	-----	-----	5.4	5.4	4.65	4.3	4.3	10.05	5.0	-----	-----
4	-----	-----	-----	5.4	5.4	4.35	4.3	4.3	10.3	5.0	-----	-----
5	-----	-----	4.3	5.45	5.4	-----	4.3	4.3	10.4	5.0	-----	-----
6	-----	-----	4.4	5.45	5.4	-----	4.3	-----	10.45	5.0	-----	-----
7	-----	-----	4.5	5.4	5.5	-----	4.3	-----	10.45	5.0	-----	-----
8	-----	-----	4.5	5.4	5.5	-----	4.3	-----	10.4	-----	-----	-----
9	-----	-----	4.5	5.45	5.5	-----	4.3	-----	10.4	-----	-----	8.0
10	-----	-----	4.5	5.65	5.55	-----	4.3	-----	10.35	-----	-----	5.9
11	-----	-----	4.5	5.8	5.6	-----	4.3	-----	10.1	-----	-----	5.1
12	-----	-----	4.75	5.75	5.6	-----	4.3	-----	9.75	-----	-----	6.15
13	-----	-----	5.1	6.45	5.6	-----	4.3	-----	9.4	-----	-----	9.1
14	-----	-----	5.4	6.35	5.6	-----	4.3	-----	9.3	-----	-----	8.35
15	-----	-----	5.4	6.3	5.5	-----	4.3	-----	9.25	-----	-----	7.85
16	-----	-----	5.3	6.15	5.5	-----	4.3	-----	9.15	-----	-----	7.75
17	-----	-----	5.2	5.95	5.5	-----	4.3	6.8	8.45	-----	-----	8.5
18	-----	-----	5.1	5.85	5.9	-----	4.3	7.55	8.3	-----	-----	7.75
19	-----	-----	5.1	5.7	5.8	-----	4.3	7.65	7.9	-----	-----	7.05
20	-----	-----	5.1	5.6	5.7	-----	4.3	7.65	7.6	-----	-----	6.35
21	-----	-----	5.1	5.6	5.55	-----	4.3	7.65	7.35	-----	-----	6.3
22	-----	-----	5.15	5.5	5.4	-----	4.3	7.55	7.0	-----	-----	6.15
23	-----	-----	5.2	5.5	5.4	-----	4.3	7.4	6.75	-----	-----	6.2
24	-----	-----	5.2	5.6	5.35	4.65	4.3	8.25	6.45	-----	-----	5.6
25	-----	-----	5.2	5.6	5.3	4.55	4.3	9.8	6.25	-----	-----	5.5
26	-----	-----	5.3	5.6	5.4	4.4	4.3	9.3	6.05	-----	-----	5.4
27	-----	-----	5.25	5.6	5.4	4.3	4.3	9.25	5.9	-----	-----	5.4
28	-----	-----	5.4	5.6	5.4	4.3	4.3	9.2	5.75	-----	-----	5.25
29	-----	-----	5.5	5.55	-----	4.3	4.3	9.1	5.55	-----	-----	5.1
30	-----	-----	5.4	5.5	-----	4.3	4.3	9.3	5.3	-----	-----	5.0
31	-----	-----	5.4	5.5	-----	4.3	-----	9.4	-----	-----	-----	-----
1900-1901.												
1	-----	-----	-----	5.0	4.7	7.1	4.7	5.95	10.5	4.9	10.2	5.6
2	-----	-----	-----	5.0	4.7	6.7	4.7	8.35	10.5	4.9	10.05	5.25
3	-----	-----	-----	5.0	5.25	6.35	4.7	8.95	10.5	4.9	9.85	5.05
4	-----	-----	-----	5.05	5.7	6.15	4.7	9.1	10.5	4.9	8.85	5.0
5	-----	-----	-----	5.15	5.7	5.85	4.7	9.6	10.65	4.9	8.35	5.0
6	-----	-----	-----	5.1	5.7	5.7	4.7	10.1	10.8	4.9	7.9	5.0
7	-----	-----	-----	4.9	5.7	5.5	4.7	10.35	10.3	4.9	7.5	4.9
8	-----	-----	-----	4.9	5.6	5.4	4.7	10.35	9.9	4.9	6.9	4.9
9	-----	-----	-----	4.9	5.6	5.3	4.7	10.05	9.35	4.9	6.6	4.9
10	-----	-----	-----	4.9	5.6	5.2	4.7	9.95	9.1	4.9	9.05	4.95
11	-----	-----	-----	4.9	5.6	5.05	4.7	9.9	8.95	4.9	9.15	5.6
12	-----	-----	-----	4.9	5.5	4.9	4.7	9.75	8.85	4.9	9.0	7.65
13	-----	-----	-----	4.9	5.5	4.8	4.7	9.6	8.65	4.9	8.7	10.1
14	-----	-----	-----	4.9	5.7	4.7	4.7	9.7	8.35	4.9	8.25	9.4
15	-----	-----	-----	4.9	5.9	4.95	4.7	9.8	8.25	4.9	7.9	9.05
16	-----	-----	-----	4.9	6.25	5.35	4.7	9.9	8.2	4.9	7.45	8.5
17	-----	-----	-----	4.9	6.15	5.5	4.7	10.1	8.4	4.9	7.2	7.6
18	-----	-----	-----	4.9	5.95	5.65	4.7	10.2	8.1	4.9	6.9	7.25
19	-----	-----	-----	4.9	5.8	5.55	4.7	10.25	8.0	4.9	6.5	6.95
20	-----	-----	-----	4.9	5.65	5.4	4.7	10.45	7.5	4.9	6.4	6.6
21	-----	-----	-----	4.9	5.6	5.25	4.7	10.55	7.1	4.9	6.35	6.2
22	-----	-----	5.05	4.9	5.5	4.95	4.7	10.55	6.7	4.9	7.9	5.85
23	-----	-----	5.4	4.9	5.5	4.9	4.7	10.5	6.4	4.9	10.05	5.45
24	-----	-----	5.4	4.9	5.5	4.7	4.7	10.5	6.1	4.9	9.25	5.1
25	-----	-----	5.4	4.9	5.4	4.7	4.7	10.5	5.9	4.9	8.4	5.0
26	-----	-----	5.4	4.9	5.3	4.7	4.7	10.6	5.65	4.9	8.0	4.9
27	-----	-----	5.4	4.7	5.2	4.7	4.7	10.6	5.6	4.9	7.4	4.9
28	-----	-----	5.35	4.7	6.7	4.7	4.7	10.85	5.45	8.7	7.1	4.9
29	-----	-----	5.15	4.7	-----	4.7	4.7	11.0	5.25	8.15	6.7	4.9
30	-----	-----	5.1	4.7	-----	4.7	4.7	11.0	5.05	9.4	6.4	4.9
31	-----	-----	5.1	4.7	-----	4.7	-----	10.65	-----	10.0	6.0	-----

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
6.	3.8	3.4	3.4	3.6	3.5							6.1
7.	3.8	3.4	3.4	3.6	3.4							5.55
8.	3.7	3.4	3.4	3.6	3.4							4.9
9.	3.7	3.4	3.5	3.5	3.4						4.35	4.8
10.	3.6	3.4	3.7	3.4	3.4						5.6	4.7
11.	3.5	3.4	3.8	3.4	3.4						5.4	4.35
12.	3.5	3.4	3.9	3.4	3.4						5.35	4.2
13.	3.4	3.4	3.9	3.4	3.4						5.15	4.2
14.	3.4	3.4	3.95	3.4	3.4						4.85	5.3
15.	3.4	3.4	4.0	3.4	3.4						4.65	5.25
16.	3.4	3.4	4.0	3.4	3.4						4.35	4.5
17.	3.4	3.4	4.0	3.4	3.4						4.1	4.35
18.	3.4	3.4	4.0	3.4	3.4						3.85	4.05
19.	3.4	3.4	4.0	3.4	3.4						3.65	3.9
20.	3.4	3.4	4.0	3.4	3.4						3.55	3.7
21.	3.4	3.4	4.1	3.4	3.4						3.4	3.6
22.	3.4	3.4	4.1	3.4	3.4						3.25	3.6
23.	3.4	3.4	4.0	3.4	3.4						3.2	4.3
24.	3.4	3.4	4.0	3.4	3.4						3.6	4.6
25.	3.4	3.4	4.0	3.4	3.4						4.3	4.4
26.	3.4	3.4	3.95	3.4	3.4						4.8	4.4
27.	3.4	3.4	3.9	3.5	3.4						5.35	4.7
28.	3.4	3.4	3.95	3.6	3.4						5.0	5.35
29.	3.4	3.4	4.1	3.6	3.4						5.0	5.8
30.	3.4	3.4	4.05	3.6							5.1	6.05
31.	3.4		4.05	3.6							5.35	
1904-5.												
1.	7.45	7.9	6.8	6.4	6.5	9.05	9.6	11.55	16.05	9.35	6.5	5.45
2.	9.55	7.8	6.8	6.4	6.55	9.2	9.9	11.4	16.1	9.15	6.4	5.4
3.	10.8	7.65	6.8	6.4	6.55	9.15	9.85	11.6	15.95	8.9	6.35	5.4
4.	11.55	7.6	6.8	6.3	6.5	9.4	9.65	11.7	15.4	8.7	6.3	5.4
5.	12.1	7.45	6.8	6.25	6.5	9.7	9.7	12.15	14.95	8.6	6.3	5.4
6.	12.75	7.4	7.45	6.25	6.5	9.6	9.9	12.45	14.25	8.45	6.4	5.4
7.	11.5	7.4	7.6	6.3	6.6	9.95	9.6	12.9	13.85	8.2	7.3	5.4
8.	11.1	7.3	7.6	6.3	6.6	9.95	9.25	13.3	13.85	8.05	7.15	5.4
9.	12.55	7.2	7.55	6.3	6.7	10.1	8.9	13.5	14.75	7.85	6.95	5.4
10.	13.3	7.1	7.5	6.85	7.25	10.8	8.85	12.9	14.5	7.65	7.05	5.3
11.	13.15	7.0	7.3	7.2	8.05	10.8	9.0	11.75	14.5	7.6	7.0	5.3
12.	13.4	7.0	7.2	7.2	7.65	10.8	9.2	11.5	14.9	7.6	7.65	5.9
13.	13.6	7.0	7.0	8.05	7.3	10.4	9.75	11.65	14.75	7.45	7.4	5.95
14.	13.9	7.0	7.0	7.7	7.0	10.05	10.35	12.05	14.9	7.3	6.95	5.9
15.	13.95	6.95	6.8	7.5	6.8	9.9	10.8	12.2	14.85	7.2	6.8	5.9
16.	11.35	6.9	6.7	7.4	6.8	9.9	10.85	12.05	14.85	7.1	6.65	5.8
17.	10.35	6.9	6.65	7.3	6.7	9.9	10.6	11.9	14.35	7.0	6.5	5.7
18.	9.85	6.95	6.6	7.2	6.45	9.7	10.6	12.05	13.9	6.9	6.4	5.6
19.	9.55	6.9	6.6	7.0	7.2	9.7	10.55	12.2	13.35	6.8	6.3	5.55
20.	9.25	6.8	6.6	7.0	8.05	10.1	10.35	12.35	12.8	6.75	6.2	5.5
21.	9.05	6.65	6.6	6.95	7.95	10.3	10.3	12.7	12.4	6.7	6.2	5.4
22.	8.8	6.6	6.6	6.7	7.6	10.3	10.3	13.3	12.0	6.7	6.05	5.35
23.	8.65	6.65	6.5	6.6	7.75	10.05	10.7	13.9	11.85	6.9	6.0	5.25
24.	8.5	6.7	6.5	6.4	7.65	9.75	11.0	14.3	11.4	6.95	6.0	5.2
25.	8.65	6.8	6.5	6.4	7.45	9.55	11.35	14.65	11.1	6.8	5.95	5.2
26.	8.35	6.9	6.5	6.55	7.5	9.55	12.15	15.0	10.7	6.65	5.8	5.2
27.	8.15	6.9	6.55	6.75	7.65	9.75	13.0	15.3	10.5	6.6	5.8	5.2
28.	8.0	6.9	6.4	6.7	8.05	9.6	13.1	15.55	10.15	6.7	5.75	5.8
29.	8.0	6.9	6.55	6.6		9.45	12.9	15.75	9.9	6.8	5.6	6.25
30.	8.0	6.8	6.55	6.5		9.3	12.15	15.9	9.6	6.55	5.55	6.05
31.	7.9		6.4	6.5		9.3		15.9		6.5	5.5	
1905-6.												
1.	6.65	5.5	7.75	6.15	6.9	7.0	8.4	10.0	11.4	9.1	8.0	6.5
2.	6.4	5.6	7.65	6.05	6.95	7.0	8.25	9.8	10.95	8.9	8.2	6.25
3.	6.25	5.6	8.2	6.0	7.0	7.0	8.05	9.8	10.7	8.7	8.7	6.05
4.	6.1	5.65	7.9	5.95	7.0	7.0	8.2	9.65	10.55	8.4	9.35	5.9
5.	6.0	5.7	7.55	5.9	6.95	6.9	8.1	9.45	10.45	8.55	9.8	5.75
6.	6.0	5.7	7.25	6.0	7.0	6.85	7.5	9.3	10.3	8.6	8.7	5.65
7.	5.9	5.85	7.1	6.0	7.05	6.85	7.5	9.35	10.0	8.55	8.4	5.6
8.	5.8	6.0	7.0	6.0	6.95	6.9	7.8	9.3	9.85	8.9	8.1	5.45
9.	5.8	6.05	6.9	6.0	6.95	7.25	7.7	9.5	9.9	9.05	8.25	5.4
10.	5.65	6.2	6.8	6.0	7.2	7.05	7.6	9.95	9.95	9.1	8.6	5.3

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
11.....	5.6	6.3	6.85	6.15	7.3	6.85	7.55	10.35	10.0	9.2	8.55	5.15
12.....	5.6	6.35	7.0	6.2	7.25	6.7	7.6	10.55	10.15	9.35	8.05	5.1
13.....	5.55	6.65	7.05	6.3	7.2	6.7	8.05	10.6	10.25	9.2	7.95	5.1
14.....	5.5	6.7	7.05	6.3	7.4	6.7	8.2	11.0	10.65	8.85	7.9	5.05
15.....	5.45	6.7	7.0	6.3	7.4	6.7	8.05	11.4	10.8	8.75	7.7	5.0
16.....	5.4	6.7	7.0	6.3	7.4	6.7	8.3	11.7	10.95	8.65	7.4	5.0
17.....	5.4	6.7	7.1	6.3	7.55	6.8	8.55	11.9	11.2	8.75	7.15	4.95
18.....	5.4	6.7	7.0	7.2	7.5	6.7	8.35	11.95	11.35	8.85	6.9	4.95
19.....	5.4	6.6	7.15	7.15	7.45	7.2	8.1	11.65	11.45	9.15	6.65	4.95
20.....	5.3	6.6	7.05	7.35	7.3	7.3	8.05	11.55	11.55	8.75	6.9	4.95
21.....	5.3	6.6	7.0	7.6	7.3	7.25	8.2	11.6	11.65	8.9	6.7	4.95
22.....	5.3	6.55	6.95	7.85	7.2	7.3	8.6	11.65	11.85	8.8	6.8	4.9
23.....	5.3	6.55	6.85	7.8	7.2	7.15	8.7	11.75	11.45	8.9	7.4	5.15
24.....	5.4	6.6	6.9	7.75	7.1	6.95	8.9	12.05	11.3	8.8	6.55	5.1
25.....	5.4	6.8	6.95	7.5	7.1	6.8	8.8	12.2	10.9	8.4	6.45	5.0
26.....	5.4	6.9	6.9	7.35	7.05	6.8	8.8	12.35	10.6	8.2	6.2	4.9
27.....	5.4	7.8	6.8	7.05	7.1	6.7	9.2	12.5	10.2	8.1	6.0	4.85
28.....	5.4	8.25	6.55	7.0	7.0	6.7	9.5	12.5	9.8	8.1	6.05	4.85
29.....	5.4	8.75	6.3	7.0	-----	6.6	9.9	12.45	9.5	8.0	7.1	5.8
30.....	5.45	8.3	6.3	7.0	-----	6.65	10.0	12.4	9.35	7.95	7.25	5.9
31.....	5.5	-----	6.2	6.95	-----	7.5	-----	11.9	-----	7.9	6.8	-----
1906-7.												
1.....	8.45	7.4	8.05	7.85	7.7	7.95	8.9	9.45	12.65	10.95	9.3	10.8
2.....	7.6	7.4	8.1	7.95	7.8	7.9	8.8	9.7	12.3	10.9	9.1	13.0
3.....	7.3	7.6	8.1	7.9	7.85	8.0	8.65	10.4	12.0	10.8	9.1	13.45
4.....	7.3	7.9	8.2	8.0	7.9	8.05	8.5	10.4	11.6	10.9	8.95	11.55
5.....	7.15	7.85	10.2	7.8	7.9	7.85	8.5	10.3	11.35	11.1	8.9	10.3
6.....	7.1	7.85	9.6	7.7	7.95	7.85	8.45	10.0	10.75	11.2	9.15	10.3
7.....	7.3	7.9	8.7	7.55	8.25	7.7	8.3	9.9	10.9	11.2	9.05	9.95
8.....	7.4	8.1	8.45	7.5	8.2	7.7	8.25	9.95	11.2	11.3	9.2	9.6
9.....	7.45	8.2	8.85	7.5	8.1	7.7	8.35	9.9	11.5	11.3	8.95	9.8
10.....	7.5	8.15	8.8	7.45	7.9	7.55	8.5	9.85	11.6	11.3	8.9	9.3
11.....	7.5	8.1	8.5	7.45	7.9	7.5	8.45	9.6	11.75	11.05	8.8	9.0
12.....	7.4	8.1	8.4	7.7	8.05	7.6	8.4	9.5	11.7	10.95	8.55	8.75
13.....	7.4	8.1	8.3	7.85	7.95	7.55	8.25	9.45	11.9	11.0	8.4	8.6
14.....	7.3	8.1	8.3	7.95	8.0	7.65	8.2	9.15	11.85	10.75	8.3	8.6
15.....	7.15	8.0	8.3	8.05	7.9	7.9	8.25	9.2	11.8	10.8	8.3	8.5
16.....	7.2	7.95	8.2	8.05	7.75	7.9	8.55	9.3	11.7	10.6	8.1	8.35
17.....	7.15	7.85	8.2	8.05	7.9	7.9	9.6	9.4	11.95	10.45	7.9	8.3
18.....	7.05	7.95	8.1	8.9	7.85	7.95	10.4	9.7	11.9	10.3	7.8	8.5
19.....	7.0	8.0	8.0	8.4	7.8	7.7	11.0	9.8	11.9	10.25	7.8	8.35
20.....	6.95	8.1	8.0	8.15	7.7	7.45	11.3	9.8	12.25	10.3	8.15	8.75
21.....	7.05	8.1	7.8	8.15	7.7	7.45	11.2	9.7	12.3	10.4	7.95	8.8
22.....	6.8	8.05	7.8	8.1	7.65	7.35	11.05	9.9	12.5	10.25	8.3	10.15
23.....	6.9	7.9	7.55	8.0	7.6	7.3	11.4	10.2	12.5	10.1	8.7	13.5
24.....	7.0	7.95	7.35	7.9	7.8	7.4	11.05	10.55	13.05	10.05	8.85	10.9
25.....	7.3	8.0	7.8	7.8	7.75	7.6	10.55	11.15	12.55	9.85	9.8	9.5
26.....	7.35	7.8	7.2	7.75	7.9	8.75	10.0	11.8	12.1	9.5	9.25	8.8
27.....	7.55	7.6	7.3	7.65	7.9	8.95	9.95	12.15	11.85	9.4	9.35	8.45
28.....	7.6	7.4	7.25	7.5	7.85	9.2	9.9	12.2	11.6	9.6	8.9	8.1
29.....	7.5	7.5	7.75	7.6	-----	9.15	9.75	12.55	11.3	9.4	10.5	7.85
30.....	7.2	7.8	7.7	7.6	-----	8.95	9.5	12.7	11.0	9.4	11.15	7.8
31.....	7.25	-----	7.8	7.7	-----	8.95	-----	12.7	-----	10.2	10.85	-----
1907-8.												
1.....	7.65	8.35	7.9	8.0	7.7	8.2	8.0	9.3	9.15	6.6	8.4	9.35
2.....	7.6	8.25	7.9	7.75	7.8	8.4	8.0	8.95	8.8	6.35	8.0	8.6
3.....	7.6	8.1	7.8	7.7	7.8	8.3	8.2	8.9	8.6	6.25	7.65	8.05
4.....	7.6	8.3	7.8	7.8	7.85	8.0	8.25	8.9	8.5	-----	8.0	9.7
5.....	7.6	8.05	7.85	7.95	8.0	8.0	8.0	8.8	8.5	-----	8.0	9.65
6.....	7.65	8.0	7.95	8.2	8.0	8.2	7.95	8.7	8.35	-----	8.7	8.1
7.....	7.6	7.95	7.9	8.2	8.1	8.3	7.85	9.2	8.3	-----	9.25	7.65
8.....	7.6	7.9	7.9	8.05	8.0	8.3	7.75	10.05	8.4	6.7	9.25	7.6
9.....	7.5	7.9	7.9	8.15	7.9	8.3	7.6	9.75	8.35	6.4	8.55	7.35
10.....	7.35	7.85	7.9	8.1	7.9	8.2	7.5	9.35	8.35	6.25	8.05	7.15
11.....	7.35	7.9	7.9	7.9	7.9	8.2	7.7	9.25	8.2	6.65	7.6	7.0
12.....	7.35	7.95	7.9	8.05	8.15	8.2	7.75	9.15	8.1	6.3	9.0	6.85
13.....	7.35	7.9	7.9	8.1	8.0	8.25	8.1	8.75	8.05	6.3	9.3	6.65
14.....	7.35	7.85	7.8	7.95	7.9	8.4	8.25	9.0	7.75	6.3	8.65	6.4
15.....	7.4	7.8	7.8	7.9	7.9	8.05	8.55	9.1	7.5	6.2	8.75	6.2

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
16.....	7.5	7.9	7.95	7.65	7.9	8.05	8.5	9.1	7.45	.....	8.7	6.5
17.....	7.65	8.0	7.9	7.7	7.9	7.9	8.7	9.15	7.45	.....	8.9	6.4
18.....	7.7	7.9	7.9	7.7	8.0	7.7	8.9	9.2	7.4	.....	10.1	6.3
19.....	7.65	7.95	7.85	7.8	8.0	7.55	9.1	9.1	7.45	.....	9.95	6.15
20.....	7.7	8.1	7.95	7.7	8.1	7.45	9.1	8.85	8.5	8.15	9.45	.....
21.....	7.8	8.2	7.95	7.75	7.95	7.3	10.0	8.7	8.45	8.9	9.1	.....
22.....	8.05	8.25	7.9	7.8	7.85	8.35	10.6	9.0	8.6	8.55	8.85	.....
23.....	7.85	8.1	7.7	7.8	7.9	9.0	10.3	9.3	8.4	9.15	8.5	.....
24.....	7.95	8.1	7.7	7.95	7.85	9.0	10.0	9.7	8.3	8.25	8.6	.....
25.....	8.5	8.0	7.65	8.0	8.0	8.8	9.7	10.3	8.1	7.85	8.15	.....
26.....	9.1	8.1	7.65	7.85	8.1	8.65	9.6	10.25	7.9	7.4	8.55	.....
27.....	8.55	8.1	7.65	7.9	7.95	8.6	9.7	10.15	7.75	7.9	9.95	.....
28.....	9.25	7.95	7.6	7.75	7.9	8.4	9.7	10.1	7.6	7.65	9.55	.....
29.....	9.0	7.95	7.6	7.8	8.0	8.3	9.5	9.75	7.35	7.95	8.95	.....
30.....	8.6	8.0	7.65	7.9	.....	8.15	9.5	9.5	7.15	7.9	8.7	.....
31.....	8.35	.....	7.85	7.85	.....	8.0	.....	9.4	.....	7.75	9.35	.....
1908-9.												
1.....	.....	.....	8.05	7.85	8.35	7.8	7.75	9.3	10.35	9.85	.....	8.3
2.....	.....	.....	8.1	7.9	8.35	7.75	7.7	9.5	10.5	9.6	.....	8.3
3.....	.....	.....	8.1	7.95	8.2	7.45	7.9	10.1	10.55	9.15	.....	8.05
4.....	.....	.....	8.0	7.9	8.25	7.25	7.8	10.3	10.5	9.3	.....	7.9
5.....	.....	.....	7.9	7.9	8.3	7.15	7.75	9.85	10.3	8.95	.....	7.85
6.....	.....	.....	7.85	7.9	8.05	7.1	7.4	9.8	10.0	9.0	.....	8.0
7.....	.....	.....	7.65	7.9	7.9	7.05	7.4	9.6	9.85	8.9	.....	8.1
8.....	.....	.....	7.8	7.85	7.8	6.95	7.2	9.6	9.6	8.45	.....	8.95
9.....	.....	.....	7.7	7.7	8.0	7.8	7.0	10.3	9.9	8.3	.....	11.75
10.....	.....	.....	7.45	7.5	8.1	8.4	8.15	11.1	10.6	8.25	.....	11.75
11.....	.....	.....	7.45	7.2	8.2	8.3	8.85	11.95	11.35	7.95	.....	11.15
12.....	.....	.....	7.85	7.85	8.25	8.85	8.5	12.2	11.9	7.8	.....	11.65
13.....	.....	.....	8.1	7.95	8.05	9.2	8.05	12.5	12.15	7.85	.....	11.05
14.....	.....	7.15	8.1	8.0	8.1	9.0	7.85	12.5	12.15	7.7	.....	10.5
15.....	.....	7.2	8.05	8.35	8.2	9.0	7.9	12.2	12.15	7.5	.....	10.5
16.....	.....	7.2	7.75	8.1	8.2	8.85	7.8	11.85	12.15	8.0	.....	10.25
17.....	.....	7.2	7.6	8.0	8.0	8.85	8.0	12.0	12.2	7.55	.....	10.1
18.....	.....	7.25	7.5	8.15	7.85	8.55	7.95	12.1	11.8	7.3	.....	9.9
19.....	.....	7.3	7.5	8.1	7.75	8.05	8.15	12.05	11.6	6.95	.....	9.8
20.....	.....	7.3	7.5	7.95	7.7	7.8	7.8	11.8	11.5	6.5	.....	9.7
21.....	.....	7.3	7.5	7.75	8.1	7.75	7.8	11.7	11.1	6.6	6.15	9.4
22.....	.....	7.3	7.6	7.65	8.1	7.9	9.1	11.65	10.75	6.55	6.1	9.4
23.....	.....	7.3	7.55	8.0	8.0	10.3	11.6	10.7	10.7	6.15	6.05	9.2
24.....	.....	7.3	7.55	8.05	7.7	8.05	11.05	11.95	10.7	6.1	6.05	8.95
25.....	.....	7.3	8.4	7.95	7.55	8.6	11.2	12.1	10.85	6.05	10.15	8.85
26.....	.....	7.3	8.2	7.9	7.45	8.4	11.2	12.05	10.75	5.95	9.4	8.8
27.....	.....	7.25	8.05	7.95	7.4	8.2	10.75	12.0	10.65	5.9	8.2	8.75
28.....	.....	7.2	7.8	7.95	7.3	8.1	10.1	11.4	10.45	.....	8.05	8.35
29.....	.....	7.35	7.95	7.95	.....	8.1	9.8	11.0	10.15	.....	8.8	8.25
30.....	.....	7.75	8.55	7.9	.....	7.95	9.45	10.6	9.9	.....	8.65	8.2
31.....	.....	.....	8.05	8.05	.....	7.8	.....	10.4	.....	.....	8.45	.....
1909-10.												
1.....	8.2	8.0	8.1	7.0	8.4	8.9	10.85	12.2	8.5	6.65	.....	.....
2.....	8.1	8.0	8.35	7.1	8.5	8.7	10.65	12.4	8.45	6.35	.....	.....
3.....	8.15	8.05	8.45	7.3	8.5	8.95	10.4	12.7	8.0	.....	.....	6.9
4.....	8.25	7.9	8.25	7.65	8.45	9.65	10.2	12.8	8.05	.....	.....	6.1
5.....	8.05	7.8	8.45	8.75	8.5	9.2	9.9	13.0	9.1	.....	.....	6.0
6.....	7.9	7.8	8.5	9.35	8.6	9.6	10.0	12.95	9.45	.....	.....	.....
7.....	7.75	7.95	8.3	9.45	8.6	10.75	10.0	12.75	9.75	.....	.....	.....
8.....	7.8	7.75	8.3	9.3	8.8	10.6	9.9	12.35	9.8	.....	.....	.....
9.....	7.85	7.7	8.35	8.65	9.0	10.5	9.9	11.9	9.1	.....	.....	.....
10.....	7.7	7.65	8.45	8.15	9.1	10.3	10.1	11.45	9.5	.....	.....	.....
11.....	7.85	7.7	8.5	7.95	8.55	10.3	10.15	11.3	9.2	.....	.....	.....
12.....	8.55	7.6	8.25	8.0	8.5	10.35	10.15	11.6	9.1	.....	.....	.....
13.....	8.75	7.65	8.2	7.9	8.3	10.65	10.35	11.8	8.9	.....	.....	.....
14.....	8.3	7.8	7.95	7.75	8.75	10.5	10.4	11.6	8.45	.....	.....	.....
15.....	8.3	7.9	7.8	7.9	8.75	10.4	10.2	11.1	8.2	.....	.....	.....
16.....	8.3	7.9	7.7	8.6	8.9	10.35	10.3	11.3	7.9	.....	.....	.....
17.....	8.3	7.8	7.65	8.9	8.4	10.25	10.55	11.55	7.55	.....	.....	.....
18.....	8.35	7.75	8.05	8.6	8.3	10.25	10.9	11.75	7.2	.....	.....	.....
19.....	8.3	7.7	8.3	8.55	8.3	10.5	10.9	11.75	6.95	.....	.....	.....
20.....	8.2	7.75	8.15	8.55	8.25	10.45	10.95	11.5	6.95	.....	.....	.....

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
21.....	8.35	7.7	7.8	8.75	8.05	10.5	10.6	11.5	7.35	.....	.....	.....
22.....	8.4	8.0	7.6	8.9	7.95	10.4	10.45	11.5	6.9	.....	.....	.....
23.....	8.35	8.25	7.55	9.0	8.7	10.2	10.2	10.45	6.25	.....	.....	.....
24.....	8.15	8.25	7.5	8.85	8.9	10.35	10.4	10.3	6.2	.....	.....	.....
25.....	8.0	7.95	7.5	8.8	8.4	10.5	10.65	9.95	6.3	.....	.....	.....
26.....	8.15	7.85	7.45	8.75	7.95	10.5	11.15	9.75	6.25	.....	.....	.....
27.....	8.15	8.0	7.3	8.6	7.75	10.55	11.4	9.65	6.45	.....	.....	.....
28.....	8.05	7.75	7.2	8.5	8.3	10.75	11.5	9.4	7.5	.....	.....	.....
29.....	8.05	7.8	7.15	8.55	.....	10.9	11.7	9.15	8.5	.....	.....	.....
30.....	8.15	7.85	7.1	8.5	.....	10.9	12.1	8.75	7.3	.....	.....	.....
31.....	8.0	.....	7.0	8.4	.....	10.9	.....	8.75	.....	.....	.....	.....
1910-11.												
1.....	.....	.....	.....	.....	7.45	7.7	8.1	10.35	10.25	10.55	11.15	6.85
2.....	.....	.....	.....	6.4	7.2	7.8	8.0	10.65	10.25	10.6	11.05	6.75
3.....	.....	.....	.....	6.7	7.05	7.8	8.0	11.05	10.3	10.9	10.65	6.6
4.....	.....	.....	.....	6.7	7.15	7.7	7.95	11.1	10.6	10.7	10.1	6.35
5.....	.....	.....	.....	6.55	7.2	8.25	7.9	10.85	10.8	12.2	9.7	6.3
6.....	.....	.....	6.4	6.35	7.65	8.3	8.3	10.55	10.2	13.75	9.5	6.3
7.....	.....	.....	6.55	6.35	8.05	8.0	8.8	10.3	10.3	13.6	9.3	6.3
8.....	.....	.....	6.65	.....	8.3	7.6	9.05	10.25	10.55	11.85	8.95	6.3
9.....	.....	.....	6.5	.....	8.1	7.75	9.2	10.45	11.0	11.7	8.75	6.3
10.....	.....	.....	6.3	.....	8.05	7.5	9.3	10.8	10.8	12.8	8.35	6.65
11.....	.....	.....	6.45	6.35	7.9	7.3	9.05	11.25	11.1	13.7	8.1	6.95
12.....	.....	.....	6.35	6.7	7.7	10.45	8.85	11.8	11.1	13.8	7.95	7.25
13.....	.....	.....	6.45	6.7	7.85	9.7	8.8	12.15	11.1	12.35	7.75	7.3
14.....	.....	.....	6.4	6.4	7.9	9.25	8.55	12.85	11.25	11.8	7.55	7.3
15.....	.....	.....	6.3	.....	7.5	9.2	8.4	12.95	11.5	11.8	7.35	7.3
16.....	.....	.....	6.3	.....	7.35	10.05	8.3	13.05	11.65	11.75	7.25	7.3
17.....	.....	.....	6.3	7.95	7.3	9.55	8.15	12.8	11.8	12.6	7.05	7.05
18.....	.....	.....	.....	8.15	7.25	8.85	7.85	12.25	11.85	13.2	6.95	7.2
19.....	.....	.....	.....	8.2	7.6	8.4	7.6	12.05	11.7	11.3	6.85	7.1
20.....	.....	.....	6.3	8.65	8.2	8.5	7.55	11.9	11.5	11.55	6.75	7.45
21.....	.....	.....	6.5	8.7	8.1	8.4	7.9	11.6	10.75	13.0	6.65	8.1
22.....	.....	.....	6.5	8.2	8.1	8.4	7.55	11.4	10.45	12.35	6.5	8.4
23.....	.....	.....	6.6	8.2	8.5	8.4	7.35	11.1	10.85	13.4	6.5	8.15
24.....	.....	.....	6.6	8.3	8.55	9.05	7.35	11.05	10.6	13.8	6.5	8.15
25.....	.....	.....	6.7	8.15	8.35	8.75	7.6	10.7	10.6	14.0	6.5	7.95
26.....	.....	.....	6.7	7.9	8.4	8.7	7.7	10.35	10.85	13.4	6.5	7.95
27.....	.....	.....	6.7	7.8	8.15	8.6	8.0	10.05	10.5	13.7	6.5	7.65
28.....	.....	.....	6.6	7.7	7.75	8.55	9.95	10.0	10.55	13.8	6.4	7.35
29.....	.....	.....	6.3	7.65	.....	8.5	10.0	10.0	10.75	12.55	6.45	7.3
30.....	.....	.....	.....	7.8	.....	8.5	9.9	9.9	10.55	11.85	7.4	7.45
31.....	.....	.....	.....	7.8	.....	8.4	.....	10.1	.....	11.4	7.05	.....
1911-12.												
1.....	7.9	10.65	9.45	8.6	9.15	8.95	9.3	9.65	15.3	10.9	8.4	9.05
2.....	8.05	10.4	9.4	8.45	9.15	9.0	9.3	9.65	15.0	11.05	8.25	9.1
3.....	8.75	10.3	9.25	8.35	9.25	8.95	9.0	9.45	15.15	10.85	8.05	10.0
4.....	9.15	10.2	9.2	8.3	9.3	8.95	9.25	9.4	14.7	10.5	8.0	9.2
5.....	9.4	10.2	9.05	8.4	9.35	8.8	9.5	10.2	14.55	10.55	7.85	8.95
6.....	10.1	10.5	8.8	8.35	8.8	8.4	9.6	11.7	14.15	10.35	7.7	8.8
7.....	10.8	10.0	8.8	8.3	8.7	8.25	9.6	12.5	13.9	10.15	7.55	8.5
8.....	11.65	10.0	9.25	8.4	8.9	8.35	9.7	12.5	13.75	9.95	7.35	8.2
9.....	13.35	10.05	9.3	8.5	8.9	8.25	9.9	11.95	13.45	9.55	7.0	8.05
10.....	13.75	9.85	9.35	8.65	8.95	8.35	10.25	11.6	13.55	9.3	.....	8.2
11.....	13.8	9.75	9.45	9.0	8.95	8.4	10.55	11.45	13.6	9.1	.....	8.1
12.....	14.5	9.6	9.45	9.2	8.95	10.0	10.9	11.8	13.75	8.85	.....	8.2
13.....	14.5	9.6	9.45	8.95	8.90	10.05	10.7	12.35	13.6	8.65	.....	8.0
14.....	13.75	9.6	9.45	9.1	8.85	9.6	10.5	12.6	13.3	8.45	.....	7.85
15.....	13.4	9.65	9.4	9.45	8.85	9.5	10.55	12.5	12.75	8.3	.....	7.7
16.....	12.9	9.8	9.4	9.5	8.8	9.3	10.45	12.5	12.5	8.25	9.45	7.55
17.....	12.45	9.65	9.3	9.1	8.9	9.5	10.45	12.55	12.25	8.05	7.9	7.4
18.....	11.55	9.5	9.35	9.25	8.9	9.45	10.3	12.6	11.7	8.0	7.8	7.25
19.....	11.05	9.5	9.15	9.3	8.95	9.1	9.75	12.7	11.65	8.0	9.3	7.1
20.....	11.35	9.4	9.15	9.45	8.9	8.7	9.75	12.45	11.35	8.45	9.15	6.95
21.....	10.6	9.4	9.15	9.45	8.85	8.55	9.6	12.55	11.15	8.55	8.6	6.8
22.....	10.55	9.4	9.2	9.5	8.75	8.55	9.5	12.9	11.0	9.0	8.65	6.8
23.....	10.3	9.55	9.05	9.5	8.75	8.3	9.7	13.15	10.9	8.7	8.55	6.75
24.....	10.35	9.5	9.05	9.6	8.65	8.4	9.75	13.8	10.9	8.6	8.8	6.75
25.....	10.25	9.5	9.1	9.6	8.8	11.55	9.6	14.3	10.7	9.25	9.1	.....

Daily gage height, in feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1895-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
26.....	10.15	9.5	9.15	10.25	9.0	10.8	9.3	14.45	10.85	9.45	8.65	.....
27.....	10.0	9.55	9.05	9.6	9.0	10.1	9.1	14.7	11.05	9.9	8.3	.....
28.....	10.0	9.5	9.25	9.1	9.0	9.95	8.95	14.85	11.2	9.85	8.55	.....
29.....	10.0	9.5	9.1	8.75	8.9	9.6	8.85	15.05	10.95	9.5	8.2	.....
30.....	10.2	9.45	8.95	9.15	.....	9.2	8.8	15.0	11.1	9.15	8.2	6.75
31.....	10.8	.....	8.7	9.15	.....	9.2	.....	15.5	.....	8.2	8.15	.....
1912-13.												
1.....	6.85	7.5	8.55	7.75	8.7	8.7	7.5	9.3	8.2	8.5	.....	.....
2.....	6.8	7.7	8.5	7.6	8.6	8.6	7.65	9.35	8.05	8.25	.....	.....
3.....	6.8	7.8	8.5	7.6	8.75	8.6	7.35	9.25	7.9	9.2	.....	.....
4.....	6.8	7.8	8.7	7.6	8.9	8.5	7.5	10.05	7.55	8.8	.....	.....
5.....	6.7	7.8	8.8	8.15	8.85	8.4	7.25	10.6	7.8	8.25	.....	.....
6.....	6.75	7.8	8.7	8.5	8.8	8.5	7.25	10.75	8.15	7.8	.....	.....
7.....	6.75	7.65	8.8	7.85	8.9	8.55	7.25	10.7	8.25	7.7	.....	.....
8.....	6.65	7.7	8.7	8.0	9.2	8.35	7.15	10.2	8.4	7.4	.....	.....
9.....	6.6	7.8	8.6	8.0	9.1	8.55	7.2	9.6	8.6	7.0	.....	.....
10.....	6.6	7.8	8.7	7.8	9.1	8.5	7.1	9.4	8.4	7.0	.....	.....
11.....	6.6	7.85	8.5	7.6	9.0	8.45	7.9	10.0	8.2	7.0	.....	.....
12.....	6.6	8.1	8.8	7.7	9.0	8.1	9.1	10.15	8.0	.....	.....	.....
13.....	6.6	8.2	9.35	7.7	9.0	8.1	9.45	9.95	8.0	.....	.....	.....
14.....	6.6	8.3	9.05	7.95	9.2	8.1	9.05	9.75	8.05	.....	.....	.....
15.....	6.6	8.3	8.8	8.2	9.05	8.15	8.75	9.7	11.6	.....	.....	.....
16.....	6.6	8.3	8.6	8.45	9.0	8.5	8.65	9.55	10.6	.....	.....	.....
17.....	6.6	8.45	8.7	8.55	9.0	8.65	8.65	9.45	9.45	.....	.....	.....
18.....	6.7	8.7	8.8	8.1	9.0	8.7	8.6	10.35	9.1	.....	.....	.....
19.....	6.6	8.6	8.95	7.8	9.0	8.7	8.5	10.2	9.4	.....	.....	.....
20.....	6.5	8.6	8.7	7.7	8.75	8.6	8.4	9.45	9.25	.....	.....	.....
21.....	6.6	8.6	8.8	7.75	8.6	8.6	8.95	9.5	9.25	.....	.....	.....
22.....	6.8	8.6	8.55	7.85	8.55	8.5	9.55	9.25	9.1	.....	.....	.....
23.....	6.9	8.6	8.5	9.45	8.6	8.3	10.25	9.65	9.5	.....	.....	.....
24.....	6.9	8.6	8.55	8.95	8.7	8.25	10.4	9.6	9.05	.....	.....	.....
25.....	6.9	8.6	8.6	8.7	8.7	7.9	10.3	9.5	9.3	.....	.....	.....
26.....	6.9	8.6	8.55	8.8	8.8	7.6	10.75	9.15	9.5	.....	.....	.....
27.....	7.0	8.45	8.45	8.9	8.8	7.6	10.85	8.95	9.3	.....	.....	.....
28.....	7.5	8.5	8.2	8.8	8.9	7.5	10.5	8.9	8.95	.....	.....	.....
29.....	7.65	8.6	8.0	8.75	.....	7.55	9.8	8.6	8.9	.....	.....	.....
30.....	7.55	8.7	7.85	8.95	.....	7.55	9.5	8.55	8.8	.....	.....	.....
31.....	7.4	.....	7.8	8.65	.....	7.6	.....	8.45	.....	.....	.....	.....

NOTE.—No flow on days for which no gage heights are published.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1889.						1889.					
1.....	.....	3,110	930	0	0	16.....	3,720	1,890	75	0	0
2.....	.....	3,240	740	0	0	17.....	3,240	1,890	130	0	0
3.....	.....	3,360	676	0	0	18.....	2,990	1,760	130	0	0
4.....	.....	3,530	660	0	0	19.....	2,870	1,760	120	0	0
5.....	.....	3,848	495	0	0	20.....	2,870	1,400	100	0	0
6.....	.....	4,090	482	0	0	21.....	2,620	1,030	80	0	0
7.....	.....	4,340	418	0	0	22.....	2,620	790	80	0	0
8.....	.....	4,460	371	0	0	23.....	2,380	660	85	0	0
9.....	.....	4,260	348	0	0	24.....	2,300	1,400	40	0	0
10.....	4,700	3,970	320	0	0	25.....	2,260	2,570	50	0	0
11.....	4,700	3,720	250	0	0	26.....	2,260	2,260	43	0	0
12.....	4,580	3,850	240	0	0	27.....	2,260	2,550	30	0	0
13.....	4,460	3,600	200	0	0	28.....	2,300	1,890	27	0	0
14.....	4,220	3,240	200	0	0	29.....	2,300	1,150	0	0	0
15.....	3,970	2,500	100	0	0	30.....	2,350	1,030	0	0	0
.....	.....	.....	.....	.....	.....	31.....	2,740	.....	0	0	.....

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1889-90.												
1.....	0	0	0	156	174	390	470	4,060	7,200	2,360	660	560
2.....	0	0	0	156	163	320	560	3,920	7,120	2,070	830	515
3.....	0	0	0	174	224	320	660	3,500	6,970	2,070	890	320
4.....	0	0	0	174	174	290	770	3,500	6,830	1,920	890	210
5.....	0	0	0	156	184	260	770	3,640	6,690	1,780	830	170
6.....	0	0	0	224	328	260	770	3,920	6,490	1,500	830	320
7.....	0	0	0	280	438	290	770	4,350	6,340	1,500	890	128
8.....	0	0	0	252	438	210	770	4,490	6,060	1,040	965	140
9.....	0	0	0	199	418	235	890	4,640	5,770	890	830	190
10.....	0	0	0	174	442	260	830	4,920	5,770	830	715	660
11.....	0	0	0	199	358	155	890	5,200	5,350	890	660	320
12.....	0	0	0	156	340	80	1,040	5,350	5,060	890	830	170
13.....	0	0	0	199	340	57	1,140	5,780	4,400	660	560	106
14.....	0	0	0	224	384	45	1,140	6,200	3,690	515	390	106
15.....	0	0	0	280	442	1,040	1,040	6,490	3,350	470	235	73
16.....	0	0	0	280	458	1,140	1,370	6,630	3,210	390	210	66
17.....	0	0	0	252	438	1,140	2,360	6,480	2,920	660	170	66
18.....	0	0	0	252	384	890	3,490	6,480	2,920	660	170	57
19.....	0	0	0	224	328	660	3,640	6,340	2,920	515	170	50
20.....	0	0	252	252	241	430	4,110	6,630	2,920	515	170	50
21.....	0	0	224	199	199	355	4,060	6,770	3,070	470	515	40
22.....	0	0	213	156	131	260	4,060	6,770	3,490	515	290	40
23.....	0	0	199	114	114	210	3,920	6,770	3,500	430	260	40
24.....	0	0	247	126	108	190	3,920	6,630	3,210	470	770	40
25.....	0	0	275	138	126	390	3,780	6,770	3,210	355	320	40
26.....	0	0	171	149	145	830	3,640	6,770	3,070	260	1,040	73
27.....	0	0	94	142	298	660	3,640	6,770	3,070	235	2,360	106
28.....	0	0	94	224	322	515	3,780	6,920	3,070	260	1,500	190
29.....	0	0	124	241	.....	430	3,640	7,200	3,210	320	2,500	260
30.....	0	0	138	174	.....	390	3,780	7,200	3,210	430	660	170
31.....	0	.....	177	174	.....	430	.....	7,200	.....	610	660	.....
1890-91.												
1.....	106	96	430	660	470	1,920	1,640	9,190	8,340	6,340	1,370	0
2.....	66	80	470	610	470	3,640	1,500	9,760	8,200	6,060	1,780	0
3.....	50	66	560	515	515	3,210	1,640	10,050	7,910	5,350	1,370	0
4.....	50	50	610	515	515	2,210	1,500	10,340	7,770	4,490	965	0
5.....	45	45	610	560	515	1,240	1,370	10,620	7,480	4,060	1,140	0
6.....	45	40	610	610	560	1,500	1,140	11,040	7,200	3,780	1,140	0
7.....	45	40	470	660	515	1,370	1,140	11,920	7,060	3,780	1,370	0
8.....	45	40	430	715	430	2,210	1,040	12,360	6,770	3,780	1,370	0
9.....	45	40	390	715	390	3,920	1,140	12,800	6,340	3,780	1,640	0
10.....	45	40	470	715	470	3,350	1,140	13,250	6,060	3,640	1,370	0
11.....	45	86	470	660	515	2,780	1,780	13,250	5,490	3,040	830	0
12.....	40	86	515	470	560	2,070	3,060	13,550	5,040	2,640	715	0
13.....	40	86	515	390	515	1,500	3,920	13,700	5,490	2,360	830	0
14.....	40	117	610	355	470	1,240	3,920	14,300	5,920	2,070	890	0
15.....	40	430	660	320	515	965	3,060	14,750	6,200	1,780	770	0
16.....	40	515	660	390	660	830	3,920	15,670	6,480	1,500	1,040	0
17.....	40	515	610	320	560	660	5,780	16,620	6,920	1,040	560	0
18.....	40	610	560	210	430	610	6,630	15,520	7,480	830	290	0
19.....	40	560	515	190	430	470	6,920	14,000	7,910	715	210	0
20.....	40	470	515	170	590	470	7,200	13,700	7,770	560	155	0
21.....	50	430	470	170	335	470	7,060	12,070	7,770	660	190	0
22.....	60	390	470	190	390	470	6,770	11,345	7,480	770	128	0
23.....	80	390	470	155	560	515	7,060	10,620	6,770	965	80	0
24.....	106	390	610	140	1,640	515	6,920	10,620	5,630	770	80	0
25.....	116	470	660	155	2,780	715	6,060	10,120	5,200	770	47	0
26.....	116	560	610	290	2,490	965	5,920	10,335	5,780	715	50	0
27.....	116	515	560	560	2,640	2,210	6,630	9,765	6,200	560	43	0
28.....	116	560	515	715	1,920	4,640	6,920	9,480	6,060	965	32	6,630
29.....	116	470	470	660	.....	4,490	7,620	9,055	6,200	1,040	30	9,480
30.....	96	355	470	610	.....	3,920	8,620	8,765	6,480	965	21	6,920
31.....	96	.....	610	515	.....	2,780	.....	8,340	.....	610	17	.....
1891-92.												
1.....	3,540	515	260	170	320	390	560	5,630	6,480	560	140	0
2.....	2,920	470	260	155	390	515	560	6,200	6,340	660	140	0
3.....	1,780	515	260	170	470	610	560	6,920	6,060	660	73	0
4.....	2,640	470	210	260	470	610	510	7,770	5,780	890	0	0
5.....	1,240	430	210	260	610	610	560	8,620	5,490	560	0	0

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
6.....	1,110	430	210	290	610	660	510	9,200	5,350	470	0	0
7.....	1,110	390	190	430	830	660	560	9,760	4,640	515	0	0
8.....	2,920	290	190	430	770	660	770	10,000	3,210	515	0	0
9.....	2,780	320	190	320	660	660	710	10,000	2,920	470	0	0
10.....	2,920	320	410	320	560	560	710	8,910	2,920	430	0	0
11.....	2,640	320	515	320	560	515	710	8,060	2,780	660	0	0
12.....	1,780	320	410	355	515	660	560	7,770	2,500	2,500	0	0
13.....	1,640	320	355	390	560	715	470	7,620	2,500	2,780	0	0
14.....	1,500	320	410	470	610	770	510	7,340	3,210	1,500	0	0
15.....	1,360	320	560	470	560	660	2,780	7,060	3,210	1,785	0	0
16.....	1,360	320	290	515	470	560	4,060	6,630	3,350	1,500	0	0
17.....	1,240	320	290	320	430	560	4,350	7,200	3,210	660	0	0
18.....	1,140	290	560	320	390	515	4,640	7,060	2,920	560	0	0
19.....	1,140	290	390	320	290	610	5,060	6,920	2,780	260	0	0
20.....	965	320	390	210	355	1,040	5,640	6,340	2,640	320	0	0
21.....	965	320	410	235	320	2,070	6,340	5,920	2,640	660	0	0
22.....	965	290	515	260	390	1,500	7,060	5,200	1,640	965	0	0
23.....	890	320	390	260	390	1,240	7,480	5,780	770	560	0	0
24.....	770	320	470	290	355	1,040	7,200	5,920	770	170	0	0
25.....	830	320	410	290	390	560	6,340	5,200	770	60	0	0
26.....	830	320	410	430	390	770	5,780	5,920	770	40	0	0
27.....	770	290	290	430	355	770	5,220	6,200	770	30	0	0
28.....	610	260	320	430	390	770	4,640	6,200	610	25	0	0
29.....	610	260	355	355	390	770	4,350	5,920	605	20	0	0
30.....	560	235	355	355	.....	660	5,200	6,200	605	10	0	0
31.....	575	.....	190	290	.....	610	.....	6,340	.....	.....	0	.....
1892-93.												
1.....	0	0	0	0	106	128	0	2,640	660	.....	.....	.....
2.....	0	0	0	0	96	128	0	2,070	660	.....	.....	.....
3.....	0	0	0	0	140	128	0	2,920	560	.....	.....	.....
4.....	0	0	0	128	96	116	0	4,350	560	.....	.....	.....
5.....	0	0	0	155	80	128	0	6,340	430	.....	.....	.....
6.....	0	0	0	128	80	116	0	5,630	390	.....	.....	.....
7.....	0	0	0	128	66	96	0	3,920	355	.....	.....	.....
8.....	0	0	0	128	62	50	0	2,640	320	.....	.....	.....
9.....	0	0	0	140	62	40	0	2,500	390	.....	.....	.....
10.....	0	0	0	128	128	30	0	2,640	355	.....	.....	.....
11.....	0	0	0	140	140	25	0	3,070	320	.....	.....	.....
12.....	0	0	0	128	128	25	0	3,070	290	.....	.....	.....
13.....	0	0	0	140	106	25	470	1,500	170	.....	.....	.....
14.....	0	0	0	140	116	15	560	1,370	170	.....	.....	.....
15.....	0	0	0	116	155	10	890	660	128	.....	.....	.....
16.....	0	0	0	140	190	10	3,500	770	140	.....	.....	.....
17.....	0	0	0	128	170	10	3,350	4,060	140	.....	.....	.....
18.....	0	0	0	128	210	10	3,210	6,490	140	.....	.....	.....
19.....	0	0	0	128	355	0	770	6,340	116	.....	.....	.....
20.....	0	0	0	128	320	0	560	6,340	73	.....	.....	.....
21.....	0	0	0	128	260	0	390	6,340	66	.....	.....	.....
22.....	0	0	0	128	170	0	260	5,920	62	.....	.....	.....
23.....	0	0	0	116	155	0	128	5,920	50	.....	.....	.....
24.....	0	0	0	140	140	0	88	6,060	37	.....	.....	.....
25.....	0	0	0	140	140	0	890	6,630	35	.....	.....	.....
26.....	0	0	0	170	128	0	890	5,780	35	.....	.....	.....
27.....	0	0	0	170	116	0	770	3,500	27	.....	.....	.....
28.....	0	0	0	190	128	0	1,240	2,920	27	.....	.....	.....
29.....	0	0	0	170	.....	0	3,070	2,070	25	.....	.....	.....
30.....	0	0	0	140	.....	0	3,210	1,370	20	.....	.....	.....
31.....	0	.....	0	128	.....	0	.....	830	.....	.....	.....	.....
1897.												
1.....	.....	.....	.....	170	230	110	68	5,000	11,000	5,300	270	0
2.....	.....	.....	.....	170	230	116	60	5,300	9,000	4,600	230	0
3.....	.....	.....	.....	190	210	90	50	5,400	10,000	3,100	170	0
4.....	.....	.....	.....	190	210	90	40	5,350	10,410	2,500	100	0
5.....	.....	.....	.....	200	210	90	830	5,280	10,200	1,730	90	100
6.....	.....	.....	.....	210	210	83	580	5,350	10,000	1,730	70	90
7.....	.....	.....	.....	350	220	75	275	5,890	9,450	1,100	60	80
8.....	.....	.....	.....	240	210	60	250	6,590	9,000	980	60	180
9.....	.....	.....	.....	180	190	60	250	7,400	8,700	750	60	100
10.....	.....	.....	.....	140	200	50	250	8,200	7,700	1,060	60	260

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897.												
11.				140	220	50	250	7,240	7,170	2,000	50	310
12.				90	220	42	950	6,810	5,230	1,300	40	330
13.				90	210	48	1,560	6,600	5,100	1,300	130	600
14.				90	210	120	1,440	6,700	4,980	1,300	130	830
15.				90	230	90	1,320	7,000	4,800	1,350	100	770
16.				90	220	90	1,320	7,150	5,340	1,290	130	2,880
17.				580	210	75	1,560	7,600	5,400	900	50	2,480
18.				1,260	210	67	1,680	7,600	5,420	860	400	1,890
19.				1,000	200	60	1,680	7,410	5,450	860	600	2,100
20.				660	190	60	1,940	7,200	5,350	760	400	900
21.				460	170	60	2,270	8,600	5,230	700	290	800
22.				425	170	120	2,400	9,800	4,500	760	230	650
23.				350	150	110	3,280	8,810	4,100	980	160	550
24.				350	150	90	3,620	10,100	3,550	720	110	430
25.				350	140	60	3,750	10,600	2,810	570	70	350
26.				300	150	47	3,890	12,000	2,470	510	40	290
27.				250	130	40	4,160	17,000	2,300	780	0	350
28.				230	125	40	4,220	15,000	2,000	400	0	530
29.				200	200	30	4,160	12,000	2,000	380	0	1,400
30.				210	200	42	4,090	11,500	4,200	340	0	1,900
31.				210	200	60	.....	11,200	.....	300	0	.....
1897-98.												
1.	1,400	1,695	1,015	.....	320	380	96	5,000	525	1,800	1,000	75
2.	570	1,525	930	.....	395	350	96	5,218	522	1,800	1,000	64
3.	460	1,440	930	.....	495	380	63	5,800	530	1,700	813	64
4.	350	1,355	890	.....	835	350	55	5,800	680	1,750	500	52
5.	300	1,313	810	.....	965	450	45	4,630	820	1,600	660	41
6.	280	1,270	810	.....	835	300	35	4,150	1,350	3,700	575	25
7.	230	1,270	700	.....	763	330	30	3,500	2,425	3,700	515	33
8.	480	1,228	630	.....	860	285	30	3,000	1,285	2,125	505	33
9.	4,000	1,270	700	.....	860	330	25	2,680	1,285	2,075	1,175	25
10.	3,600	1,270	850	.....	820	330	25	2,350	2,850	2,700	750	23
11.	3,400	1,270	930	.....	605	400	25	2,350	3,080	2,200	750	25
12.	4,500	1,270	735	.....	580	460	20	2,200	2,980	3,250	515	17
13.	5,000	1,270	550	.....	720	400	15	2,000	2,750	2,300	1,550	12
14.	3,500	1,143	570	.....	670	400	15	1,100	2,600	1,800	1,080	9
15.	2,400	1,015	550	.....	650	410	20	1,180	2,600	1,700	780	170
16.	2,000	1,015	570	.....	670	400	185	1,180	2,450	1,620	600	130
17.	1,600	890	570	.....	695	480	1,520	1,300	2,325	4,050	485	90
18.	1,700	930	500	.....	605	620	1,650	1,800	2,200	4,260	330	70
19.	1,600	1,058	735	.....	537	570	1,930	1,884	2,110	9,700	300	50
20.	1,500	1,015	630	.....	515	420	2,270	1,900	1,320	9,900	250	30
21.	1,450	1,058	515	.....	495	340	2,640	1,725	1,290	9,780	200	22
22.	1,400	973	460	.....	455	280	3,400	1,560	1,288	4,900	160	13
23.	1,420	1,015	500	.....	415	250	3,634	1,430	1,480	3,700	160	11
24.	1,500	973	550	.....	400	220	4,750	1,300	1,650	3,200	160	9
25.	1,460	890	610	.....	400	220	4,500	1,110	2,480	3,125	122	8
26.	1,400	810	610	.....	610	180	4,000	960	2,675	3,025	122	7
27.	1,380	890	570	.....	460	120	4,750	930	2,150	1,890	111	6
28.	1,460	890	610	.....	450	136	4,500	825	2,150	1,750	100	5
29.	1,410	1,015	650	.....	.....	110	4,443	710	2,250	1,330	220	4
30.	1,400	930	550	.....	.....	99	4,600	580	2,153	1,300	145	3
31.	1,350	.....	500	.....	.....	99	.....	530	.....	1,210	100	.....
1898-99.												
1.	3	2	2	180	180	200	130	570	0	0	120	0
2.	3	2	15	200	170	180	60	600	0	0	20	0
3.	3	2	27	290	160	190	20	610	0	0	20	0
4.	3	2	30	290	150	180	20	540	0	0	20	0
5.	3	2	40	260	130	190	10	480	0	0	20	0
6.	3	2	70	240	220	190	10	390	0	0	70	0
7.	3	2	95	230	300	200	10	330	0	0	10	0
8.	3	2	105	230	230	220	20	330	0	0	0	0
9.	3	2	105	220	250	190	30	260	0	0	0	0
10.	3	2	105	210	250	160	40	210	0	0	0	0
11.	3	2	105	180	250	140	50	140	0	0	0	0
12.	3	2	105	170	230	120	40	120	0	0	0	0
13.	3	2	105	150	150	110	30	90	0	0	0	0
14.	3	2	115	130	190	100	30	100	0	0	0	0
15.	3	2	100	130	160	90	20	60	0	0	0	0

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
16.....	3	2	83	130	150	80	20	50	0	0	0	0
17.....	3	2	70	220	150	80	20	50	0	0	0	0
18.....	3	2	76	240	160	70	10	30	0	0	0	0
19.....	3	2	96	250	190	70	10	20	0	60	0	0
20.....	2	2	83	260	170	80	10	20	0	280	0	0
21.....	2	2	83	250	190	90	10	20	0	850	0	0
22.....	2	2	70	210	300	90	10	20	0	1,900	0	0
23.....	2	2	70	180	300	80	30	10	0	1,900	0	0
24.....	2	2	76	200	240	70	600	10	0	1,200	0	0
25.....	2	2	70	240	230	60	730	10	0	1,000	0	0
26.....	2	2	200	250	220	50	610	10	0	850	0	0
27.....	2	2	200	210	200	50	480	10	0	670	0	0
28.....	2	2	150	190	190	60	430	10	0	340	0	0
29.....	2	2	130	190	.....	40	180	10	0	300	0	0
30.....	2	2	150	190	.....	40	480	10	0	290	0	0
31.....	2	.....	160	190	.....	80	.....	10	.....	230	0	.....
1899-1900.												
1.....	0	0	0	95	100	65	5	5	2,400	5	0	0
2.....	0	0	0	90	95	40	5	5	2,400	5	0	0
3.....	0	0	0	90	90	25	5	5	3,000	5	0	0
4.....	0	0	0	90	90	10	5	5	3,340	5	0	0
5.....	0	0	0	95	90	10	5	5	3,480	5	0	0
6.....	0	0	10	95	90	0	5	0	3,550	5	0	0
7.....	0	0	10	90	100	0	5	0	3,500	5	0	0
8.....	0	0	10	90	105	0	5	0	3,320	0	0	0
9.....	0	0	10	90	105	0	5	0	3,200	0	0	830
10.....	0	0	10	120	105	0	5	0	2,800	0	0	80
11.....	0	0	10	150	115	0	5	0	2,500	0	0	30
12.....	0	0	30	150	120	0	5	0	2,050	0	0	110
13.....	0	0	50	330	115	0	5	0	1,640	0	0	1,690
14.....	0	0	90	300	115	0	5	0	1,580	0	0	1,060
15.....	0	0	90	280	100	0	5	0	1,550	0	0	740
16.....	0	0	70	230	100	0	5	0	1,480	0	0	680
17.....	0	0	60	170	100	0	5	620	1,050	0	0	1,170
18.....	0	0	50	135	150	0	5	930	960	0	0	680
19.....	0	0	50	120	135	0	5	960	760	0	0	370
20.....	0	0	50	110	125	0	5	900	610	0	0	160
21.....	0	0	50	110	110	0	5	840	490	0	0	140
22.....	0	0	50	100	95	0	5	790	335	0	0	120
23.....	0	0	60	100	90	0	5	730	270	0	0	130
24.....	0	0	60	110	80	20	5	1,360	195	0	0	45
25.....	0	0	60	110	75	20	5	2,500	145	0	0	45
26.....	0	0	70	115	90	10	5	2,120	115	0	0	45
27.....	0	0	70	115	90	10	5	2,140	95	0	0	45
28.....	0	0	100	115	90	10	5	2,140	80	0	0	45
29.....	0	0	110	105	.....	5	5	2,090	45	0	0	45
30.....	0	0	100	95	.....	5	5	2,200	10	0	0	45
31.....	0	.....	100	95	.....	5	.....	2,250	.....	0	0	.....
1900-1901.												
1.....	0	0	0	20	0	410	0	110	3,150	0	3,070	50
2.....	0	0	0	20	0	290	0	1,020	3,150	0	2,880	30
3.....	0	0	0	20	30	210	0	1,480	3,150	0	2,350	20
4.....	0	0	0	20	100	160	0	1,520	3,150	0	1,480	10
5.....	0	0	0	30	100	100	0	1,880	3,360	0	1,080	10
6.....	0	0	0	30	100	100	0	2,380	3,620	0	740	10
7.....	0	0	0	0	100	60	0	3,050	2,590	0	550	0
8.....	0	0	0	0	70	50	0	3,100	2,280	0	390	0
9.....	0	0	0	0	70	30	0	2,340	1,820	0	320	0
10.....	0	0	0	0	70	20	0	2,200	1,640	0	1,380	10
11.....	0	0	0	0	70	20	0	2,170	1,500	0	1,420	50
12.....	0	0	0	0	60	10	0	2,040	1,400	0	1,340	630
13.....	0	0	0	0	60	10	0	1,910	1,200	0	1,200	2,650
14.....	0	0	0	0	90	0	0	1,990	850	0	820	2,250
15.....	0	0	0	0	110	20	0	2,100	810	0	720	1,820
16.....	0	0	0	0	180	50	0	2,270	800	0	530	1,370
17.....	0	0	0	0	160	60	0	2,540	860	0	460	590
18.....	0	0	0	0	120	80	0	2,680	780	0	390	360
19.....	0	0	0	0	100	70	0	2,740	750	0	300	270
20.....	0	0	0	0	70	50	0	3,020	550	0	270	200

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
21.....	0	0	0	0	70	30	0	3,140	440	0	250	120
22.....	0	0	20	0	60	20	0	3,140	340	0	730	70
23.....	0	0	45	0	60	0	0	3,100	270	0	2,900	40
24.....	0	0	45	0	60	0	0	3,100	100	0	1,750	20
25.....	0	0	45	0	40	0	0	3,100	80	0	840	10
26.....	0	0	45	0	30	0	0	3,280	60	0	750	0
27.....	0	0	45	0	20	0	0	3,290	50	0	530	0
28.....	0	0	45	0	270	0	0	3,700	40	1,280	440	0
29.....	0	0	45	0	0	0	0	3,980	30	820	340	0
30.....	0	0	17	0	0	0	0	3,980	20	1,760	270	0
31.....	0	0	17	0	0	0	0	3,360	0	2,480	90	0
1901-2.												
1.....	0	80	130	130	160	20	10	75	0	0	0	860
2.....	0	180	130	130	160	10	10	60	0	0	0	645
3.....	0	810	130	130	140	10	10	55	135	0	0	460
4.....	0	290	130	130	140	10	10	25	15	0	0	235
5.....	0	180	130	130	140	10	10	15	5	0	0	160
6.....	0	80	130	130	120	10	10	5	0	0	0	130
7.....	0	40	130	130	120	10	10	5	0	0	0	100
8.....	0	40	130	130	120	10	10	5	0	0	0	75
9.....	0	70	130	130	110	10	10	5	0	0	0	50
10.....	0	60	130	130	100	10	10	5	0	0	0	25
11.....	280	50	130	130	100	10	10	5	0	0	0	15
12.....	450	50	130	130	100	10	10	5	0	10	0	10
13.....	260	30	130	130	100	10	10	0	0	0	0	5
14.....	180	50	130	130	100	10	10	0	0	0	0	0
15.....	120	280	130	130	120	10	10	0	0	0	0	0
16.....	70	140	130	130	140	10	10	0	0	0	0	0
17.....	50	110	130	140	130	10	10	0	0	0	0	0
18.....	30	720	130	140	120	10	270	0	0	0	0	0
19.....	30	720	130	140	120	10	285	0	0	0	0	0
20.....	30	550	130	140	120	10	285	0	0	0	0	0
21.....	30	510	130	140	110	10	290	0	0	0	0	0
22.....	30	270	130	140	90	10	210	0	0	0	0	0
23.....	30	220	130	140	70	10	200	0	0	0	0	0
24.....	40	200	130	140	50	10	185	0	0	0	0	0
25.....	380	140	130	140	40	10	270	0	0	0	0	0
26.....	240	130	130	140	30	10	465	0	0	0	0	550
27.....	140	130	130	140	30	10	540	0	0	0	940	635
28.....	100	110	130	140	30	10	425	0	0	0	1,400	370
29.....	70	110	130	140	0	10	245	0	0	0	2,140	210
30.....	70	110	130	140	0	10	145	0	0	0	1,590	160
31.....	60	0	130	140	0	10	0	0	0	0	1,240	0
1902-3.												
1.....	115	0	45	5	0	40	200	2,100	2,520	10,930	200	5
2.....	100	0	45	5	0	50	245	2,250	2,300	10,030	165	5
3.....	90	0	40	5	0	140	245	2,270	2,000	9,020	155	5
4.....	55	0	35	5	10	180	340	2,320	1,700	7,540	140	5
5.....	50	0	45	5	20	140	330	2,280	1,910	6,540	280	5
6.....	45	0	55	25	15	150	940	2,300	2,590	4,860	200	5
7.....	40	0	50	15	15	125	1,930	2,350	2,820	3,540	150	5
8.....	40	0	40	5	20	90	1,930	2,380	3,100	3,050	120	5
9.....	35	0	35	5	25	85	1,460	2,450	3,730	2,730	90	5
10.....	30	0	25	0	25	110	1,020	2,480	4,080	2,530	80	5
11.....	30	0	15	0	5	1,360	880	2,480	4,780	2,110	150	5
12.....	25	0	10	0	0	1,070	850	2,620	5,630	1,740	110	5
13.....	20	0	5	0	0	650	860	2,990	6,680	1,520	80	5
14.....	15	0	5	0	0	530	890	3,190	8,540	1,250	30	5
15.....	10	0	5	5	0	390	900	3,450	10,340	1,470	20	5
16.....	10	0	0	30	0	390	890	3,850	10,790	970	20	5
17.....	5	0	0	35	0	500	890	4,650	13,310	970	20	5
18.....	5	0	0	30	0	800	740	5,060	16,000	1,100	15	5
19.....	0	0	0	25	25	750	490	5,200	16,170	820	15	5
20.....	0	0	0	30	25	650	440	5,340	16,370	620	15	5
21.....	0	0	45	10	35	570	550	5,040	18,070	540	15	5
22.....	0	0	115	0	60	465	690	4,930	17,840	470	15	5
23.....	0	0	85	0	105	465	760	5,070	17,600	900	15	5
24.....	0	0	65	0	95	405	660	5,170	17,670	1,000	15	5
25.....	0	0	50	0	75	265	490	4,430	16,940	950	10	25

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
26.....	0	30	30	0	35	225	450	3,650	16,660	700	10	25
27.....	0	30	20	25	25	205	560	2,910	16,300	520	10	40
28.....	0	30	15	15	35	185	750	2,530	15,300	430	10	20
29.....	0	30	5	5	-----	160	1,510	2,310	12,430	375	10	145
30.....	0	30	5	5	-----	130	2,050	2,270	11,730	320	10	145
31.....	0	-----	5	20	-----	120	-----	2,340	-----	215	10	-----
1903-4.												
1.....	150	5	5	75	15	0	0	0	0	0	0	380
2.....	220	5	5	75	15	0	0	0	0	0	0	280
3.....	200	5	5	70	15	0	0	0	0	0	0	a 280
4.....	90	5	5	45	15	0	0	0	0	0	0	205
5.....	45	5	5	15	10	0	0	0	0	0	0	455
6.....	30	5	5	15	10	0	0	0	0	0	0	655
7.....	30	5	5	15	5	0	0	0	0	0	0	380
8.....	20	5	5	15	5	0	0	0	0	0	0	140
9.....	20	5	10	10	5	0	0	0	0	0	0	120
10.....	15	5	25	5	5	0	0	0	0	0	a 480	100
11.....	15	5	35	5	5	0	0	0	0	0	0	390
12.....	15	5	45	5	5	0	0	0	0	0	0	a 370
13.....	15	5	45	5	5	0	0	0	0	0	0	290
14.....	15	5	45	5	5	0	0	0	0	0	0	a 204
15.....	15	5	50	5	5	0	0	0	0	0	0	165
16.....	15	5	50	5	5	0	0	0	0	0	a 105	65
17.....	15	5	50	5	5	0	0	0	0	0	0	65
18.....	10	5	55	5	5	0	0	0	0	0	a 30	30
19.....	10	5	55	5	5	0	0	0	0	0	0	20
20.....	10	5	60	5	5	0	0	0	0	0	0	a 15
21.....	10	5	75	5	5	0	0	0	0	0	0	10
22.....	10	5	75	5	5	0	0	0	0	0	0	5
23.....	10	5	60	5	5	0	0	0	0	0	0	5
24.....	5	5	60	5	5	0	0	0	0	0	0	15
25.....	5	5	55	5	5	0	0	0	0	0	0	a 90
26.....	5	5	50	5	5	0	0	0	0	0	0	170
27.....	5	5	45	10	5	0	0	0	0	0	0	a 285
28.....	5	5	50	15	5	0	0	0	0	0	0	200
29.....	5	5	65	15	5	0	0	0	0	0	0	200
30.....	5	5	65	15	5	0	0	0	0	0	0	a 225
31.....	5	-----	65	15	-----	0	-----	0	-----	0	-----	285
1904-5.												
1.....	1,730	1,490	600	405	460	2,390	1,880	5,380	20,270	3,150	260	40
2.....	4,040	1,390	610	385	475	2,560	2,060	a5,170	a20,720	2,810	230	a 35
3.....	a5,410	1,240	a 620	a 365	a 475	a2,500	a2,030	5,410	20,320	a2,390	a 215	35
4.....	6,230	1,190	620	460	340	2,860	1,960	5,530	18,840	2,130	200	30
5.....	a6,850	1,040	620	330	460	3,320	2,040	6,070	17,620	2,000	200	a 30
6.....	a8,170	990	a 890	340	460	3,170	a2,220	a6,430	a15,630	1,820	250	30
7.....	6,180	a 990	980	370	a 490	3,700	1,980	7,800	14,190	a1,510	a 725	30
8.....	5,740	920	980	a 385	490	a3,700	1,700	9,100	14,190	1,350	645	a 35
9.....	7,670	860	a 950	385	550	3,910	a1,420	a9,760	a17,410	1,200	545	30
10.....	a11,370	810	920	620	a 820	4,910	1,370	8,590	18,300	a1,060	a 595	30
11.....	10,550	a 770	870	a 765	1,290	4,910	1,530	6,350	20,190	970	570	a 25
12.....	a12,010	770	a 840	765	a1,050	a4,910	1,740	a5,850	a23,680	910	a 950	a 110
13.....	13,800	780	730	1,290	860	4,330	2,310	5,960	23,050	a 735	810	115
14.....	16,200	a 780	730	a1,075	695	3,810	a2,930	6,570	23,620	629	565	a 110
15.....	17,100	760	a 620	950	a 585	a3,500	3,760	6,680	a23,270	545	a 490	110
16.....	9,300	740	550	890	585	3,370	3,850	a6,200	23,270	a 470	415	90
17.....	6,300	a 740	510	830	550	3,150	a3,400	5,740	20,100	450	345	a 75
18.....	5,050	740	a 470	a 770	460	a2,700	3,400	5,880	a17,250	430	a 300	60
19.....	4,300	700	475	630	a 720	2,700	3,330	6,020	13,620	a 415	250	50
20.....	3,550	640	480	625	1,290	3,020	a3,040	a6,180	9,970	400	200	a 45
21.....	3,150	a 570	a 490	a 605	a1,220	a3,170	2,970	6,980	a7,310	385	a 200	35
22.....	2,700	550	500	540	1,000	3,170	2,970	8,360	6,820	a 385	160	30
23.....	2,460	570	480	515	1,100	2,810	3,380	a9,720	6,640	485	145	a 20
24.....	2,250	a 580	a 490	a 460	1,035	a2,380	a3,780	9,800	6,090	510	a 145	15
25.....	2,460	620	480	460	a 910	2,080	4,430	a10,210	a5,720	a 435	130	15
26.....	2,040	660	470	500	975	2,080	5,900	12,640	4,950	385	100	a 15
27.....	1,800	650	475	555	1,070	2,380	7,500	14,720	a4,560	360	a 100	15
28.....	1,620	640	a 415	a 540	a1,300	2,150	7,700	a16,450	4,150	a 380	85	110
29.....	1,620	630	475	500	-----	1,920	a7,300	17,860	3,860	410	55	a 165
30.....	1,620	a 590	480	460	-----	1,690	5,900	18,920	a3,510	285	a 50	140
31.....	1,500	-----	a 430	a 460	-----	a1,690	-----	a18,920	-----	a 260	45	-----

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	230	a 35	1,035	a 220	455	485	1,520	3,680	a6,120	1,880	775	260
2.....	a 195	60	965	190	a 490	a 515	a1,340	3,480	5,260	1,630	960	a 150
3.....	170	60	a1,350	175	515	515	1,170	a3,700	4,770	a1,390	a1,430	115
4.....	145	a 75	1,140	a 165	510	515	1,280	3,420	a4,470	1,040	2,400	90
5.....	a 130	85	895	150	a 470	a 425	a1,210	3,040	4,580	1,220	3,080	a 65
6.....	130	85	a 690	175	500	385	750	a2,760	4,600	a1,280	a1,610	55
7.....	110	a 115	625	a 175	530	375	750	2,740	a4,360	1,160	1,390	50
8.....	a 90	150	585	175	a 470	a 395	a 970	2,520	3,880	1,760	1,290	40
9.....	90	165	a 540	175	440	610	900	a2,810	3,740	a2,030	a1,230	35
10.....	65	a 200	500	a 175	565	490	820	3,640	a3,610	2,120	1,440	30
11.....	a 60	235	525	210	a 595	a 370	a 780	4,370	3,560	2,310	1,380	a 20
12.....	60	255	a 595	220	585	290	800	a4,740	3,690	a2,590	a 805	20
13.....	50	360	620	a 240	575	280	1,060	4,830	a3,730	2,370	705	25
14.....	a 45	380	620	240	a 715	a 270	1,150	5,330	4,320	1,740	665	a 20
15.....	35	a 380	a 570	240	715	270	1,060	a5,840	4,550	1,660	a 505	20
16.....	25	370	575	a 240	715	270	1,260	6,610	a4,770	1,520	455	15
17.....	a 25	355	630	240	a 795	a 280	a1,470	7,190	5,250	1,650	415	a 10
18.....	a 25	a 310	a 580	a 520	760	270	1,350	a7,330	5,560	a1,770	a 355	10
19.....	25	310	655	540	730	520	1,200	6,630	a5,770	2,280	245	10
20.....	a 25	310	605	730	a 635	a 580	a1,170	a6,390	5,960	1,600	340	a 10
21.....	25	a 310	a 580	a 945	630	555	1,290	6,540	6,140	a1,840	a 250	10
22.....	25	305	530	1,110	560	580	1,630	6,690	a6,500	1,630	290	10
23.....	a 30	315	455	1,080	a 555	a 520	a1,710	a6,990	5,740	1,720	530	20
24.....	40	a 335	a 455	a1,045	500	425	1,930	7,730	5,450	a1,510	a 240	a 15
25.....	40	485	480	870	510	355	1,850	8,080	a4,720	1,250	220	10
26.....	a 40	560	475	765	a 485	a 355	a1,870	a8,460	4,220	1,120	165	10
27.....	40	a1,240	a 450	a 560	515	295	2,430	8,700	3,560	a1,060	a 120	a 15
28.....	40	1,530	365	525	455	295	a2,850	8,490	a2,910	1,060	130	15
29.....	a 40	1,870	280	520	.....	a 235	3,350	a8,140	2,440	a 990	495	125
30.....	40	a1,560	a 280	a 515	.....	265	a3,470	8,040	a2,210	830	a 545	a 140
31.....	40	.....	245	480	.....	a 770	.....	7,040	.....	a 680	410	.....
1906-7.												
1.....	a1,245	760	960	870	690	910	1,870	2,920	9,780	5,190	3,720	4,440
2.....	755	a 760	a1,000	965	805	860	1,820	3,200	a9,210	5,160	3,580	a8,620
3.....	a 580	950	1,000	a 940	a 875	a 950	a1,740	a3,980	8,520	a1,980	a3,560	a10,370
4.....	580	1,220	1,080	1,020	930	995	1,570	4,030	7,600	5,520	3,090	6,660
5.....	465	a1,180	a3,670	900	945	825	1,530	3,950	a7,020	6,330	2,710	a3,730
6.....	a 435	1,100	2,770	a 835	a1,000	a 825	a1,440	a3,720	5,580	6,860	a2,600	3,730
7.....	555	1,060	1,740	750	1,240	665	1,320	3,630	5,640	7,120	3,000	3,200
8.....	620	a1,140	a1,510	720	1,130	625	1,290	3,690	a5,780	a7,650	2,480	a2,680
9.....	a 650	1,250	2,070	a 720	a 920	a 585	a1,370	a3,650	6,350	7,650	a2,230	2,950
10.....	700	1,250	1,990	675	770	505	1,470	3,510	6,540	7,650	2,220	2,250
11.....	720	a1,240	a1,560	675	780	500	1,400	3,110	a6,830	6,830	2,200	a1,830
12.....	a 685	1,210	1,380	a 905	a 905	a 595	a1,330	a2,960	6,540	a6,560	a2,080	1,520
13.....	685	1,180	1,200	1,070	835	560	1,210	2,880	7,320	6,660	1,710	1,330
14.....	630	a1,150	a1,110	1,190	870	635	1,220	2,390	a7,220	6,130	1,380	a1,330
15.....	a 540	1,080	1,150	a1,295	a 800	a 825	a1,280	a2,470	7,070	a6,230	a1,130	1,180
16.....	560	1,040	1,120	1,295	705	860	1,650	2,590	6,770	5,800	970	970
17.....	540	970	a1,170	1,295	825	890	a3,080	2,720	a6,960	5,470	805	a 880
18.....	a 505	a1,030	1,140	1,970	a 800	a 960	4,210	a3,090	6,770	a5,130	a 725	1,160
19.....	495	1,060	1,110	a1,400	795	755	a5,070	3,300	6,770	5,000	650	1,020
20.....	485	1,110	a1,170	1,240	755	540	5,920	3,350	a8,040	5,070	855	a1,540
21.....	a 505	a1,110	1,010	1,240	a 785	a 540	a6,060	a3,260	8,280	5,240	a 620	1,650
22.....	425	1,060	930	a1,210	715	470	5,810	3,560	a9,170	a4,920	980	3,640
23.....	460	960	a 810	1,125	645	445	6,460	4,010	9,170	4,680	1,400	a4,150
24.....	490	a 980	685	1,045	a 750	a 510	a5,810	4,530	a10,750	4,590	a1,550	4,820
25.....	655	970	655	960	720	710	4,900	a5,480	9,440	a4,270	2,590	a2,630
26.....	690	760	a 600	880	845	1,860	3,840	6,800	8,260	3,840	2,110	1,760
27.....	a 820	a 550	660	760	850	a2,060	a3,750	7,520	a7,590	3,720	a2,280	a1,360
28.....	850	470	630	595	a 820	2,460	3,660	a7,740	6,890	a3,970	1,740	1,040
29.....	780	a 550	a 940	a 630	.....	a2,380	3,410	8,840	6,060	3,770	a3,790	870
30.....	a 565	760	815	635	.....	1,980	a3,000	a9,290	a5,230	3,770	5,000	a 780
31.....	585	.....	810	a 660	.....	a1,980	.....	9,630	.....	a4,350	a4,440	.....

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	660	1,190	675	665	395	710	590	1,650	1,770	75	650	1,280
2.	595	1,130	675	540	435	830	570	1,380	1,320	45	a 400	745
3.	a 560	a1,040	a 590	515	a 435	a 770	a 650	a1,340	a1,100	a 30	295	a 355
4.	540	1,260	590	565	455	670	675	1,340	1,020	0	460	a1,760
5.	520	985	645	640	510	685	555	1,240	1,020	0	a 460	1,720
6.	a 530	a 925	a 750	765	a 505	a 785	a 530	a1,130	a 900	0	925	535
7.	510	875	695	a 765	555	745	475	1,740	845	0	a1,290	a 215
8.	510	820	685	690	520	660	415	2,770	910	85	a1,290	200
9.	a 470	a 820	a 675	710	a 480	a 575	a 325	2,400	a 845	35	835	125
10.	420	770	675	a 665	480	615	265	1,920	845	a 5	505	a 75
11.	420	835	675	555	480	705	385	1,800	735	80	a 240	55
12.	a 420	900	a 675	580	a 755	a 795	a 420	1,680	a 665	35	1,160	40
13.	420	a 835	670	a 565	675	830	660	1,190	635	35	a1,360	a 20
14.	420	800	585	510	585	920	765	1,500	455	35	830	10
15.	a 455	a 750	a 580	490	a 530	a 690	a1,000	1,620	a 305	25	910	5
16.	495	825	710	a 400	515	690	940	1,620	245	0	a 870	a 20
17.	515	900	675	415	500	555	1,190	a1,670	220	0	1,020	15
18.	a 520	a 825	a 685	415	a 520	a 375	a1,450	1,720	a 155	0	a1,910	10
19.	500	865	615	a 450	545	290	1,690	1,620	185	0	1,820	5
20.	615	1,010	665	420	605	275	1,690	1,350	870	510	1,500	0
21.	a 785	a1,110	a 630	450	a 565	a 240	a2,740	a1,210	840	a1,260	a1,280	0
22.	1,010	1,150	635	a 480	540	1,040	3,420	1,560	a 930	885	1,020	0
23.	880	1,010	520	475	570	a1,560	3,120	1,910	745	1,515	680	0
24.	a 850	a1,010	a 565	530	a 560	1,520	a2,820	a2,380	650	a 605	a 770	0
25.	1,410	885	505	a 545	615	1,290	2,460	3,230	a 515	485	450	0
26.	2,020	965	485	485	650	a1,120	2,310	3,160	440	350	750	0
27.	a1,470	a 945	a 465	505	a 580	1,080	a2,360	3,020	380	a 470	a1,730	0
28.	2,170	765	435	a 445	560	910	2,230	a2,960	325	370	1,380	0
29.	1,890	740	435	455	a 595	a 825	1,900	2,520	230	455	a 850	0
30.	a1,440	a 760	a 475	485	-----	710	a1,800	2,210	a 150	a 440	625	0
31.	1,190	-----	a 635	a 455	-----	a 610	-----	a2,080	-----	395	a1,300	-----
1908-9.												
1.	0	0	490	425	425	365	175	1,450	3,040	2,030	0	875
2.	0	0	525	a 445	425	340	165	1,620	3,130	1,710	0	875
3.	0	0	a 525	470	335	a 185	a 230	a2,150	a3,160	1,170	0	a 635
4.	0	0	a 445	425	365	95	200	2,300	3,070	1,350	0	535
5.	0	0	370	a 420	a 395	55	190	2,030	2,830	930	0	520
6.	0	0	a 330	420	305	a 35	a 115	a2,000	a2,460	990	0	a 625
7.	0	0	260	420	265	25	115	1,790	2,280	890	0	780
8.	0	0	315	380	250	10	90	1,790	1,980	530	0	1,840
9.	0	0	280	a 275	a 350	a 340	a 65	a2,640	a2,420	440	0	a5,140
10.	0	0	a 185	195	390	645	545	4,160	3,500	415	0	5,140
11.	0	0	185	75	435	590	810	5,770	4,670	295	0	3,820
12.	0	0	385	315	a 455	915	a 680	a6,240	a5,330	250	0	a4,880
13.	0	0	a 515	350	360	a1,110	410	6,850	6,110	265	0	3,980
14.	0	a 50	515	a 370	365	985	295	6,830	6,190	220	0	3,290
15.	0	75	485	620	a 390	985	a 320	a6,250	a6,270	160	0	a3,290
16.	0	95	a 290	a 510	390	a 890	255	5,640	6,300	310	0	2,820
17.	0	a 115	230	420	310	885	305	6,040	6,430	175	0	2,540
18.	0	150	200	480	a 245	730	a 275	a6,350	5,380	125	0	a2,250
19.	0	180	a 200	a 420	205	465	370	6,090	a4,970	a 80	0	2,130
20.	0	180	200	345	190	a 335	215	5,430	4,830	30	0	2,020
21.	0	a 180	200	290	a 330	290	a 215	a5,070	4,250	40	a 30	1,670
22.	0	170	a 225	260	330	350	1,640	4,990	a3,740	a 35	25	a1,670
23.	0	160	215	260	300	395	2,880	4,900	3,350	20	20	1,450
24.	0	a 155	a 235	350	205	a 415	a3,630	5,500	3,440	15	a 20	a1,170
25.	0	155	745	330	a 160	735	3,780	5,750	a3,530	a 15	a2,680	1,090
26.	0	155	625	320	155	600	3,780	a5,670	3,470	10	1,910	1,070
27.	0	145	a 530	330	165	465	a3,300	5,600	3,380	5	690	a1,060
28.	0	135	365	330	a 165	a 395	2,460	4,670	a3,210	0	a 540	790
29.	0	a 170	440	330	-----	395	2,050	4,050	2,670	0	1,420	725
30.	0	290	785	320	-----	290	a1,460	a3,430	a2,170	0	1,250	a 690
31.	0	-----	a 495	355	-----	a 185	-----	3,120	-----	0	a1,010	-----
1909-10.												
1.	690	400	a 460	115	545	400	2,270	4,870	755	25	0	0
2.	600	380	655	140	555	a 320	2,090	5,470	715	10	0	0
3.	a 645	a 380	760	a 195	535	430	a1,880	a6,370	385	0	0	50
4.	735	340	630	340	a 500	725	1,610	6,870	a 420	0	0	10
5.	560	310	a 820	925	495	535	1,260	7,670	1,130	0	0	5

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.....	a 430	a 310	760	1,350	505	a 705	a1,240	a7,720	1,360	0	0	0
7.....	300	335	560	1,430	a 505	2,030	1,310	7,290	1,570	0	0	0
8.....	340	300	480	1,310	515	1,850	1,280	6,550	a1,600	0	0	0
9.....	a 385	a 290	a 435	a 790	520	a1,730	a1,280	a5,710	1,500	0	0	0
10.....	255	280	490	530	a 495	1,500	1,350	4,630	1,320	0	0	0
11.....	385	290	515	450	325	1,470	1,360	3,980	1,040	0	0	0
12.....	a1,000	a 275	a 390	a 470	310	a1,490	a1,360	a3,870	a 945	0	0	0
13.....	1,160	290	365	410	a 250	1,790	1,640	4,480	835	0	0	0
14.....	755	335	280	335	410	1,690	1,720	4,610	590	0	0	0
15.....	755	a 365	a 235	a 375	405	a1,620	a1,380	a4,390	450	0	0	0
16.....	a 755	375	215	720	460	1,570	1,600	4,590	a 315	0	0	0
17.....	635	345	205	890	a 255	1,470	1,810	4,850	225	0	0	0
18.....	a 560	a 330	375	a 720	220	a1,470	a2,110	a5,070	140	0	0	0
19.....	550	310	a 475	675	220	1,710	2,110	5,170	a 75	0	0	0
20.....	490	320	425	695	a 200	1,660	2,150	4,950	85	0	0	0
21.....	660	a 290	300	a 880	130	a1,710	1,890	5,140	205	0	0	0
22.....	705	420	225	1,000	100	1,620	a1,770	a5,320	a 70	0	0	0
23.....	a 600	530	210	1,080	a 340	1,430	1,500	3,490	10	0	0	0
24.....	a 500	a 535	a 190	a 955	415	a1,570	1,730	3,230	5	0	0	0
25.....	450	375	190	915	275	1,740	a2,030	a2,620	a 10	0	0	0
26.....	500	320	180	875	a 750	1,740	2,710	2,250	10	0	0	0
27.....	a 500	a 400	160	750	105	a1,810	3,080	2,060	20	0	0	0
28.....	460	300	a 145	a 665	205	2,100	a3,220	a1,590	a 245	0	0	0
29.....	a 465	325	135	715	.....	2,320	3,620	1,330	545	0	0	0
30.....	520	345	130	665	.....	2,320	a4,620	905	a 125	0	0	0
31.....	a 415	.....	a 110	a 565	.....	2,320	.....	a 905	.....	0	0	.....
1910-11.												
1.....	0	0	0	0	a 155	140	315	2,240	2,740	3,350	4,390	60
2.....	0	0	0	5	115	190	220	2,660	2,740	a3,270	4,240	50
3.....	0	0	0	20	100	a 190	a 195	a3,220	a2,810	3,710	3,630	35
4.....	0	0	0	20	a 110	130	170	3,290	3,200	3,410	a2,840	a 10
5.....	0	0	0	10	115	460	145	2,990	3,460	a5,860	2,360	5
6.....	0	0	5	a 5	255	a 490	445	a2,640	a2,940	a9,380	2,070	5
7.....	0	0	15	5	380	315	820	2,360	3,060	9,210	a1,750	5
8.....	0	0	a 25	0	a 460	80	1,010	2,310	3,380	a6,270	1,380	5
9.....	0	0	15	0	310	a 165	a1,120	2,560	a3,910	6,040	1,140	5
10.....	0	0	5	0	275	115	1,210	a2,990	3,710	7,730	a 720	35
11.....	0	0	15	5	a 160	75	985	3,700	4,010	a9,300	570	a 65
12.....	0	0	5	20	125	2,220	805	4,620	a4,010	9,550	475	130
13.....	0	0	15	20	155	a1,720	750	5,200	4,010	a7,060	a 350	145
14.....	0	0	10	10	a 170	1,470	530	a6,440	4,240	6,010	265	145
15.....	0	0	5	0	140	1,440	390	6,940	a4,630	6,010	180	a 145
16.....	0	0	5	0	130	a1,910	a 290	a7,440	4,870	a5,920	a 140	155
17.....	0	0	5	a 220	a 130	1,480	250	7,020	a5,110	7,740	85	115
18.....	0	0	0	305	125	925	175	6,090	5,190	9,060	65	140
19.....	0	0	0	330	175	555	a 115	5,750	5,150	a4,940	45	125
20.....	0	0	5	570	a 260	a 600	110	5,520	a5,100	5,400	a 20	a 295
21.....	0	0	15	a 595	235	530	160	5,110	3,980	a8,060	10	645
22.....	0	0	15	360	235	530	a 110	4,830	3,530	6,870	10	810
23.....	0	0	20	a 315	530	80	a4,410	a4,100	8,890	a 10	a 675	5
24.....	0	0	20	410	325	a 995	80	4,340	3,680	a9,660	5	600
25.....	0	0	25	340	300	795	120	3,820	3,680	10,240	5	460
26.....	0	0	25	a 220	305	760	a 135	3,300	a4,020	9,270	a 5	460
27.....	0	0	a 25	175	280	a 690	265	a2,850	3,480	a9,790	5	a 250
28.....	0	0	20	a 160	155	660	1,660	2,700	3,530	9,850	5	95
29.....	0	0	5	155	.....	620	1,720	2,620	a3,710	7,210	a 10	70
30.....	0	0	0	175	.....	a 620	a1,680	2,390	3,510	a5,670	125	a 105
31.....	0	.....	0	175	.....	550	.....	a2,610	.....	4,770	a 80	.....
1911-12.												
1.....	360	3,550	1,370	470	800	a 540	1,130	1,190	15,380	4,890	845	1,170
2.....	450	3,030	1,350	335	775	560	1,110	1,190	a15,300	5,170	575	1,210
3.....	1,110	a2,720	a1,320	240	a 820	510	a 720	1,040	15,980	a4,750	a 295	a2,040
4.....	a1,480	2,690	1,240	a 205	855	490	915	a1,000	a13,950	4,010	285	1,130
5.....	1,910	2,690	1,030	305	890	a 370	1,110	2,170	13,590	4,120	255	845

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	2,920	a 2,550	a 720	290	a 615	255	a 1,190	4,360	a12,590	a 3,720	a 225	a 675
7.....	3,920	2,530	720	a 280	605	200	1,240	5,530	11,670	3,410	185	530
8.....	a 5,140	2,530	1,150	355	620	a 235	1,420	a 5,530	11,130	3,100	130	385
9.....	8,700	a 2,550	1,200	430	a 620	200	1,730	4,780	a10,050	a 2,480	a 350	a 315
10.....	a 9,590	2,220	a 1,240	a 545	620	235	a 2,230	4,300	10,370	2,190	0	370
11.....	9,710	2,080	1,310	810	590	275	2,620	a 4,090	10,530	1,830	0	300
12.....	11,810	a 1,870	1,310	960	a 555	a 1,640	a 3,060	4,530	a11,080	a 1,460	0	a 330
13.....	11,810	1,800	a 1,310	770	510	1,680	2,800	5,240	10,760	1,160	0	235
14.....	a 9,290	1,740	1,300	885	460	1,300	2,530	5,560	10,140	860	0	180
15.....	8,610	a 1,750	1,240	1,140	445	1,210	a 2,600	a 5,430	a 8,880	a 630	0	a 125
16.....	7,740	1,860	1,230	1,180	a 395	a 1,040	2,490	5,550	8,200	580	1,480	105
17.....	a 6,970	1,750	a 1,120	735	480	1,200	2,490	5,750	7,510	380	a 360	80
18.....	5,300	1,640	1,130	a 865	510	1,160	a 2,390	a 5,940	a 6,130	a 330	285	a 60
19.....	4,350	a 1,640	885	930	565	a 880	1,690	6,010	6,020	330	a 1,410	45
20.....	4,220	1,550	a 840	a 1,130	a 565	555	1,690	5,560	5,400	850	1,300	30
21.....	a 3,490	1,530	825	1,070	515	430	a 1,490	a 5,680	a 4,990	a 970	825	a 15
22.....	3,330	a 1,510	865	1,070	435	a 430	1,420	6,500	4,520	1,460	a 865	15
23.....	2,880	a 700	a 700	1,010	415	235	1,570	7,100	4,150	1,130	825	10
24.....	a 2,850	1,570	710	a 1,080	a 335	350	1,590	8,640	3,980	a 1,010	925	a 10
25.....	2,730	a 1,570	770	1,080	395	a 3,970	1,420	a 9,820	3,630	1,690	a 1,040	0
26.....	2,600	1,540	a 830	1,930	485	2,980	1,080	9,860	3,980	1,900	805	0
27.....	a 2,410	1,540	770	a 1,280	a 485	2,080	850	a10,130	a 4,420	a 2,370	620	0
28.....	2,520	1,480	890	845	485	a 1,890	a 685	11,000	4,970	2,320	a 750	0
29.....	2,620	1,450	800	610	440	1,490	585	a12,050	4,720	1,990	495	0
30.....	a 3,030	a 1,390	a 710	835	.....	1,030	535	12,580	a 5,260	1,660	415	10
31.....	3,930	.....	560	a 835	.....	a 1,030	.....	a14,910	.....	a 765	a 305	.....
1912-13.												
1.....	15	80	475	120	590	600	30	1,210	180	355	0	0
2.....	10	90	510	95	485	560	40	1,200	110	205	0	0
3.....	a 10	a 95	a 555	a 95	a 460	a 560	a 20	a 1,150	a 70	a 980	0	0
4.....	10	109	605	95	505	465	30	2,060	25	680	0	0
5.....	10	105	630	230	460	375	15	2,690	60	340	0	0
6.....	a 10	a 110	a 605	a 320	a 420	a 365	a 15	a 2,860	a 175	a 110	0	0
7.....	10	85	630	115	450	340	15	2,800	210	100	0	0
8.....	5	100	610	165	615	235	10	2,220	260	65	0	0
9.....	a 5	a 125	a 590	165	a 545	a 255	a 10	a 1,630	a 335	a 10	0	0
10.....	5	125	605	95	625	280	5	1,330	250	10	0	0
11.....	5	160	570	50	655	315	70	1,940	165	5	0	0
12.....	a 5	a 195	a 625	a 50	a 735	a 255	a 770	a 2,120	a 85	5	0	0
13.....	5	250	850	50	735	220	1,100	1,790	85	0	0	0
14.....	5	300	610	125	830	180	725	1,460	105	0	0	0
15.....	a 5	a 300	a 400	a 200	a 775	a 155	a 430	a 1,370	a 3,900	0	0	0
16.....	5	300	335	285	770	265	320	1,220	2,700	0	0	0
17.....	5	380	365	320	770	310	320	1,120	1,320	0	0	0
18.....	a 10	a 510	a 390	a 185	a 770	325	a 260	a 2,020	a 925	0	0	0
19.....	10	500	420	120	770	325	220	1,890	1,130	0	0	0
20.....	5	500	365	100	755	295	180	1,290	985	0	0	0
21.....	a 10	a 500	a 385	a 110	a 740	a 295	a 645	a 1,270	a 955	0	0	0
22.....	10	500	310	140	645	260	1,380	900	835	0	0	0
23.....	15	500	295	920	575	185	2,240	1,490	1,070	0	0	0
24.....	a 15	a 500	a 310	a 695	a 520	170	a 2,400	a 1,370	a 805	0	0	0
25.....	15	500	320	625	545	a 70	2,240	1,250	1,010	0	0	0
26.....	15	500	305	655	a 595	40	2,940	810	1,160	0	0	0
27.....	a 25	a 470	a 280	a 685	610	40	a 3,160	a 590	a 1,010	0	0	0
28.....	90	460	225	670	a 680	a 30	2,710	560	650	0	0	0
29.....	105	460	175	665	.....	35	1,820	380	600	0	0	0
30.....	a 95	a 465	140	690	.....	35	a 1,440	350	a 535	0	0	0
31.....	75	.....	a 130	a 655	.....	a 40	.....	a 290	.....	0	0	.....

a Date of measurement.

NOTE.—Discharge estimated Sept. 19-25, Oct. 3-22, and Nov. 2-10, 1890. During 1896, there was no flow during the following periods: June 21-27, July 8-16, Aug. 24, Sept. 7-22.

Monthly discharge of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913.

Month.	Discharge in second-foot.			Run-off (total in acre-foot).	Month.	Discharge in second-foot.			Run-off (total in acre-foot).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1889.					1897.				
May 10-31.....	4,700	2,260	3,116	135,960	May.....	17,000	5,000	8,312	511,088
June.....	4,460	660	2,638	156,961	June.....	11,000	2,000	6,095	362,677
July.....	930	0	237	14,575	July.....	5,300	300	1,330	81,770
August.....	0	0	0	0	August.....	600	0	132	8,116
September.....	0	0	0	0	September.....	2,880	0	705	41,950
The period.....				307,000	The period.....				1,140,000
1889-90.					1897-98.				
October.....	0	0	0	0	October.....	5,000	230	1,758	108,096
November.....	0	0	0	0	November.....	1,695	810	1,132	67,359
December.....	252	0	71	4,366	December.....	1,015	460	680	41,812
January.....	280	114	196	12,054	January.....			α 490	30,129
February.....	458	108	290	16,095	February.....	965	320	606	33,655
March.....	1,140	45	424	26,076	March.....	620	99	326	20,044
April.....	4,110	470	2,190	130,305	April.....	4,750	15	1,646	97,944
May.....	7,200	3,500	5,771	354,916	May.....	5,800	530	2,280	140,192
June.....	7,200	2,920	4,404	262,038	June.....	3,080	522	1,875	111,570
July.....	2,360	235	854	52,521	July.....	9,900	1,210	3,192	196,269
August.....	2,500	170	734	45,141	August.....	1,550	100	508	31,236
September.....	660	40	176	10,472	September.....	170	3	38	2,262
The year.....	7,200	0	1,260	914,009	The year.....	9,900	3	1,210	881,000
1890-91.					1898-99.				
October.....	116	40	65	3,997	October.....	3	2	3	160
November.....	610	40	284	16,898	November.....	2	2	2	110
December.....	660	430	535	32,902	December.....	200	2	93	5,718
January.....	715	140	451	27,736	January.....	290	130	210	12,912
February.....	2,780	335	809	44,899	February.....	300	130	204	11,530
March.....	4,640	470	1,866	114,759	March.....	230	40	115	7,071
April.....	8,620	1,040	4,265	253,767	April.....	720	10	148	8,807
May.....	16,620	8,340	11,852	726,528	May.....	690	10	168	10,330
June.....	8,340	5,040	6,714	399,483	June.....	0	0	0	0
July.....	6,340	560	2,271	139,666	July.....	1,900	0	318	19,553
August.....	1,780	17	662	40,713	August.....	120	0	7	430
September.....	9,480	0	768	45,695	September.....	0	0	0	0
The year.....	16,620	0	2,540	1,850,000	The period.....	1,900	0	106	76,400
1891-92.					1899-1900.				
October.....	3,540	560	1,488	91,512	October.....	0	0	2	123
November.....	515	235	341	20,289	November.....	0	0	2	119
December.....	560	190	344	21,156	December.....	110	0	46	2,828
January.....	515	155	326	20,049	January.....	330	90	132	8,110
February.....	830	290	476	27,370	February.....	150	75	102	5,680
March.....	2,070	390	752	46,248	March.....	65	0	8	460
April.....	7,480	470	3,147	187,246	April.....	5	5	5	300
May.....	10,000	5,200	7,093	436,219	May.....	2,500	0	729	44,810
June.....	6,480	605	2,943	175,108	June.....	3,550	10	1,565	93,100
July.....	2,780	0	668	41,082	July.....	5	0	1	70
August.....	110	0	13	800	August.....	0	0	0	0
September.....	0	0	0	0	September.....	1,690	0	277	16,483
The year.....	10,000	0	1,470	1,070,000	The year.....	3,550	0	239	172,000
1892-93.					1900-1901.				
October.....	0	0	0	0	October.....	0	0	0	0
November.....	0	0	0	0	November.....	0	0	0	0
December.....	0	0	0	0	December.....	45	0	12	738
January.....	190	0	134	8,241	January.....	30	0	5	278
February.....	355	62	144	7,992	February.....	270	0	81	4,503
March.....	128	0	35	2,152	March.....	410	0	60	3,669
April.....	3,500	0	808	48,076	April.....	0	0	0	0
May.....	6,630	660	3,764	231,486	May.....	3,980	110	2,571	158,102
June.....	660	20	225	13,388	June.....	3,620	20	1,295	77,038
The period.....				311,000	July.....	2,480	0	205	12,576
1897.					1901.				
January.....	1,260	90	305	18,754	January.....	3,070	90	986	60,655
February.....	230	125	194	10,774	February.....	2,650	0	353	21,005
March.....	120	30	72	4,427	The year.....	3,980	0	464	339,000
April.....	4,220	40	1,740	108,537					

α Estimated.

Monthly discharge of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Contd.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1901-2.					1906-7.				
October	450	0	87	5,336	October	1,245	425	621	38,192
November	810	30	215	12,813	November	1,250	470	997	59,326
December	130	130	130	7,993	December	3,670	600	1,240	76,255
January	140	130	135	8,291	January	1,970	595	983	60,436
February	160	30	104	5,772	February	1,240	645	839	46,621
March	20	10	10	635	March	2,460	445	976	60,020
April	540	10	133	7,904	April	6,460	1,220	2,951	175,577
May	75	0	9	526	May	9,630	2,390	4,381	269,355
June	135	0	5	307	June	10,750	5,230	7,438	442,612
July	10	0	0	20	July	7,650	3,720	5,487	337,408
August	2,140	0	236	14,499	August	5,000	620	2,200	135,263
September	860	0	156	9,313	September	10,370	780	2,801	166,671
The year.	2,140	0	102	73,400	The year.	10,750	425	2,580	1,870,000
1902-3.					1907-8.				
October	115	0	23	1,428	October	2,170	420	813	50,003
November	30	0	5	298	November	1,260	740	923	54,942
December	115	0	29	1,775	December	750	435	612	37,636
January	35	0	10	615	January	765	400	536	32,985
February	105	0	23	1,289	February	1,755	395	542	31,170
March	1,360	40	368	22,602	March	1,560	240	777	47,752
April	2,050	200	831	49,468	April	3,420	265	1,347	80,132
May	5,340	2,100	3,312	203,623	May	3,230	1,130	1,901	116,866
June	18,070	1,700	9,863	586,909	June	1,770	150	675	40,165
July	10,930	215	2,573	158,202	July	1,515	0	265	16,314
August	280	10	70	4,334	August	1,910	240	954	58,641
September	145	5	17	1,031	September	1,760	0	240	14,261
The year.	18,070	0	1,430	1,030,000	The year.	3,420	0	799	581,000
1903-4.					1908-9.				
October	220	5	33	2,033	October	0	0	0	0
November	5	5	5	298	November	290	0	85	5,078
December	75	5	40	2,440	December	785	185	380	23,385
January	75	5	16	972	January	620	75	363	22,324
February	15	5	7	387	February	455	155	309	17,177
March	0	0	0	0	March	1,110	10	468	28,760
April	0	0	0	0	April	3,780	65	1,034	61,527
May	0	0	0	0	May	6,830	1,450	4,392	270,050
June	0	0	0	0	June	6,430	1,980	3,932	233,970
July	0	0	0	0	July	2,030	0	403	24,803
August	480	0	120	7,398	August	2,680	0	310	19,031
September	655	10	184	10,959	September	5,140	520	1,979	117,759
The year.	655	0	34	24,500	The year.	6,830	0	1,140	824,000
1904-5.					1909-10.				
October	17,100	1,500	5,960	366,486	October	1,160	255	575	35,345
November	1,490	550	813	48,397	November	535	275	347	20,268
December	980	415	621	38,182	December	820	110	707	22,820
January	1,290	330	584	38,920	January	1,430	115	707	43,498
February	1,300	460	780	43,309	February	555	100	355	19,726
March	4,910	1,690	3,065	188,489	March	2,320	320	1,511	92,916
April	7,700	1,370	3,326	197,911	April	4,620	1,240	1,966	116,985
May	18,920	5,170	8,879	545,950	May	7,720	905	4,450	273,620
June	23,680	3,510	14,304	851,147	June	1,600	5	557	33,124
July	3,150	260	956	58,800	July	25	0	1	69
August	950	45	322	19,785	August	0	0	0	0
September	165	15	56	3,322	September	50	0	2	129
The year.	23,680	15	3,310	2,400,000	The year.	7,720	0	904	658,009
1905-6.					1910-11.				
October	230	25	69	4,225	October	0	0	0	0
November	1,870	35	428	25,458	November	0	0	0	0
December	1,350	245	610	37,478	December	25	0	10	595
January	1,110	150	439	26,995	January	595	0	151	9,263
February	795	440	571	31,686	February	460	100	214	11,891
March	770	235	412	25,309	March	2,220	75	708	43,537
April	3,470	750	1,480	88,046	April	1,720	80	535	31,855
May	8,700	2,520	5,676	348,992	May	7,440	2,240	4,031	247,855
June	6,500	2,210	4,548	270,625	June	5,190	2,740	3,850	229,071
July	2,590	680	1,571	96,575	July	10,240	3,270	7,081	435,372
August	3,080	120	799	49,150	August	4,390	5	871	53,583
September	260	10	47	2,817	September	810	5	195	11,593
The year.	8,700	10	1,380	1,010,000	The year.	10,240	0	1,470	1,070,000

Monthly discharge of Rio Grande near El Paso, Tex., for 1889-1893, 1897-1913—Contd.

Month.	Discharge in second-foot.			Run-off (total in acre-foot).	Month.	Discharge in second-foot.			Run-off (total in acre-foot).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1911-12.				1912-13.					
October.....	11,810	360	4,790	294,506	October.....	105	5	20	1,230
November.....	3,550	1,390	1,997	118,850	November.....	510	50	309	18,377
December.....	1,370	560	1,014	62,370	December.....	850	130	439	27,015
January.....	1,930	205	790	48,605	January.....	920	50	306	18,823
February.....	890	335	562	32,301	February.....	830	420	630	34,969
March.....	3,970	230	982	60,397	March.....	600	30	254	15,630
April.....	3,060	535	1,613	95,960	April.....	3,160	5	852	50,698
May.....	14,910	1,000	6,220	382,453	May.....	2,860	290	1,442	88,641
June.....	15,980	3,630	8,643	514,274	June.....	3,900	25	723	43,051
July.....	5,170	330	2,049	125,980	July.....	980	0	92	5,683
August.....	1,480	0	501	30,813	August.....	0	0	0	0
September.....	2,040	0	341	20,271	September.....	0	0	0	0
The year.	15,980	0	2,460	1,790,000	The year.	3,900	0	422	304,000

RIO GRANDE NEAR FORT HANCOCK, TEX.

Location.—One and one-half miles east of Fort Hancock, in El Paso County. No important tributary within many miles.

Records available.—May 21, 1900, to June 30, 1903.

Drainage area.—Not measured.

Gage.—No data.

Channel.—Shifting greatly.

Discharge measurements.—Made from car and cable.

Diversions.—No data.

Accuracy.—Owing to the shifting channel, discharge measurements were made very frequently and the estimates of daily discharge are based almost directly on these.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records were furnished.

Discharge measurements of Rio Grande near Fort Hancock, Tex., for 1900-1903.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1900.			1901.			1903.		
May 24.....	Feet. 4.00	Sec.-ft. 217	June 21.....	Feet. 3.00	Sec.-ft. 150	Apr. 2.....	Feet. 2.2	Sec.-ft. 2
27.....	7.60	1,627	24.....	1.20	43	9.....	7.75	1,094
30.....	6.80	1,082	26.....	.50	13	13.....	5.6	399
June 4.....	7.30	1,399	Aug. 11.....	5.35	1,295	16.....	6.3	768
8.....	8.00	2,368	12.....	5.02	1,170	18.....	6.3	789
16.....	6.30	971	13.....	5.60	1,469	21.....	5.2	292
19.....	5.60	527	16.....	3.20	419	25.....	5.45	409
23.....	3.80	186	17.....	2.80	284	28.....	5.4	360
28.....	2.60	14	24.....	6.05	1,701	30.....	6.35	680
Sept. 25.....	— .10	13	25.....	5.55	1,344	May 2.....	7.8	1,363
1901.			30.....	2.20	100	5.....	8.0	1,720
May 8.....	5.65	1,877	Sept. 13.....	2.30	159	8.....	8.0	1,687
10.....	6.20	2,151	14.....	6.33	1,783	11.....	8.05	1,788
13.....	4.60	1,616	15.....	5.70	1,535	16.....	7.9	1,967
15.....	4.40	1,456	1902.			19.....	7.9	1,985
17.....	5.40	1,706	July 21.....	2.5	6	21.....	8.2	2,372
20.....	5.70	2,005	23.....	3.0	18	23.....	8.3	2,699
22.....	5.80	2,064	24.....	2.4	5	26.....	8.65	2,985
24.....	6.00	2,233	Aug. 30.....	6.3	808	29.....	8.8	3,510
27.....	6.10	2,287	Sept. 1.....	7.0	1,034	June 2.....	7.6	1,646
29.....	6.20	2,397	4.....	4.5	249	5.....	7.6	1,669
31.....	6.60	2,663	6.....	3.4	81	8.....	7.9	1,856
June 3.....	6.40	2,669	9.....	3.2	72	11.....	8.25	2,430
5.....	6.40	2,496	12.....	2.1	8	13.....	8.6	4,088
7.....	6.30	2,281	Oct. 7.....	2.5	16	16.....	9.4	4,479
10.....	5.40	1,531	1903.			18.....	9.7	5,185
12.....	4.70	1,184	Mar. 14.....	5.3	362	20.....	10.1	6,092
14.....	4.00	542	23.....	4.6	174	23.....	12.5	10,285
17.....	3.80	469	26.....	4.2	170	25.....	13.1	11,188
19.....	3.70	401	30.....	3.2	68	27.....	13.2	11,147
						30.....	12.7	11,849

NOTE.—Measurements made by T. M. Courchesne, J. Hague, C. W. Healey, A. L. Wilcox, F. W. Carpenter, and E. E. Winter.

Daily gage height, in feet, of Rio Grande near Fort Hancock, Tex., for 1900-1903.

Day.	May.	June.	Sept.	Day.	May.	June.	Sept.	Day.	May.	June.	Sept.	
1900.				1900.				1900.				
1		6.7	0.6	11		7.5	-0.1	21		3.8	4.5	0.8
2		7.15	.6	12		7.15	- .1	22		3.9	4.0	.3
3		7.1	.6	13		6.75	- .1	23		4.0	3.6	.1
4		7.25	.6	14		6.55	- .1	24		4.0	3.3	.1
5		7.25	1.3	15		6.45	1.5	25		4.3	3.1	- .1
6		7.85	.9	16		6.35	1.1	26		7.8	2.9	- .1
7		7.9	.4	17		6.55	.9	27		7.5	2.9	- .1
8		7.95	- .1	18		5.7	1.35	28		7.0	2.6	- .5
9		8.0	- .1	19		5.5	1.2	29		6.9	1.8	- .5
10		7.75	- .1	20		4.9	.9	30		6.8	.8	- .5
								31		6.65		

Day.	Oct.	May.	June.	July.	Aug.	Sept.	Day.	Oct.	May.	June.	July.	Aug.	Sept.
1900-1901.							1900-1901.						
1	-0.5		6.7		6.2	1.3	16	- .3	4.7	3.6		3.1	5.35
2	- .5		6.55		5.9	.9	17		5.4	3.8		2.7	4.5
3	- .5		6.35		6.3	1.1	18		4.0	5.6		2.2	3.3
4	- .5		6.3		6.1	.9	19		1.1	5.65		1.7	2.5
5	- .3	4.5	6.4		4.35	.5	20	- .1	5.7	3.55		1.3	2.1
6	- .3	5.3	6.5		2.0	.25	21	- .1	5.8	2.9		1.05	1.7
7	- .3	5.6	6.35		1.15	.25	22	- .1	5.85	2.5		.85	1.55
8	- .3	5.7	6.75		.65		23	- .1	5.8	1.9		.65	1.35
9	- .3	6.35	5.7		.5		24	- .1	6.0	1.1		6.15	1.15
10	- .3	6.2	5.4		.2	1.8	25	- .1	5.9	1.0		5.5	.95
11	- .3	5.65	5.0		5.25	1.2	26	- .1	5.95	.5		4.3	.75
12	- .3	4.5	4.6		4.8	.55	27	- .1	6.1	.5		3.3	.55
13	- .3	4.55	4.2		5.5	2.3	28	- .1	6.35	.2		2.6	.35
14	- .3	4.3	3.9		4.5	6.4	29	- .1	6.25			2.3	.15
15	- .3	4.45	3.7		3.8	5.7	30	- .1	6.65		4.2	2.1	
							31	- .1	6.6		5.2	1.7	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1			1.5	1.65	4.8	5.3						6.9
2			1.75	1.75	4.9	5.5						5.85
3			2.2	1.55	5.0	5.6						5.2
4			4.8	1.6	5.1	5.5						4.6
5			3.9	1.7	5.1	5.4						4.0
6			3.5	1.7	5.1	5.3						3.35
7			3.1	1.7	5.2	5.3						3.3
8			2.7	1.8	5.3	5.2						3.2
9			2.3	1.8	5.3	5.1						3.15
10			1.9	1.7	5.4	5.2						2.75
11			1.5	1.85	5.5	5.2						2.4
12			1.2	2.1	5.5	5.2						2.1
13			1.2	2.2	5.6	5.3						2.0
14		1.55	1.1	2.05	5.7	5.3				4.3		
15		1.35	1.7	1.9	5.7	5.3						
16		1.15	1.65	1.9	5.8	5.2						
17		.95	1.55	1.8	5.8	4.95						
18		.75	1.7	1.95	5.7	4.75						
19		.55	1.75	2.5	5.7	4.55						2.45
20		.35	3.8	2.9	5.5	4.35				5.4		2.4
21		1.25	3.45	3.3	5.8	4.0				2.15		2.1
22		1.75	2.95	3.1	5.75	3.75				4.4		
23		2.5	2.7	2.7	5.8					3.5		
24		3.35	2.15	2.3	5.7					2.4		
25		1.9	1.85	1.95	5.6							
26		2.8	1.55	1.75	5.6							
27		3.9	1.75	1.55	5.6					3.4		
28		3.2	1.9	1.35	5.6					2.6		
29		2.4	1.8	1.3	5.6							5.15
30		1.9	1.55	1.3	5.5						5.0	4.05
31		1.55		1.3	5.4						7.3	

Daily gage height, in feet, of Rio Grande near Fort Hancock, Tex., for 1900-1903—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1	3.35						2.5	7.7	7.6			
2	3.05							7.85	7.6			
3	2.7							7.9	7.5			
4	3.65							7.95	7.5			
5	3.9						2.75	8.0	7.6			
6	2.9						3.25	7.9	7.75			
7	2.35						3.85	8.05	7.95			
8	2.0						7.0	8.0	8.0			
9							7.7	8.1	8.05			
10							6.75	8.05	8.15			
11								6.55	8.1	8.2		
12								6.15	8.0	8.25		
13							6.5	5.7	7.9	8.45		
14							5.4	5.85	7.9	9.0		
15							4.5	6.1	7.9	9.25		
16							4.3	6.4	7.9	9.45		
17							4.1	6.3	7.9	9.55		
18							4.0	6.4	7.9	9.7		
19							4.7	5.75	8.05	9.85		
20							5.1	5.55	8.1	10.1		
21							5.0	5.3	8.2	10.25		
22							4.75	5.2	8.3	10.85		
23							4.55	5.3	8.3	12.4		
24							4.4	5.45	8.4	12.85		
25							4.45	5.5	8.55	13.15		
26							4.1	5.15	8.7	13.3		
27							3.75	4.75	8.8	13.2		
28							3.55	5.4	8.9	13.05		
29							3.35	5.25	8.75	12.85		
30							3.1	6.5	8.5	12.65		
31							2.85		7.7			

Daily discharge, in second-feet, of Rio Grande near Fort Hancock, Tex., for 1900-1903.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900.								1900.							
1		0	0	1,030	0	0	0	16		0	0	1,000	0	0	190
2		0	0	1,300	0	0	0	17		0	0	1,140	0	0	160
3		0	0	1,240	0	0	0	18		0	0	570	0	0	220
4		0	0	1,370	0	0	0	19		0	0	500	0	0	200
5		0	0	1,370	0	0	230	20		0	0	370	0	0	160
6		0	0	2,100	0	0	160	21		0	190	290	0	0	140
7		0	0	2,200	0	0	70	22		0	200	220	0	0	70
8		0	0	2,300	0	0	0	23		0	220	160	0	0	40
9		0	0	2,370	0	0	0	24		0	220	120	0	0	40
10		0	0	2,120	0	0	0	25		0	260	90	0	0	10
11		0	0	1,880	0	0	0	26		0	2,000	60	0	0	10
12		0	0	1,560	0	0	0	27		0	1,570	60	0	0	10
13		0	0	1,260	0	0	0	28		0	1,210	20	0	0	0
14		0	0	1,140	0	0	0	29		0	1,160	0	0	0	0
15		0	0	1,080	0	0	240	30		0	1,080	0	0	0	0
								31		0	990		0	0	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1	0	0	0	0	0	0	0	0	2,710	0	1,740	50
2	0	0	0	0	0	0	0	0	2,620	0	1,630	30
3	0	0	0	0	0	0	0	0	2,480	0	1,770	40
4	0	0	0	0	0	0	0	0	2,290	0	1,710	30
5	0	0	0	0	0	0	0	1,550	2,500	0	900	20
6	0	0	0	0	0	0	0	1,690	2,560	0	80	10
7	0	0	0	0	0	0	0	1,870	2,390	0	40	10
8	0	0	0	0	0	0	0	1,910	2,780	0	20	0
9	0	0	0	0	0	0	0	2,210	2,030	0	10	0
10	0	0	0	0	0	0	0	2,150	1,530	0	0	70

Daily discharge, in second-feet, of Rio Grande near Fort Hancock, Tex., for 1900-1903—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	0	0	0	0	0	0	0	1,950	1,320	0	1,270	40
12.....	0	0	0	0	0	0	0	1,550	1,100	0	1,090	20
13.....	0	0	0	0	0	0	0	1,580	730	0	1,400	160
14.....	0	0	0	0	0	0	0	1,450	500	0	970	1,800
15.....	0	0	0	0	0	0	0	1,500	430	0	670	1,530
16.....	0	0	0	0	0	0	0	1,630	390	0	380	1,300
17.....	740	0	0	0	0	0	0	1,700	470	0	260	960
18.....	400	0	9	0	0	0	0	1,920	420	0	100	470
19.....	185	0	0	0	0	0	0	1,960	400	0	70	210
20.....	13	0	0	0	0	0	0	2,000	360	0	50	130
21.....	0	0	0	0	0	0	0	2,060	140	0	40	80
22.....	0	0	0	0	0	0	0	2,100	110	0	30	70
23.....	0	0	0	0	0	0	0	2,060	80	0	20	50
24.....	0	0	0	0	0	0	0	2,230	40	0	1,730	40
25.....	0	0	0	0	0	0	0	2,180	40	0	1,400	30
26.....	0	0	0	0	0	0	0	2,200	20	0	880	30
27.....	0	0	0	0	0	0	0	2,290	20	0	460	20
28.....	0	0	0	0	0	0	0	2,500	0	0	230	10
29.....	0	0	0	0	0	0	0	2,440	0	0	160	10
30.....	0	0	0	0	-----	0	0	2,680	0	830	90	0
31.....	0	-----	0	0	-----	0	-----	2,650	-----	1,250	70	-----
1901-2.												
1.....	0	70	80	40	90	0	0	0	0	0	0	1,000
2.....	0	90	90	50	110	0	0	0	0	0	0	650
3.....	0	140	70	60	120	0	0	0	0	0	0	450
4.....	0	1,000	70	70	110	0	0	0	0	0	0	270
5.....	0	630	80	70	100	0	0	0	0	0	0	180
6.....	0	540	80	70	90	0	0	0	0	0	0	80
7.....	0	390	80	80	90	0	0	0	0	0	0	75
8.....	0	250	90	90	80	0	0	0	0	0	0	70
9.....	0	160	90	90	70	0	0	0	0	0	0	70
10.....	0	110	80	100	80	0	0	0	0	0	0	50
11.....	0	70	100	110	80	0	0	0	0	0	0	30
12.....	0	40	120	110	80	0	0	0	0	0	0	10
13.....	0	40	140	120	90	0	0	0	0	100	0	5
14.....	70	30	120	140	90	0	0	0	0	0	0	0
15.....	50	80	110	140	90	0	0	0	0	0	0	0
16.....	40	70	110	160	80	0	0	0	0	0	0	0
17.....	30	70	90	160	50	0	0	0	0	0	0	0
18.....	20	80	110	140	30	0	0	0	0	0	0	0
19.....	10	90	190	140	20	0	0	0	0	0	0	30
20.....	10	600	300	110	20	0	0	0	0	460	0	30
21.....	50	500	450	160	10	0	0	0	0	5	0	10
22.....	90	320	390	150	10	0	0	0	0	120	0	0
23.....	210	260	250	160	0	0	0	0	0	50	0	0
24.....	510	130	160	140	0	0	0	0	0	5	0	0
25.....	110	100	120	120	0	0	0	0	0	0	0	0
26.....	280	70	90	120	0	0	0	0	0	0	0	0
27.....	630	90	70	120	0	0	0	0	0	50	0	0
28.....	420	110	50	120	0	0	0	0	0	10	0	0
29.....	190	90	40	120	-----	0	0	0	0	0	0	450
30.....	110	70	40	110	-----	0	0	0	0	0	380	190
31.....	70	-----	40	100	-----	0	-----	0	-----	0	1,090	-----
1902-3.												
1.....	80	0	0	0	0	0	15	1,180	1,650	-----	-----	-----
2.....	60	0	0	0	0	0	0	1,450	1,650	-----	-----	-----
3.....	40	0	0	0	0	0	0	1,540	1,500	-----	-----	-----
4.....	125	0	0	0	0	0	0	1,630	1,510	-----	-----	-----
5.....	165	0	0	0	0	0	30	1,720	1,670	-----	-----	-----
6.....	50	0	0	0	0	0	75	1,530	1,760	-----	-----	-----
7.....	10	0	0	0	0	0	135	1,770	1,880	-----	-----	-----
8.....	5	0	0	0	0	0	860	1,690	1,950	-----	-----	-----
9.....	0	0	0	0	0	0	1,080	1,870	2,000	-----	-----	-----
10.....	0	0	0	0	0	0	780	1,780	2,160	-----	-----	-----
11.....	0	0	0	0	0	0	705	1,870	2,290	-----	-----	-----
12.....	0	0	0	0	0	0	580	1,780	2,500	-----	-----	-----
13.....	0	0	0	0	0	840	440	1,760	3,380	-----	-----	-----
14.....	0	0	0	0	0	400	530	1,830	4,060	-----	-----	-----
15.....	0	0	0	0	0	220	660	1,900	4,360	-----	-----	-----

Daily discharge, in second-feet, of Rio Grande near Fort Hancock, Tex., for 1900-1903--Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	0	0	0	0	0	180	820	1,970	4,600	.....	.....	.....
17.....	0	0	0	0	0	140	780	1,980	4,830	.....	.....	.....
18.....	0	0	0	0	0	120	830	1,980	5,180	.....	.....	.....
19.....	0	0	0	0	0	260	540	2,170	5,520	.....	.....	.....
20.....	0	0	0	0	0	330	450	2,240	6,090	.....	.....	.....
21.....	0	0	0	0	0	300	340	2,370	6,370	.....	.....	.....
22.....	0	0	0	0	0	230	290	2,600	7,450	.....	.....	.....
23.....	0	0	0	0	0	170	340	2,700	10,120	.....	.....	.....
24.....	0	0	0	0	0	170	410	2,800	10,790	.....	.....	.....
25.....	0	0	0	0	0	180	430	2,950	11,250	.....	.....	.....
26.....	0	0	0	0	0	160	320	3,110	11,350	.....	.....	.....
27.....	0	0	0	0	0	125	200	3,430	11,150	.....	.....	.....
28.....	0	0	0	0	0	105	360	3,760	11,400	.....	.....	.....
29.....	0	0	0	0	.....	85	320	3,430	11,580	.....	.....	.....
30.....	0	0	0	0	.....	60	770	3,040	11,770	.....	.....	.....
31.....	0	.....	0	0	.....	35	.....	1,800	.....	.....	.....	.....

Monthly discharge of Rio Grande near Fort Hancock, Tex., for 1900-1903.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.					1901-2.				
April.....	0	0	0	0	October.....	630	0	94	5,752
May.....	2,000	0	293	18,050	November.....	1,000	30	210	12,476
June.....	2,370	0	964	57,350	December.....	450	40	123	7,736
July.....	0	0	0	0	January.....	160	40	112	6,883
August.....	0	0	0	0	February.....	120	0	57	3,134
September.....	240	0	65	3,869	March.....	0	0	0	0
The period.....	.....	.....	.....	79,300	April.....	0	0	0	0
1900-1901.					May.....	0	0	0	0
October.....	740	0	43	2,644	June.....	0	0	0	0
November.....	0	0	0	0	July.....	460	0	26	1,587
December.....	0	0	0	0	August.....	1,090	0	47	2,916
January.....	0	0	0	0	September.....	1,000	0	122	7,240
February.....	0	0	0	0	The year.....	1,090	0	66	47,700
March.....	0	0	0	0	1902-3.				
April.....	0	0	0	0	October.....	165	0	17	1,061
May.....	2,680	0	1,742	107,127	November.....	0	0	0	0
June.....	2,780	0	1,015	60,417	December.....	0	0	0	0
July.....	1,250	0	67	4,126	January.....	0	0	0	0
August.....	1,770	0	622	38,221	February.....	0	0	0	0
September.....	1,800	0	241	14,321	March.....	840	0	133	8,152
The year.....	2,780	0	311	227,000	April.....	1,080	0	436	25,964
					May.....	3,790	1,180	2,182	134,142
					June.....	11,770	1,500	5,459	324,833
					The period.....	.....	.....	.....	494,000

RIO GRANDE ABOVE PRESIDIO, TEX.

Location.—At the Hacienda, 9 miles above Presidio, and 8 miles above the mouth of Rio Conchos, one of the principal tributaries of the Rio Grande. On September 26, 1905, the station was moved 8 miles farther upstream and maintained at that point until July 6, 1909, when it was removed to the original site. As no tributaries enter between the two points the flow is the same at both sites.

Records available.—May 22, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff. Relation between the gage readings at the two sites or between the two gages used at the present site not determined.

Channel.—Shifting greatly.

Discharge measurements.—Made from car and cable.

Diversions.—No data.

Accuracy.—Owing to the shifting channel, discharge measurements are made very frequently and the estimates of daily discharge based almost directly on these.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 23.....	2.00	101	Aug. 17.....	3.30	528	Mar. 20.....	1.5	74
26.....	0		20.....	2.60	319	23.....	1.3	52
June 28.....	2.00	96	22.....	1.90	86	26.....	1.85	134
1.....	4.20	907	24.....	1.70	61	29.....	1.7	105
6.....	4.20	901	27.....	4.80	1,072	31.....	1.5	92
8.....	4.40	1,157	Sept. 29.....	3.25	453	Apr. 3.....	1.0	23
11.....	5.35	1,589	3.....	2.25	125	6.....	0.9	16
13.....	6.50	2,376	5.....	6.45	2,087	13.....	4.0	711
15.....	4.60	1,170	7.....	2.70	251	16.....	2.85	347
18.....	3.60	692	10.....	1.60	30	19.....	3.4	442
22.....	3.00	400	12.....	6.25	2,053	22.....	2.9	363
25.....	2.30	192	14.....	2.20	104	25.....	2.15	179
July 27.....	1.50	110	19.....	3.55	702	28.....	2.85	330
2.....	1.80	116	21.....	2.60	303	30.....	2.1	173
5.....	1.70	59	24.....	1.90	104	May 3.....	3.65	699
7.....	2.30	218	25.....	1.70	58	6.....	4.9	1,218
23.....	2.20	193	28.....	1.70	64	8.....	4.95	1,280
Aug. 4.....	1.50	54	Oct. 8.....	2.15	211	10.....	6.7	2,126
Sept. 24.....	2.70	305	24.....	2.85	410	12.....	5.0	1,274
27.....	1.70	46	26.....	2.00	163	14.....	5.0	1,300
Oct. 3.....	2.10	80	29.....	1.90	137	17.....	5.0	1,263
18.....	4.75	970	Nov. 2.....	2.75	341	19.....	5.0	1,199
20.....	5.10	1,435	5.....	1.80	108	21.....	5.0	1,203
23.....	2.10	125	7.....	1.40	46	23.....	5.0	1,228
25.....	1.60	45	11.....	1.90	160	26.....	5.15	1,337
			13.....	1.60	100	28.....	5.25	1,399
			16.....	1.40	46	June 3.....	4.8	1,090
1901.			19.....	0.00	30	5.....	6.0	1,740
May 10.....	3.55	673	24.....	2.40	293	8.....	5.6	1,551
11 ^a	4.80	933	26.....	2.20	212	10.....	5.6	1,560
14.....	4.10	936	28.....	2.00	173	13.....	6.2	1,681
16.....	3.90	899	Dec. 3.....	1.40	69	15.....	5.6	1,574
18.....	3.80	818	5.....	1.40	74	17.....	5.95	1,615
21.....	4.30	1,050	7.....	1.30	67	19.....	6.0	1,661
23.....	4.50	1,112	10.....	1.20	62	21.....	6.0	1,614
25.....	4.70	1,224	12.....	1.30	64	23.....	6.5	1,784
27.....	4.80	1,287	14.....	1.30	59	25.....	6.7	1,917
29.....	4.80	1,313	17.....	1.40	81	27.....	6.7	1,953
June 30.....	4.95	1,364	19.....	1.50	96	29.....	7.5	2,621
4.....	5.50	1,620	21.....	1.40	76	July 1.....	7.5	2,518
6.....	5.30	1,521				3.....	7.8	4,555
8.....	5.30	1,560	1902.			5.....	7.8	4,544
11.....	5.05	1,330	July 5.....	1.4	53	7.....	7.9	5,034
13.....	3.95	770	10.....	4.0	857	9.....	8.0	5,201
15.....	3.15	447	12.....	4.1	943	11.....	7.7	3,227
18.....	2.60	269	15.....	2.55	289	14.....	7.5	2,541
20.....	2.50	230	17.....	1.95	143	17.....	5.2	1,190
22.....	2.30	176	19.....	1.55	61	20.....	5.3	1,234
25.....	2.10	141	23.....	7.3	2,683	23.....	4.4	816
27.....	1.80	72	25.....	5.6	1,326	26.....	3.5	479
29.....	1.40	14	29.....	2.15	193	29.....	3.4	435
July 13.....	2.85	363	31.....	1.75	62	31.....	3.5	475
16.....	9	9	Aug. 2.....	0.9	14			
23.....	2.30	163	11.....	5.5	1,254	Aug. 8.....	3.3	443
25.....	2.15	140	13.....	2.65	188	11.....	3.3	403
27.....	4.65	1,294	15.....	2.4	165	15.....	2.7	163
30.....	2.05	84	Sept. 2.....	2.0	107	18.....	2.6	157
Aug. 3.....	2.75	425	5.....	3.45	635	21.....	2.5	141
6.....	4.90	1,274	8.....	2.1	186	24.....	2.0	48
7.....	4.45	1,042	10.....	2.0	99	27.....	2.6	162
8.....	3.55	615	Oct. 12.....	7	15	Sept. 1.....	2.3	79
10.....	2.70	336	Nov. 3.....	1.5	60	3.....	2.0	48
13.....	2.65	323	5.....	1.0	13	5.....	1.75	16
15.....	3.70	723	8.....	0.8	9	8.....	1.7	15

^a River rose 0.4 foot during measurement.

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1905.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1906.	<i>Fcct.</i>	<i>Sec.-ft.</i>
Sept. 10.....	1.9	27	June 17.....	8.8	a 6,109	Jan. 14.....	3.4	236
12.....	1.6	8	21.....	8.6	a 4,888	17.....	3.35	223
15.....	1.8	22	24.....	8.5	a 4,411	20.....	3.3	206
17.....	1.6	12	27.....	8.5	a 4,331	24.....	3.75	364
19.....	1.6	10	July 1.....	8.2	a 3,771	28.....	4.3	597
22.....	2.0	32	5.....	7.0	a 2,668	31.....	4.45	660
28.....	2.0	38	8.....	6.2	a 1,774	Feb. 3.....	4.2	505
Oct. 1.....	2.1	49	11.....	5.0	1,432	6.....	4.1	437
4.....	1.7	14	14.....	4.2	1,226	9.....	4.1	426
1904.			17.....	5.6	1,830	13.....	4.2	530
June 19.....	2.6	261	19.....	6.05	b 2,285	16.....	4.3	586
24.....	1.5	9	21.....	5.5	1,811	19.....	4.2	538
27.....	6.75	1,845	24.....	5.2	1,537	22.....	4.15	504
30.....	1.8	20	27.....	3.65	932	25.....	4.3	510
Sept. 5.....	6.1	1,614	30.....	3.6	912	Mar. 2.....	4.1	431
7.....	4.6	778	Aug. 2.....	3.7	903	11.....	4.1	437
Oct. 8.....	5.2	1,205	5.....	3.7	929	16.....	3.95	338
10.....	7.3	2,166	8.....	2.6	469	19.....	3.9	321
12.....	7.6	a 2,454	10.....	2.7	555	22.....	3.8	280
14.....	7.65	a 3,024	13.....	2.6	416	25.....	3.7	239
18.....	8.2	a 3,610	16.....	3.0	549	28.....	3.8	278
20.....	8.0	a 3,331	19.....	3.0	565	31.....	3.9	347
22.....	8.2	a 3,251	22.....	2.8	528	Apr. 3.....	3.9	269
25.....	7.5	2,357	25.....	2.4	426	6.....	4.3	583
26.....	7.3	2,242	27.....	2.15	323	9.....	4.4	685
28.....	7.0	2,012	30.....	2.2	339	12.....	4.2	484
Nov. 1.....	6.1	1,570	Sept. 2.....	1.8	200	15.....	4.1	480
3.....	5.9	1,478	5.....	2.3	302	18.....	4.2	557
6.....	5.7	1,258	7.....	5.4	1,712	21.....	4.5	738
9.....	4.9	864	10.....	3.15	620	24.....	4.5	779
11.....	4.6	821	13.....	3.0	590	27.....	4.8	1,047
14.....	4.3	704	16.....	1.5	106	30.....	5.1	1,278
16.....	4.2	672	18.....	1.5	135	May 3.....	6.2	2,676
18.....	4.0	641	21.....	1.5	111	6.....	6.1	2,394
21.....	3.9	607	26 c.....	3.0	118	9.....	5.7	2,051
23.....	3.8	545	Oct. 2.....	2.9	108	12.....	5.6	1,908
26.....	3.6	509	5.....	2.75	96	15.....	6.3	3,045
29.....	3.5	443	8.....	2.7	78	18.....	6.7	3,675
Dec. 2.....	3.5	424	11.....	2.7	89	21.....	7.2	4,978
5.....	3.7	520	14.....	2.7	92	24.....	7.2	5,105
7.....	3.8	543	17.....	2.7	73	27.....	7.3	5,688
9.....	3.6	461	20.....	2.7	73	30.....	7.4	5,946
12.....	3.6	464	23.....	2.7	80	June 2.....	7.75	7,294
15.....	3.5	377	29.....	2.7	76	5.....	7.3	5,854
18.....	3.6	453	Nov. 1.....	2.6	51	8.....	6.5	3,994
21.....	3.9	616	5.....	2.5	36	11.....	6.2	3,203
24.....	3.8	446	8.....	2.65	59	14.....	6.1	2,935
27.....	3.8	398	11.....	3.4	226	17.....	6.25	3,380
29.....	3.8	386	14.....	3.5	260	20.....	6.65	3,722
31.....	3.75	369	17.....	3.4	232	23.....	7.2	4,998
1905.			20.....	3.1	143	26.....	7.5	6,334
Jan. 3.....	3.55	323	23.....	3.0	130	29.....	6.95	4,178
6.....	3.4	295	26.....	3.0	128	July 2.....	6.05	2,248
9.....	3.4	280	29.....	2.9	116	5.....	5.5	1,734
12.....	3.3	267	Dec. 3.....	3.8	441	8.....	4.6	878
15.....	3.6	346	6.....	4.4	813	11.....	4.5	718
18.....	4.2	634	9.....	4.3	728	14.....	5.1	1,169
21.....	3.95	554	12.....	4.4	875	17.....	4.9	995
24.....	3.8	469	16.....	4.0	571	20.....	5.1	1,136
27.....	3.7	392	19.....	3.8	478	23.....	4.6	850
30.....	3.55	371	22.....	4.2	581	26.....	4.35	695
Feb. 2.....	3.55	354	24.....	4.15	567	Aug. 29.....	4.3	651
5.....	3.7	401	28.....	4.15	551	1.....	4.3	616
8.....	3.5	320	31.....	4.0	494	4.....	4.4	645
11.....	3.5	335	1906.			7.....	5.2	1,213
14.....	3.55	349	Jan. 3.....	3.9	423	10.....	5.4	1,527
17.....	3.9	541	6.....	3.8	398	13.....	5.0	943
20.....	3.6	381	10.....	3.6	286	16.....	4.6	827

^a Channel only. Bottoms overflowed. The channel was carrying less than 50 per cent of the total discharge at the station. The actual discharge was computed from daily gage heights, the flow at lower Presidio station, and of Rio Conchos.

^b Channel only. Bottoms overflowed. Overflow ceased at 5.5 feet on gage.

^c Station moved 8 miles farther up Rio Grande and new gage established 16 miles above mouth of Rio Conchos. The new gage heights are not comparable with old.

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1906.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 25.....	4.35	639	Apr. 14.....	4.7	889	Dec. 8.....	4.4	652
28.....	4.9	1,178	17.....	4.6	816	11.....	4.5	719
31.....	3.8	411	20.....	5.0	1,181	14.....	4.2	540
Sept. 3.....	3.7	337	23.....	6.3	2,815	17.....	4.2	540
6.....	3.6	296	26.....	6.9	4,073	20.....	4.1	445
9.....	3.3	201	29.....	7.1	4,353	23.....	4.2	519
12.....	3.1	143	May 2.....	6.2	2,740	26.....	4.1	481
15.....	3.0	123	5.....	6.0	2,499	30.....	4.1	457
18.....	2.9	86	8.....	6.3	2,787			
21.....	3.3	186	11.....	6.0	2,430	1908.		
24.....	3.0	126	14.....	6.1	2,644	Jan. 2.....	4.05	415
27.....	2.8	75	17.....	5.7	1,981	5.....	4.1	444
30.....	2.6	56	20.....	5.9	2,117	8.....	4.1	422
Oct. 3.....	2.6	59	23.....	6.1	2,656	11.....	4.4	647
6.....	2.4	36	26.....	6.1	2,720	14.....	4.2	529
9.....	3.65	317	29.....	6.4	3,257	17.....	4.35	604
12.....	3.5	241	June 1.....	7.1	4,535	20.....	4.2	500
15.....	4.0	428	4.....	7.6	5,667	23.....	4.1	469
18.....	3.7	364	7.....	8.0	8,261	27.....	4.1	466
21.....	3.6	327	10.....	7.5	5,552	30.....	4.2	496
24.....	3.6	322	13.....	7.5	5,421	Feb. 4.....	4.0	404
27.....	3.5	291	16.....	7.65	5,993	7.....	4.0	402
30.....	3.5	287	19.....	7.85	6,789	10.....	4.0	401
Nov. 2.....	3.9	528	22.....	7.8	6,719	13.....	4.2	521
5.....	3.8	408	25.....	8.0	8,222	16.....	4.15	480
8.....	3.9	487	28.....	8.2	9,124	19.....	4.2	535
11.....	4.3	680	July 1.....	8.0	8,374	22.....	4.2	504
14.....	4.6	1,002	4.....	7.4	5,174	25.....	4.0	393
17.....	4.4	812	7.....	7.2	4,423	28.....	4.0	397
19.....	4.3	692	10.....	7.3	4,731	Mar. 2.....	3.9	344
23.....	4.35	724	13.....	7.7	6,368	5.....	3.9	349
26.....	4.4	780	16.....	7.4	4,944	8.....	4.2	489
29.....	4.3	671	19.....	7.25	4,860	11.....	4.1	477
Dec. 2.....	3.9	464	22.....	6.3	3,399	14.....	4.1	456
5.....	4.5	965	25.....	6.3	3,348	17.....	4.1	436
8.....	4.6	1,103	28.....	6.05	3,086	20.....	4.2	466
11.....	5.4	1,576	31.....	6.15	3,269	Apr. 9.....	4.1	393
14.....	5.3	1,431	Aug. 3.....	5.7	2,682	13.....	4.1	345
17.....	5.0	1,057	6.....	5.4	2,393	15.....	3.9	242
20.....	4.8	904	9.....	5.3	2,103	18.....	3.9	235
23.....	4.7	863	12.....	5.1	1,525	21.....	4.3	596
26.....	4.5	696	15.....	5.0	1,348	24.....	4.7	853
29.....	4.3	547	18.....	4.7	876	27.....	5.7	2,515
			21.....	4.7	842	29.....	5.3	1,964
1907.			24.....	4.4	682	May 3.....	5.0	1,538
Jan 1.....	4.3	559	27.....	4.8	1,018	7.....	4.5	1,472
4.....	4.5	639	30.....	4.7	904	11.....	4.9	1,665
7.....	4.5	669	Sept. 2.....	7.3	5,361	13.....	5.15	1,525
10.....	4.6	819	5.....	6.9	3,758	16.....	4.6	1,386
13.....	4.4	643	8.....	7.7	6,826	19.....	4.8	1,454
16.....	4.3	592	11.....	6.2	2,540	22.....	4.85	1,098
19.....	4.8	913	14.....	5.5	1,689	25.....	4.4	1,129
22.....	5.3	1,384	17.....	5.0	1,477	28.....	5.4	1,960
25.....	5.0	1,150	20.....	5.35	1,621	31.....	5.95	2,486
28.....	4.8	855	23.....	5.4	1,734	June 3.....	5.15	1,739
31.....	4.5	682	26.....	6.4	3,341	6.....	4.55	1,303
Feb. 3.....	4.3	661	29.....	5.8	2,312	9.....	4.2	931
6.....	4.3	653	Oct. 2.....	5.0	1,135	12.....	4.0	593
9.....	4.7	718	5.....	4.8	992	15.....	3.9	340
12.....	4.4	786	8.....	4.3	610	18.....	3.8	282
15.....	4.4	786	11.....	4.3	586	21.....	3.55	160
18.....	4.7	966	14.....	4.1	451	24.....	3.2	67
21.....	4.3	694	17.....	4.25	501	27.....	2.9	52
24.....	4.3	695	20.....	5.5	1,856	30.....	3.0	30
27.....	4.3	666	23.....	4.9	1,132	July 4.....	4.0	249
Mar. 3.....	4.25	591	26.....	4.8	1,070	7.....	3.0	103
5.....	4.3	648	30.....	5.9	2,459	10.....	2.85	8
8.....	4.6	829	Nov. 2.....	5.4	1,613	13.....	2.8	5
11.....	4.3	649	4.....	5.0	1,170	22.....	4.0	243
14.....	4.2	565	7.....	4.8	1,053	26.....	4.6	642
17.....	4.1	452	10.....	4.7	965	28.....	4.6	393
20.....	4.2	554	13.....	4.6	819	31.....	4.0	186
23.....	4.2	556	16.....	4.6	866	Aug. 3.....	3.6	99
27.....	4.0	359	19.....	4.5	728	6.....	4.6	844
30.....	4.2	547	22.....	4.4	689	9.....	4.0	362
Apr. 2.....	5.45	1,586	25.....	4.7	976	12.....	4.4	615
5.....	5.3	1,369	29.....	4.6	849	15.....	4.1	379
8.....	5.0	1,076	Dec. 2.....	4.5	722	18.....	4.4	623
11.....	4.7	894	5.....	4.5	722	21.....	4.4	602

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1908.	<i>Fect.</i>	<i>Sec.-ft.</i>	July 1909.	<i>Fect.</i>	<i>Sec.-ft.</i>	1910.	<i>Fect.</i>	<i>Sec.-ft.</i>
Aug. 24	4.7	730	21	6.3	171	Mar. 30	8.3	758
27	4.3	544	24	5.9	97	Apr. 2	9.15	1,483
30	4.4	556	27	6.0	106	5	9.0	1,302
Sept. 1	5.1	1,781	30	6.35	189	8	8.2	640
4	4.7	1,162	3	5.4	73	11	8.0	792
7	4.05	571	6	5.4	69	14	7.8	683
11	3.95	511	9	5.2	36	17	7.8	604
14	3.6	224	12	4.5	8	20	8.1	888
16	3.4	175	14	7.2	325	23	9.1	1,900
19	3.1	74	18	4.4	8	26	8.5	1,180
22	3.0	68	Sept. 2	5.5	41	29	8.9	1,432
25	2.7	43	5	6.5	162	May 3	10.2	3,063
Dec. 13	3.2	33	8	6.3	119	6	11.9	4,835
16	3.2	38	11	6.4	139	9	10.95	3,494
19	3.05	23	14	10.95	5,763	12	11.4	3,519
23	3.5	92	17	9.75	2,840	15	12.4	6,663
26	3.3	75	20	9.3	1,859	18	10.4	3,539
30	3.3	80	23	8.8	1,138	21	10.7	4,199
1909.			26	8.2	691	24	11.2	4,693
Jan. 3	3.7	163	29	7.55	392	27	10.25	2,407
6	3.5	105	Oct. 3	7.2	258	30	8.5	1,460
9	3.6	99	6	6.9	191	June 2	7.4	722
12	3.55	129	9	6.9	217	5	6.8	288
15	3.45	141	12	6.8	139	8	6.3	208
18	3.3	88	15	6.45	109	11	5.7	111
21	3.6	169	18	6.9	219	14	7.0	328
24	3.6	195	21	7.1	284	17	7.55	883
27	3.45	139	24	7.1	268	23	5.8	118
30	3.3	94	27	7.3	340	26	5.35	49
Feb. 3	3.2	86	Nov. 2	7.0	233	30	6.1	134
6	3.2	77	5	7.1	187	July 3	5.7	50
9	3.35	103	8	7.0	180	6	5.15	6
12	3.6	115	11	6.8	128	9	4.85	4
15	3.3	99	14	6.7	86	12	6.7	284
18	3.3	96	17	6.6	79	15	5.85	58
21	3.4	101	20	6.6	65	18	5.4	24
24	3.3	95	23	6.8	91	21	4.95	12
27	3.25	90	26	6.8	109	Sept. 8	6.0	232
Mar. 3	3.3	69	29	6.6	109	1911.		
6	3.1	43	Dec. 3	6.9	135	Feb. 18	6.1	238
9	2.9	32	6	6.9	139	19	6.2	302
12	2.75	18	9	7.1	213	22	4.55	30
15	2.6	13	12	7.3	244	Mar. 22	6.85	208
21	4.0	223	15	7.4	193	25	5.55	62
24	3.7	116	19	7.4	155	27	5.45	24
27	3.3	79	21	7.2	140	30	5.0	12
30	3.0	73	24	7.0	174	Apr. 2	6.1	64
Apr. 2	2.6	28	27	7.2	204	5	5.7	41
5	3.0	78	30	6.9	131	8	5.1	7
8	2.8	56	1910.			19	5.2	14
11	2.8	42	Jan. 3	6.7	85	22	4.9	4
14	2.6	12	6	6.4	55	25	6.9	160
29	5.7	2,308	9	6.25	38	29	5.2	10
May 2	5.6	1,157	12	8.1	730	May 6	7.0	291
5	4.6	547	15	7.6	345	9	8.9	1,353
8	5.2	992	18	7.3	222	12	8.1	563
11	4.5	493	21	7.4	328	15	9.3	1,293
14	5.8	2,586	24	7.4	373	18	10.4	2,596
16	6.3	3,474	27	7.5	467	21	10.6	2,871
19	6.9	5,158	30	8.0	721	24	10.9	4,537
22	7.0	4,399	Feb. 3	7.7	467	27	10.9	4,847
26	6.4	4,076	6	7.4	343	30	10.7	3,420
30	6.5	3,815	9	7.4	290	June 2	8.8	1,043
June 2	6.0	2,539	12	7.2	221	5	9.3	1,517
5	5.5	1,920	15	7.1	222	8	9.7	2,520
8	5.3	1,559	18	7.1	227	11	9.5	2,363
11	5.9	3,250	21	6.8	139	14	11.85	4,975
14	6.3	3,007	24	6.8	104	17	10.2	3,198
17	6.9	4,832	27	6.45	64	20	9.7	1,956
20	6.9	3,160	Mar. 3	6.1	44	23	10.4	2,616
23	6.9	5,614	6	6.05	23	26	10.8	2,958
26	6.1	3,607	9	5.8	19	29	9.8	1,716
29	5.9	2,483	12	7.8	628	July 3	11.1	4,772
July 2	5.5	1,631	15	8.05	792	6	9.55	1,414
6	8.6	1,736	18	8.5	1,190	9	10.7	3,687
9	8.4	1,495	21	8.2	768	12	11.5	5,440
12	7.4	625	24	8.3	790	15	10.9	4,162
15	6.7	289	27	8.0	587	18	11.1	4,021
18	5.4	56				21	12.9	6,457

NOTE.—Gage heights, after July 6, 1909, taken on new gage, whose readings are not comparable with old gage.

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1911.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>
July 24.....	12.65	6,786	Mar. 15.....	7.0	291	Nov. 11.....	4.1	b 20
27.....	12.05	5,953	18.....	7.8	447	14.....	4.0	b 16
30.....	11.8	5,316	21.....	7.7	388	17.....	4.4	b 57
Aug. 3.....	12.15	6,495	24.....	7.6	355	20.....	4.6	b 89
6.....	9.65	2,371	27.....	7.5	428	23.....	4.6	b 88
9.....	8.3	1,059	30.....	9.3	1,531	26.....	5.0	b 164
12.....	7.3	622	Apr. 2.....	8.05	848	29.....	5.0	b 164
15.....	6.8	284	5.....	7.7	783	Dec. 3.....	5.4	b 299
18.....	6.2	175	8.....	7.5	625	6.....	5.5	b 336
21.....	5.7	105	11.....	8.05	992	9.....	5.3	b 280
24.....	5.8	145	14.....	8.55	1,453	12.....	5.85	b 586
27.....	6.2	229	17.....	9.2	1,988	15.....	6.0	b 513
30.....	6.1	193	20.....	9.3	2,205	18.....	5.5	b 337
Sept. 2.....	5.7	129	23.....	8.25	1,559	21.....	5.7	b 483
5.....	5.5	97	26.....	7.7	923	24.....	5.6	b 326
8.....	7.9	880	29.....	7.6	669	27.....	5.6	b 313
11.....	5.45	100	May 3.....	6.9	439	30.....	5.5	b 286
14.....	5.8	197	6.....	6.8	365			
17.....	5.3	101	9.....	7.5	845	1913.		
20.....	5.1	71	12.....	10.5	3,841	Jan. 3.....	5.3	187
23.....	5.7	157	15.....	9.9	3,418	3.....	5.3	191
26.....	5.2	88	18.....	10.55	3,806	9.....	5.0	160
29.....	5.0	47	21.....	10.8	4,032	12.....	4.9	121
Oct. 3.....	5.6	102	24.....	10.75	4,259	15.....	4.9	106
6.....	5.3	72	27.....	10.75	4,138	18.....	4.9	95
9.....	5.1	42	30.....	10.65	3,947	21.....	4.5	93
12.....	9.85	1,940	June 2.....	11.5	4,923	24.....	4.5	105
15.....	10.6	3,820	5.....	12.0	6,556	27.....	4.5	96
18.....	11.0	4,396	9.....	13.65	a 10,008	30.....	4.5	89
21.....	11.3	5,046	12.....	14.85	a 14,498	Feb. 2.....	5.4	293
24.....	10.95	3,505	15.....	14.15	a 13,405	5.....	5.6	350
27.....	9.0	1,790	18.....	13.1	a 10,249	8.....	5.4	366
30.....	8.9	1,752	20.....	12.0	9,501	11.....	5.6	510
Nov. 2.....	9.05	2,125	23.....	9.65	6,533	14.....	5.9	496
5.....	8.9	1,693	26.....	9.3	5,576	17.....	5.8	429
8.....	8.5	1,241	29.....	9.6	5,895	20.....	5.5	294
11.....	8.8	1,590	July 3.....	9.4	5,609	23.....	5.4	259
14.....	8.5	1,270	6.....	9.3	5,153	25.....	5.4	248
17.....	8.3	1,109	9.....	9.0	4,842	27.....	5.2	214
20.....	8.3	1,126	12.....	8.6	4,210	Mar. 3.....	5.4	342
23.....	8.2	1,218	15.....	7.6	3,451	3.....	5.3	291
26.....	8.1	861	18.....	7.2	2,575	9.....	5.3	271
29.....	8.2	873	21.....	6.8	1,039	12.....	5.2	255
Dec. 3.....	8.2	1,093	24.....	7.0	1,193	15.....	5.2	240
6.....	7.9	926	27.....	6.6	1,021	18.....	5.0	134
9.....	7.7	843	30.....	6.6	978	21.....	4.9	106
12.....	7.6	705	Aug. 3.....	7.6	1,546	24.....	4.7	90
15.....	7.8	711	6.....	7.0	980	27.....	4.6	78
18.....	7.9	794	9.....	6.7	571	30.....	4.3	43
21.....	8.0	951	12.....	6.4	403	Apr. 2.....	4.4	50
24.....	7.9	1,072	15.....	6.4	322	5.....	4.3	36
27.....	7.6	872	18.....	9.0	2,185	8.....	4.3	27
30.....	7.6	939	21.....	7.05	1,715	11.....	4.1	18
1912.			24.....	6.6	1,254	14.....	3.8	8
Jan. 3.....	7.7	1,190	27.....	6.1	816	18.....	3.6	6
6.....	7.3	636	30.....	6.3	955	20.....	3.6	5
9.....	7.3	614	Sept. 2.....	6.45	973	23.....	7.15	430
12.....	7.0	451	5.....	6.2	784	26.....	6.0	225
15.....	7.0	395	8.....	6.75	1,112	29.....	6.5	382
18.....	7.3	565	11.....	7.3	1,622	May 3.....	7.7	537
21.....	7.8	816	14.....	7.55	1,906	6.....	6.95	387
24.....	8.1	1,137	17.....	5.7	473	9.....	8.0	1,033
27.....	8.05	1,399	20.....	5.4	379	12.....	8.4	1,151
30.....	8.0	1,139	23.....	5.25	238	15.....	7.1	617
Feb. 1.....	7.9	836	26.....	5.2	219	18.....	7.4	898
4.....	7.6	622	29.....	5.0	181	21.....	7.8	1,406
7.....	7.6	607	Oct. 3.....	5.8	370	24.....	7.4	1,052
10.....	7.6	540	6.....	5.2	209	27.....	6.8	530
13.....	7.4	423	9.....	5.1	162	30.....	6.6	340
16.....	7.4	446	12.....	4.8	118	June 2.....	6.6	341
19.....	7.35	385	15.....	4.6	98	5.....	6.6	328
22.....	7.4	304	18.....	4.5	84	8.....	6.8	411
25.....	7.3	325	21.....	4.4	60	11.....	6.5	283
28.....	7.3	278	24.....	4.3	54	14.....	7.35	499
Mar. 3.....	7.1	243	27.....	4.3	42	17.....	6.2	234
6.....	7.2	271	30.....	4.2	38	20.....	6.3	258
9.....	7.1	304	Nov. 2.....	4.2	35	23.....	7.0	489
12.....	7.2	357	5.....	4.1	27	26.....	6.9	424
			8.....	4.1	23	29.....	6.8	311

a Discharge obtained by subtracting the flow of Rio Conchos from that of the Rio Grande below Presidio.

b Measurement made 1 mile above Presidio.

Discharge measurements of Rio Grande above Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
July 1913.	<i>Fect.</i>	<i>Sec.-ft.</i>	1913.	<i>Fect.</i>	<i>Sec.-ft.</i>	1913.	<i>Fect.</i>	<i>Sec.-ft.</i>
July 3.....	7.0	334	Aug. 12.....	6.3	63	Sept. 11.....	6.6	105
6.....	6.7	258	15.....	6.6	91	14.....	6.3	57
9.....	6.1	108	18.....	5.6	10	17.....	5.9	27
12.....	5.8	36	21.....	5.7	19	20.....	5.8	23
15.....	5.7	19	Sept. 5.....	7.0	233			
24.....	6.0	33	8.....	7.4	304			

NOTE.—Measurements made by S. D. Church, J. P. Hague, E. E. Winter, F. X. Dougherty, W. T. Millington, and C. L. Vasquez.

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....		4.1				16.....		4.15			
2.....		3.5	3.0	2.5		17.....		3.6			
3.....		3.0	5.5	1.2	3.1	18.....		3.6			
4.....		4.0	3.0	1.05		19.....		3.4	2.6		
5.....		4.0	1.75			20.....		4.1	3.4		
6.....		4.2	2.9	2.05	.7	21.....		3.35	2.35	2.0	3.2
7.....		4.2	2.5	.3	2.85	22.....	2.5	3.0	1.75	1.95	2.75
8.....		4.4	2.5	1.15	1.65	23.....	2.0	2.7	1.8	.6	4.1
9.....		5.0	1.5	2.75		24.....		2.45			2.55
10.....		5.15	1.0	2.05		25.....		2.15	1.05		1.25
11.....		5.3	2.5	1.5		26.....		1.7	.55		1.15
12.....		6.15	1.5			27.....	1.9	1.55	2.0		1.65
13.....		5.9		.25		28.....	3.55	1.75			2.45
14.....		5.0				29.....		1.45			5.7
15.....		4.45		.95		30.....	2.45	1.45			7.0
						31.....	3.5				

Day.	Oct.	May.	June.	July.	Aug.	Sept.	Day.	Oct.	May.	June.	July.	Aug.	Sept.
1900-1901.							1900-1901.						
1.....	3.75		5.05		0.55	1.85	16.....		4.0	2.95		4.55	1.55
2.....	2.6		5.35		2.5	2.0	17.....	3.5	3.85	2.75		3.3	3.25
3.....	2.4		5.4		2.85	2.85	18.....	5.25	3.9	2.65		3.25	5.05
4.....	1.1		5.45		4.55	4.8	19.....	2.3	4.0	2.5		2.7	3.65
5.....			5.35		4.85	5.8	20.....	3.4	4.15	2.5		2.95	2.85
6.....			5.3		4.9	4.5	21.....	3.2	4.3	2.45	2.55	2.05	2.6
7.....			5.2		4.4	3.9	22.....	2.4	4.5	2.3	2.75	1.85	2.15
8.....			5.35		2.95	1.85	23.....	2.15	4.55	2.3	2.2	1.75	2.05
9.....			5.4		2.75	1.45	24.....	1.75	4.6	2.15	2.15	1.55	1.9
10.....		3.5	5.5		2.7	1.55	25.....	1.55	4.65	2.05	1.85	.5	1.8
11.....		4.55	5.0		2.45	3.25	26.....	1.35	4.8	1.95	2.8	.9	1.85
12.....		4.55	4.15		2.55	5.25	27.....	.95	4.85	1.4	3.9	4.8	1.95
13.....		4.45	3.9	3.95	2.5	3.3	28.....	1.0	4.85	1.05	2.45	4.3	1.65
14.....		3.95	3.6	2.8	3.05	2.1	29.....	.85	4.85	1.35	3.2	3.3	3.2
15.....		3.95	3.15	1.75	3.5	1.8	30.....	.6	5.0		1.85	2.75	4.0
							31.....		5.0		1.45	2.2	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	3.25	4.35	1.6	1.2	1.3						1.6	3.55
2.....	1.55	2.9	1.5	1.2	1.3					3.05	.95	3.55
3.....		1.8	1.4	1.1	1.25					.75		4.85
4.....		2.05	1.35	1.0	1.2					1.95		4.95
5.....		1.7	1.4	1.1	1.2				1.2	1.4		3.4
6.....		1.55	1.4	1.35	1.3							4.35
7.....	3.3	1.3	1.35	1.0	1.4							3.65
8.....	2.25	1.75	1.2	1.5	1.4				.55			2.15
9.....		2.15	1.2	1.5	1.3							2.0
10.....		2.0	1.2	1.4	1.25					4.05	1.2	1.2

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
16												1.5
17												.85
18												2.25
19									2.9			2.05
20									1.7			2.6
21										1.95		4.05
22												2.55
23									5.15			2.5
24									.75	1.7		2.05
25										.9	1.2	1.0
26									7.25			2.25
27									6.55			1.95
28									2.6			.5
29									2.5			
30									1.75			
31												
1904-5.												
1		6.15	3.5	3.7	3.45	4.05	6.25	7.8	7.85	8.15	3.3	1.7
2		6.0	3.5	3.7	3.55	4.35	6.0	7.85	8.0	7.9	3.95	1.65
3		5.9	3.5	3.55	3.5	4.75	5.75	8.0	8.1	7.6	2.85	2.0
4		5.45	3.8	3.5	3.5	4.5	5.95	8.0	8.2	7.3	3.25	2.1
5		7.85	3.75	3.4	3.65	5.8	6.3	7.9	8.25	6.8	3.6	2.45
6		6.0	3.8	3.4	3.7	6.3	6.45	8.1	8.5	6.6	2.9	1.7
7	2.7	5.2	3.8	3.4	3.65	6.6	6.25	8.1	8.6	6.45	2.85	5.95
8	5.45	5.1	3.7	3.4	3.55	7.45	6.2	8.1	8.75	6.15	2.7	4.15
9	6.4	4.95	3.65	3.4	3.5	7.25	6.1	7.9	8.8	5.75	2.85	5.6
10	7.15	4.8	3.6	3.4	3.55	7.4	6.25	7.75	8.85	5.3	2.65	3.15
11	7.55	4.65	3.6	3.4	3.55	7.8	5.85	7.65	8.9	4.95	2.55	2.8
12	7.65	4.5	3.6	3.3	3.4	7.9	5.5	7.7	8.85	4.7	2.6	3.05
13	7.7	4.4	3.6	3.3	3.5	8.0	5.3	8.0	9.05	4.5	2.9	2.95
14	7.65	4.3	3.6	3.3	3.6	8.15	5.0	8.0	9.05	4.15	2.6	2.25
15	7.6	4.3	3.5	3.45	3.55	8.2	4.9	8.1	8.8	7.65	2.6	1.7
16	7.9	4.2	3.5	3.6	3.8	8.0	5.15	8.05	8.75	5.8	2.9	1.55
17	8.25	4.1	3.45	3.95	3.9	8.2	5.6	8.2	8.8	6.7	3.9	1.65
18	8.2	4.0	3.6	4.25	4.0	7.95	6.15	8.15	8.5	4.75	3.35	1.5
19	8.2	4.0	3.95	4.15	3.75	7.85	6.9	8.2	8.75	6.45	2.95	2.15
20	8.0	4.0	3.95	4.0	3.6	7.8	7.65	8.25	8.7	8.05	3.1	1.65
21	8.0	3.9	3.9	3.95	3.7	7.55	7.6	7.65	8.65	5.2	2.8	1.5
22	8.2	3.9	4.1	3.9	3.6	7.3	7.75	7.8	8.8	4.0	2.7	1.4
23	7.95	3.8	4.0	3.8	3.55	7.45	7.7	7.65	8.65	4.85	2.6	1.2
24	7.65	3.8	3.95	3.8	3.4	7.65	7.45	7.5	8.55	5.5	2.85	1.2
25	7.5	3.7	3.9	3.75	4.25	7.65	7.4	7.5	8.5	6.55	2.25	1.2
26	7.3	3.6	3.55	3.7	4.25	7.55	7.4	7.5	8.45	4.45	2.0	3.0
27	7.3	3.6	3.7	3.75	4.15	7.2	7.75	7.55	7.95	3.65	1.15	3.0
28	7.0	3.6	3.75	3.6	4.1	6.7	7.85	7.6	7.7	3.65	1.8	2.9
29	6.65	3.5	3.8	3.6		6.4	8.0	7.5	7.55	3.6	1.9	2.9
30	7.65	3.5	3.8	3.55		6.35	7.85	7.6	7.8	3.6	2.35	2.8
31	7.3		3.75	3.5		6.3		7.75		3.6	1.85	
1905-6.												
1	2.8	2.6	3.2	4.0	4.55	4.1	3.85	5.4	7.65	6.3	4.3	3.75
2	2.75	2.6	3.4	4.0	4.3	4.2	3.9	5.8	7.7	6.05	4.25	4.5
3	2.7	2.6	3.8	3.95	4.2	4.15	3.85	6.15	7.8	6.7	4.35	3.85
4	2.7	2.5	4.3	3.85	4.15	4.15	3.85	6.2	7.6	5.65	4.4	4.05
5	2.7	2.55	4.4	3.8	4.15	4.1	3.8	6.15	7.25	6.05	5.9	3.65
6	2.7	2.6	4.4	3.8	4.15	4.1	4.25	6.1	7.1	6.35	4.7	3.6
7	2.7	2.6	4.45	3.8	4.05	4.15	4.5	6.0	6.8	5.6	5.3	3.45
8	2.7	2.65	4.3	3.8	4.1	4.05	4.5	5.9	6.5	4.6	5.8	3.45
9	2.7	3.55	4.3	3.7	4.15	4.1	4.4	5.75	6.35	4.5	5.8	3.35
10	2.7	3.5	4.2	3.65	4.2	4.1	4.35	5.6	6.25	4.55	5.55	3.25
11	2.7	3.4	4.25	3.6	4.15	4.05	4.35	5.6	6.2	4.75	5.5	3.2
12	2.7	3.6	4.35	3.55	4.25	3.95	4.25	5.6	6.2	6.25	5.0	3.15
13	2.7	3.55	4.1	3.5	4.25	3.95	4.25	5.8	6.15	5.35	5.25	3.1
14	2.7	3.45	4.0	3.45	4.25	3.95	4.15	6.1	6.15	5.2	5.15	3.1
15	2.7	3.75	4.05	3.4	4.2	3.95	4.05	6.35	6.2	5.05	4.95	3.0
16	2.7	3.65	3.95	3.45	4.3	3.95	4.1	6.4	6.25	4.95	4.55	3.3
17	2.7	3.45	3.8	3.35	4.3	3.9	4.1	6.55	6.25	4.95	4.55	3.0
18	2.7	3.5	3.85	3.35	4.3	3.9	4.2	6.75	6.4	5.65	4.45	2.9
19	2.7	3.4	3.8	3.4	4.2	3.9	4.45	6.95	6.6	5.2	4.3	2.95
20	2.7	3.15	4.15	3.35	4.2	3.85	4.45	7.15	6.65	5.2	4.2	3.15

α Sept. 26 this station was moved 8 miles farther up the Rio Grande and a new gage was established. The new gage heights are not comparable with the old.

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
21.....	2.7	3.1	4.25	3.35	4.15	3.8	4.5	7.2	6.75	5.0	4.0	3.2
22.....	2.7	3.1	4.2	3.45	4.15	3.75	4.7	7.3	6.95	4.95	3.85	3.1
23.....	2.7	3.0	4.2	3.5	4.3	3.7	4.6	7.3	7.15	4.65	3.95	3.0
24.....	2.7	3.0	4.15	3.7	4.3	3.7	4.5	7.2	7.35	4.5	3.9	3.0
25.....	2.6	3.0	4.15	3.8	4.25	3.7	4.45	7.2	7.4	4.3	4.2	3.2
26.....	2.6	3.0	4.2	3.9	4.25	3.75	4.55	7.2	7.5	4.35	4.1	2.9
27.....	2.6	3.0	4.25	4.1	4.2	3.8	4.85	7.25	7.55	4.15	6.4	2.8
28.....	2.6	3.0	4.15	4.3	4.15	3.8	5.15	7.45	7.25	4.4	4.65	2.75
29.....	2.6	2.95	4.1	4.45	-----	3.95	5.15	7.45	7.05	4.35	4.15	2.7
30.....	2.6	2.9	4.05	4.55	-----	3.95	5.1	7.4	6.6	4.3	4.1	2.65
31.....	2.6	-----	4.0	4.45	-----	3.95	-----	7.35	-----	4.25	3.8	-----
1906-7.												
1.....	2.6	3.8	4.1	4.3	4.45	4.25	5.25	6.55	7.0	8.05	5.8	6.9
2.....	2.6	3.85	3.95	4.45	4.35	4.3	5.35	6.25	7.35	8.2	5.55	7.2
3.....	2.6	3.9	3.8	4.45	4.3	4.3	5.3	6.1	7.55	7.75	5.8	6.8
4.....	2.65	3.8	3.85	4.45	4.3	4.3	5.25	6.0	7.65	7.4	5.65	6.85
5.....	2.5	3.8	4.35	4.45	4.3	4.35	5.3	5.95	7.8	7.3	5.45	7.05
6.....	2.45	3.8	4.5	4.45	4.3	4.45	5.15	6.15	7.9	7.2	5.35	7.15
7.....	2.4	3.8	4.55	4.5	4.3	4.45	5.0	6.3	8.0	7.25	5.3	7.4
8.....	3.6	4.05	4.55	4.6	4.3	4.6	5.0	6.3	8.0	7.35	5.3	7.7
9.....	3.65	4.3	6.0	4.65	4.3	4.45	4.9	6.2	7.75	7.35	5.3	6.9
10.....	3.5	4.3	5.8	4.6	4.5	4.4	4.8	6.15	7.5	7.4	5.6	6.55
11.....	3.4	4.3	5.35	4.6	4.75	4.35	4.7	6.05	7.4	7.45	5.45	6.25
12.....	3.5	4.35	5.45	4.5	4.65	4.25	4.65	6.1	7.45	7.4	5.15	6.15
13.....	3.65	4.55	5.6	4.45	4.6	4.2	4.65	6.1	7.5	7.7	5.05	5.85
14.....	3.7	4.6	5.35	4.4	4.5	4.15	4.7	6.0	7.55	7.5	5.05	5.55
15.....	4.0	4.5	5.35	4.35	4.45	4.1	4.7	5.8	7.55	7.45	4.95	5.25
16.....	3.8	4.4	5.2	4.35	4.4	4.15	4.65	5.85	7.65	7.5	4.8	5.1
17.....	3.7	4.35	5.05	4.65	4.5	4.1	4.6	5.7	7.9	7.25	4.75	5.0
18.....	3.7	4.25	4.9	4.7	4.65	4.1	4.55	5.6	7.85	6.95	4.7	4.95
19.....	3.6	4.25	4.8	4.8	4.6	4.1	4.6	5.6	7.9	7.25	4.6	4.8
20.....	3.6	4.45	4.8	4.9	4.5	4.2	4.95	5.85	7.9	6.55	4.65	5.3
21.....	3.55	4.35	4.8	5.05	4.4	4.3	5.6	5.9	7.95	6.45	4.6	5.45
22.....	3.55	4.35	4.8	5.35	4.3	4.3	6.0	6.0	7.8	6.3	4.5	5.25
23.....	3.65	4.35	4.7	5.2	4.3	4.2	6.25	6.05	7.85	6.4	4.4	5.35
24.....	3.6	4.5	4.75	5.1	4.35	4.15	6.55	6.0	7.95	6.4	4.4	5.2
25.....	3.5	4.45	4.6	5.0	4.3	4.1	6.75	5.9	8.0	6.3	4.35	6.0
26.....	3.5	4.45	4.55	5.0	4.3	4.0	6.95	6.1	8.0	6.25	4.3	6.45
27.....	3.55	4.4	4.5	4.9	4.3	3.95	7.05	6.15	8.05	6.15	4.75	6.7
28.....	3.5	4.35	4.4	4.8	4.25	4.0	7.2	6.4	8.15	6.0	5.0	6.2
29.....	3.55	4.35	4.35	4.7	-----	4.0	7.05	6.45	8.1	5.8	5.35	5.7
30.....	3.5	4.3	4.3	4.7	-----	4.2	6.95	6.6	8.05	6.0	4.8	5.45
31.....	3.45	-----	4.25	4.55	-----	4.85	-----	6.8	-----	6.1	7.75	-----
1907-8.												
1.....	5.1	5.5	4.6	4.1	4.0	4.05	4.45	5.3	5.7	3.75	3.9	4.95
2.....	4.95	5.5	4.35	4.0	3.95	3.9	4.35	5.3	5.35	3.5	3.65	4.65
3.....	4.85	5.1	4.5	4.0	4.0	4.0	4.3	5.0	5.15	4.4	3.6	5.05
4.....	4.8	4.95	4.45	4.0	4.05	4.0	4.25	4.9	4.9	4.0	5.3	4.7
5.....	4.75	4.95	4.45	4.05	4.0	3.95	4.2	4.7	4.75	3.45	6.15	4.55
6.....	4.55	4.85	4.35	4.25	4.05	4.25	4.2	4.7	4.55	3.1	4.45	4.3
7.....	4.45	4.75	4.4	4.15	4.05	4.35	4.1	4.5	4.35	3.0	5.1	4.05
8.....	4.35	4.8	4.4	4.15	4.05	4.15	4.1	4.5	4.25	3.0	4.5	4.4
9.....	4.35	4.8	4.35	4.2	4.0	4.1	4.1	4.5	4.2	2.9	3.9	4.3
10.....	4.25	4.7	4.35	4.2	4.05	4.05	4.1	4.4	4.15	2.85	3.65	4.15
11.....	4.3	4.7	4.45	4.4	4.0	4.1	4.1	4.95	4.05	2.9	3.65	3.95
12.....	4.3	4.7	4.25	4.45	4.05	4.05	4.15	5.3	4.0	2.9	4.45	3.85
13.....	4.25	4.55	4.25	4.35	4.2	4.1	4.1	5.15	4.0	2.75	4.35	3.75
14.....	4.15	4.45	4.2	4.2	4.2	4.15	4.05	4.9	3.9	-----	4.25	3.6
15.....	4.35	4.45	4.25	4.35	4.15	4.1	3.85	4.75	3.9	-----	4.05	3.45
16.....	4.35	4.5	4.3	4.35	4.15	4.1	3.8	4.6	3.9	-----	3.85	3.4
17.....	4.25	4.55	4.25	4.35	4.15	4.1	3.95	4.65	3.85	-----	4.55	3.3
18.....	4.2	4.45	4.1	4.3	4.2	4.1	3.9	4.75	3.8	-----	4.35	3.2
19.....	4.25	4.5	4.1	4.2	4.2	4.2	4.15	4.8	3.8	3.0	4.35	3.1
20.....	5.4	4.45	4.1	4.2	4.2	4.2	4.3	4.8	3.65	-----	4.6	3.0
21.....	5.1	4.6	4.05	4.15	4.2	4.2	4.3	4.8	3.55	3.65	4.45	2.95
22.....	5.05	4.45	4.2	4.0	4.15	4.1	4.65	4.85	3.45	4.35	5.0	2.95
23.....	4.8	4.4	4.2	4.1	4.1	4.05	4.7	4.7	3.35	4.2	4.95	2.8
24.....	4.7	4.5	4.15	4.1	4.15	3.95	4.7	4.5	3.2	4.2	4.9	2.75
25.....	4.65	4.65	4.1	4.1	4.05	3.85	5.6	4.4	3.2	4.0	4.75	2.7

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
26.....	4.75	4.7	4.1	4.05	4.15	3.75	5.7	4.75	2.95	4.75	4.5	2.55
27.....	4.85	4.95	4.2	4.05	4.1	3.75	5.65	4.95	2.9	4.35	4.2	.....
28.....	4.65	4.75	4.2	4.1	4.05	4.75	5.45	5.4	2.9	4.55	4.25	.....
29.....	5.6	4.65	4.2	4.1	4.05	4.7	5.3	5.8	3.0	4.7	4.8	.....
30.....	5.9	4.6	4.15	4.15	.....	4.6	5.35	5.8	3.0	4.2	4.4	.....
31.....	5.45	.....	4.1	4.15	.....	4.5	.....	5.95	.....	3.95	4.3	.....
1908-9.												
1.....	.....	.....	.....	3.7	3.2	3.1	2.6	6.15	6.3	5.7	5.65	5.25
2.....	.....	.....	.....	3.7	3.3	3.1	2.6	5.5	5.95	5.45	5.55	5.45
3.....	.....	.....	.....	3.65	3.25	3.3	3.2	4.85	5.75	5.2	5.4	5.7
4.....	.....	.....	.....	3.6	3.25	3.2	3.1	4.7	5.65	5.05	5.65	6.7
5.....	.....	.....	.....	3.6	3.2	3.1	3.0	4.55	5.55	5.0	5.45	6.45
6.....	.....	.....	.....	3.5	3.2	3.1	2.9	4.7	5.5	8.6	5.45	6.85
7.....	.....	.....	.....	3.6	3.2	2.95	2.8	5.0	5.4	8.95	5.3	6.9
8.....	.....	.....	.....	3.6	3.2	2.9	2.8	5.25	5.35	10.4	5.2	6.2
9.....	.....	.....	.....	3.6	3.35	2.9	2.8	5.05	5.85	7.8	5.1	5.85
10.....	.....	.....	.....	3.65	3.5	2.85	2.8	4.7	5.9	7.85	4.85	6.35
11.....	.....	.....	3.0	3.6	3.6	2.85	2.8	4.55	5.9	8.15	4.65	6.3
12.....	.....	.....	3.1	3.6	3.6	2.8	2.7	4.8	5.95	7.3	4.45	6.55
13.....	.....	.....	3.2	3.6	3.45	2.7	2.7	5.3	6.05	6.95	6.8	10.25
14.....	.....	.....	3.2	3.5	3.3	2.65	2.6	5.8	6.3	6.7	8.7	11.0
15.....	.....	.....	3.1	3.45	3.3	2.6	2.6	6.0	6.55	6.7	5.45	11.15
16.....	.....	.....	3.2	3.4	3.3	2.6	.....	6.3	6.65	6.5	4.95	10.45
17.....	.....	.....	3.2	3.4	3.2	.....	.....	6.6	6.85	5.95	4.7	9.75
18.....	.....	.....	3.1	3.3	3.3	.....	.....	6.8	6.55	5.3	4.4	9.85
19.....	.....	.....	3.0	3.35	3.4	3.8	.....	6.85	6.9	6.3	4.55	9.45
20.....	.....	.....	3.5	3.5	3.4	4.0	.....	7.0	6.9	6.3	4.5	9.3
21.....	.....	.....	3.6	3.6	3.4	4.0	.....	7.05	6.9	6.25	4.3	9.5
22.....	.....	.....	3.55	3.6	3.25	3.9	.....	7.0	6.95	6.05	.....	8.8
23.....	.....	.....	3.5	3.6	3.3	3.75	.....	7.1	6.9	5.95	.....	8.8
24.....	.....	.....	3.4	3.6	3.3	3.7	.....	7.15	6.55	5.9	.....	8.5
25.....	.....	.....	3.3	3.5	3.35	3.6	.....	6.75	6.05	5.8	.....	8.35
26.....	.....	.....	3.3	3.5	3.2	3.45	.....	6.4	6.1	5.85	.....	8.15
27.....	.....	.....	3.3	3.45	3.25	3.3	.....	6.3	5.8	6.0	.....	7.9
28.....	.....	.....	3.3	3.4	3.1	3.2	3.9	6.45	5.85	7.4	.....	7.65
29.....	.....	.....	3.3	3.3	.....	3.1	5.7	6.5	5.9	7.6	.....	7.55
30.....	.....	.....	3.3	3.25	.....	3.0	5.7	6.5	5.7	6.5	.....	7.45
31.....	.....	.....	3.3	3.2	.....	2.9	.....	6.5	.....	5.95	.....	.....
1909-10.												
1.....	7.5	7.1	7.05	6.7	7.5	6.35	8.75	9.9	7.65	6.1	.....	.....
2.....	7.35	7.05	7.0	6.7	7.45	6.3	9.1	10.05	7.4	5.9	.....	.....
3.....	7.15	6.95	6.9	6.7	7.35	6.1	9.05	10.25	7.1	5.65	.....	.....
4.....	7.0	6.95	6.85	6.6	7.55	6.0	9.1	10.4	6.85	5.4	.....	.....
5.....	6.9	6.95	6.9	6.45	7.55	6.05	9.05	10.65	6.75	5.25	.....	.....
6.....	6.9	6.9	6.8	6.4	7.45	6.05	8.65	11.45	6.5	5.1	.....	.....
7.....	6.85	6.9	6.9	6.4	7.35	6.0	8.4	10.75	6.35	5.05	.....	4.8
8.....	6.8	6.9	6.8	6.35	7.5	5.9	8.2	10.85	6.25	4.9	.....	5.2
9.....	6.85	6.85	7.15	6.2	7.4	5.8	8.0	10.9	6.05	4.85	.....	.....
10.....	6.85	6.8	7.2	6.2	7.3	5.8	8.45	10.9	5.85	4.7	.....	.....
11.....	6.95	6.8	7.2	7.25	7.35	5.7	7.95	11.1	5.65	5.95	.....	.....
12.....	6.8	6.7	7.3	7.95	7.2	7.85	7.8	11.35	7.1	6.45	.....	.....
13.....	6.7	6.7	7.35	7.85	7.2	7.9	7.7	11.4	7.05	6.2	.....	.....
14.....	6.55	6.75	7.3	7.65	7.15	7.95	7.8	12.05	6.95	6.0	.....	.....
15.....	6.45	6.7	7.3	7.55	7.1	8.1	7.85	12.35	6.75	5.85	.....	.....
16.....	6.4	6.65	7.3	7.4	7.05	8.5	7.8	11.15	6.8	5.7	.....	.....
17.....	6.45	6.6	7.3	7.3	7.1	8.65	7.9	10.45	7.55	5.4	.....	.....
18.....	6.95	6.55	7.45	7.25	7.1	8.45	8.05	10.55	7.3	5.35	.....	.....
19.....	7.1	6.6	7.4	7.25	6.95	8.4	8.05	10.7	6.5	5.25	.....	.....
20.....	7.05	6.6	7.3	7.25	6.9	8.3	8.3	10.65	6.35	5.1	.....	.....
21.....	7.15	6.6	7.2	7.5	6.75	8.2	8.7	10.8	6.2	4.95	.....	.....
22.....	7.2	6.6	7.0	7.5	6.65	8.25	8.85	11.05	5.95	4.7	.....	.....
23.....	7.15	6.8	7.0	7.45	6.6	8.35	9.05	11.1	5.85	.....	.....	.....
24.....	7.15	6.8	6.95	7.5	6.65	8.3	9.05	11.2	5.6	.....	.....	.....
25.....	7.2	6.8	6.9	7.55	6.55	8.25	8.75	11.4	5.3	.....	.....	.....

a On July 6 station was moved back to former site, 8 miles above the mouth of Rio Conchos. New gage not comparable with old.

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
26.....	7.1	6.8	7.15	7.95	6.5	8.05	8.5	11.1	6.65	-----	-----	-----
27.....	7.25	6.8	7.1	7.95	6.4	8.1	8.55	10.0	8.0	-----	-----	-----
28.....	7.1	6.65	7.0	7.85	6.3	8.35	8.5	9.2	6.3	-----	-----	-----
29.....	7.0	6.6	7.0	7.8	-----	8.35	9.1	8.7	6.55	-----	-----	-----
30.....	7.0	6.6	6.9	7.7	-----	8.3	9.5	8.45	6.05	-----	-----	-----
31.....	7.1	-----	6.8	7.6	-----	8.2	-----	8.25	-----	-----	-----	-----
1910-11.												
1.....	-----	-----	-----	-----	-----	-----	4.9	4.85	8.95	9.4	12.4	5.8
2.....	-----	-----	-----	-----	-----	-----	6.05	-----	8.75	10.5	12.35	5.7
3.....	-----	-----	-----	-----	-----	-----	6.05	-----	8.85	11.1	12.35	5.6
4.....	-----	-----	-----	-----	-----	-----	5.85	-----	9.25	9.5	12.25	5.6
5.....	-----	-----	-----	-----	-----	-----	5.65	-----	9.3	9.55	10.6	5.5
6.....	-----	-----	-----	-----	-----	-----	5.45	7.0	9.25	9.65	9.6	5.6
7.....	-----	-----	-----	-----	-----	-----	5.35	8.0	9.25	9.8	9.1	5.25
8.....	-----	-----	-----	-----	-----	-----	5.05	8.7	9.8	9.8	8.55	7.2
9.....	-----	-----	-----	-----	-----	-----	4.8	8.9	9.8	11.0	8.2	6.0
10.....	-----	-----	-----	-----	-----	-----	-----	8.6	9.6	12.15	7.85	5.55
11.....	-----	-----	-----	-----	-----	-----	-----	8.4	9.4	11.65	7.55	5.75
12.....	-----	-----	-----	-----	-----	-----	-----	8.15	10.85	11.45	7.3	6.3
13.....	-----	-----	-----	-----	-----	-----	-----	8.35	12.6	11.0	7.1	5.9
14.....	-----	-----	-----	-----	-----	-----	-----	9.3	11.2	10.9	6.85	5.75
15.....	-----	-----	-----	-----	-----	-----	-----	9.35	10.3	11.35	6.7	5.4
16.....	-----	-----	-----	-----	-----	-----	-----	9.35	10.2	11.75	6.45	5.35
17.....	-----	-----	-----	-----	-----	-----	-----	11.35	10.2	11.2	6.35	5.25
18.....	-----	-----	-----	-----	5.3	-----	-----	10.35	10.25	11.65	6.15	5.2
19.....	-----	-----	-----	-----	5.2	-----	5.1	10.5	10.25	12.5	5.95	5.1
20.....	-----	-----	-----	-----	5.4	-----	5.05	10.55	10.05	12.5	5.75	5.7
21.....	-----	-----	-----	-----	4.95	-----	5.0	10.65	11.35	12.95	5.65	6.35
22.....	-----	-----	-----	-----	4.6	6.8	4.9	10.75	10.6	13.05	5.6	6.0
23.....	-----	-----	-----	-----	-----	6.35	4.9	10.85	10.5	12.55	5.65	5.7
24.....	-----	-----	-----	-----	-----	5.75	-----	10.9	10.65	12.5	5.75	5.5
25.....	-----	-----	-----	-----	-----	5.5	7.15	10.9	10.8	12.0	8.35	5.35
26.....	-----	-----	-----	-----	-----	5.65	6.5	10.9	10.75	11.65	6.55	5.2
27.....	-----	-----	-----	-----	-----	5.6	6.1	10.85	10.2	11.95	6.3	5.15
28.....	-----	-----	-----	-----	-----	5.55	5.6	11.6	10.0	12.3	7.0	5.1
29.....	-----	-----	-----	-----	-----	5.2	5.2	10.85	9.7	12.05	7.05	5.0
30.....	-----	-----	-----	-----	-----	4.95	4.9	10.7	9.45	11.8	6.1	4.9
31.....	-----	-----	-----	-----	-----	4.9	-----	10.6	-----	12.05	6.0	-----
1911-12.												
1.....	4.9	8.95	8.0	7.7	7.85	7.05	8.35	7.15	11.3	9.65	8.15	6.9
2.....	5.65	9.0	8.05	7.75	7.85	7.0	8.0	7.0	11.5	9.4	7.85	6.4
3.....	5.55	9.6	8.2	7.65	7.6	7.05	7.75	6.85	11.7	9.55	7.55	6.15
4.....	5.35	9.6	8.0	7.5	7.65	7.0	7.55	6.75	11.75	9.65	7.25	5.95
5.....	5.3	8.85	8.0	7.4	7.7	7.1	7.7	6.8	12.0	9.45	7.2	6.4
6.....	5.25	8.8	7.9	7.25	7.6	7.15	7.65	6.95	12.3	9.3	7.0	6.2
7.....	5.1	8.65	7.85	7.1	7.6	7.05	7.55	7.1	12.7	9.1	6.9	7.25
8.....	5.1	8.55	7.75	7.0	7.6	7.15	7.45	7.1	13.35	9.05	6.85	6.6
9.....	5.05	8.85	7.85	7.15	7.6	7.1	7.45	7.3	13.65	9.0	6.65	6.3
10.....	7.4	8.9	7.45	7.15	7.6	7.2	7.65	10.05	13.95	8.8	6.55	6.1
11.....	8.95	8.85	7.5	7.0	7.55	7.2	8.05	10.75	14.5	8.65	6.45	7.1
12.....	9.75	8.65	7.6	6.9	7.5	7.2	8.2	10.6	14.85	8.5	6.4	6.85
13.....	10.0	8.65	7.7	7.0	7.4	7.15	8.3	10.5	14.85	8.1	6.4	7.1
14.....	10.5	8.5	7.8	7.05	7.4	7.1	8.65	10.0	14.5	8.15	6.4	7.4
15.....	10.55	8.3	7.8	6.9	7.4	6.95	9.15	9.95	14.15	7.6	6.45	6.3
16.....	10.5	8.2	7.95	7.0	7.4	6.9	9.35	10.3	13.95	7.5	6.5	6.15
17.....	10.75	8.3	7.9	7.35	7.4	7.0	9.2	10.45	13.5	7.3	6.45	5.65
18.....	11.0	8.3	7.9	7.35	7.4	7.7	8.9	10.6	13.1	7.2	8.5	5.5
19.....	11.0	8.35	7.9	7.6	7.35	7.8	9.1	10.5	12.7	7.3	8.5	5.4
20.....	11.05	8.3	7.9	7.9	7.4	7.75	9.2	10.7	11.9	7.05	9.05	5.35
21.....	11.4	8.2	8.0	7.8	7.4	7.7	8.6	10.75	10.95	6.9	6.7	5.3
22.....	11.75	8.15	7.7	7.8	7.4	7.7	8.35	10.75	10.2	7.9	6.85	5.3
23.....	11.7	8.15	7.85	8.1	7.4	7.65	8.25	10.8	9.7	7.2	6.0	5.3
24.....	10.95	8.1	7.75	8.1	7.3	7.55	8.05	10.75	9.55	6.9	6.5	5.25
25.....	9.65	8.1	7.65	8.15	7.3	7.5	7.85	10.75	9.4	6.75	6.4	5.2
26.....	9.45	8.1	7.8	7.95	7.3	7.55	7.65	10.75	9.3	6.7	6.1	5.15
27.....	9.05	8.4	7.65	8.05	7.25	7.4	7.5	10.8	9.1	6.75	6.15	5.1
28.....	9.25	8.2	7.6	8.1	7.25	7.35	7.75	10.8	9.15	7.1	5.85	5.0
29.....	9.1	8.2	7.5	8.1	7.2	8.0	7.55	10.9	9.6	6.95	6.15	5.2
30.....	8.85	8.1	7.6	8.1	-----	9.15	7.3	10.75	9.35	7.1	6.25	5.9
31.....	8.65	-----	7.6	8.0	-----	8.7	-----	10.9	-----	9.0	5.85	-----

Daily gage height, in feet, of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	5.8	4.2	5.1	5.4	5.4	5.1	4.4	8.6	6.6	7.25	.....	.....
2.....	6.15	4.2	5.35	5.4	5.45	5.4	4.35	8.15	6.6	7.2	.....	6.35
3.....	5.6	4.1	5.4	5.3	5.6	5.4	4.3	7.6	6.95	6.95	.....	7.65
4.....	5.3	4.1	5.5	5.3	5.6	5.4	4.3	7.2	6.7	6.85	.....	6.9
5.....	5.15	4.1	5.5	5.3	5.6	5.3	4.3	7.0	6.6	6.75	.....	7.4
6.....	5.1	4.1	5.5	5.3	5.6	5.3	4.3	6.9	6.45	6.65	.....	7.3
7.....	4.85	4.1	5.55	5.2	5.6	5.3	4.3	6.75	6.3	6.45	.....	8.0
8.....	5.75	4.1	5.5	5.0	5.4	5.3	4.3	7.1	6.8	6.25	.....	7.4
9.....	5.05	4.1	5.35	5.0	5.6	5.3	4.2	8.15	7.6	6.05	.....	7.15
10.....	4.8	4.1	5.55	5.0	5.55	5.25	4.1	8.7	6.95	6.0	5.45	6.85
11.....	4.8	4.1	5.75	5.0	5.6	5.2	4.1	8.4	6.4	5.9	5.45	6.6
12.....	4.85	4.1	5.85	4.9	5.6	5.2	4.1	8.25	6.45	5.8	6.25	6.35
13.....	4.9	4.1	5.6	4.9	5.75	5.2	3.85	7.35	6.9	5.8	5.8	6.3
14.....	4.75	4.0	5.7	4.9	5.9	5.2	3.75	7.0	7.1	5.75	6.75	6.5
15.....	4.65	4.0	6.0	4.9	5.8	5.2	3.6	7.25	6.4	5.7	6.6	6.05
16.....	4.6	4.0	5.75	4.9	5.8	5.2	3.6	7.7	6.25	5.6	6.2	5.95
17.....	4.55	4.4	5.55	4.9	5.8	5.1	3.6	7.6	6.2	5.6	5.8	5.9
18.....	4.5	4.45	5.5	4.9	5.7	5.0	3.6	7.4	6.4	.....	5.7	5.85
19.....	4.5	4.45	5.65	4.8	5.6	5.0	3.6	7.25	6.45	.....	5.7	5.8
20.....	4.45	4.55	5.5	4.7	5.5	5.0	3.6	7.4	6.65	.....	5.65	5.8
21.....	4.35	4.5	5.7	4.5	5.5	4.9	3.8	7.85	7.3	.....	5.7	.....
22.....	4.3	4.5	5.6	4.5	5.4	4.9	7.5	7.95	7.65	.....	.....	.....
23.....	4.3	4.55	5.6	4.5	5.4	4.7	7.1	7.85	7.3	5.95	.....	.....
24.....	4.3	4.7	5.6	4.5	5.4	4.7	6.6	7.35	7.3	5.95	.....	.....
25.....	4.3	4.85	5.55	4.5	5.4	4.65	6.25	7.2	7.0	5.75	.....	.....
26.....	4.3	5.0	5.55	4.5	5.3	4.6	5.9	6.85	6.9	5.6	.....	.....
27.....	4.3	5.0	5.55	4.5	5.2	4.55	5.4	6.8	6.85	.....	.....	.....
28.....	4.2	5.0	5.55	4.5	5.2	4.45	5.0	6.8	6.8	.....	.....	.....
29.....	4.2	5.0	5.55	4.5	.....	4.4	6.75	6.7	6.8	.....	.....	.....
30.....	4.2	5.0	5.45	4.5	.....	4.3	7.6	6.6	7.85	.....	.....	.....
31.....	4.2	.....	5.4	4.5	.....	4.2	.....	6.6	.....	.....	.....	.....

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1900.													
1.....	.....	0	870	0	0	0	16.....	0	0	900	0	0	0
2.....	.....	0	640	400	230	0	17.....	0	0	690	0	0	0
3.....	.....	0	400	1,500	40	450	18.....	0	0	690	0	0	0
4.....	0	0	830	400	40	0	19.....	0	0	590	280	0	0
5.....	0	0	830	70	0	0	20.....	0	0	870	440	0	0
6.....	0	0	900	340	120	20	21.....	0	0	560	230	110	490
7.....	0	0	900	260	10	360	22.....	0	245	400	100	110	320
8.....	0	0	1,160	260	40	70	23.....	0	100	310	110	20	820
9.....	0	0	1,450	50	320	0	24.....	0	0	235	0	0	250
10.....	0	0	1,500	20	120	0	25.....	0	0	170	25	0	30
11.....	0	0	1,570	260	60	0	26.....	0	0	130	0	0	30
12.....	0	0	2,120	50	0	0	27.....	0	100	115	160	0	50
13.....	0	0	1,960	0	10	0	28.....	0	660	135	0	0	200
14.....	0	0	1,390	0	0	0	29.....	0	0	105	0	0	1,290
15.....	0	0	1,080	0	30	0	30.....	0	235	105	0	0	1,730
.....	.....	.....	.....	.....	.....	.....	31.....	.....	640	.....	0	0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	630	0	0	0	0	0	0	0	1,410	0	30	90
2.....	250	0	0	0	0	0	0	0	1,550	0	240	130
3.....	180	0	0	0	0	0	0	0	1,570	0	360	360
4.....	20	0	0	0	0	0	0	0	1,590	0	1,120	1,070
5.....	0	0	0	0	0	0	0	0	1,550	0	1,260	1,780
6.....	0	0	0	0	0	0	0	0	1,520	0	1,270	960
7.....	0	0	0	0	0	0	0	0	1,480	0	1,030	740
8.....	0	0	0	0	0	0	0	0	1,570	0	390	90
9.....	0	0	0	0	0	0	0	0	1,580	0	350	30
10.....	0	0	0	0	0	0	0	600	1,620	0	340	40

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	0	0	0	0	0	0	0	980	1,320	0	220	580
12.....	0	0	0	0	0	0	0	1,120	870	0	240	1,540
13.....	0	0	0	0	0	0	0	1,080	740	830	230	600
14.....	0	0	0	0	0	0	0	920	610	360	420	90
15.....	0	0	0	0	0	0	0	910	450	70	600	50
16.....	0	0	0	0	0	0	0	930	370	0	1,070	30
17.....	740	0	0	0	0	0	0	860	310	0	530	580
18.....	1,500	0	0	0	0	0	0	900	280	0	480	1,440
19.....	210	0	0	0	0	0	0	930	240	0	340	680
20.....	870	0	0	0	0	0	0	980	240	0	390	360
21.....	600	0	0	0	0	0	0	1,040	230	280	120	300
22.....	250	0	0	0	0	0	0	1,100	180	350	80	120
23.....	150	0	0	0	0	0	0	1,130	180	150	70	110
24.....	60	0	0	0	0	0	0	1,160	150	140	40	100
25.....	40	0	0	0	0	0	0	1,200	140	80	10	70
26.....	30	0	0	0	0	0	0	1,290	100	360	20	90
27.....	20	0	0	0	0	0	0	1,320	40	810	1,070	100
28.....	20	0	0	0	0	0	0	1,330	0	260	890	50
29.....	20	0	0	0	0	0	0	1,350	30	472	530	550
30.....	10	0	0	0	0	0	0	1,360	0	80	350	850
31.....	0	0	0	0	0	0	0	1,370	0	20	240	0
1901-2.												
1.....	580	1,020	110	60	60	0	0	0	0	0	50	650
2.....	50	430	100	60	60	0	0	0	0	490	15	650
3.....	0	140	70	50	60	0	0	0	0	20	0	1,050
4.....	0	200	70	40	50	0	0	0	0	145	0	1,080
5.....	0	110	70	50	50	0	0	0	60	55	0	620
6.....	0	90	70	70	60	0	0	0	0	0	0	960
7.....	600	40	70	110	70	0	0	0	0	0	0	720
8.....	240	130	60	100	70	0	0	0	20	0	0	200
9.....	0	220	60	100	60	0	0	0	0	0	0	130
10.....	0	190	60	70	60	0	0	0	0	900	25	80
11.....	20	150	60	70	60	0	0	0	0	2,160	1,250	10
12.....	0	110	60	70	50	0	0	0	0	850	1,100	0
13.....	0	100	60	70	40	0	0	0	0	370	170	0
14.....	0	70	60	60	30	0	0	0	0	230	410	0
15.....	0	50	70	60	20	0	0	0	0	290	130	0
16.....	0	50	80	60	10	0	0	0	0	190	20	0
17.....	0	40	80	50	0	0	0	0	0	120	0	0
18.....	0	30	80	60	0	0	0	0	0	55	0	0
19.....	0	30	100	100	0	0	0	0	0	55	0	0
20.....	0	30	100	100	0	0	0	0	0	560	0	0
21.....	0	30	80	70	0	0	0	0	0	1,500	0	0
22.....	740	30	80	70	0	0	0	0	0	1,280	0	0
23.....	970	70	60	60	0	0	0	0	0	2,740	0	0
24.....	430	300	110	50	0	0	0	0	0	2,220	0	0
25.....	170	210	110	100	0	0	0	0	0	1,440	0	0
26.....	580	210	100	120	0	0	0	0	0	740	0	0
27.....	430	190	100	130	0	0	0	0	0	390	0	0
28.....	300	170	130	110	0	0	0	0	0	310	0	0
29.....	300	140	90	110	0	0	0	0	0	230	0	0
30.....	90	120	100	90	0	0	0	0	0	210	0	0
31.....	230	0	60	70	0	0	0	0	0	60	0	0
1902-3.												
1.....	0	10	240	0	0	0	70	140	1,520	2,520	455	75
2.....	0	670	10	0	0	0	45	170	1,220	3,200	425	80
3.....	0	85	0	0	0	0	25	460	1,120	4,550	405	50
4.....	0	30	0	0	0	0	15	940	1,120	5,200	600	30
5.....	70	15	0	0	0	0	15	1,170	1,740	5,950	755	15
6.....	15	10	0	0	0	0	15	1,430	1,720	6,400	380	15
7.....	0	15	0	0	0	0	10	1,230	1,400	6,400	720	10
8.....	0	10	0	0	0	0	10	1,310	1,430	6,600	445	15
9.....	0	0	0	0	0	0	0	1,340	1,760	6,600	430	20
10.....	0	0	0	0	0	0	0	1,840	1,530	6,200	560	25
11.....	0	0	0	0	0	0	0	1,420	1,730	4,550	480	40
12.....	15	0	0	0	0	0	500	1,270	2,060	3,800	300	10
13.....	0	0	0	0	0	0	760	1,320	1,920	3,350	260	200
14.....	0	0	0	0	0	0	590	1,300	1,540	2,480	200	100
15.....	0	0	0	0	0	0	440	1,330	1,590	2,200	165	25

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	0	0	0	0	0	0	345	1,410	1,600	1,850	160	15
17.....	0	0	0	0	0	0	390	1,390	1,620	1,290	160	10
18.....	0	0	0	0	0	30	390	1,230	1,660	1,190	140	10
19.....	0	0	0	0	0	145	415	1,200	1,680	1,310	140	10
20.....	0	0	0	0	0	75	425	1,200	1,640	1,430	120	5
21.....	0	0	0	0	0	60	410	1,200	1,630	910	140	0
22.....	0	0	0	0	0	60	350	1,210	1,660	820	80	70
23.....	0	0	0	0	0	50	230	1,230	1,850	820	60	50
24.....	0	0	0	0	0	230	215	1,230	1,920	820	50	360
25.....	0	0	0	0	0	205	190	1,270	1,920	810	50	130
26.....	0	0	0	0	0	145	1,060	1,340	1,930	460	50	130
27.....	0	0	0	0	0	135	760	1,340	1,950	350	140	80
28.....	0	0	0	0	0	105	330	1,400	2,320	455	80	40
29.....	0	0	0	0	-----	105	225	1,430	2,620	455	50	200
30.....	0	0	0	0	-----	95	155	1,490	2,620	520	35	560
31.....	0	-----	0	0	-----	90	-----	1,490	-----	475	20	-----
1903-4.												
1.....	60	0	0	0	0	0	0	0	0	0	0	0
2.....	40	0	0	0	0	0	0	0	0	0	0	0
3.....	40	0	0	0	0	0	0	0	0	0	0	0
4.....	15	0	0	0	0	0	0	0	0	0	0	85
5.....	5	0	0	0	0	0	0	0	0	0	0	a 525
6.....	0	0	0	0	0	0	0	0	0	0	0	2,140
7.....	0	0	0	0	0	0	0	0	0	0	0	a1,660
8.....	0	0	0	0	0	0	0	0	0	0	0	930
9.....	0	0	0	0	0	0	0	0	0	0	0	645
10.....	0	0	0	0	0	0	0	0	0	0	0	450
11.....	0	0	0	0	0	0	0	0	0	0	0	285
12.....	0	0	0	0	0	0	0	0	0	0	0	165
13.....	0	0	0	0	0	0	0	0	0	0	0	75
14.....	0	0	0	0	0	0	0	0	0	0	0	75
15.....	0	0	0	0	0	0	0	0	0	0	0	125
16.....	0	0	0	0	0	0	0	0	0	0	0	10
17.....	0	0	0	0	0	0	0	0	0	0	0	10
18.....	0	0	0	0	0	0	0	0	0	0	0	85
19.....	0	0	0	0	0	0	0	0	a 340	0	0	195
20.....	0	0	0	0	0	0	0	0	20	0	0	180
21.....	0	0	0	0	0	0	0	0	40	0	0	615
22.....	0	0	0	0	0	0	0	0	0	0	0	165
22.....	0	0	0	0	0	0	0	0	1,180	0	0	150
24.....	0	0	0	0	0	0	0	0	a 5	40	0	45
25.....	0	0	0	0	0	0	0	0	0	10	20	10
26.....	0	0	0	0	0	0	0	0	2,100	0	0	85
27.....	0	0	0	0	0	0	0	0	a1,760	0	0	35
28.....	0	0	0	0	0	0	0	0	260	0	0	5
29.....	0	0	0	0	0	0	0	0	230	0	0	0
30.....	0	0	0	0	0	0	0	0	a 20	0	0	0
31.....	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
1904-5.												
1.....	0	a1,590	435	355	330	580	1,580	2,750	5,850	a6,400	740	180
2.....	0	1,520	a 425	355	a 355	650	1,470	2,850	6,200	5,400	a1,000	a 170
3.....	0	a1,480	425	a 325	340	800	1,370	3,100	6,500	4,200	575	240
4.....	0	1,260	550	315	340	700	1,510	3,200	6,900	3,600	745	260
5.....	0	2,780	a 535	295	a 385	1,310	1,730	3,200	7,480	a2,970	a 890	a 330
6.....	0	a1,530	550	a 295	400	1,580	1,850	3,500	8,860	2,730	595	180
7.....	310	1,010	a 545	290	380	1,760	1,730	3,600	9,640	2,580	575	a2,260
8.....	a1,310	965	500	285	a 340	2,310	1,700	3,700	10,620	a2,280	a 510	1,070
9.....	1,750	a 890	a 480	a 280	325	2,180	1,640	3,600	11,200	1,880	595	1,910
10.....	a2,090	850	465	280	345	2,270	1,730	3,550	11,780	1,610	a 535	a 620
11.....	2,600	a 830	465	280	a 350	2,810	1,510	3,550	12,360	a1,420	460	550
12.....	a3,540	780	a 465	a 265	315	2,960	1,340	3,700	12,540	1,350	445	600
13.....	4,200	740	450	265	335	3,110	1,240	4,100	13,700	1,300	a 515	a 575
14.....	a4,000	a 705	430	265	a 360	3,330	1,090	4,200	13,700	a1,210	415	350
15.....	3,630	705	a 375	a 305	345	3,430	1,040	4,400	12,600	4,200	415	170
16.....	6,180	a 670	385	345	480	3,110	1,160	4,450	12,400	2,030	a 515	120
17.....	9,360	655	370	515	a 540	3,430	1,390	4,700	a12,000	a3,150	915	165
18.....	a8,910	a 640	a 455	a 660	590	3,030	1,670	4,750	11,400	1,370	700	a 155
19.....	8,910	640	640	615	460	2,880	2,120	4,900	12,300	a2,850	a 545	320
20.....	a7,000	640	640	570	a 380	2,810	2,640	5,050	12,100	5,000	600	160

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	7,000	a 605	a 615	a 555	430	2,430	2,610	4,550	a11,900	a1,540	530	a 110
22.....	a8,550	605	675	525	380	2,220	2,710	4,800	12,500	1,070	a 500	110
23.....	6,350	a 545	585	470	355	2,320	2,680	4,750	11,900	1,410	475	100
24.....	3,540	545	a 520	a 470	315	2,580	2,500	4,700	a11,500	a1,810	410	110
25.....	a2,410	530	480	430	680	2,580	2,470	4,800	10,800	3,000	a 365	120
26.....	a2,240	a 510	290	390	680	2,430	2,470	4,900	10,100	1,250	245	a 120
27.....	2,240	500	a 350	a 430	640	2,150	2,710	5,050	a7,600	a 930	a 325	120
28.....	a2,010	490	365	375	620	1,820	2,780	5,200	6,100	930	210	110
29.....	1,800	a 445	a 385	375	-----	1,640	2,890	5,200	5,500	910	245	a 110
30.....	3,540	445	385	a 370	-----	1,610	2,780	5,400	6,000	a 910	a 390	100
31.....	2,010	-----	a 370	355	-----	1,580	-----	5,650	-----	910	230	-----
1905-6.												
1.....	100	a 50	225	480	715	435	300	1,600	7,070	2,780	a 615	375
2.....	a 95	50	295	470	565	475	295	2,170	a7,280	a2,250	600	930
3.....	85	50	a 440	a 445	505	455	250	a2,610	7,680	3,550	630	a 540
4.....	80	35	755	410	475	a 455	250	2,640	6,950	1,860	a 645	455
5.....	a 80	a 40	815	400	470	435	230	2,510	a5,730	a2,280	2,190	325
6.....	80	50	a 815	a 400	a 465	435	a 545	a2,390	5,400	2,880	860	a 295
7.....	85	50	855	390	405	455	785	2,310	4,700	1,780	a1,370	250
8.....	a 90	a 60	730	380	425	415	785	2,220	a4,000	a 880	2,150	250
9.....	90	270	a 730	330	a 450	435	a 685	a2,090	3,610	770	2,150	a 215
10.....	90	255	670	a 305	490	435	635	1,910	3,340	790	a1,760	185
11.....	a 90	a 225	735	285	450	a 415	635	1,910	a3,200	a 920	1,670	170
12.....	85	295	a 835	270	540	365	a 535	a1,910	3,200	2,650	940	a 155
13.....	80	280	645	260	a 555	355	540	2,230	3,070	1,420	a1,190	145
14.....	a 75	a 245	570	a 245	555	350	495	2,720	a3,070	a1,270	1,090	145
15.....	75	335	610	235	530	445	440	a3,120	3,230	1,130	925	a 125
16.....	75	305	a 535	245	a 585	a 340	480	3,200	a3,380	1,040	a 775	210
17.....	a 75	a 245	450	a 225	585	320	480	3,440	a3,380	a1,040	775	115
18.....	75	260	505	225	585	a 555	a3,810	3,510	1,740	680	a 85	85
19.....	75	230	a 480	240	a 540	a 320	705	4,330	3,680	1,250	a 535	95
20.....	a 80	a 160	570	a 225	535	300	705	4,850	a3,720	a1,250	440	145
21.....	80	145	595	225	510	280	a 740	a4,980	3,950	1,080	380	a 160
22.....	75	145	a 580	260	a 505	a 260	915	5,280	4,410	1,050	a 335	145
23.....	a 75	a 130	580	275	555	240	850	5,320	a4,890	880	380	125
24.....	75	130	a 565	a 345	530	240	a 780	a5,100	5,590	790	350	a 125
25.....	60	130	560	385	a 490	a 240	740	5,210	5,890	665	a 540	175
26.....	55	a 130	585	430	490	260	825	5,320	a6,330	a 695	580	100
27.....	55	130	610	515	470	280	a1,090	5,560	6,310	520	3,580	a 75
28.....	50	130	a 550	a 595	450	a 280	1,320	6,080	5,240	740	a1,000	70
29.....	a 50	a 120	530	660	-----	345	1,320	6,080	a4,480	a 695	650	65
30.....	50	115	510	700	-----	355	a1,280	a5,950	3,410	665	615	a 60
31.....	50	-----	a 495	a 660	-----	a 365	-----	5,820	-----	635	610	-----
1906-7.												
1.....	55	470	570	a 560	680	620	1,460	3,350	a4,380	a8,640	2,810	4,270
2.....	60	a 500	490	620	670	635	a1,520	a2,830	5,100	9,440	2,490	a5,090
3.....	a 60	520	410	620	a 660	a 620	1,410	2,620	5,550	7,040	a2,780	3,360
4.....	50	420	450	a 620	660	635	1,340	2,500	a5,990	a5,170	2,630	3,560
5.....	45	a 410	a 850	630	655	a 680	a1,370	a2,450	6,970	4,800	2,440	a4,330
6.....	a 40	410	965	640	a 655	740	1,220	2,640	7,620	4,420	a2,340	4,710
7.....	35	410	1,035	a 670	675	740	1,080	2,790	a8,260	a4,580	2,200	5,670
8.....	295	560	a1,035	760	695	a 830	a1,080	a2,790	8,260	4,880	2,150	a6,830
9.....	a 315	680	2,500	820	a 720	740	1,010	2,670	6,910	4,880	a2,100	4,540
10.....	260	680	2,190	a 820	875	710	950	2,610	a5,550	a5,140	2,400	3,540
11.....	220	680	a1,530	800	1,070	a 680	a 890	a2,490	5,210	5,340	2,140	a2,680
12.....	a 240	a 730	a1,610	720	a 990	605	855	2,590	5,310	5,140	a1,610	2,480
13.....	215	950	1,750	a 670	950	565	855	2,620	a5,420	a6,370	1,440	2,120
14.....	305	1,000	a1,480	645	865	a 510	a 890	a2,480	5,610	5,420	1,440	a1,750
15.....	a 430	a 900	1,460	620	a 825	450	890	2,150	5,610	5,180	a1,270	1,580
16.....	385	810	1,280	a 620	785	510	855	2,230	a5,990	a5,420	1,040	1,520
17.....	365	750	a1,110	815	855	a 450	a 815	a1,980	6,990	4,640	960	a1,480
18.....	a 365	630	980	850	a 960	450	780	1,830	6,790	4,040	a 880	1,400
19.....	325	630	905	a 915	920	450	815	1,790	a6,990	a4,560	760	1,400
20.....	325	a 840	a 905	1,005	845	a 555	a1,130	a2,060	6,990	3,780	800	a1,600
21.....	a 310	740	905	1,150	a 770	655	1,940	2,200	7,190	3,630	a 740	1,770
22.....	310	730	865	a1,420	695	655	2,440	2,430	a6,720	a3,400	740	1,510
23.....	340	720	905	1,310	695	a 555	a2,920	2,590	7,150	3,530	680	a1,660
24.....	a 320	a 870	780	1,200	a 730	505	3,320	2,540	7,790	3,510	a 680	1,410
25.....	290	820	a 735	a1,150	685	460	3,760	2,420	a8,220	a3,350	640	2,700

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	290	820	695	1,100	675	360	a4,170	a2,720	8,220	3,300	600	a3,430
27.....	a305	a780	620	980	a665	a310	4,370	2,810	8,440	3,190	a980	3,850
28.....	290	720	a585	a855	635	360	4,670	3,260	a8,900	a2,990	1,250	3,000
29.....	305	720	545	795	.....	300	a4,250	a3,360	8,750	2,630	1,640	a2,140
30.....	a285	a670	510	740	.....	a545	4,050	3,660	8,560	2,990	a1,020	1,720
31.....	270	.....	.....	a710	.....	1,200	.....	4,060	.....	a3,180	6,570	.....
1907-8.												
1.....	1,260	1,800	825	455	405	425	735	1,890	2,250	195	165	a1,550
2.....	a1,100	a1,730	a765	a385	380	a345	660	1,800	1,930	140	110	1,080
3.....	1,030	1,280	720	385	405	385	610	a1,360	a1,740	530	a100	1,700
4.....	990	a1,140	685	385	a430	390	565	1,400	1,560	a250	1,490	a1,160
5.....	a950	1,140	a685	a415	405	a370	520	1,380	1,450	165	2,510	1,030
6.....	800	1,080	615	525	435	515	505	1,490	a1,300	120	a725	800
7.....	730	a1,010	650	400	a430	560	430	a1,470	1,090	a105	1,290	a570
8.....	a650	1,050	a650	a450	430	a485	410	1,470	985	85	765	885
9.....	630	1,050	620	495	400	475	a395	1,470	a930	40	a300	800
10.....	565	a965	620	510	a430	470	380	1,430	830	a10	140	675
11.....	a585	940	a685	a645	400	a475	370	a1,670	695	20	140	a510
12.....	585	915	570	675	430	460	385	1,820	a595	20	a650	430
13.....	550	a790	570	620	a520	465	a345	a1,530	530	a5	575	345
14.....	a485	745	a540	a530	515	a465	320	1,470	405	0	495	a225
15.....	600	760	570	605	485	450	a240	1,430	a340	0	a340	185
16.....	600	a805	600	605	a480	440	200	a1,390	340	0	175	a175
17.....	a500	805	a570	a605	490	a435	260	1,400	310	0	740	140
18.....	445	710	445	570	525	435	a235	1,440	a280	0	a585	105
19.....	500	a730	445	500	a535	465	425	a1,450	280	40	575	a75
20.....	a1,740	705	a445	a500	525	a465	555	1,330	210	0	770	70
21.....	1,370	835	410	480	515	465	a595	1,200	a160	175	a640	65
22.....	1,310	a730	520	410	a475	420	820	a1,100	135	a480	1,140	a65
23.....	a1,070	690	a520	a470	450	395	850	1,110	105	380	1,070	50
24.....	1,010	785	500	470	475	350	a855	1,100	a65	380	a1,000	45
25.....	975	a930	480	465	a420	305	2,350	a1,130	65	245	755	a45
26.....	a1,040	975	a480	445	475	260	2,510	1,420	55	a745	640	15
27.....	1,130	1,230	535	a450	450	260	a2,450	1,590	a50	445	a500	0
28.....	880	1,010	530	465	a425	1,010	2,170	1,960	40	a375	525	0
29.....	2,080	a905	520	465	425	965	a1,960	2,340	40	425	945	0
30.....	a2,460	850	a485	a480	.....	870	2,030	2,340	30	250	a555	0
31.....	1,920	.....	455	480	.....	780	.....	2,490	.....	a175	510	.....
1908-9.												
1.....	0	0	0	165	85	70	30	2,430	3,370	2,060	105	30
2.....	0	0	0	165	90	65	a30	a1,100	a2,480	a1,580	95	a40
3.....	0	0	0	a150	a90	a70	100	700	2,230	1,330	a75	40
4.....	0	0	0	135	90	55	90	610	2,100	1,180	110	190
5.....	0	0	0	135	80	45	a80	a510	a1,980	1,130	80	a150
6.....	0	0	0	a105	a75	a45	65	620	1,920	a1,740	a80	265
7.....	0	0	0	120	80	35	55	845	1,740	2,440	55	280
8.....	0	0	0	110	85	30	a55	a1,030	a1,650	5,340	35	a110
9.....	0	0	0	a100	a105	a30	50	885	3,110	a975	a30	75
10.....	0	0	0	120	110	25	45	635	3,250	1,020	20	135
11.....	0	0	25	125	115	25	a40	a530	a3,250	1,280	10	125
12.....	0	0	30	a140	a115	a20	25	975	3,000	a575	a5	175
13.....	0	0	a35	150	110	15	25	1,780	2,850	410	285	4,870
14.....	0	0	35	140	100	15	a10	a2,590	a3,010	290	a925	a5,830
15.....	0	0	30	a140	a100	a15	10	2,940	3,770	a290	130	6,060
16.....	0	0	a40	125	100	10	0	a3,480	4,070	255	70	4,450
17.....	0	0	40	125	90	0	0	4,320	a4,680	155	40	a2,840
18.....	0	0	30	a90	a95	0	0	4,880	3,580	a45	a10	2,990
19.....	0	0	a20	100	100	155	0	a5,020	3,720	170	20	2,170
20.....	0	0	90	140	100	225	0	5,000	a3,160	170	15	a1,860
21.....	0	0	105	a170	a100	a225	0	4,770	3,950	a160	5	2,150
22.....	0	0	100	180	90	185	0	a4,400	4,830	125	0	1,140
23.....	0	0	a90	190	95	135	0	4,670	a5,510	105	0	a1,140
24.....	0	0	80	a195	a95	a115	0	4,870	4,680	a95	0	915
25.....	0	0	75	160	100	105	0	4,440	3,490	90	0	800
26.....	0	0	a75	160	85	95	0	a4,080	a3,610	90	0	a670
27.....	0	0	75	a140	a90	a80	0	3,840	2,410	a105	0	555
28.....	0	0	75	125	75	80	210	3,950	2,440	625	0	440
29.....	0	0	80	95	.....	75	a2,310	3,920	a2,480	725	0	a390
30.....	0	0	a80	v85	.....	a75	2,310	a3,920	2,060	a250	0	360
31.....	0	.....	80	80	.....	70	.....	3,920	.....	140	0	.....

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	380	225	150	85	385	55	1,160	2,620	900	135	0	0
2.....	320	a 185	145	85	365	50	a1,440	2,840	a 720	90	0	0
3.....	a 245	175	a 135	a 85	a 325	a 45	1,360	a3,110	505	a 45	0	0
4.....	215	175	125	75	385	35	1,420	3,270	325	25	0	0
5.....	190	a 170	135	60	365	30	a1,340	a 520	a 280	15	0	0
6.....	a 190	150	a 120	a 55	a 310	a 25	1,010	a4,200	240	a 5	0	0
7.....	185	140	140	55	280	25	805	3,210	215	5	0	30
8.....	180	a 130	120	50	345	20	a 640	3,350	a 200	5	0	a 95
9.....	a 200	115	a 220	a 35	a 315	a 20	625	a3,420	170	a 5	0	0
10.....	185	100	230	35	270	20	935	3,220	135	5	0	0
11.....	200	a 100	230	425	290	15	a 765	3,300	a 100	170	0	0
12.....	a 140	85	a 245	a 680	a 220	a 660	685	a3,360	345	a 220	0	0
13.....	130	85	230	540	230	695	630	3,520	335	155	0	0
14.....	115	a 90	195	385	225	725	a 685	5,560	a 320	100	0	0
15.....	a 110	90	a 175	a 325	a 220	a 835	680	a6,590	280	60	0	0
16.....	100	85	165	265	210	1,190	630	4,910	320	45	0	0
17.....	110	a 80	155	220	225	1,320	a 700	3,910	a 885	25	0	0
18.....	a 235	70	175	a 200	a 225	a1,120	840	a4,020	775	a 20	0	0
19.....	285	70	a 155	225	185	1,050	840	4,200	425	20	0	0
20.....	265	a 65	145	245	170	910	a1,090	4,140	355	15	0	0
21.....	a 300	65	a 140	a 375	a 130	a 770	1,490	a4,300	290	a 10	0	0
22.....	310	65	125	375	105	780	1,650	4,550	185	5	0	0
23.....	290	a 90	150	350	95	800	a1,850	4,600	a 140	0	0	0
24.....	a 285	95	a 170	a 375	105	a 790	1,840	a4,810	90	0	0	0
25.....	305	105	160	410	90	755	1,450	4,930	75	0	0	0
26.....	270	a 110	195	690	80	620	a1,180	4,270	a 570	0	0	0
27.....	a 320	120	a 190	a 680	65	a 645	1,210	a2,270	1,110	0	0	0
28.....	270	105	155	595	50	785	1,180	1,840	245	0	0	0
29.....	235	a 110	155	550	-----	785	a1,630	1,570	370	0	0	0
30.....	a 235	110	a 130	a 465	-----	760	2,030	a1,440	a 125	0	0	0
31.....	265	-----	105	430	-----	710	-----	1,340	-----	0	0	0
1910-11.												
1.....	0	0	0	0	0	0	10	5	1,220	1,400	6,700	145
2.....	0	0	0	0	0	0	a 60	0	a1,000	3,580	6,660	a 130
3.....	0	0	0	0	0	0	60	0	1,090	a4,770	a6,830	115
4.....	0	0	0	0	0	0	50	0	1,470	1,490	6,660	115
5.....	0	0	0	0	0	0	a 40	0	a1,520	1,500	3,940	a 95
6.....	0	0	0	0	0	0	30	a 290	1,470	a1,610	a2,320	105
7.....	0	0	0	0	0	0	25	850	1,470	1,910	1,840	70
8.....	0	0	0	0	0	0	5	1,240	a2,720	1,910	1,300	a 655
9.....	0	0	0	0	0	0	5	a1,350	2,720	a4,290	a1,010	270
10.....	0	0	0	0	0	0	0	1,060	2,480	6,640	860	135
11.....	0	0	0	0	0	0	0	860	a2,240	5,690	730	a185
12.....	0	0	0	0	0	0	0	a 595	4,360	a5,230	a 620	340
13.....	0	0	0	0	0	0	0	715	6,950	4,370	485	225
14.....	0	0	0	0	0	0	0	1,295	a4,270	4,160	315	a 190
15.....	0	0	0	0	0	0	0	a1,350	3,310	a4,880	a 265	120
16.....	0	0	0	0	0	0	0	1,350	3,200	5,520	220	110
17.....	0	0	0	0	0	0	0	4,500	a3,200	4,250	205	a 95
18.....	0	0	0	0	a 130	0	0	a2,530	3,250	a4,760	a 170	85
19.....	0	0	0	0	a 120	0	a 10	2,730	3,250	5,910	140	70
20.....	0	0	0	0	140	0	10	2,800	a2,780	5,910	110	a 155
21.....	0	0	0	0	70	0	10	a3,020	3,510	6,560	a 100	245
22.....	0	0	0	0	a 35	a 205	a 5	3,580	2,800	7,030	90	195
23.....	0	0	0	0	0	155	5	4,130	a2,710	6,310	105	a 155
24.....	0	0	0	0	0	85	c	a4,540	2,830	a6,580	a 130	130
25.....	0	0	0	0	0	a 55	a 180	4,640	2,960	5,880	1,090	110
26.....	0	0	0	0	0	60	125	4,740	a2,900	5,400	370	a 90
27.....	0	0	0	0	0	a 40	90	a4,700	2,210	a5,810	a 265	80
28.....	0	0	0	0	0	30	45	6,670	1,970	6,590	515	70
29.....	0	0	0	0	-----	20	a 10	4,140	a1,640	5,950	535	a 45
30.....	0	0	0	0	-----	a 10	5	a3,420	1,440	a5,320	a 195	30
31.....	0	0	0	0	-----	10	-----	3,220	-----	5,820	180	-----
1911-12.												
1.....	30	1,990	760	1,070	a800	195	995	420	4,680	5,920	2,270	1,260
2.....	105	a2,060	875	1,160	800	195	a840	410	a4,920	5,640	1,870	a940
3.....	a95	2,780	a1,090	a1,150	620	a230	790	a400	5,530	a5,960	a1,500	825
4.....	75	2,780	980	960	a655	215	755	330	5,840	5,860	1,220	725
5.....	70	a1,640	980	800	685	245	a785	365	a6,560	5,450	1,170	a935

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande above Presidio, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	a65	1,580	a925	a600	610	a255	745	a170	7,180	a5,150	a980	785
7.....	40	1,410	905	490	a605	245	665	570	8,020	4,950	845	1,570
8.....	40	a1,300	865	410	585	300	a590	570	9,350	4,890	760	a1,040
9.....	a35	1,650	a995	a535	565	a305	590	a710	a10,010	a4,840	a545	885
10.....	975	1,710	580	550	a540	340	725	3,400	11,260	4,570	485	785
11.....	1,590	a1,640	615	450	510	350	a990	4,090	13,130	4,340	430	a1,470
12.....	a1,900	1,430	a705	a390	480	a355	1,130	a3,940	a14,500	a4,140	a405	1,280
13.....	2,370	1,430	710	430	a425	340	1,220	3,840	14,500	3,840	375	1,500
14.....	3,490	a1,270	710	445	430	325	a1,540	3,490	13,950	3,880	350	a1,790
15.....	a3,750	1,110	710	a340	440	a280	1,940	a3,450	a13,410	a3,480	a345	930
16.....	3,680	1,030	795	395	a445	270	2,110	3,660	12,730	3,210	370	815
17.....	4,040	a1,110	785	595	435	290	a1,990	3,750	11,430	2,840	345	a460
18.....	a4,400	1,120	a795	a690	425	a430	1,750	a3,840	a10,250	a2,570	a1,840	410
19.....	4,400	1,160	825	715	a355	445	1,980	3,760	9,980	2,300	1,840	380
20.....	4,500	a1,130	860	865	380	420	a2,140	3,940	a9,370	1,670	2,390	a360
21.....	a5,250	1,100	a950	a815	340	a390	1,780	a3,980	8,180	a1,120	a1,350	310
22.....	5,950	1,120	830	815	a305	390	1,630	4,070	7,230	1,890	1,510	285
23.....	5,790	a1,180	950	1,140	330	370	a1,560	4,220	a6,500	1,350	775	a260
24.....	a3,510	1,050	a970	a1,140	300	a340	1,330	a4,260	6,230	a1,150	a1,170	240
25.....	2,360	950	905	1,290	a325	360	1,100	4,220	5,870	1,090	1,080	220
26.....	2,180	a860	1,010	1,190	310	410	a875	4,180	a5,580	1,060	815	a210
27.....	a1,830	1,100	a900	a1,400	265	a400	670	a4,190	5,360	a1,100	a850	200
28.....	1,990	870	895	1,380	a250	385	870	4,160	5,420	1,260	645	180
29.....	1,890	a870	755	1,310	220	765	a630	4,230	a5,890	1,170	850	a260
30.....	a1,720	790	a940	a1,240	.....	1,440	430	a4,050	5,660	a1,480	a930	540
31.....	1,600	.....	940	1,140	.....	1,170	.....	4,200	.....	3,380	730	.....
1912-13.												
1.....	450	35	200	240	295	200	50	1,330	340	450	0	0
2.....	585	a35	285	225	a305	340	a50	935	a340	425	0	80
3.....	a315	30	a300	a185	350	a340	40	a515	475	a320	0	390
4.....	235	30	335	185	350	340	40	435	375	295	0	210
5.....	195	a25	335	190	a350	290	a35	395	a330	270	0	a305
6.....	a185	25	a335	a190	375	a290	35	a375	285	a245	0	285
7.....	115	25	350	180	400	280	30	335	240	195	0	455
8.....	330	a25	335	160	a365	275	a25	530	a410	145	0	a305
9.....	a155	25	a295	a160	455	a270	20	a1,110	755	a95	0	240
10.....	120	20	420	150	465	265	20	1,380	475	85	5	165
11.....	120	a20	530	140	a510	255	a20	1,150	a260	60	5	a105
12.....	a125	20	a585	a120	475	a255	20	a1,090	270	a35	a60	65
13.....	135	20	470	115	485	240	15	720	385	35	20	55
14.....	115	a15	465	110	a495	225	a10	580	a440	30	105	a85
15.....	a105	15	a515	a105	455	a210	5	a705	280	a20	a90	35
16.....	100	15	425	105	440	210	5	975	245	5	60	30
17.....	90	a55	355	95	a430	170	5	950	a235	5	25	a25
18.....	a85	65	a335	a95	385	a135	a5	a900	280	0	a20	25
19.....	80	65	420	95	340	135	5	855	295	0	20	25
20.....	70	a50	350	95	a295	130	a5	930	a375	0	15	a25
21.....	a55	75	a485	a95	295	a105	25	a1,180	600	0	a20	0
22.....	55	75	405	95	260	105	500	1,240	715	0	0	0
23.....	55	a50	365	100	a260	90	a420	1,200	a610	30	0	0
24.....	a55	105	a325	a105	255	a90	330	a1,010	600	a30	0	0
25.....	50	135	305	105	a250	85	270	880	475	15	0	0
26.....	45	a165	305	100	230	80	a210	575	a425	5	0	0
27.....	a40	165	a300	a95	a215	a70	135	a530	380	0	0	0
28.....	40	165	300	95	215	60	75	530	340	0	0	0
29.....	40	a165	300	90	.....	55	a430	435	a310	0	0	0
30.....	a40	165	a270	a90	.....	a45	600	a340	730	0	0	0
31.....	40	.....	255	90	.....	40	.....	320	.....	0	0	.....

a Date of measurement.

NOTE.—High-water discharge estimated by subtracting the flow of Rio Conchos from the discharge of the Rio Grande below Presidio.

Monthly discharge of Rio Grande above Presidio, Tex., for 1900-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.					1904-5.				
April 4-30.....	0	0	0	0	January.....	660	265	384	23,613
May.....	660	0	64	3,930	February.....	680	315	421	23,395
June.....	2,120	105	787	46,810	March.....	3,430	580	2,206	135,669
July.....	1,500	0	160	9,830	April.....	2,890	1,040	1,937	115,259
August.....	320	0	41	2,521	May.....	5,650	2,750	4,253	261,521
September.....	1,730	0	204	12,139	June.....	13,700	5,500	10,154	604,225
The period.....				75,230	July.....	6,400	910	2,329	143,207
					August.....	1,000	210	523	32,152
1900-1901.					September.....	2,260	100	382	22,760
October.....	1,500	0	181	11,126	The year.....	13,700	0	2,280	1,650,000
November.....	0	0	0	0	1905-6.				
December.....	0	0	0	0	October.....	100	50	75	4,631
January.....	0	0	0	0	November.....	335	35	160	9,511
February.....	0	0	0	0	December.....	855	225	595	36,605
March.....	0	0	0	0	January.....	700	225	371	22,840
April.....	0	0	0	0	February.....	715	405	516	28,671
May.....	1,370	0	770	47,326	March.....	475	240	355	21,828
June.....	1,620	0	731	43,478	April.....	1,320	230	673	40,046
July.....	830	0	137	8,450	May.....	6,050	1,660	3,701	227,564
August.....	1,270	10	462	28,423	June.....	7,680	3,070	4,657	277,091
September.....	1,780	30	453	26,936	July.....	3,550	520	1,353	83,197
The year.....	1,780	0	228	166,000	August.....	3,580	335	994	61,111
					September.....	930	60	210	12,516
1901-2.					The year.....	7,680	35	1,140	826,000
October.....	970	0	185	11,365	1906-7.				
November.....	1,020	30	157	9,322	October.....	430	35	251	15,461
December.....	130	60	81	4,979	November.....	1,000	410	686	40,800
January.....	130	40	77	4,741	December.....	2,500	410	1,018	62,588
February.....	70	0	29	1,607	January.....	1,420	560	834	51,293
March.....	0	0	0	0	February.....	1,070	635	770	42,764
April.....	0	0	0	0	March.....	1,200	310	585	35,980
May.....	0	0	0	0	April.....	4,670	780	1,904	113,306
June.....	60	0	3	159	May.....	4,060	1,790	2,630	161,693
July.....	2,740	0	568	34,929	June.....	8,900	4,380	6,848	407,484
August.....	1,250	0	102	6,288	July.....	9,440	2,630	4,674	287,365
September.....	1,080	0	205	12,198	August.....	6,570	600	1,685	103,577
The year.....	2,740	0	117	85,600	September.....	6,830	1,400	2,905	172,879
					The year.....	9,440	35	2,070	1,500,000
1902-3.					1907-8.				
October.....	70	0	3	198	October.....	2,460	445	985	60,575
November.....	670	0	28	1,676	November.....	1,860	690	972	57,818
December.....	240	0	8	496	December.....	825	410	571	35,127
January.....	0	0	0	0	January.....	675	385	497	30,545
February.....	0	0	0	0	February.....	535	380	454	26,112
March.....	230	0	49	3,035	March.....	1,010	260	486	29,861
April.....	1,060	0	280	16,631	April.....	2,510	200	838	49,855
May.....	1,840	140	1,217	74,836	May.....	2,490	1,100	1,544	94,949
June.....	2,620	1,120	1,734	103,180	June.....	2,250	30	626	37,279
July.....	6,600	350	2,709	166,542	July.....	745	0	187	11,504
August.....	755	20	262	16,096	August.....	2,510	100	675	41,494
September.....	560	0	79	4,721	September.....	1,700	0	426	25,379
The year.....	6,600	0	531	387,000	The year.....	2,510	0	688	500,000
					1908-9.				
1903-4.					October.....	0	0	0	0
October.....	60	0	5	317	November.....	0	0	0	0
November.....	0	0	0	0	December.....	105	0	42	2,559
December.....	0	0	0	0	January.....	195	80	134	8,251
January.....	0	0	0	0	February.....	115	75	94	5,246
February.....	0	0	0	0	March.....	225	0	71	4,344
March.....	0	0	0	0	April.....	2,310	0	185	10,988
April.....	0	0	0	0	May.....	5,020	510	2,828	173,871
May.....	0	0	0	0	June.....	5,510	1,650	3,146	187,200
June.....	2,100	0	198	11,812	July.....	5,340	45	805	49,478
July.....	40	0	2	100	August.....	925	0	71	4,364
August.....	20	0	1	40	September.....	6,060	30	1,375	81,808
September.....	2,140	0	292	17,355	The year.....	6,060	0	729	528,000
The year.....	2,140	0	42	29,600					
1904-5.									
October.....	9,360	0	3,403	209,216					
November.....	2,780	445	870	51,769					
December.....	675	290	471	28,969					

Monthly discharge of Rio Grande above Presidio, Tex., for 1900-1913—Continued.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1909-10.					1911-12.				
October.....	380	100	228	14,103	October.....	5,950	30	2,249	138,288
November.....	225	65	112	6,664	November.....	2,780	790	1,374	81,759
December.....	245	105	163	10,046	December.....	1,090	580	856	52,641
January.....	690	35	304	18,694	January.....	1,400	340	835	51,342
February.....	385	50	224	12,426	February.....	800	220	464	26,707
March.....	1,320	15	550	33,808	March.....	1,440	195	402	24,694
April.....	2,030	625	1,127	67,081	April.....	2,140	430	1,171	69,709
May.....	6,590	1,340	3,619	222,545	May.....	4,260	330	2,941	180,823
June.....	1,110	75	368	21,878	June.....	14,500	4,680	8,621	512,985
July.....	220	0	38	2,341	July.....	5,960	1,060	3,276	201,421
August.....	0	0	0	0	August.....	2,390	345	1,001	61,567
September.....	95	0	4	248	September.....	1,790	180	728	43,339
The year.	6,590	0	561	410,000	The year.	14,500	30	1,990	1,450,000
1910-11.					1912-13.				
October.....	0	0	0	0	October.....	585	40	136	8,380
November.....	0	0	0	0	November.....	165	15	65	3,848
December.....	0	0	0	0	December.....	585	200	364	23,374
January.....	0	0	0	0	January.....	240	90	129	7,934
February.....	140	0	18	982	February.....	510	215	357	19,835
March.....	205	0	22	1,329	March.....	340	40	183	11,266
April.....	180	0	26	1,547	April.....	600	5	114	6,813
May.....	6,670	0	2,268	139,478	May.....	1,380	320	788	48,466
June.....	6,950	1,000	2,631	156,575	June.....	755	235	409	24,347
July.....	7,030	1,400	4,743	291,630	July.....	450	0	90	5,544
August.....	6,830	93	1,450	89,167	August.....	105	0	14	883
September.....	655	30	152	9,045	September.....	455	0	97	5,772
The year.	7,030	0	942	690,000	The year.	1,380	0	229	166,000

RIO GRANDE BELOW PRESIDIO, TEX.

Location.—At the west end of the canyon section of the Rio Grande, 6 miles below Presidio, and 7 miles below the mouth of the Rio Conchos. The discharge at this station minus the discharge at the station above Presidio is the discharge of the Rio Conchos, except at rare intervals, when some rain water enters the Rio Grande from the north.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff in main channel and vertical staff at the gravel hills to measure the overflow.

Channel.—Shifting sand, and is affected by an intermittent stream called Alamos Creek, which reaches the river one-fourth mile below the station. This creek is subject to torrential floods which bring large quantities of boulders and gravel into the Rio Grande, forming a temporary dam that remains, throwing backwater onto the gage, until a flood in the river scours it out. The channel overflows at gage height 13 feet to an extreme width of 750 feet, where gravel hills are found.

Discharge measurements.—Made in main channel from car and cable and in overflow section from boat.

Floods.—Below the mouth of the Rio Conchos the Rio Grande is subject to severe floods from this tributary. Since the records have been maintained the highest flood occurred September 11, 1904, reaching a stage of 26.35 feet and a discharge of 149,200 second-feet. On the same day the discharge above the Rio Conchos was only 2,600 second-feet.

Diversions.—No data.

Accuracy.—Owing to the shifting channel, discharge measurements are made very frequently and the estimated daily discharge is based almost directly on these measurements.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 20	3.40	14	Dec. 3	5.00	256	July 29	8.30	2,094
22	8.30	1,762	8	5.00	255	Aug. 2	8.35	2,488
25	4.90	66	10	5.00	248	5	8.80	2,994
29	4.85	98	13	5.00	248	9	7.30	1,427
June 7	7.10	1,030	20	5.00	220	12	7.70	1,637
9	7.45	1,318	22	5.00	225	14	7.20	1,221
12	8.70	2,213	24	4.90	214	16	8.15	2,218
14	7.50	1,668	27	4.90	211	21	7.15	1,372
16	6.50	1,021	29	4.90	213	23	6.50	994
19	6.00	735				26	6.20	791
21	5.85	710	1901.			28	8.05	2,076
23	5.10	355	Jan. 2	4.90	202	Sept. 2	6.40	754
26	4.40	167	4	4.90	195	4	8.45	2,660
28	4.40	107	7	4.80	196	6	6.50	804
July 3	6.40	729	10	4.80	190	9	8.00	1,809
6	5.10	275	14	4.80	179	11	9.05	2,948
9	8.40	1,425	16	4.80	178	13	8.65	2,870
12	11.30	8,834	19	4.80	175	16	9.70	4,754
14	10.50	6,890	23	4.70	172	18	9.95	5,304
17	8.45	2,655	25	4.70	171	20	8.65	2,903
19	8.25	2,477	28	4.70	162	23	7.55	1,617
22	9.40	4,068	Feb. 1	4.70	175	25	7.00	1,083
24	10.80	7,893	Mar. 15	4.70	157	27	6.55	872
26	9.85	5,608	18	4.60	147	Oct. 2	6.50	881
28	10.60	7,491	20	4.60	135	4	5.70	431
Aug. 1	11.75	11,586	22	4.50	124	7	7.90	707
3	11.75	12,784	25	4.40	109	9	6.40	474
6	12.95	16,049	27	4.00	86	11	5.80	337
9	11.35	10,357	Apr. 1	4.20	75	14	6.60	388
11	10.40	7,032	3	4.10	74	16	6.20	493
13	9.35	5,001	5	4.10	57	18	5.90	391
15	9.00	4,129	8	4.00	58	21	5.80	332
21	7.60	2,053	10	4.00	57	25	9.95	4,864
23	8.90	4,035	12	3.90	42	28	8.35	2,042
25	9.20	4,823	15	3.80	33	Nov. 1	7.10	1,107
28	8.05	2,643	18	3.70	29	4	6.50	771
30	7.50	2,039	22	3.70	27	6	6.30	641
Sept. 5	7.00	1,437	25	3.70	21	9	6.50	744
7	7.80	2,367	May 1	3.60	22	12	6.00	554
10	8.90	5,061	4	3.60	26	15	5.70	451
12	8.95	4,082	7	3.60	24	18	5.50	411
14	8.35	2,797	13	6.60	1,041	20	5.50	383
17	7.45	1,725	15	6.50	837	22	5.50	353
19	7.20	1,262	17	6.30	748	25	5.85	565
25	6.85	1,249	20	6.50	938	27	5.70	504
28	7.90	2,169	22	6.70	1,054	Dec. 2	5.50	367
Oct. 4	7.75	2,573	24	6.80	1,119	4	5.40	347
6	7.60	2,112	28	7.00	1,252	6	5.40	346
9	7.80	2,265	June 3	7.40	1,530	9	5.30	293
11	7.25	1,602	5	7.30	1,516	13	5.20	282
13	7.45	1,685	7	7.30	1,444	16	5.10	266
15	6.70	1,127	12	6.65	1,104	20	5.20	280
17	9.50	4,702	14	6.05	^a 743			
19	7.20	1,497	17	6.95	545			
22	6.70	1,158	19	5.30	281	1902.		
24	6.20	893	21	5.20	255	Mar. 3	4.2	98
27	6.05	731	24	4.90	166	6	4.2	85
29	5.90	601	26	4.80	139	10	4.1	77
Nov. 5	5.60	492	July 1	4.20	47	12	4.0	58
7	5.60	476	5	3.90	24	14	3.9	52
10	5.50	459	8	4.00	29	17	3.9	51
12	5.50	431	10	5.25	261	19	3.9	48
14	5.40	403	12	5.00	193	21	3.8	41
16	5.40	399	15	5.80	458	24	3.7	35
19	5.30	370	19	5.70	412	26	3.7	30
22	5.20	333	22	7.25	908	28	3.7	32
26	5.20	311	24	6.95	940	Apr. 2	3.7	32
28	5.10	288	26	6.85	943	4	3.7	32
						7	3.7	29

^a Back water from Rio Alamos retarded flow.

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1902.	<i>Fect.</i>	<i>Sec.-ft.</i>	1902.	<i>Fect.</i>	<i>Sec.-ft.</i>	1903.	<i>Fect.</i>	<i>Sec.-ft.</i>
Apr. 9.....	3.6	26	Nov. 16.....	5.15	485	June 18.....	7.8	2,565
11.....	3.6	25	19.....	5.1	451	20.....	7.7	2,487
14.....	3.6	22	22.....	5.05	446	22.....	7.7	2,364
16.....	3.6	23	25.....	5.0	420	24.....	7.7	2,472
18.....	3.6	22	28.....	5.0	413	26.....	7.7	2,081
21.....	3.5	20	Dec. 1.....	6.5	974	28.....	7.9	2,627
23.....	3.5	21	6.....	5.4	542	30.....	7.9	2,423
25.....	3.5	20	9.....	5.2	498	July 2.....	8.2	3,062
May 5.....	3.4	13	12.....	5.2	492	4.....	9.2	5,264
7.....	3.4	12	15.....	5.35	574	6.....	9.5	6,816
9.....	3.4	11	18.....	5.3	530	8.....	9.8	7,204
12.....	3.4	10	21.....	5.25	481	10.....	9.5	6,340
20.....	3.5	8	24.....	5.05	401	13.....	8.5	3,669
June 6.....	3.9	7	27.....	5.05	415	16.....	7.4	1,872
9.....	6.85	405	30.....	5.05	404	19.....	7.1	1,673
11.....	4.7	26	Jan. 2.....	4.9	375	22.....	6.3	1,934
13.....	5.2	74	5.....	4.8	314	25.....	6.45	1,055
16.....	4.7	30	8.....	4.8	366	28.....	6.2	847
20.....	4.5	15	11.....	4.7	293	30.....	6.0	722
July 2.....	8.55	2,275	15.....	4.7	312	Aug. 7.....	6.5	872
4.....	5.0	170	17.....	4.7	303	10.....	7.1	1,331
7.....	7.3	517	20.....	4.7	302	13.....	6.2	773
9.....	8.9	3,086	23.....	4.7	317	16.....	6.9	1,196
14.....	8.05	2,156	26.....	5.2	513	19.....	8.55	3,937
16.....	8.2	2,265	29.....	5.25	497	22.....	7.5	3,132
18.....	7.65	1,473	Feb. 1.....	5.2	481	25.....	7.2	1,385
21.....	9.4	4,883	4.....	5.0	438	28.....	8.45	3,925
22.....	11.0	9,539	7.....	7.65	2,622	30.....	8.0	2,624
24.....	12.15	13,706	9.....	7.55	2,506	Sept. 2.....	8.2	2,992
26.....	12.2	14,352	11.....	6.9	1,398	4.....	8.0	2,245
28.....	11.4	10,579	13.....	6.9	1,352	7.....	7.7	1,957
30.....	9.6	5,313	16.....	6.65	1,057	9.....	7.7	1,981
Aug. 1.....	8.9	3,601	18.....	6.2	911	11.....	7.8	2,013
4.....	7.6	1,854	20.....	5.85	721	14.....	8.3	3,189
6.....	8.3	1,909	23.....	6.9	1,382	16.....	8.0	2,374
8.....	7.7	1,528	25.....	6.9	1,381	18.....	7.7	2,210
10.....	8.3	1,794	27.....	6.9	1,381	21.....	7.8	2,280
12.....	10.8	7,300	Mar. 2.....	6.6	1,141	23.....	8.7	4,043
14.....	10.2	5,999	4.....	6.2	903	25.....	8.8	4,237
16.....	10.25	6,082	7.....	5.95	750	27.....	8.75	3,983
18.....	9.75	4,971	10.....	5.4	532	30.....	9.2	5,138
20.....	9.85	5,426	13.....	5.25	409	Oct. 2.....	9.45	5,953
22.....	9.8	5,416	16.....	5.15	379	5.....	9.1	5,093
24.....	11.3	8,831	19.....	5.3	475	8.....	7.9	2,058
26.....	10.0	5,776	22.....	5.0	342	11.....	7.3	1,175
28.....	11.4	10,361	25.....	5.3	471	13.....	7.5	1,393
30.....	11.45	10,522	28.....	5.0	347	17.....	6.7	1,039
Sept. 1.....	10.15	5,781	30.....	4.9	313	20.....	6.6	991
4.....	12.85	15,932	Apr. 2.....	4.6	225	23.....	6.0	683
8.....	16.75	32,962	5.....	4.4	149	26.....	5.8	623
9.....	13.7	23,771	8.....	4.3	105	29.....	5.65	585
11.....	12.5	17,686	11.....	4.3	109	31.....	5.5	503
15.....	10.5	7,169	14.....	5.8	628	Nov. 4.....	5.5	502
17.....	8.3	3,669	17.....	5.35	463	6.....	5.4	462
19.....	8.2	3,396	20.....	5.3	450	9.....	5.4	437
20.....	7.7	2,652	23.....	5.3	457	12.....	5.3	397
22.....	7.5	2,125	26.....	6.5	953	14.....	5.2	385
24.....	7.5	2,125	29.....	5.1	366	17.....	5.2	373
25.....	7.5	2,157	May 2.....	5.0	339	20.....	5.0	335
27.....	7.3	1,933	5.....	6.8	1,191	23.....	5.0	329
29.....	7.15	1,742	7.....	6.9	1,299	26.....	5.0	334
Oct. 1.....	7.1	1,617	9.....	6.9	1,359	29.....	5.0	317
3.....	6.85	1,438	11.....	7.0	1,564	Dec. 2.....	4.9	293
6.....	6.65	1,245	13.....	7.0	1,570	5.....	4.8	278
8.....	7.6	2,230	16.....	7.15	1,637	8.....	4.8	271
10.....	7.2	1,963	18.....	7.2	1,643	12.....	4.8	271
13.....	6.8	1,758	20.....	6.95	1,372	16.....	4.8	259
15.....	6.6	1,080	22.....	6.8	1,196	19.....	4.8	244
17.....	6.4	1,010	25.....	6.9	1,307	22.....	4.75	237
20.....	6.2	906	27.....	6.9	1,300	26.....	4.6	209
23.....	6.05	845	June 2.....	6.9	1,343	28.....	4.6	201
25.....	6.0	815	4.....	7.0	1,426	31.....	4.6	216
27.....	5.8	721	6.....	7.05	1,606	Jan. 1904.		
30.....	6.05	834	9.....	7.65	2,613	19.....	4.5	165
Nov. 1.....	5.7	711	12.....	9.4	5,613	22.....	4.5	163
4.....	5.65	697	14.....	7.9	2,662	25.....	4.5	174
7.....	5.4	587	16.....	7.8	2,534	28.....	4.5	161
10.....	5.4	588						
13.....	5.2	532						

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 30	4.5	154	Nov. 17	7.65	2,260	Oct. 24	7.2	1,857
Feb. 2	4.4	125	20	7.4	1,765	28	7.0	1,501
5	4.4	120	22	7.3	1,745	31	7.0	1,347
8	4.4	117	25	7.3	1,740	Nov. 3	6.75	1,295
11	4.4	114	28	7.2	1,615	7	8.75	5,501
14	4.4	116	Dec. 1	7.1	1,637	10	10.75	10,940
18	4.4	120	3	7.1	1,558	13	9.4	7,319
22	4.4	126	6	8.1	3,301	16	9.15	6,568
26	4.4	113	8	7.9	2,995	19	9.3	7,143
29	4.4	106	10	8.0	3,099	22	8.65	5,119
Mar. 2	4.3	103	13	7.95	3,068	25	7.9	3,008
5	4.3	86	16	7.9	2,963	28	7.65	2,787
8	4.3	107	19	7.55	2,512	Dec. 2	9.2	6,891
12	4.2	83	22	7.45	2,399	5	8.6	5,306
16	4.15	82	26	7.05	1,441	8	8.2	3,975
20	4.1	73	28	7.1	1,484	10	7.9	3,224
23	4.1	76	30	7.00	1,364	14	7.6	2,558
26	3.9	51				17	9.1	6,318
28	3.9	50	1905.			20	9.2	6,974
31	3.85	44	Jan. 2	6.9	1,376	23	9.45	7,760
Apr. 3	3.8	40	5	6.7	1,078	27	8.6	5,430
7	3.8	39	8	6.05	1,096	30	8.1	3,677
10	3.7	31	11	6.55	1,071			
13	3.6	20	14	6.5	971	Jan. 1906.		
16	3.6	20	17	6.55	995	Jan. 2	7.75	2,730
19	3.6	19	20	7.05	1,502	5	7.45	2,225
22	3.6	18	23	6.9	1,407	9	7.3	1,838
25	3.5	14	26	6.8	1,176	13	7.3	1,800
29	3.5	13	29	6.6	978	16	7.0	1,580
May 3	3.4	6	31	6.45	925	19	7.0	1,583
7	3.4	5	Feb. 3	6.4	899	22	6.9	1,436
11	3.4	5	6	6.4	848	26	6.8	1,326
14	3.3	3	9	6.35	795	29	7.1	1,580
19	4.3	120	12	6.25	774	Feb. 2	6.9	1,410
21	4.0	64	15	6.1	724	5	7.85	2,845
25	4.8	239	18	6.9	1,366	8	8.4	4,423
27	4.5	138	21	7.5	1,945	11	8.9	5,750
30	4.3	120	June 20	11.25	12,541	14	8.55	4,760
June 1	4.5	130	23	11.2	12,473	17	9.0	5,834
4	4.8	241	26	10.45	10,622	20	8.9	5,776
7	4.5	137	29	9.3	6,456	23	8.75	5,163
9	5.6	152	July 3	8.3	3,980	Mar. 3	7.8	2,904
11	7.05	512	7	7.9	3,219	7	7.6	2,274
14	6.3	311	10	7.5	2,073	10	7.3	1,984
16	6.1	278	13	7.2	1,677	14	7.0	1,611
18	5.85	182	16	7.65	2,202	17	7.0	1,647
20	7.85	1,695	18	8.85	6,249	20	6.6	1,207
23	8.1	1,900	20	10.2	10,128	23	6.35	891
26	11.1	4,737	22	10.1	9,910	26	6.3	842
29	6.5	385	25	11.2	14,715	29	6.35	899
July 2	6.5	441	Aug. 28	11.65	16,355	Apr. 1	6.2	779
6	5.4	220	1	10.3	10,432	4	6.0	635
8	5.5	239	4	8.6	4,303	7	7.0	1,169
10	5.5	245	7	8.6	4,305	10	6.6	1,042
13	6.3	567	9	8.4	3,836	13	6.4	940
16	8.7	1,537	12	8.5	3,966	16	6.2	774
19	8.7	1,573	15	10.0	9,319	19	6.7	1,006
22	7.4	917	18	11.7	16,301	22	7.0	1,223
25	7.35	903	21	10.0	8,906	25	6.7	1,032
28	7.3	875	24	9.7	8,058	28	7.2	1,572
31	7.6	1,149	26	9.75	8,164	May 1	7.45	1,867
Aug. 3	7.0	821	28	8.9	5,994	4	8.2	2,725
6	7.0	808	31	8.1	3,261	7	8.2	2,792
9	6.15	439	Sept. 3	7.6	2,449	10	8.0	2,205
12	5.8	317	6	7.6	2,622	13	8.25	3,026
15	6.2	438	11	10.65	11,150	16	8.4	3,657
18	6.15	409	14	10.55	10,827	19	8.7	4,367
21	7.5	1,003	17	9.8	8,179	22	9.0	4,759
24	8.95	2,156	20	8.55	4,135	25	9.2	5,039
27	8.1	1,614	23	12.3	20,719	28	9.35	5,802
30	7.5	937	27	10.95	12,520	31	9.5	6,339
Sept. 3	7.3	933	Oct. 30	11.05	12,984	June 3	9.7	6,831
6	11.95	9,936	3	11.45	15,550	6	9.3	5,415
Nov. 2	9.0	5,319	6	11.1	13,728	9	8.8	4,084
5	8.9	4,936	9	8.95	6,645	12	8.6	3,491
7	8.4	3,016	12	8.6	5,703	15	8.6	3,417
10	8.35	3,070	15	7.9	3,042	18	9.0	4,248
12	7.9	2,602	18	7.7	2,791	21	9.1	4,668
15	7.7	2,316	21	7.5	2,402	24	9.5	5,189

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1906.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1907.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1907.	<i>Fcct.</i>	<i>Sec.-ft.</i>
June 27.....	9.7	5,716	Feb. 13.....	7.6	1,197	Oct. 9.....	7.9	1,694
30.....	9.5	5,235	16.....	7.6	1,161	12.....	7.8	1,310
July 3.....	9.05	4,505	19.....	7.6	1,109	16.....	8.0	1,787
6.....	10.1	6,491	22.....	7.5	1,082	18.....	7.8	1,366
9.....	11.0	9,921	25.....	7.4	971	21.....	9.3	5,700
12.....	9.9	7,872	28.....	7.4	969	24.....	8.4	2,461
15.....	10.45	8,892	Mar. 4.....	7.4	900	27.....	8.3	2,191
18.....	13.45	17,568	6.....	7.4	837	31.....	8.5	2,666
21.....	11.9	14,468	9.....	7.5	1,007	Nov. 3.....	8.35	2,391
24.....	13.0	16,062	12.....	7.4	900	5.....	9.35	5,760
27.....	12.85	16,802	16.....	7.4	890	8.....	11.85	13,849
30.....	10.4	10,849	18.....	7.2	586	11.....	9.45	6,429
Aug. 2.....	11.55	13,920	21.....	7.3	660	14.....	8.6	3,818
5.....	13.15	16,023	24.....	7.3	663	17.....	8.5	2,965
8.....	13.4	18,709	28.....	7.0	441	20.....	8.2	2,516
11.....	12.95	16,828	31.....	7.5	881	23.....	8.1	2,187
14.....	11.2	13,372	Apr. 3.....	7.9	1,559	27.....	8.2	2,656
17.....	11.4	13,663	6.....	7.9	1,451	Dec. 30.....	12.2	14,848
20.....	10.9	12,700	9.....	7.7	1,130	3.....	10.3	8,540
23.....	11.75	13,815	12.....	7.6	998	6.....	9.65	6,875
26.....	13.3	16,000	15.....	7.5	916	9.....	9.5	5,523
29.....	14.85	^a 25,887	18.....	7.4	822	12.....	8.9	4,640
Sept. 1.....	12.5	15,386	22.....	8.1	1,934	15.....	8.6	3,300
4.....	11.9	14,489	24.....	8.6	3,640	18.....	8.4	2,739
7.....	10.25	11,966	27.....	8.8	4,079	21.....	8.2	2,202
10.....	9.4	7,441	30.....	8.7	4,402	24.....	8.1	2,052
14.....	9.0	6,439	May 3.....	8.6	3,590	27.....	8.0	1,883
16.....	8.6	4,720	6.....	8.5	2,813	31.....	7.8	1,527
19.....	8.8	5,861	9.....	8.5	3,074	1908.		
22.....	8.25	3,067	12.....	8.4	2,598	Jan. 4.....	7.7	1,343
25.....	8.75	5,079	15.....	8.3	2,321	7.....	7.7	1,433
28.....	8.8	5,646	19.....	8.2	1,945	9.....	7.6	1,185
Oct. 1.....	8.5	4,428	21.....	8.2	1,987	12.....	7.7	1,306
4.....	8.1	2,719	24.....	8.3	2,352	15.....	7.65	1,239
7.....	7.65	2,337	27.....	8.6	3,280	19.....	7.5	1,085
10.....	8.6	4,604	31.....	8.9	4,077	22.....	7.4	998
13.....	7.6	1,694	June 2.....	9.1	4,936	24.....	7.4	979
16.....	7.6	1,643	5.....	9.2	5,271	28.....	7.3	903
19.....	7.6	1,711	8.....	9.7	7,134	31.....	7.3	861
22.....	7.4	1,300	11.....	9.4	6,209	Feb. 3.....	7.2	798
26.....	7.5	1,283	14.....	9.3	5,662	6.....	7.2	765
28.....	7.5	1,284	17.....	9.5	6,421	9.....	7.2	773
31.....	7.45	1,252	20.....	10.3	8,229	12.....	7.2	761
Nov. 3.....	7.5	1,317	23.....	10.0	7,281	14.....	7.5	1,060
7.....	7.5	1,329	26.....	9.7	6,756	17.....	7.4	950
9.....	7.5	1,303	29.....	10.1	7,690	20.....	7.5	1,026
12.....	7.6	1,596	July 2.....	10.05	7,502	23.....	7.3	880
15.....	7.7	1,680	6.....	9.3	5,726	27.....	7.3	870
18.....	7.55	1,434	9.....	9.2	5,210	29.....	7.2	817
21.....	7.6	1,477	11.....	9.4	6,200	Mar. 3.....	7.05	654
24.....	7.65	1,598	14.....	9.4	6,085	7.....	7.2	823
28.....	7.6	1,483	17.....	9.3	5,762	9.....	7.0	620
30.....	7.6	1,485	20.....	9.1	4,283	12.....	7.0	614
Dec. 3.....	7.4	1,147	24.....	9.1	4,444	15.....	7.0	621
6.....	7.6	1,448	26.....	9.1	4,382	18.....	6.9	567
9.....	8.2	2,578	29.....	9.25	5,399	21.....	7.0	593
12.....	7.95	2,279	Aug. 1.....	9.3	5,685	25.....	6.9	535
15.....	7.9	2,094	4.....	9.25	5,284	28.....	6.9	572
18.....	7.8	1,889	8.....	8.75	3,598	31.....	7.2	788
21.....	7.7	1,789	10.....	9.05	4,475	Apr. 3.....	7.0	608
24.....	7.7	1,724	13.....	8.75	3,623	6.....	6.8	508
27.....	7.6	1,347	17.....	8.3	1,676	10.....	6.8	450
30.....	7.5	1,171	19.....	8.5	2,158	14.....	7.5	646
1907.			22.....	8.35	1,920	16.....	7.1	420
Jan. 2.....	7.5	1,152	25.....	9.45	6,049	19.....	7.0	394
5.....	7.5	1,097	28.....	9.3	5,434	22.....	7.4	592
8.....	7.5	1,066	31.....	10.45	8,597	26.....	8.7	2,548
11.....	7.6	1,359	Sept. 3.....	11.5	11,706	30.....	8.4	1,727
15.....	7.4	1,004	6.....	11.3	10,953	Mar. 4.....	8.15	1,689
17.....	7.5	1,129	9.....	11.7	13,285	8.....	7.7	1,274
20.....	7.5	1,293	12.....	11.2	10,485	12.....	8.3	1,635
23.....	7.75	1,587	15.....	10.1	7,662	14 ^b	8.15	1,147
26.....	8.1	2,336	18.....	11.95	14,157	17.....	7.7	1,103
29.....	7.8	1,900	21.....	11.75	12,380	20.....	7.9	1,092
Feb. 1.....	7.7	1,368	24.....	10.4	9,517	23.....	7.85	1,038
4.....	7.6	1,218	27.....	10.2	8,400	26.....	7.65	1,187
7.....	7.6	1,185	30.....	9.2	5,506	30.....	8.75	2,407
10.....	7.5	1,086	Oct. 3.....	8.4	2,656			
			6.....	8.1	2,329			

^a Includes overflow section.

^b Measurement too small; rejected.

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1908.	<i>Fect.</i>	<i>Sec.-ft.</i>	1909.	<i>Fect.</i>	<i>Sec.-ft.</i>	1909.	<i>Fect.</i>	<i>Sec.-ft.</i>
June 2.....	8.45	1,629	Jan. 22.....	6.8	950	Sept. 24.....	9.8	5,298
5.....	8.05	1,132	25.....	6.8	665	27.....	9.2	3,564
8.....	7.55	933	28.....	6.8	501	30.....	8.6	2,480
11.....	7.5	882	31.....	6.6	491	Oct. 4.....	8.2	1,702
14.....	7.15	806	Feb. 4.....	6.8	900	7.....	8.1	1,411
17.....	7.1	352	7.....	6.7	616	10.....	7.9	1,065
20.....	6.85	285	10.....	6.8	617	13.....	7.8	981
23.....	6.55	270	14.....	6.75	591	16.....	7.6	911
26.....	6.3	165	16.....	6.7	569	19.....	7.8	1,072
29.....	6.1	43	19.....	6.6	481	22.....	7.7	1,084
July 3.....	8.15	1,822	22.....	6.55	446	25.....	7.7	935
6.....	6.35	221	25.....	6.6	358	28.....	7.5	1,094
9.....	6.1	126	28.....	6.6	357	31.....	7.7	702
12.....	6.1	89	Mar. 4.....	6.5	272	Nov. 3.....	7.4	755
15.....	5.95	78	7.....	6.5	238	6.....	7.3	644
17.....	7.1	184	10.....	6.45	208	9.....	7.3	625
18.....	6.15	35	13.....	6.35	143	12.....	7.2	595
21.....	7.2	207	16.....	6.3	158	15.....	7.2	580
23.....	13.1	12,791	19.....	6.2	174	18.....	7.1	529
24.....	9.6	2,138	22.....	6.85	474	21.....	7.1	462
27.....	11.2	5,989	25.....	6.6	349	24.....	7.1	506
30.....	9.5	2,928	28.....	6.4	280	27.....	7.1	466
Aug. 4.....	11.3	5,140	31.....	6.25	312	Dec. 30.....	7.0	478
7.....	10.9	3,910	Apr. 3.....	6.3	333	4.....	7.1	584
14.....	11.5	4,826	6.....	6.35	405	7.....	7.0	512
16.....	10.1	3,045	9.....	6.2	307	10.....	7.2	639
19.....	9.7	2,436	12.....	6.1	351	13.....	7.3	539
22.....	9.9	3,408	15.....	6.0	320	16.....	7.2	468
25.....	10.1	3,182	18.....	5.95	276	20.....	7.2	596
28.....	10.2	2,597	21.....	5.9	197	23.....	7.1	486
31.....	12.8	10,676	24.....	5.9	190	26.....	7.1	500
Sept. 2.....	15.15	18,655	27.....	5.9	202	28.....	10.85	8,492
5.....	15.35	20,553	30.....	7.4	1,128	31.....	9.0	3,205
8.....	10.05	4,942	May 1.....	8.0	2,740			
10.....	11.7	9,192	4.....	7.7	2,054	1910.		
13.....	10.6	6,453	7.....	7.8	2,548	Jan. 4.....	8.3	2,055
17.....	8.8	3,894	10.....	7.7	2,085	7.....	8.1	1,140
20.....	8.5	3,435	13.....	7.9	1,470	10.....	7.9	808
23.....	8.1	1,522	17.....	8.6	3,719	13.....	8.3	2,429
26.....	7.8	1,175	20.....	8.9	5,983	16.....	7.9	1,552
30.....	7.5	917	24.....	9.05	5,452	19.....	7.7	1,166
Oct. 3.....	7.4	730	27.....	9.1	5,338	22.....	7.7	1,375
6.....	7.3	633	31.....	9.1	4,509	25.....	7.7	1,040
9.....	7.1	629	June 3.....	8.6	1,500	28.....	7.8	1,352
12.....	7.0	554	6.....	8.4	1,286	31.....	7.6	1,106
15.....	6.9	501	9.....	8.3	1,036	Feb. 4.....	7.4	1,087
19.....	6.9	601	12.....	8.0	719	7.....	7.3	1,192
22.....	6.8	419	15.....	10.7	6,958	10.....	7.2	1,000
25.....	6.8	454	18.....	10.2	5,242	13.....	7.1	977
28.....	6.8	458	21.....	10.1	4,361	16.....	7.0	826
31.....	6.8	405	24.....	10.35	6,059	19.....	7.0	674
Nov. 2.....	6.8	458	27.....	9.5	3,565	22.....	7.0	549
5.....	6.8	395	30.....	9.7	4,327	25.....	6.9	516
8.....	6.8	383	July 7.....	11.9	10,407	28.....	6.8	449
11.....	6.8	381	10.....	12.8	14,819	Mar. 4.....	6.6	315
15.....	6.8	389	13.....	12.15	10,396	7.....	6.6	262
18.....	6.8	418	16.....	10.7	5,945	10.....	6.5	184
21.....	6.8	423	19.....	9.5	2,467	13.....	7.4	729
24.....	6.8	497	22.....	9.4	2,530	16.....	7.7	766
27.....	6.7	454	25.....	9.0	1,993	19.....	8.3	1,671
30.....	6.7	374	28.....	10.15	4,030	22.....	7.9	1,147
Dec. 3.....	6.7	387	31.....	10.3	4,466	25.....	8.0	1,077
6.....	6.7	402	Aug. 4.....	10.4	6,089	28.....	7.9	1,323
9.....	6.7	407	7.....	9.75	5,001	31.....	8.0	1,513
12.....	6.7	430	10.....	10.4	7,110	Apr. 3.....	8.3	1,993
15.....	6.9	494	13.....	10.3	5,735	5.....	8.1	1,539
18.....	6.8	614	16.....	10.75	8,114	9.....	7.9	1,202
21.....	6.75	628	19.....	11.8	12,157	12.....	7.6	973
24.....	6.85	650	22.....	10.2	7,619	15.....	7.7	946
27.....	6.75	705	25.....	9.65	4,215	18.....	7.8	949
31.....	6.75	625	28.....	9.6	4,965	21.....	8.0	1,613
			31.....	8.6	2,360	24.....	8.3	2,215
1909.			Sept. 3.....	12.7	14,222	27.....	8.0	1,524
Jan. 4.....	6.8	802	6.....	9.9	6,380	30.....	8.3	1,893
7.....	6.8	704	9.....	9.0	4,011	May 4.....	8.9	3,085
10.....	6.8	781	12.....	9.8	7,578	7.....	9.1	3,530
13.....	6.8	603	15.....	11.2	10,796	10.....	9.1	3,485
16.....	6.8	652	18.....	11.4	12,633	13.....	9.4	4,312
19.....	6.7	564	21.....	10.5	7,534	16.....	9.5	5,069

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 19.....	9.1	4,051	Jan. 13.....	6.2	33	Sept. 6.....	12.9	13,283
22.....	9.2	4,249	16.....	6.2	30	9.....	12.45	9,184
25.....	9.35	4,946	19.....	6.2	27	12.....	12.05	8,360
28.....	8.8	2,329	22.....	6.1	26	15.....	11.0	6,494
31.....	8.2	1,367	25.....	6.2	29	18.....	10.0	4,159
June 3.....	7.7	1,023	28.....	6.3	40	21.....	10.6	5,538
6.....	7.2	325	31.....	6.4	50	24.....	9.5	2,933
9.....	6.8	243	Feb. 4.....	6.3	47	27.....	10.3	4,371
12.....	7.3	389	7.....	6.4	68	30.....	9.5	2,708
15.....	7.3	337	10.....	6.5	95	Oct. 4.....	9.1	2,042
17.....	7.9	1,272	13.....	6.4	a 120	8.....	10.35	5,067
24.....	6.2	191	16.....	6.6	191	10.....	9.55	3,538
27.....	8.6	2,540	18.....	8.05	823	13.....	12.6	8,038
29.....	11.4	6,999	19.....	7.5	359	16.....	13.05	10,391
July 4.....	9.5	3,980	22.....	6.9	243	19.....	12.8	8,463
7.....	9.3	3,023	25.....	6.7	173	22.....	12.4	7,793
10.....	8.4	2,349	28.....	6.6	151	25.....	11.5	6,083
13.....	8.1	1,904	Mar. 4.....	6.5	118	28.....	11.0	4,623
16.....	8.0	1,370	7.....	6.4	89	31.....	10.4	4,177
19.....	7.8	1,184	10.....	6.3	82	Nov. 3.....	10.6	3,641
22.....	7.2	825	13.....	6.2	74	6.....	10.6	3,434
25.....	6.9	248	16.....	6.4	92	9.....	10.5	2,984
28.....	7.0	290	19.....	6.2	73	12.....	10.1	2,768
31.....	7.0	248	22.....	6.2	64	15.....	10.7	4,062
Aug. 4.....	6.7	162	25.....	7.0	239	18.....	10.3	3,616
7.....	6.9	192	28.....	6.7	130	21.....	10.0	2,787
10.....	7.0	292	31.....	6.4	97	24.....	9.7	2,278
13.....	6.7	187	Apr. 3.....	6.9	197	27.....	9.6	2,295
16.....	8.1	1,556	6.....	6.7	92	30.....	9.4	2,415
19.....	8.3	1,989	9.....	6.2	56	Dec. 4.....	9.4	3,206
22.....	8.6	2,806	12.....	6.1	29	7.....	9.3	3,196
25.....	9.2	4,576	15.....	5.9	22	10.....	9.2	3,339
28.....	8.3	1,848	18.....	5.9	18	13.....	8.9	3,247
31.....	7.8	1,226	21.....	5.9	17	16.....	9.3	4,139
Sept. 3.....	7.6	572	24.....	6.6	121	19.....	9.5	4,288
6.....	7.6	684	27.....	8.7	1,443	22.....	9.6	4,719
9.....	9.9	3,699	30.....	6.7	107	25.....	9.2	3,290
12.....	9.7	3,135	May 4.....	6.4	95	28.....	9.0	3,046
15.....	8.7	1,688	7.....	8.2	734	31.....	8.8	2,560
18.....	8.1	1,261	10.....	9.1	1,422			
21.....	11.1	5,210	13.....	8.8	1,094	1912.		
24.....	9.2	2,960	14.....	13.8	9,801	Jan. 4.....	10.0	4,171
27.....	8.4	1,544	16.....	9.1	1,674	7.....	9.5	3,011
30.....	8.0	1,158	19.....	10.9	3,234	10.....	9.1	2,572
Oct. 4.....	7.8	863	22.....	10.9	4,195	13.....	8.9	2,528
7.....	7.4	649	25.....	10.8	3,505	16.....	8.8	2,305
10.....	7.3	560	28.....	12.9	8,888	19.....	9.0	2,854
13.....	7.1	493	31.....	11.05	5,971	22.....	9.0	2,777
16.....	7.1	448	June 3.....	9.4	2,517	25.....	9.2	3,453
20.....	6.9	365	6.....	9.4	2,376	28.....	9.1	2,896
22.....	7.0	407	9.....	9.7	3,303	31.....	9.0	2,678
25.....	6.9	370	12.....	11.1	6,344	Feb. 2.....	8.9	2,497
28.....	6.8	296	15.....	16.6	30,875	5.....	8.7	2,414
31.....	7.0	380	18.....	11.6	8,166	8.....	8.6	2,351
Nov. 3.....	7.0	324	21.....	11.8	8,903	11.....	8.6	1,490
6.....	7.0	325	24.....	10.8	4,875	14.....	8.5	1,118
9.....	7.0	317	27.....	10.6	4,104	17.....	8.3	901
12.....	6.9	283	30.....	10.5	4,651	20.....	8.2	862
15.....	6.9	264	July 4.....	10.4	4,693	23.....	8.1	793
18.....	6.9	259	7.....	11.4	6,200	26.....	8.0	754
21.....	6.8	209	10.....	11.8	8,561	29.....	8.0	741
24.....	6.7	168	13.....	14.6	17,046	Mar. 4.....	7.9	640
27.....	6.6	129	16.....	12.0	9,968	7.....	7.9	625
30.....	6.6	130	19.....	14.7	16,585	10.....	7.9	612
Dec. 4.....	6.5	126	22.....	13.75	14,306	13.....	7.9	631
7.....	6.5	108	25.....	14.7	18,720	16.....	7.8	455
10.....	6.5	93	28.....	11.9	10,445	19.....	8.4	985
13.....	6.5	83	31.....	13.4	13,582	22.....	8.6	1,002
16.....	6.4	80	Aug. 4.....	12.9	11,551	25.....	8.2	573
19.....	6.4	71	7.....	11.35	7,324	28.....	7.9	462
22.....	6.4	73	10.....	10.35	5,362	31.....	9.1	1,350
25.....	6.4	57	13.....	9.8	4,093	Apr. 3.....	8.6	829
28.....	6.3	51	16.....	9.2	3,095	6.....	8.6	920
31.....	6.3	53	19.....	8.6	2,193	9.....	8.4	611
			22.....	8.3	1,572	12.....	8.8	1,652
1911.			25.....	9.1	2,494	15.....	9.0	1,566
Jan. 4.....	6.2	48	28.....	9.4	2,503	18.....	9.35	1,959
7.....	6.2	39	31.....	9.1	2,603	21.....	9.4	2,083
10.....	6.2	34	Sept. 3.....	10.2	4,174	24.....	9.0	1,658

a Heavy wind downstream.

Discharge measurements of Rio Grande below Presidio, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 27	8.6	1,157	Oct. 22	8.7	1,795	Apr. 12	7.3	184
30	8.5	797	25	8.55	1,684	15	7.2	139
May 4	8.1	437	28	8.3	1,298	18	7.1	130
7	8.0	557	31	8.3	1,228	21	7.45	258
10	9.5	1,991	Nov. 3	8.2	1,214	24	7.6	310
13	10.5	3,813	6	8.1	940	27	7.3	215
16	10.35	3,476	9	8.0	816	30	8.55	773
19	10.6	3,714	12	7.9	715	May 4	8.6	537
22	10.8	4,284	15	7.8	503	7	7.9	383
25	10.9	4,223	18	8.0	693	10	9.1	1,483
28	11.0	4,356	21	8.0	629	13	8.7	1,042
31	11.1	4,605	24	8.0	596	16	8.55	939
June 3	11.35	5,284	27	8.2	751	19	8.6	1,242
6	11.7	6,903	30	8.2	753	22	9.0	1,524
9	13.35	10,286	Dec. 4	8.2	732	25	8.8	1,162
12	14.2	14,765	7	8.2	641	28	8.0	627
15	14.0	13,664	10	8.4	923	31	7.7	446
18	13.45	10,510	13	8.3	740	June 3	7.6	587
21	12.75	8,804	16	8.2	646	6	7.7	620
24	11.65	6,289	19	8.8	1,298	9	10.0	2,969
27	10.9	5,231	22	8.7	1,123	12	7.7	393
30	10.9	5,879	25	8.6	1,028	15	8.5	630
July 4	10.7	5,313	28	8.5	869	18	8.5	702
7	10.5	5,155	31	8.3	762	21	8.6	813
10	10.0	4,433	Jan. 1913.			24	10.1	1,878
13	9.4	4,339	Jan. 4	8.2	672	27	9.3	1,146
16	8.7	3,386	7	8.0	633	30	8.6	825
19	9.65	5,345	10	7.9	454	July 4	8.7	840
22	8.7	3,021	13	7.8	370	7	8.6	703
25	9.3	3,599	16	7.8	350	10	8.0	481
28	8.9	2,915	19	7.8	324	13	7.7	322
31	10.0	5,029	22	7.7	298	16	7.5	240
Aug. 4	9.55	2,822	25	7.7	288	19	7.3	162
7	9.1	2,067	28	7.7	289	22	7.2	147
10	8.6	1,268	31	7.7	295	25	7.6	412
13	8.2	748	Feb. 3	7.7	295	28	7.6	471
16	8.4	809	6	7.9	450	31	9.0	1,182
19	13.5	7,995	9	7.9	483	Aug. 4	8.3	595
22	15.3	12,455	12	7.9	482	7	8.3	562
25	12.55	7,891	15	8.0	514	10	8.2	536
28	14.65	11,128	18	11.5	4,905	13	8.7	874
31	13.6	11,611	21	10.2	3,110	16	9.0	1,335
Sept. 3	13.6	11,611	24	9.6	2,499	19	11.0	3,956
6	12.15	9,055	27	9.15	2,098	22	10.1	2,467
7	14.7	15,910	30	8.9	1,716	25	9.3	1,231
9	12.4	9,551	Mar. 4	10.1	3,717	28	8.5	559
12	16.4	20,357	7	9.6	2,934	31	8.4	471
15	16.8	21,796	10	9.5	2,470	Sept. 3	8.7	789
18	14.9	13,007	13	9.1	2,210	6	10.8	3,322
21	10.7	6,600	16	8.9	1,737	9	14.2	11,483
24	9.8	4,620	19	8.6	1,131	12	11.1	4,167
27	9.4	3,716	22	8.3	884	15	9.7	1,947
30	9.1	3,239	25	8.2	693	18	9.5	1,384
Oct. 4	11.2	5,248	28	7.9	534	21	9.1	1,201
7	10.5	4,546	31	7.7	452	24	8.6	787
10	10.0	3,593	Apr. 3	7.6	328	27	9.6	1,928
13	9.5	2,891	6	7.5	228	30	8.7	950
16	9.1	2,564	9	7.4	198			
19	9.0	2,047						

NOTE.—Measurements were made by S. D. Church, J. P. Hague, E. E. Winter, F. X. Dougherty, W. T. Millington, and C. S. Vasquez.

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1	3.7	8.4	6.75	11.7	7.1	6	3.6	7.05	5.15	12.6	6.85
2	3.7	8.2	6.2	10.6	7.2	7	3.6	7.0	6.4	11.75	7.85
3	3.65	7.4	7.07	12.05	11.85	8	3.5	7.15	8.75	12.2	8.15
4	3.6	7.0	8.75	10.65	7.3	9	3.5	7.5	8.25	11.4	8.6
5	3.6	7.05	5.8	11.2	7.05	10	3.5	7.6	11.5	10.95	8.8

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
11.....	4.5	7.85	12.9	10.8	9.4	21.....	10.25	5.95	8.75	7.9	7.0
12.....	3.5	8.8	11.6	10.05	8.65	22.....	7.77	5.45	8.55	8.2	8.15
13.....	3.5	9.85	11.45	9.55	8.65	23.....	6.15	5.05	9.65	9.05	7.9
14.....	3.5	7.55	10.35	9.5	8.3	24.....	5.35	4.95	10.8	9.4	7.35
15.....	3.5	6.85	8.9	8.9	7.95	25.....	4.9	4.45	10.55	9.3	6.85
16.....	3.5	6.6	7.9	8.85	7.75	26.....	1.7	4.45	9.85	8.75	7.3
17.....	3.5	6.35	8.55	8.7	7.45	27.....	6.15	4.25	10.9	8.35	8.55
18.....	3.45	6.05	7.95	8.3	7.1	28.....	5.6	4.4	10.7	7.95	9.0
19.....	3.4	5.95	8.15	8.35	7.1	29.....	4.8	4.55	10.65	7.75	9.1
20.....	3.4	6.4	8.55	7.9	6.9	30.....	4.4	7.6	10.55	7.55	9.3
						31.....	7.15	.....	10.85	7.35	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	8.3	5.8	5.2	4.9	4.7	5.5	4.2	3.6	7.1	4.1	9.0	6.7
2.....	7.9	5.7	5.2	4.9	4.7	5.4	4.1	3.6	7.3	4.1	8.7	6.5
3.....	8.35	5.7	5.0	4.9	4.7	5.4	4.1	3.6	7.4	4.15	8.95	6.15
4.....	7.75	5.7	5.0	4.9	4.7	5.3	4.2	3.6	7.4	3.95	8.85	8.15
5.....	7.75	5.6	5.0	4.8	4.7	5.2	4.1	3.6	7.3	3.95	8.7	8.2
6.....	7.6	5.6	5.0	4.8	4.7	5.2	4.1	3.6	7.3	4.35	8.65	6.9
7.....	7.65	5.6	5.0	4.8	4.7	5.1	4.1	3.6	7.3	4.15	8.35	8.0
8.....	7.6	5.6	5.0	4.8	4.7	5.1	4.1	4.45	7.3	4.0	7.65	8.4
9.....	7.7	5.6	5.0	4.8	4.7	5.0	4.1	4.35	7.3	3.95	7.25	7.9
10.....	7.4	5.5	5.0	4.8	4.7	4.9	4.0	4.35	7.4	5.25	7.65	7.75
11.....	7.25	5.5	5.0	4.8	4.7	4.9	3.9	6.25	6.9	5.15	7.7	9.25
12.....	7.2	5.5	4.9	4.8	4.7	4.8	3.9	6.55	6.6	5.1	7.5	9.9
13.....	7.45	5.5	5.0	4.8	4.7	4.85	3.8	6.45	6.2	6.95	7.45	8.55
14.....	6.95	5.4	5.0	4.8	4.7	4.7	3.7	6.5	6.0	7.4	7.1	7.9
15.....	6.75	5.4	5.0	4.8	4.7	4.7	3.7	6.4	5.7	5.7	7.7	7.65
16.....	7.15	5.4	5.0	4.8	4.7	4.6	3.7	6.35	5.45	5.5	7.85	9.65
17.....	9.5	5.4	5.0	4.8	4.7	4.6	3.7	6.2	6.15	5.5	8.45	9.75
18.....	7.8	5.3	5.0	4.8	4.7	5.2	4.6	6.25	5.7	5.65	7.7	10.0
19.....	7.15	5.3	5.0	4.8	4.7	5.45	4.6	6.4	5.25	5.65	7.8	9.4
20.....	7.6	5.3	5.0	4.8	4.7	6.1	4.6	6.5	5.2	5.9	7.65	8.75
21.....	7.1	5.3	5.0	4.7	4.6	6.05	4.5	3.7	6.6	5.2	9.05	8.35
22.....	6.75	5.3	5.0	4.7	4.7	5.9	4.5	3.7	6.7	5.05	6.7	8.0
23.....	6.55	5.2	4.9	4.7	4.7	5.8	4.45	3.7	6.8	4.9	6.55	7.6
24.....	6.35	5.2	4.9	4.7	4.7	5.8	4.4	3.7	6.85	4.9	7.35	6.3
25.....	6.3	5.2	4.9	4.7	4.7	5.8	4.4	3.7	6.9	4.8	6.4	6.95
26.....	6.15	5.2	4.9	4.7	4.7	5.7	4.3	3.7	7.0	4.7	8.15	6.5
27.....	6.15	5.2	4.9	4.7	4.7	5.6	4.0	3.7	7.1	4.65	9.1	7.75
28.....	6.05	5.2	4.9	4.7	4.7	5.5	4.0	3.7	7.1	4.45	8.6	8.05
29.....	6.0	5.2	4.9	4.7	4.7	.....	4.0	3.7	7.1	4.25	8.45	7.6
30.....	6.0	5.2	4.9	4.7	4.7	.....	4.15	3.7	7.1	4.2	9.0	7.25
31.....	5.8	.....	4.9	4.7	4.7	.....	4.2	3.7	7.1	.....	9.35	6.8
1901-2.												
1.....	6.7	7.55	5.6	5.0	4.8	4.2	3.7	3.45	3.9	4.75	8.7	10.6
2.....	6.55	7.35	5.5	4.95	4.75	4.2	3.7	3.4	3.9	8.15	8.2	10.2
3.....	6.0	6.75	5.4	4.9	4.65	4.2	3.7	3.4	3.9	5.5	7.9	11.1
4.....	5.75	6.6	5.4	4.8	4.6	4.2	3.7	3.4	3.9	5.0	7.65	12.85
5.....	5.6	6.4	5.4	4.9	4.6	4.2	3.7	3.4	3.9	5.0	7.7	14.25
6.....	7.3	6.3	5.4	5.15	4.6	4.2	3.7	3.4	3.9	6.6	8.45	16.5
7.....	7.5	6.15	5.35	5.4	4.7	4.2	3.7	3.4	3.9	7.45	7.55	17.95
8.....	7.2	6.1	5.3	5.35	4.65	4.15	3.7	3.4	5.6	8.4	7.7	16.65
9.....	6.35	6.5	5.3	5.25	4.55	4.1	3.6	3.4	7.4	9.1	7.5	14.0
10.....	6.05	6.3	5.3	5.15	4.45	4.1	3.6	3.4	5.3	11.6	8.4	12.9
11.....	5.8	6.15	5.2	5.1	4.4	4.1	3.6	3.4	4.7	12.2	11.5	12.65
12.....	6.1	6.0	5.2	5.1	4.4	4.0	3.6	3.4	4.7	10.3	11.4	12.45
13.....	6.45	5.9	5.2	5.1	4.35	3.9	3.6	3.4	5.2	9.15	10.4	12.15
14.....	6.5	5.8	5.2	5.0	4.3	3.9	3.6	4.35	5.1	8.65	10.3	11.05
15.....	6.4	5.7	5.15	5.0	4.3	3.9	3.6	3.8	4.85	7.7	10.1	10.55
16.....	6.2	5.7	5.1	4.9	4.3	3.9	3.6	3.6	4.7	8.2	10.2	9.35
17.....	6.15	5.7	5.1	4.8	4.3	3.9	3.6	3.6	4.8	7.8	9.7	8.5
18.....	5.95	5.6	5.15	4.9	4.3	3.9	3.6	3.5	4.55	7.65	9.9	8.3
19.....	5.9	5.6	5.2	5.15	4.3	3.9	3.5	3.5	4.55	7.4	9.9	8.15
20.....	5.8	5.5	5.2	5.15	4.3	3.9	3.5	3.5	4.9	9.8	9.85	7.75

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
21.....	5.9	5.5	5.15	5.0	4.3	3.8	3.5	3.5	4.4	9.4	10.0	7.6
22.....	8.35	5.5	5.1	5.0	4.25	3.8	3.5	3.5	4.4	12.25	9.95	7.5
23.....	10.3	5.4	5.05	4.9	4.2	3.8	3.5	3.5	4.4	12.6	10.8	7.6
24.....	10.3	6.1	5.25	4.8	4.2	3.8	3.5	3.5	4.4	12.1	11.4	7.5
25.....	9.4	5.9	5.3	5.1	4.2	3.8	3.5	5.55	4.4	12.1	11.4	7.45
26.....	8.7	5.8	5.25	5.3	4.2	3.7	3.5	4.0	4.4	12.75	10.2	7.5
27.....	8.3	5.8	5.3	5.3	4.2	3.7	3.5	3.9	4.4	12.0	10.8	7.35
28.....	7.85	5.75	5.5	5.2	4.2	3.7	3.5	3.9	4.4	11.5	11.5	7.25
29.....	7.45	5.7	5.2	5.15	-----	3.7	3.5	3.9	4.3	10.5	11.55	7.15
30.....	7.45	5.6	5.2	5.0	-----	3.7	3.5	3.9	4.3	9.6	11.4	7.1
31.....	-----	-----	5.15	4.9	-----	3.7	-----	3.9	-----	8.95	11.3	-----
1902-3.												
1.....	7.1	5.8	6.75	4.9	5.2	6.45	4.75	5.0	7.1	8.05	5.95	9.25
2.....	8.15	6.65	5.35	4.9	5.0	6.25	4.65	5.05	7.05	8.35	5.85	8.3
3.....	6.85	7.25	5.25	4.9	5.0	6.15	4.5	4.75	6.9	8.6	5.75	8.05
4.....	6.8	5.8	5.1	4.8	4.95	5.95	4.45	6.5	6.95	9.05	5.75	8.0
5.....	6.8	5.65	5.15	4.8	4.9	5.85	4.4	6.75	8.2	9.35	6.45	8.1
6.....	6.65	5.5	5.35	4.8	4.9	5.75	4.4	7.05	8.5	9.45	6.15	8.1
7.....	7.45	5.45	5.25	4.8	6.65	5.55	4.4	6.9	7.35	9.7	6.3	7.75
8.....	7.65	5.4	5.2	4.8	7.6	5.5	4.3	6.9	7.0	9.75	5.6	7.5
9.....	7.45	5.4	5.2	4.8	7.55	5.45	4.3	6.85	7.6	9.8	6.6	7.8
10.....	7.25	5.4	5.2	4.7	7.3	5.4	4.3	7.15	7.7	9.55	7.1	7.4
11.....	7.1	5.3	5.2	4.7	6.95	5.3	4.3	7.1	7.75	9.45	6.7	7.75
12.....	6.9	5.3	5.2	4.7	6.9	5.25	5.2	7.0	9.45	9.2	6.3	7.55
13.....	6.8	5.15	5.15	4.7	6.9	5.2	6.25	7.0	8.4	8.7	6.3	7.05
14.....	6.7	5.2	5.2	4.7	6.9	5.2	5.95	6.95	7.95	8.35	6.65	7.6
15.....	6.6	5.2	5.35	4.7	6.7	5.2	5.6	6.95	7.9	7.95	6.6	8.1
16.....	6.5	5.15	5.4	4.7	6.65	5.15	5.35	7.15	7.8	7.55	6.9	7.9
17.....	6.4	5.1	5.3	4.7	6.35	5.1	5.35	7.15	7.8	7.5	7.2	7.85
18.....	6.3	5.1	5.3	4.7	6.25	5.05	5.3	7.2	7.85	7.2	8.65	7.7
19.....	6.2	5.1	5.3	4.7	6.05	5.15	5.55	7.05	7.7	7.05	8.4	7.55
20.....	6.2	5.1	5.2	4.7	5.85	5.15	5.35	6.95	7.7	7.2	8.2	7.55
21.....	6.2	5.1	5.25	4.7	5.8	5.1	5.5	6.9	7.7	6.8	7.75	7.85
22.....	6.1	5.05	5.1	4.7	7.1	5.0	5.4	6.85	7.75	6.4	7.6	11.35
23.....	6.05	5.0	5.1	4.7	6.9	4.95	5.2	6.85	7.7	6.3	7.2	8.7
24.....	6.0	5.0	5.05	4.7	6.9	5.15	5.0	6.9	7.75	6.35	6.85	8.45
25.....	6.0	5.0	5.05	5.0	6.9	5.3	4.9	6.9	7.75	6.45	7.0	8.8
26.....	5.9	5.0	5.05	5.3	6.75	5.15	6.9	6.9	7.75	6.55	8.45	8.7
27.....	5.8	5.0	5.05	5.4	6.7	5.1	6.6	6.95	7.8	6.3	7.6	8.75
28.....	5.8	5.0	5.05	5.3	6.6	5.0	5.3	6.95	7.85	6.15	8.05	8.95
29.....	5.8	5.0	5.05	5.25	-----	5.0	5.1	7.0	7.9	6.1	8.15	10.35
30.....	6.0	5.0	5.05	5.25	-----	4.9	5.0	7.0	7.9	6.05	8.4	9.4
31.....	5.85	-----	5.0	5.2	-----	4.9	-----	7.0	-----	6.0	10.25	-----
1903-4.												
1.....	10.45	5.5	4.9	4.6	4.4	4.3	3.85	3.5	4.65	6.5	7.45	7.35
2.....	9.55	5.5	4.9	4.6	4.4	4.3	3.85	3.5	5.35	6.45	7.25	7.25
3.....	9.45	5.5	4.9	4.6	4.4	4.3	3.8	3.45	5.15	6.25	7.05	7.15
4.....	9.25	5.5	4.9	4.6	4.4	4.3	3.8	3.4	4.9	6.2	7.0	7.6
5.....	9.15	5.4	4.8	4.6	4.4	4.3	3.8	3.4	4.8	5.9	7.0	7.45
6.....	8.8	5.4	4.8	4.6	4.4	4.3	3.8	3.4	4.55	5.5	7.0	12.05
7.....	8.4	5.4	4.8	4.6	4.4	4.3	3.8	3.4	4.45	5.4	6.8	13.35
8.....	7.95	5.4	4.8	4.6	4.4	4.25	3.8	3.4	6.6	5.55	6.4	16.3
9.....	7.9	5.4	4.8	4.6	4.4	4.2	3.8	3.4	7.9	5.45	6.1	20.8
10.....	7.75	5.35	4.8	4.6	4.4	4.2	3.7	3.4	10.2	5.45	6.0	24.0
11.....	7.3	5.3	4.8	4.6	4.4	4.2	3.7	3.4	6.8	5.3	5.95	26.35
12.....	7.05	5.3	4.8	4.5	4.4	4.2	3.6	3.4	6.65	5.35	5.8	23.35
13.....	7.4	5.25	4.8	4.5	4.4	4.2	3.6	3.4	6.85	5.9	5.8	18.05
14.....	7.2	5.2	4.8	4.5	4.4	4.15	3.6	3.4	6.45	5.95	6.15	14.2
15.....	6.85	5.2	4.8	4.5	4.4	4.15	3.6	3.9	6.4	8.05	6.15	12.75
16.....	6.95	5.2	4.8	4.5	4.4	4.15	3.6	4.3	6.15	9.0	6.2	12.05
17.....	6.8	5.2	4.8	4.5	4.4	4.15	3.6	4.15	5.95	8.7	6.15	11.0
18.....	6.7	5.15	4.8	4.5	4.4	4.15	3.6	3.9	5.85	7.65	6.55	11.2
19.....	6.6	5.1	4.8	4.5	4.4	4.15	3.6	4.65	8.1	9.0	6.9	11.75
20.....	6.6	5.05	4.7	4.5	4.4	4.1	3.6	4.3	9.1	7.4	7.5	12.0
21.....	6.35	5.0	4.7	4.5	4.4	4.1	3.6	4.0	6.4	7.55	7.65	11.0
22.....	6.25	5.0	4.7	4.5	4.4	4.1	3.6	4.0	6.25	7.45	7.7	9.95
23.....	6.05	5.0	4.7	4.5	4.4	4.05	3.6	4.1	7.4	7.7	7.65	10.3
24.....	6.0	5.0	4.7	4.5	4.4	3.95	3.5	5.5	6.6	7.35	8.95	9.95
25.....	5.9	5.0	4.7	4.5	4.4	3.9	3.5	5.0	6.6	7.35	9.0	9.65

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
26.....	5.8	5.0	4.6	4.5	4.4	3.9	3.5	4.8	11.3	7.3	8.7	9.45
27.....	5.7	5.0	4.6	4.5	4.4	3.9	3.5	4.55	10.05	7.3	8.25	9.4
28.....	5.7	5.0	4.6	4.5	4.4	3.9	3.5	4.55	7.85	7.3	7.95	9.6
29.....	5.65	5.0	4.6	4.5	4.4	3.9	3.5	4.5	6.75	7.4	7.85	9.4
30.....	5.6	5.0	4.6	4.5	4.4	3.85	3.5	4.35	6.5	7.5	7.6	9.1
31.....	5.5	.....	4.6	4.5	.....	3.85	.....	4.3	.....	7.6	7.5	.....
1904-5.												
1.....	9.7	9.2	7.1	6.9	6.4	7.35	7.75	8.15	9.3	9.45	10.3	7.95
2.....	9.25	9.0	7.1	6.85	6.4	7.3	7.6	8.3	9.35	8.8	9.75	7.85
3.....	8.6	8.7	7.1	6.8	6.4	7.35	7.6	8.45	9.4	8.4	9.1	7.6
4.....	8.65	8.4	7.65	6.8	6.4	7.15	7.5	8.3	9.6	8.3	8.8	7.6
5.....	8.75	8.75	8.35	6.75	6.4	7.4	7.45	8.35	9.85	8.2	8.75	7.75
6.....	8.55	8.6	8.15	6.7	6.4	7.85	7.65	8.45	10.05	8.15	8.6	7.75
7.....	8.8	8.45	8.05	6.7	6.5	7.95	7.7	8.5	10.35	7.9	8.55	9.4
8.....	9.65	8.3	7.95	6.65	6.45	8.1	7.65	8.55	10.5	7.6	8.5	9.55
9.....	9.75	8.2	7.9	6.6	6.35	8.15	7.65	8.5	10.75	7.65	8.35	11.35
10.....	9.5	8.3	8.0	6.6	6.3	8.1	7.65	8.65	11.15	7.55	8.5	11.3
11.....	10.0	8.15	8.0	6.55	6.3	8.15	7.6	8.6	11.55	7.5	8.6	10.75
12.....	11.1	7.95	8.0	6.5	6.25	8.25	7.45	8.55	11.7	7.3	8.15	10.7
13.....	12.2	7.9	7.95	6.5	6.1	8.2	7.4	8.6	12.15	7.2	9.05	10.45
14.....	12.3	7.85	7.9	6.5	6.1	8.25	7.4	8.7	12.6	7.2	9.6	10.45
15.....	12.6	7.75	7.9	6.5	6.1	8.4	7.4	8.8	12.35	8.8	10.2	10.45
16.....	12.75	7.7	7.9	6.5	6.3	8.3	7.35	8.8	12.0	7.8	10.0	10.05
17.....	12.65	7.65	7.8	6.55	6.95	8.6	7.4	8.9	11.35	10.35	10.45	9.75
18.....	12.4	7.55	7.7	6.7	6.85	8.6	7.7	8.95	11.15	8.45	11.7	9.05
19.....	12.0	7.45	7.55	6.85	7.45	8.45	7.8	8.95	11.25	9.4	10.9	8.85
20.....	11.45	7.4	7.6	7.05	7.45	8.45	7.9	9.0	11.3	10.65	10.5	8.55
21.....	11.05	7.4	7.5	6.9	7.5	8.35	8.1	8.95	11.35	10.2	10.0	8.7
22.....	10.6	7.3	7.45	6.9	7.4	8.15	8.1	9.0	11.45	9.85	9.65	9.65
23.....	10.35	7.3	7.4	6.9	7.5	8.1	7.85	9.25	11.25	10.6	9.75	11.95
24.....	9.85	7.3	7.35	6.9	7.2	8.05	7.8	9.05	11.05	10.6	9.8	13.35
25.....	9.45	7.3	7.2	6.8	7.2	8.2	7.8	8.9	10.8	11.25	10.2	14.45
26.....	9.25	7.3	7.05	6.8	7.4	8.15	7.95	8.9	10.5	11.4	9.75	13.25
27.....	9.05	7.2	7.1	6.75	7.5	8.15	8.0	9.05	9.85	11.55	9.5	10.9
28.....	9.5	7.2	7.1	6.7	7.45	8.1	8.15	9.2	9.4	11.75	9.0	10.3
29.....	9.8	7.1	7.1	6.6	.....	7.9	8.1	9.1	9.3	11.05	8.55	10.35
30.....	10.1	7.1	7.0	6.5	.....	7.8	8.15	9.0	9.3	10.55	8.35	11.3
31.....	9.4	.....	7.0	6.45	.....	7.7	.....	9.15	.....	10.3	8.15	.....
1905-6.												
1.....	10.5	6.9	7.7	8.0	7.3	8.0	6.2	7.45	9.6	9.35	10.65	12.7
2.....	11.4	6.8	9.3	7.8	6.9	7.9	6.15	7.8	9.55	9.25	11.55	13.05
3.....	11.2	6.75	9.4	7.65	6.85	7.8	6.1	8.15	9.6	9.35	11.55	12.55
4.....	10.6	6.7	8.7	7.6	7.35	7.85	6.05	8.25	9.6	9.1	11.9	11.85
5.....	10.75	6.95	8.55	7.45	7.85	7.75	6.05	8.75	9.45	9.45	13.1	11.55
6.....	11.3	7.7	8.45	7.4	8.15	7.7	7.45	9.25	9.2	10.0	13.5	11.4
7.....	11.0	8.8	8.25	7.4	8.4	7.6	7.2	8.55	8.95	8.45	14.2	10.75
8.....	9.75	9.8	8.15	7.4	8.45	7.45	6.95	8.15	8.85	11.45	13.65	9.95
9.....	9.05	10.3	8.0	7.3	8.7	7.35	6.85	8.05	8.8	11.4	15.15	9.6
10.....	8.85	10.7	7.85	7.3	9.3	7.25	6.65	7.95	8.8	11.05	14.4	9.4
11.....	8.65	11.6	7.8	7.3	9.05	7.2	6.45	7.85	8.7	10.3	13.35	9.35
12.....	8.6	10.75	7.75	7.3	9.05	7.1	6.4	7.8	8.6	9.9	13.75	9.2
13.....	8.3	9.3	7.7	7.25	8.85	7.1	6.45	8.25	8.55	10.55	12.5	9.1
14.....	8.1	9.3	7.6	7.15	8.6	7.0	6.45	8.25	8.55	10.4	11.2	9.05
15.....	7.9	9.55	8.05	7.05	8.55	7.0	6.45	8.3	8.6	10.6	14.3	8.85
16.....	7.75	9.2	8.85	7.0	8.75	6.95	6.25	8.4	8.6	12.4	13.65	8.6
17.....	7.7	9.4	9.15	7.0	9.0	6.95	6.4	8.45	9.1	13.0	11.5	9.0
18.....	7.7	9.6	9.5	7.0	9.05	6.75	6.7	8.45	9.05	13.25	11.7	9.2
19.....	7.65	9.2	10.0	7.0	8.8	6.65	6.7	8.75	9.05	12.55	11.5	9.55
20.....	7.6	9.1	9.5	7.0	8.9	6.55	6.75	8.9	9.2	12.9	11.1	9.3
21.....	7.5	8.9	9.75	7.0	9.45	6.5	6.7	9.1	9.15	11.95	11.05	8.45
22.....	7.45	8.55	10.0	6.95	9.15	6.45	7.0	9.1	9.25	11.25	11.4	8.25
23.....	7.35	8.25	9.4	6.9	8.8	6.35	7.0	9.1	9.45	12.8	11.75	9.15
24.....	7.25	8.2	9.0	6.9	8.85	6.3	6.85	9.2	9.5	13.05	12.4	9.25
25.....	7.2	8.05	8.75	6.8	8.65	6.3	6.75	9.25	9.55	13.9	12.9	8.95
26.....	7.15	7.8	8.65	6.8	8.45	6.3	6.75	9.4	9.75	14.25	14.15	8.85
27.....	7.1	7.75	8.6	6.85	8.25	6.3	7.1	9.4	9.75	12.95	16.4	8.45
28.....	7.0	7.65	8.45	7.05	8.1	6.35	7.25	9.35	9.7	10.85	16.5	8.85
29.....	7.0	7.55	8.35	7.2	.....	6.35	7.35	9.5	9.55	10.5	14.9	8.5
30.....	7.0	7.7	8.15	7.05	.....	6.3	7.25	9.5	9.45	10.4	14.4	8.75
31.....	7.0	.....	8.0	7.05	.....	6.25	.....	9.5	.....	10.55	13.85	.....

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	8.5	7.45	7.55	7.5	7.75	7.4	7.9	8.55	8.95	10.05	9.25	10.75
2.	8.2	7.45	7.5	7.5	7.7	7.4	7.95	8.55	9.1	10.1	9.2	10.95
3.	8.2	7.45	7.45	7.5	7.7	7.4	7.9	8.55	9.05	10.25	9.25	11.5
4.	8.15	7.4	7.4	7.55	7.65	7.4	7.95	8.35	9.05	10.4	9.3	11.55
5.	8.0	7.45	7.55	7.5	7.6	7.4	7.95	8.3	9.3	9.4	9.2	11.65
6.	7.9	7.5	7.6	7.5	7.6	7.45	7.9	8.4	9.4	9.35	9.1	11.4
7.	7.7	7.5	7.7	7.5	7.6	7.45	7.8	8.55	9.5	9.35	9.0	11.35
8.	7.7	7.5	7.65	7.5	7.6	7.6	7.75	8.55	9.7	9.4	8.8	12.4
9.	8.05	7.55	8.15	7.6	7.55	7.55	7.65	8.45	9.75	9.25	8.9	11.85
10.	8.65	7.6	8.15	7.6	7.5	7.5	7.6	8.4	9.5	9.3	9.0	11.05
11.	8.0	7.6	8.0	7.6	7.75	7.45	7.55	8.4	9.35	9.4	8.95	11.05
12.	7.6	7.6	7.95	7.55	7.75	7.4	7.5	8.4	9.2	9.45	8.95	11.2
13.	7.6	7.7	8.0	7.5	7.65	7.4	7.4	8.35	9.2	9.4	8.65	10.35
14.	7.8	7.7	8.0	7.5	7.6	7.4	7.5	8.4	9.25	9.4	8.65	10.2
15.	7.85	7.7	7.95	7.4	7.6	7.4	7.5	8.35	9.3	9.6	8.55	10.1
16.	7.7	7.65	7.95	7.5	7.55	7.35	7.5	8.25	9.45	9.7	8.35	10.35
17.	7.75	7.6	7.85	7.55	7.6	7.25	7.5	8.3	9.6	9.55	8.3	10.6
18.	7.65	7.55	7.8	7.7	7.6	7.2	7.45	8.3	10.05	9.3	8.3	12.0
19.	7.6	7.6	7.8	7.7	7.6	7.2	7.4	8.2	10.15	9.25	8.4	11.75
20.	7.6	7.6	7.8	7.55	7.6	7.25	7.45	8.2	10.2	9.1	8.25	11.3
21.	7.6	7.6	7.75	7.6	7.5	7.3	7.85	8.25	10.1	9.05	8.3	11.8
22.	7.5	7.6	7.7	7.85	7.5	7.3	8.15	8.3	10.05	9.0	8.3	10.95
23.	7.55	7.6	7.7	7.75	7.5	7.3	8.4	8.4	10.05	9.05	8.2	10.55
24.	7.5	7.65	7.7	7.7	7.5	7.3	8.55	8.35	9.9	9.05	10.5	10.4
25.	7.5	7.65	7.7	7.75	7.45	7.2	8.7	8.35	9.8	9.05	9.65	10.15
26.	7.5	7.6	7.65	8.05	7.4	7.1	8.8	8.4	9.8	9.05	9.4	10.05
27.	7.5	7.6	7.6	8.15	7.4	7.05	8.8	8.55	9.9	9.0	9.25	10.15
28.	7.45	7.6	7.55	8.1	7.4	7.0	8.9	8.65	9.9	9.25	9.25	9.55
29.	7.45	7.6	7.5	7.85	-----	7.0	8.85	8.75	9.9	9.2	9.3	9.25
30.	7.5	7.6	7.5	7.9	-----	7.05	8.7	8.8	10.1	9.45	9.5	9.0
31.	7.45	-----	7.5	7.9	-----	7.7	-----	8.95	-----	9.3	10.45	-----
1907-8.												
1.	8.7	8.35	13.25	7.7	7.2	7.1	7.25	8.55	8.85	6.9	9.65	15.8
2.	8.5	8.6	12.15	7.7	7.2	7.1	7.1	8.4	8.45	6.55	9.9	15.15
3.	8.35	8.45	10.6	7.7	7.2	7.05	7.0	8.3	8.3	6.15	11.3	15.15
4.	8.2	8.45	9.8	7.7	7.2	7.1	7.0	8.15	8.2	7.3	11.35	15.45
5.	8.1	9.55	9.65	7.7	7.2	7.05	6.9	8.0	8.05	6.8	11.25	15.35
6.	8.15	13.4	9.6	7.7	7.2	7.1	6.85	7.9	7.85	6.35	10.85	13.15
7.	8.1	13.9	9.5	7.7	7.15	7.15	6.8	7.75	7.75	6.25	10.9	10.7
8.	8.05	11.55	9.5	7.65	7.15	7.15	6.8	7.7	7.55	6.1	11.15	10.05
9.	7.95	9.9	9.5	7.6	7.2	7.0	6.8	7.7	7.5	6.1	11.6	10.75
10.	7.9	9.45	9.15	7.6	7.2	7.0	6.8	7.6	7.55	6.1	13.9	11.7
11.	7.8	9.35	9.1	7.6	7.2	7.05	6.9	7.7	7.5	6.1	17.6	11.55
12.	7.8	8.95	8.85	7.65	7.2	7.05	7.55	8.3	7.3	6.1	16.4	10.85
13.	7.75	8.8	8.8	7.7	7.2	7.0	7.4	8.3	7.25	6.1	14.05	10.6
14.	7.65	8.7	8.7	7.65	7.4	7.05	7.4	8.15	7.15	6.05	11.25	10.3
15.	7.6	8.6	8.6	7.6	7.4	7.05	7.25	7.95	7.1	5.95	10.15	9.6
16.	8.05	8.4	8.55	7.65	7.4	7.0	7.1	7.75	7.1	5.95	10.05	9.25
17.	7.85	8.45	8.5	7.65	7.4	7.0	7.1	7.7	7.1	7.1	9.95	8.8
18.	7.75	8.35	8.4	7.55	7.5	6.95	7.05	7.65	7.05	6.15	9.8	8.7
19.	7.6	8.3	8.35	7.5	7.5	6.9	7.0	7.9	7.0	6.1	9.7	8.6
20.	8.0	8.2	8.25	7.5	7.5	6.95	7.35	7.9	6.85	6.4	9.7	8.45
21.	9.25	8.2	8.15	7.5	7.4	6.95	7.4	7.9	6.8	7.25	9.7	8.3
22.	8.85	8.2	8.15	7.4	7.3	7.0	7.45	8.0	6.75	7.25	9.9	8.15
23.	8.7	8.15	8.1	7.4	7.3	7.05	7.7	7.85	6.55	11.85	9.9	8.1
24.	8.5	8.1	8.1	7.4	7.3	6.95	7.7	7.7	6.5	9.4	9.95	8.0
25.	8.3	8.1	8.05	7.3	7.3	6.85	8.15	7.6	6.45	8.45	10.3	7.85
26.	8.25	8.0	8.0	7.3	7.3	6.8	8.7	7.65	6.3	9.95	10.45	7.75
27.	8.3	8.1	8.0	7.3	7.3	6.8	8.8	7.75	6.25	11.2	10.5	7.6
28.	8.4	8.35	7.95	7.3	7.25	7.0	8.55	8.3	6.15	10.45	10.2	7.55
29.	8.55	8.4	7.9	7.3	7.2	7.35	8.35	8.6	6.1	9.85	10.3	7.5
30.	8.95	12.45	7.8	7.3	-----	7.3	8.35	8.75	6.4	9.5	10.3	7.5
31.	8.55	-----	7.8	7.3	-----	7.2	-----	8.75	-----	9.55	13.1	-----
1908-9.												
1.	7.4	6.8	6.7	6.7	6.7	6.6	6.15	7.85	8.95	9.65	10.85	9.5
2.	7.4	6.8	6.7	6.7	6.7	6.7	6.2	8.0	8.75	9.65	11.2	12.15
3.	7.35	6.8	6.7	6.9	6.75	6.5	6.3	7.85	8.55	9.3	10.65	12.5
4.	7.3	6.8	6.7	6.8	6.8	6.5	6.4	7.65	8.45	9.2	10.45	11.25
5.	7.3	6.8	6.7	6.8	6.8	6.5	6.3	7.5	8.4	9.2	10.5	10.25

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
6.....	7.25	6.8	6.7	6.8	6.7	6.5	6.3	7.5	8.4	11.0	10.5	9.95
7.....	7.2	6.8	6.7	6.8	6.7	6.5	6.2	7.85	8.4	11.55	9.75	9.45
8.....	7.1	6.8	6.7	6.85	6.7	6.5	6.2	7.9	8.3	12.6	10.05	9.1
9.....	7.1	6.8	6.7	6.8	6.7	6.4	6.2	7.95	8.3	12.5	10.1	9.1
10.....	7.1	6.8	6.7	6.8	6.75	6.4	6.2	7.7	8.25	12.8	10.45	9.65
11.....	7.0	6.8	6.7	6.85	6.8	6.4	6.1	7.6	8.15	12.3	10.3	10.15
12.....	7.0	6.8	6.7	6.8	6.8	6.4	6.1	7.6	8.0	12.8	10.3	9.9
13.....	7.0	6.8	6.7	6.8	6.8	6.4	6.1	7.85	8.1	12.0	10.35	10.65
14.....	7.0	6.8	6.75	6.8	6.75	6.4	6.1	8.1	8.35	11.15	10.85	11.1
15.....	6.9	6.8	6.9	6.8	6.7	6.35	6.0	8.35	10.55	10.4	10.4	11.2
16.....	6.9	6.8	6.8	6.8	6.7	6.3	6.0	8.5	9.6	10.65	10.8	11.6
17.....	6.9	6.8	6.8	6.75	6.7	6.25	6.0	8.6	10.0	10.45	11.7	11.4
18.....	6.9	6.8	6.8	6.7	6.7	6.2	6.0	8.75	10.3	9.95	11.8	11.4
19.....	6.9	6.8	6.75	6.7	6.6	6.2	6.0	8.85	10.15	9.5	11.65	11.0
20.....	6.9	6.8	6.7	6.7	6.6	6.85	6.0	8.95	10.1	9.65	10.8	10.95
21.....	6.85	6.8	6.8	6.8	6.6	6.85	5.9	9.0	10.15	9.55	10.45	10.5
22.....	6.8	6.8	6.8	6.8	6.55	6.8	5.9	9.05	10.4	9.35	10.1	10.4
23.....	6.8	6.8	6.85	6.8	6.5	6.8	5.9	9.05	10.65	9.1	9.75	10.05
24.....	6.8	6.8	6.9	6.9	6.5	6.7	5.9	9.05	10.3	9.0	9.95	9.85
25.....	6.8	6.75	6.8	6.8	6.55	6.6	5.9	9.1	9.75	9.0	9.65	9.55
26.....	6.8	6.7	6.8	6.8	6.6	6.55	5.9	9.1	9.65	9.75	9.05	9.25
27.....	6.8	6.7	6.8	6.8	6.6	6.5	5.9	9.1	9.45	9.8	9.8	9.2
28.....	6.8	6.7	6.75	6.75	6.6	6.4	5.9	9.05	9.3	10.2	9.6	9.1
29.....	6.8	6.7	6.75	6.7	6.4	7.4	9.15	9.5	10.5	9.6	8.7	8.7
30.....	6.8	6.7	6.75	6.7	6.3	7.4	9.1	9.7	10.45	8.75	8.6	8.6
31.....	6.8	6.7	6.7	6.6	6.2	6.2	9.1	9.1	10.35	8.6	8.6	8.6
1909-10.												
1.....	8.5	7.5	7.05	8.65	7.45	6.75	8.15	8.65	7.95	10.55	6.9	7.8
2.....	8.4	7.4	7.1	8.5	7.4	6.7	8.3	8.65	7.8	10.15	6.8	7.65
3.....	8.3	7.4	7.1	8.4	7.4	6.7	8.3	8.8	7.65	10.55	6.7	7.6
4.....	8.2	7.4	7.1	8.25	7.4	6.6	8.3	8.9	7.4	10.15	6.7	7.6
5.....	8.2	7.3	7.05	8.15	7.3	6.6	8.25	9.1	7.3	10.1	6.65	7.45
6.....	8.15	7.3	7.0	8.1	7.3	6.6	8.1	9.4	7.2	9.6	6.75	7.65
7.....	8.1	7.3	7.0	8.05	7.3	6.55	8.0	9.05	7.05	9.25	6.95	7.95
8.....	8.0	7.3	7.0	8.0	7.3	6.5	8.0	9.1	6.95	8.9	7.35	10.6
9.....	8.0	7.3	7.1	7.95	7.25	6.5	7.9	9.1	6.75	8.55	7.2	9.85
10.....	7.9	7.3	7.15	7.9	7.2	6.45	7.8	9.1	6.6	8.35	7.0	9.65
11.....	7.9	7.2	7.3	7.95	7.1	6.4	7.8	9.15	6.5	8.6	6.85	10.1
12.....	7.85	7.2	7.3	8.35	7.1	6.85	7.6	9.35	7.3	9.1	6.6	9.6
13.....	7.75	7.2	7.25	8.25	7.1	7.45	7.65	9.45	7.4	8.1	6.65	9.2
14.....	7.6	7.2	7.2	8.2	7.1	7.5	7.7	9.5	7.4	8.05	6.65	8.95
15.....	7.6	7.2	7.15	8.1	7.1	7.65	7.75	9.65	7.25	7.9	6.95	8.75
16.....	7.6	7.2	7.2	7.95	7.0	7.75	7.7	9.4	7.1	7.95	8.15	8.45
17.....	7.6	7.1	7.1	7.9	7.0	8.0	7.7	9.15	7.8	7.8	8.05	8.2
18.....	7.75	7.1	7.15	7.8	7.0	8.1	7.8	9.1	7.75	7.8	7.95	8.1
19.....	7.8	7.1	7.2	7.7	7.0	8.2	7.7	9.1	7.05	7.7	8.3	8.15
20.....	7.7	7.1	7.2	7.6	7.0	8.1	7.7	9.15	6.75	7.5	8.45	9.8
21.....	7.7	7.1	7.2	7.6	7.0	7.95	8.05	9.1	6.6	7.35	8.2	11.1
22.....	7.75	7.1	7.1	7.7	6.95	7.9	8.2	9.2	6.4	7.2	8.65	10.0
23.....	7.7	7.1	7.1	7.7	6.9	8.0	8.3	9.2	6.3	7.1	8.95	9.4
24.....	7.7	7.1	7.1	7.7	6.9	8.0	8.25	9.3	6.2	7.0	9.7	9.1
25.....	7.7	7.1	7.1	7.7	6.9	8.0	8.1	9.35	7.9	6.95	9.1	8.85
26.....	7.6	7.1	7.1	7.75	6.9	8.0	8.0	9.15	8.4	7.15	8.75	8.55
27.....	7.6	7.1	7.15	7.9	6.8	7.8	8.0	8.95	8.95	7.05	8.45	8.35
28.....	7.7	7.0	10.75	7.8	6.8	7.95	8.0	8.75	8.35	7.0	8.3	8.2
29.....	7.6	7.0	9.9	7.75	6.8	8.0	8.2	8.5	11.35	6.9	8.15	8.1
30.....	7.5	7.0	9.2	7.65	6.8	7.9	8.35	8.35	11.2	7.05	7.95	8.0
31.....	7.5	7.0	9.0	7.55	6.8	8.0	8.0	8.15	7.0	7.8	7.8	8.0
1910-11.												
1.....	8.0	7.0	6.6	6.3	6.35	6.6	6.4	6.6	10.7	10.4	13.55	10.7
2.....	7.8	7.0	6.5	6.3	6.3	6.6	6.95	6.5	9.6	11.1	12.9	11.15
3.....	7.8	7.0	6.5	6.25	6.3	6.5	6.9	6.35	9.3	11.4	12.85	10.45
4.....	7.75	7.0	6.5	6.2	6.3	6.5	6.85	6.35	9.5	10.4	12.9	11.55
5.....	7.65	7.0	6.5	6.2	6.3	6.5	6.7	6.3	9.4	10.85	12.15	12.8
6.....	7.5	7.0	6.5	6.2	6.35	6.4	6.6	6.6	9.4	11.05	11.65	13.05
7.....	7.4	7.0	6.5	6.2	6.4	6.4	6.4	8.3	9.4	11.55	11.25	13.15
8.....	7.35	7.0	6.5	6.2	6.4	6.4	6.35	8.85	9.45	11.55	10.85	12.9
9.....	7.35	7.0	6.5	6.2	6.45	6.4	6.2	9.1	9.6	11.6	10.75	12.4
10.....	7.3	7.0	6.5	6.2	6.5	6.3	6.2	9.05	9.4	12.05	10.2	12.1

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
11.....	7.2	6.9	6.5	6.2	6.5	6.3	6.1	8.8	9.65	13.35	10.0	11.75
12.....	7.15	6.9	6.5	6.2	6.4	6.3	6.1	8.75	11.75	14.0	9.9	12.1
13.....	7.1	6.9	6.5	6.2	6.4	6.2	6.1	8.85	13.45	14.25	9.75	12.25
14.....	7.3	6.9	6.45	6.2	6.5	6.3	6.05	12.4	14.7	13.1	9.55	11.6
15.....	7.2	6.9	6.4	6.2	6.6	6.4	5.95	10.05	16.45	12.3	9.35	10.95
16.....	7.1	6.9	6.4	6.2	6.6	6.4	5.9	9.05	14.05	12.1	9.15	10.6
17.....	7.1	6.9	6.4	6.2	7.4	6.3	5.9	13.9	13.2	11.95	8.95	10.2
18.....	7.05	6.9	6.4	6.2	8.3	6.2	5.9	11.1	11.5	12.6	8.75	9.95
19.....	7.0	6.8	6.4	6.2	7.5	6.2	5.9	10.8	10.75	14.9	8.55	9.9
20.....	6.9	6.8	6.4	6.1	7.45	6.2	5.9	10.3	11.05	14.1	8.5	10.2
21.....	6.9	6.8	6.4	6.1	7.25	6.2	5.9	10.45	11.35	14.0	8.35	10.8
22.....	7.0	6.7	6.4	6.1	6.9	6.2	5.9	10.85	10.85	13.7	8.3	9.7
23.....	6.9	6.7	6.4	6.2	6.8	7.25	6.6	10.75	10.9	13.85	8.1	9.5
24.....	6.8	6.7	6.4	6.2	6.75	7.0	6.6	10.8	10.75	13.15	7.9	9.8
25.....	6.85	6.7	6.4	6.2	6.7	7.0	7.75	10.75	10.6	14.85	9.15	11.2
26.....	6.8	6.7	6.3	6.2	6.7	7.15	8.6	10.8	10.6	14.0	8.75	10.6
27.....	6.8	6.6	6.3	6.2	6.7	7.2	8.7	10.75	10.55	12.6	9.5	10.7
28.....	6.8	6.6	6.3	6.3	6.7	6.7	7.25	12.45	10.35	11.95	9.7	9.95
29.....	6.8	6.6	6.3	6.4	6.7	6.65	6.8	11.7	10.35	13.0	9.5	9.75
30.....	6.9	6.6	6.3	6.4	6.5	6.7	11.0	10.5	13.05	9.25	9.55	
31.....	7.0		6.3	6.4	6.4		11.05		13.35	9.1		
1911-12.												
1.....	9.55	10.5	9.4	8.9	8.9	7.9	9.0	8.3	11.1	10.8	10.85	15.7
2.....	9.4	10.5	9.3	9.0	8.9	7.9	8.75	8.3	11.25	10.7	10.2	14.85
3.....	9.2	10.65	9.5	9.0	8.8	7.9	8.55	8.2	11.35	10.6	9.9	13.6
4.....	9.1	10.8	9.4	10.0	8.7	7.9	8.4	8.05	11.5	10.75	9.6	13.6
5.....	9.45	10.75	9.3	9.8	8.7	7.9	8.5	7.95	11.6	10.7	9.45	13.1
6.....	9.95	10.65	9.3	9.7	8.7	7.9	8.6	7.8	11.75	10.65	9.25	12.1
7.....	9.8	10.85	9.3	9.45	8.6	7.9	8.5	8.0	12.05	10.45	9.1	14.2
8.....	10.3	10.65	9.2	9.3	8.6	7.9	8.45	8.0	12.7	10.25	8.95	12.7
9.....	10.0	10.5	9.35	9.2	8.6	7.9	8.4	8.35	13.4	10.1	8.65	12.35
10.....	9.7	10.4	9.2	9.1	8.6	7.9	8.5	9.6	13.85	10.35	8.55	11.6
11.....	10.9	10.3	9.05	9.0	8.6	7.9	8.8	10.15	14.05	10.4	8.4	14.4
12.....	11.35	10.1	9.0	9.0	8.4	7.9	8.8	10.35	14.2	9.6	8.3	14.8
13.....	12.6	10.35	8.95	8.9	8.45	7.9	8.7	10.5	14.3	9.4	8.15	16.05
14.....	12.6	10.95	9.1	8.9	8.5	7.8	8.95	10.4	14.2	9.2	8.15	16.55
15.....	12.65	10.7	9.2	8.8	8.45	7.8	9.1	10.3	14.0	9.0	8.4	17.0
16.....	13.0	10.55	9.3	8.85	8.4	7.8	9.4	10.35	13.75	8.75	8.35	16.9
17.....	12.95	10.45	9.2	9.1	8.3	7.7	9.5	10.6	13.6	8.75	9.35	16.65
18.....	12.8	10.3	9.35	9.1	8.3	8.15	9.35	10.65	13.45	9.3	12.35	14.35
19.....	12.8	10.2	9.5	9.0	8.3	8.4	9.4	10.65	13.3	9.35	13.6	11.85
20.....	12.6	10.1	9.5	9.1	8.3	8.5	9.5	10.75	13.1	8.75	14.95	11.1
21.....	12.55	10.0	9.5	9.1	8.2	8.45	9.4	10.8	12.65	8.75	15.9	10.65
22.....	12.4	9.9	9.6	9.0	8.2	8.6	9.25	10.8	12.2	8.9	15.1	10.4
23.....	12.45	9.8	9.45	9.05	8.2	8.6	9.1	10.9	11.85	9.15	16.5	10.2
24.....	12.2	9.7	9.3	9.2	8.1	8.25	8.95	10.95	11.6	8.75	15.4	9.8
25.....	11.5	9.7	9.1	9.2	8.05	8.15	8.8	10.9	11.3	9.4	16.3	9.65
26.....	11.35	9.6	9.0	9.2	8.0	8.0	8.7	10.9	11.1	9.5	13.6	9.5
27.....	11.15	9.6	9.0	9.1	8.0	8.0	8.6	10.9	10.9	9.0	13.7	9.35
28.....	10.95	9.5	8.95	9.1	8.0	7.9	8.7	11.0	10.9	8.9	12.45	9.2
29.....	10.8	9.5	8.8	9.1	8.0	7.8	8.6	11.0	10.9	9.5	12.65	9.1
30.....	10.7	9.4	8.85	9.0		9.5	8.45	11.0	10.9	9.5	13.75	9.1
31.....	10.4		8.8	9.0		9.1		11.1		10.35	14.85	
1912-13.												
1.....	11.65	8.2	8.2	8.3	7.85	8.8	7.7	9.55	8.0	9.85	8.8	9.35
2.....	10.85	8.2	8.2	8.3	7.9	8.7	7.7	9.4	7.7	9.35	9.65	8.65
3.....	10.85	8.2	8.2	8.2	7.9	10.6	7.6	9.0	7.75	8.9	8.5	8.75
4.....	11.15	8.1	8.2	8.2	7.9	10.15	7.6	8.55	8.25	8.65	8.4	8.6
5.....	11.0	8.1	8.3	8.2	7.9	9.95	7.5	8.25	7.85	8.55	8.4	10.45
6.....	10.65	8.1	8.2	8.1	7.9	9.75	7.5	8.1	7.7	8.65	8.3	10.9
7.....	10.45	8.0	8.2	8.0	7.9	9.6	7.5	7.9	7.7	8.55	8.3	12.65
8.....	10.85	8.0	8.2	8.0	7.9	9.6	7.4	7.8	10.0	8.3	8.3	11.7
9.....	11.0	8.0	8.25	8.0	7.9	9.55	7.4	8.4	9.5	8.1	8.4	13.5
10.....	10.0	8.0	8.4	7.9	8.0	9.5	7.4	9.2	8.2	8.0	8.4	11.5
11.....	9.85	7.9	8.5	7.9	8.0	9.4	7.3	9.3	7.85	7.95	9.25	11.85
12.....	9.65	7.9	8.45	7.9	8.0	9.2	7.3	9.15	7.7	7.75	8.85	11.05
13.....	9.5	7.9	8.25	7.8	8.05	9.1	7.2	8.65	8.3	7.7	8.65	10.7
14.....	9.4	7.8	8.2	7.8	8.25	9.0	7.2	8.45	8.0	7.6	8.5	10.2
15.....	9.25	7.8	8.15	7.8	11.4	9.0	7.2	8.2	8.45	7.5	8.4	9.7

Daily gage height, in feet, of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
16.....	9.1	7.8	8.3	7.8	10.85	8.9	7.15	8.65	8.25	7.5	8.9	9.7
17.....	9.1	7.9	9.0	7.8	10.5	8.85	7.1	8.75	8.2	7.4	9.3	9.65
18.....	9.1	8.0	8.9	7.8	10.15	8.7	7.1	8.6	8.4	7.3	11.45	9.5
19.....	9.0	8.1	8.8	7.8	9.9	8.6	7.1	8.55	8.35	7.3	10.7	9.35
20.....	8.9	8.0	8.8	7.7	9.75	8.5	7.4	8.4	8.8	7.2	10.15	9.2
21.....	8.85	8.0	8.7	7.7	9.6	8.4	7.55	8.7	8.55	7.2	10.1	9.1
22.....	8.7	8.0	8.7	7.7	9.55	8.3	8.95	9.0	9.6	7.2	10.05	8.9
23.....	8.7	8.0	8.6	7.7	9.35	8.3	8.1	9.05	10.35	7.75	9.5	8.8
24.....	8.6	8.0	8.6	7.7	9.15	8.2	7.55	8.95	10.2	7.85	9.4	8.6
25.....	8.55	8.1	8.6	7.7	9.1	8.2	7.3	8.6	10.1	7.55	9.2	8.5
26.....	8.45	8.2	8.5	7.7	9.0	8.0	7.2	8.2	9.9	7.3	8.95	9.0
27.....	8.4	8.2	8.5	7.7	8.9	8.0	7.3	8.1	9.2	7.2	8.65	9.7
28.....	8.3	8.2	8.5	7.7	8.85	7.9	7.0	7.95	8.9	7.55	8.5	9.1
29.....	8.3	8.2	8.4	7.7	.....	7.8	8.35	7.8	8.75	7.4	8.5	8.65
30.....	8.35	8.2	8.3	7.7	.....	7.8	8.6	7.7	9.55	7.55	8.5	8.65
31.....	8.3	.....	8.3	7.7	.....	7.7	.....	7.7	.....	9.0	9.65	.....

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.											
1.....	40	2,000	950	11,950	1,500	16.....	20	1,090	2,040	3,900	2,080
2.....	40	1,860	620	7,770	1,660	17.....	20	940	2,800	3,650	1,720
3.....	35	1,280	1,220	13,150	12,510	18.....	15	770	2,090	3,040	1,100
4.....	30	980	3,050	7,940	1,770	19.....	15	730	2,340	3,200	1,100
5.....	30	1,000	480	9,820	1,490	20.....	15	960	2,800	2,570	1,250
6.....	30	1,000	300	14,920	1,250	21.....	3,100	730	3,050	2,460	1,250
7.....	30	980	700	12,180	2,430	22.....	1,460	510	2,800	2,880	2,760
8.....	25	1,080	1,550	13,640	3,180	23.....	670	340	5,080	4,350	2,470
9.....	25	1,360	1,380	10,570	4,310	24.....	300	300	7,890	5,170	1,840
10.....	25	1,420	9,200	8,970	4,800	25.....	80	180	7,200	4,950	1,250
11.....	20	1,610	12,000	8,440	6,250	26.....	70	170	5,600	3,760	1,640
12.....	20	2,360	9,380	6,360	3,440	27.....	670	110	8,070	3,120	3,380
13.....	20	3,060	9,100	5,400	3,440	28.....	420	110	7,660	2,520	4,000
14.....	20	1,700	6,500	4,020	2,730	29.....	90	200	7,580	2,290	4,140
15.....	20	1,240	3,270	5,320	2,310	30.....	60	1,710	7,200	2,050	4,420
						31.....	1,080	.....	7,970	1,830	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3,030	560	320	200	170	440	80	20	1,320	40	3,120	960
2.....	2,470	520	320	200	170	400	70	20	1,460	40	2,910	800
3.....	3,100	520	250	200	170	400	70	20	1,530	50	3,080	640
4.....	2,570	520	250	200	160	370	70	30	1,530	20	3,020	1,920
5.....	2,570	480	250	190	160	330	60	30	1,480	20	2,910	1,960
6.....	2,110	480	250	190	160	320	60	20	1,480	70	2,840	1,080
7.....	2,450	480	250	190	160	300	60	20	1,440	50	2,590	1,810
8.....	2,110	480	250	190	160	290	60	120	1,440	30	1,620	2,600
9.....	2,190	480	250	190	160	260	60	110	1,440	20	1,400	1,740
10.....	1,780	440	250	190	160	210	60	110	1,530	260	1,620	1,640
11.....	1,600	440	250	190	160	210	50	860	1,230	230	1,640	3,820
12.....	1,550	440	250	190	160	200	40	1,040	1,070	220	1,540	5,200
13.....	1,690	440	250	190	160	200	40	980	840	820	1,520	2,750
14.....	1,250	400	250	180	160	170	30	900	730	1,100	1,170	1,950
15.....	1,070	400	250	180	160	160	30	840	550	410	1,660	1,780
16.....	1,630	400	250	180	160	160	30	770	540	330	1,820	4,600
17.....	4,700	400	220	180	170	150	30	710	820	330	2,660	4,820
18.....	2,330	370	220	180	320	150	30	730	550	400	1,640	5,410
19.....	1,450	370	220	180	420	150	30	800	270	400	1,720	4,150
20.....	2,450	370	220	180	780	140	30	940	250	480	1,620	2,920
21.....	1,430	370	220	170	730	130	30	1,000	260	2,950	1,170	2,580
22.....	1,190	370	220	170	600	120	30	1,070	210	850	980	1,800
23.....	1,070	320	210	170	570	120	30	1,120	170	1,100	920	1,710
24.....	970	320	210	170	570	110	20	1,150	170	990	820	1,280
25.....	950	320	210	170	560	110	20	1,170	160	2,820	860	1,060

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
26.....	840	320	210	160	530	100	20	1,250	130	1,860	900	970
27.....	840	320	210	160	500	90	20	1,300	110	3,000	1,680	870
28.....	740	320	210	160	450	90	20	1,300	80	2,820	2,080	750
29.....	690	320	210	160	.....	80	20	1,300	60	2,660	1,600	700
30.....	690	320	210	170	.....	90	20	1,300	50	3,120	1,410	1,910
31.....	510	.....	210	170	.....	100	.....	1,300	.....	3,470	1,060	.....
1901-2.												
1.....	980	1,500	450	250	220	100	30	15	10	40	3,290	7,400
2.....	930	1,240	370	240	210	100	30	15	10	1,710	2,570	5,960
3.....	630	880	350	230	190	100	30	15	10	240	2,200	9,340
4.....	460	800	350	220	180	100	30	15	10	170	1,910	15,930
5.....	410	710	350	230	180	90	30	15	10	170	1,970	22,200
6.....	620	640	350	260	180	90	30	15	10	410	2,100	31,000
7.....	650	590	320	350	200	90	30	10	10	760	1,360	45,000
8.....	600	580	290	320	190	80	30	10	155	2,280	1,530	32,000
9.....	490	740	290	290	170	80	25	10	625	3,630	1,300	25,300
10.....	410	640	290	270	150	80	25	10	95	11,200	1,330	19,700
11.....	340	590	280	270	140	70	25	10	25	14,000	8,800	18,440
12.....	450	550	280	270	140	60	25	10	25	7,500	8,500	17,420
13.....	560	510	280	270	130	50	25	10	75	4,300	6,300	15,840
14.....	570	480	280	250	120	50	25	10	65	2,160	6,150	10,060
15.....	540	450	270	250	120	50	25	10	45	1,550	5,800	7,430
16.....	490	440	270	230	120	50	25	10	30	2,260	6,000	5,360
17.....	460	430	270	220	120	50	25	10	40	1,720	4,800	4,000
18.....	400	410	270	230	120	50	25	10	20	1,470	5,600	3,670
19.....	390	400	280	270	120	50	20	10	20	1,100	5,600	3,320
20.....	330	380	280	270	120	50	20	10	50	6,000	5,430	2,730
21.....	330	370	270	250	120	40	20	10	15	4,880	5,760	2,380
22.....	390	350	270	250	110	40	20	10	10	14,600	5,650	2,125
23.....	2,040	530	260	230	100	40	20	10	10	16,300	7,680	2,380
24.....	5,690	620	290	220	100	40	20	10	10	13,450	9,100	2,125
25.....	5,690	580	290	270	100	40	20	10	10	13,450	9,100	2,100
26.....	4,220	550	280	290	100	30	20	10	10	17,100	6,280	2,150
27.....	2,510	540	290	290	100	30	20	10	10	13,000	8,100	1,990
28.....	1,980	520	370	280	100	30	20	10	10	10,900	10,700	1,990
29.....	1,840	500	280	270	.....	30	20	10	10	8,000	10,900	1,740
30.....	1,360	460	280	250	.....	30	20	10	10	5,310	10,360	1,680
31.....	1,360	.....	260	230	.....	30	.....	10	.....	3,800	10,000	.....
1902-3.												
1.....	1,620	750	1,070	375	480	1,050	270	340	1,500	2,740	700	5,620
2.....	3,320	1,250	530	375	440	930	240	360	1,460	3,390	650	3,240
3.....	1,440	2,000	500	375	440	870	190	270	1,340	3,940	600	2,480
4.....	1,390	750	455	315	420	750	170	900	1,380	4,930	600	2,250
5.....	1,390	700	470	315	400	700	150	1,140	3,230	6,080	950	2,400
6.....	1,245	630	530	315	400	660	150	1,500	3,830	6,550	800	2,400
7.....	2,070	610	510	310	1,220	585	140	1,300	2,110	7,070	870	2,010
8.....	2,300	590	500	305	2,560	565	105	1,330	1,520	7,130	530	1,780
9.....	2,140	590	500	305	2,510	550	105	1,300	2,530	7,200	1,030	2,070
10.....	2,000	590	495	295	2,080	530	110	1,720	2,700	6,480	1,330	1,700
11.....	1,910	560	495	295	1,480	460	110	1,670	2,780	6,210	1,090	1,970
12.....	1,810	560	490	295	1,380	420	120	1,570	5,700	5,540	830	1,790
13.....	1,760	510	470	295	1,350	395	840	1,570	3,630	4,200	830	1,340
14.....	1,420	530	490	295	1,350	395	700	1,510	2,760	3,370	1,050	2,150
15.....	1,080	530	570	310	1,120	395	550	1,510	2,660	2,690	1,020	2,650
16.....	1,040	490	600	310	1,060	380	465	1,640	2,530	2,060	1,200	2,320
17.....	1,010	460	530	305	950	365	465	1,600	2,550	2,000	1,600	2,290
18.....	960	450	530	305	920	350	450	1,640	2,610	1,750	4,100	2,210
19.....	910	450	530	300	820	400	540	1,480	2,490	1,630	3,800	2,060
20.....	905	450	460	300	720	390	475	1,370	2,490	1,750	3,640	2,060
21.....	905	450	480	300	700	365	525	1,310	2,430	1,380	3,330	2,380
22.....	865	440	420	310	1,720	340	490	1,260	2,410	1,020	3,210	8,960
23.....	845	430	420	315	1,380	325	415	1,260	2,420	930	2,230	4,040
24.....	815	425	400	315	1,380	410	345	1,310	2,520	970	1,380	3,540
25.....	815	420	405	410	1,380	470	310	1,310	2,330	1,060	1,380	4,240
26.....	765	420	410	540	1,260	405	1,270	1,310	2,210	1,150	3,920	3,930
27.....	720	415	415	580	1,220	385	1,020	1,360	2,350	930	2,610	3,980
28.....	720	415	415	530	1,140	345	440	1,360	2,480	810	3,300	4,480
29.....	720	415	410	500	.....	345	365	1,420	2,520	780	3,300	8,100
30.....	810	415	405	500	.....	315	330	1,420	2,420	750	3,500	5,640
31.....	740	.....	380	480	.....	315	.....	1,420	.....	720	8,100	.....

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—(Contd.)

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	8,360	500	295	210	130	105	45	10	a 185	420	1,070	950
2.	6,190	500	295	210	a 125	a 105	45	10	445	a 430	960	920
3.	5,950	500	295	210	125	95	a 40	a 10	370	a 390	a 850	a 890
4.	5,460	500	290	210	120	90	40	5	a 280	380	820	1,170
5.	5,220	460	280	210	a 120	a 85	40	5	240	320	815	1,050
6.	4,330	460	275	200	120	90	40	5	155	a 240	a 810	a 10,340
7.	3,320	450	275	200	120	95	a 40	a 5	a 120	220	720	15,600
8.	2,180	440	270	200	a 115	a 95	40	5	900	a 250	545	30,600
9.	2,060	435	270	200	115	85	40	5	a 150	230	a 425	75,100
10.	1,760	415	270	190	115	85	a 30	5	330	a 240	385	115,500
11.	1,170	395	270	190	a 115	85	30	a 5	a 445	220	365	149,200
12.	1,050	395	270	170	115	a 85	20	5	405	220	a 315	106,700
13.	1,290	390	270	170	115	85	a 20	5	460	a 400	315	45,000
14.	1,140	385	270	170	a 115	80	20	a 5	a 350	420	a 425	22,000
15.	1,070	385	265	170	115	80	20	55	335	1,280	a 425	18,900
16.	1,090	380	260	170	120	a 80	a 20	120	a 285	a 1,660	440	16,100
17.	1,060	375	255	165	120	80	20	95	220	1,560	420	12,320
18.	1,040	365	250	165	a 120	80	20	55	a 180	1,050	a 585	13,040
19.	990	355	245	a 165	120	80	a 20	a 205	1,900	a 1,720	735	15,020
20.	990	345	230	165	125	a 75	20	120	a 2,800	920	1,000	15,900
21.	860	335	230	165	125	75	20	a 65	595	995	a 1,100	12,320
22.	810	330	230	a 165	a 125	75	a 20	65	460	a 945	1,140	8,650
23.	710	330	230	165	125	a 70	20	85	a 1,340	1,080	1,100	9,870
24.	680	330	230	170	120	55	15	470	745	905	a 2,160	8,650
25.	650	335	230	a 175	115	50	a 15	a 290	745	a 905	2,200	7,600
26.	620	335	210	170	a 115	a 50	15	240	a 4,960	875	2,000	6,900
27.	600	330	205	165	110	50	15	a 150	3,660	875	a 1,710	6,720
28.	600	320	200	a 160	110	a 50	15	150	1,575	a 875	1,470	7,420
29.	580	320	205	160	a 105	50	a 10	140	a 585	970	1,360	6,720
30.	550	320	210	a 155	.....	45	10	a 125	385	1,060	a 1,100	5,670
31.	500	.....	215	155	.....	a 45	.....	120	.....	a 1,150	1,000	.....
1904-5.												
1.	7,770	6,000	a 1,640	1,360	900	2,050	2,630	2,970	6,400	6,830	a 10,430	3,000
2.	6,200	a 5,320	1,600	a 1,330	900	1,980	2,410	3,270	6,580	5,220	8,440	2,850
3.	3,920	4,270	a 1,560	1,250	a 900	2,050	2,380	3,650	6,770	4,230	6,100	a 2,450
4.	4,100	3,220	2,520	1,220	880	1,750	2,230	3,270	7,510	3,980	a 5,020	2,510
5.	4,450	a 4,350	3,740	a 1,130	860	2,130	2,140	3,390	8,450	3,790	4,840	2,810
6.	3,750	3,780	a 3,390	1,100	a 850	2,840	2,350	3,650	9,210	3,690	4,300	a 2,870
7.	4,630	a 3,200	3,220	1,120	950	3,000	2,390	3,800	10,330	a 3,220	4,190	7,680
8.	7,600	2,950	a 3,070	a 1,100	900	3,250	2,290	3,940	10,800	2,360	4,070	8,100
9.	7,950	2,880	3,000	1,090	a 800	3,330	2,260	3,800	11,400	2,500	a 3,670	13,140
10.	7,080	a 3,010	a 3,100	1,080	790	3,250	2,260	4,230	12,360	a 2,210	4,070	13,000
11.	8,830	2,860	3,100	a 1,070	790	3,330	2,200	4,090	13,410	2,070	4,300	a 11,440
12.	12,680	a 2,650	3,100	1,010	a 770	3,500	2,020	3,940	13,880	1,810	a 4,140	11,300
13.	16,700	2,600	a 3,070	990	720	3,420	1,960	4,090	15,410	a 1,680	5,930	10,500
14.	17,100	2,530	2,960	a 970	720	3,500	1,960	4,380	16,940	1,680	7,900	a 10,500
15.	18,300	a 2,390	2,960	970	a 720	3,760	1,960	4,670	16,090	6,080	a 10,100	10,500
16.	18,900	2,320	a 2,960	970	880	3,590	1,900	4,670	14,900	a 2,650	9,320	9,080
17.	18,500	a 2,260	2,840	a 1,000	1,400	4,110	1,960	4,980	12,850	10,730	11,100	a 8,010
18.	17,500	2,060	2,720	1,150	1,320	4,110	2,330	5,140	12,340	a 4,910	a 16,300	5,750
19.	15,900	1,860	a 2,540	1,300	1,900	3,840	2,460	5,140	12,560	7,830	12,600	5,100
20.	13,920	a 1,770	2,610	a 1,500	1,900	3,840	2,600	5,310	a 12,660	a 11,930	10,900	a 4,130
21.	12,480	1,770	2,470	1,410	a 1,950	3,670	2,890	5,140	12,810	10,130	8,910	4,610
22.	10,900	a 1,740	a 2,400	1,410	1,870	3,330	2,890	5,310	13,100	a 9,160	7,920	8,790
23.	10,020	1,740	a 2,280	a 1,410	1,990	3,250	2,530	6,210	a 12,600	12,080	8,200	a 19,140
24.	8,270	1,740	2,160	1,360	1,710	3,160	2,460	5,490	12,120	12,080	a 8,340	23,870
25.	6,870	a 1,740	1,800	1,220	1,730	3,420	2,460	4,980	11,510	a 14,900	9,700	27,170
26.	6,180	1,720	a 1,440	a 1,180	1,950	3,330	2,670	4,980	a 10,770	15,440	a 8,160	22,130
27.	5,490	1,640	1,480	1,130	2,070	3,330	2,740	5,490	8,470	15,990	7,520	a 12,300
28.	7,050	a 1,620	a 1,480	1,080	2,040	3,250	2,970	6,030	6,810	a 16,750	a 6,250	9,540
29.	8,100	1,540	1,480	a 980	.....	2,920	2,890	5,670	a 6,460	13,960	4,800	9,770
30.	9,150	1,540	a 1,360	950	.....	2,760	2,970	5,310	6,460	11,960	4,120	14,130
31.	6,700	.....	1,360	a 930	.....	2,600	.....	5,850	.....	10,960	a 3,430	.....
1905-6.												
1.	11,750	1,320	2,880	3,450	2,010	3,280	a 780	a 1,870	6,590	4,970	11,480	a 16,080
2.	15,200	1,300	a 7,160	a 2,890	a 1,410	3,090	745	2,270	6,460	4,810	13,920	a 17,310
3.	a 14,130	a 1,290	7,420	2,560	1,340	2,900	710	2,670	a 6,590	a 4,970	13,020	16,080
4.	12,080	1,270	5,560	2,470	2,090	2,900	a 670	a 2,820	6,480	4,600	13,170	a 14,410
5.	12,570	1,710	a 5,150	a 2,220	2,850	2,670	670	3,850	5,950	5,260	a 15,870	13,950

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
6.	a14,530	3,300	4,810	2,100	3,710	2,510	1,620	4,870	a 5,150	a 6,300	17,970	13,720
7.	13,400	a 5,640	4,140	2,080	4,420	a 2,270	a 1,370	a 3,490	4,480	3,520	21,340	a12,730
8.	9,280	8,360	a 3,850	2,060	4,550	2,120	1,155	2,630	4,220	a11,000	a19,700	10,420
9.	a 6,970	9,720	a 3,480	a 1,840	5,210	2,020	1,125	2,370	a 4,080	a10,880	26,950	8,740
10.	6,370	a10,810	a 3,110	1,830	6,790	a 1,920	a 1,060	a 2,090	4,080	10,010	23,230	a 7,440
11.	5,830	13,500	3,000	1,820	a 6,140	1,860	965	1,920	3,780	8,610	a18,500	7,320
12.	a 5,700	10,940	2,890	1,810	6,140	1,740	940	1,880	a 3,490	a 7,870	20,030	6,940
13.	4,610	a 7,020	2,780	a 1,760	5,610	1,730	a 970	a 3,030	3,340	9,080	16,770	6,520
14.	3,820	7,020	a 2,560	1,690	a 4,900	a 1,610	970	3,120	3,320	8,800	a13,370	a 6,870
15.	a 3,040	7,770	3,680	1,620	4,760	1,620	970	3,330	a 3,420	a 9,320	22,670	5,800
16.	2,860	a 6,720	5,680	a 1,580	5,240	1,580	a 810	a 3,660	3,420	14,530	20,650	a 4,720
17.	2,790	7,440	a 6,420	1,580	a 5,830	a 1,590	865	3,770	4,460	16,260	a13,970	6,080
18.	a 2,790	8,040	7,460	1,580	6,030	1,370	1,005	3,770	4,430	a16,980	14,570	6,760
19.	2,690	a 6,840	8,840	a 1,580	5,430	1,260	a 1,005	a 4,490	a 4,350	15,770	14,100	a 8,010
20.	2,590	6,530	a 7,720	1,580	a 5,780	a 1,150	1,040	4,750	4,870	16,470	a13,170	7,060
21.	a 2,400	5,900	8,400	1,580	7,190	1,090	1,005	5,130	a 4,800	a14,570	12,900	3,830
22.	2,310	a 4,840	9,080	a 1,520	6,310	a 1,020	a 1,220	a 5,010	4,880	13,520	13,350	a 3,070
23.	2,130	4,000	a 7,630	1,440	a 5,290	890	1,220	4,930	5,230	15,770	a13,810	6,090
24.	a 1,950	3,850	6,520	1,440	5,420	840	1,120	5,120	a 5,190	a16,210	14,730	6,470
25.	1,860	a 3,430	5,830	1,330	4,900	840	a 1,060	a 5,180	a 5,320	19,160	15,440	a 5,630
26.	1,770	2,920	5,560	a 1,330	4,380	a 840	1,060	5,710	5,850	20,400	a18,550	5,520
27.	1,680	2,880	a 5,430	1,370	3,860	840	1,460	5,830	a 5,720	a17,100	36,700	4,460
28.	a 1,500	a 2,790	4,900	1,540	3,470	900	a 1,620	a 5,800	5,720	11,940	37,400	a 5,800
29.	1,450	2,690	4,550	a 1,670	.....	a 900	1,720	6,280	a 5,360	11,090	a26,240	4,750
30.	a 1,400	2,880	a 3,850	1,540	.....	860	1,620	6,310	a 5,120	a10,850	23,190	5,500
31.	1,350	.....	3,530	1,540	.....	820	.....	a 6,340	.....	11,210	20,440	.....
1906-7.												
1.	a 4,430	1,250	1,400	1,160	a 1,540	950	1,560	3,780	4,290	7,500	a 5,530	9,480
2.	3,150	1,250	1,310	a 1,150	1,350	935	1,640	3,610	4,940	7,650	5,300	10,080
3.	3,150	a 1,250	a 1,230	1,130	1,330	920	a 1,560	a 3,440	4,770	8,100	5,370	a11,710
4.	a 2,930	1,180	1,150	1,190	a 1,270	a 900	1,600	2,680	4,770	8,550	a 5,430	11,890
5.	2,630	1,250	1,370	a 1,100	1,210	870	1,570	2,370	a 5,640	5,980	5,120	12,270
6.	2,550	1,320	a 1,450	1,090	1,200	a 875	a 1,450	a 2,510	6,020	a 5,850	4,780	a11,330
7.	a 2,380	a 1,330	1,640	1,080	a 1,190	905	1,290	3,050	6,390	5,800	4,440	11,400
8.	2,460	1,320	1,540	a 1,070	1,190	1,060	1,210	3,140	a 7,130	5,880	a 3,760	15,840
9.	3,290	a 1,380	a 2,480	1,260	1,140	a 1,050	a 1,060	a 2,920	7,290	a 5,360	4,040	a13,880
10.	a 4,720	1,500	2,520	1,310	a 1,090	1,000	1,000	2,710	6,520	5,700	a 4,330	10,420
11.	2,860	1,550	2,340	a 1,360	1,360	950	940	2,650	a 6,060	a 6,200	4,190	10,150
12.	1,690	a 1,600	a 2,280	1,270	1,360	a 900	a 915	a 2,600	5,530	6,310	4,190	a10,480
13.	a 1,690	1,680	2,310	1,180	a 1,250	900	835	2,460	5,450	6,120	a 3,360	8,300
14.	2,180	1,680	2,270	1,160	1,190	895	915	2,600	a 5,510	a 6,090	3,170	7,920
15.	2,280	a 1,680	a 2,160	a 1,000	1,170	890	a 915	a 2,460	5,660	6,730	2,720	a 7,660
16.	a 1,840	1,590	2,140	1,130	a 1,130	a 855	915	2,160	6,230	7,050	2,610	8,540
17.	2,090	a 1,510	1,980	a 1,210	1,140	705	915	2,260	a 6,650	a 6,570	a 1,080	9,420
18.	1,810	a 1,430	a 1,890	1,450	1,130	a 585	a 870	2,230	7,660	5,470	1,680	a14,360
19.	a 1,710	1,480	1,890	1,450	a 1,110	585	820	a 1,950	7,890	5,030	a 2,000	13,030
20.	1,710	1,480	1,890	a 1,330	1,120	625	900	1,970	a 8,000	a 4,280	1,760	10,900
21.	1,710	a 1,480	a 1,840	1,410	1,070	a 660	1,540	a 2,140	7,600	4,170	1,840	a12,580
22.	a 1,500	1,490	1,770	1,710	a 1,080	660	a 2,040	2,310	7,440	4,060	a 1,840	10,680
23.	1,550	1,510	1,740	a 1,690	1,070	660	2,900	2,630	7,440	4,250	1,680	9,840
24.	1,390	a 1,600	a 1,720	1,540	1,050	a 665	a 3,530	a 2,500	7,110	a 4,290	8,750	a 9,520
25.	1,340	1,590	1,640	1,640	a 1,000	590	3,860	2,510	6,930	4,260	a 6,570	8,600
26.	a 1,280	1,500	1,490	a 2,240	970	515	4,080	2,660	a 6,990	a 4,230	5,840	8,120
27.	1,280	1,490	a 1,350	2,440	970	480	a 4,080	a 3,130	7,220	4,180	5,340	a 8,250
28.	a 1,250	a 1,480	1,260	2,360	970	a 440	4,480	3,410	7,220	5,390	a 5,280	6,520
29.	1,250	1,480	1,180	a 1,980	.....	440	4,550	3,680	a 7,220	a 5,250	5,430	a 5,650
30.	a 1,250	a 1,490	a 1,170	2,060	.....	485	a 4,400	3,810	7,690	6,000	a 5,980	a 4,930
31.	a 1,250	.....	1,170	2,060	.....	a 1,060	.....	a 4,210	.....	5,550	a 8,600	.....
1907-8.												
1.	3,790	2,390	18,210	1,360	800	705	830	1,810	2,670	680	3,200	21,900
2.	3,030	2,850	14,710	1,360	800	705	700	1,730	a 1,630	360	3,500	a18,650
3.	a 2,600	a 2,570	a 9,780	1,350	a 800	a 655	a 610	1,670	1,440	a 1,820	5,140	18,950
4.	2,440	2,730	7,330	a 1,340	785	710	610	a 1,590	1,320	1,060	a 5,240	20,750
5.	2,330	a 6,410	6,880	1,370	775	655	560	1,490	a 1,130	620	4,990	20,550
6.	a 2,380	18,880	a 6,720	1,400	a 765	710	a 535	1,420	1,050	a 220	3,760	14,050
7.	2,330	20,500	6,120	a 1,430	730	a 770	495	1,310	1,020	185	a 3,910	6,890
8.	2,170	a12,920	5,820	1,310	735	770	480	a 1,270	a 935	125	4,800	a 4,940
9.	a 1,850	7,820	a 5,520	a 1,180	a 775	a 620	465	1,270	895	a 125	6,400	6,740
10.	1,690	6,430	5,010	1,180	770	620	a 450	1,210	920	115	15,100	9,190

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
11.....	1,310	a 6,120	4,930	1,170	765	645	480	1,270	a 880	100	34,000	8,820
12.....	a 1,310	4,890	a 4,640	a 1,240	a 760	a 645	660	a 1,630	820	a 90	25,600	7,080
13.....	1,190	4,430	4,190	1,310	760	615	620	1,630	820	90	15,640	a 6,450
14.....	950	a 4,130	3,750	1,240	960	650	a 620	a 1,500	a 805	85	a 4,760	6,030
15.....	830	3,630	a 3,300	a 1,170	950	a 650	505	1,320	640	a 80	3,110	5,030
16.....	a 1,900	2,850	3,160	1,240	950	620	a 420	1,140	490	80	a 2,970	4,530
17.....	1,470	a 2,820	3,020	1,240	a 950	620	420	a 1,100	a 350	a 185	2,810	a 3,890
18.....	a 1,270	2,740	a 2,740	1,140	1,030	a 595	410	1,030	340	a 35	2,590	3,740
19.....	970	2,660	2,610	a 1,090	1,030	565	a 395	1,140	325	30	a 2,440	3,590
20.....	2,080	a 2,520	2,340	1,090	a 1,030	580	570	a 1,090	a 285	75	2,640	a 3,330
21.....	a 5,560	2,520	a 2,130	1,090	955	a 580	595	1,090	280	a 230	2,840	2,660
22.....	4,080	2,520	2,130	a 1,000	880	595	a 620	1,200	280	230	a 3,400	1,990
23.....	3,540	a 2,350	2,050	990	880	620	770	a 1,040	a 270	a 88,980	3,210	a 1,520
24.....	a 2,820	2,230	a 2,050	a 980	880	565	770	1,040	250	a 1,980	3,110	1,410
25.....	2,190	2,270	1,970	905	875	a 510	1,440	1,070	230	1,220	a 3,540	1,230
26.....	2,060	2,010	1,880	905	875	495	a 2,550	a 1,190	a 165	3,820	3,560	a 1,130
27.....	a 2,190	a 2,360	a 1,880	905	a 870	510	2,690	1,300	135	a 5,990	3,390	1,000
28.....	2,430	3,110	1,790	a 905	845	a 645	2,140	1,910	75	4,640	a 2,600	960
29.....	2,790	3,270	1,700	890	a 815	895	1,680	2,240	a 45	3,560	2,980	915
30.....	3,740	a 15,650	1,530	875	.....	860	a 1,630	2,440	225	a 2,930	3,180	a 915
31.....	a 2,790	.....	a 1,530	a 860	.....	a 790	.....	2,410	.....	3,200	a 11,880	.....
1908-9.												
1.....	790	430	380	640	635	355	290	a 2,340	3,610	4,190	6,670	4,910
2.....	760	a 460	380	675	695	310	330	2,740	2,400	4,190	8,070	12,630
3.....	a 680	440	a 385	815	795	270	a 395	2,400	a 1,450	3,220	6,710	a 13,660
4.....	635	420	390	a 800	a 900	a 270	420	a 1,900	1,340	2,950	a 6,210	10,160
5.....	635	a 395	395	770	830	260	395	1,450	1,290	2,950	6,260	7,360
6.....	a 590	395	a 400	735	685	250	a 395	1,450	a 1,290	7,920	6,260	a 6,510
7.....	605	390	405	a 705	a 615	a 240	335	a 2,700	1,240	a 9,440	a 5,000	5,200
8.....	575	a 385	405	755	600	240	320	2,850	1,090	13,840	5,970	4,280
9.....	a 630	385	a 405	755	585	180	a 305	3,000	a 1,040	13,350	6,130	a 4,270
10.....	630	380	415	a 780	a 590	a 180	335	a 2,090	985	a 14,820	7,260	6,200
11.....	555	a 380	425	745	615	180	325	1,380	875	11,420	6,450	7,990
12.....	a 555	380	a 430	665	615	175	a 350	980	a 720	14,820	6,090	a 7,810
13.....	555	385	430	a 605	615	a 165	350	a 1,320	950	a 9,940	a 5,880	9,530
14.....	555	385	445	620	a 590	175	350	2,110	1,530	7,330	7,730	10,570
15.....	a 500	a 390	a 495	635	570	165	a 320	2,910	a 6,610	5,020	6,270	a 10,800
16.....	525	395	515	a 650	a 570	a 160	310	3,400	3,190	a 5,790	a 8,310	12,410
17.....	550	405	565	610	555	160	300	a 3,720	4,560	5,220	11,770	12,220
18.....	575	a 420	a 615	575	545	160	a 300	4,620	a 5,540	3,770	12,160	a 12,630
19.....	a 600	420	610	a 565	a 480	a 175	275	5,380	4,900	a 2,470	a 11,730	10,370
20.....	560	420	605	530	480	475	255	a 6,130	4,550	2,780	9,320	10,090
21.....	490	a 425	a 630	545	475	475	a 195	6,040	a 4,510	2,700	8,320	a 7,530
22.....	a 420	450	640	a 510	a 445	a 450	195	5,940	5,580	a 2,460	a 7,320	7,210
23.....	430	475	650	560	385	450	190	5,700	6,640	2,130	5,680	6,100
24.....	445	a 495	a 660	665	345	400	a 190	a 5,450	a 5,910	1,990	5,700	a 5,440
25.....	a 455	475	665	a 665	a 335	a 350	195	5,510	4,300	a 1,990	a 4,210	4,570
26.....	455	455	690	610	360	330	200	5,430	4,010	3,320	2,950	3,710
27.....	455	a 455	a 720	555	360	315	a 200	a 5,340	a 3,460	3,410	5,190	a 3,560
28.....	a 460	425	685	a 475	a 355	a 280	200	4,980	3,160	a 4,180	a 4,960	3,380
29.....	440	400	665	480	.....	310	1,130	5,070	3,740	5,050	4,960	2,660
30.....	420	a 375	645	510	.....	300	a 1,130	4,720	a 4,330	4,900	2,750	a 2,480
31.....	a 405	.....	a 610	a 490	.....	a 290	.....	a 4,510	.....	a 4,610	a 2,360	.....
1909-10.												
1.....	2,280	740	530	2,630	1,100	415	1,750	2,590	1,190	5,650	220	1,120
2.....	2,090	710	585	2,380	1,090	385	1,990	2,590	1,090	5,010	190	765
3.....	1,890	a 755	585	2,220	1,090	385	a 1,990	2,890	a 955	5,650	160	a 570
4.....	a 1,700	750	a 585	a 1,970	a 1,090	a 315	1,990	a 3,090	605	a 5,010	a 160	610
5.....	1,660	650	550	1,610	1,050	295	1,880	3,530	465	4,940	155	465
6.....	1,540	a 645	510	1,330	1,120	280	a 1,540	4,200	a 325	3,740	170	a 750
7.....	a 1,410	640	a 510	a 1,060	a 1,190	a 225	1,370	a 3,430	295	a 2,980	a 240	1,140
8.....	1,240	630	510	970	1,160	185	1,370	3,510	275	2,720	640	4,610
9.....	1,240	a 625	575	890	1,080	185	a 1,200	3,500	a 230	2,460	490	a 3,620
10.....	a 1,070	625	a 605	a 810	a 1,000	a 155	1,130	a 3,490	185	a 2,270	a 290	3,320
11.....	1,060	595	645	1,210	975	125	1,130	3,620	155	2,640	240	4,040
12.....	1,020	a 595	595	2,180	975	400	a 975	4,180	a 390	3,390	150	a 2,990
13.....	a 965	590	a 505	a 2,320	a 975	a 735	975	a 4,460	400	a 1,900	a 165	2,410
14.....	910	585	470	2,210	960	740	980	4,760	385	1,700	165	2,050
15.....	910	a 580	435	1,990	945	760	a 985	5,370	a 320	1,330	455	a 1,760

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
16.....	a 910	580	a 470	a 1,660	a 825	a 765	920	a 4,810	275	a 1,320	a 1,610	1,510
17.....	910	530	430	1,550	775	1,220	895	4,180	a 1,150	1,180	1,510	1,330
18.....	1,030	a 530	495	1,360	775	1,370	a 950	4,050	1,150	1,180	1,410	a 1,260
19.....	a 1,070	505	565	a 1,170	a 675	a 1,520	905	a 4,050	590	a 1,120	a 1,990	1,300
20.....	1,020	485	a 595	1,080	630	1,410	1,020	4,150	350	1,000	2,360	3,480
21.....	1,050	a 460	595	1,150	590	1,210	a 1,710	4,050	305	915	1,930	a 5,210
22.....	a 1,120	475	485	a 1,380	a 535	a 1,150	2,010	a 4,250	245	a 825	a 2,910	3,910
23.....	1,030	490	a 485	1,260	515	1,190	2,210	4,360	215	635	3,510	3,200
24.....	980	a 505	490	1,150	a 515	1,130	a 2,130	4,710	a 1,900	440	5,010	a 2,780
25.....	a 940	495	495	a 1,040	515	a 1,080	1,820	a 4,950	1,860	a 270	a 4,320	2,340
26.....	910	480	a 500	1,170	450	1,190	1,590	3,990	2,350	355	3,290	1,810
27.....	960	a 465	550	1,460	a 450	1,110	a 1,520	3,040	a 3,100	310	2,380	a 1,500
28.....	a 1,090	425	a 8,200	a 1,350	.....	a 1,390	1,520	a 2,330	2,140	a 290	a 1,850	1,350
29.....	935	450	5,780	1,290	.....	1,480	1,770	1,850	6,910	230	1,660	1,250
30.....	780	a 480	3,770	1,170	.....	1,360	a 1,960	1,610	6,670	245	1,410	a 1,160
31.....	a 700	.....	a 3,200	a 1,050	.....	a 1,510	.....	a 1,290	.....	a 250	a 1,230	.....
1910-11.												
1.....	1,140	360	130	55	50	150	95	105	5,240	4,510	13,880	5,800
2.....	890	340	125	55	45	145	205	100	2,940	5,970	11,610	6,700
3.....	875	a 325	125	50	45	120	a 195	95	a 2,320	6,630	11,430	4,990
4.....	a 835	325	a 125	a 50	a 45	a 120	165	a 95	a 2,670	a 4,690	a 11,550	8,670
5.....	780	325	120	45	50	115	115	90	2,420	5,370	9,500	12,850
6.....	700	a 325	115	40	60	90	a 85	110	a 2,380	5,670	8,140	a 13,810
7.....	a 650	320	a 110	a 40	a 70	a 90	70	a 810	2,520	a 6,500	a 7,130	13,320
8.....	605	320	105	35	70	90	65	1,230	2,760	7,020	6,340	11,600
9.....	605	a 315	100	35	80	90	a 55	1,420	a 3,200	7,640	6,150	a 9,080
10.....	a 560	315	a 95	a 35	a 95	a 80	50	a 1,370	2,770	a 9,320	a 5,000	8,460
11.....	525	285	90	35	110	80	35	1,090	3,300	13,260	4,520	7,740
12.....	510	a 285	85	35	105	80	a 30	1,040	a 9,210	15,240	4,270	8,450
13.....	a 490	275	a 85	a 35	a 120	a 75	30	a 1,150	16,800	a 16,090	a 9,960	8,720
14.....	575	270	80	30	155	80	30	7,380	22,390	12,970	3,640	7,590
15.....	510	a 265	80	30	190	90	a 25	3,320	a 30,190	10,790	3,330	a 6,380
16.....	a 450	260	a 80	a 30	a 190	a 90	20	a 1,600	19,300	a 10,210	a 3,020	5,560
17.....	450	260	75	30	545	85	20	9,970	15,440	9,850	2,720	4,630
18.....	430	a 260	75	30	a 940	75	a 20	3,700	a 7,920	11,440	2,420	a 4,040
19.....	405	220	a 70	a 25	a 360	a 75	20	a 3,070	6,040	a 17,060	a 2,090	3,930
20.....	a 365	215	70	20	350	70	15	2,590	6,860	15,140	1,990	4,620
21.....	365	a 210	75	20	310	65	a 15	3,150	a 7,090	14,900	1,680	a 6,010
22.....	a 405	175	a 75	a 25	a 245	a 65	15	a 4,100	5,070	a 14,190	a 1,570	3,410
23.....	370	175	70	30	210	340	120	3,730	5,280	14,550	1,340	2,930
24.....	335	a 170	65	30	190	240	a 120	3,670	a 4,680	12,870	1,110	a 3,530
25.....	a 350	165	a 55	a 30	a 175	a 240	845	a 3,500	4,110	a 19,280	a 2,550	6,330
26.....	320	160	50	30	175	300	1,380	3,500	4,110	16,650	2,130	5,020
27.....	310	a 130	50	30	175	320	a 1,445	3,380	a 4,000	12,520	2,910	a 5,200
28.....	a 295	130	a 50	a 40	a 175	a 130	470	a 8,180	3,850	a 10,600	3,250	3,640
29.....	295	130	50	50	.....	125	170	6,990	4,100	12,740	3,300	3,220
30.....	340	a 130	55	50	.....	110	a 105	5,890	a 4,650	12,850	2,760	a 2,810
31.....	a 380	.....	a 55	a 50	.....	a 95	.....	a 5,970	.....	a 13,480	a 2,600	.....
1911-12.												
1.....	2,790	4,050	2,610	2,690	2,540	685	1,250	615	4,670	5,660	6,300	14,280
2.....	2,540	3,770	2,710	2,830	a 2,500	670	985	615	5,020	5,450	4,560	13,200
3.....	2,210	3,720	3,110	2,830	2,460	655	a 780	525	a 5,280	5,230	3,790	a 11,610
4.....	a 2,040	a 3,870	a 3,210	a 4,170	2,410	a 640	660	a 395	5,890	a 5,350	a 2,950	11,610
5.....	2,870	3,730	3,200	3,740	2,410	635	790	385	6,400	5,310	2,650	10,730
6.....	4,000	a 3,510	3,200	3,440	2,410	630	a 920	330	a 7,000	5,270	2,320	a 8,970
7.....	3,830	3,710	a 3,200	a 2,960	2,350	a 625	785	a 555	7,620	a 5,080	a 2,070	a 14,530
8.....	a 4,970	3,310	3,180	2,790	a 2,350	620	700	555	8,950	4,800	1,830	10,380
9.....	4,400	a 2,980	3,410	2,680	2,060	615	a 610	890	a 10,440	4,580	1,350	a 9,450
10.....	a 3,760	2,930	a 3,340	a 2,570	1,780	a 610	910	a 2,140	12,430	a 4,960	2,100	7,950
11.....	5,520	2,880	3,290	2,550	a 1,490	620	1,510	3,070	13,670	5,030	1,010	15,190
12.....	6,180	a 2,770	3,280	2,550	1,270	625	a 1,650	3,480	a 14,760	4,480	880	a 16,040
13.....	a 8,040	3,310	a 3,300	a 2,530	1,190	a 630	1,410	a 3,810	15,070	a 4,340	a 735	19,410
14.....	8,300	4,600	3,610	2,490	a 1,120	540	1,620	3,630	14,520	4,070	735	21,000
15.....	8,730	a 4,060	3,870	2,350	1,060	495	a 1,680	3,440	a 13,660	3,800	810	a 22,400
16.....	a 10,220	3,900	4,140	a 2,360	995	a 455	2,010	a 3,480	12,410	a 3,460	a 795	21,950
17.....	9,690	3,780	4,070	2,720	a 900	365	2,130	3,710	11,460	3,650	1,790	20,830
18.....	8,810	a 3,620	4,180	2,840	900	765	a 1,960	3,760	a 10,510	4,650	6,260	a 12,170
19.....	a 8,460	3,340	a 4,290	a 2,850	900	a 985	2,040	a 3,790	10,140	a 4,890	a 8,240	8,350
20.....	8,130	3,060	4,400	2,930	a 900	995	2,170	4,030	9,660	3,700	11,590	7,200

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande below Presidio, Tex., for 1900-1913—(Contd.)

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
21.....	8,040	a 2,790	4,510	2,900	850	990	a 2,080	4,190	a 8,580	3,390	13,950	a 6,520
22.....	a 7,790	2,620	a 4,720	a 2,780	840	a 1,000	1,920	a 4,280	7,550	a 3,210	a 11,960	5,940
23.....	7,890	2,450	4,230	2,990	a 830	965	1,770	4,360	6,740	3,450	17,850	5,430
24.....	7,410	a 2,280	3,730	3,290	795	650	a 1,600	4,370	a 6,220	3,070	12,900	a 4,620
25.....	a 6,080	2,320	a 3,190	a 3,450	775	a 555	1,410	a 4,220	5,800	a 3,770	16,950	4,290
26.....	5,640	2,260	3,080	3,300	a 755	500	1,280	4,220	5,510	3,940	10,430	3,970
27.....	5,060	a 2,290	3,060	3,050	750	500	a 1,160	4,220	a 5,230	3,090	10,670	a 3,640
28.....	a 4,590	2,300	a 3,000	a 2,900	745	a 460	1,200	a 4,360	5,450	a 2,910	a 7,740	3,400
29.....	4,480	2,410	2,750	2,860	a 740	420	1,000	4,390	5,660	3,970	8,050	3,240
30.....	4,400	a 2,420	2,710	2,720	.....	1,630	a 745	4,420	a 5,880	4,120	9,740	a 3,240
31.....	a 4,180	.....	a 2,560	a 2,680	.....	a 1,350	.....	a 4,610	.....	a 5,560	a 11,530	.....
1912-13.												
1.....	6,040	1,210	750	750	390	1,620	425	1,930	625	1,690	1,010	1,330
2.....	4,900	1,210	745	740	430	1,530	400	1,710	600	1,320	1,730	755
3.....	4,900	a 1,210	740	680	a 450	4,490	a 330	1,120	a 635	990	760	a 860
4.....	a 5,200	1,060	a 730	a 670	460	a 3,790	310	a 525	800	a 815	a 675	670
5.....	5,050	1,000	780	670	470	3,480	250	460	670	735	665	2,900
6.....	4,700	a 940	670	650	a 485	3,170	a 230	425	a 620	755	575	a 3,560
7.....	a 4,500	830	a 640	a 635	480	a 2,930	230	a 385	620	a 685	a 560	7,760
8.....	4,900	825	670	590	480	2,830	200	365	2,970	595	560	5,480
9.....	5,050	a 815	745	545	a 480	2,650	a 200	880	a 2,410	520	620	a 9,830
10.....	a 3,590	815	a 925	a 455	515	a 2,470	200	a 1,590	955	a 580	a 670	5,110
11.....	3,380	715	995	445	515	2,400	185	1,700	560	455	1,240	5,940
12.....	3,110	a 715	915	430	a 515	2,270	a 185	1,540	a 395	350	970	a 4,090
13.....	a 2,890	680	a 695	a 370	540	a 2,210	155	a 1,010	575	320	a 795	3,530
14.....	2,810	540	645	365	640	2,020	150	865	485	280	565	2,740
15.....	2,690	a 505	600	355	a 4,770	1,930	a 140	690	a 610	240	410	a 1,950
16.....	a 2,560	505	a 755	a 350	4,010	a 1,740	135	a 1,010	555	a 240	a 1,200	1,840
17.....	2,420	600	1,520	340	3,520	1,640	130	1,170	560	200	1,730	1,670
18.....	2,280	a 695	1,410	330	a 3,060	1,330	a 130	1,130	a 660	160	4,540	a 1,380
19.....	a 2,050	750	a 1,300	a 325	2,800	a 1,130	130	a 1,210	665	a 160	a 3,460	1,310
20.....	1,960	650	1,270	300	2,650	1,050	240	1,100	870	145	2,550	1,250
21.....	1,920	a 630	1,150	300	a 2,500	965	a 310	1,310	a 780	145	2,470	a 1,200
22.....	a 1,800	620	a 1,120	a 300	2,450	a 885	1,010	a 1,520	1,520	a 145	a 2,390	1,030
23.....	1,800	605	1,030	295	2,270	845	570	1,480	2,060	510	1,540	950
24.....	1,720	a 595	1,030	290	a 2,100	730	a 295	1,340	a 1,970	575	1,390	a 785
25.....	a 1,680	675	a 1,030	a 290	2,010	a 695	215	a 1,030	1,880	a 390	a 1,150	675
26.....	1,540	750	910	290	1,880	585	200	760	1,700	310	935	1,250
27.....	1,440	a 750	890	290	1,760	585	a 215	695	a 1,100	290	685	a 2,040
28.....	a 1,300	750	a 870	a 290	a 1,670	a 535	155	a 595	960	a 450	a 560	1,390
29.....	1,270	755	815	290	.....	495	695	505	895	390	560	900
30.....	1,200	a 755	765	295	.....	495	a 795	445	a 1,490	450	560	a 900
31.....	a 1,230	.....	a 760	a 295	.....	a 450	.....	a 445	.....	a 1,180	a 1,570	.....

a Date of measurement.

Monthly discharge of Rio Grande below Presidio, Tex., for 1900-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.									
May.....	3,100	15	274	16,850	January.....	200	160	181	11,107
June.....	3,060	110	1,057	62,900	February.....	780	160	314	17,434
July.....	12,000	300	4,576	281,330	March.....	440	80	198	12,198
August.....	14,920	1,830	6,201	381,285	April.....	80	20	41	2,420
September.....	12,510	1,100	2,916	173,514	May.....	1,300	20	720	44,291
The period.....	.....	.....	.....	916,000	June.....	1,530	50	763	45,422
1900-1901.									
October.....	4,700	510	1,720	105,760	July.....	3,470	20	999	61,408
November.....	560	320	410	24,397	August.....	3,120	820	1,793	110,241
December.....	320	210	237	14,573	September.....	5,410	640	2,206	131,266
The year.....	5,410	20	798	581,000					

Monthly discharge of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1901-2.					1906-7.				
October.....	5,690	330	1,223	75,213	October.....	4,720	1,250	2,149	132,159
November.....	1,500	330	593	35,266	November.....	1,680	1,180	1,461	86,916
December.....	450	260	300	18,466	December.....	2,520	1,150	1,728	106,255
January.....	350	220	259	15,907	January.....	2,440	1,000	1,455	89,474
February.....	220	100	141	7,835	February.....	1,540	970	1,166	64,760
March.....	100	30	59	3,610	March.....	1,060	440	775	47,623
April.....	30	20	24	1,448	April.....	4,550	820	1,945	115,716
May.....	15	10	11	674	May.....	4,210	1,950	2,792	171,650
June.....	625	10	48	2,866	June.....	8,000	4,290	6,509	387,292
July.....	17,100	40	5,918	363,888	July.....	8,550	4,060	5,737	352,760
August.....	10,900	1,300	5,702	350,618	August.....	8,750	1,680	4,258	261,838
September.....	45,000	1,680	10,755	639,947	September.....	15,840	4,930	10,125	602,479
The year.....	45,000	10	2,090	1,520,000	The year.....	15,840	440	3,340	2,420,000
1902-3.					1907-8.				
October.....	3,320	720	1,305	80,212	October.....	5,560	830	2,325	142,969
November.....	2,000	415	590	35,098	November.....	20,500	2,010	5,286	314,539
December.....	1,070	380	493	30,317	December.....	18,210	1,530	4,562	280,502
January.....	580	295	357	21,967	January.....	1,430	860	1,146	70,443
February.....	2,560	400	1,153	64,026	February.....	1,030	730	855	49,180
March.....	1,050	315	459	30,069	March.....	895	495	651	40,007
April.....	1,270	105	405	24,109	April.....	2,690	395	857	51,015
May.....	1,720	270	1,305	80,251	May.....	2,410	1,030	1,436	88,304
June.....	5,700	1,340	2,530	150,526	June.....	2,670	45	691	41,098
July.....	7,200	720	3,134	192,714	July.....	8,980	30	1,385	85,170
August.....	8,100	530	2,048	125,911	August.....	34,000	2,440	6,332	389,335
September.....	8,960	1,340	3,203	190,572	September.....	21,900	915	6,960	414,129
The year.....	8,960	105	1,420	1,030,000	The year.....	34,000	30	2,710	1,970,000
1903-4.					1908-9.				
October.....	8,360	500	2,028	124,721	October.....	790	405	546	33,590
November.....	500	320	391	23,236	November.....	495	375	416	24,774
December.....	295	200	251	15,461	December.....	720	380	528	32,440
January.....	210	155	176	10,998	January.....	815	475	635	39,065
February.....	130	105	118	6,813	February.....	900	335	558	30,992
March.....	105	45	76	4,671	March.....	475	160	274	16,850
April.....	45	10	25	1,517	April.....	1,130	190	949	20,787
May.....	470	5	85	5,227	May.....	6,130	980	3,663	225,243
June.....	4,960	120	853	50,787	June.....	6,640	720	3,160	188,033
July.....	1,720	220	749	46,026	July.....	14,820	1,990	5,876	361,329
August.....	2,200	315	928	57,055	August.....	12,160	2,360	6,616	406,810
September.....	149,200	890	24,894	1,481,296	September.....	13,660	2,480	7,541	448,740
The year.....	149,200	5	2,550	1,830,000	The year.....	14,820	160	2,510	1,830,000
1904-5.					1909-10.				
October.....	18,900	3,750	9,903	608,906	October.....	2,280	700	1,175	72,239
November.....	6,000	1,540	2,636	156,833	November.....	755	425	569	33,858
December.....	3,740	1,360	2,433	149,574	December.....	8,200	430	1,139	70,016
January.....	1,500	930	1,154	70,949	January.....	2,630	810	1,486	91,379
February.....	2,070	720	1,256	69,739	February.....	1,190	450	840	46,641
March.....	4,110	1,750	3,150	193,686	March.....	1,520	125	828	50,916
April.....	2,970	1,900	2,405	143,127	April.....	2,210	895	1,473	87,640
May.....	6,210	2,970	4,608	283,319	May.....	5,370	1,290	3,641	223,894
June.....	16,940	6,400	11,065	658,433	June.....	6,910	155	1,159	68,955
July.....	16,750	1,680	7,510	461,772	July.....	5,650	230	1,999	122,886
August.....	16,300	3,430	7,260	446,420	August.....	5,010	150	1,364	83,861
September.....	27,170	2,450	9,872	587,445	September.....	5,210	465	2,120	126,169
The year.....	27,170	720	5,270	3,830,000	The year.....	6,910	125	1,480	1,080,000
1905-6.					1910-11.				
October.....	15,200	1,350	5,574	342,744	October.....	1,140	295	520	31,964
November.....	13,500	1,270	5,424	322,750	November.....	360	130	248	14,757
December.....	9,080	2,560	5,286	325,031	December.....	130	50	84	5,137
January.....	3,450	1,330	1,819	111,868	January.....	55	20	36	2,231
February.....	6,790	1,340	4,681	259,954	February.....	940	45	190	10,572
March.....	3,280	820	1,646	101,217	March.....	340	65	126	7,775
April.....	1,720	670	1,085	64,562	April.....	1,445	15	201	11,960
May.....	6,340	1,870	4,009	246,526	May.....	9,970	90	2,980	183,263
June.....	6,590	3,320	4,872	289,884	June.....	30,190	2,320	7,120	423,689
July.....	20,400	3,520	11,349	607,845	July.....	19,280	4,510	11,290	694,215
August.....	37,400	11,480	18,620	1,144,919	August.....	13,880	1,110	4,762	292,800
September.....	17,310	3,070	8,269	492,059	September.....	13,810	2,810	6,634	394,731
The year.....	37,400	670	6,050	4,400,000	The year.....	30,190	15	2,850	2,070,000

Monthly discharge of Rio Grande below Presidio, Tex., for 1900-1913—Continued.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1911-12.					1912-13.				
October.....	10,220	2,040	5,840	359,107	October.....	6,040	1,230	2,967	182,420
November.....	4,600	2,260	3,168	188,509	November.....	1,210	505	772	45,926
December.....	4,720	2,500	3,456	212,509	December.....	1,520	600	899	55,279
January.....	4,170	2,350	2,896	178,096	January.....	750	290	426	26,221
February.....	2,540	740	1,416	81,471	February.....	4,770	390	1,582	87,868
March.....	1,630	365	706	43,398	March.....	4,490	450	1,740	106,998
April.....	2,170	610	1,358	80,787	April.....	1,010	130	204	17,484
May.....	4,610	330	2,930	180,188	May.....	1,930	365	998	61,369
June.....	15,070	4,670	8,739	520,026	June.....	2,970	395	1,040	61,874
July.....	5,660	2,910	4,330	296,261	July.....	1,690	145	518	31,874
August.....	17,850	735	6,245	384,010	August.....	4,540	410	1,261	77,544
September.....	22,400	3,240	10,718	637,765	September.....	9,830	670	2,502	148,909
The year.	22,400	330	4,320	3,130,000	The year.	9,830	130	1,250	904,000

RIO GRANDE NEAR LANGTRY, TEX.

Location.—At the east end of the canyon section, half a mile south of Langtry, and a few miles above the mouth of the Pecos.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Very shifting and subject to overflow at stage of 29.5 feet. The overflow extends 110 feet back of the main bank.

Discharge measurements.—Made from car and cable.

Floods.—Below the Rio Conchos the Rio Grande is subject to severe floods from that source. Since the records have been maintained the highest flood occurred September 13, 1904, reaching a stage of 34.25 feet and a discharge of 132,000 second-foot. This is somewhat less than the maximum stage of 149,200 at the station below Presidio, showing the slight retarding effect of the channel upon flood flow.

Diversions.—No data.

Accuracy.—Owing to the shifting of the channel very frequent discharge measurements are made and the estimates of daily discharge based almost directly on these.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1900.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 11.....	1.60	513	June 24.....	2.60	1,701	Aug. 6.....	6.30	10,100
11.....	1.60	406	28.....	1.70	811	8.....	11.25	24,401
12.....	1.50	351	July 2.....	2.20	1,348	13.....	5.90	8,561
15.....	1.60	371	5.....	5.45	8,287	16.....	4.35	5,258
16.....	1.60	478	9.....	2.35	1,428	21.....	5.80	9,934
23.....	3.90	3,826	12.....	3.65	3,499	25.....	3.40	3,693
29.....	1.80	859	15.....	6.90	11,836	29.....	3.70	4,153
June 2.....	2.85	2,273	18.....	4.70	5,617	Sept. 2.....	2.90	2,515
5.....	2.80	1,991	22.....	3.20	2,751	7.....	3.30	3,427
10.....	2.10	1,339	26.....	5.20	7,671	12.....	3.40	3,313
13.....	3.30	2,958	30.....	5.45	8,330	16.....	3.40	3,712
17.....	3.25	2,893	Aug. 2.....	5.70	8,236	22.....	2.40	1,920

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.			1901.			1902.		
Sept. 26.....	<i>Feet.</i> 3.25	<i>Sec.-ft.</i> 3,441	Oct. 5.....	<i>Feet.</i> 1.90	<i>Sec.-ft.</i> 1,704	Aug. 4.....	<i>Feet.</i> 3.4	<i>Sec.-ft.</i> 3,902
Oct. 2.....	3.90	4,688	7.....	1.65	1,282	8.....	2.95	3,060
8.....	2.90	2,674	11.....	2.20	2,078	13.....	2.3	2,043
12.....	2.60	2,325	19.....	1.40	1,158	18.....	3.95	5,066
15.....	2.40	2,020	22.....	1.40	1,152	22.....	4.0	5,263
23.....	2.50	2,285	25.....	2.40	2,519	26.....	5.9	9,328
26.....	2.00	1,630	28.....	4.95	8,118	30.....	5.45	8,268
31.....	1.70	1,124	Nov. 4.....	2.05	1,987	Sept. 3.....	5.15	7,843
Nov. 4.....	1.65	1,070	7.....	1.90	1,708	7.....	7.95	14,979
8.....	1.55	992	10.....	1.60	1,358	11.....	10.65	23,471
12.....	1.45	888	15.....	1.55	1,297	20.....	3.8	4,749
16.....	1.40	858	18.....	1.45	1,190	24.....	3.1	3,261
21.....	1.40	836	24.....	1.30	957	28.....	2.6	2,360
23.....	1.30	772	27.....	1.30	928	30.....	2.7	2,532
Dec. 30.....	1.30	761	Dec. 7.....	1.25	898	Oct. 3.....	2.75	2,523
5.....	1.25	726	10.....	1.20	897	7.....	2.35	1,957
10.....	1.20	685	15.....	1.15	827	11.....	2.8	2,661
14.....	1.15	667	1902.			15.....	2.35	2,011
20.....	1.20	680	Jan. 3.....	.9	806	19.....	2.0	1,540
24.....	1.15	644	7.....	.9	684	23.....	1.8	1,317
1901.			9.....	.9	592	27.....	1.7	1,202
Jan. 1.....	1.10	611	12.....	.9	649	31.....	1.65	1,142
5.....	1.10	623	17.....	1.0	589	Nov. 4.....	1.7	1,222
11.....	1.10	618	20.....	1.0	651	8.....	1.8	1,324
18.....	1.05	593	24.....	.9	554	12.....	1.5	1,032
23.....	1.05	588	27.....	1.0	636	16.....	1.4	939
28.....	1.05	583	31.....	.95	563	20.....	1.35	868
Feb. 1.....	1.05	572	Feb. 3.....	1.0	571	24.....	1.35	863
6.....	1.00	543	7.....	1.0	563	28.....	1.3	815
11.....	1.00	541	11.....	.95	550	Dec. 1.....	1.3	779
15.....	1.00	537	14.....	.95	542	5.....	1.9	1,434
20.....	1.00	532	18.....	1.0	577	10.....	1.35	839
25.....	1.50	919	21.....	.9	512	15.....	1.35	831
Mar. 1.....	1.45	893	25.....	.9	514	20.....	1.4	893
6.....	1.30	764	28.....	.9	531	26.....	1.35	845
11.....	1.20	677	Mar. 3.....	.8	484	1903.		
15.....	1.10	616	6.....	.8	460	Jan. 1.....	1.3	783
21.....	.95	528	10.....	.8	458	7.....	1.2	714
26.....	.85	462	13.....	.8	454	12.....	1.2	720
Apr. 16.....	.70	380	15.....	.8	447	17.....	1.2	719
22.....	.70	371	18.....	.75	409	23.....	1.15	680
30.....	.80	461	21.....	.75	424	28.....	1.1	658
May 6.....	.90	515	25.....	.7	391	Feb. 2.....	1.35	839
8.....	.80	448	27.....	.7	403	6.....	1.3	795
13.....	.80	450	31.....	.65	370	16.....	2.2	1,894
17.....	1.60	1,181	Apr. 2.....	.65	362	20.....	1.9	1,396
22.....	1.50	1,124	5.....	.65	373	25.....	1.6	1,099
23.....	2.30	1,893	9.....	.65	361	Mar. 2.....	2.0	1,519
June 4.....	2.00	1,614	12.....	.65	368	7.....	1.75	1,240
12.....	2.10	1,842	17.....	1.0	591	12.....	1.5	980
15.....	2.10	1,868	21.....	.7	378	17.....	1.35	845
17.....	1.90	1,603	24.....	.65	318	22.....	1.2	724
23.....	1.30	954	28.....	.65	304	26.....	1.2	715
July 1.....	.90	579	May 2.....	.6	283	30.....	1.25	724
4.....	.85	533	5.....	1.35	845	Apr. 4.....	1.1	611
10.....	.85	544	8.....	.65	310	9.....	1.0	544
13.....	.75	499	12.....	.6	286	14.....	.95	503
17.....	1.60	1,290	15.....	1.1	656	19.....	1.4	886
19.....	1.55	1,246	18.....	2.2	1,899	24.....	1.3	811
23.....	1.80	1,589	22.....	.75	362	29.....	2.6	2,395
24.....	2.50	2,448	26.....	.7	329	May 4.....	1.3	814
26.....	2.90	3,508	31.....	1.7	1,159	9.....	1.65	1,163
27.....	2.80	3,336	June 5.....	.75	358	12.....	2.5	2,267
Aug. 5.....	2.80	3,404	9.....	.7	305	15.....	2.1	1,736
12.....	2.40	2,684	13.....	1.35	797	20.....	2.4	2,060
15.....	2.30	1,862	17.....	1.0	501	25.....	1.95	1,482
21.....	2.70	2,468	21.....	1.8	1,269	30.....	1.95	1,509
27.....	1.90	1,360	26.....	.7	318	June 2.....	3.7	4,329
Sept. 2.....	2.20	1,834	July 1.....	1,360		7.....	2.7	2,598
7.....	2.70	2,594	5.....	.85	382	11.....	3.9	4,486
11.....	2.50	2,617	10.....	2.95	3,067	14.....	6.2	11,611
16.....	3.10	3,599	14.....	5.0	6,696	19.....	2.95	3,108
20.....	5.00	6,374	18.....	2.35	2,125	24.....	2.8	2,706
24.....	2.80	3,173	22.....	3.0	2,997	30.....	2.7	2,555
29.....	2.00	1,795	26.....	8.0	12,962	July 5.....	3.0	3,148
			31.....	5.45	7,599	10.....	4.8	6,496
						14.....	4.2	5,225

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1904.	<i>Fcct.</i>	<i>Sec.-ft.</i>	1905.	<i>Fcct.</i>	<i>Sec.-ft.</i>
July 17	3.05	2,978	June 30	3.5	3,972	July 29	6.1	8,567
25	2.0	1,608	July 3	1.8	768	Aug. 4	3.9	6,004
31	2.3	1,991	13	.9	543	10	3.2	4,002
Aug. 3	1.65	1,161	15	1.0	594	14	5.2	7,743
7	1.6	1,126	19	1.4	740	19	5.55	8,480
11	1.6	1,128	24	1.8	981	24	4.4	6,788
17	1.8	1,366	29	1.6	880	28	4.5	6,864
22	3.1	3,090	Aug. 2	1.3	722	Sept. 2	2.7	3,597
26	2.3	1,920	8	1.4	808	7	2.15	2,942
30	2.5	2,311	12	1.2	706	10	5.65	7,431
Sept. 3	4.55	5,758	16	1.0	602	16	4.4	5,359
10	3.6	2,571	22	1.1	642	22	3.0	3,785
14	2.3	1,817	26	1.6	980	25	5.65	7,984
18	2.8	2,294	Sept. 29	2.4	1,852	28	10.85	23,694
22	2.7	2,183	Oct. 2	2.0	1,358	Oct. 2	6.35	8,731
29	3.45	3,584	8	9.4	22,657	6	5.0	6,609
Oct. 5	5.3	8,836	Nov. 2	5.0	9,407	10	4.65	6,169
10	3.0	3,047	6	4.1	5,835	14	3.25	3,840
15	2.25	1,946	10	3.5	4,245	19	2.5	3,453
19	2.0	1,607	15	2.7	3,253	23	2.0	2,733
23	1.9	1,500	17	2.6	2,907	28	1.7	2,283
27	1.7	1,230	21	2.3	2,827	Nov. 2	1.6	2,012
31	1.5	1,039	25	2.2	2,166	6	1.3	1,407
Nov. 3	1.4	950	29	1.9	1,904	9	1.3	1,320
9	1.35	900	Dec. 4	1.7	1,638	13	2.7	3,145
13	1.3	847	8	3.0	3,836	17	4.0	4,583
18	1.15	743	12	2.5	2,435	21	4.1	4,888
22	1.15	743	16	2.6	2,329	28	2.4	3,523
26	1.1	722	20	2.7	2,755	30	2.0	2,902
30	1.05	698	28	1.8	1,247	Dec. 3	2.1	3,248
Dec. 5	1.0	650	1905.			9	2.85	4,008
9	1.0	645	Jan. 2	1.6	1,552	12	2.2	3,493
13	1.0	641	6	1.55	1,474	17	2.0	2,937
17	.95	626	11	1.4	1,248	20	4.2	8,434
21	.95	622	14	1.3	1,207	25	4.6	9,299
26	.95	622	19	1.1	1,097	31	2.7	4,144
31	.9	593	23	1.4	1,296	1906.		
Jan. 5	.9	573	28	1.5	1,234	Jan. 5	2.1	2,804
9	.9	567	Feb. 2	1.3	1,045	9	1.8	2,406
14	.9	564	6	1.2	922	13	1.6	2,222
19	.85	538	10	1.2	909	17	1.4	2,031
25	.8	513	14	1.1	1,070	22	1.2	1,614
30	.8	495	18	1.0	1,012	25	1.2	1,580
Feb. 4	.8	487	25	1.9	1,932	29	1.1	1,489
9	.8	478	Mar. 6	2.2	2,091	Feb. 2	1.3	1,817
14	.8	482	10	3.1	3,810	7	1.3	1,766
19	.8	477	15	3.3	3,810	12	2.9	4,282
24	.75	465	19	3.0	2,831	17	2.9	3,867
29	.75	453	23	3.0	2,976	22	3.9	6,053
Mar. 5	.7	421	Apr. 28	2.7	2,496	26	3.3	4,911
10	.7	424	3	2.3	1,800	Mar. 2	2.6	3,299
15	.65	406	7	2.0	2,068	7	2.0	2,855
21	.6	386	11	1.9	2,200	12	1.6	2,185
26	.55	375	15	1.9	2,283	16	1.3	1,843
31	.55	377	20	1.7	2,365	21	1.0	1,473
Apr. 5	.5	388	24	2.4	2,860	25	.9	1,410
9	.5	339	27	2.4	2,640	28	.8	1,301
15	1.8	1,390	May 2	2.6	3,005	Apr. 7	.7	1,356
20	.5	318	6	2.7	3,728	11	1.1	1,619
25	.45	300	10	3.4	2,486	15	.7	1,311
30	.45	302	15	3.3	3,881	19	.75	1,335
May 5	.45	294	19	3.4	4,703	23	.7	1,242
9	.4	268	24	3.5	4,509	27	.95	1,488
14	.5	332	29	3.4	4,170	May 2	1.2	1,746
18	.45	302	June 2	3.8	4,759	7	1.95	2,851
23	2.6	2,606	8	5.2	7,671	10	1.9	2,771
27	3.1	3,344	12	6.8	13,278	14	1.9	2,839
31	2.1	1,927	16	8.5	18,887	19	2.7	3,440
June 4	1.0	614	20	7.1	12,925	23	2.85	4,110
9	1.5	1,080	24	7.3	13,105	28	3.1	4,271
10	4.8	6,284	28	5.9	7,524	June 2	3.4	6,130
14	2.0	1,703	July 3	4.1	4,589	7	3.4	6,016
18	1.0	628	8	2.8	3,518	11	2.9	3,945
24	1.95	1,604	14	2.0	2,472	15	2.4	2,991
			19	3.2	3,550	20	2.3	2,952
			24	4.8	6,524	23	2.7	3,474

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913—Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1906.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
June 28.....	3.0	3,875	May 11.....	2.65	2,929	Apr. 20.....	1.2	1,014
July 1.....	2.9	3,731	16.....	2.6	2,949	24.....	.9	796
9.....	3.95	4,788	20.....	2.4	2,838	27.....	.9	923
11.....	5.65	8,253	24.....	2.3	2,577	May 2.....	2.0	2,329
14.....	4.8	6,406	28.....	2.35	2,731	7.....	1.8	1,668
17.....	4.65	5,876	June 8.....	3.7	5,703	11.....	1.7	1,530
20.....	9.0	17,815	11.....	4.3	6,301	16.....	1.7	1,623
25.....	8.55	17,200	15.....	3.7	5,662	19.....	1.5	1,626
29.....	12.3	29,261	18.....	4.8	6,606	23.....	1.4	1,503
Aug. 2.....	5.1	8,362	22.....	5.65	7,264	28.....	1.3	1,361
8.....	12.7	29,087	27.....	4.2	5,809	June 2.....	2.0	2,213
12.....	16.5	43,637	July 2.....	4.4	6,690	6.....	1.9	1,728
14.....	11.5	25,516	8.....	3.7	5,670	11.....	1.2	1,451
17.....	8.3	16,640	14.....	3.7	5,554	15.....	1.0	1,181
21.....	5.45	9,722	18.....	3.7	5,845	19.....	.8	756
25.....	9.3	18,726	25.....	3.4	5,571	23.....	.5	676
30.....	15.35	35,002	30.....	3.6	5,750	27.....	.9	1,120
Sept. 3.....	10.45	22,588	Aug. 2.....	3.6	5,454	July 2.....	.5	621
7.....	7.0	11,790	8.....	3.2	4,612	7.....	5.25	10,010
11.....	4.7	6,683	12.....	3.0	4,287	12.....	.8	911
17.....	3.5	4,771	16.....	3.0	4,255	16.....	.5	603
20.....	3.0	3,783	21.....	1.9	2,108	20.....	.4	682
25.....	3.0	3,907	24.....	1.9	2,153	25.....	4.0	6,070
28.....	3.1	4,246	28 ^a	3.6	6,359	29.....	4.4	8,683
Oct. 2.....	3.1	4,107	Sept. 5.....	5.2	9,053	Aug. 3.....	3.0	4,800
6.....	3.0	3,949	8.....	5.8	10,475	7.....	6.95	15,986
10.....	2.4	2,772	13.....	5.25	8,323	12.....	8.5	19,318
15.....	2.3	2,608	20.....	7.5	15,307	15.....	9.25	23,100
18.....	2.4	2,454	23.....	5.75	12,176	20.....	3.95	6,253
22.....	2.0	2,191	27.....	4.8	9,221	25.....	3.95	6,424
25.....	1.9	2,015	Oct. 2.....	3.6	5,665	28.....	4.25	7,617
28.....	1.85	1,907	7.....	3.2	4,243	Sept. 3.....	9.0	21,867
Nov. 2.....	1.7	1,862	11.....	2.1	2,425	7.....	8.85	19,492
7.....	1.7	1,837	16.....	1.8	1,971	11.....	5.0	9,280
10.....	1.7	1,849	21.....	1.7	1,872	15.....	5.0	9,449
15.....	1.7	1,850	25.....	2.9	3,823	19.....	3.4	4,796
19.....	1.9	2,193	29.....	2.0	2,597	23.....	2.55	2,879
23.....	1.85	2,111	Nov. 2.....	3.0	4,091	27.....	2.0	2,224
28.....	1.95	2,095	7.....	2.4	2,825	Oct. 2.....	1.6	1,563
Dec. 2.....	1.9	2,169	10.....	6.1	12,235	7.....	1.65	1,589
6.....	1.8	2,029	14.....	3.8	5,681	12.....	1.0	1,143
10.....	1.75	1,860	18.....	3.05	4,083	16.....	.9	1,071
14.....	2.3	2,757	22.....	2.7	3,359	20.....	.8	990
17.....	2.3	2,592	28.....	2.3	2,799	24.....	.7	826
29.....	1.9	2,240	Dec. 2.....	2.5	2,923	28.....	6	806
			9.....	4.3	6,556	Nov. 2.....	.5	760
			13.....	3.8	5,585	6.....	.5	766
1907.			17.....	3.2	4,162	10.....	.5	753
Jan. 3.....	1.65	1,913	21.....	2.7	3,287	14.....	.45	748
7.....	1.55	1,834	24.....	2.5	2,849	19.....	.45	748
11.....	1.55	1,891	29.....	2.3	2,461	23.....	.45	711
15.....	1.55	1,931	Jan. 2.....	2.1	2,233	27.....	.45	717
19.....	1.45	1,880	7.....	1.9	1,936	Dec. 2.....	.4	675
24.....	1.5	1,954	11.....	1.8	1,838	7.....	.4	669
28.....	1.6	2,015	15.....	1.8	1,810	12.....	.4	702
Feb. 3.....	1.9	1,839	19.....	1.7	1,684	17.....	.4	667
7.....	1.6	1,600	23.....	1.65	1,623	22.....	.35	668
11.....	1.6	1,573	28.....	1.5	1,416	28.....	.4	716
14.....	1.6	1,582	Feb. 1.....	1.4	1,327	Jan. 1909.		
17.....	1.55	1,548	5.....	1.4	1,302	Jan. 2.....	.35	661
21.....	1.55	1,489	10.....	1.4	1,339	7.....	.5	770
25.....	1.55	1,577	14.....	1.25	1,214	12.....	.35	655
Mar. 2.....	1.4	1,390	20.....	1.5	1,454	18.....	.4	671
7.....	1.3	1,438	27.....	1.3	1,277	23.....	.4	694
11.....	1.3	1,317	Mar. 1.....	1.25	1,207	28.....	.4	723
15.....	1.3	1,390	5.....	1.1	1,059	Feb. 2.....	.4	684
19.....	1.4	1,476	10.....	1.0	953	7.....	.3	630
23.....	1.2	1,178	14.....	1.1	996	12.....	.3	626
28.....	1.1	1,066	20.....	1.0	915	17.....	.3	628
Apr. 2.....	.9	1,024	24.....	.95	938	25.....	.35	655
6.....	1.7	1,537	29.....	.9	897	Mar. 2.....	.3	631
11.....	1.7	1,595	Apr. 3.....	1.25	1,276	7.....	.3	565
15.....	1.5	1,429	8.....	1.1	1,128	13.....	.25	546
18.....	1.3	1,293	12.....	1.0	1,033	17.....	.25	549
23.....	1.3	1,241	16.....	1.7	2,944	22.....	.1	413
28.....	2.8	2,760						
May 2.....	3.0	3,396						
7.....	2.6	2,944						

^a Measurement too large; rejected.

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1909.	<i>Feet.</i>	<i>Sec.-ft.</i>	1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 28.....	0.05	416	Mar. 11.....	0.2	682	Feb. 19.....	0.8	1,058
Apr. 2.....	.15	511	15.....	.2	658	22.....	.7	1,001
7.....	.15	503	19.....	.7	1,060	25.....	.5	840
12.....	.05	466	24.....	1.35	1,537	Mar. 2.....	.1	608
17.....	.0	420	28.....	1.25	1,486	6.....	.0	557
22.....	-.05	379	Apr. 2.....	1.2	1,472	10.....	-.05	530
27.....	-.05	387	7.....	1.6	1,757	15.....	-.1	505
May 2.....	-.05	380	11.....	1.3	1,527	20.....	-.1	510
6.....	1.6	1,596	15.....	1.0	1,228	24.....	-.1	488
10.....	.95	1,088	20.....	.9	1,186	28.....	-.1	511
14.....	1.5	1,379	23.....	.9	1,203	Apr. 2.....	.3	654
18.....	1.8	2,132	27.....	1.5	1,829	6.....	.0	570
23.....	2.8	3,991	May 3.....	1.45	1,728	10.....	.0	566
28.....	3.15	4,763	7.....	2.75	4,194	14.....	.0	562
June 2.....	3.0	4,486	12.....	2.6	3,973	19.....	-.1	457
6.....	2.3	2,929	16.....	3.1	4,943	23.....	-.1	462
10.....	2.3	3,027	20.....	3.25	5,212	26.....	1.9	2,329
15.....	1.8	2,063	24.....	2.65	4,040	28.....	2.8	4,136
19.....	3.2	4,919	30.....	2.5	3,631	May 3.....	.4	788
23.....	3.1	4,548	June 1.....	2.0	2,438	8.....	.0	557
27.....	3.2	4,761	6.....	1.3	1,533	12.....	.4	779
July 2.....	2.7	3,858	10.....	.75	1,029	16.....	13.8	34,500
8.....	3.5	5,316	15.....	.4	769	18.....	6.65	16,349
12.....	7.5	16,369	20.....	.6	922	22.....	2.7	3,750
16.....	5.1	9,501	28.....	4.5	8,993	26.....	2.9	4,259
20.....	3.9	6,472	July 2.....	3.2	5,566	31.....	5.1	9,936
25.....	3.5	5,374	7.....	3.2	5,430	June 2.....	2.9	4,259
28.....	3.7	6,301	12.....	1.65	1,946	7.....	1.9	2,348
Aug. 3.....	4.45	7,924	16.....	1.45	1,602	12.....	2.0	2,485
7.....	4.7	8,952	21.....	.75	1,100	16.....	6.8	12,900
12.....	4.05	7,027	28.....	.35	771	23.....	4.7	8,983
16.....	4.7	9,189	Aug. 2.....	.15	656	27.....	3.1	4,292
21.....	5.8	12,031	6.....	.1	636	July 2.....	3.0	4,020
24.....	3.9	6,869	11.....	.05	546	7.....	2.95	3,715
28.....	3.1	4,577	16.....	.05	533	11.....	4.1	6,362
Sept. 2.....	2.5	3,336	20.....	-.05	512	15.....	5.9	12,610
6.....	5.35	11,319	24.....	1.25	1,534	21.....	5.4	10,720
13.....	3.3	5,482	28.....	2.0	2,638	24.....	6.6	13,482
17.....	5.15	10,378	Sept. 2.....	1.0	1,263	28.....	5.65	11,693
21.....	5.4	11,112	7.....	1.95	2,705	Aug. 2.....	5.7	11,288
25.....	4.0	7,350	11.....	.9	1,194	7.....	4.45	7,574
27.....	3.4	5,783	15.....	2.35	3,231	11.....	3.2	4,636
Oct. 2.....	2.45	3,280	19.....	2.0	2,694	15.....	2.6	3,635
7.....	1.9	2,333	23.....	3.0	4,877	19.....	1.9	2,461
11.....	1.7	1,956	Oct. 27.....	2.0	2,752	24.....	1.2	1,449
15.....	1.6	1,672	Oct. 2.....	1.1	1,358	28.....	4.15	6,806
20.....	1.0	1,444	6.....	.7	1,042	Sept. 2.....	1.7	1,988
24.....	1.0	1,440	10.....	.7	1,005	6.....	3.1	4,376
28.....	1.0	1,421	14.....	.5	842	11.....	4.35	7,411
Nov. 2.....	.9	1,298	19.....	.3	775	15.....	4.0	6,197
7.....	.85	1,170	23.....	.3	786	20.....	2.4	3,076
11.....	.8	1,074	28.....	.2	641	24.....	2.85	4,216
15.....	.8	1,035	Nov. 2.....	.15	602	27.....	3.05	4,891
20.....	.7	985	6.....	.15	591	Oct. 2.....	2.0	2,645
24.....	.7	941	10.....	.15	570	6.....	1.7	2,236
28.....	.6	849	14.....	.15	575	10.....	2.85	4,264
Dec. 2.....	.55	850	18.....	.1	580	14.....	2.95	4,473
7.....	.6	912	23.....	.1	573	18.....	4.35	7,538
11.....	.6	890	27.....	.15	596	23.....	4.3	7,367
16.....	.5	839	Dec. 2.....	.0	557	28.....	3.4	5,324
22.....	.6	871	7.....	.1	573	Nov. 3.....	2.8	4,208
28.....	.5	834	11.....	.1	581	8.....	2.9	4,416
1910.			15.....	.0	569	12.....	2.85	4,219
Jan. 1.....	3.2	5,569	19.....	.0	563	16.....	2.9	4,467
6.....	1.9	2,097	23.....	.0	537	21.....	2.5	3,274
10.....	1.7	1,844	28.....	-.05	519	25.....	2.2	2,734
14.....	1.5	1,686	Jan. 2.....	-.1	478	29.....	2.0	2,421
19.....	1.5	1,702	7.....	-.05	478	Dec. 2.....	1.95	2,333
24.....	1.05	1,373	12.....	-.05	485	7.....	1.95	2,339
28.....	1.0	1,354	16.....	-.05	490	12.....	1.95	2,307
Feb. 2.....	1.1	1,302	20.....	-.1	482	16.....	1.6	1,920
7.....	.9	1,178	24.....	-.1	465	20.....	1.6	1,946
11.....	.8	1,138	28.....	-.1	466	24.....	1.6	1,941
15.....	.7	1,019	Feb. 1.....	-.1	462	28.....	1.6	1,885
19.....	.6	926	6.....	-.1	458	Jan. 1912.		
25.....	.5	833	10.....	-.15	455	Jan. 2.....	1.25	1,547
Mar. 2.....	.4	813	15.....	-.15	442	6.....	1.3	1,576
7.....	.3	768				11.....	1.7	2,125

Discharge measurements of Rio Grande near Langtry, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 15.....	1.5	1,898	Aug. 20.....	2.05	2,436	Mar. 10.....	2.2	2,468
20.....	1.5	1,622	23.....	7.15	15,359	14.....	2.2	2,454
25.....	1.45	1,565	27.....	7.95	19,506	19.....	1.7	1,940
Feb. 28.....	1.5	1,527	Sept. 2.....	7.2	17,074	24.....	1.3	1,531
7.....	1.45	1,607	5.....	6.3	13,054	28.....	1.05	1,319
12.....	1.1	1,349	9.....	6.95	15,449	Apr. 2.....	.8	1,083
16.....	1.05	1,290	13.....	7.55	18,174	7.....	.7	1,023
21.....	1.05	1,270	16.....	9.2	21,179	10.....	.5	844
26.....	.6	954	19.....	10.25	24,467	14.....	.35	738
Mar. 2.....	.5	886	23.....	4.35	7,185	18.....	.35	638
7.....	.5	863	27.....	3.0	4,276	23.....	.3	623
12.....	.4	801	Oct. 2.....	2.3	2,947	27.....	.95	1,215
16.....	.4	748	7.....	4.5	8,135	May 1.....	.4	786
21.....	.4	667	11.....	4.35	7,432	4.....	3.05	4,157
24.....	.6	773	15.....	2.4	3,137	7.....	1.35	1,591
28.....	.7	998	19.....	2.0	2,533	10.....	.9	1,172
Apr. 2.....	1.2	1,379	24.....	1.7	2,008	15.....	1.6	1,832
7.....	3.4	5,237	28.....	1.4	1,671	19.....	1.0	1,191
9.....	.8	1,094	Nov. 2.....	1.2	1,365	23.....	1.0	1,232
13.....	.6	933	7.....	1.1	1,315	28.....	1.2	1,381
18.....	1.6	1,861	11.....	.95	1,285	June 2.....	1.0	1,239
22.....	1.6	1,889	15.....	.9	1,204	6.....	1.0	1,244
27.....	1.4	1,620	20.....	1.4	1,753	11.....	3.25	4,736
May 2.....	1.0	1,219	24.....	.9	1,235	16.....	.8	1,002
6.....	.6	964	29.....	.85	1,178	20.....	4.95	8,844
11.....	.0	662	Dec. 2.....	1.0	1,351	25.....	2.6	3,452
18.....	2.5	3,497	6.....	.95	1,266	28.....	2.2	2,761
21.....	2.7	3,775	11.....	1.2	1,398	July 2.....	1.2	1,389
24.....	2.75	3,941	16.....	1.1	1,345	7.....	1.2	1,386
28.....	3.0	4,715	20.....	1.4	1,681	11.....	.9	1,163
June 2.....	3.0	4,601	26.....	1.4	1,719	16.....	.5	843
6.....	3.0	4,668	28.....	1.3	1,547	19.....	.5	828
12.....	4.85	8,960	Jan. 1913.			24.....	.4	788
17.....	5.7	10,995	Jan. 2.....	1.1	1,352	28.....	1.1	1,356
20.....	5.3	10,409	6.....	1.0	1,263	31.....	1.95	2,532
24.....	4.3	7,049	10.....	.9	1,174	Aug. 2.....	1.1	1,304
27.....	3.25	4,881	15.....	.8	1,061	7.....	1.1	1,220
July 2.....	3.0	3,988	20.....	.7	999	13.....	1.4	741
8.....	2.8	3,342	24.....	.7	961	18.....	1.0	1,203
12.....	2.3	2,701	28.....	.6	874	22.....	2.3	2,819
17.....	1.9	2,048	Feb. 2.....	.6	901	27.....	1.5	1,653
22.....	1.8	2,030	6.....	.6	899	Sept. 2.....	3.25	4,633
25.....	1.4	1,536	10.....	.7	987	6.....	3.35	5,029
29.....	1.9	1,945	14.....	.65	971	11.....	5.7	11,533
Aug. 4.....	2.3	2,943	19.....	2.75	3,781	15.....	3.35	4,912
8.....	1.85	2,288	25.....	2.2	2,699	19.....	2.3	3,062
12.....	1.4	1,635	Mar. 2.....	1.6	1,860	24.....	1.6	1,882
16.....	1.9	2,286	6.....	3.1	4,296	27.....	1.3	1,549

NOTE.—Measurements made by D. Griggs, J. D. Dillard, W. D. Greet, J. P. Hague, E. E. Winter, H. F. Collins, D. J. Smith, I. P. Whites, and W. H. Dodd.

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	1.7	1.75	2.7	5.55	2.85	16.....	1.7	4.15	4.4	4.4	3.35
2.....	2.3	3.95	2.8	5.6	2.9	17.....	1.5	3.15	4.05	4.25	3.1
3.....	1.8	2.75	3.05	6.25	2.9	18.....	1.5	2.85	4.6	3.8	2.75
4.....	1.7	2.1	3.05	6.25	4.7	19.....	1.45	2.55	3.95	3.8	2.7
5.....	1.85	2.85	4.05	8.3	7.35	20.....	1.65	2.4	3.7	5.75	2.6
6.....	1.75	3.05	3.45	6.0	4.75	21.....	1.95	2.65	3.4	5.8	2.5
7.....	1.75	2.6	3.1	6.3	3.15	22.....	4.1	2.9	3.2	5.1	2.45
8.....	1.95	2.45	2.75	10.3	2.8	23.....	3.65	2.95	4.9	4.3	3.45
9.....	1.9	2.25	2.25	9.25	2.7	24.....	3.75	2.55	3.5	3.45	2.85
10.....	1.75	2.3	2.1	7.5	2.95	25.....	2.9	2.2	3.25	3.3	3.35
11.....	1.6	2.3	3.35	6.9	3.2	26.....	2.35	1.95	5.4	3.35	3.15
12.....	1.5	2.3	3.4	6.3	3.55	27.....	2.25	1.8	5.3	3.4	2.9
13.....	1.55	3.25	7.5	5.8	4.25	28.....	1.95	1.7	4.95	3.4	3.85
14.....	1.55	3.45	6.8	5.2	4.0	29.....	1.85	3.05	5.5	3.55	4.8
15.....	1.55	3.4	6.7	4.8	3.65	30.....	1.6	2.55	5.35	3.5	3.2
						31.....	1.5	.....	5.6	3.0	.....

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3.4	1.65	1.3	1.1	1.0	1.5	0.8	0.9	2.0	0.9	3.0	2.4
2.....	3.9	1.6	1.3	1.1	1.0	1.5	.8	.9	2.0	.9	3.1	2.2
3.....	4.0	1.6	1.3	1.1	1.0	1.5	.8	.9	2.0	.9	3.3	1.95
4.....	3.55	1.6	1.3	1.1	1.0	1.5	.8	.9	2.15	.9	3.25	1.85
5.....	2.85	1.55	1.2	1.1	1.0	1.3	.8	.9	2.3	.9	2.9	1.8
6.....	3.35	1.5	1.2	1.1	1.0	1.3	.8	.85	2.35	.9	2.9	1.7
7.....	2.95	1.5	1.2	1.1	1.0	1.3	.8	1.0	2.4	.9	2.9	2.7
8.....	2.85	1.55	1.2	1.1	1.0	1.3	.7	1.0	2.45	.9	3.0	8.45
9.....	2.8	1.8	1.2	1.1	1.0	1.3	.7	.9	2.5	.9	3.0	4.75
10.....	2.8	1.7	1.2	1.1	1.0	1.3	.7	.8	2.3	.9	2.9	3.0
11.....	2.85	1.5	1.2	1.1	1.0	1.25	.7	.8	2.3	.9	2.8	2.35
12.....	2.6	1.45	1.2	1.1	1.0	1.2	.7	.8	2.1	.9	2.6	2.9
13.....	2.55	1.4	1.2	1.1	1.0	1.2	.7	.8	2.1	.9	2.35	3.85
14.....	2.5	1.4	1.2	1.1	1.0	1.15	.7	.8	2.0	1.2	2.3	3.75
15.....	2.3	1.4	1.2	1.1	1.0	1.1	.7	.8	2.1	1.7	2.3	3.5
16.....	2.25	1.4	1.2	1.1	1.0	1.1	.7	.8	2.05	2.2	2.0	3.1
17.....	2.4	1.4	1.2	1.05	1.0	1.1	.7	1.65	1.9	1.85	1.8	2.85
18.....	5.15	1.4	1.2	1.0	1.0	1.1	.7	1.7	1.9	1.6	1.6	2.7
19.....	4.5	1.4	1.2	1.0	1.0	1.05	.7	1.7	1.6	1.55	2.3	2.6
20.....	4.3	1.4	1.2	1.0	1.0	1.0	.7	1.7	1.5	1.5	2.85	4.25
21.....	3.75	1.4	1.2	1.0	1.0	1.0	.7	1.7	1.4	1.0	2.7	4.3
22.....	2.8	1.4	1.2	1.0	1.0	1.0	.7	1.55	1.4	1.7	2.45	3.8
23.....	2.4	1.4	1.2	1.1	1.0	.9	.7	1.7	1.3	1.8	2.25	3.1
24.....	2.5	1.4	1.15	1.1	1.25	.9	.7	1.8	1.2	1.95	2.35	3.1
25.....	2.25	1.3	1.15	1.1	1.5	.9	.7	2.65	1.0	2.45	2.25	2.95
26.....	2.1	1.3	1.1	1.1	1.5	.9	.7	2.9	1.0	2.45	1.9	2.5
27.....	2.0	1.3	1.1	1.0	1.5	.9	1.25	2.6	1.0	2.85	1.85	2.3
28.....	2.0	1.3	1.1	1.0	1.5	.9	.85	2.3	1.0	2.1	1.6	2.1
29.....	1.9	1.3	1.1	1.0	.....	.9	1.5	2.3	.9	2.9	1.5	2.0
30.....	1.9	1.3	1.1	1.0	.....	.9	.8	2.3	.9	2.1	1.15	2.0
31.....	1.75	.....	1.1	1.0	.....	.8	.....	2.15	.....	2.5	2.5	.....
1901-2.												
1.....	1.95	2.5	1.4	.9	.9	.9	.65	.65	1.0	1.65	4.75	5.9
2.....	1.0	2.3	1.4	.9	1.0	.8	.65	.6	.85	.9	3.8	5.8
3.....	1.7	2.05	1.3	.9	1.0	.8	.65	.6	.8	1.0	3.4	5.45
4.....	1.75	2.05	1.3	.9	1.0	.8	.65	.7	.8	.9	3.25	6.4
5.....	1.85	2.0	1.3	.9	1.0	.8	.65	1.55	.75	.85	2.9	7.0
6.....	1.65	1.9	1.3	.9	1.0	.8	.65	.8	.75	.9	3.7	7.85
7.....	1.65	1.9	1.25	.9	1.0	.8	.65	.65	.7	1.1	3.7	8.1
8.....	1.7	1.75	1.25	.9	1.0	.8	.65	.65	.7	1.2	2.8	10.4
9.....	3.85	1.7	1.25	.9	1.0	.8	.65	.65	.7	2.2	2.65	14.6
10.....	2.65	1.65	1.2	.9	1.0	.8	.65	.65	1.0	3.05	2.5	12.95
11.....	2.35	1.55	1.2	.9	.95	.8	.65	.65	1.35	2.8	2.5	10.65
12.....	1.9	1.5	1.2	.9	.95	.8	.65	.6	1.7	2.9	2.45	10.05
13.....	1.7	1.55	1.2	.9	.95	.8	2.95	.6	1.4	7.0	4.65	8.85
14.....	1.7	1.6	1.2	1.1	.95	.8	1.0	.75	1.25	4.8	6.25	7.25
15.....	1.35	1.55	1.15	1.1	.95	.8	2.15	1.1	1.2	3.9	5.65	6.4
16.....	1.3	1.5	1.15	1.1	.9	.8	2.05	.95	1.1	3.5	5.25	5.7
17.....	1.3	1.5	1.15	1.0	.9	.8	1.4	.8	1.1	2.55	4.4	5.05
18.....	1.3	1.45	1.1	1.0	1.0	.75	.8	2.45	1.45	2.45	3.95	4.35
19.....	1.35	1.4	1.1	1.0	.9	.75	.8	1.15	1.8	2.95	3.95	4.05
20.....	1.5	1.4	1.1	1.0	.9	.75	.8	.85	1.8	2.6	4.05	3.95
21.....	1.45	1.35	1.1	1.0	.9	.75	.8	.8	1.8	3.2	3.95	6.25
22.....	1.35	1.3	1.1	1.0	.9	.75	.75	.75	1.1	2.9	3.9	5.05
23.....	1.3	1.3	1.1	1.0	.9	.7	.7	.75	1.0	4.35	3.75	3.55
24.....	1.75	1.3	1.1	.95	.9	.7	.65	1.3	.85	4.0	4.45	3.05
25.....	2.5	1.3	1.1	.9	.9	.7	.65	.8	.75	10.45	5.1	2.95
26.....	1.7	1.3	1.1	.95	.9	.7	.65	.75	.7	7.6	5.9	2.9
27.....	1.75	1.3	1.1	1.0	.9	.7	.65	.75	.7	7.45	5.15	2.75
28.....	4.25	1.3	1.05	1.0	.9	.7	.65	.75	.7	7.75	4.6	2.65
29.....	3.45	1.35	1.0	1.0	.....	.7	.65	1.6	.7	8.1	4.55	2.7
30.....	3.05	1.45	.95	1.0	.....	.65	.65	1.6	4.1	5.8	5.6	2.7
31.....	2.75	.....	.95	.9	.....	.65	.....	1.6	.....	5.45	6.4	.....
1902-3.												
1.....	2.8	2.55	1.3	1.3	1.1	2.1	1.2	1.75	1.95	2.7	1.8	3.4
2.....	3.1	1.95	1.3	1.3	1.35	1.95	1.2	1.65	3.45	2.8	1.8	3.65
3.....	3.4	2.15	1.6	1.3	1.35	1.9	1.1	1.35	2.2	2.7	2.0	4.65
4.....	3.2	1.95	1.7	1.3	1.3	1.9	1.1	1.3	2.1	2.8	2.75	4.25
5.....	3.4	2.85	1.8	1.3	1.3	1.85	1.0	1.2	2.15	3.1	2.55	4.2

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
6.....	2.65	2.55	1.6	1.25	1.3	1.75	1.0	1.45	3.0	3.5	1.85	3.8
7.....	2.4	2.0	1.6	1.25	1.3	1.75	1.0	1.15	2.5	3.95	1.6	3.75
8.....	2.2	1.8	1.55	1.2	1.3	1.7	1.0	1.1	2.6	4.3	1.6	4.1
9.....	2.2	1.65	1.5	1.2	1.25	1.65	1.0	1.8	3.25	4.55	1.8	2.7
10.....	2.1	1.55	1.35	1.2	1.2	1.6	1.0	2.05	2.9	4.8	1.6	2.8
11.....	2.75	1.5	1.35	1.2	1.1	1.55	1.0	2.1	3.7	4.85	1.6	2.8
12.....	2.7	1.5	1.3	1.2	1.1	1.5	1.0	3.0	8.95	4.65	1.55	2.7
13.....	2.6	1.45	1.3	1.2	2.5	1.45	1.0	2.0	6.65	4.35	2.2	2.3
14.....	2.55	1.45	1.3	1.2	2.5	1.4	1.0	2.0	6.05	4.1	2.4	2.2
15.....	2.3	1.4	1.3	1.3	2.45	1.4	1.0	2.05	4.3	3.9	2.05	2.3
16.....	2.2	1.4	1.4	1.25	2.25	1.4	1.0	2.7	3.3	3.3	1.9	2.65
17.....	2.15	1.4	1.4	1.2	2.05	1.35	1.0	2.3	3.2	3.05	1.8	3.05
18.....	2.05	1.4	1.4	1.15	2.0	1.3	1.2	2.1	3.0	2.9	1.8	2.8
19.....	2.0	1.4	1.4	1.15	1.95	1.3	1.4	2.2	3.0	2.85	1.85	2.7
20.....	1.95	1.4	1.4	1.15	1.9	1.3	1.2	2.3	2.9	2.7	2.1	2.75
21.....	1.9	1.35	1.4	1.15	1.9	1.3	1.2	2.2	2.9	2.65	2.75	2.75
22.....	1.85	1.35	1.4	1.15	1.9	1.2	1.2	2.2	2.85	2.65	3.1	2.55
23.....	1.8	1.35	1.4	1.15	1.75	1.2	1.2	2.1	2.8	2.65	2.9	2.4
24.....	1.8	1.35	1.4	1.15	1.7	1.2	1.3	1.9	2.8	2.2	2.8	2.3
25.....	1.75	1.4	1.4	1.1	1.6	1.2	1.3	1.9	2.7	1.95	2.55	2.85
26.....	1.75	1.7	1.4	1.1	1.6	1.2	1.3	1.9	2.7	1.85	2.3	3.8
27.....	1.7	1.4	1.4	1.1	2.4	1.15	1.3	1.9	2.7	1.8	2.3	3.15
28.....	1.7	1.3	1.35	1.1	2.25	1.0	1.35	1.9	2.7	1.9	3.95	3.3
29.....	1.7	1.3	1.35	1.1	.....	1.05	2.55	1.9	2.7	2.2	3.55	3.4
30.....	1.65	1.3	1.35	1.1	.....	1.2	2.05	1.95	2.7	2.9	2.5	4.4
31.....	1.6	.....	1.35	1.1	.....	1.2	.....	1.95	.....	2.15	2.5	.....
1903-4.												
1.....	3.55	1.5	1.05	.9	.8	.75	.55	.45	1.5	1.55	1.3	2.15
2.....	4.7	1.45	1.05	.9	.8	.75	.55	.45	1.25	1.8	1.3	1.95
3.....	5.55	1.4	1.05	.9	.8	.75	.55	.45	1.1	1.75	1.3	1.85
4.....	5.95	1.4	1.05	.9	.8	.75	.55	.45	1.0	1.55	1.55	2.15
5.....	5.1	1.4	1.0	.9	.8	.75	.55	.45	.9	1.4	1.7	2.9
6.....	5.0	1.35	1.0	.9	.8	.7	.5	.45	2.45	1.3	1.7	5.6
7.....	4.0	1.3	1.0	.9	.8	.7	.5	.45	1.25	1.25	1.45	7.1
8.....	3.85	1.3	1.0	.9	.8	.7	.5	.4	.9	1.2	1.35	9.4
9.....	3.3	1.3	1.0	.9	.8	.7	.5	.4	1.35	1.3	1.3	6.7
10.....	2.95	1.3	1.0	.9	.8	.7	.5	.4	4.6	1.1	1.3	7.95
11.....	2.9	1.3	1.0	.9	.8	.7	.5	.4	3.5	1.1	1.3	16.95
12.....	2.7	1.3	1.0	.9	.8	.7	.5	.4	1.7	1.0	1.25	28.4
13.....	2.35	1.25	1.0	.9	.8	.7	.5	.4	1.9	.95	1.1	31.25
14.....	2.3	1.25	1.0	.9	.8	.7	.5	.5	2.05	.9	1.1	27.75
15.....	2.25	1.25	1.0	.9	.8	.65	1.7	.5	1.55	1.1	1.0	19.15
16.....	2.1	1.25	1.0	.9	.8	.65	.6	.5	1.25	1.0	1.0	11.7
17.....	2.05	1.2	1.0	.9	.8	.65	.6	.5	1.2	1.1	.95	11.45
18.....	2.0	1.2	1.0	.9	.8	.65	.6	.45	1.0	1.95	.85	2.6
19.....	2.0	1.2	1.0	.9	.8	.65	.5	.45	1.0	1.3	.8	11.95
20.....	1.9	1.1	1.0	.85	.8	.6	.5	.45	2.8	1.15	.8	11.9
21.....	1.9	1.1	1.0	.85	.8	.6	.5	.45	2.35	1.5	.8	10.7
22.....	1.9	1.1	1.0	.85	.8	.6	.5	.6	2.5	1.9	1.1	8.65
23.....	1.85	1.1	.95	.85	.8	.55	.5	2.45	2.3	2.1	1.25	7.9
24.....	1.8	1.1	.95	.8	.75	.55	.45	1.65	1.95	1.8	1.4	6.9
25.....	1.75	1.1	.95	.8	.75	.55	.45	3.3	1.85	1.55	1.65	6.45
26.....	1.7	1.1	.95	.8	.75	.55	.45	1.3	4.55	1.2	1.6	6.25
27.....	1.7	1.1	.95	.8	.75	.55	.45	2.9	7.5	1.8	1.7	6.35
28.....	1.65	1.1	.95	.8	.75	.55	.45	5.15	7.4	1.7	2.4	6.15
29.....	1.4	1.05	.95	.8	.75	.55	.45	4.1	4.75	1.45	2.4	5.55
30.....	1.4	1.05	.95	.8	.....	.55	.45	2.4	3.15	1.3	2.35	5.35
31.....	1.45	.....	.9	.8	.....	.55	.....	2.1	.....	1.2	2.3	.....
1904-5.												
1.....	5.65	5.2	1.75	1.7	1.4	1.9	5.4	2.45	3.5	10.2	5.2	2.95
2.....	4.95	4.9	1.7	1.7	1.25	1.9	2.6	2.6	3.85	5.35	4.8	2.65
3.....	4.9	4.7	1.7	1.6	1.2	1.9	2.4	2.6	3.8	4.2	4.1	2.55
4.....	4.95	4.3	1.75	1.6	1.15	1.95	2.25	2.6	3.9	3.7	3.9	2.5
5.....	4.55	4.2	1.75	1.6	1.05	2.3	2.15	2.65	3.9	3.65	3.75	2.55
6.....	4.0	4.05	2.45	1.55	1.15	2.3	2.0	2.7	4.05	3.55	3.5	2.15
7.....	3.9	4.0	3.15	1.5	1.05	2.3	2.0	2.7	4.55	2.8	3.45	2.15
8.....	3.8	3.95	2.95	1.5	1.1	2.5	2.0	2.8	5.25	2.8	3.35	2.7
9.....	3.8	3.85	2.8	1.5	1.2	4.35	2.05	5.1	5.7	2.65	3.2	2.9
10.....	4.15	3.5	2.6	1.45	1.15	3.05	2.05	3.45	5.65	2.4	3.2	6.25

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
11.....	5.4	3.4	2.6	1.4	1.1	2.8	1.95	3.2	5.8	2.25	3.1	9.5
12.....	6.15	3.35	2.5	1.4	1.1	2.8	1.9	3.7	6.95	2.2	2.9	5.4
13.....	6.75	3.25	2.4	1.3	1.1	2.9	1.9	4.0	7.0	2.1	5.95	5.1
14.....	8.3	3.0	2.5	1.3	1.1	2.9	1.9	3.95	7.7	2.0	5.1	4.5
15.....	8.95	2.7	2.7	1.3	1.1	3.35	1.9	3.35	8.15	1.95	5.35	4.4
16.....	8.25	2.6	2.65	1.25	1.0	3.1	1.9	3.25	8.65	1.9	5.75	4.4
17.....	8.9	2.55	2.65	1.2	1.0	3.0	1.8	3.3	8.3	2.15	6.3	4.95
18.....	9.0	2.5	2.7	1.2	1.0	3.0	1.7	3.3	7.1	3.25	5.55	4.8
19.....	10.3	2.5	2.7	1.1	1.0	3.0	1.7	3.35	7.35	3.25	6.25	3.95
20.....	8.55	2.45	2.65	1.1	1.0	3.05	1.7	3.4	7.15	3.75	6.7	3.5
21.....	8.1	2.25	2.6	1.1	1.2	3.25	1.7	3.5	7.3	3.9	7.05	3.05
22.....	8.45	2.25	2.55	1.1	1.4	3.1	1.7	3.5	7.2	4.65	5.95	2.9
23.....	7.5	2.2	2.35	1.25	2.0	3.0	2.35	3.5	7.25	5.35	4.65	2.7
24.....	6.8	2.2	2.15	1.7	1.9	2.9	2.4	4.15	7.25	4.85	4.35	2.7
25.....	6.45	2.2	2.05	1.65	1.85	2.75	2.4	3.7	7.1	7.55	5.65	5.6
26.....	6.1	2.2	2.0	1.6	1.8	2.7	2.4	3.5	7.0	5.4	5.15	8.4
27.....	5.3	2.15	1.8	1.6	1.8	2.7	2.4	3.5	6.3	5.3	4.95	10.4
28.....	4.8	2.0	1.8	1.5	1.8	2.7	2.75	3.4	5.65	5.5	4.5	10.3
29.....	4.75	1.9	1.75	1.5	.....	2.7	2.55	3.6	7.5	6.15	4.05	6.6
30.....	5.05	1.8	1.7	1.45	.....	2.7	2.4	3.45	11.1	6.4	3.65	5.65
31.....	5.7	.....	1.7	1.4	.....	2.5	.....	3.5	.....	6.15	3.3	.....
1905-6.												
1.....	5.5	1.6	1.9	2.5	1.3	2.7	.65	1.2	3.3	2.85	5.45	13.3
2.....	6.75	1.6	1.9	2.3	1.3	2.6	.65	1.3	3.4	2.65	5.05	11.6
3.....	7.3	1.55	2.05	2.2	1.3	2.55	.7	1.4	3.65	2.5	5.1	10.25
4.....	6.4	1.5	3.2	2.15	1.3	2.35	.7	1.75	5.25	2.35	6.2	9.15
5.....	5.4	1.45	3.85	2.05	1.3	2.2	.7	1.9	3.5	2.2	7.7	8.5
6.....	4.9	1.3	3.55	2.0	1.3	2.05	.7	1.75	3.45	2.65	8.55	7.4
7.....	5.7	1.3	3.4	1.95	1.3	2.0	.7	1.95	3.3	2.6	10.95	7.0
8.....	6.65	1.3	3.15	1.9	1.3	1.9	.7	1.9	3.1	3.0	12.8	6.5
9.....	5.55	1.3	2.85	1.8	1.5	1.9	.7	1.9	3.15	3.85	14.3	6.1
10.....	4.6	1.3	2.55	1.7	1.55	1.8	1.55	1.9	2.9	3.75	15.45	5.35
11.....	4.15	1.3	2.4	1.65	2.0	1.7	1.05	1.9	2.85	5.75	19.5	4.6
12.....	3.75	1.3	2.25	1.6	2.85	1.55	.85	1.9	2.65	5.65	17.25	4.4
13.....	3.6	2.0	2.2	1.6	3.1	1.4	.75	1.9	2.55	5.4	14.8	4.0
14.....	3.15	4.3	2.1	1.6	3.4	1.35	.7	1.9	2.45	5.45	11.5	3.95
15.....	2.95	7.0	2.1	1.55	3.5	1.3	.7	1.9	2.4	5.3	9.3	3.75
16.....	2.85	4.55	2.0	1.4	3.15	1.3	.7	1.95	2.35	4.1	8.25	3.6
17.....	2.8	4.0	2.0	1.4	2.9	1.25	.75	2.1	2.3	4.8	8.3	3.5
18.....	2.5	4.5	2.55	1.4	2.9	1.1	.75	2.75	2.25	7.4	7.35	3.25
19.....	2.45	4.6	4.0	1.3	3.1	1.1	.75	2.8	2.2	8.25	6.4	3.1
20.....	2.25	4.15	4.25	1.25	3.7	1.1	.7	2.75	2.3	9.0	5.6	3.0
21.....	2.1	4.05	4.2	1.25	3.9	1.05	.7	2.55	2.4	9.1	5.4	3.0
22.....	2.0	3.7	4.0	1.2	3.9	1.0	.7	2.7	2.55	9.2	5.55	3.0
23.....	1.95	3.2	4.5	1.2	3.9	1.0	.7	2.85	2.7	8.6	7.25	3.1
24.....	1.9	2.8	5.25	1.2	3.75	1.0	.75	2.85	2.95	8.35	9.45	3.1
25.....	1.8	2.55	4.6	1.2	3.55	.9	.8	2.9	2.75	8.6	9.3	3.0
26.....	1.8	2.4	3.9	1.2	3.15	.8	.8	3.0	2.8	8.7	9.9	3.2
27.....	1.75	2.4	3.6	1.1	2.9	.8	.95	3.0	2.9	9.2	10.6	3.35
28.....	1.7	2.35	3.25	1.1	2.8	.8	.95	3.15	3.0	10.7	11.8	3.25
29.....	1.6	2.2	3.05	1.1	.....	.7	1.5	3.2	3.5	10.7	12.35	3.1
30.....	1.6	1.95	2.85	1.1	.....	.7	2.65	3.2	3.2	7.5	15.15	3.1
31.....	1.6	.....	2.7	1.2	.....	.7	.....	3.25	.....	6.75	14.3	.....
1906-7.												
1.....	3.1	1.7	2.2	1.7	2.0	1.4	1.05	3.2	2.85	4.4	3.7	3.35
2.....	3.25	1.7	1.9	1.6	1.9	1.4	.9	2.95	3.1	4.45	3.65	3.85
3.....	3.55	1.7	1.9	1.6	1.9	1.4	.9	2.8	3.0	4.45	3.45	4.8
4.....	3.15	1.7	1.9	1.6	1.9	1.4	1.1	2.8	3.15	4.2	3.3	4.9
5.....	3.05	1.7	1.8	1.55	1.8	1.35	1.55	2.75	3.4	3.95	3.4	5.4
6.....	2.95	1.7	1.8	1.55	1.8	1.3	1.7	2.7	3.5	3.9	3.5	6.15
7.....	2.85	1.7	1.75	1.55	1.6	1.3	1.8	2.6	3.6	3.75	3.4	5.85
8.....	2.7	1.7	1.75	1.55	1.55	1.3	1.8	2.5	3.75	3.7	3.25	5.8
9.....	2.55	1.7	1.7	1.55	1.55	1.3	1.75	2.45	3.95	3.6	2.95	6.1
10.....	2.4	1.7	1.75	1.55	1.6	1.3	1.7	2.45	4.35	3.6	2.9	7.05
11.....	2.4	1.7	1.95	1.55	1.6	1.3	1.7	2.7	4.3	3.6	2.85	7.6
12.....	2.3	1.7	2.5	1.6	1.6	1.3	1.7	2.75	3.95	3.8	2.85	6.7
13.....	2.3	1.7	2.35	1.6	1.6	1.3	1.7	2.6	3.7	3.7	2.8	5.25
14.....	2.3	1.7	2.3	1.6	1.6	1.3	1.6	2.55	3.7	3.7	2.8	4.75
15.....	2.3	1.7	2.3	1.55	1.55	1.3	1.5	2.6	3.7	3.7	2.8	4.6

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
16.....	2.4	1.7	2.3	1.55	1.55	1.3	1.45	2.55	3.7	3.7	3.0	4.5
17.....	2.4	1.8	2.25	1.55	1.55	1.3	1.3	2.3	3.85	3.7	2.6	4.8
18.....	2.35	1.9	2.3	1.5	1.55	1.35	1.3	2.2	5.0	3.6	2.45	4.65
19.....	2.2	1.9	2.25	1.45	1.55	1.35	1.3	2.2	4.7	3.6	2.3	5.0
20.....	2.15	1.9	2.1	1.45	1.55	1.3	1.3	2.6	4.6	3.5	2.2	7.75
21.....	2.1	1.9	2.0	1.4	1.55	1.15	1.35	2.6	4.55	3.45	1.95	6.55
22.....	2.0	1.85	2.0	1.4	1.55	1.2	1.3	2.4	5.5	3.35	1.95	6.6
23.....	1.95	1.85	1.95	1.4	1.55	1.15	1.3	2.35	4.65	3.2	1.9	5.5
24.....	1.9	1.9	1.9	1.5	1.55	1.15	1.4	2.3	4.25	3.4	1.9	4.9
25.....	1.9	1.9	1.9	1.65	1.55	1.1	1.8	2.4	4.0	3.4	1.9	4.95
26.....	1.9	1.9	1.9	1.7	1.55	1.2	2.25	2.5	4.05	3.5	3.9	4.75
27.....	1.85	1.95	1.9	1.6	1.5	1.45	2.55	2.4	4.25	3.2	3.5	4.7
28.....	1.85	1.95	1.9	1.6	1.45	1.15	2.85	2.35	4.25	4.15	3.4	4.75
29.....	1.75	2.0	1.9	1.65	.....	1.1	3.1	2.4	4.2	3.4	3.3	4.6
30.....	1.7	1.95	1.8	2.2	.....	1.1	3.2	2.5	4.2	3.6	3.3	4.25
31.....	1.7	.....	1.75	2.15	.....	1.1	.....	2.55	.....	3.65	3.3	.....
1907-8.												
1.....	3.9	2.55	2.55	2.1	1.4	1.25	.9	2.0	1.75	.5	3.75	5.0
2.....	3.55	3.0	4.55	2.0	1.4	1.25	.95	2.0	1.95	.5	3.25	7.7
3.....	3.3	2.8	8.15	2.0	1.4	1.2	1.25	2.05	2.2	.5	2.95	9.0
4.....	3.05	2.85	5.75	2.0	1.4	1.2	1.25	2.05	2.15	.5	2.6	8.85
5.....	3.2	2.75	5.1	1.9	1.4	1.1	1.2	1.95	2.05	.45	2.5	8.1
6.....	2.85	2.5	4.7	1.9	1.4	1.1	1.2	1.9	1.9	.35	5.15	9.05
7.....	3.0	2.4	4.5	1.9	1.35	1.1	1.05	1.8	1.8	4.95	6.55	8.5
8.....	2.85	7.3	4.35	1.9	1.35	1.1	1.05	1.65	1.75	1.8	4.9	7.45
9.....	2.45	9.95	4.3	1.85	1.4	1.1	1.05	1.6	1.6	1.45	4.3	5.7
10.....	2.15	6.25	4.3	1.8	1.4	1.05	.95	1.55	1.4	1.35	4.15	5.15
11.....	2.05	5.35	4.15	1.8	1.55	1.0	.95	1.65	1.2	1.25	4.15	5.15
12.....	2.0	4.5	3.95	1.8	1.5	1.15	1.0	1.45	1.05	.85	7.8	6.45
13.....	1.9	4.05	3.85	1.8	1.4	1.2	.95	1.3	1.0	.75	11.25	6.15
14.....	1.85	3.85	3.65	1.8	1.25	1.1	1.25	1.2	1.0	.65	12.3	5.85
15.....	1.9	3.55	3.45	1.8	1.25	1.1	1.1	1.1	1.0	.55	8.9	4.95
16.....	1.85	3.35	3.3	1.8	1.25	1.05	1.45	1.75	.95	.5	6.1	4.35
17.....	1.7	3.15	3.2	1.7	1.25	1.1	1.6	1.9	.9	.4	5.3	3.95
18.....	2.05	3.05	3.1	1.7	1.3	1.05	2.1	1.8	.8	.4	4.9	3.6
19.....	2.1	3.0	2.95	1.7	1.5	1.0	1.8	1.5	.8	.4	4.45	3.3
20.....	1.95	2.9	2.9	1.7	1.5	1.0	1.45	1.4	.75	.4	4.0	3.05
21.....	1.75	2.85	2.7	1.7	1.4	1.05	1.1	1.4	.7	3.1	3.95	2.85
22.....	1.85	2.75	2.7	1.7	1.4	1.0	.95	1.4	.6	1.75	3.95	2.65
23.....	1.7	2.6	2.5	1.65	1.5	1.0	.95	1.4	.5	.9	3.95	2.55
24.....	3.0	2.55	2.5	1.6	1.5	.95	.85	1.4	2.65	3.4	3.95	2.4
25.....	2.85	2.5	2.5	1.6	1.5	.95	.8	1.4	2.05	4.55	4.4	2.25
26.....	2.7	2.45	2.4	1.6	1.4	.95	.8	1.4	1.65	3.5	4.85	2.05
27.....	2.5	2.4	2.4	1.55	1.3	.9	.85	1.3	.95	2.45	4.35	2.05
28.....	2.35	2.3	2.3	1.5	1.3	.9	.9	1.3	1.0	2.65	4.35	1.9
29.....	2.1	2.55	2.3	1.5	1.3	.9	1.1	1.3	.75	4.45	4.55	1.8
30.....	2.05	2.65	2.2	1.5	.....	.9	2.0	1.3	.55	4.0	4.65	1.7
31.....	2.05	.....	2.1	1.4	.....	.9	.....	1.35	.....	3.85	4.9	.....
1908-9.												
1.....	1.65	.5	.45	.4	.4	.3	.2	-.05	3.2	2.55	4.0	2.5
2.....	1.6	.5	.45	.35	.4	.3	.15	-.05	3.0	2.7	4.05	2.5
3.....	1.55	.5	.45	.35	.4	.3	.15	-.05	3.1	2.75	4.35	2.55
4.....	1.45	.5	.45	.4	.4	.3	.15	.8	2.9	2.7	4.95	6.95
5.....	1.35	.5	.45	.4	.4	.3	.15	1.85	2.65	2.55	4.45	6.75
6.....	1.3	.5	.4	.45	.35	.3	.15	1.6	2.4	2.5	4.55	5.25
7.....	1.5	.5	.4	.5	.3	.3	.15	1.45	2.3	2.6	4.65	4.15
8.....	1.6	.5	.4	.45	.3	.25	.1	1.25	2.25	3.3	4.45	3.7
9.....	1.25	.5	.4	.35	.3	.25	.1	1.05	2.3	5.75	4.15	3.45
10.....	1.15	.5	.4	.35	.3	.25	.1	.95	2.3	6.55	3.7	3.25
11.....	1.05	.45	.4	.35	.3	.25	.05	.9	2.25	6.7	3.75	2.9
12.....	1.0	.45	.4	.35	.3	.25	.05	1.05	2.25	7.55	4.1	2.65
13.....	1.0	.45	.35	.4	.3	.25	.05	1.55	2.35	7.3	3.25	3.05
14.....	.95	.45	.35	.4	.35	.25	.0	1.5	2.1	7.2	4.2	3.65
15.....	.95	.45	.35	.4	.3	.25	.0	1.3	1.7	6.25	3.95	3.8
16.....	.9	.45	.35	.4	.3	.25	.0	1.15	1.15	5.15	4.55	4.65
17.....	.9	.45	.35	.4	.3	.25	.0	1.55	1.55	5.1	4.55	5.15
18.....	.9	.45	.35	.4	.35	.25	.0	1.85	3.15	4.5	4.75	6.0
19.....	.85	.45	.35	.4	.35	.25	.0	2.05	3.2	3.95	5.85	6.0
20.....	.8	.45	.35	.4	.35	.25	.0	2.3	3.2	3.8	5.95	5.65

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
21.....	0.8	0.45	0.35	0.4	0.35	0.2	-0.05	2.5	3.4	3.65	5.8	5.3
22.....	.75	.45	.35	.4	.3	.1	-.05	2.65	3.05	3.6	4.8	4.8
23.....	.7	.45	.35	.4	.3	.1	-.05	2.85	3.1	3.7	4.15	4.15
24.....	.7	.45	.35	.4	.3	.1	-.05	2.9	3.3	3.75	3.65	4.0
25.....	.7	.45	.35	.4	.3	.1	-.05	3.05	3.5	3.5	3.3	3.9
26.....	.7	.45	.35	.4	.3	.1	-.05	3.05	3.45	3.3	3.1	3.65
27.....	.65	.45	.35	.4	.3	.1	-.05	3.1	3.15	3.45	3.1	3.4
28.....	.6	.45	.4	.4	.35	.05	-.05	3.15	3.05	3.7	3.15	3.25
29.....	.6	.45	.4	.4	.....	.05	-.05	3.15	2.9	3.35	2.85	3.0
30.....	.6	.45	.35	.4	.....	.05	-.05	3.1	2.6	3.6	2.55	2.8
31.....	.5	.....	.35	.4	.....	.05	.....	3.05	.....	3.65	2.5	.....
1909-10.												
1.....	2.65	1.0	.5	3.3	1.15	.4	1.15	1.35	1.95	2.75	.15	1.25
2.....	2.45	.9	.55	3.0	1.1	.4	1.2	1.35	1.85	3.1	.15	1.05
3.....	2.25	.9	.6	2.55	1.1	.4	1.3	1.45	1.75	2.9	.1	1.05
4.....	2.1	.9	.6	2.15	1.0	.35	1.35	1.65	1.55	3.0	.1	.95
5.....	2.0	.85	.6	1.95	1.0	.35	1.45	1.85	1.4	2.65	.1	.8
6.....	2.0	.85	.6	1.9	1.0	.3	1.6	2.05	1.9	2.75	.1	4.1
7.....	1.9	.85	.6	1.85	.9	.3	1.6	2.65	1.45	3.15	.1	1.9
8.....	1.8	.8	.6	1.8	.9	.3	1.7	2.65	1.25	2.55	.05	1.85
9.....	1.8	.8	.6	1.7	.9	.3	1.75	2.75	1.15	2.05	.05	1.6
10.....	1.7	.8	.6	1.7	.85	.2	2.1	2.55	.75	2.0	.05	1.2
11.....	1.7	.8	.6	1.55	.8	.2	1.35	2.5	.7	1.75	.05	1.15
12.....	1.65	.8	.6	1.45	.8	.2	1.3	2.6	.7	1.65	.15	2.6
13.....	1.6	.8	.6	1.4	.8	.2	1.1	2.7	.5	1.7	.05	2.45
14.....	1.6	.8	.6	1.5	.75	.2	1.1	2.8	.45	1.85	.05	2.65
15.....	1.55	.8	.55	1.55	.7	.2	1.0	2.85	.4	2.0	.05	2.35
16.....	1.4	.75	.5	1.65	.7	.15	1.0	3.0	.3	1.5	.05	2.35
17.....	1.3	.7	.55	1.6	.7	.1	.9	3.15	.65	1.35	.0	1.95
18.....	1.25	.7	.6	1.5	.7	.2	.9	3.05	.7	1.15	-.05	1.8
19.....	1.15	.7	.6	1.5	.65	.75	.9	2.95	.6	.95	-.05	1.85
20.....	1.0	.7	.6	1.3	.6	.95	.9	3.15	1.25	.8	-.05	1.7
21.....	1.0	.7	.6	1.2	.55	1.15	.0	2.6	1.5	.75	-.05	1.55
22.....	1.0	.7	.6	1.2	.55	1.25	.9	2.6	.95	.65	-.05	1.35
23.....	1.0	.7	.6	1.2	.5	1.55	.9	2.7	.8	.5	.35	2.4
24.....	1.0	.7	.6	1.05	.5	1.35	.9	2.7	.6	.5	1.1	2.95
25.....	1.0	.6	.6	1.1	.5	1.25	1.2	2.7	.55	.5	.95	2.45
26.....	1.0	.55	.55	1.0	.45	1.35	1.4	2.75	1.1	.45	.85	2.2
27.....	1.0	.55	.55	1.0	.45	1.3	1.5	2.8	2.8	.4	1.1	2.0
28.....	1.0	.55	.5	1.0	.45	1.25	1.55	2.75	3.85	.35	1.9	1.95
29.....	1.0	.55	.5	1.0	.....	1.3	1.4	2.6	2.6	.25	1.7	1.65
30.....	1.0	.5	.5	1.0	.....	1.1	1.35	2.5	2.6	.25	1.45	1.9
31.....	1.0	.....	3.75	1.0	.....	1.1	.....	2.25	.....	.15	1.35	.....
1910-11.												
1.....	1.65	.15	.1	-.05	-.1	.25	.3	.75	3.1	2.9	5.5	1.6
2.....	1.15	.15	.0	-.1	-.1	.1	.3	.55	2.85	2.95	5.6	1.7
3.....	1.05	.15	.0	-.05	-.1	.1	.3	.35	3.25	2.85	5.5	2.75
4.....	.95	.15	.1	-.05	-.1	.1	.2	.25	2.85	2.85	5.0	3.0
5.....	.9	.2	.1	.0	-.1	.1	.05	.15	2.25	2.8	5.05	3.1
6.....	.75	.15	.1	.0	-.1	.0	.0	.05	1.9	2.75	5.05	3.3
7.....	.7	.2	.1	-.05	-.15	.0	.05	.0	1.9	2.9	4.45	3.25
8.....	.7	.2	.1	-.05	-.15	-.05	.1	.0	1.85	3.55	4.05	3.9
9.....	.7	.15	.1	-.05	-.15	-.1	.05	.0	1.85	4.15	3.75	5.35
10.....	.7	.15	.1	-.05	-.15	-.05	.0	.0	1.9	5.0	3.5	4.8
11.....	.6	.15	.1	-.05	-.15	-.05	.0	.0	1.9	4.25	3.1	4.4
12.....	.6	.15	.1	-.05	-.15	-.1	-.1	.4	2.1	4.55	2.95	2.95
13.....	.55	.15	.1	-.05	-.15	-.1	-.05	.25	2.15	4.8	2.8	3.6
14.....	.45	.15	.1	-.05	-.15	-.15	.0	1.6	3.05	6.75	2.75	3.65
15.....	.45	.2	.0	-.05	-.15	-.1	-.1	7.45	3.9	5.95	2.6	3.8
16.....	.4	.15	.05	-.05	-.15	-.15	-.05	13.25	6.8	5.2	2.45	3.75
17.....	.3	.1	.1	-.05	-.15	-.15	-.05	6.95	6.5	4.2	2.2	3.25
18.....	.3	.1	.0	-.05	.55	-.1	-.1	6.3	5.15	4.8	2.05	2.85
19.....	.3	.15	.0	-.1	.8	-.05	-.1	4.5	3.95	4.6	1.85	2.6
20.....	.3	.1	.0	-.1	.65	-.1	-.1	3.5	3.4	4.85	1.65	2.35
21.....	.3	.1	.0	-.1	.7	-.2	-.1	2.95	3.55	5.5	1.6	2.05
22.....	.3	.1	.0	-.1	.65	-.2	-.1	2.7	3.55	5.15	1.6	1.95
23.....	.3	.1	.0	-.1	.55	-.15	-.1	3.05	4.5	6.45	1.45	2.45
24.....	.3	.1	.0	-.1	.55	-.1	-.1	3.0	3.75	6.45	1.2	2.85
25.....	.3	.15	.0	-.1	.45	-.1	.0	3.0	3.55	4.95	1.2	2.45

Daily gage height, in feet, of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
26.....	0.25	0.15	0.0	-0.1	0.45	-0.1	1.6	2.9	3.3	5.5	1.45	2.1
27.....	.2	.15	.05	-.1	.35	-.1	1.75	3.55	3.1	5.8	1.6	3.1
28.....	.2	.1	.05	-.1	.3	-.1	2.8	3.9	3.05	5.6	4.3	2.7
29.....	.15	.1	.05	-.1	.....	-.1	1.7	3.65	2.95	4.8	2.7	2.6
30.....	.15	.1	.05	-.1	.....	.15	1.05	4.8	2.85	4.75	2.3	2.5
31.....	.15	.....	.05	-.1	.....	.3	.....	4.8	.....	5.8	2.6	.....
1911-12.												
1.....	2.3	2.85	1.95	1.45	1.5	.5	.5	1.0	2.9	2.95	.8	5.75
2.....	2.05	2.8	1.95	1.25	1.45	.5	.85	1.0	3.0	2.95	.8	7.3
3.....	2.0	2.8	1.9	1.3	1.4	.5	1.3	.9	3.2	2.9	1.55	7.9
4.....	1.95	2.8	1.9	1.3	1.4	.5	1.3	.85	3.1	2.9	2.0	7.45
5.....	1.8	2.8	1.9	1.3	1.4	.5	1.2	.75	3.1	2.9	2.15	6.5
6.....	1.7	2.8	1.95	1.3	1.3	.5	1.05	.6	3.05	2.85	2.1	7.15
7.....	1.65	2.85	1.95	1.6	1.1	.5	4.4	.55	3.3	2.85	1.95	8.45
8.....	1.9	2.9	1.9	1.65	1.05	.5	.95	.45	3.3	2.75	2.05	5.65
9.....	3.9	2.9	1.8	1.85	1.05	.45	.8	.4	3.5	2.55	1.85	6.35
10.....	2.85	2.9	1.8	1.75	1.05	.45	.8	.25	3.9	2.45	1.4	4.65
11.....	2.45	2.9	1.85	1.7	1.05	.45	.8	.0	4.55	2.3	1.45	4.05
12.....	2.2	2.8	1.95	1.6	1.05	.4	.75	1.0	4.9	2.3	1.4	4.25
13.....	2.2	2.6	1.85	1.55	1.05	.4	.6	1.25	5.35	2.75	1.25	7.9
14.....	3.05	2.75	1.7	1.5	1.05	.4	.6	2.15	5.75	2.2	.95	9.7
15.....	3.55	2.8	1.6	1.5	1.05	.4	.7	2.2	5.85	2.05	2.0	7.5
16.....	4.35	2.9	1.6	1.4	1.05	.4	.85	2.05	5.9	1.85	1.8	9.3
17.....	4.05	2.9	1.65	1.5	1.0	.45	1.15	2.25	5.85	1.8	1.65	9.05
18.....	4.3	2.7	1.65	1.5	1.0	.4	1.55	2.5	5.7	1.65	1.85	8.35
19.....	4.45	2.65	1.65	1.5	.95	.4	1.55	2.4	5.5	1.7	1.95	10.3
20.....	4.4	2.5	1.6	1.5	.9	.4	1.6	2.55	5.25	1.85	2.45	9.2
21.....	4.35	2.5	1.6	1.5	.8	.4	1.65	2.7	5.1	1.6	4.75	6.15
22.....	4.2	2.45	1.6	1.55	.8	.5	1.65	2.6	5.0	1.8	6.2	4.95
23.....	4.25	2.3	1.6	1.5	.85	.5	1.7	2.6	4.65	1.95	7.0	4.3
24.....	4.1	2.25	1.6	1.5	.8	.6	1.7	2.75	4.25	1.95	6.2	3.85
25.....	4.2	2.2	1.55	1.45	.7	.6	1.65	2.85	3.75	1.4	7.9	3.6
26.....	4.1	2.2	1.55	1.5	.6	.65	1.45	2.95	3.5	1.55	6.7	3.25
27.....	3.6	2.15	1.55	1.5	.6	.8	1.4	3.0	3.25	1.55	7.8	2.95
28.....	3.35	2.1	1.6	1.5	.55	.7	1.15	3.0	3.2	1.7	5.7	2.8
29.....	3.2	2.0	1.55	1.5	.5	.65	1.05	2.9	3.05	1.9	5.55	2.65
30.....	3.1	2.0	1.5	1.5	.....	.65	1.0	2.9	2.95	1.75	5.4	2.5
31.....	2.95	.....	1.5	1.5	.....	.6	.....	2.9	.....	1.65	5.2	.....
1912-13.												
1.....	2.4	1.25	.95	1.2	.55	1.8	.9	.45	.85	1.6	1.3	.9
2.....	2.3	1.2	1.0	1.1	.55	1.6	.8	.4	1.0	1.2	1.0	3.2
3.....	4.75	1.2	.9	1.05	.6	1.55	.75	.3	.85	1.25	.85	1.95
4.....	3.55	1.2	.85	1.05	.5	1.5	.7	3.55	1.5	1.75	.55	2.7
5.....	4.1	1.15	.85	1.05	.55	1.5	.7	1.75	1.7	1.35	.65	1.65
6.....	4.1	1.15	.95	1.0	.6	3.05	.7	1.6	1.05	1.35	1.2	3.2
7.....	4.5	1.1	.95	1.0	.7	2.9	.7	1.35	1.85	1.2	1.0	3.2
8.....	4.0	1.05	1.0	1.0	.7	2.8	.6	1.15	1.85	1.05	.7	4.65
9.....	4.05	1.0	1.05	.95	.7	2.6	.6	1.05	1.5	.95	.5	5.4
10.....	3.95	1.0	1.1	.9	.7	2.25	.5	.9	1.15	.9	.4	5.8
11.....	4.2	.95	1.2	.9	.65	2.3	.45	1.0	2.6	.9	.4	5.7
12.....	3.45	.95	1.2	.85	.7	2.3	.4	1.25	2.2	.9	.35	4.0
13.....	2.95	.9	1.25	.85	.7	2.3	.3	1.0	1.5	.85	.4	3.85
14.....	2.75	.9	1.25	.85	.65	2.15	.35	1.5	1.2	.75	.5	3.7
15.....	2.45	.9	1.2	.8	.65	2.1	.3	1.6	.95	.65	1.2	3.25
16.....	2.5	.9	1.1	.8	.7	1.9	.3	1.5	.8	.5	1.6	2.95
17.....	2.3	.8	1.0	.8	.95	1.85	.35	1.25	1.2	.5	1.25	2.7
18.....	2.15	.8	1.0	.8	3.5	1.7	.35	1.15	1.55	.5	1.0	2.35
19.....	2.0	1.05	1.0	.75	2.95	1.7	.3	1.0	2.45	.5	1.2	2.2
20.....	1.9	1.4	1.2	.7	2.75	1.6	.45	1.05	4.75	.5	1.25	2.05
21.....	1.9	1.1	1.65	.7	2.75	1.5	.45	1.2	1.95	.5	1.0	1.85
22.....	1.85	.9	1.7	.7	2.6	1.45	.3	1.15	1.9	.5	2.3	1.65
23.....	1.75	.9	1.7	.7	2.45	1.35	.55	1.0	1.85	.5	2.0	1.6
24.....	1.65	.9	1.7	.7	2.25	1.3	.95	.9	2.3	.35	1.8	1.6
25.....	1.6	.85	1.55	.7	2.2	1.25	.9	1.1	2.55	.4	1.9	1.7
26.....	1.55	.9	1.4	.7	2.05	1.15	.8	1.3	2.5	1.15	1.6	2.0
27.....	1.45	.9	1.45	.65	2.0	1.05	1.0	1.35	2.6	.45	1.45	1.3
28.....	1.3	.85	1.35	.6	1.85	1.05	.7	1.2	2.1	1.05	1.4	1.35
29.....	1.3	.85	1.3	.6	.....	1.0	.6	1.05	2.1	.5	1.15	1.1
30.....	1.3	.9	1.2	.6	.....	.9	.55	.9	3.1	.45	1.0	1.9
31.....	1.3	.....	1.2	.6	.....	.9	.....	.8	.....	1.9	.85	.....

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	540	800.	1,950	7,920	2,570	16.....	540	4,160	4,950	5,360	3,600
2.....	1,200	3,890	2,100	8,030	2,640	17.....	350	2,740	4,250	5,040	3,080
3.....	660	1,900	2,500	9,950	2,640	18.....	350	2,270	5,380	4,090	2,470
4.....	540	1,260	2,500	9,950	6,670	19.....	320	1,660	4,050	4,090	2,430
5.....	720	2,40	5,500	15,890	13,200	20.....	480	1,520	3,620	9,260	3,350
6.....	600	2,590	3,150	9,170	6,800	21.....	830	1,760	3,080	9,390	2,170
7.....	600	1,700	2,570	10,100	3,180	22.....	4,100	2,350	2,750	7,730	2,070
8.....	830	1,570	2,020	21,680	2,510	23.....	3,460	2,430	6,600	5,830	3,820
9.....	770	1,440	1,370	18,500	2,430	24.....	3,610	1,660	3,260	3,800	2,560
10.....	600	1,470	1,200	13,300	2,740	25.....	2,350	1,350	2,820	3,510	3,600
11.....	410	1,470	3,000	11,530	3,290	26.....	1,470	1,080	8,170	3,610	3,180
12.....	350	1,470	3,080	9,750	3,980	27.....	1,390	910	7,920	3,710	2,640
13.....	380	2,890	13,300	8,340	5,560	28.....	1,050	810	6,800	3,710	4,570
14.....	380	3,180	11,600	7,070	4,950	29.....	920	2,590	8,400	3,970	6,920
15.....	380	3,110	11,330	6,210	4,100	30.....	600	1,660	8,100	3,910	3,290
						31.....	470		8,700	2,860	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3,710	1,070	770	610	570	890	440	520	1,610	580	3,450	2,080
2.....	4,690	1,030	770	610	560	890	440	520	1,610	560	3,670	1,830
3.....	4,940	1,030	770	620	560	880	440	520	1,610	540	3,920	1,470
4.....	3,980	1,030	770	620	550	870	440	520	1,740	530	3,730	1,340
5.....	2,560	990	680	620	550	800	430	520	1,900	530	3,360	1,280
6.....	3,610	940	680	620	540	760	420	490	2,000	530	3,300	1,210
7.....	2,750	940	680	620	540	750	410	610	2,120	540	3,250	2,600
8.....	2,560	990	680	620	540	740	400	580	2,210	540	3,120	14,700
9.....	2,510	1,290	680	620	540	730	390	520	2,350	540	3,080	5,700
10.....	2,510	1,120	680	620	540	720	390	450	2,190	540	2,920	3,450
11.....	2,500	940	680	620	540	700	380	450	2,100	520	2,800	2,420
12.....	2,340	890	680	610	540	680	380	450	1,840	500	2,320	3,280
13.....	2,270	850	680	610	540	660	380	450	1,840	500	1,910	4,540
14.....	2,170	850	680	610	540	640	380	450	1,610	890	1,860	4,350
15.....	1,890	850	680	600	540	620	380	450	1,870	1,480	1,860	3,930
16.....	1,850	850	680	600	530	610	380	450	1,790	2,090	1,430	3,600
17.....	2,000	850	680	590	530	600	380	1,200	1,600	1,660	1,280	3,240
18.....	7,780	850	680	590	530	580	380	1,380	1,680	1,290	1,160	2,990
19.....	6,180	850	680	590	530	570	370	1,380	1,300	1,250	1,860	2,810
20.....	5,680	850	680	590	530	550	370	1,380	1,180	1,190	2,640	5,100
21.....	4,320	850	680	590	520	530	370	1,380	1,060	700	2,470	5,170
22.....	2,510	850	680	590	520	510	370	1,250	1,060	1,460	2,120	4,430
23.....	2,000	850	680	590	520	480	370	1,400	950	1,590	1,840	3,600
24.....	2,170	850	650	590	720	470	370	1,500	860	1,680	2,000	3,600
25.....	1,850	770	650	590	920	460	370	3,200	680	2,400	1,860	3,380
26.....	1,730	770	620	580	920	460	370	3,500	660	2,400	1,360	2,620
27.....	1,590	770	620	580	910	460	720	3,160	660	3,440	1,310	2,280
28.....	1,590	770	620	580	900	460	460	1,890	660	2,140	1,140	1,940
29.....	1,430	770	620	580	.....	460	920	1,890	600	3,510	1,060	1,800
30.....	1,430	770	620	570	.....	460	460	1,860	610	2,140	820	1,800
31.....	1,190	.....	620	570	.....	450	.....	1,740	.....	2,450	2,600	.....
1901-2.												
1.....	1,750	2,610	1,120	810	550	530	370	300	560	1,100	6,800	9,600
2.....	1,700	2,320	1,120	810	570	480	360	285	440	420	4,750	9,400
3.....	1,400	1,990	980	810	570	480	365	285	400	510	3,900	8,570
4.....	1,460	1,990	970	770	570	480	370	350	400	420	3,600	10,860
5.....	1,600	1,890	960	730	560	470	370	1,020	360	380	2,970	12,420
6.....	1,280	1,710	950	700	560	460	370	420	360	420	4,540	14,700
7.....	1,280	1,710	900	680	560	460	365	310	305	600	4,540	15,400
8.....	1,400	1,530	900	640	560	460	360	310	305	700	2,810	22,650
9.....	4,520	1,470	900	590	560	460	360	310	305	1,870	2,550	38,200
10.....	2,900	1,410	900	610	560	460	365	310	540	3,180	2,340	31,650
11.....	2,420	1,300	890	630	550	460	370	310	800	2,820	2,340	23,470
12.....	1,700	1,250	880	650	550	450	370	285	1,160	2,970	2,250	21,490
13.....	1,400	1,300	870	650	540	450	3,380	285	840	10,900	6,570	17,650
14.....	1,400	1,360	860	820	540	450	620	380	710	6,300	10,200	13,070
15.....	1,130	1,300	830	820	540	450	2,120	655	660	4,550	8,750	10,860

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16.....	1,100	1,250	830	820	530	450	1,990	540	580	3,850	7,800	9,140
17.....	1,100	1,250	830	590	530	450	1,090	420	580	2,430	6,050	7,660
18.....	1,100	1,190	820	610	580	410	450	2,250	900	2,270	5,070	6,040
19.....	1,130	1,120	820	630	530	410	450	700	1,270	2,950	5,070	5,350
20.....	1,210	1,120	820	650	520	420	450	440	1,270	2,470	5,310	5,110
21.....	1,180	1,050	820	630	510	420	440	400	1,270	3,300	5,110	10,500
22.....	1,130	980	820	610	510	410	410	360	600	2,870	5,050	7,660
23.....	1,100	970	820	590	510	390	360	360	520	5,440	4,690	4,180
24.....	1,460	960	820	570	510	390	320	830	420	4,750	6,180	3,170
25.....	2,610	940	820	550	520	390	320	400	350	20,800	7,530	2,980
26.....	1,400	930	820	590	520	390	315	360	315	12,130	9,330	2,890
27.....	1,460	930	820	640	530	400	310	360	315	11,810	7,640	2,620
28.....	5,120	930	810	620	530	400	305	360	315	12,450	6,480	2,440
29.....	3,880	1,050	810	600	.....	400	305	1,090	815	13,170	6,360	2,530
30.....	3,530	1,190	800	580	.....	370	305	1,090	5,170	8,450	8,630	2,530
31.....	3,060	.....	800	550	.....	370	.....	1,090	.....	7,600	10,500	.....
1902-3.												
1.....	2,610	2,300	780	780	660	1,700	700	1,260	1,510	2,550	1,360	3,830
2.....	3,250	1,480	780	780	840	1,460	690	1,160	3,900	2,750	1,360	4,250
3.....	3,900	1,720	1,110	780	840	1,410	610	860	1,870	2,550	1,620	5,860
4.....	3,470	1,480	1,220	780	795	1,410	610	810	1,730	2,750	2,600	4,750
5.....	3,900	2,740	1,330	770	795	1,350	550	730	1,800	3,340	2,340	4,590
6.....	2,380	2,300	1,110	740	795	1,240	550	960	3,100	4,080	1,420	3,250
7.....	2,030	1,540	1,110	740	795	1,240	550	690	2,300	4,920	1,130	3,020
8.....	1,770	1,320	1,060	715	795	1,180	550	650	2,450	5,570	1,130	4,070
9.....	1,770	1,170	1,010	715	760	1,130	540	1,360	3,460	6,030	1,370	1,780
10.....	1,640	1,070	840	720	730	1,080	540	1,680	2,910	6,500	1,130	1,820
11.....	2,580	1,030	840	720	660	1,030	540	1,740	4,170	6,600	1,130	1,920
12.....	2,510	1,030	790	720	660	980	540	2,920	18,000	6,160	1,070	1,880
13.....	2,370	985	790	720	2,340	930	530	1,610	12,500	5,530	1,580	1,820
14.....	2,300	985	790	720	2,340	890	530	1,610	11,160	5,030	2,140	1,720
15.....	1,950	940	790	780	2,270	890	530	1,760	6,100	4,630	1,680	1,820
16.....	1,810	940	900	750	1,970	890	530	2,530	3,700	3,430	1,490	2,150
17.....	1,750	940	900	720	1,650	845	530	2,000	3,500	2,980	1,370	2,520
18.....	1,600	930	900	680	1,570	800	720	1,730	3,110	2,780	1,370	2,299
19.....	1,540	930	900	680	1,480	800	890	1,840	3,110	2,710	1,440	2,180
20.....	1,480	920	890	680	1,400	800	730	1,950	2,910	2,520	1,770	2,230
21.....	1,430	870	890	680	1,400	800	730	1,820	2,910	2,450	2,630	2,230
22.....	1,370	870	890	680	1,400	725	730	1,820	2,810	2,450	3,090	2,030
23.....	1,320	860	890	680	1,250	725	730	1,690	2,710	2,450	2,800	1,880
24.....	1,320	860	890	680	1,200	720	810	1,430	2,710	1,870	2,650	1,780
25.....	1,260	910	880	660	1,100	720	810	1,430	2,560	1,540	2,280	2,460
26.....	1,260	1,220	880	660	1,100	715	810	1,430	2,560	1,410	1,920	4,260
27.....	1,200	910	880	660	2,200	680	810	1,440	2,560	1,350	1,920	3,020
28.....	1,200	815	850	660	1,970	575	850	1,440	2,560	1,480	4,750	3,300
29.....	1,200	815	850	660	.....	610	2,320	1,450	2,560	1,870	4,000	3,490
30.....	1,140	815	840	660	.....	720	1,580	1,510	2,560	2,780	2,310	5,460
31.....	1,080	.....	840	660	.....	720	.....	1,510	.....	1,800	2,310	.....
1903-4.												
1.....	3,780	1,040	700	590	490	450	375	300	1,200	705	720	1,540
2.....	6,650	990	700	585	490	450	375	300	910	770	a 720	a 1,300
3.....	9,590	950	700	580	485	445	375	300	750	a 755	720	1,180
4.....	10,790	950	700	575	a 485	440	375	295	a 640	705	940	1,540
5.....	8,260	950	650	a 575	a 485	a 435	a 375	a 295	560	670	1,070	3,040
6.....	7,970	900	650	575	485	420	340	295	2,320	645	1,070	9,250
7.....	5,270	850	650	570	480	420	340	295	870	630	850	13,150
8.....	4,900	850	645	565	480	420	340	270	560	620	a 780	a 22,660
9.....	3,650	850	645	a 565	a 480	425	a 340	a 270	a 950	645	750	12,110
10.....	2,960	850	645	565	480	a 425	340	270	a 5,940	595	750	14,950
11.....	2,880	850	645	565	480	425	340	270	4,020	595	750	47,100
12.....	2,580	850	645	565	480	425	340	270	1,370	570	730	99,900
13.....	2,090	810	640	565	480	420	340	270	1,590	a 560	650	132,000
14.....	2,020	810	640	a 565	a 480	420	340	a 330	a 1,750	545	650	96,600
15.....	1,950	810	640	565	480	a 405	a 1,290	330	1,190	a 630	600	56,200
16.....	1,750	810	640	565	480	405	380	330	860	595	a 600	29,570
17.....	1,680	780	640	565	480	400	380	330	810	640	580	28,820
18.....	1,610	780	640	565	475	400	380	a 300	a 630	1,070	520	32,270
19.....	1,610	780	640	a 565	a 475	400	320	300	630	a 700	500	30,320
20.....	1,500	720	635	540	475	385	a 320	300	2,860	640	500	30,170

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21	1,500	720	635	540	475	α 385	320	300	2,160	790	500	26,570
22	1,500	720	635	540	475	385	320	390	2,390	1,040	α 640	20,420
23	1,430	720	620	540	475	375	320	α 2,400	2,090	1,160	710	18,170
24	1,360	720	620	515	α 465	375	300	1,310	α 1,600	α 980	810	15,170
25	1,300	720	620	α 515	465	375	α 300	3,810	1,480	860	1,020	13,820
26	1,230	720	620	515	460	α 375	300	810	6,000	730	α 980	13,220
27	1,230	720	620	510	460	375	300	α 3,050	14,200	980	1,090	13,520
28	1,180	720	620	505	455	375	300	8,460	14,000	930	1,850	12,970
29	960	700	620	500	α 455	375	300	5,840	6,400	α 820	α 1,850	11,120
30	960	700	620	α 495	.....	375	300	2,350	3,410	760	1,800	10,520
31	1,000	.....	595	495	.....	α 375	.....	α 1,930	.....	720	1,750	.....
1904-5.												
1	11,350	10,000	1,710	1,350	1,130	1,930	7,700	2,700	4,370	25,700	7,520	4,000
2	9,250	α 9,000	1,640	α 1,550	α 990	1,930	2,100	3,000	α 4,860	6,420	7,050	α 3,540
3	9,100	8,200	1,640	1,550	930	1,930	α 1,900	3,130	4,760	α 4,690	6,230	3,420
4	9,250	6,600	α 1,720	1,550	870	1,960	1,890	3,260	4,960	4,260	α 6,000	3,360
5	8,050	6,200	1,720	1,550	760	2,190	1,930	3,490	4,960	4,220	5,600	3,420
6	6,400	α 5,660	2,900	α 1,470	α 880	α 2,190	1,920	α 3,730	5,270	4,140	5,000	2,940
7	6,100	5,500	4,090	1,400	820	2,280	α 2,070	3,730	6,310	3,520	α 4,800	α 2,940
8	5,800	5,350	α 3,750	1,400	850	2,660	2,130	3,930	α 7,770	α 3,520	4,500	3,600
9	5,800	5,080	3,280	1,400	910	6,690	2,220	6,530	9,420	3,320	4,100	3,850
10	6,850	α 4,240	2,720	1,320	α 880	α 3,710	2,280	α 2,590	9,250	3,000	α 4,000	α 9,530
11	10,600	4,110	2,720	1,250	910	3,130	α 2,240	2,410	9,770	2,800	3,800	22,500
12	12,850	4,050	α 2,440	α 1,250	960	3,050	α 2,220	3,730	α 13,770	2,730	3,400	8,150
13	14,650	3,920	2,240	1,210	α 1,020	3,170	2,240	4,650	13,940	2,600	9,240	7,320
14	19,300	3,610	2,320	α 1,210	α 1,070	3,090	α 2,260	4,870	16,250	α 2,470	α 7,540	5,640
15	21,250	α 3,250	2,540	1,210	1,070	α 3,910	α 2,280	α 3,980	17,730	2,420	8,050	5,360
16	19,150	3,030	α 2,410	1,180	1,010	3,310	2,340	3,950	α 19,380	2,380	8,870	α 5,360
17	21,100	α 2,860	2,470	1,150	1,010	3,020	2,300	4,220	18,040	2,600	9,980	6,900
18	21,400	2,860	2,620	1,150	α 1,010	2,930	2,250	4,390	12,930	3,620	8,480	6,400
19	25,300	2,910	2,690	α 1,100	1,010	α 2,830	2,300	α 4,660	14,000	α 3,640	α 9,880	5,200
20	20,050	2,920	α 2,680	1,100	1,010	2,960	α 2,360	α 4,670	12,970	4,570	10,780	4,530
21	18,700	α 2,780	2,600	1,100	1,210	3,400	2,360	4,780	13,100	4,850	11,480	3,850
22	19,750	2,640	2,520	1,100	1,420	3,140	2,370	4,690	13,010	6,240	9,530	α 3,670
23	16,900	2,450	2,180	α 1,200	2,030	α 2,980	2,820	4,600	13,050	7,540	7,230	3,450
24	14,800	2,310	1,840	1,500	1,930	2,820	α 2,860	α 5,810	α 13,050	α 6,600	α 6,700	3,450
25	13,750	α 2,170	1,670	1,430	α 1,880	2,580	2,780	4,880	12,300	14,700	9,300	α 7,900
26	12,700	2,170	1,590	1,370	1,830	2,500	2,710	4,450	11,910	7,460	8,230	16,200
27	10,300	2,120	1,250	1,370	1,830	2,500	α 2,640	4,420	9,120	7,300	7,800	22,340
28	8,800	1,990	α 1,250	α 1,230	1,830	α 2,500	2,990	4,190	α 7,020	7,620	α 6,860	α 22,030
29	8,650	α 1,900	1,180	1,230	.....	2,500	2,790	α 4,570	14,660	8,650	5,960	10,830
30	9,550	1,810	1,110	1,180	.....	2,500	2,640	α 4,270	29,300	9,170	5,160	7,980
31	11,500	.....	1,110	1,130	.....	2,180	.....	4,370	.....	8,670	4,460	.....
1905-6.												
1	7,830	2,100	2,760	3,700	1,750	3,650	1,180	1,750	5,670	3,670	9,100	29,680
2	α 9,930	α 2,010	2,760	3,250	1,820	α 3,300	1,200	α 1,890	α 6,130	3,430	α 8,260	25,450
3	11,580	1,910	α 3,130	3,030	1,810	3,260	1,270	2,040	6,730	3,250	8,360	α 21,960
4	8,880	1,810	4,350	2,920	1,800	3,110	1,300	2,550	10,570	3,070	11,360	18,520
5	7,240	1,710	5,000	α 2,740	1,790	3,000	1,320	2,780	6,260	2,900	15,460	16,480
6	α 6,480	α 1,410	4,700	2,670	1,780	2,890	1,340	2,550	6,140	3,390	17,770	13,040
7	7,800	1,380	4,550	2,600	1,770	α 2,850	α 1,360	α 2,850	α 5,820	3,330	24,310	11,790
8	9,630	1,350	4,300	2,540	1,770	2,680	1,360	2,770	5,150	3,760	α 29,360	10,680
9	7,580	α 1,320	α 4,010	α 2,410	2,080	2,680	1,360	2,770	4,980	α 4,680	35,220	9,790
10	α 6,090	1,300	3,770	2,310	2,160	2,510	2,160	α 2,770	4,210	4,570	39,620	8,130
11	5,330	1,280	3,650	2,270	2,860	2,340	α 1,580	2,790	α 3,850	α 8,460	57,890	α 6,520
12	4,670	1,260	α 3,530	2,220	4,200	α 2,130	1,430	2,800	3,470	8,250	α 46,640	6,200
13	4,420	α 2,240	3,490	α 2,220	4,680	1,960	1,350	2,820	3,280	7,710	37,470	5,560
14	α 3,780	5,480	3,210	2,220	5,280	1,900	1,310	α 2,840	3,090	α 7,820	α 25,540	5,400
15	3,680	13,880	3,210	2,170	5,480	1,840	α 1,310	2,840	α 2,990	7,500	19,410	5,160
16	3,630	6,230	2,940	2,030	4,540	α 1,840	1,310	2,880	2,970	5,100	16,500	4,920
17	3,600	α 4,580	α 2,940	α 2,030	3,870	1,780	1,340	2,990	2,950	6,290	α 16,640	α 4,770
18	3,450	6,080	4,310	1,980	3,870	1,600	1,340	3,480	2,930	13,410	14,330	4,280
19	α 3,380	6,380	7,940	1,840	4,300	1,590	α 1,340	α 3,640	2,910	15,750	12,020	3,980
20	3,090	5,040	α 8,540	1,750	5,620	1,590	1,300	3,630	α 2,950	α 17,810	10,080	α 3,780
21	2,870	α 4,850	8,430	1,700	6,050	α 1,530	1,280	3,320	3,080	18,260	α 9,600	3,800
22	2,730	4,570	8,060	α 1,610	6,050	1,470	1,260	3,710	α 3,270	18,700	9,960	3,830
23	α 2,650	4,170	9,080	1,600	6,050	1,470	α 1,240	α 4,110	α 3,470	17,050	13,930	4,010
24	2,580	3,850	10,700	1,590	5,760	1,470	1,290	4,040	3,800	16,450	19,080	4,040
25	2,430	3,640	α 9,300	α 1,580	5,380	α 1,410	1,340	4,070	3,540	α 17,350	α 18,730	α 3,910

α Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1909-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26.	2,430	3,520	7,400	1,580	4,640	1,300	1,340	4,200	3,600	17,650	20,340	4,290
27.	2,350	3,520	6,590	1,490	4,190	1,300	1,490	4,140	3,730	19,150	22,220	4,590
28.	2,280	3,440	5,640	1,490	4,010	1,300	1,490	4,390	3,870	24,040	25,450	4,490
29.	2,200	3,210	5,100	1,490	.....	1,200	2,100	4,740	5,070	24,040	26,930	4,250
30.	2,200	2,830	4,560	1,490	.....	1,200	3,350	4,970	4,350	14,050	23,460	4,250
31.	2,200	.....	4,140	1,580	.....	1,200	.....	5,320	.....	11,800	32,170	.....
1906-7.												
1.	4,180	1,830	2,600	2,010	2,370	1,430	1,080	3,480	3,740	6,450	5,790	4,930
2.	4,400	1,860	2,170	1,880	2,040	1,390	1,020	3,340	4,320	6,760	5,550	6,050
3.	5,000	1,860	2,170	1,860	1,840	1,420	1,020	3,170	4,090	6,760	5,140	8,160
4.	4,240	1,850	2,170	1,870	1,840	1,440	1,150	3,170	4,430	6,400	4,820	8,390
5.	4,040	1,850	2,030	1,840	1,760	1,430	1,440	3,110	5,010	6,030	5,030	9,530
6.	3,850	1,840	2,030	1,830	1,760	1,420	1,540	3,060	5,240	5,960	5,240	11,300
7.	3,650	1,840	1,990	1,830	1,600	1,440	1,620	2,940	5,470	5,740	5,030	10,590
8.	3,360	1,840	1,910	1,850	1,550	1,410	1,630	2,800	5,750	5,670	4,720	10,480
9.	3,070	1,850	1,810	1,860	1,550	1,380	1,610	2,720	5,950	5,560	4,200	11,330
10.	2,770	1,850	1,860	1,880	1,580	1,350	1,580	2,700	6,350	5,540	4,120	14,020
11.	2,770	1,850	2,190	1,890	1,570	1,320	1,590	3,000	6,300	5,520	4,040	15,610
12.	2,610	1,850	3,050	1,940	1,580	1,330	1,600	3,070	5,930	5,680	4,040	12,830
13.	2,610	1,850	2,840	1,950	1,580	1,350	1,600	2,950	5,660	5,770	3,970	8,320
14.	2,610	1,850	2,760	1,960	1,580	1,370	1,510	2,910	5,660	5,550	3,970	7,320
15.	2,610	1,850	2,700	1,930	1,550	1,390	1,430	2,950	5,660	5,630	3,970	7,020
16.	2,660	1,850	2,650	1,990	1,550	1,390	1,390	2,900	5,660	5,700	4,260	6,820
17.	2,560	2,020	2,550	1,930	1,550	1,390	1,290	2,650	5,790	5,700	3,470	7,670
18.	2,380	2,190	2,590	1,900	1,530	1,430	1,290	2,550	6,760	5,750	3,180	7,240
19.	2,230	2,190	2,550	1,850	1,520	1,430	1,280	2,550	6,530	5,750	2,890	8,240
20.	2,240	2,190	2,420	1,890	1,500	1,360	1,270	3,080	6,450	5,660	2,700	16,060
21.	2,260	2,190	2,330	1,850	1,490	1,210	1,290	3,080	6,410	5,620	2,210	13,610
22.	2,190	2,110	2,330	1,860	1,510	1,210	1,250	2,740	7,150	5,530	2,220	13,700
23.	2,100	2,110	2,280	1,870	1,530	1,140	1,240	2,660	6,260	5,390	2,140	11,400
24.	2,020	2,150	2,240	1,950	1,550	1,140	1,340	2,580	5,860	5,570	2,150	9,540
25.	2,010	2,120	2,240	2,050	1,570	1,100	1,750	2,740	5,610	5,570	2,150	9,690
26.	2,010	2,080	2,240	2,080	1,570	1,180	2,200	2,900	5,660	5,660	6,080	9,060
27.	1,920	2,130	2,240	2,010	1,540	1,380	2,500	2,780	5,560	5,390	5,240	8,910
28.	1,910	2,100	2,240	2,010	1,510	1,140	2,810	2,730	5,860	6,250	5,030	9,120
29.	1,800	2,180	2,240	2,080	.....	1,100	3,180	2,810	5,810	5,570	4,820	8,820
30.	1,770	2,100	2,140	2,850	.....	1,100	3,330	2,970	5,810	5,750	4,820	8,120
31.	1,800	.....	2,090	2,780	.....	1,100	.....	3,050	.....	5,790	4,820	.....
1907-8.												
1.	6,800	3,410	3,040	2,170	1,330	1,210	895	2,210	1,900	650	7,010	9,740
2.	5,660	4,090	3,810	2,110	1,320	1,210	950	2,330	2,150	620	5,530	17,920
3.	4,940	3,670	17,360	2,100	1,320	1,160	1,280	2,380	2,540	620	4,700	21,870
4.	4,320	3,770	10,610	2,090	1,310	1,160	1,280	2,330	2,970	620	4,000	20,940
5.	4,490	3,560	8,790	1,960	1,300	1,060	1,230	2,080	2,100	570	3,800	18,200
6.	3,670	3,040	7,670	1,950	1,310	1,050	1,230	1,920	1,730	470	11,060	20,570
7.	3,840	2,830	7,110	1,940	1,280	1,050	1,080	1,670	1,690	9,290	214,870	118,560
8.	3,670	15,280	6,690	1,940	1,280	1,040	1,080	1,460	1,670	2,000	10,250	15,780
9.	3,010	22,010	6,560	1,890	1,330	1,040	1,080	1,390	1,610	1,620	8,570	11,140
10.	2,510	12,620	6,560	1,830	1,340	990	985	1,320	1,530	1,510	8,150	9,680
11.	2,350	10,100	6,260	1,840	1,460	940	985	1,460	1,450	1,400	8,150	9,730
12.	2,270	7,680	5,880	1,830	1,420	1,050	1,030	1,220	1,250	970	17,520	13,630
13.	2,120	6,390	5,650	1,820	1,340	1,090	985	1,040	1,180	860	27,570	12,770
14.	2,050	5,820	5,230	1,820	1,210	1,000	1,000	930	1,180	755	30,700	11,900
15.	2,120	5,150	4,760	1,810	1,210	1,000	1,120	820	1,180	655	21,990	9,300
16.	2,050	4,720	4,400	1,810	1,210	960	1,450	1,700	1,080	605	13,080	7,560
17.	1,820	4,300	4,160	1,680	1,210	1,000	1,540	1,940	970	565	10,540	6,390
18.	2,350	4,080	3,990	1,680	1,260	960	2,200	1,860	800	600	9,270	5,380
19.	2,420	3,950	3,720	1,680	1,450	920	1,810	1,630	755	640	7,840	4,570
20.	2,210	3,770	3,640	1,680	1,450	910	1,340	1,530	745	680	6,410	4,010
21.	1,940	3,670	3,290	1,680	1,370	970	960	1,520	730	4,130	6,290	3,560
22.	2,120	3,460	3,290	1,680	1,370	945	875	1,510	700	1,970	6,320	3,110
23.	1,870	3,220	2,850	1,620	1,450	965	875	1,500	675	1,120	6,350	2,880
24.	3,990	3,150	2,850	1,560	1,450	940	820	1,490	3,060	4,870	6,390	2,700
25.	3,760	3,080	2,850	1,550	1,450	940	780	1,480	2,400	4,750	6,770	2,520
26.	3,550	3,010	2,660	1,550	1,370	940	760	1,470	1,950	5,070	9,120	2,280
27.	3,280	2,940	2,660	1,480	1,280	895	790	1,360	1,170	4,020	7,860	2,220
28.	3,070	2,800	2,460	1,420	1,280	895	930	1,360	1,230	4,320	7,860	2,100
29.	2,730	3,150	2,460	1,420	1,280	895	1,140	1,360	955	8,800	8,460	1,980
30.	2,660	3,290	2,280	1,420	.....	895	2,100	1,360	735	7,680	8,740	1,860
31.	2,660	.....	2,100	1,320	.....	895	.....	1,410	.....	7,310	9,440	.....

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	1,710	710	695	710	695	575	540	a380	4,780	3,580	6,950	3,360
2.	a1,560	a760	a675	a660	a685	a565	a510	380	a4,490	a3,860	7,060	a3,340
3.	1,540	760	675	660	685	565	510	380	4,710	3,950	a7,700	3,480
4.	1,490	760	675	695	685	570	510	990	4,260	3,860	9,420	15,800
5.	1,430	765	675	695	685	570	510	1,790	3,710	3,580	8,470	15,240
6.	1,410	a765	670	730	655	570	505	a1,600	a3,150	3,490	8,660	a11,030
7.	a1,490	765	a670	a770	a630	a575	a505	1,480	2,950	3,680	a8,860	7,900
8.	1,550	760	670	730	630	550	485	1,320	2,880	a4,950	8,210	6,620
9.	1,310	760	670	655	630	550	485	1,170	3,000	11,530	7,320	5,900
10.	1,240	a755	670	655	625	550	485	a1,090	a3,030	13,750	5,990	5,330
11.	1,170	750	670	655	625	545	465	1,060	2,930	14,170	6,140	4,330
12.	a1,140	750	a670	a655	a625	545	a465	1,140	2,930	a16,510	a7,190	3,620
13.	1,140	750	660	670	625	a545	465	1,140	3,120	15,800	7,690	a7,760
14.	1,110	a750	660	670	650	545	430	a1,380	2,640	15,520	7,520	6,410
15.	1,110	750	660	670	630	545	425	1,180	a1,960	12,790	6,700	6,810
16.	a1,070	750	665	670	630	550	525	1,030	1,410	a9,650	a8,690	9,060
17.	1,070	745	a665	670	a630	a550	a420	1,710	2,090	9,500	8,800	a10,380
18.	1,070	745	665	670	655	545	415	a2,220	4,830	7,990	9,320	12,880
19.	1,070	a745	670	675	655	535	410	2,600	a4,920	6,600	12,160	12,880
20.	a1,030	740	670	680	655	530	405	3,060	4,880	a6,200	12,410	11,850
21.	970	730	670	685	a655	500	385	3,430	5,230	5,790	a12,030	a10,840
22.	950	720	a670	690	630	a445	a380	3,710	4,490	5,650	9,310	9,500
23.	885	a710	670	a695	630	445	380	a4,100	a4,550	5,920	7,540	7,750
24.	a825	710	670	700	630	440	380	4,210	4,970	6,060	a6,150	7,350
25.	825	710	670	705	a630	435	385	4,540	5,400	a5,370	5,150	a7,090
26.	825	715	670	710	620	430	385	4,540	5,290	4,990	4,580	6,440
27.	815	a715	670	715	605	430	a385	4,650	a4,670	5,520	4,580	a5,780
28.	a805	715	a715	a720	615	a415	385	a4,760	4,490	a6,300	4,720	5,410
29.	785	720	715	715	.....	420	390	4,760	4,220	5,760	4,080	4,780
30.	765	720	670	705	.....	425	390	4,660	3,680	6,080	3,480	4,280
31.	a765	.....	670	700	.....	430	.....	4,560	.....	6,190	3,380	.....
1909-10.												
1.	3,850	1,400	810	a5,850	1,380	795	1,440	1,680	a2,370	4,570	635	1,550
2.	a3,280	a1,300	a850	5,030	a1,300	a815	a1,470	1,680	2,240	a5,350	a655	a1,320
3.	2,940	1,280	900	3,830	1,300	815	1,540	a1,730	2,110	4,880	645	1,310
4.	2,680	1,270	900	2,770	1,240	790	1,580	2,110	1,850	5,070	640	1,210
5.	2,510	1,200	905	2,230	1,240	790	1,650	2,490	1,660	4,280	635	1,060
6.	2,510	1,180	905	a2,100	1,240	790	1,760	2,870	a2,090	4,470	a625	7,550
7.	a2,330	a1,170	a910	2,030	a1,180	a770	a1,760	a4,000	1,670	a5,320	620	a2,630
8.	2,140	1,100	905	1,970	1,180	760	1,880	4,050	1,490	3,970	590	2,560
9.	2,140	1,090	900	1,840	1,180	750	1,940	4,190	1,400	2,840	575	2,200
10.	1,960	1,080	895	a1,840	1,160	690	2,360	3,900	a1,030	2,730	560	1,630
11.	a1,960	a1,070	a890	1,710	a1,140	a680	a1,580	3,830	990	2,170	a545	a1,590
12.	1,850	1,060	890	1,640	1,140	680	1,530	a3,970	990	a1,940	565	3,910
13.	1,740	1,050	890	1,610	1,140	670	1,330	4,170	845	2,030	540	3,670
14.	1,710	1,040	890	a1,690	1,080	670	1,330	4,300	805	2,290	535	3,990
15.	a1,650	a1,030	865	1,730	a1,020	a660	a1,230	4,460	a770	2,550	535	a3,230
16.	1,600	1,010	a840	1,810	1,020	620	1,230	a4,750	695	a1,690	a530	3,230
17.	1,560	985	855	1,780	1,020	580	1,190	5,030	960	1,530	525	2,620
18.	1,540	985	870	1,700	1,020	660	1,190	4,850	995	1,390	510	2,390
19.	1,500	985	870	a1,700	a975	a1,100	1,190	4,670	920	1,240	510	a2,620
20.	a1,440	a985	870	1,500	925	1,240	a1,190	a5,020	a1,510	1,130	a510	2,300
21.	1,440	975	870	1,480	880	1,390	1,190	3,950	1,730	a1,100	510	2,110
22.	1,440	965	a870	1,480	880	1,470	1,200	3,950	1,210	1,020	510	1,850
23.	1,440	950	870	1,480	835	1,090	a1,200	4,140	1,090	895	750	a3,770
24.	a1,440	a940	870	a1,370	835	a1,540	1,200	a4,140	930	895	a1,380	4,770
25.	1,440	875	870	1,390	a835	1,380	1,520	4,140	890	895	1,230	3,710
26.	1,430	835	850	1,350	795	1,540	1,620	4,240	1,440	855	1,130	3,180
27.	1,430	825	850	1,350	795	1,510	a1,830	4,340	5,210	810	1,460	a2,750
28.	a1,420	a820	a835	a1,350	795	a1,490	1,880	4,220	a7,540	a770	a2,490	2,680
29.	1,420	830	835	1,350	.....	1,520	1,730	3,870	4,240	690	2,190	2,230
30.	1,410	805	835	1,350	.....	1,400	1,680	a3,630	4,240	690	1,810	2,600
31.	1,400	.....	7,100	1,350	.....	1,400	.....	3,130	.....	610	1,660	.....
1910-11.												
1.	2,210	610	585	500	a460	695	655	1,270	4,790	3,750	10,890	1,790
2.	a1,440	a600	a555	a480	460	a610	a655	1,000	a4,130	a3,920	a11,060	a1,990
3.	1,320	600	555	490	460	610	655	a760	4,930	3,680	10,660	3,780
4.	1,240	600	575	485	460	610	625	700	4,160	3,640	9,340	4,210
5.	1,200	620	575	495	460	610	585	645	3,020	3,500	9,290	4,380

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
6.....	a1,080	a590	575	490	a460	a555	a570	585	2,350	3,360	9,120	a4,860
7.....	1,030	610	a575	a480	455	555	585	555	a2,350	a3,610	a7,570	4,740
8.....	1,020	610	575	480	455	530	600	a555	2,280	5,100	6,660	6,320
9.....	1,010	580	575	480	455	505	580	555	2,280	6,480	5,950	9,840
10.....	a1,010	a570	580	480	a455	a530	a565	555	2,350	8,430	5,340	8,510
11.....	925	570	a580	485	455	530	565	550	2,350	a6,880	a4,470	a7,530
12.....	925	570	580	a485	450	505	530	a780	6,700	7,920	4,220	6,370
13.....	880	575	580	485	450	505	545	600	2,810	8,790	3,970	5,460
14.....	a825	a575	580	485	445	480	a560	2,310	4,760	15,560	3,890	5,550
15.....	825	600	a570	490	a440	a505	515	16,720	6,610	12,780	a3,630	a5,830
16.....	810	590	570	a490	440	485	515	a33,100	a12,900	10,510	3,330	5,710
17.....	775	580	580	490	440	485	500	17,100	12,340	7,510	2,870	4,730
18.....	775	a580	565	490	875	510	470	a15,230	9,810	9,110	2,270	3,940
19.....	a775	590	a565	480	a1,060	530	a455	9,490	7,570	8,580	a2,200	3,470
20.....	780	580	555	a480	975	a510	460	6,300	6,540	9,240	1,970	a2,980
21.....	780	575	550	480	1,000	465	460	4,540	6,820	a10,950	1,910	2,380
22.....	785	575	545	475	a960	460	460	a3,750	6,820	10,140	1,910	2,180
23.....	a785	a575	a535	470	880	475	a460	4,640	a8,400	13,130	1,740	3,310
24.....	775	575	535	a465	880	a490	460	4,510	6,200	a13,200	a1,450	a4,220
25.....	760	590	535	465	a810	495	490	4,510	5,610	10,380	1,450	3,420
26.....	705	590	525	465	810	500	a1,970	a4,260	4,880	11,410	1,750	2,720
27.....	655	a595	520	465	755	505	2,150	5,940	a4,290	11,980	1,930	a5,000
28.....	a640	585	a520	a465	725	a510	a4,140	6,840	4,160	a11,590	a7,100	4,140
29.....	620	585	520	465	.....	510	2,600	6,190	3,880	9,990	3,950	3,930
30.....	620	585	520	465	.....	600	1,690	9,160	3,610	9,890	3,160	3,710
31.....	620	.....	520	465	.....	655	.....	a1,960	.....	11,990	3,750	.....
1911-12.												
1.....	3,280	4,280	2,330	1,730	1,610	890	865	1,220	4,510	3,970	1,070	12,070
2.....	a2,750	4,210	a2,330	a1,550	a1,610	a885	a1,120	a1,120	a4,600	a3,890	1,070	a17,520
3.....	2,640	a4,210	2,260	1,580	1,570	880	1,450	1,150	5,020	3,750	2,010	20,200
4.....	2,580	4,220	2,260	1,580	1,570	875	1,450	1,120	4,830	3,710	a2,570	18,190
5.....	2,380	4,330	2,260	1,580	1,570	875	1,380	1,060	4,850	3,670	2,730	a13,650
6.....	a2,240	4,240	2,340	a1,580	1,500	870	1,270	a965	a4,780	3,520	2,650	15,600
7.....	2,150	4,330	a2,340	1,910	a1,350	a865	a7,600	940	5,360	3,480	2,440	19,500
8.....	2,590	a4,420	2,270	1,990	1,310	860	1,210	890	5,360	a3,280	a2,580	11,940
9.....	6,110	4,380	2,150	2,220	1,300	835	a1,090	865	5,830	3,020	2,290	a13,650
10.....	a4,260	4,350	2,140	2,150	1,300	830	1,090	790	6,760	2,890	1,640	8,550
11.....	3,430	4,320	2,190	a2,130	1,300	825	1,090	a660	8,260	2,700	1,710	6,750
12.....	2,910	a4,140	a2,310	2,010	a1,290	a800	1,050	1,460	a9,080	a2,700	a1,640	7,400
13.....	2,910	3,890	2,200	1,960	1,290	790	a930	1,970	10,160	3,430	1,480	a19,220
14.....	a4,690	4,160	2,030	1,900	1,280	775	930	2,970	11,110	2,540	1,190	23,970
15.....	5,790	4,270	1,920	a1,900	1,280	760	1,030	3,040	11,350	2,290	2,400	16,720
16.....	7,540	a4,470	1,920	1,740	a1,270	a750	1,160	2,820	11,470	1,970	a2,190	a21,490
17.....	6,880	4,390	1,980	1,790	1,230	750	1,440	3,120	a11,350	a1,930	2,040	20,710
18.....	a7,430	3,910	1,990	1,730	1,230	715	a1,820	a3,500	10,990	1,770	2,240	18,520
19.....	7,780	3,730	1,990	1,680	1,190	700	1,820	3,360	10,700	1,850	2,340	a24,620
20.....	7,640	3,350	a1,950	a1,620	1,160	685	1,880	3,570	a10,290	a2,050	a5,520	21,400
21.....	7,510	a3,270	1,950	1,610	a1,080	a665	1,930	a3,770	9,690	2,770	8,380	12,460
22.....	7,130	3,180	1,940	1,650	1,080	720	a1,960	3,650	9,210	a2,030	12,600	8,940
23.....	a7,250	2,910	1,940	1,590	1,110	720	2,020	3,690	8,130	2,210	a14,920	a7,080
24.....	6,910	2,820	a1,940	1,580	1,080	a775	2,020	a3,940	a6,950	2,210	12,980	6,110
25.....	7,140	a2,730	1,870	a1,530	1,020	775	1,960	4,210	5,910	a1,540	19,320	5,570
26.....	6,910	2,730	1,860	1,560	a955	845	1,690	4,480	5,390	1,660	14,850	4,820
27.....	5,780	2,660	1,840	1,560	955	1,050	a1,620	4,650	a4,880	1,660	a19,000	a4,180
28.....	a5,220	2,580	a1,850	a1,560	925	a1,000	1,370	a4,710	4,700	1,780	11,860	3,880
29.....	4,920	a2,420	1,830	1,570	895	970	1,270	4,510	4,320	a1,950	11,350	3,580
30.....	4,720	2,420	1,780	1,570	.....	970	1,220	4,510	4,040	1,820	10,840	3,280
31.....	4,420	.....	1,780	1,570	.....	940	.....	4,510	.....	1,750	10,160	.....
1912-13.												
1.....	3,110	1,460	1,290	1,470	865	2,200	1,180	a810	1,130	2,020	1,450	1,130
2.....	a2,950	a1,370	a1,350	a1,350	a875	a1,860	a1,080	780	a1,240	a1,390	a1,230	a4,530
3.....	8,730	1,370	1,260	1,310	900	1,780	1,050	740	1,130	1,470	1,110	2,080
4.....	5,900	1,370	1,210	1,310	850	1,700	1,020	a5,160	1,740	2,230	885	3,630
5.....	7,200	1,340	1,200	1,300	875	1,700	1,020	2,190	1,940	1,620	940	1,580
6.....	7,200	1,340	a1,270	a1,260	a900	a4,210	1,020	1,970	a1,320	1,620	1,310	a4,730
7.....	a8,140	a1,300	1,270	1,260	985	3,890	a1,020	a1,590	2,560	a1,390	a1,150	4,730
8.....	6,890	1,300	1,290	1,260	985	3,690	935	1,400	2,560	1,270	945	8,630
9.....	7,010	1,290	1,320	1,220	985	3,250	935	1,310	2,020	1,200	810	10,710
10.....	6,760	1,290	1,350	a1,170	a985	a2,570	a845	a1,170	1,480	1,160	740	11,810

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Langtry, Tex., for 1909-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
11.....	a 7,100	a 1,280	a 1,400	1,170	970	2,560	810	1,270	a 3,720	a 1,160	740	a 11,530
12.....	5,450	1,270	1,400	1,120	985	2,560	775	1,500	3,130	1,160	705	6,740
13.....	4,350	1,230	1,420	1,120	985	2,550	705	1,270	2,070	1,120	a 740	6,320
14.....	3,910	1,220	1,420	1,120	a 970	a 2,400	a 740	1,740	1,610	1,040	820	5,890
15.....	a 3,250	a 1,200	1,400	a 1,060	970	2,350	700	a 1,830	1,230	965	1,360	a 4,740
16.....	3,290	1,200	a 1,350	1,060	1,010	2,140	675	1,720	a 1,000	a 845	1,660	4,200
17.....	2,990	1,140	1,300	1,060	1,210	2,090	665	1,460	1,760	840	1,400	3,760
18.....	2,760	1,140	1,300	1,060	5,280	1,940	a 640	1,350	2,420	835	a 1,200	3,140
19.....	a 2,530	1,390	1,300	1,030	a 4,180	a 1,940	625	a 1,190	4,120	a 830	1,450	a 2,890
20.....	2,380	a 1,750	a 1,490	a 1,000	3,780	1,840	670	1,240	a 8,410	830	1,510	2,640
21.....	2,350	1,440	1,960	990	3,780	1,740	670	1,370	2,300	830	1,200	2,300
22.....	2,250	1,240	2,020	980	3,490	1,690	625	1,340	2,200	830	a 2,820	1,960
23.....	2,100	a 1,230	2,030	970	3,190	1,580	a 850	a 1,230	2,100	830	2,380	1,880
24.....	a 1,950	a 1,230	2,030	a 960	2,800	a 1,530	1,215	1,160	2,910	a 770	2,060	a 1,880
25.....	1,900	1,200	1,880	960	a 2,700	1,490	1,170	1,310	a 3,370	790	2,230	2,020
26.....	1,840	1,220	a 1,720	960	2,520	1,400	1,080	1,450	3,280	1,390	1,800	2,440
27.....	1,730	1,220	1,740	910	2,460	1,320	a 1,260	1,490	3,450	830	1,600	a 1,550
28.....	a 1,560	1,180	a 1,600	a 875	2,280	a 1,320	990	a 1,380	a 2,590	a 1,310	1,560	1,620
29.....	1,560	a 1,180	1,550	875	.....	1,280	900	1,280	2,590	850	1,330	1,270
30.....	1,560	1,240	1,470	875	.....	1,200	855	1,170	4,380	810	1,200	2,390
31.....	1,560	.....	1,470	875	.....	1,200	.....	1,100	.....	a 2,480	1,060	.....

a Date of measurement.

Monthly discharge of Rio Grande near Langtry, Tex., for 1900-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1900.					1902-3.				
May.....	4,100	320	1,008	61,970	October.....	3,900	1,080	1,948	119,782
June.....	4,160	800	1,994	118,640	November.....	2,740	815	1,190	70,800
July.....	13,300	1,200	5,033	309,390	December.....	1,330	780	917	56,370
August.....	21,680	2,860	7,976	490,425	January.....	780	660	711	43,696
September.....	13,200	2,070	3,867	230,102	February.....	2,340	660	1,277	70,939
The period.....	.....	.....	.....	1,210,000	March.....	1,700	575	960	59,038
1900-1901.					April.....	2,320	530	738	43,914
October.....	7,780	1,190	2,915	179,236	May.....	2,920	650	1,507	92,688
November.....	1,290	770	903	53,732	June.....	18,000	1,510	3,993	237,600
December.....	770	620	678	41,690	July.....	6,600	1,350	3,383	207,987
January.....	620	570	600	36,893	August.....	4,750	1,070	1,983	121,904
February.....	920	520	599	33,263	September.....	5,860	1,720	2,922	173,871
March.....	890	450	627	38,559	The year.....	18,000	530	1,790	1,300,000
April.....	920	370	425	25,309	1903-4.				
May.....	3,500	450	1,163	71,524	October.....	10,790	960	3,134	192,674
June.....	2,350	600	1,465	87,174	November.....	1,040	700	811	48,278
July.....	3,510	500	1,314	80,767	December.....	700	595	642	39,501
August.....	3,920	820	2,306	141,818	January.....	590	495	550	33,798
September.....	14,700	1,210	3,418	203,385	February.....	490	455	476	27,392
The year.....	14,700	370	1,370	493,000	March.....	450	375	405	24,912
1901-2.					April.....	1,290	300	369	21,947
October.....	5,120	1,100	1,900	116,846	May.....	8,460	270	1,182	72,654
November.....	2,610	930	1,367	81,322	June.....	14,200	560	2,805	166,889
December.....	1,120	800	875	53,772	July.....	1,160	545	744	45,729
January.....	820	550	663	40,760	August.....	1,850	500	887	54,565
February.....	580	510	542	30,089	September.....	132,000	1,180	27,304	1,624,700
March.....	530	370	435	26,717	The year.....	132,000	270	3,280	2,350,000
April.....	3,380	305	611	36,367	1904-5.				
May.....	2,250	285	544	33,451	October.....	25,300	5,800	13,194	811,239
June.....	5,170	305	745	44,301	November.....	10,000	1,810	4,056	241,369
July.....	20,800	380	4,964	305,216	December.....	4,090	1,110	2,213	136,066
August.....	10,550	2,250	5,672	348,734	January.....	1,550	1,100	1,296	79,716
September.....	38,200	2,440	11,160	664,046	February.....	2,030	760	1,181	65,574
The year.....	38,200	285	2,460	1,780,000	March.....	6,690	1,930	2,854	175,477
					April.....	7,700	1,890	2,530	150,526
					May.....	6,530	2,410	4,150	255,174

Monthly discharge of Rio Grande near Langtry, Tex., for 1900-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1904-5.					1909-10.				
June.....	29,300	4,370	11,572	688,602	October.....	3,850	1,400	1,890	116,231
July.....	25,700	2,380	5,852	359,841	November.....	1,400	805	1,036	61,666
August.....	11,480	3,400	7,017	431,464	December.....	7,100	810	1,073	65,980
September.....	22,500	2,940	7,327	436,007	January.....	5,850	1,350	1,991	122,420
The year.....	29,300	760	5,270	3,830,000	February.....	1,380	795	1,055	58,572
1905-6.					March.....	1,690	580	1,024	62,965
October.....	11,580	2,200	4,806	295,517	April.....	2,360	1,190	1,514	90,089
November.....	13,880	1,260	3,545	210,942	May.....	5,030	1,680	3,792	233,177
December.....	10,700	2,760	5,227	321,382	June.....	7,540	695	1,864	110,896
January.....	3,700	1,490	2,132	131,107	July.....	5,350	610	2,280	140,172
February.....	6,050	1,750	3,763	208,979	August.....	2,490	510	859	52,790
March.....	3,650	1,200	2,044	125,653	September.....	7,550	1,060	2,741	163,081
April.....	3,350	1,180	1,455	86,558	The year.....	7,550	510	1,760	1,280,000
May.....	5,320	1,750	3,305	203,187	1910-11.				
June.....	10,570	2,910	4,361	259,497	October.....	2,210	620	923	56,727
July.....	24,040	2,900	10,732	659,881	November.....	610	570	588	34,969
August.....	57,890	8,260	22,200	1,365,044	December.....	585	520	557	34,264
September.....	29,680	3,780	8,588	511,002	January.....	500	465	480	29,484
The year.....	57,890	1,180	6,010	4,380,000	February.....	1,060	440	622	34,572
1906-7.					March.....	695	460	533	32,767
October.....	5,000	1,770	2,762	169,845	April.....	4,140	455	869	51,709
November.....	2,190	1,830	1,981	117,878	May.....	33,100	550	5,579	343,041
December.....	3,080	1,810	2,310	142,056	June.....	12,900	2,280	5,190	308,826
January.....	2,850	1,830	1,977	121,587	July.....	15,560	3,360	8,613	529,587
February.....	2,370	1,490	1,631	90,585	August.....	11,060	1,450	4,810	295,735
March.....	1,440	1,100	1,312	80,668	September.....	9,840	1,790	4,567	271,735
April.....	3,330	1,020	1,628	96,853	The year.....	33,100	440	2,780	2,020,000
May.....	3,480	2,550	2,908	178,790	1911-12.				
June.....	7,150	3,740	5,701	339,253	October.....	7,780	2,150	5,028	309,183
July.....	6,760	5,390	5,732	356,112	November.....	4,470	2,420	3,707	220,602
August.....	6,080	2,140	4,123	253,507	December.....	2,340	1,780	2,057	126,506
September.....	16,060	4,930	9,796	582,902	January.....	2,220	1,530	1,732	106,473
The year.....	16,060	1,020	3,460	2,530,000	February.....	1,610	895	1,252	72,020
1907-8.					March.....	1,050	665	829	50,866
October.....	6,800	1,820	3,106	191,008	April.....	7,600	865	1,624	96,664
November.....	22,010	2,800	5,401	321,401	May.....	4,710	660	2,682	164,906
December.....	17,360	2,100	5,162	317,375	June.....	11,470	4,040	7,329	436,125
January.....	2,170	1,320	1,753	107,762	July.....	3,970	1,540	2,542	156,278
February.....	1,460	1,210	1,332	76,641	August.....	19,320	1,070	6,131	376,978
March.....	1,210	895	999	61,438	September.....	24,620	3,280	13,052	776,668
April.....	2,200	760	1,161	69,104	The year.....	24,620	660	4,000	2,890,000
May.....	2,380	820	1,582	97,269	1912-13.				
June.....	3,060	675	1,449	86,251	October.....	8,730	1,560	3,944	242,499
July.....	9,290	470	2,659	163,517	November.....	1,750	1,140	1,288	76,661
August.....	30,700	3,800	10,181	626,003	December.....	2,030	1,200	1,486	91,359
September.....	21,870	1,860	9,162	545,157	January.....	1,470	875	1,095	67,320
The year.....	30,700	470	3,660	2,660,000	February.....	5,280	850	1,884	104,658
1908-9.					March.....	4,210	1,200	2,097	128,926
October.....	1,710	675	1,124	69,094	April.....	1,260	625	891	53,008
November.....	765	710	740	44,033	May.....	5,160	740	1,483	91,180
December.....	715	660	673	41,375	June.....	8,410	1,000	2,225	150,268
January.....	770	655	690	42,417	July.....	2,480	770	1,184	72,823
February.....	695	605	643	35,702	August.....	2,820	705	1,336	82,165
March.....	575	415	513	31,517	September.....	11,810	1,130	4,157	247,378
April.....	540	380	440	26,212	The year.....	11,810	625	1,950	1,410,000
May.....	4,760	380	2,429	149,336					
June.....	5,400	1,410	3,855	229,408					
July.....	16,510	3,490	7,567	465,302					
August.....	12,410	3,380	7,428	456,714					
September.....	15,800	3,340	7,673	456,595					
The year.....	16,510	380	2,810	2,050,000					

RIO GRANDE NEAR DEVILS RIVER, TEX.

Location.—One mile below the mouth of Devils River and the town of the same name.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff.

Channel.—Shifting greatly and subject to overflow for a distance of 500 feet.

Discharge measurements.—Made from car and cable.

Floods.—The lower Rio Grande is subject to severe floods. The highest on record occurred April 6, 1900, and reached a stage of 36.5 feet.

Diversions.—No data.

Accuracy.—Owing to the shifting channel, discharge measurements are made very frequently and the estimates of daily discharge based almost directly on these measurements.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande near Devils River, Tex., in 1900-1913.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
May 1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	Jan. 1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	Oct. 1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
25.....	4.90	5,586	3.....	3.65	2,309	8.....	3.95	2,787
31.....	3.90	3,303	10.....	3.65	2,326	12.....	4.20	3,600
June 4.....	4.45	5,062	16.....	3.60	2,287	17.....	3.70	2,550
8.....	4.20	4,054	22.....	3.60	2,260	23.....	3.80	2,628
12.....	3.90	3,543	26.....	3.60	2,228	27.....	4.00	3,099
15.....	4.60	5,101	31.....	3.50	2,161	Nov. 2.....	4.45	4,237
20.....	4.10	3,930	Feb. 5.....	3.50	2,120	5.....	4.20	3,674
23.....	4.10	3,725	9.....	3.50	2,116	8.....	4.35	3,902
27.....	3.70	2,826	14.....	3.60	2,241	13.....	4.60	4,630
30.....	4.70	4,948	19.....	3.60	2,230	16.....	4.70	4,995
July 4.....	4.20	3,848	23.....	3.60	2,242	19.....	4.40	4,188
7.....	4.40	5,009	28.....	3.85	2,673	22.....	4.10	3,541
13.....	6.40	10,478	Mar. 5.....	3.75	2,487	25.....	3.90	2,958
20.....	4.90	5,612	9.....	3.70	2,373	Dec. 2.....	4.00	3,351
24.....	5.55	7,692	14.....	3.60	2,205	13.....	3.80	2,885
28.....	5.90	9,151	19.....	3.50	2,071	17.....	3.70	2,598
Aug. 1.....	6.70	10,917	23.....	3.45	2,000			
7.....	6.45	10,609	28.....	3.40	1,916	1902.		
11.....	7.75	14,735	Apr. 19.....	3.20	1,616	Jan. 6.....	3.5	2,152
15.....	6.10	8,854	25.....	3.20	1,640	10.....	3.9	2,944
20.....	6.00	8,971	29.....	3.30	1,766	14.....	3.8	2,591
24.....	5.25	6,653	May 3.....	3.30	1,755	19.....	3.7	2,147
28.....	5.20	6,205	11.....	3.40	1,955	23.....	3.5	2,107
Sept. 1.....	4.75	5,277	15.....	3.35	1,805	26.....	3.5	1,955
6.....	8.50	18,012	21.....	3.70	2,065	30.....	3.5	1,865
11.....	4.30	4,261	26.....	3.70	2,016	Feb. 5.....	3.5	1,943
15.....	5.30	6,643	June 1.....	3.95	2,630	10.....	3.5	2,034
21.....	4.50	4,531	13.....	4.05	2,987	13.....	3.5	2,048
25.....	7.60	13,457	14.....	4.25	3,402	17.....	3.5	2,081
Oct. 4.....	5.80	7,552	18.....	4.00	2,980	20.....	3.5	2,172
10.....	5.00	5,460	21.....	3.50	2,352	24.....	3.5	2,037
14.....	4.70	4,428	28.....	3.30	1,947	Mar. 2.....	3.4	1,826
22.....	5.00	5,343	July 2.....	3.20	1,769	5.....	3.3	1,697
25.....	5.00	5,364	8.....	3.30	2,028	9.....	3.3	1,592
27.....	4.70	4,519	15.....	3.20	1,894	12.....	3.3	1,716
Nov. 3.....	4.50	4,013	31.....	5.00	5,593	16.....	3.3	1,672
7.....	4.25	3,346	Aug. 3.....	4.50	4,817	20.....	3.2	1,579
10.....	4.20	3,288	8.....	4.70	5,493	24.....	3.25	1,622
15.....	4.05	2,990	11.....	4.50	5,102	28.....	3.1	1,496
20.....	4.00	2,911	18.....	4.00	2,858	Apr. 3.....	3.1	1,438
24.....	3.95	2,770	24.....	4.55	4,187	8.....	3.1	1,405
28.....	3.85	2,655	30.....	3.80	2,612	11.....	3.1	1,379
Dec. 4.....	3.80	2,562	Sept. 5.....	3.80	2,615	14.....	4.6	4,393
8.....	3.75	2,435	13.....	4.80	4,716	19.....	3.25	1,488
13.....	3.75	2,465	16.....	5.20	6,157	26.....	3.1	1,253
18.....	3.75	2,419	21.....	6.15	9,113	May 1.....	3.1	1,243
23.....	3.70	2,346	30.....	4.20	3,425	6.....	3.4	1,671
29.....	3.65	2,348	Oct. 4.....	4.00	3,075	10.....	3.2	1,379

Discharge measurements of Rio Grande near Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1902.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1904.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 16	3.3	1,558	May 11	4.2	2,574	May 17	3.4	1,308
20	3.95	2,654	16	4.25	2,723	21	3.3	1,189
24	3.4	1,600	21	4.65	3,380	24	4.4	2,885
29	3.3	1,426	27	4.3	2,744	28	4.8	3,893
June 3	3.4	1,620	June 1	4.2	2,482	June 2	4.05	2,389
7	3.3	1,398	5	4.3	2,651	7	6.2	7,899
11	3.3	1,471	10	5.05	4,376	12	5.0	4,792
15	3.5	1,807	15	7.5	12,011	16	4.1	2,489
19	3.4	1,662	20	5.2	4,917	21	3.7	1,798
24	3.35	1,556	25	5.4	5,522	28	13.0	32,871
28	3.4	1,502	July 1	5.4	5,072	July 6	4.2	3,031
July 3	3.4	1,497	5	5.6	5,961	12	3.7	2,147
8	3.55	1,765	11	6.3	8,160	15	3.6	1,939
12	4.3	3,204	15	5.7	6,117	22	4.2	2,579
15	5.75	6,495	18	5.1	4,692	26	4.0	2,461
20	4.7	3,875	23	4.6	3,400	30	3.9	2,209
24	6.8	9,735	29	4.5	3,011	Aug. 4	3.7	1,845
29	9.1	15,560	4	4.1	2,259	8	3.9	2,203
Aug. 2	6.5	8,779	8	4.05	2,175	13	3.7	1,894
6	5.3	4,998	12	3.9	2,171	17	3.6	1,577
11	4.85	4,106	16	4.4	2,558	23	3.6	1,527
15	6.85	10,000	21	4.2	2,613	26	4.0	1,869
19	5.6	6,038	25	4.75	3,422	30	4.4	2,638
23	5.7	6,357	29	5.8	6,762	Sept. 6	5.7	6,795
28	6.3	8,205	Sept. 4	5.9	6,923	10	8.3	15,842
Sept. 1	7.15	10,467	8	5.0	5,019	13	24.3	115,750
5	8.7	14,587	11	4.7	3,921	19	10.5	27,578
9	11.75	29,431	16	4.7	3,600	24	9.0	21,986
13	9.65	19,549	19	4.7	3,266	27	7.5	16,957
17	6.35	10,064	23	4.5	3,143	Oct. 3	7.4	15,657
19	6.1	8,564	28	5.3	5,404	7	7.3	14,323
23	5.35	5,602	Oct. 3	6.3	8,116	13	7.4	13,539
27	4.85	4,133	8	5.4	5,499	18	10.5	25,676
Oct. 2	4.7	3,748	14	4.35	3,399	25	10.2	16,323
6	5.0	4,497	18	4.35	2,987	Nov. 5	6.9	8,307
10	4.4	2,889	22	4.25	2,796	9	6.7	7,333
14	4.65	3,393	26	4.1	2,417	13	5.8	5,225
18	4.35	2,856	30	4.0	2,271	16	5.4	4,171
22	4.2	2,491	Nov. 4	3.9	2,141	19	5.0	3,649
25	4.15	2,451	8	3.8	2,024	23	4.7	3,423
30	4.05	2,226	12	3.8	2,007	28	4.5	3,034
Nov. 2	4.75	3,795	17	3.8	1,989	Dec. 3	4.5	2,935
6	4.85	3,847	21	3.75	1,896	7	5.7	4,370
10	4.1	2,353	25	3.75	1,856	10	5.3	3,886
14	3.95	2,117	29	3.7	1,820	15	5.1	3,733
18	3.9	2,025	Dec. 4	3.7	1,766	19	5.3	4,284
22	3.9	2,027	8	3.7	1,761	23	4.7	3,694
26	3.9	2,095	12	3.7	1,759	31	4.3	2,814
Dec. 2	3.9	2,052	16	3.7	1,748			
8	4.0	2,168	23	3.7	1,731			
13	3.95	2,112	29	3.65	1,688			
18	3.9	2,074				1905.		
23	3.9	2,051	Jan. 1904.			Jan. 4	3.9	2,524
30	3.9	2,041	Jan. 2	3.65	1,753	10	3.8	2,439
			7	3.6	1,678	13	3.7	2,264
Jan. 1903.			12	3.6	1,638	18	3.6	2,187
Jan. 5	3.85	1,957	18	3.55	1,592	21	3.6	2,104
10	3.9	2,007	23	3.5	1,537	26	3.9	2,411
16	4.1	2,306	28	3.5	1,528	31	3.7	2,225
21	3.95	2,096	Feb. 2	3.5	1,542	Feb. 4	3.6	2,060
26	3.95	2,069	6	3.5	1,494	9	3.7	2,123
31	3.9	1,980	11	3.5	1,453	13	3.6	2,005
Feb. 4	4.0	2,141	16	3.5	1,492	17	3.6	2,197
10	3.95	2,102	22	3.5	1,503	22	3.85	2,401
18	4.4	2,859	27	3.5	1,515	28	4.4	3,485
23	4.2	2,483	Mar. 3	3.4	1,392	Mar. 7	4.6	3,487
Mar. 1	4.5	3,196	8	3.45	1,418	14	5.3	4,378
5	4.3	2,730	13	3.4	1,376	18	6.0	6,715
10	4.1	2,319	18	3.4	1,358	22	6.2	7,193
15	4.0	2,195	24	3.3	1,331	26	5.6	4,494
21	4.0	2,196	Apr. 2	3.35	1,276	31	5.1	3,671
28	3.75	1,951	Apr. 4	3.4	1,330	Apr. 6	4.7	4,050
Apr. 2	3.7	1,714	8	3.35	1,277	10	4.5	4,400
7	3.6	1,579	13	3.3	1,217	14	4.4	4,167
13	3.5	1,479	18	3.3	1,241	19	4.0	3,152
18	3.45	1,326	23	3.4	1,339	22	4.25	3,382
23	3.7	1,687	28	3.25	1,193	26	5.5	5,078
27	3.7	1,716	May 3	3.35	1,235	30	6.7	7,024
May 2	4.0	2,147	7	3.4	1,277	May 5	5.7	5,274
7	3.95	2,114	12	3.25	1,116	9	5.9	6,086
						13	5.7	5,387
						18	6.0	6,690

Discharge measurements of Rio Grande near Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1906.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1907.	<i>Fcet.</i>	<i>Sec.-ft.</i>
May 22.....	5.9	6,603	May 17.....	4.05	3,523	Apr. 30.....	4.75	4,018
26.....	6.2	7,214	22.....	4.65	4,534	May 4.....	4.5	3,506
31.....	6.4	8,306	26.....	5.2	5,117	10.....	4.2	3,375
June 6.....	6.6	8,202	30.....	5.3	5,559	15.....	4.2	3,340
10.....	7.5	12,475	June 6.....	6.6	8,597	18.....	4.2	3,142
15.....	9.4	15,764	9.....	5.4	5,622	23.....	4.1	3,313
19.....	9.5	20,879	14.....	4.7	4,509	27.....	4.3	3,366
23.....	9.0	20,564	19.....	4.8	4,755	31.....	4.35	3,614
27.....	8.4	15,628	22.....	4.8	5,119	June 9.....	5.4	6,637
29.....	21.9	85,148	27.....	5.0	5,112	13.....	5.8	8,308
July 6.....	6.7	9,144	30.....	5.6	5,704	16.....	5.4	7,278
12.....	5.9	6,343	July 6.....	5.05	5,102	21.....	6.1	9,022
17.....	4.7	3,844	13.....	7.7	11,302	25.....	6.0	7,430
22.....	6.5	8,179	15.....	7.4	10,179	30.....	5.9	7,356
26.....	7.05	9,344	19.....	9.15	14,831	July 4.....	5.9	8,800
31.....	8.6	15,796	23.....	9.2	15,803	10.....	5.4	7,844
Aug. 8.....	6.9	10,525	27.....	9.85	17,609	15.....	5.7	8,418
12.....	7.0	11,210	31.....	8.25	13,835	19.....	5.4	7,709
17.....	8.6	15,746	Aug. 5.....	8.65	16,206	24.....	5.1	6,030
23.....	7.5	12,660	10.....	13.15	31,760	28.....	5.8	8,337
26.....	7.3	12,419	15.....	12.3	27,543	Aug. 5.....	5.2	6,335
31.....	6.2	9,287	19.....	8.65	18,228	10.....	5.0	6,119
Sept. 5.....	5.2	5,254	23.....	9.8	20,486	14.....	4.4	4,256
12.....	8.15	13,060	31.....	14.2	33,582	19.....	4.3	4,028
18.....	6.9	9,282	Sept. 6.....	9.0	18,633	22.....	4.4	3,349
24.....	5.4	6,022	10.....	7.5	13,123	25.....	4.4	3,309
27.....	9.95	20,000	15.....	6.05	8,168	31 ^a	5.0	4,473
30.....	7.95	13,619	18.....	5.8	6,944	Sept. 7.....	6.8	13,300
Oct. 5.....	7.55	11,785	22.....	6.1	8,374	11.....	7.6	18,679
9.....	7.25	11,027	26.....	5.9	8,452	20.....	7.6	17,482
13.....	6.5	8,807	30.....	5.5	6,549	30.....	6.0	9,190
18.....	5.1	5,770	Oct. 5.....	5.2	5,495	Oct. 5.....	5.4	6,715
21.....	4.8	4,426	9.....	4.7	4,386	10.....	4.7	4,203
26.....	4.4	3,875	13.....	4.5	4,258	14.....	4.5	3,326
31.....	4.1	3,366	17.....	4.5	4,296	18.....	4.4	3,201
Nov. 5.....	4.0	2,951	21.....	4.3	3,707	23.....	4.5	3,334
8.....	3.95	2,659	24.....	4.2	3,946	27.....	5.0	4,969
12.....	4.0	3,013	27.....	4.1	3,721	31.....	4.9	4,475
15.....	8.45	15,664	31.....	4.0	3,384	Nov. 5.....	5.5	7,053
20.....	6.8	10,397	Nov. 6.....	3.95	3,030	9.....	8.8	21,852
24.....	5.8	8,265	9.....	3.95	3,023	13.....	6.1	9,160
29.....	4.9	5,489	14.....	4.0	3,171	17.....	5.4	6,683
Dec. 6.....	6.3	9,728	17.....	4.0	3,194	21.....	5.1	5,241
11.....	6.1	6,371	22.....	3.95	3,031	26.....	4.9	4,656
15.....	5.2	5,543	26.....	4.0	3,162	30.....	5.0	5,047
19.....	5.3	5,371	30.....	4.05	3,247	Dec. 4.....	7.4	15,963
24.....	7.45	13,442	Dec. 4.....	4.1	3,631	11.....	6.0	8,312
27.....	6.2	9,027	9.....	4.2	3,610	15.....	5.5	6,818
			12.....	4.6	4,196	19.....	5.2	5,457
			16.....	4.8	4,258	23.....	4.9	4,679
			20.....	4.6	4,279	26.....	4.8	4,372
			31.....	4.1	3,793	31.....	4.7	4,002
1906.			Jan. 1907.			1908.		
Jan. 3.....	5.0	4,998	Jan. 5.....	4.0	3,416	Jan. 4.....	1.6	3,751
6.....	4.7	4,004	10.....	3.9	3,043	8.....	4.6	3,539
11.....	4.4	3,413	14.....	3.9	3,066	13.....	4.5	3,432
16.....	4.2	3,287	18.....	4.0	3,354	16.....	4.4	3,366
19.....	4.1	3,522	23.....	4.0	3,359	20.....	4.4	3,244
23.....	4.0	3,068	26.....	4.0	3,363	24.....	4.35	3,105
27.....	4.0	3,049	31.....	4.05	3,460	30.....	4.3	3,002
31.....	4.0	3,072	Feb. 9.....	3.9	2,898	Feb. 3.....	4.2	2,689
Feb. 6.....	4.1	3,109	13.....	3.8	2,742	7.....	4.2	2,678
10.....	4.0	3,300	16.....	3.7	2,718	12.....	4.2	2,861
16.....	5.7	6,889	19.....	3.8	2,778	16.....	4.05	2,553
21.....	6.3	8,315	23.....	3.8	2,660	23.....	4.1	2,755
25.....	6.0	7,900	28.....	3.7	2,626	29.....	4.0	2,485
28.....	5.6	7,157	Mar. 5.....	3.6	2,620	Mar. 4.....	4.0	2,325
Mar. 6.....	4.65	4,066	10.....	3.7	2,511	8.....	3.9	2,214
9.....	4.2	4,076	14.....	3.7	2,506	12.....	3.9	2,266
15.....	3.95	3,342	18.....	3.5	2,441	17.....	3.85	2,044
20.....	3.8	2,995	21.....	3.4	2,481	21.....	3.8	2,054
24.....	3.65	2,739	27.....	3.4	2,149	25.....	3.75	1,998
27.....	3.5	2,600	31.....	3.4	2,179	31.....	3.75	1,909
31.....	3.3	2,505	Apr. 5.....	3.1	2,072	Apr. 7.....	3.85	2,167
Apr. 10.....	3.25	2,496	10.....	3.7	2,502	10.....	3.95	2,374
14.....	3.4	2,597	14.....	3.5	2,284	15.....	3.95	2,263
18.....	3.3	2,520	17.....	3.55	2,332	18.....	7.1	15,018
22.....	3.2	2,459	21.....	3.4	2,428	23.....	4.0	2,362
26.....	3.3	2,548	26.....	3.2	2,108	26.....	3.8	2,131
30.....	5.7	6,337						
May 5.....	4.0	3,477						
9.....	4.45	4,525						
12.....	4.3	4,061						

^a Measurement too small; rejected.

Discharge measurements of Rio Grande near Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1909.	<i>Feet.</i>	<i>Sec.-ft.</i>	1910.	<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 30	4.2	2,518	Apr. 25	3.4	1,175	Apr. 10	4.3	2,918
May 6	4.3	3,129	30	3.5	1,302	14	4.0	2,345
9	4.2	2,678	May 5	3.55	1,393	19	3.85	2,154
14	4.0	2,274	9	4.0	2,272	22	3.8	2,069
18	4.3	3,138	13	4.0	2,229	26	3.8	2,043
22	3.9	2,967	17	3.9	2,008	30	4.1	2,379
27	4.1	3,212	21	4.8	4,251	May 6	4.35	3,149
31	3.9	2,736	26	5.0	4,795	11	4.65	4,147
June 5	4.5	3,903	31	5.0	4,852	15	4.8	4,302
9	4.1	3,318	June 5	4.85	4,547	19	5.0	4,912
14	3.9	2,306	9	4.65	3,767	23	4.9	4,695
18	3.7	1,872	13	4.8	4,289	27	4.9	4,824
22	3.6	1,709	18	5.0	4,741	June 3	4.3	3,040
26	4.4	3,096	22	5.0	4,901	9	3.9	2,028
30	3.7	2,186	26	5.3	6,166	14	3.65	1,631
July 6	3.6	2,091	30	4.9	4,694	18	3.65	1,633
10	5.0	5,158	July 7	4.8	4,607	23	3.85	2,038
15	3.9	2,459	11	7.8	16,693	30	4.85	4,717
19	3.7	2,006	15	7.5	16,198	July 6	4.7	3,989
21	3.95	2,842	19	6.0	9,212	10	4.6	3,724
27	5.0	5,357	23	14.6	42,532	15	4.15	2,532
31	5.9	8,737	27	5.5	6,623	20	3.85	2,018
Aug. 6	7.0	11,812	31	6.2	9,476	26	3.6	1,606
10	6.1	9,747	Aug. 6	6.0	8,885	31	3.5	1,363
14	9.4	22,498	11	5.6	7,115	Aug. 5	3.45	1,263
19	5.95	9,465	15	5.7	7,486	10	3.4	1,264
23	5.75	8,043	20	7.0	13,055	15	3.4	1,215
27	6.0	10,588	23	6.0	8,875	19	3.4	1,207
31	6.25	10,872	27	5.3	6,231	23	3.7	1,735
Sept. 5	8.6	19,667	31	4.8	4,574	27	4.35	2,990
10	7.0	12,931	Sept. 5	5.1	5,363	31	4.45	3,077
14	7.0	12,658	9	5.7	7,771	Sept. 5	4.0	2,165
18	5.7	7,874	16	6.05	9,588	10	4.5	3,654
22	5.0	5,138	20	6.55	12,012	14	4.5	3,346
26	4.7	3,659	24	5.9	8,453	18	4.5	3,328
30	4.4	3,392	26	5.65	7,243	22	4.2	2,622
Oct. 6	4.1	2,701	30	5.1	5,375	26	5.0	4,766
11	4.1	2,464	Oct. 6	4.5	3,602	30	4.4	3,062
15	3.95	2,285	10	4.3	2,943	Oct. 5	4.5	3,292
19	3.8	2,179	14	4.3	2,939	9	4.0	2,279
23	3.8	2,029	19	4.0	2,342	13	3.8	1,889
27	3.8	1,992	23	4.0	2,355	18	3.7	1,668
31	3.8	1,963	27	4.0	2,347	22	3.7	1,580
Nov. 5	3.75	1,896	31	4.0	2,304	26	3.7	1,590
9	3.75	1,866	Nov. 6	3.8	1,992	31	3.6	1,481
13	3.7	1,898	10	3.8	1,989	Nov. 5	3.6	1,424
18	3.7	1,849	14	3.8	1,923	9	3.6	1,442
22	3.7	1,804	19	3.7	1,885	13	3.6	1,410
26	3.7	1,810	23	3.7	1,832	17	3.6	1,421
30	3.75	1,940	27	3.7	1,768	22	3.6	1,367
Dec. 5	3.7	1,813	30	3.7	1,835	26	3.6	1,355
10	3.7	1,847	Dec. 4	3.7	1,694	30	3.55	1,350
16	3.7	1,854	9	3.7	1,692	Dec. 5	3.55	1,365
21	3.7	1,795	14	3.7	1,677	10	3.5	1,328
27	3.7	1,816	18	3.7	1,687	14	3.5	1,332
31	3.7	1,799	24	3.8	1,709	18	3.5	1,330
1909.			30	3.7	1,716	22	3.5	1,349
Jan. 5	3.7	1,592	1910.			27	3.5	1,291
10	3.7	1,619	Jan. 5	4.3	2,909	31	3.5	1,287
15	3.7	1,729	9	4.3	2,881			
21	3.7	1,789	13	4.2	2,640	Jan. 6	3.5	1,221
26	3.7	1,770	18	4.1	2,518	11	3.5	1,237
31	3.7	1,734	22	4.0	2,411	15	3.5	1,289
Feb 5	3.6	1,686	27	4.0	2,398	19	3.5	1,258
10	3.6	1,690	31	3.9	2,219	23	3.5	1,233
15	3.6	1,655	Feb. 5	3.8	1,961	27	3.5	1,223
20	3.6	1,645	10	3.8	1,924	31	3.5	1,217
24	3.6	1,604	14	3.7	1,776	Feb. 4	3.5	1,160
28	3.75	1,879	17	3.7	1,746	9	3.45	1,140
Mar. 5	3.55	1,492	24	3.65	1,639	14	3.45	1,139
10	3.55	1,469	28	3.6	1,617	18	4.05	2,542
15	3.55	1,433	Mar. 5	3.5	1,432	20	5.45	6,486
20	3.5	1,359	10	3.5	1,429	24	4.0	2,415
26	3.5	1,330	14	3.45	1,394	28	3.9	2,061
31	3.45	1,282	18	3.6	1,644	Mar. 5	3.7	1,571
Apr. 6	3.5	1,321	23	4.1	2,492	9	3.6	1,365
11	3.45	1,269	27	3.9	2,254	14	3.55	1,271
16	3.4	1,193	31	4.0	2,327	18	3.5	1,196
20	3.4	1,156	Apr. 6	4.0	2,306	23	3.6	1,351

Discharge measurements of Rio Grande near Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Mar. 1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	Feb. 1912.	<i>Fect.</i>	<i>Sec.-ft.</i>	Dec. 1912.	<i>Fect.</i>	<i>Sec.-ft.</i>
27.....	3.6	1,371	6.....	4.0	2,172	5.....	3.9	2,014
31.....	3.7	1,544	10.....	3.95	2,080	10.....	3.9	2,020
Apr. 5.....	5.55	7,188	15.....	3.9	1,973	14.....	4.0	2,206
8.....	3.9	2,081	20.....	3.85	1,877	19.....	3.9	1,991
13.....	3.7	1,543	24.....	3.8	1,778	24.....	4.25	2,840
17.....	3.8	1,889	29.....	3.7	1,661	27.....	4.1	2,341
22.....	3.65	1,453	Mar. 6.....	3.7	1,600	31.....	3.9	2,062
27.....	4.35	2,924	11.....	3.6	1,493			
30.....	4.35	2,978	15.....	3.6	1,481			
May 6.....	3.9	2,120	20.....	3.6	1,457	Jan. 1913.		
11.....	3.6	1,439	23.....	3.55	1,447	5.....	3.9	1,983
17.....	9.5	28,363	26.....	3.7	1,579	9.....	3.8	1,880
21.....	5.5	6,874	31.....	3.7	1,573	14.....	3.8	1,827
25.....	5.1	5,004	Apr. 5.....	4.0	2,183	18.....	3.75	1,762
29.....	5.25	5,805	8.....	4.5	3,345	23.....	3.7	1,636
June 6.....	4.5	3,659	12.....	4.0	2,483	27.....	3.7	1,618
10.....	4.3	3,126	17.....	3.9	2,203	31.....	3.7	1,624
15.....	4.5	3,709	20.....	4.25	2,809	Feb. 5.....	3.6	1,534
17.....	7.25	13,359	25.....	4.4	3,215	9.....	3.7	1,589
26.....	5.35	5,552	30.....	4.0	2,191	13.....	3.7	1,682
30.....	5.0	4,743	May 5.....	3.85	1,987	18.....	3.7	1,663
July 3.....	5.0	4,856	10.....	3.6	1,451	22.....	4.8	4,266
10.....	5.15	5,040	15.....	4.45	3,126	28.....	4.4	2,969
14.....	6.5	10,054	20.....	4.6	3,709	Mar. 5.....	4.1	2,350
19.....	6.2	9,392	23.....	4.8	4,309	9.....	4.9	4,283
23.....	6.9	11,917	27.....	5.0	5,186	13.....	4.6	3,621
27.....	6.3	9,447	31.....	4.9	4,747	18.....	4.25	2,674
31.....	6.5	11,204	June 5.....	4.07	5,535	22.....	4.1	2,352
Aug. 5.....	6.95	11,591	11.....	4.80	7,546	27.....	3.9	1,884
10.....	5.6	7,134	15.....	5.53	11,652	31.....	3.75	1,757
14.....	5.1	4,795	19.....	5.76	11,501	Apr. 5.....	3.6	1,564
18.....	4.7	4,123	22.....	5.35	10,092	9.....	3.6	1,519
23.....	4.25	2,566	26.....	4.44	6,573	12.....	3.55	1,475
26.....	4.0	2,161	30.....	3.56	4,712	17.....	3.5	1,390
31.....	5.2	5,116	July 6.....	4.85	4,071	22.....	3.55	1,442
Sept. 5.....	5.75	7,452	11.....	4.7	3,521	25.....	4.9	4,278
8.....	5.9	7,172	16.....	4.55	3,313	30.....	3.75	1,936
13.....	5.5	6,357	20.....	4.1	2,009	May 3.....	3.6	1,511
19.....	4.9	4,538	24.....	4.4	2,543	5.....	10.85	28,185
23.....	4.6	3,657	28.....	4.1	2,233	9.....	4.15	2,372
26.....	4.6	3,628	31.....	4.15	2,236	14.....	3.8	2,010
30.....	4.8	4,260	Aug. 7.....	4.4	3,166	18.....	4.1	2,487
Oct. 5.....	4.4	3,090	11.....	4.4	3,166	22.....	4.1	2,348
9.....	5.15	6,878	15.....	3.9	1,938	27.....	4.0	2,160
13.....	4.6	3,669	19.....	4.3	2,872	31.....	3.8	1,876
17.....	5.8	7,901	22.....	6.25	9,263	June 5.....	4.4	3,170
21.....	6.0	8,264	26.....	7.8	16,270	10.....	4.1	2,472
26.....	5.75	7,577	28.....	7.9	17,188	14.....	4.1	2,614
31.....	5.1	5,258	31.....	6.4	11,139	18.....	4.5	3,700
Nov. 6.....	5.05	5,121	Sept. 4.....	8.0	18,290	23.....	5.0	4,981
11.....	5.0	5,032	8.....	7.35	15,708	26.....	5.2	5,617
15.....	4.75	4,311	12.....	6.0	9,349	30.....	6.55	11,324
20.....	4.8	4,318	14.....	8.4	20,871	July 5.....	4.45	3,174
24.....	4.65	3,701	18.....	8.2	20,092	9.....	4.2	2,671
28.....	4.5	3,404	21.....	7.1	14,997	15.....	3.8	1,942
30.....	4.5	3,194	26.....	5.4	6,440	18.....	3.6	1,640
Dec. 6.....	4.45	3,022	30.....	5.35	6,240	23.....	3.55	1,491
11.....	4.4	2,995	Oct. 5.....	5.5	6,662	27.....	4.95	4,761
15.....	4.35	2,829	10.....	6.15	9,384	30.....	3.95	2,056
19.....	4.3	2,710	14.....	5.3	6,132	Aug. 6.....	3.7	1,771
23.....	4.3	2,674	18.....	4.5	3,647	12.....	3.65	1,552
27.....	4.3	2,679	23.....	4.3	2,827	15.....	3.85	1,582
31.....	4.25	2,534	27.....	4.0	2,355	20.....	4.0	2,118
			31.....	4.0	2,301	26.....	4.4	3,002
Jan. 1912.			Nov. 6.....	3.9	1,976	30.....	4.05	2,226
5.....	4.0	2,287	10.....	3.8	1,884	Sept. 5.....	4.75	4,307
10.....	4.45	2,975	14.....	3.8	1,863	10.....	7.0	12,057
13.....	4.3	2,653	19.....	3.8	1,855	13.....	5.65	7,104
18.....	4.1	2,297	23.....	3.9	2,040	18.....	4.8	4,346
24.....	4.15	2,463	26.....	3.85	1,896	23.....	4.3	2,866
27.....	4.1	2,425	30.....	3.8	1,865	26.....	4.25	2,703
31.....	4.1	2,357				30.....	4.05	2,205

NOTE.—Measurements made by J. D. Dillard, W. D. Greet, J. P. Hague, A. L. Wilcox, E. E. Winter, H. F. Collins, D. J. Smith, I. P. Whitis, and W. H. Dodd.

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	3.6	4.2	3.95	6.75	4.65	16.....	3.8	4.45	6.45	5.55	5.0
2.....	3.6	4.7	4.05	6.9	5.95	17.....	3.7	4.35	6.6	5.45	4.95
3.....	3.5	5.6	3.7	6.9	4.6	18.....	3.6	4.5	6.35	5.2	4.85
4.....	3.5	4.4	4.1	6.75	5.0	19.....	3.6	4.6	5.15	5.0	4.7
5.....	3.3	4.35	4.6	8.7	6.8	20.....	3.5	4.2	4.8	6.1	4.6
6.....	3.35	4.3	4.65	7.45	8.5	21.....	4.1	3.95	4.40	6.30	4.5
7.....	3.55	4.45	4.4	6.35	5.8	22.....	6.15	3.85	4.4	5.8	9.9
8.....	3.6	4.15	4.4	9.45	4.3	23.....	6.15	3.95	5.6	5.9	16.6
9.....	3.8	3.85	4.4	10.50	3.95	24.....	4.7	3.85	5.25	5.15	12.25
10.....	3.9	3.75	3.75	9.65	3.9	25.....	4.8	3.6	4.5	4.9	7.1
11.....	3.8	3.75	3.6	7.7	4.35	26.....	4.35	3.4	4.75	4.85	5.6
12.....	3.8	3.9	3.6	7.1	4.35	27.....	4.05	3.6	5.95	5.55	5.0
13.....	3.65	3.95	5.75	6.7	4.65	28.....	4.0	3.5	5.75	5.2	4.8
14.....	3.9	3.85	7.1	6.4	5.7	29.....	3.9	8.75	5.7	4.55	6.8
15.....	4.45	4.65	6.3	6.1	5.15	30.....	3.8	4.65	6.3	4.75	6.1
						31.....	3.8		6.35	4.55	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	5.25	4.85	3.8	3.7	3.5	3.8	3.4	3.5	3.95	3.3	4.6	3.7
2.....	4.7	4.6	3.8	3.7	3.5	3.8	3.4	3.5	3.8	3.3	4.5	4.2
3.....	5.0	4.45	3.8	3.7	3.5	3.7	3.4	3.4	3.85	3.3	3.7	4.0
4.....	5.7	4.4	3.8	3.7	3.5	3.7	3.4	3.3	4.0	3.3	4.7	3.8
5.....	5.6	4.4	3.8	3.7	3.5	3.7	3.4	3.3	4.0	3.3	4.7	4.0
6.....	5.45	4.3	3.8	3.7	3.5	3.7	3.3	3.4	4.2	3.3	4.8	4.2
7.....	5.25	4.3	3.8	3.7	3.5	3.7	3.3	3.65	4.1	3.3	4.7	4.2
8.....	5.1	4.3	3.8	3.7	3.5	3.7	3.3	3.5	4.2	3.3	5.0	4.2
9.....	5.0	4.25	3.8	3.7	3.5	3.7	3.3	3.5	4.1	3.2	5.15	14.4
19.....	5.0	4.2	3.8	3.7	3.5	3.7	3.3	3.4	4.05	3.2	5.1	6.0
11.....	5.0	4.2	3.8	3.7	3.55	3.6	3.3	3.4	4.0	3.2	4.5	5.0
12.....	4.85	4.2	3.8	3.7	3.6	3.6	3.3	3.4	4.0	3.8	4.5	4.8
13.....	4.8	4.2	3.8	3.7	3.6	3.6	3.3	3.3	4.0	3.8	4.6	4.8
14.....	4.65	4.1	3.8	3.6	3.6	3.6	3.2	3.3	4.0	3.7	4.0	4.8
15.....	4.45	4.05	3.8	3.6	3.6	3.6	3.2	3.3	3.9	3.2	4.0	4.8
16.....	4.4	4.0	3.8	3.6	3.6	3.6	3.2	3.3	3.9	3.3	4.0	5.3
17.....	4.4	4.0	3.8	3.6	3.6	3.5	3.2	3.4	4.4	4.0	4.1	4.8
18.....	4.35	4.0	3.8	3.6	3.6	3.5	3.2	3.55	4.0	4.15	4.0	4.7
19.....	4.55	4.0	3.7	3.6	3.6	3.5	3.2	3.75	3.8	4.0	4.1	4.75
20.....	5.4	4.0	3.7	3.6	3.6	3.5	3.2	3.7	3.6	3.8	4.1	5.9
21.....	6.25	4.0	3.7	3.6	3.6	3.5	3.2	3.7	3.5	3.55	4.1	6.05
22.....	5.0	4.0	3.7	3.6	3.6	3.5	3.2	3.7	3.7	3.4	4.4	5.6
23.....	4.75	4.0	3.7	3.6	3.6	3.5	3.2	3.7	3.7	3.3	5.0	5.5
24.....	5.0	4.0	3.7	3.6	3.6	3.4	3.2	3.7	3.6	3.4	4.6	5.1
25.....	5.0	3.85	3.7	3.6	3.6	3.4	3.2	3.8	3.5	3.5	4.4	5.0
26.....	4.85	3.8	3.7	3.6	3.95	3.4	3.2	3.8	3.4	3.7	4.4	4.8
27.....	4.7	3.8	3.7	2.6	3.9	3.4	3.2	4.3	3.4	3.9	4.1	4.5
28.....	4.5	3.8	3.7	3.6	3.9	3.4	3.2	4.0	3.3	4.45	4.0	4.5
29.....	4.5	3.8	3.7	3.6		3.4	3.3	4.1	3.3	4.2	3.8	4.3
30.....	4.5	3.8	3.7	3.5		3.4	3.5	4.1	3.3	4.0	3.8	4.2
31.....	5.25		3.7	3.5		3.4		4.1		4.9	8.8	
1901-2.												
1.....	4.0	4.8	4.0	3.6	3.5	3.5	3.1	3.1	3.8	6.25	6.85	7.35
2.....	3.8	4.45	4.0	3.6	3.5	3.4	3.1	3.1	3.5	3.75	6.45	7.25
3.....	3.9	4.0	4.0	3.6	3.5	3.5	3.1	3.1	3.4	3.4	6.2	7.25
4.....	4.0	4.0	4.0	3.6	3.5	3.45	3.1	4.8	3.4	3.35	5.95	7.3
5.....	4.0	4.2	4.0	3.55	3.5	3.3	3.1	3.75	3.3	3.3	5.65	8.65
6.....	4.0	4.3	3.95	3.5	3.5	3.3	3.1	3.55	3.3	3.3	5.25	8.0
7.....	4.0	4.5	3.8	3.5	3.5	3.3	3.1	3.6	3.3	3.3	5.9	8.6
8.....	3.9	4.35	3.8	3.5	3.5	3.3	3.1	3.35	3.3	3.5	5.5	9.7
9.....	6.65	4.4	3.8	3.9	3.5	3.3	3.1	3.2	3.3	3.4	4.95	11.65
10.....	5.0	4.6	3.8	3.85	3.5	3.3	3.1	3.2	3.3	4.05	4.75	12.75
11.....	4.8	4.5	3.8	3.8	3.5	3.3	3.1	3.1	3.35	4.4	4.7	10.9
12.....	4.2	4.5	3.8	3.8	3.5	3.3	3.1	3.1	3.6	4.2	4.6	10.4
13.....	4.3	4.6	3.8	3.8	3.5	3.3	3.4	3.1	3.75	5.35	4.5	9.5
14.....	4.0	4.5	3.8	3.8	3.5	3.3	4.1	3.1	3.95	6.6	7.5	8.45
15.....	3.8	4.4	3.8	3.7	3.5	3.3	3.7	3.1	3.5	5.6	6.85	7.3

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1915.—(Contd.)

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16.....	4.0	4.75	3.8	3.7	3.5	3.3	3.5	3.2	3.5	5.15	6.0	6.65
17.....	3.7	4.7	3.7	3.7	3.5	3.3	3.4	3.2	3.5	4.8	6.0	6.35
18.....	3.8	4.55	3.7	3.7	3.5	3.3	3.4	10.0	3.5	4.85	5.95	6.05
19.....	4.0	4.4	3.7	3.7	3.5	3.2	3.3	5.6	3.4	4.75	5.6	5.95
20.....	3.9	4.3	3.7	3.6	3.5	3.2	3.15	3.95	3.9	4.7	5.85	5.5
21.....	3.8	4.2	3.6	3.6	3.5	3.2	3.1	3.75	3.95	4.95	5.65	6.1
22.....	3.8	4.1	3.6	3.6	3.5	3.2	3.1	3.45	3.8	4.85	5.65	6.55
23.....	3.8	4.0	3.6	3.5	3.2	3.2	3.1	3.4	3.5	5.65	5.7	5.3
24.....	4.0	3.9	3.6	3.5	3.5	3.25	3.1	3.4	3.4	6.5	5.6	5.0
25.....	4.0	3.9	3.6	3.5	3.5	3.2	3.1	3.65	3.4	10.15	5.95	4.8
26.....	4.6	3.9	3.6	3.5	3.5	3.1	3.1	3.5	3.4	9.55	6.75	4.9
27.....	4.0	3.95	3.6	3.5	3.5	3.1	3.1	3.4	3.4	8.0	6.95	4.85
28.....	6.8	4.0	3.6	3.5	3.5	3.1	3.1	3.4	3.4	8.4	6.2	4.7
29.....	5.4	4.0	3.6	3.5	.....	3.1	3.1	3.3	3.35	9.2	5.9	4.7
30.....	5.2	4.0	3.6	3.5	.....	3.1	3.1	4.2	3.3	8.05	6.3	4.7
31.....	4.8	.....	3.6	3.5	.....	3.1	.....	4.2	.....	7.55	7.25	.....
1902-3.												
1.....	4.7	4.35	3.9	3.9	3.9	4.5	3.75	4.15	4.2	5.35	4.55	4.4
2.....	4.7	4.6	3.9	3.9	4.05	4.4	3.7	4.0	4.45	5.25	4.25	4.8
3.....	5.1	4.35	3.85	3.9	4.05	4.35	3.7	3.85	4.7	5.15	4.1	5.95
4.....	4.8	4.35	3.8	3.9	4.0	4.3	3.65	3.8	4.35	5.1	4.2	6.0
5.....	5.0	4.3	3.95	3.9	3.95	4.3	3.6	3.8	4.3	5.25	4.8	5.35
6.....	4.95	4.85	4.05	3.9	3.95	4.25	3.0	3.75	4.3	5.25	4.55	5.1
7.....	4.65	4.55	4.05	3.9	3.95	4.2	3.6	3.9	4.85	5.65	4.15	5.3
8.....	4.45	4.35	4.0	3.9	3.95	4.15	3.6	3.7	4.45	5.9	4.0	5.15
9.....	4.4	4.2	3.9	3.9	3.95	4.15	3.6	3.6	4.45	6.05	4.0	4.9
10.....	4.4	4.1	4.0	3.9	3.95	4.1	3.6	3.9	5.0	6.25	4.1	4.75
11.....	4.35	4.05	4.0	3.9	3.95	4.1	3.6	4.2	4.9	6.3	4.05	4.65
12.....	4.75	4.0	4.0	3.9	3.9	4.1	3.6	6.0	7.8	6.25	3.9	4.45
13.....	4.75	3.9	3.9	3.9	4.65	4.05	3.5	4.5	11.5	6.05	3.9	4.65
14.....	4.65	3.9	3.9	3.95	4.65	4.05	3.5	4.15	7.95	5.85	4.45	4.75
15.....	4.55	3.9	3.9	4.15	4.65	4.0	3.45	4.3	7.35	5.65	4.4	4.55
16.....	4.45	3.9	3.9	4.1	4.5	4.0	3.45	4.25	6.4	5.5	4.4	4.6
17.....	4.4	3.9	3.9	4.0	4.45	3.9	3.45	5.2	5.5	5.15	4.25	4.65
18.....	4.35	3.9	3.9	4.0	4.35	3.9	3.45	4.6	5.25	5.1	4.1	4.75
19.....	4.3	3.9	3.95	4.0	4.3	4.1	3.55	4.4	5.2	4.9	4.15	4.7
20.....	4.3	3.9	3.9	4.0	4.3	3.95	3.8	4.55	5.2	4.75	4.2	4.6
21.....	4.2	3.9	3.9	3.95	4.25	4.0	3.7	4.65	5.1	4.75	4.2	4.7
22.....	4.2	3.9	3.9	3.95	4.2	3.9	3.7	4.3	5.45	4.75	5.0	4.75
23.....	4.15	3.95	3.9	3.95	4.2	3.85	3.7	4.4	5.45	4.55	5.0	4.45
24.....	4.1	4.2	3.9	3.95	4.1	3.8	3.65	4.3	5.4	4.5	4.85	4.75
25.....	4.1	3.95	3.9	3.95	4.1	3.8	3.6	4.4	5.4	4.4	4.75	4.85
26.....	4.0	3.9	3.9	3.9	4.25	3.8	3.7	4.25	5.45	4.3	4.55	5.65
27.....	4.05	4.05	3.9	3.95	4.55	3.8	3.7	4.3	5.5	4.25	4.4	5.5
28.....	4.1	3.9	3.9	3.9	4.65	3.75	3.7	4.3	5.4	4.2	4.8	5.25
29.....	4.1	3.9	3.9	3.9	.....	3.75	3.7	4.25	5.45	4.45	6.15	5.2
30.....	4.1	3.9	3.9	3.9	.....	3.7	4.35	4.2	5.55	4.4	6.0	5.15
31.....	4.1	.....	3.9	3.9	.....	3.7	.....	4.25	.....	4.6	5.45	.....
1903-4.												
1.....	5.8	4.1	3.7	3.65	3.5	3.5	3.4	3.3	4.3	5.15	3.75	4.25
2.....	5.85	4.0	3.7	3.65	3.5	3.5	3.4	3.3	4.0	4.7	3.7	4.2
3.....	6.3	3.9	3.7	3.6	3.5	3.5	3.4	3.4	3.8	4.45	3.7	4.0
4.....	6.7	3.9	3.7	3.6	3.5	3.45	3.4	3.4	3.65	4.4	3.7	4.3
5.....	6.55	3.9	3.7	3.6	3.5	3.45	3.4	3.55	4.5	4.25	3.8	4.3
6.....	6.05	3.85	3.7	3.6	3.5	3.4	3.35	3.5	4.35	4.15	3.9	5.7
7.....	5.65	3.8	3.7	3.6	3.5	3.4	3.35	3.4	5.95	4.1	3.7	6.5
8.....	5.35	3.8	3.7	3.6	3.5	3.4	3.35	3.3	5.15	4.05	3.9	8.4
9.....	5.1	3.8	3.7	3.6	3.5	3.4	3.3	3.3	4.15	4.0	3.9	9.15
10.....	4.85	3.8	3.7	3.6	3.5	3.4	3.3	3.3	5.0	3.85	3.8	8.45
11.....	4.8	3.8	3.7	3.6	3.5	3.45	3.3	3.3	5.35	3.8	3.75	10.2
12.....	4.7	3.8	3.7	3.6	3.5	3.45	3.3	3.25	5.2	3.7	3.7	16.0
13.....	4.55	3.8	3.7	3.6	3.5	3.4	3.3	3.3	4.55	3.7	3.7	22.75
14.....	4.5	3.8	3.7	3.6	3.5	3.4	3.3	3.45	4.55	3.6	3.6	26.75
15.....	4.45	3.8	3.7	3.6	3.5	3.4	3.3	3.55	4.3	3.6	3.6	23.55
16.....	4.4	3.8	3.7	3.6	3.5	3.4	3.75	3.4	4.05	3.65	3.6	14.6
17.....	4.35	3.8	3.7	3.55	3.5	3.4	3.35	3.4	3.85	3.65	3.6	10.5
18.....	4.35	3.8	3.7	3.55	3.5	3.4	3.3	3.4	3.75	3.75	3.6	11.15
19.....	4.3	3.8	3.7	3.55	3.5	3.4	3.3	3.4	3.7	4.05	3.6	10.1
20.....	4.25	3.8	3.7	3.55	3.5	3.4	3.3	3.4	3.7	3.85	3.6	19.8

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21.....	4.25	3.75	3.7	3.55	3.5	3.4	3.3	3.3	3.8	3.9	3.6	12.65
22.....	4.3	3.8	3.7	3.55	3.5	3.4	4.1	3.3	4.65	4.2	3.95	12.55
23.....	4.25	3.8	3.7	3.5	3.5	3.4	3.4	3.9	4.45	4.35	4.0	10.35
24.....	4.15	3.8	3.7	3.5	3.5	3.4	3.35	4.35	4.35	4.45	3.6	9.0
25.....	4.1	3.8	3.7	3.5	3.5	3.4	3.3	4.15	4.15	4.25	3.8	8.35
26.....	4.05	3.75	3.7	3.5	3.5	3.4	3.3	4.45	3.85	4.1	4.25	8.0
27.....	4.05	3.7	3.65	3.5	3.5	3.35	3.3	4.9	8.85	3.9	4.3	7.5
28.....	4.05	3.7	3.65	3.5	3.5	3.35	3.3	4.7	11.35	4.0	4.4	7.5
29.....	4.05	3.7	3.65	3.5	3.5	3.35	3.3	7.15	7.35	4.0	4.4	7.35
30.....	4.0	3.7	3.65	3.5	3.5	3.35	3.3	5.35	5.5	3.9	4.45	7.3
31.....	4.0	.....	3.65	3.5	.....	3.35	.....	4.5	.....	3.8	4.3	.....
1904-5.												
1.....	7.65	8.8	4.5	4.2	3.7	4.25	8.0	6.25	6.35	10.7	7.85	5.65
2.....	7.25	8.1	4.5	4.0	3.65	4.35	7.1	5.85	6.7	10.7	7.6	5.5
3.....	7.2	7.45	4.5	3.95	3.6	4.4	5.5	5.75	6.5	10.1	7.6	5.5
4.....	6.9	7.15	4.5	3.9	3.55	4.4	5.05	5.7	6.55	7.25	7.35	5.4
5.....	6.5	6.7	4.65	3.9	3.5	4.45	4.85	5.7	6.6	7.15	7.0	5.3
6.....	6.65	6.35	5.05	3.9	3.55	4.75	4.65	5.8	6.65	6.75	6.95	5.1
7.....	6.95	7.0	5.6	3.85	3.65	4.7	4.55	5.85	6.35	6.9	6.9	5.0
8.....	6.3	6.8	5.5	3.85	3.65	5.35	4.5	5.9	7.1	6.3	7.0	5.2
9.....	6.15	6.6	5.55	3.8	3.7	5.65	4.5	5.9	7.55	6.2	7.1	5.6
10.....	6.3	6.2	5.3	3.8	3.7	5.95	4.5	7.15	7.5	5.8	7.3	7.0
11.....	7.2	5.95	5.15	3.75	3.7	5.0	4.5	5.8	7.55	5.3	7.5	9.7
12.....	7.5	5.8	5.0	3.75	3.7	4.9	4.5	5.7	8.1	5.5	6.85	8.35
13.....	7.7	5.8	4.95	3.7	3.7	5.3	4.5	5.7	8.65	4.95	8.95	7.6
14.....	9.35	5.7	4.95	3.7	3.65	5.35	4.4	5.95	9.0	4.9	8.65	7.95
15.....	11.3	5.45	5.0	3.7	3.65	6.3	4.3	6.1	9.45	4.75	7.55	7.4
16.....	10.3	5.35	5.1	3.65	3.65	6.2	4.3	6.05	9.7	4.65	7.75	7.2
17.....	10.55	5.15	5.25	3.6	3.6	5.9	4.25	5.95	9.8	4.7	8.55	6.9
18.....	10.45	5.05	5.25	3.6	3.6	5.95	4.15	5.95	9.6	5.4	8.25	6.9
19.....	11.45	4.95	5.25	3.6	3.6	5.9	4.0	5.9	9.55	5.25	8.3	6.95
20.....	11.1	4.9	5.05	3.6	3.6	5.9	4.0	5.9	9.7	6.5	8.75	6.75
21.....	10.25	4.85	4.85	3.6	3.65	6.0	4.0	5.9	9.7	6.2	9.1	5.85
22.....	10.5	4.75	4.8	3.6	4.0	6.15	4.25	5.9	9.2	6.5	8.45	5.5
23.....	10.4	4.65	4.7	3.75	4.4	6.05	4.45	5.95	8.8	6.9	7.3	5.5
24.....	10.25	4.6	4.55	3.85	4.4	5.85	7.7	6.15	8.6	7.0	0.95	5.35
25.....	10.2	4.6	4.45	3.9	4.4	5.65	5.95	7.25	8.6	7.9	7.1	6.65
26.....	10.1	4.55	4.35	3.9	4.4	5.55	5.3	6.3	8.55	7.1	7.45	8.75
27.....	10.05	4.5	4.3	3.9	4.4	5.45	4.95	6.1	8.4	7.5	7.7	10.2
28.....	9.75	4.5	4.3	3.85	4.4	5.4	4.9	6.05	10.3	7.8	7.35	10.7
29.....	9.55	4.5	4.3	3.8	.....	5.35	5.0	6.1	21.1	8.5	6.9	8.7
30.....	9.5	4.5	4.3	3.75	.....	5.15	6.7	6.1	9.65	8.7	6.35	7.8
31.....	9.4	.....	4.25	3.7	.....	5.05	.....	6.3	.....	8.5	6.1	.....
1905-6.												
1.....	7.2	4.1	4.65	5.35	4.2	5.25	3.3	4.0	5.5	5.55	7.4	13.2
2.....	7.75	4.1	4.6	5.2	4.2	5.1	3.25	3.8	5.6	5.1	7.05	12.55
3.....	9.0	4.15	4.5	4.95	4.1	4.9	3.3	3.9	6.5	5.0	7.05	11.15
4.....	8.45	4.1	4.5	4.85	4.15	4.8	3.35	4.0	6.9	4.6	7.8	10.65
5.....	7.65	4.0	5.95	4.8	4.1	4.75	3.4	3.95	6.7	4.35	8.65	9.45
6.....	6.95	4.05	6.4	4.75	4.1	4.6	3.35	4.0	6.3	4.65	9.3	9.0
7.....	7.0	3.9	6.65	4.65	4.05	4.45	3.35	4.2	5.85	5.7	11.9	8.9
8.....	7.7	3.95	6.6	4.55	4.0	4.35	3.4	4.4	5.6	7.0	11.3	8.6
9.....	7.25	3.95	6.15	4.45	4.0	4.25	3.35	4.5	5.4	7.75	12.8	7.95
10.....	7.05	4.0	6.15	4.4	4.0	4.15	3.5	4.6	5.25	7.25	13.6	7.5
11.....	7.0	4.05	6.05	4.4	4.25	4.1	3.7	4.45	5.1	7.95	18.65	7.25
12.....	6.8	4.0	5.55	4.35	5.0	4.05	3.55	4.3	5.1	7.75	23.85	6.9
13.....	6.4	4.1	5.65	4.3	5.4	4.0	3.45	4.25	4.85	7.65	19.0	6.6
14.....	6.0	5.55	5.35	4.2	5.65	4.0	3.4	4.2	4.7	7.05	13.5	6.3
15.....	5.9	8.3	5.25	4.2	5.9	3.95	3.3	4.15	4.65	7.55	12.4	6.05
16.....	5.3	7.1	5.45	4.2	5.65	3.9	3.25	4.1	4.85	6.8	10.5	5.9
17.....	5.1	6.6	5.9	4.2	5.45	3.85	3.3	4.05	4.85	6.8	9.85	5.8
18.....	5.05	6.7	5.6	4.2	5.4	3.85	3.3	4.2	4.7	8.0	10.2	5.7
19.....	4.95	6.75	5.8	4.1	5.45	3.8	3.3	4.8	4.8	9.1	8.05	5.65
20.....	4.95	6.75	7.35	4.1	6.0	3.8	3.3	5.0	5.1	9.5	6.35	5.8
21.....	4.85	6.65	7.25	4.1	6.3	3.7	3.25	4.6	4.8	9.7	6.85	6.05
22.....	4.75	6.55	7.0	4.05	6.4	3.7	3.2	4.7	4.8	10.35	7.7	6.4
23.....	4.7	6.1	6.65	4.0	6.25	3.7	3.2	4.85	4.75	9.95	9.1	6.3
24.....	4.6	5.65	7.1	4.0	6.1	3.6	3.2	4.95	4.8	9.1	10.65	5.6
25.....	4.5	5.35	7.15	4.0	6.0	3.6	3.3	5.0	4.9	9.45	10.75	5.5

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26.....	4.45	5.25	6.6	4.0	5.8	3.5	3.3	5.2	4.9	9.8	9.85	5.95
27.....	4.35	5.15	6.15	4.0	5.65	3.5	3.3	5.2	5.0	10.0	12.05	5.95
28.....	4.25	5.0	5.95	4.0	5.5	3.45	3.4	5.25	5.0	10.05	12.8	6.0
29.....	4.2	4.95	5.75	4.0	.....	3.35	3.55	5.25	5.1	11.75	12.45	5.7
30.....	4.15	4.8	5.55	4.0	.....	3.3	5.85	5.3	5.6	9.2	13.5	5.45
31.....	4.1	.....	5.4	4.0	.....	3.3	.....	5.4	.....	8.15	14.2	.....
1906-7.												
1.....	5.4	3.95	4.1	4.0	4.2	3.65	3.3	4.7	4.65	5.9	5.35	5.1
2.....	5.15	3.95	4.2	4.0	4.3	3.6	3.2	4.7	4.95	5.9	5.5	5.45
3.....	5.7	3.95	4.2	4.0	4.2	3.6	3.2	4.7	5.0	5.9	5.45	6.6
4.....	5.35	3.95	4.1	4.0	4.2	3.6	3.2	4.5	5.05	5.9	5.2	6.15
5.....	5.15	3.95	4.1	3.95	4.2	3.6	3.1	4.5	5.1	6.05	5.15	6.45
6.....	5.0	3.95	4.1	3.85	4.15	3.6	3.1	4.45	5.15	5.25	5.1	6.75
7.....	4.95	3.95	4.1	3.9	4.0	3.6	3.7	4.25	5.25	5.2	5.2	6.75
8.....	4.85	3.95	4.1	3.9	4.0	3.6	3.7	4.25	5.3	5.55	5.25	6.7
9.....	4.7	3.95	4.2	3.85	3.9	3.65	3.7	4.25	5.45	5.6	5.0	6.7
10.....	4.6	3.95	4.45	3.85	3.9	3.7	3.7	4.2	5.65	5.4	5.0	6.9
11.....	4.55	3.95	4.65	3.85	3.9	3.7	3.7	4.2	5.7	5.4	4.8	7.6
12.....	4.5	3.95	4.7	3.9	3.8	3.7	3.7	4.3	5.8	5.45	4.8	6.95
13.....	4.55	4.0	4.9	3.9	3.8	3.7	3.5	4.2	5.8	5.65	4.9	6.35
14.....	4.65	4.0	5.0	3.9	3.8	3.7	3.55	4.2	5.55	5.7	4.4	6.2
15.....	4.5	4.0	4.9	3.9	3.8	3.7	3.6	4.2	5.4	5.75	4.3	5.4
16.....	5.05	4.0	4.8	3.95	3.7	3.6	3.5	4.1	5.5	5.6	4.35	5.25
17.....	4.55	4.0	4.8	3.95	3.9	3.5	3.55	4.15	5.85	5.65	4.25	6.2
18.....	4.45	3.95	4.75	4.0	3.9	3.5	3.55	4.2	6.85	5.5	4.15	6.05
19.....	4.5	3.95	4.65	4.0	3.8	3.5	3.4	4.2	6.25	5.4	4.3	5.95
20.....	4.35	3.95	4.6	4.0	3.9	3.4	3.4	4.1	6.4	5.4	4.35	7.5
21.....	4.3	3.95	4.5	4.0	3.85	3.4	3.4	4.4	6.05	5.4	4.4	7.55
22.....	4.2	3.95	4.4	4.0	3.8	3.4	3.4	4.45	6.55	5.3	4.4	7.2
23.....	4.2	3.95	4.4	4.0	3.8	3.4	3.4	4.1	6.0	5.35	4.4	6.75
24.....	4.2	2.95	4.3	4.0	3.8	3.4	3.35	3.95	6.0	5.15	4.4	6.35
25.....	4.2	4.0	4.3	4.0	3.75	3.4	3.2	3.9	5.95	5.1	4.4	6.2
26.....	4.15	4.0	4.3	3.95	3.7	3.4	3.5	4.1	5.8	5.25	4.4	6.15
27.....	4.1	4.0	4.3	4.0	3.7	3.4	4.1	4.3	5.85	5.1	5.4	6.1
28.....	4.1	4.0	4.3	4.0	3.7	3.4	4.3	4.15	5.9	5.8	5.4	6.15
29.....	4.0	4.05	4.2	4.0	.....	3.4	4.55	4.1	5.9	5.2	5.15	6.05
30.....	4.0	4.05	4.15	4.0	.....	3.4	4.75	4.1	5.9	5.15	5.1	6.0
31.....	4.0	.....	4.1	4.1	.....	3.4	.....	4.5	.....	5.75	5.0	.....
1907-8.												
1.....	5.75	4.9	5.0	4.7	4.3	4.0	3.7	4.5	3.95	3.7	5.4	6.45
2.....	5.3	5.2	5.0	4.6	4.2	4.0	3.7	4.5	4.15	3.6	5.2	6.85
3.....	5.25	5.3	8.3	4.6	4.2	4.0	3.8	4.45	4.35	3.75	4.9	8.2
4.....	5.1	4.9	7.35	4.6	4.2	4.0	3.9	4.3	4.5	3.65	5.0	8.7
5.....	5.45	5.55	6.45	4.6	4.2	4.0	3.9	4.3	4.55	3.6	5.25	8.8
6.....	5.25	5.55	6.2	4.6	4.2	3.9	3.85	4.3	4.55	3.55	6.85	8.25
7.....	5.1	5.5	6.05	4.6	4.2	3.9	3.85	4.2	4.35	7.8	7.25	8.45
8.....	5.1	6.65	6.1	4.6	4.1	3.9	3.8	4.2	4.2	5.95	6.45	8.1
9.....	4.95	8.65	6.0	4.5	4.2	3.9	3.7	4.2	4.1	5.0	5.6	7.4
10.....	4.7	7.65	5.95	4.5	4.2	3.9	3.95	4.1	4.1	5.0	6.05	6.9
11.....	4.7	6.95	5.95	4.5	4.2	3.85	3.8	4.1	4.05	4.65	5.95	6.45
12.....	4.55	6.5	5.9	4.5	4.2	3.9	3.85	4.05	3.9	4.3	6.55	7.0
13.....	4.5	6.05	5.7	4.5	4.1	3.9	3.9	4.0	4.0	4.1	8.45	7.25
14.....	4.5	5.85	5.5	4.5	4.1	3.9	4.05	4.0	3.9	4.0	9.45	6.95
15.....	4.4	5.8	5.5	4.5	4.05	3.9	3.95	3.95	3.9	3.9	9.8	6.65
16.....	4.5	5.0	5.4	4.4	4.05	3.85	4.1	3.9	3.8	3.8	7.6	6.2
17.....	4.4	5.35	5.3	4.4	4.05	3.85	4.15	3.9	3.8	3.8	6.6	6.0
18.....	4.4	5.3	5.2	4.4	4.05	3.8	5.4	4.3	3.7	3.7	6.15	5.65
19.....	4.4	5.3	5.15	4.4	4.05	3.8	5.4	4.3	3.7	3.7	5.9	5.45
20.....	4.4	5.2	5.1	4.4	4.1	3.8	4.75	4.05	3.7	3.7	5.75	5.3
21.....	4.4	5.1	5.1	4.4	4.1	3.8	4.5	3.95	3.7	3.75	5.7	5.2
22.....	4.4	5.05	5.0	4.4	4.1	3.8	4.15	3.9	3.6	3.85	5.7	5.0
23.....	4.45	5.0	4.9	4.4	4.1	3.8	4.0	3.95	3.6	4.15	5.75	5.0
24.....	4.4	5.0	4.9	4.4	4.05	3.8	3.95	5.25	4.35	3.95	5.75	4.85
25.....	5.05	5.0	4.8	4.35	4.15	3.75	3.95	4.55	4.6	5.0	6.15	4.7
26.....	5.0	4.9	4.8	4.3	4.1	3.8	3.8	4.15	4.35	6.0	6.4	4.7
27.....	5.0	4.95	4.8	4.3	4.1	3.8	3.9	4.1	4.2	5.0	5.95	4.7
28.....	5.0	4.95	4.7	4.3	4.05	3.8	3.9	4.05	4.05	4.35	5.8	4.65
29.....	6.9	4.9	4.7	4.3	4.0	3.8	4.05	3.95	3.85	4.95	5.75	4.45
30.....	4.95	5.0	4.7	4.3	.....	3.75	4.25	3.9	3.7	5.9	6.1	4.4
31.....	4.9	.....	4.7	4.3	.....	3.75	.....	3.9	.....	5.95	6.4	.....

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	4.25	3.75	3.75	3.75	3.7	3.6	3.5	3.5	5.0	4.75	6.3	4.55
2.	4.2	3.75	3.7	3.7	3.7	3.6	3.5	3.5	5.05	4.8	6.25	4.6
3.	4.2	3.75	3.7	3.7	3.7	3.6	3.5	3.5	5.0	4.9	6.2	4.6
4.	4.15	3.75	3.7	3.7	3.7	3.55	3.5	3.5	4.9	5.15	6.55	4.65
5.	4.1	3.75	3.7	3.7	3.65	3.55	3.5	3.85	4.85	5.15	6.4	5.8
6.	4.1	3.75	3.7	3.7	3.65	3.55	3.5	4.3	4.7	4.8	6.1	7.5
7.	4.5	3.75	3.7	3.7	3.6	3.5	3.5	4.2	4.7	4.85	6.1	6.25
8.	4.4	3.75	3.7	3.7	3.6	3.5	3.5	4.1	4.6	5.4	6.1	6.15
9.	4.35	3.75	3.7	3.7	3.6	3.5	3.5	4.0	4.6	6.35	6.05	5.65
10.	4.15	3.75	3.7	3.7	3.6	3.5	3.5	4.0	4.6	6.75	5.7	5.35
11.	4.1	3.7	3.7	3.7	3.6	3.5	3.4	3.9	4.6	7.8	5.6	5.05
12.	4.0	3.7	3.7	3.7	3.6	3.55	3.4	4.0	4.6	7.85	5.55	4.85
13.	4.0	3.7	3.7	3.7	3.6	3.5	3.4	4.1	4.8	7.4	5.75	4.7
14.	4.0	3.7	3.7	3.7	3.6	3.55	3.4	4.2	4.6	7.45	6.0	5.5
15.	3.95	3.7	3.7	3.7	3.6	3.55	3.4	4.15	4.6	7.4	5.7	5.5
16.	3.9	3.7	3.7	3.7	3.6	3.5	3.4	4.0	4.65	6.6	5.8	6.05
17.	3.85	3.7	3.7	3.7	3.6	3.5	3.4	3.9	4.65	6.25	6.45	6.45
18.	3.85	3.7	3.7	3.7	3.65	3.5	3.4	4.05	5.1	6.15	5.85	6.8
19.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	4.35	5.0	6.0	6.45	7.25
20.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	4.65	4.65	5.75	7.0	6.5
21.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	4.8	5.15	5.45	6.6	6.9
22.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	4.8	5.05	5.3	5.95	6.5
23.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	4.85	5.2	12.5	6.0	6.5
24.	3.8	3.7	3.7	3.7	3.6	3.5	3.4	5.0	5.3	6.35	5.75	5.9
25.	3.8	3.7	3.75	3.7	3.6	3.5	3.4	5.0	5.45	5.95	5.55	5.9
26.	3.8	3.7	3.7	3.7	3.6	3.5	3.55	5.0	5.3	5.4	5.35	5.65
27.	3.8	3.7	3.7	3.7	3.5	3.5	3.6	5.1	5.2	5.5	5.4	5.6
28.	3.8	3.7	3.7	3.7	3.75	3.5	3.5	5.0	5.25	5.4	5.4	5.4
29.	3.8	3.75	3.7	3.7	-----	3.5	3.5	5.15	5.05	5.65	5.15	5.2
30.	3.8	3.75	3.7	3.7	-----	3.5	3.5	5.0	4.95	6.15	4.9	5.1
31.	3.8	-----	3.7	3.7	-----	3.45	-----	5.0	-----	6.3	4.8	-----
1909-10.												
1.	4.95	4.0	3.7	5.25	4.0	3.6	3.9	4.1	4.45	4.75	3.5	4.2
2.	4.85	4.0	3.7	4.65	4.0	3.55	3.9	4.0	4.35	4.7	3.45	4.1
3.	4.7	3.9	3.7	4.4	3.9	3.55	3.9	4.0	4.3	5.2	3.45	4.0
4.	4.6	3.9	3.7	4.35	3.9	3.5	3.9	4.05	4.25	5.55	3.45	4.0
5.	4.55	3.85	3.7	4.3	3.8	3.5	4.0	4.2	4.2	4.95	3.45	3.95
6.	4.5	3.8	3.7	4.35	3.8	3.5	4.0	4.35	4.1	4.75	3.45	10.7
7.	4.4	3.8	3.7	4.35	3.8	3.5	4.1	4.5	4.6	5.25	3.45	7.5
8.	4.35	3.8	3.7	4.3	3.8	3.5	4.1	4.75	4.05	4.9	3.4	5.6
9.	4.3	3.8	3.7	4.3	3.8	3.5	5.1	4.7	3.9	4.7	3.4	4.85
10.	4.3	3.8	3.7	4.2	3.8	3.5	4.3	4.8	3.85	4.7	3.4	4.4
11.	4.3	3.8	3.7	4.1	3.7	3.5	4.25	4.65	3.8	4.75	3.4	4.2
12.	4.3	3.8	3.7	4.2	3.7	3.5	4.2	4.65	3.75	4.3	3.4	4.85
13.	4.3	3.8	3.7	4.2	3.7	3.5	4.0	4.7	3.75	4.2	3.4	4.85
14.	4.25	3.8	3.7	4.1	3.7	3.45	4.0	4.75	3.65	4.15	3.4	4.65
15.	4.2	3.8	3.7	4.1	3.8	3.45	3.9	4.9	3.6	4.25	3.4	4.9
16.	4.2	3.8	3.7	4.15	3.7	3.45	3.9	5.45	3.6	4.35	3.45	4.7
17.	4.05	3.75	3.7	4.25	3.7	3.45	3.9	5.05	3.6	4.25	3.4	4.6
18.	4.0	3.75	3.7	4.1	3.7	3.5	3.85	5.15	3.7	4.15	3.4	4.5
19.	4.0	3.7	3.7	4.15	3.7	3.45	3.85	5.0	3.7	3.95	3.4	4.35
20.	4.0	3.7	3.7	4.1	3.7	3.55	3.8	6.5	3.7	3.85	3.4	4.2
21.	4.1	3.7	3.7	4.05	3.7	3.8	3.8	5.4	4.05	3.8	3.4	4.2
22.	4.0	3.7	3.75	4.0	3.65	3.95	3.8	5.0	4.05	3.75	3.5	4.15
23.	4.0	3.7	3.8	4.0	3.65	4.1	3.8	4.9	3.8	3.75	3.7	4.1
24.	4.0	3.7	3.8	3.9	3.65	4.05	3.8	4.9	3.75	3.7	3.65	5.15
25.	4.0	3.7	3.8	3.9	3.6	3.95	3.8	4.9	3.6	3.6	3.8	4.95
26.	4.0	3.7	3.8	3.9	3.6	3.9	3.8	4.9	4.05	3.6	3.95	4.9
27.	4.0	3.7	3.75	3.9	3.6	3.9	3.8	4.9	5.15	3.6	4.55	4.65
28.	4.0	3.7	3.7	3.9	3.6	3.9	3.85	4.95	5.8	3.5	4.8	4.5
29.	4.0	3.7	3.7	3.9	-----	3.9	4.1	4.9	5.35	3.5	4.75	4.5
30.	4.0	3.7	3.7	3.9	-----	3.9	4.1	4.9	4.8	3.5	4.65	4.4
31.	4.0	-----	3.7	3.9	-----	4.0	-----	4.6	-----	3.5	4.45	-----
1910-11.												
1.	4.5	3.6	3.55	3.5	3.5	3.7	3.7	4.6	5.25	4.9	6.6	5.0
2.	4.35	3.6	3.55	3.5	3.5	3.7	3.7	4.55	4.95	4.9	6.35	4.7
3.	4.4	3.6	3.55	3.5	3.5	3.65	5.2	4.15	5.3	4.9	7.0	4.4
4.	4.75	3.6	3.55	3.5	3.5	3.65	6.8	4.0	4.9	4.65	7.1	5.0
5.	4.5	3.6	3.55	3.5	3.5	3.7	6.2	4.0	4.75	4.75	7.0	5.45

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
6.....	4.25	3.6	3.55	3.5	3.45	3.7	4.75	3.9	4.5	4.8	7.05	5.3
7.....	4.05	3.6	3.55	3.5	3.45	3.7	4.05	3.85	4.4	4.9	6.6	5.0
8.....	4.0	3.6	3.55	3.5	3.45	3.6	3.9	3.75	4.35	5.0	6.1	5.55
9.....	3.95	3.6	3.5	3.5	3.45	3.6	3.9	3.65	4.3	5.1	5.9	6.35
10.....	3.9	3.6	3.5	3.5	3.5	3.6	3.8	3.65	4.3	5.2	5.55	6.2
11.....	3.9	3.6	3.5	3.5	3.5	3.55	3.75	3.6	4.3	6.35	5.3	5.4
12.....	3.85	3.6	3.5	3.5	3.45	3.55	3.7	3.65	4.3	5.45	5.2	5.1
13.....	3.8	3.6	3.5	3.5	3.45	3.55	3.7	3.9	4.3	5.75	5.1	5.35
14.....	3.8	3.6	3.5	3.5	3.45	3.55	3.7	4.75	4.3	6.6	5.1	5.5
15.....	3.8	3.6	3.5	3.5	3.5	3.5	3.7	5.9	4.9	6.95	5.0	5.55
16.....	3.75	3.6	3.5	3.5	3.5	3.55	4.0	8.05	6.75	6.55	5.0	5.6
17.....	3.75	3.6	3.5	3.5	3.55	3.5	3.75	8.2	7.2	6.1	4.9	5.2
18.....	3.7	3.6	3.5	3.5	4.1	3.5	3.7	5.6	6.25	6.1	4.7	5.0
19.....	3.7	3.6	3.5	3.5	4.6	3.75	3.65	6.3	5.8	6.1	4.6	4.9
20.....	3.7	3.6	3.5	3.5	5.5	3.6	3.65	5.9	5.7	6.05	4.5	4.75
21.....	3.7	3.6	3.5	3.5	4.5	3.5	3.65	5.4	5.6	6.45	4.4	4.7
22.....	3.7	3.6	3.5	3.5	4.1	3.65	3.65	5.05	5.5	7.05	4.3	4.55
23.....	3.7	3.6	3.5	3.5	4.1	3.6	3.6	5.35	5.7	6.9	4.25	4.7
24.....	3.7	3.6	3.5	3.5	4.0	3.6	3.6	5.25	5.65	7.1	4.2	5.0
25.....	3.7	3.6	3.5	3.5	4.0	3.6	3.65	5.1	5.5	7.55	4.1	4.9
26.....	3.7	3.6	3.5	3.5	3.95	3.7	3.65	5.0	5.35	6.4	4.0	4.6
27.....	3.65	3.55	3.5	3.5	3.9	3.6	4.35	5.0	5.2	6.65	4.35	4.45
28.....	3.65	3.55	3.5	3.5	3.85	3.6	4.4	5.5	5.1	7.25	4.0	5.05
29.....	3.6	3.55	3.5	3.5	.....	3.6	4.65	5.3	5.05	6.15	6.7	4.8
30.....	3.6	3.55	3.5	3.5	.....	3.6	4.35	5.35	5.0	6.15	6.0	4.8
31.....	3.6	.....	3.5	3.5	.....	3.75	.....	5.65	.....	6.7	5.2	.....
1911-12.												
1.....	4.65	5.0	4.5	4.15	4.1	3.75	3.65	3.9	5.3	5.05	4.1	6.6
2.....	4.5	5.0	4.5	4.1	4.1	3.75	3.6	3.9	5.0	5.0	4.2	7.4
3.....	4.5	5.0	4.5	4.1	4.1	3.75	3.8	3.85	5.0	5.0	4.2	7.6
4.....	4.5	4.9	4.45	4.1	4.1	3.7	3.95	3.85	5.0	5.0	4.2	8.0
5.....	4.35	5.0	4.45	4.0	4.0	3.7	4.0	3.85	5.1	4.9	4.7	7.25
6.....	4.3	5.0	4.45	4.1	4.0	3.7	4.0	3.8	5.15	4.85	4.45	7.1
7.....	4.2	5.15	4.45	4.1	4.0	3.6	6.4	3.7	5.2	4.95	4.35	7.7
8.....	4.2	5.1	4.4	4.45	4.0	3.6	4.6	3.65	5.0	4.9	4.25	7.3
9.....	5.15	5.1	4.4	4.5	4.0	3.6	4.25	3.6	5.3	4.9	4.5	7.35
10.....	5.15	5.15	4.4	4.45	3.95	3.6	4.05	3.6	5.5	4.85	4.4	6.55
11.....	4.9	5.0	4.4	4.4	3.95	3.6	4.00	3.55	5.7	4.7	4.25	6.1
12.....	4.75	4.9	4.45	4.3	3.9	3.6	4.0	3.55	6.05	4.65	3.95	6.0
13.....	4.6	4.9	4.55	4.3	3.9	3.6	3.85	3.55	6.3	4.6	3.95	7.15
14.....	4.8	4.8	4.4	4.2	3.9	3.6	3.8	3.55	6.35	4.7	3.9	8.4
15.....	5.1	4.75	4.35	4.15	3.9	3.6	3.8	4.5	6.75	4.4	3.85	7.35
16.....	5.2	4.75	4.3	4.1	3.85	3.6	3.8	4.7	6.8	4.45	4.1	8.1
17.....	5.8	4.75	4.25	4.1	3.85	3.6	3.9	4.7	6.7	4.3	4.2	8.25
18.....	5.8	5.0	4.3	4.1	3.85	3.6	4.0	4.6	6.85	4.3	4.45	8.25
19.....	6.0	4.9	4.3	4.1	3.85	3.6	4.1	4.6	6.55	4.35	4.25	8.6
20.....	5.85	4.8	4.3	4.1	3.85	3.6	4.15	4.6	6.5	4.1	4.25	8.9
21.....	6.0	4.8	4.3	4.15	3.8	3.6	4.3	4.75	6.45	4.2	5.85	7.05
22.....	5.9	4.75	4.3	4.2	3.75	3.6	4.3	4.8	6.3	4.15	6.3	6.25
23.....	5.8	4.7	4.3	4.15	3.75	3.55	4.3	4.8	6.2	4.2	7.2	5.85
24.....	5.8	4.65	4.3	4.15	3.8	3.55	4.4	4.85	6.1	4.35	7.4	5.55
25.....	5.85	4.6	4.25	4.1	3.75	3.7	4.4	4.9	5.95	4.2	7.3	5.55
26.....	5.75	4.6	4.25	4.1	3.75	3.7	4.35	5.0	5.45	4.2	7.85	5.35
27.....	5.55	4.55	4.3	4.1	3.7	3.7	4.3	5.0	5.3	4.2	7.5	5.2
28.....	5.4	4.5	4.25	4.1	3.7	3.7	4.2	5.25	5.15	4.1	7.85	4.9
29.....	5.3	4.5	4.2	4.1	3.7	3.7	4.05	4.9	5.1	4.1	6.95	7.1
30.....	5.35	4.5	4.25	4.1	.....	3.7	4.0	4.9	5.0	4.1	6.65	5.25
31.....	5.1	.....	4.2	4.1	.....	3.7	.....	4.9	.....	4.15	6.35	.....
1912-13.												
1.....	4.65	3.9	3.8	4.0	3.7	4.3	3.7	3.7	3.7	5.1	4.4	3.85
2.....	4.35	3.9	3.85	3.95	3.65	4.2	3.7	3.7	3.7	4.4	4.1	3.8
3.....	4.3	3.9	3.85	3.9	3.6	4.15	3.7	3.6	3.6	4.2	4.0	5.2
4.....	6.55	3.9	3.9	3.9	3.6	4.1	3.6	11.7	3.75	4.4	3.9	5.25
5.....	5.45	3.9	3.9	3.9	3.6	4.05	3.6	10.3	4.4	4.45	3.6	4.65
6.....	5.5	3.9	3.85	3.85	3.6	4.4	3.6	6.5	4.15	4.4	3.8	4.3
7.....	5.55	3.85	3.85	3.8	3.7	5.0	3.6	4.85	4.0	4.25	3.95	4.55
8.....	5.6	3.85	3.8	3.8	3.6	4.9	3.6	4.55	5.85	4.3	3.85	5.05
9.....	5.85	3.8	3.85	3.8	3.7	4.85	3.6	4.1	4.2	4.25	3.8	6.0
10.....	6.0	3.8	3.9	3.8	3.7	4.7	3.6	3.95	4.1	4.1	3.7	6.85

Daily gage height, in feet, of Rio Grande near Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
11.....	5.5	3.8	3.95	3.8	3.7	4.6	3.55	3.9	3.95	4.0	3.65	6.5
12.....	5.5	3.8	4.0	3.8	3.7	4.6	3.55	4.0	4.9	3.95	3.65	6.65
13.....	5.2	3.8	4.0	3.8	3.7	4.6	3.5	3.95	4.35	3.85	3.65	5.55
14.....	5.2	3.8	4.0	3.8	3.7	4.55	3.5	3.8	4.05	3.8	3.65	5.25
15.....	4.7	3.75	4.0	3.8	3.7	4.55	3.5	4.05	3.95	3.8	3.65	5.2
16.....	4.6	3.75	4.0	3.8	3.7	4.55	3.5	4.1	3.95	3.7	4.4	5.05
17.....	4.75	3.75	4.0	3.75	3.7	4.35	3.5	4.0	3.95	3.7	4.2	4.95
18.....	4.5	3.8	4.0	3.75	4.8	4.25	3.5	4.1	4.45	3.6	4.1	4.8
19.....	4.5	3.8	3.9	3.7	5.3	4.2	3.5	3.95	4.85	3.6	4.0	4.65
20.....	4.5	3.95	3.9	3.7	5.05	4.15	3.5	3.9	5.35	3.6	4.0	4.5
21.....	4.45	4.15	3.9	3.7	4.9	4.1	3.5	3.95	4.9	3.55	3.95	4.4
22.....	4.35	4.0	3.95	3.7	4.8	4.1	3.5	4.1	4.2	3.55	4.35	4.4
23.....	4.25	3.9	4.3	3.7	4.8	4.0	3.95	4.1	4.95	3.55	4.7	4.3
24.....	4.1	3.9	4.25	3.7	4.7	4.0	6.8	4.0	4.8	3.5	4.4	4.3
25.....	4.1	3.8	4.2	3.8	4.55	4.0	4.8	4.0	5.15	3.5	4.4	4.2
26.....	4.1	3.85	4.15	3.7	4.5	3.9	4.1	4.0	5.15	3.9	4.4	5.35
27.....	4.0	3.85	4.05	3.7	4.4	3.9	3.95	4.05	5.2	4.8	4.25	4.55
28.....	4.0	3.8	4.0	3.7	4.4	3.8	3.85	4.1	4.85	4.25	4.05	4.4
29.....	4.0	3.8	4.0	3.7	.....	3.75	3.85	4.0	4.8	4.15	4.0	4.2
30.....	4.0	3.8	3.95	3.7	.....	3.75	3.7	3.9	6.7	3.9	4.05	4.05
31.....	4.0	.....	3.9	3.7	.....	3.75	.....	3.8	.....	3.85	3.9	.....

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	2,500	4,100	3,400	11,400	4,960	16.....	3,250	4,750	10,650	7,470	5,870
2.....	2,500	5,300	3,580	11,900	8,590	17.....	2,830	4,520	11,140	7,190	5,760
3.....	2,180	7,050	2,950	11,900	4,820	18.....	2,500	4,870	10,400	6,260	5,560
4.....	2,180	4,850	3,670	11,400	5,870	19.....	2,500	5,100	6,350	5,870	5,090
5.....	1,550	4,650	5,100	18,870	11,540	20.....	2,180	4,180	5,350	9,090	4,810
6.....	1,700	4,450	5,170	13,790	18,010	21.....	3,940	3,650	4,400	9,810	4,600
7.....	2,350	4,900	5,000	9,980	8,180	22.....	9,700	3,420	4,400	8,180	(a)
8.....	2,500	3,970	4,800	22,200	4,260	23.....	9,800	3,650	8,000	8,460	(a)
9.....	3,200	3,420	4,600	26,750	3,870	24.....	5,300	3,420	6,700	6,130	(a)
10.....	3,540	3,060	3,030	23,100	3,800	25.....	5,450	2,500	4,550	5,560	11,800
11.....	3,200	3,060	2,770	14,610	4,330	26.....	4,450	1,850	5,200	5,540	7,040
12.....	3,200	3,540	2,770	12,590	4,330	27.....	3,700	2,500	9,000	7,470	5,360
13.....	2,650	3,640	8,400	11,220	4,960	28.....	3,550	2,180	8,500	6,230	4,750
14.....	3,540	3,420	12,600	10,150	7,890	29.....	3,300	17,500	8,350	4,710	10,800
15.....	4,750	5,170	10,300	9,090	6,120	30.....	3,080	4,850	10,200	5,280	8,480
						31.....	3,080	.....	10,350	4,710	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	6,120	4,880	2,560	2,320	2,150	2,570	1,920	2,070	2,630	1,950	4,300	2,490
2.....	4,470	4,220	2,560	2,320	2,140	2,550	1,900	2,070	2,560	1,950	4,100	3,430
3.....	5,350	3,840	2,560	2,310	2,140	2,430	1,870	1,920	2,600	1,970	4,550	2,960
4.....	7,300	3,720	2,560	2,310	2,130	2,400	1,850	1,790	2,750	1,970	4,550	2,650
5.....	7,030	3,720	2,560	2,310	2,120	2,390	1,820	1,790	2,750	1,990	4,550	3,030
6.....	6,630	3,500	2,560	2,310	2,120	2,380	1,790	1,920	3,160	1,990	4,720	3,430
7.....	6,100	3,500	2,560	2,320	2,120	2,380	1,790	2,290	2,560	2,000	4,550	3,430
8.....	5,720	3,500	2,560	2,320	2,120	2,370	1,780	2,070	3,160	2,020	5,590	3,430
9.....	5,450	3,380	2,560	2,350	2,120	2,370	1,750	2,070	3,030	1,830	6,000	34,280
10.....	5,450	3,290	2,560	2,330	2,130	2,370	1,720	1,920	3,090	1,830	5,850	8,670
11.....	5,450	3,290	2,560	2,320	2,180	2,270	1,690	1,960	3,020	1,830	4,100	5,550
12.....	4,870	3,290	2,560	2,310	2,220	2,250	1,660	1,900	2,980	2,640	4,100	4,720
13.....	4,760	3,290	2,560	2,300	2,230	2,230	1,650	1,790	2,980	2,640	4,300	4,720
14.....	4,360	3,070	2,560	2,300	2,240	2,210	1,620	1,790	2,980	2,490	2,860	4,720
15.....	3,860	2,990	2,560	2,300	2,240	2,210	1,620	1,770	2,750	1,890	2,860	4,720

a Flood occurred on Sept. 22-24, 1900; no estimate of discharge has been made.

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
16	3,720	2,910	2,560	2,290	2,240	2,200	1,620	1,750	2,750	2,020	2,860	6,460
17	3,720	2,910	2,560	2,290	2,230	2,150	1,620	1,900	3,770	2,920	3,150	4,720
18	3,610	2,910	2,560	2,280	2,230	2,110	1,620	1,955	2,980	3,100	2,860	4,580
19	4,100	2,910	2,350	2,280	2,230	2,070	1,620	2,020	2,560	2,860	3,200	4,650
20	6,500	2,910	2,350	2,270	2,230	2,060	1,620	2,060	2,420	2,620	3,230	8,340
21	9,000	2,910	2,350	2,270	2,240	2,050	1,620	2,060	2,350	2,320	3,230	8,810
22	5,350	2,910	2,350	2,260	2,240	2,030	1,630	2,060	2,490	2,040	3,900	7,410
23	4,600	2,910	2,350	2,260	2,240	2,000	1,630	2,060	2,490	1,990	3,550	7,100
24	5,350	2,910	2,350	2,250	2,240	1,950	1,640	2,060	2,400	2,150	4,280	5,550
25	5,350	2,650	2,350	2,240	2,240	1,900	1,640	2,060	2,350	2,260	3,900	5,550
26	4,880	2,560	2,350	2,230	2,870	1,940	1,660	2,300	2,170	2,520	3,900	4,900
27	4,470	2,560	2,350	2,220	2,840	1,930	1,660	3,610	2,100	2,750	3,230	4,100
28	4,010	2,560	2,350	2,220	2,800	1,920	1,720	2,980	1,950	3,950	2,560	4,100
29	4,010	2,560	2,350	2,200	.....	1,920	1,770	3,180	1,950	3,420	2,630	3,660
30	4,010	2,560	2,350	2,180	.....	1,920	2,070	3,180	1,950	2,860	2,650	3,430
31	6,120	.....	2,350	2,160	.....	1,920	.....	3,180	.....	5,250	2,650	.....
1901-2.												
1	3,070	4,820	3,350	2,360	1,880	1,940	1,460	1,240	2,380	8,100	10,000	11,100
2	2,700	4,240	3,350	2,360	1,890	1,890	1,450	1,240	1,810	2,130	8,650	10,740
3	2,850	3,240	3,350	2,360	1,900	1,940	1,440	1,240	1,620	1,500	7,900	10,740
4	3,070	3,240	3,350	2,360	1,920	1,880	1,430	4,620	1,620	1,430	7,080	10,870
5	3,020	3,670	3,350	2,260	1,940	1,700	1,430	2,370	1,430	1,360	6,200	14,460
6	2,990	3,820	3,230	2,150	1,960	1,670	1,420	1,970	1,420	1,360	4,900	12,700
7	2,970	4,340	2,890	2,150	1,950	1,640	1,410	2,070	1,400	1,360	6,970	14,330
8	2,790	3,900	2,890	2,150	2,000	1,610	1,410	1,600	1,400	1,680	5,700	19,600
9	10,800	4,140	2,890	2,940	2,020	1,590	1,400	1,300	1,400	1,500	4,300	29,000
10	5,410	4,630	2,890	2,770	2,030	1,630	1,390	1,380	1,400	2,720	3,900	35,500
11	4,820	4,340	2,890	2,590	2,040	1,670	1,380	1,240	1,550	3,380	3,800	25,700
12	3,600	4,340	2,890	2,590	2,040	1,720	1,370	1,240	1,990	3,010	3,620	23,400
13	3,470	4,630	2,880	2,590	2,050	1,710	1,830	1,240	2,260	5,380	3,460	19,200
14	3,080	4,340	2,880	2,590	2,050	1,700	3,270	1,240	2,080	9,200	12,200	16,150
15	2,690	4,190	2,880	2,480	2,060	1,690	2,650	1,240	1,810	6,080	10,000	12,810
16	3,070	5,180	2,880	2,370	2,060	1,670	2,050	1,380	1,810	4,900	7,300	10,930
17	2,560	5,000	2,600	2,260	2,070	1,670	1,830	1,380	1,810	4,100	7,300	10,060
18	2,630	4,440	2,600	2,150	2,100	1,670	1,830	23,000	1,810	4,210	7,120	8,670
19	3,100	4,190	2,600	2,150	2,130	1,580	1,600	6,700	1,660	3,990	6,040	8,290
20	2,850	3,980	2,600	2,140	2,170	1,580	1,430	2,650	2,560	3,880	6,800	6,170
21	2,630	3,760	2,360	2,130	2,140	1,580	1,270	2,250	2,650	4,440	6,200	8,860
22	2,630	3,540	2,360	2,120	2,110	1,580	1,270	1,700	2,360	4,210	6,200	10,860
23	2,630	3,240	2,360	2,110	2,080	1,580	1,260	1,600	1,790	6,210	6,360	5,450
24	3,100	2,960	2,360	2,060	2,040	1,620	1,260	1,600	1,670	8,870	6,040	4,580
25	3,100	2,960	2,360	2,010	2,020	1,580	1,250	2,050	1,560	15,700	7,120	4,000
26	4,390	2,960	2,360	1,960	2,000	1,500	1,250	1,800	1,540	16,800	9,620	4,270
27	3,100	3,100	2,360	1,940	1,980	1,500	1,250	1,600	1,520	12,800	10,230	4,130
28	11,500	3,240	2,360	1,920	1,960	1,500	1,250	1,600	1,500	13,800	7,900	3,700
29	6,620	3,240	2,360	1,890	.....	1,500	1,260	1,430	1,470	15,800	6,950	3,700
30	6,010	3,240	2,360	1,860	.....	1,500	1,260	3,150	1,440	12,930	8,200	3,700
31	4,820	.....	2,360	1,870	.....	1,500	.....	3,150	.....	11,700	11,150	.....
1902-3.												
1	3,750	2,860	2,050	2,040	1,980	3,200	1,820	2,420	2,480	4,970	3,130	2,850
2	3,750	3,460	2,050	2,040	2,220	2,960	1,710	2,150	2,950	4,770	2,550	3,800
3	4,770	2,900	1,990	2,030	2,220	2,840	1,710	1,940	3,580	4,570	2,260	7,070
4	4,000	2,900	1,930	2,020	2,140	2,730	1,640	1,870	2,750	4,470	2,450	7,220
5	4,500	2,780	2,110	2,010	2,100	2,730	1,580	1,870	2,630	4,920	3,780	5,750
6	4,360	3,850	2,250	2,010	2,100	2,620	1,580	1,800	2,650	4,920	3,250	5,230
7	3,560	3,250	2,250	2,010	2,100	2,520	1,580	2,030	3,920	6,120	2,390	5,650
8	3,020	2,850	2,170	2,010	2,100	2,420	1,580	1,750	2,950	6,900	2,090	5,330
9	2,890	2,550	2,050	2,010	2,100	2,420	1,580	1,610	2,950	7,360	2,150	4,650
10	2,890	2,350	2,170	2,010	2,100	2,320	1,580	2,030	4,260	7,990	2,370	4,100
11	2,780	2,270	2,170	2,000	2,100	2,320	1,580	2,570	4,030	8,160	2,350	3,820
12	3,660	2,190	2,170	2,000	2,020	2,320	1,580	7,000	13,060	7,990	2,170	3,360
13	3,660	2,030	2,070	2,000	3,460	2,260	1,480	3,120	28,180	7,310	1,270	3,690
14	3,390	2,030	2,070	2,070	3,460	2,260	1,480	2,560	13,580	6,630	3,520	3,830
15	3,210	2,030	2,070	2,390	3,460	2,200	1,390	2,800	11,540	6,000	2,860	3,360
16	3,030	2,030	2,070	2,310	3,100	2,200	1,370	2,720	8,500	5,650	2,860	3,400
17	2,940	2,030	2,070	2,170	2,980	2,100	1,350	4,700	5,820	4,810	2,680	3,390
18	2,860	2,030	2,070	2,170	2,760	2,100	1,330	3,300	5,070	4,690	2,480	3,480
19	2,740	2,030	2,110	2,170	2,670	2,320	1,470	2,960	4,920	4,170	2,550	3,270
20	2,740	2,030	2,070	2,170	2,670	2,150	1,850	3,210	4,920	3,780	2,610	3,200

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
21	2,490	2,030	2,060	2,100	2,570	2,200	1,690	3,380	4,620	3,780	2,610	3,270
22	2,490	2,030	2,060	2,100	2,480	2,100	1,690	2,740	5,670	3,780	4,170	3,370
23	2,450	2,120	2,050	2,090	2,480	2,050	1,690	2,920	5,670	3,280	4,170	3,040
24	2,340	2,620	2,050	2,090	2,310	2,000	1,630	2,740	5,520	3,160	3,720	3,850
25	2,340	2,120	2,050	2,080	2,310	2,000	1,570	2,920	5,520	2,920	3,420	4,130
26	2,150	2,090	2,050	2,000	2,570	2,000	1,720	2,650	5,670	2,680	3,100	6,390
27	2,230	2,320	2,050	2,070	3,220	2,000	1,720	2,740	5,820	2,560	2,860	5,960
28	2,320	2,090	2,040	2,000	3,460	1,950	1,720	2,740	5,520	2,440	3,820	5,250
29	2,300	2,070	2,040	1,990	-----	1,950	1,720	2,650	5,670	2,890	7,880	5,100
30	2,280	2,050	2,040	1,980	-----	1,900	2,890	2,560	5,970	2,770	7,400	4,950
31	2,260	-----	2,040	1,980	-----	1,900	-----	2,630	-----	3,260	5,640	-----
1903-4.												
1	6,670	2,410	1,800	1,720	1,540	1,490	1,330	1,220	3,020	5,150	1,990	2,350
2	6,820	2,270	1,790	1,750	1,540	1,480	1,330	1,220	2,300	4,110	1,890	2,250
3	8,120	2,140	1,780	1,700	1,530	1,470	1,330	1,280	1,970	3,500	1,870	1,870
4	9,320	2,140	1,770	1,690	1,520	1,430	1,330	1,250	1,730	3,450	1,850	2,450
5	8,870	2,140	1,770	1,690	1,510	1,430	1,330	1,460	3,540	3,140	2,020	2,450
6	7,390	2,080	1,770	1,680	1,500	1,390	1,280	1,400	3,160	2,940	2,200	6,800
7	6,230	2,020	1,760	1,680	1,490	1,390	1,280	1,280	7,250	2,850	1,850	9,440
8	5,380	2,020	1,760	1,680	1,480	1,380	1,280	1,180	5,180	2,760	2,200	16,240
9	4,800	2,020	1,760	1,670	1,470	1,380	1,220	1,180	2,620	2,670	2,200	19,900
10	4,220	2,010	1,760	1,660	1,460	1,380	1,220	1,170	4,790	2,410	2,040	16,440
11	4,110	2,010	1,760	1,650	1,450	1,420	1,220	1,170	5,700	2,320	1,970	26,460
12	3,880	2,010	1,760	1,640	1,460	1,420	1,220	1,120	5,310	2,150	1,890	54,100
13	3,530	3,010	1,760	1,640	1,470	1,380	1,220	1,190	3,640	2,150	1,890	102,300
14	3,400	2,000	1,760	1,630	1,480	1,380	1,220	1,370	3,640	1,940	1,670	138,800
15	3,270	2,000	1,750	1,630	1,490	1,370	1,220	1,490	3,000	1,940	1,640	109,100
16	3,140	1,990	1,750	1,620	1,490	1,370	1,900	1,310	2,400	1,990	1,610	46,300
17	3,000	1,990	1,750	1,590	1,490	1,360	1,300	1,310	2,850	1,990	1,580	27,600
18	3,000	2,000	1,750	1,590	1,490	1,360	1,240	1,310	1,050	2,100	1,580	30,200
19	2,900	2,010	1,740	1,590	1,500	1,360	1,240	1,310	1,800	2,420	1,570	225,900
20	2,800	2,020	1,740	1,580	1,500	1,350	1,240	1,310	1,800	2,210	1,560	28,740
21	2,800	2,000	1,730	1,580	1,500	1,350	1,240	1,190	1,970	2,260	1,550	36,640
22	2,900	2,020	1,730	1,570	1,500	1,340	1,240	1,190	3,900	2,580	1,840	36,180
23	2,800	1,980	1,730	1,540	1,500	1,340	1,340	1,340	3,390	2,910	1,870	27,000
24	2,540	1,940	1,730	1,540	1,510	1,330	1,290	1,280	3,130	3,130	1,530	21,900
25	2,420	1,900	1,730	1,540	1,510	1,330	1,240	2,490	2,620	2,630	1,700	19,500
26	2,340	1,860	1,730	1,530	1,510	1,330	1,240	3,000	2,060	2,520	2,350	18,630
27	2,340	1,820	1,690	1,530	1,510	1,290	1,240	4,140	15,070	2,210	2,450	16,960
28	2,340	1,820	1,690	1,530	1,520	1,280	1,240	3,640	27,500	2,460	2,640	16,960
29	2,340	1,820	1,690	1,530	1,520	1,280	1,240	10,900	11,000	2,460	2,640	16,960
30	2,270	1,820	1,690	1,530	-----	1,270	1,240	5,280	6,090	2,210	2,540	16,360
31	2,270	-----	1,690	1,530	-----	1,270	-----	3,130	-----	2,100	2,450	-----
1904-5.												
1	17,000	12,680	3,000	2,730	2,220	3,240	10,900	6,230	8,040	29,140	13,470	7,060
2	15,510	11,070	2,970	2,590	2,140	3,340	8,200	5,530	8,970	29,140	12,700	6,460
3	15,060	9,570	2,940	2,550	2,060	3,370	5,400	5,360	8,250	26,140	12,700	6,460
4	13,960	8,880	2,940	2,520	2,030	3,330	4,630	5,270	8,280	11,830	11,920	6,050
5	12,560	7,850	3,120	2,520	2,000	3,360	4,290	5,270	8,310	11,390	10,840	5,650
6	12,810	6,910	3,600	2,520	2,030	3,740	3,950	5,600	8,430	9,390	10,680	4,950
7	13,510	8,280	4,250	2,480	2,090	3,630	3,940	5,800	9,380	7,910	10,530	4,750
8	11,300	7,690	4,130	2,480	2,090	4,700	4,030	6,010	10,570	7,740	10,830	5,150
9	10,640	7,100	4,190	2,440	2,120	5,300	4,220	6,090	12,710	7,390	11,130	5,950
10	10,880	6,160	3,890	2,440	2,120	5,900	4,400	9,010	12,470	6,130	11,730	9,450
11	13,370	5,580	3,750	2,350	2,120	4,000	4,400	5,640	12,550	5,080	12,330	20,600
12	14,060	5,230	3,610	2,350	2,120	3,870	4,400	5,390	13,500	5,500	10,790	13,860
13	14,440	4,520	3,550	2,260	2,120	4,380	4,400	5,390	14,460	4,350	17,150	11,400
14	20,360	4,960	3,550	2,260	2,110	4,500	4,170	6,120	15,060	4,250	15,950	12,450
15	28,880	4,300	3,610	2,260	2,160	6,940	3,920	6,610	15,960	3,940	12,770	10,800
16	24,880	4,100	3,730	2,200	2,210	6,870	3,920	6,600	18,140	3,730	13,330	10,200
17	25,880	3,840	4,140	2,190	2,200	6,310	3,790	6,460	19,720	3,840	15,650	9,280
18	25,480	3,710	4,200	2,190	2,200	6,600	3,540	6,570	20,100	5,330	14,770	9,280
19	29,500	3,610	4,230	2,160	2,200	6,480	3,150	6,600	21,080	5,170	14,910	9,430
20	26,740	3,570	4,030	2,130	2,200	6,480	3,150	6,600	22,100	5,160	16,350	8,960
21	21,980	3,380	3,830	2,100	2,240	6,720	3,150	6,600	22,520	7,460	17,750	7,900
22	21,620	3,460	3,780	2,100	2,690	7,080	3,380	6,600	20,940	8,180	15,330	6,240
23	19,860	3,320	3,690	2,250	3,490	6,520	3,650	6,700	19,760	9,030	12,100	6,240
24	17,900	3,230	3,360	2,350	3,490	5,720	10,000	7,110	18,330	9,240	11,420	5,920
25	16,320	3,230	3,140	2,410	3,490	4,930	5,980	9,860	17,700	12,740	11,850	9,870

^a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
26.	16,020	3,130	2,920	α 2,410	3,490	α 4,410	α 4,800	α 7,460	16,860	α 9,550	α 12,850	16,340
27.	15,870	3,040	2,810	2,410	3,490	4,240	4,310	6,960	15,630	11,220	13,560	α 21,000
28.	14,970	α 3,030	2,810	2,360	α 3,490	4,160	4,240	6,840	25,100	12,460	12,560	23,500
29.	14,370	3,030	2,810	2,310	.....	4,080	4,380	6,960	α 80,350	15,380	11,280	16,020
30.	14,220	3,030	2,810	2,260	.....	3,750	α 7,020	6,960	21,900	16,210	9,720	α 13,140
31.	13,920	.....	α 2,700	α 2,220	.....	α 3,590	.....	α 7,760	.....	α 15,390	α 9,000	.....
1905-6.												
1.	10,900	3,320	4,730	6,170	3,440	6,020	2,510	3,480	6,030	5,650	10,180	31,030
2.	12,700	3,280	4,580	5,670	3,420	5,540	2,470	3,150	6,270	5,160	9,130	29,110
3.	18,450	3,330	4,280	4,830	3,190	4,890	2,520	3,310	8,370	5,050	9,130	24,980
4.	15,920	3,190	4,280	4,500	3,260	4,560	2,560	3,480	9,310	4,600	12,440	23,500
5.	α 12,180	α 2,950	8,670	4,330	3,130	4,400	2,600	α 3,400	8,840	4,330	α 16,210	19,960
6.	10,280	2,990	α 10,030	α 4,170	α 3,110	α 3,920	2,570	3,480	α 7,850	α 4,660	18,450	α 18,630
7.	10,400	2,630	10,230	3,910	3,110	3,920	2,570	3,950	6,730	6,620	27,440	18,270
8.	12,380	α 2,660	9,530	3,710	3,110	4,070	2,620	4,420	6,110	9,660	25,370	17,100
9.	α 11,030	2,720	7,630	3,510	3,200	α 4,220	2,580	4,680	α 5,620	11,420	30,550	14,770
10.	10,440	2,880	7,080	3,410	α 3,300	3,930	α 2,700	4,990	5,380	10,250	α 31,460	α 13,120
11.	10,290	3,040	α 6,220	α 3,410	3,820	3,780	2,860	4,520	5,140	11,890	74,800	12,270
12.	9,700	α 3,010	5,190	3,380	5,410	3,630	2,720	α 4,000	5,140	11,420	121,660	11,070
13.	α 8,590	3,210	5,960	3,350	6,250	3,490	2,640	3,950	4,750	α 11,190	78,010	10,040
14.	7,720	6,960	5,530	3,290	6,780	3,490	α 2,600	3,850	α 4,510	9,540	34,400	9,020
15.	7,510	α 15,210	α 5,690	3,290	7,310	α 3,340	2,520	3,740	4,420	α 10,580	α 28,000	α 8,170
16.	6,200	11,340	6,170	α 3,290	α 6,790	3,220	2,480	3,630	4,830	8,580	22,950	7,430
17.	5,770	9,960	7,400	3,430	6,490	3,110	2,520	α 3,520	4,840	8,580	21,300	6,940
18.	α 5,670	10,180	6,380	3,580	6,390	3,110	α 2,520	3,790	4,750	11,780	22,190	α 6,640
19.	5,230	10,290	7,250	α 3,520	6,490	3,000	2,520	5,050	α 4,760	α 14,700	α 15,720	6,490
20.	4,980	α 10,290	13,060	3,450	7,670	α 3,000	2,520	5,430	5,480	16,230	8,600	7,120
21.	α 4,530	10,070	12,680	3,390	α 8,310	2,820	2,490	4,490	5,000	17,030	10,320	8,170
22.	4,360	9,860	11,750	3,230	8,520	2,820	α 2,460	α 4,640	α 5,120	20,280	13,250	α 9,570
23.	4,290	8,900	10,450	α 3,070	8,290	2,820	2,460	4,820	4,980	α 18,720	α 18,080	9,390
24.	4,150	α 7,800	α 12,130	3,070	8,060	α 2,690	2,460	4,880	5,000	15,520	23,100	6,810
25.	4,010	6,870	12,380	3,060	7,900	2,690	2,550	4,830	5,080	16,490	23,410	6,630
26.	α 3,940	6,560	10,440	α 3,050	7,530	2,600	α 2,550	α 5,120	5,020	17,470	20,640	α 8,690
27.	3,790	6,250	α 8,860	α 3,050	7,250	α 2,600	2,550	5,170	α 5,110	α 18,200	27,400	8,690
28.	3,620	5,790	8,190	3,050	α 6,970	2,570	2,640	5,340	5,110	18,450	29,700	8,930
29.	3,540	α 5,640	7,520	3,060	.....	2,520	2,790	5,390	5,210	28,450	28,610	7,500
30.	3,450	5,290	6,850	3,070	.....	2,500	α 6,640	α 5,560	α 5,710	16,730	31,840	α 6,310
31.	α 3,370	.....	6,350	α 3,070	.....	α 2,500	.....	5,800	.....	α 13,680	α 33,980	.....
1906-7.												
1.	6,200	3,240	3,400	3,560	3,700	2,620	2,050	3,920	4,480	7,720	6,840	6,150
2.	5,320	3,200	3,640	3,520	3,860	2,620	2,020	3,920	5,350	8,080	7,350	7,620
3.	7,250	3,100	3,710	3,490	3,650	2,620	2,060	3,920	5,500	8,440	7,180	12,470
4.	6,020	3,120	α 3,630	3,450	3,610	2,620	2,100	α 3,510	5,640	α 8,800	6,340	10,570
5.	α 5,380	3,070	3,590	α 3,320	3,560	α 2,620	α 2,070	3,570	5,790	9,090	α 6,280	11,830
6.	5,050	α 3,030	3,560	3,080	3,440	2,590	2,070	3,550	5,930	7,560	6,220	13,100
7.	4,940	3,030	3,520	3,150	3,150	2,560	2,500	3,260	6,220	7,460	6,330	13,100
8.	4,720	3,020	3,490	3,110	3,100	2,530	2,500	3,330	6,370	8,130	6,390	12,630
9.	α 4,390	3,020	α 3,610	2,980	α 2,900	2,520	2,500	3,400	α 6,860	8,230	6,120	12,630
10.	4,250	3,030	3,970	α 2,940	2,900	α 2,510	α 2,500	α 3,370	7,690	α 7,840	α 6,120	13,970
11.	4,220	3,040	4,270	2,950	2,900	2,510	2,500	3,370	7,900	7,840	5,480	α 18,680
12.	4,190	3,050	α 4,400	3,050	2,740	2,510	2,500	3,520	8,310	7,940	5,480	15,360
13.	α 4,360	3,100	4,800	3,060	α 2,740	2,510	2,280	3,350	α 8,310	8,320	α 5,860	12,300
14.	4,570	α 3,170	4,900	α 3,070	2,740	α 2,510	α 2,330	3,350	7,670	8,420	α 4,260	11,540
15.	4,280	3,170	4,580	3,090	2,740	α 2,500	2,380	α 3,340	7,280	α 8,510	4,030	7,460
16.	5,390	3,180	α 4,260	3,210	α 2,720	2,470	2,280	3,130	7,530	8,180	4,140	6,700
17.	α 4,400	α 3,190	4,360	3,230	3,040	2,440	2,330	3,140	8,400	8,300	3,910	11,060
18.	4,150	3,070	4,370	α 3,350	2,990	α 2,440	2,390	α 3,140	12,000	7,950	3,690	10,370
19.	4,200	3,060	4,280	3,350	α 2,780	2,460	2,320	3,140	9,620	α 7,710	α 4,030	9,910
20.	3,850	3,050	α 4,280	3,350	2,890	2,460	2,370	3,000	10,220	7,550	3,830	17,030
21.	α 3,710	3,040	4,150	3,350	2,790	α 2,480	α 2,430	3,600	α 8,820	7,400	3,640	α 17,260
22.	3,650	α 3,030	4,020	3,360	2,690	2,430	2,400	3,700	10,520	6,940	α 3,350	15,380
23.	3,800	α 3,040	4,040	α 3,360	α 2,660	2,370	2,360	α 3,310	8,030	6,940	3,340	13,020
24.	α 3,950	3,050	3,910	3,360	2,680	2,320	2,290	3,100	7,730	α 6,180	3,320	10,920
25.	3,950	3,150	3,940	3,360	2,630	2,260	2,140	3,030	α 7,280	6,030	3,310	10,140

α Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	3,840	a 3,160	3,970	a 3,260	2,580	a 2,210	a 2,480	3,200	6,870	6,520	3,310	9,880
27.....	a 3,720	3,100	4,000	3,360	2,600	a 2,150	3,210	a 3,370	7,070	6,030	6,940	9,620
28.....	3,690	3,160	4,020	3,360	a 2,630	2,130	3,460	3,170	7,260	a 8,340	6,940	9,880
29.....	3,450	3,250	3,890	3,360	.....	2,110	3,770	3,130	7,310	6,540	6,180	9,350
31.....	3,420	a 3,250	3,840	3,360	.....	2,100	a 4,020	3,170	a 7,360	6,390	6,030	9,190
31.....	a 3,380	.....	3,790	a 3,570	.....	a 2,080	.....	a 3,910	.....	8,190	5,730	.....
1907-8.												
1.....	8,160	4,480	5,050	4,000	2,960	2,440	1,870	3,190	2,830	2,190	6,940	11,620
2.....	6,310	5,770	5,050	3,750	2,730	2,400	1,890	3,250	3,220	2,090	6,220	13,120
3.....	6,100	6,190	19,740	3,750	a 2,690	2,360	2,030	3,220	3,610	2,230	5,120	18,170
4.....	5,480	4,480	a 15,760	a 3,750	2,690	a 2,320	2,170	2,990	3,900	2,140	5,440	20,040
5.....	a 6,920	a 7,280	11,870	3,700	2,680	2,320	2,190	3,060	a 3,980	2,090	6,240	a 20,420
6.....	6,180	7,280	10,570	3,650	2,680	2,210	2,150	a 3,130	3,980	a 2,040	a 11,340	18,190
7.....	5,640	7,050	9,680	3,590	a 2,680	2,210	a 2,170	2,850	3,680	17,200	12,700	19,040
8.....	5,640	12,200	9,590	a 3,540	2,520	a 2,210	2,140	2,760	3,470	9,240	10,550	17,560
9.....	5,100	a 21,150	8,890	3,360	2,750	2,220	2,040	a 2,680	3,320	5,160	8,590	14,620
10.....	a 4,200	16,450	8,400	3,380	2,790	2,220	a 2,370	2,480	3,200	a 5,160	a 9,550	a 12,630
11.....	4,200	13,160	a 8,160	3,400	2,830	2,170	2,140	2,480	2,970	4,300	9,160	11,280
12.....	3,550	11,040	8,010	3,420	a 2,860	a 2,230	2,190	2,380	2,550	3,440	11,470	12,660
13.....	3,330	a 8,890	7,420	a 3,430	2,660	2,200	2,240	2,280	2,630	2,950	18,830	13,410
14.....	a 3,330	8,280	6,820	3,470	2,660	2,180	2,430	a 2,270	a 2,310	2,700	a 22,750	a 12,470
15.....	3,200	8,100	a 6,820	3,520	2,550	2,150	a 2,260	2,130	2,310	a 2,460	24,500	11,370
16.....	3,330	5,270	6,360	a 3,370	a 2,550	2,070	2,470	1,990	2,090	2,230	15,900	9,710
17.....	3,200	a 6,440	5,910	3,340	2,570	a 2,040	2,540	1,990	2,090	2,230	12,000	8,980
18.....	a 3,200	6,200	5,460	3,300	2,580	2,010	a 6,520	a 3,140	a 1,870	2,010	10,250	a 7,680
19.....	3,200	6,200	a 5,330	3,270	2,600	2,020	6,520	3,290	1,870	a 2,010	a 9,270	6,900
20.....	3,200	5,720	5,200	a 3,240	2,710	2,040	4,440	2,950	1,870	2,060	8,540	6,310
21.....	3,200	a 5,240	5,200	3,230	2,730	a 2,050	3,640	2,910	1,870	2,230	8,180	5,920
22.....	3,200	5,100	4,940	3,220	2,740	2,050	2,570	a 2,970	a 1,710	2,520	8,020	a 5,140
23.....	a 3,270	4,950	a 4,680	3,210	a 2,760	2,050	a 2,360	3,090	1,710	3,210	8,400	4,990
24.....	3,200	4,950	4,680	a 3,200	2,640	2,050	2,300	6,310	3,010	a 2,840	8,350	4,400
25.....	5,130	4,950	4,370	3,100	2,830	a 2,000	2,300	4,420	3,440	5,360	10,170	3,800
26.....	4,970	a 4,660	a 4,370	3,000	2,720	2,040	a 2,130	3,350	a 3,030	8,960	11,420	a 3,660
27.....	a 4,970	4,850	4,370	3,000	2,710	2,020	2,230	a 3,210	2,840	a 5,360	a 10,020	3,740
28.....	4,970	4,850	4,000	3,000	2,600	2,010	2,230	3,090	2,640	3,540	9,450	3,720
29.....	14,350	4,660	4,000	3,000	2,480	1,990	2,370	2,850	2,380	5,550	9,260	3,410
30.....	4,720	a 5,050	4,000	a 3,000	.....	1,920	2,570	2,740	2,190	8,740	10,380	3,390
31.....	a 4,480	.....	a 4,000	.....	.....	a 1,910	.....	a 2,740	.....	a 8,900	a 11,470	.....
1908-9.												
1.....	3,090	1,900	1,920	1,810	1,730	1,690	1,320	1,300	4,850	4,270	9,880	3,910
2.....	2,990	1,900	1,860	1,720	1,730	1,650	1,320	1,300	4,950	4,450	9,680	4,040
3.....	2,990	1,900	1,840	1,680	1,730	1,620	1,320	1,300	4,850	4,780	9,480	4,040
4.....	2,890	1,900	1,830	1,640	1,730	1,530	1,320	1,300	4,650	5,560	10,880	4,180
5.....	2,790	a 1,900	a 1,810	a 1,590	a 1,700	a 1,490	1,320	a 1,980	a 4,550	5,590	10,280	a 8,510
6.....	a 2,790	1,890	1,820	1,600	1,700	1,490	a 1,320	2,860	3,960	4,580	a 9,330	16,200
7.....	3,590	1,880	1,830	1,600	1,690	1,440	1,320	2,670	3,960	a 4,810	9,330	10,350
8.....	3,310	1,870	1,830	1,610	1,690	1,430	1,310	2,470	3,570	7,030	9,330	9,880
9.....	3,170	a 1,870	1,840	1,610	1,690	1,430	1,310	a 2,270	a 3,590	10,860	9,110	a 7,600
10.....	2,610	1,890	a 1,850	a 1,620	a 1,690	a 1,420	1,300	2,260	3,590	12,470	7,560	6,550
11.....	a 2,460	1,860	1,850	1,640	1,690	1,420	a 1,240	2,050	3,590	a 16,690	a 7,120	5,500
12.....	2,340	1,880	1,850	1,660	1,680	1,460	1,230	2,240	3,590	17,070	6,930	4,800
13.....	2,340	a 1,900	1,850	1,680	1,670	1,410	1,220	a 2,450	a 4,290	15,450	7,670	4,270
14.....	2,340	1,890	1,850	1,700	1,660	1,440	1,210	2,670	3,840	15,820	8,600	7,420
15.....	a 2,280	1,880	1,850	a 1,730	a 1,660	a 1,430	1,200	2,560	3,840	a 15,730	a 7,490	7,420
16.....	2,250	1,870	a 1,850	1,740	1,660	1,380	a 1,190	2,230	3,950	12,000	7,910	a 9,590
17.....	2,210	1,860	1,840	1,750	1,650	1,380	1,190	a 2,010	3,350	10,370	10,700	11,530
18.....	2,210	a 1,850	1,830	1,760	1,700	1,370	1,180	2,380	a 5,040	9,910	8,130	13,220
19.....	a 2,180	1,840	1,820	1,770	1,650	1,370	1,170	3,150	4,780	a 9,210	10,700	15,400
20.....	2,140	1,830	1,810	1,780	a 1,640	a 1,360	a 1,160	3,870	3,770	8,240	a 13,050	a 11,790
21.....	2,110	1,820	a 1,790	a 1,790	1,630	1,360	1,160	a 4,250	5,310	7,080	11,380	13,590
22.....	2,070	a 1,810	1,800	1,780	1,620	1,350	1,160	a 4,250	a 5,050	6,500	8,670	11,540
23.....	a 2,030	1,810	1,800	1,780	1,610	1,350	1,170	4,390	a 5,740	a 24,260	a 8,870	11,540
24.....	2,020	1,810	1,800	1,770	a 1,600	1,340	1,170	4,800	6,170	9,980	7,930	a 8,450
25.....	2,010	1,810	1,860	1,770	1,600	1,340	a 1,180	4,800	6,800	8,400	7,170	8,450

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
26	2,000	a 1,810	a 1,810	a 1,770	1,600	a 1,330	1,360	a 4,800	a 6,170	6,230	6,420	a 7,240
27	a 1,990	1,820	a 1,820	1,770	1,500	1,330	1,430	5,070	5,800	a 6,620	a 6,560	7,070
28	1,980	a 1,840	a 1,810	1,760	a 1,880	1,330	1,300	4,820	5,980	6,220	6,560	6,390
29	1,980	1,940	1,810	1,750	.....	1,320	1,300	5,220	5,250	7,230	5,730	5,710
30	1,970	a 1,940	1,800	1,740	.....	1,320	a 1,300	4,840	a 4,880	9,270	4,900	5,370
31	a 1,960	.....	a 1,800	a 1,730	.....	a 1,280	.....	a 4,850	.....	a 9,880	a 4,570	.....
1909-10.												
1	4,930	2,300	1,800	5,900	2,330	1,600	2,200	2,380	3,630	4,390	1,360	2,750
2	4,630	2,300	1,760	4,010	2,310	1,530	2,200	2,180	3,240	4,200	1,280	2,370
3	4,190	2,150	1,730	3,220	2,150	1,520	2,200	2,150	a 3,040	5,500	1,270	2,170
4	3,900	2,150	a 1,690	3,060	2,120	1,440	2,200	2,320	2,910	6,470	1,270	2,170
5	3,750	2,070	1,690	a 2,910	a 1,960	a 1,430	2,310	2,730	2,790	4,740	a 1,260	a 2,070
6	a 3,600	a 1,990	1,690	3,020	1,950	1,430	a 2,310	3,150	2,530	a 4,120	1,280	27,440
7	3,270	1,990	1,690	3,010	1,950	1,430	2,510	3,530	3,800	5,450	1,290	15,180
8	3,110	1,990	1,690	2,890	1,940	1,430	2,510	4,170	2,410	4,520	1,240	7,880
9	2,940	1,990	a 1,690	a 2,880	1,930	1,430	5,510	4,040	a 2,030	3,990	1,260	5,000
10	a 2,940	a 1,990	1,690	2,640	a 1,920	a 1,430	a 2,920	4,300	1,950	a 3,990	a 1,270	a 3,440
11	2,940	1,970	1,690	2,400	1,780	1,430	2,820	a 4,150	1,870	4,120	1,260	3,020
12	2,940	1,960	1,680	2,640	1,780	1,430	2,730	4,150	1,790	2,930	1,250	4,320
13	2,940	1,940	1,680	a 2,640	1,780	1,430	2,350	4,200	1,790	2,660	1,240	4,320
14	a 2,840	a 1,920	a 1,680	2,520	a 1,780	a 1,390	a 2,350	4,250	a 1,630	2,530	1,230	a 3,760
15	2,740	1,920	1,680	2,520	1,910	1,390	2,220	a 4,610	1,550	a 2,700	a 1,220	4,470
16	2,740	1,920	1,680	2,580	1,760	1,390	2,220	6,280	1,550	2,870	1,270	3,900
17	2,440	1,900	1,690	2,700	a 1,750	1,390	2,220	5,060	1,550	2,700	1,210	3,610
18	2,340	1,900	a 1,690	a 2,520	1,740	a 1,450	2,150	5,370	a 1,730	2,530	1,210	a 3,330
19	a 2,340	a 1,880	1,690	2,570	1,730	1,390	a 2,150	a 4,910	1,730	2,190	a 1,210	3,000
20	2,340	1,870	1,690	2,520	1,720	1,560	2,070	11,760	1,730	a 2,020	1,210	2,670
21	2,540	1,850	1,690	2,460	1,720	1,980	2,070	6,690	2,440	1,940	1,210	2,650
22	2,350	1,840	1,700	a 2,410	1,650	2,240	a 2,070	5,080	2,440	1,850	1,380	a 2,520
23	a 2,350	a 1,830	1,710	2,410	1,640	a 2,490	2,060	a 4,700	a 1,940	1,850	1,740	2,420
24	2,350	1,820	a 1,710	2,260	a 1,640	2,430	2,060	4,730	1,840	1,770	1,640	5,220
25	2,350	1,800	1,720	2,260	1,620	2,310	2,050	4,760	1,540	1,610	1,930	4,640
26	2,350	1,780	1,730	2,260	1,620	2,250	a 2,040	4,790	2,680	a 1,610	2,220	a 4,520
27	a 2,350	a 1,770	1,710	a 2,260	1,620	a 2,250	2,040	a 4,820	5,480	1,610	3,490	3,840
28	2,340	1,700	1,700	2,250	a 1,620	2,250	2,100	4,920	8,200	1,420	4,110	3,410
29	2,330	1,810	1,710	2,240	.....	2,250	2,350	4,820	6,120	1,400	3,970	3,360
30	2,320	a 1,830	a 1,720	2,230	.....	2,250	a 2,380	4,820	a 4,590	1,380	3,670	a 3,060
31	a 2,300	.....	1,720	2,220	.....	a 2,330	.....	4,220	.....	1,360	a 3,080	.....
1910-11.												
1	3,290	1,470	1,350	1,270	1,200	1,640	1,540	3,800	6,360	4,580	11,320	4,760
2	2,950	1,460	1,360	1,260	1,190	1,620	1,540	3,680	5,280	4,620	10,200	4,220
3	3,060	1,450	1,360	1,250	1,170	1,510	6,110	2,720	6,540	a 4,660	12,240	3,680
4	3,370	1,430	1,360	1,240	a 1,160	1,490	11,690	2,360	5,100	4,140	12,350	5,350
5	a 3,290	a 1,420	a 1,370	1,230	1,160	a 1,570	a 9,530	2,360	4,560	4,320	11,760	a 6,700
6	2,780	1,430	1,360	a 1,220	1,140	1,560	4,720	a 2,120	a 3,660	4,400	11,920	6,330
7	2,380	1,430	1,360	1,220	1,140	1,560	2,540	2,010	3,390	4,590	10,440	5,580
8	2,280	1,440	1,360	1,230	1,140	1,370	a 2,080	1,780	3,260	4,770	8,790	a 6,550
9	a 2,180	a 1,440	1,330	1,230	a 1,110	a 1,370	2,080	1,550	3,130	4,950	8,130	8,750
10	2,080	1,430	a 1,330	1,230	1,160	1,360	1,810	1,530	a 3,130	a 5,220	a 6,980	8,330
11	2,080	1,430	1,330	a 1,240	1,160	1,280	1,680	a 1,440	3,130	9,490	6,020	6,090
12	1,990	1,420	1,330	1,250	1,110	1,280	1,540	1,560	3,130	6,150	5,510	5,250
13	a 1,890	a 1,410	1,330	1,260	1,140	1,270	a 1,540	2,150	3,130	7,270	5,000	a 5,950
14	1,880	1,410	a 1,330	1,280	a 1,140	a 1,270	1,560	4,180	3,130	a 10,450	a 4,790	6,360
15	1,860	1,420	1,330	a 1,290	1,160	1,200	1,580	9,250	a 5,110	11,850	4,630	6,510
16	1,770	1,420	1,330	1,280	1,160	a 1,270	2,410	20,650	11,600	10,540	4,630	6,660
17	1,760	a 1,420	1,330	1,270	1,190	1,200	a 1,790	a 21,380	a 13,150	9,060	4,460	5,450
18	a 1,670	1,410	a 1,330	1,270	a 2,686	a 1,200	1,660	7,420	9,250	9,060	a 4,120	4,840
19	1,650	1,400	a 1,330	a 1,260	4,090	1,650	1,530	11,180	7,400	a 9,030	3,780	a 4,540
20	1,620	1,390	1,340	1,250	a 6,630	1,350	1,510	9,030	6,990	8,850	3,430	4,130
21	1,600	1,380	1,350	1,250	3,820	1,150	1,480	a 6,400	6,580	10,300	3,090	3,970
22	a 1,580	a 1,370	a 1,350	1,240	2,690	1,450	a 1,450	4,770	6,170	12,460	2,740	3,570
23	1,580	1,360	1,340	a 1,230	2,690	a 1,350	1,350	6,170	6,990	a 11,920	a 2,570	a 3,960
24	1,590	1,360	1,330	1,230	a 2,410	1,360	1,350	5,700	6,780	12,740	2,480	4,850
25	1,590	1,360	1,320	1,230	2,380	1,360	1,450	a 5,000	6,170	14,600	2,320	4,540
26	a 1,590	a 1,360	1,300	1,230	2,240	1,530	1,450	4,700	a 5,500	9,860	a 2,160	a 3,630
27	1,540	1,350	a 1,290	a 1,220	2,100	a 1,370	a 2,920	4,700	5,200	a 10,850	2,860	3,150
28	1,540	1,350	1,290	1,220	a 1,960	1,370	3,090	7,050	4,970	13,250	2,160	5,050
29	1,480	1,350	1,290	1,220	.....	1,370	3,860	6,050	4,860	9,000	10,260	4,260
30	1,480	a 1,350	1,290	1,220	.....	1,370	a 2,980	6,300	a 4,740	9,000	7,860	a 4,200
31	a 1,480	.....	a 1,290	1,220	.....	a 1,630	.....	7,800	.....	a 12,000	a 5,120	.....

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande near Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1	3,850	4,980	3,180	2,430	2,350	1,710	1,530	2,050	5,630	4,760	2,240	12,030
2	3,440	4,980	3,170	2,390	2,350	1,700	1,490	2,050	5,100	4,600	2,470	15,610
3	3,410	4,980	3,160	2,390	2,340	1,690	1,820	1,990	5,180	4,540	2,550	16,500
4	3,370	4,700	3,050	2,390	2,330	1,620	2,080	1,990	5,260	4,480	2,630	18,290
5	α 2,990	4,980	3,030	α 2,290	2,180	1,610	α 2,180	α 1,990	α 5,540	4,230	3,460	15,310
6	2,890	α 4,980	α 3,020	2,440	α 2,170	α 1,600	2,180	1,880	5,770	α 4,070	3,160	14,720
7	2,690	5,300	3,020	2,440	2,170	1,490	9,720	1,700	6,010	4,220	α 3,090	17,100
8	2,690	5,210	3,000	2,980	2,160	1,990	α 3,680	1,590	5,740	4,070	2,880	α 15,510
9	α 6,880	5,210	3,000	3,050	2,160	1,490	2,910	1,480	6,480	4,020	3,200	15,410
10	6,560	5,300	2,990	α 2,980	α 2,080	1,490	2,570	α 1,450	7,010	α 3,870	3,000	12,030
11	5,360	α 5,030	α 2,990	2,870	2,070	α 1,490	2,480	1,350	α 7,540	α 3,520	α 2,710	9,990
12	4,510	4,740	3,080	2,690	1,990	1,490	α 2,480	1,350	8,870	3,450	2,200	α 9,350
13	α 3,670	4,740	3,260	α 2,650	1,990	1,490	α 2,230	1,350	9,900	3,380	2,140	14,870
14	4,370	4,460	α 2,950	2,490	1,980	1,480	2,130	1,350	10,320	3,520	2,000	α 20,870
15	5,430	α 4,310	α 2,830	2,410	α 1,970	α 1,480	2,100	α 3,230	α 11,990	3,100	α 1,840	16,780
16	5,790	4,310	2,710	2,320	1,890	1,480	2,080	3,680	12,150	α 3,160	2,370	19,700
17	7,900	4,310	2,590	2,310	1,890	1,470	α 2,200	3,740	11,890	2,780	2,600	20,290
18	7,900	4,940	α 2,710	α 2,300	1,890	1,470	2,380	3,590	12,280	2,620	3,130	α 20,320
19	8,260	4,630	α 2,710	2,310	1,880	1,460	α 2,550	3,650	α 11,500	2,540	α 2,770	21,940
20	7,990	α 4,320	2,700	2,330	α 1,880	α 1,460	α 2,630	α 3,710	11,130	α 2,010	2,770	23,330
21	α 8,260	4,260	2,690	2,420	1,800	1,460	2,920	4,080	10,760	2,190	7,960	α 14,800
22	7,990	4,070	2,680	2,510	1,720	1,460	2,950	α 4,240	α 10,090	2,100	α 9,490	11,250
23	7,710	3,890	α 2,670	2,450	1,710	α 1,450	2,980	α 4,310	9,510	2,190	13,560	9,290
24	7,710	α 3,700	2,680	α 2,460	α 1,780	1,450	3,180	4,530	8,930	α 2,490	14,460	7,740
25	7,850	3,600	2,580	2,430	1,720	1,580	α 3,210	4,750	8,200	2,340	14,010	7,390
26	α 7,580	3,600	2,580	2,430	1,720	α 1,580	3,000	5,070	α 6,470	2,340	α 16,500	α 6,270
27	6,940	3,500	α 2,680	α 2,430	1,660	1,580	2,910	α 5,190	5,960	2,340	α 15,150	5,760
28	6,420	α 3,400	α 2,570	2,410	1,660	1,580	2,670	5,630	5,440	α 2,230	α 16,990	4,640
29	6,030	3,300	2,460	2,390	α 1,660	1,570	2,340	4,870	5,130	α 2,220	13,360	13,240
30	6,020	α 3,190	2,550	2,370	.....	1,570	α 2,190	4,810	α 4,710	2,200	12,150	α 5,840
31	α 5,260	.....	α 2,440	2,360	.....	α 1,570	.....	α 4,750	.....	α 2,240	α 10,940	.....
1912-13.												
1	4,140	2,130	1,860	2,170	1,620	2,760	1,690	1,790	1,750	5,700	3,000	1,790
2	3,240	2,100	1,940	2,090	1,580	2,550	1,690	1,720	1,750	2,980	2,480	1,650
3	3,090	2,070	1,940	2,010	1,530	2,450	1,690	α 1,510	1,620	2,580	2,300	5,750
4	10,860	2,040	2,010	2,000	1,530	2,350	1,560	31,600	1,910	2,980	2,120	5,890
5	α 6,450	2,010	α 2,010	α 1,980	α 1,530	α 2,240	α 1,560	α 26,070	α 3,170	α 3,370	1,600	α 3,960
6	6,660	α 1,980	1,950	1,930	1,530	3,080	1,550	11,420	2,590	3,070	α 1,970	2,760
7	6,870	1,930	1,950	1,880	1,590	4,430	1,540	5,060	2,240	2,770	2,250	3,620
8	7,080	1,930	1,880	1,880	1,530	4,280	1,530	3,910	7,520	2,870	2,030	5,340
9	8,130	1,880	1,950	α 1,880	α 1,590	α 4,170	α 1,520	α 2,320	2,700	α 2,770	1,910	8,620
10	α 8,510	α 1,880	α 2,020	1,870	1,610	3,840	1,520	2,160	α 2,470	2,490	1,690	α 11,540
11	6,900	1,880	2,100	1,860	1,630	3,620	1,480	2,110	2,210	2,310	1,570	10,410
12	6,900	1,870	2,180	1,850	1,660	3,620	α 1,470	2,220	4,940	2,220	α 1,550	10,770
13	5,760	1,870	2,200	1,810	α 1,680	α 3,620	1,420	2,160	3,320	2,030	1,560	α 6,780
14	α 5,820	α 1,860	α 2,210	α 1,830	1,680	3,490	1,410	α 2,010	α 2,480	1,940	1,570	5,810
15	4,270	1,810	2,190	1,820	1,670	3,490	1,400	2,410	2,210	α 1,940	α 1,580	5,640
16	3,960	1,810	2,180	1,820	1,670	3,490	1,400	2,490	2,210	1,790	3,580	5,160
17	4,420	1,810	2,160	1,770	1,670	2,940	α 1,390	2,330	2,210	1,790	2,590	4,830
18	3,650	1,860	2,150	α 1,760	α 4,270	α 2,670	1,390	α 2,490	α 3,570	α 1,640	2,350	α 4,350
19	3,540	α 1,860	α 2,000	1,700	5,870	2,570	1,390	2,240	4,600	1,620	2,120	3,900
20	3,440	2,050	2,060	1,680	5,070	2,460	1,390	2,140	5,880	1,610	α 2,120	3,460
21	3,260	2,310	2,140	1,670	4,590	2,350	1,390	2,170	4,720	1,520	2,010	3,160
22	3,010	2,140	2,280	1,650	α 4,270	α 2,350	α 1,390	α 2,530	2,930	1,500	2,890	3,160
23	α 2,780	α 2,040	2,840	1,640	4,270	2,120	2,280	2,340	α 4,820	α 1,490	3,670	α 2,870
24	2,580	2,010	α 2,840	1,630	3,940	2,120	11,880	2,190	4,350	1,370	3,000	2,870
25	2,540	1,860	2,670	1,720	3,460	2,120	α 4,070	2,180	5,460	1,370	3,000	2,540
26	2,500	α 1,900	2,510	1,620	3,290	1,880	2,650	2,170	α 5,460	2,310	α 3,000	α 6,220
27	α 2,360	1,900	α 2,270	α 1,620	2,970	α 1,850	2,340	α 2,230	5,620	α 4,360	2,670	3,660
28	2,340	1,860	2,200	1,620	α 2,970	1,800	2,140	2,300	4,570	2,870	2,220	3,180
29	2,330	1,860	2,200	1,620	.....	1,760	2,140	2,160	4,420	2,600	2,110	2,580
30	2,320	α 1,860	2,130	1,620	.....	1,760	α 1,840	2,020	α 11,950	α 1,960	α 2,230	α 2,200
31	α 2,300	.....	α 2,060	α 1,620	.....	α 1,760	.....	α 1,880	.....	1,860	1,930	.....

α Date of measurement.

Monthly discharge of Rio Grande near Devils River, Tex., for 1900-1913.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).			
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.				
1900.					1904-5.							
May.....	9,800	1,550	3,553	218,430	January.....	2,730	2,100	2,349	144,436			
June.....	17,500	1,850	4,451	264,770	February.....	3,490	2,060	2,443	135,689			
July.....	12,600	2,770	6,506	399,930	March.....	7,080	3,240	4,888	300,575			
August.....	26,750	4,710	10,545	648,420	April.....	10,900	3,150	4,790	285,045			
September.....	(a)	3,800	(a)	(a)	May.....	9,860	5,270	6,515	400,582			
1900-1901.					June.....	80,350	8,040	17,572	1,045,626			
October.....	9,060	3,610	5,217	320,781	July.....	29,140	3,730	10,409	640,046			
November.....	4,880	2,560	3,171	188,688	August.....	17,750	9,000	12,835	789,223			
December.....	2,560	2,350	2,472	151,990	September.....	23,500	4,750	10,115	601,904			
January.....	2,330	2,160	2,277	140,033	The year.				80,350	2,000	8,200	6,000,000
February.....	2,870	2,120	2,260	125,497	1905-6.							
March.....	2,570	1,920	2,180	133,964	October.....	18,450	3,370	7,722	474,823			
April.....	2,070	1,620	1,719	102,288	November.....	15,210	2,630	6,216	369,858			
May.....	3,610	1,750	2,189	134,588	December.....	13,060	4,280	7,984	490,889			
June.....	3,770	1,950	2,669	158,816	January.....	6,170	3,050	3,625	222,883			
July.....	5,250	1,830	2,452	150,783	February.....	8,520	3,110	5,661	314,380			
August.....	6,000	2,650	3,907	240,218	March.....	6,020	2,500	3,476	213,759			
September.....	34,280	2,490	5,863	348,873	April.....	6,640	2,460	2,706	161,038			
The year.					May.....	5,800	3,150	4,385	269,593			
34,280	1,620	3,030	2,200,000	June.....	9,310	4,420	5,675	377,726				
1901-2.					July.....	28,450	4,330	12,352	759,491			
October.....	11,500	2,630	3,938	242,122	August.....	121,660	8,600	28,432	1,748,192			
November.....	5,180	2,960	3,897	231,888	September.....	31,030	6,310	12,547	746,598			
December.....	3,350	2,360	2,748	168,992	The year.				121,660	2,460	8,400	6,110,000
January.....	2,940	1,860	2,246	138,129	1906-7.							
February.....	2,170	1,880	2,022	112,304	October.....	7,250	3,380	4,442	273,104			
March.....	1,940	1,500	1,646	101,217	November.....	3,250	3,020	3,112	185,157			
April.....	3,270	1,250	1,535	91,359	December.....	4,900	3,400	4,006	246,327			
May.....	23,000	1,240	2,656	163,339	January.....	3,570	2,940	3,270	201,064			
June.....	2,650	1,400	1,755	104,450	February.....	3,860	2,580	2,979	165,441			
July.....	18,700	1,360	6,372	391,795	March.....	2,620	2,080	2,428	149,276			
August.....	12,200	3,460	7,071	434,797	April.....	4,020	2,020	2,487	147,987			
September.....	35,500	3,700	12,122	721,329	May.....	3,920	3,000	3,385	208,106			
The year.					June.....	12,000	4,480	7,511	446,916			
35,500	1,240	4,000	2,900,000	July.....	9,090	6,030	7,664	471,212				
1902-3.					August.....	7,350	3,310	5,225	321,263			
October.....	4,770	2,150	3,037	186,744	September.....	18,680	6,150	11,037	692,469			
November.....	3,850	2,030	2,400	142,790	The year.				18,680	2,020	4,850	3,510,000
December.....	2,250	1,930	2,080	127,914	1907-8.							
January.....	2,390	1,980	2,068	127,180	October.....	14,350	3,200	4,836	297,382			
February.....	3,460	1,980	2,544	141,283	November.....	21,150	4,480	7,363	438,129			
March.....	3,200	1,900	2,292	140,906	December.....	19,740	4,000	7,055	433,785			
April.....	2,800	1,330	1,640	97,567	January.....	4,000	3,000	3,361	206,658			
May.....	7,000	1,610	2,745	168,793	February.....	2,960	2,480	2,688	154,611			
June.....	28,180	2,480	6,214	369,739	March.....	2,440	1,910	2,133	131,127			
July.....	8,160	2,440	4,829	296,926	April.....	6,520	1,870	2,649	157,626			
August.....	7,880	2,090	3,241	199,260	May.....	6,310	1,990	2,974	182,856			
September.....	7,220	2,850	4,392	261,342	June.....	3,980	1,710	2,752	163,775			
The year.					July.....	17,200	2,010	4,295	264,079			
28,180	1,330	3,120	2,260,000	August.....	24,500	5,120	10,649	654,783				
1903-4.					September.....	20,420	3,390	10,278	611,603			
October.....	9,320	2,270	4,136	254,301	The year.				24,500	1,710	5,090	3,700,000
November.....	2,410	1,820	2,009	119,544	1908-9.							
December.....	1,800	1,690	1,744	107,246	October.....	3,590	1,960	2,422	148,939			
January.....	1,750	1,530	1,614	99,233	November.....	1,940	1,810	1,866	111,015			
February.....	1,540	1,450	1,498	86,162	December.....	1,920	1,790	1,830	112,522			
March.....	1,490	1,270	1,368	84,099	January.....	1,810	1,590	1,713	105,322			
April.....	2,420	1,220	1,323	78,704	February.....	1,880	1,500	1,671	92,787			
May.....	10,900	1,120	2,107	129,560	March.....	1,690	1,280	1,415	86,995			
June.....	27,500	1,730	4,784	284,648	April.....	1,430	1,160	1,256	74,737			
July.....	5,150	1,940	2,636	162,089	May.....	5,220	1,300	3,142	193,210			
August.....	2,640	1,530	1,956	120,258	June.....	6,800	3,570	4,677	278,301			
September.....	138,800	1,870	29,893	1,778,777	July.....	34,260	4,270	9,889	608,053			
The year.					August.....	13,050	4,570	8,449	519,511			
138,800	1,120	4,590	3,300,000	September.....	16,200	3,910	8,385	498,942				
1904-5.					The year.				34,260	1,160	3,890	2,830,000
October.....	29,500	10,640	17,544	1,078,750	1909-10.							
November.....	12,680	3,030	5,412	322,016	October.....	3,590	1,960	2,422	148,939			
December.....	4,250	2,700	3,487	214,393	November.....	1,940	1,810	1,866	111,015			

a Flood occurred Sept. 22-24, 1900; no estimate of discharge has been made.

Monthly discharge of Rio Grande near Devils River, Tex., for 1900-1913—Continued.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1909-10.					1911-12.				
October.....	4,930	2,300	2,896	178,096	October.....	8,260	2,690	5,733	352,502
November.....	2,300	1,770	1,941	115,478	November.....	5,300	3,190	4,431	263,643
December.....	1,800	1,680	1,703	104,707	December.....	3,260	2,440	2,830	174,010
January.....	5,900	2,220	2,723	167,425	January.....	3,050	2,290	2,488	152,965
February.....	2,330	1,620	1,836	101,990	February.....	2,350	1,660	1,971	113,355
March.....	2,490	1,390	1,740	107,008	March.....	1,710	1,450	1,533	94,235
April.....	5,510	2,040	2,380	141,620	April.....	9,720	1,490	2,728	162,307
May.....	11,760	2,180	4,518	277,825	May.....	5,630	1,350	3,142	193,190
June.....	8,200	1,540	2,751	163,676	June.....	12,280	4,710	8,013	476,826
July.....	6,470	1,360	2,983	183,392	July.....	4,760	2,010	3,155	194,023
August.....	4,110	1,210	1,727	106,175	August.....	16,990	1,840	6,380	392,291
September.....	27,440	2,070	4,744	282,307	September.....	23,330	4,640	13,874	825,580
The year.	27,440	1,210	2,660	1,930,000	The year.	23,330	1,350	4,690	3,390,000
1910-11.					1912-13.				
October.....	3,870	1,480	2,045	125,712	October.....	10,860	2,300	4,591	282,268
November.....	1,470	1,350	1,404	83,544	November.....	2,310	1,810	1,946	115,775
December.....	1,370	1,290	1,332	81,898	December.....	2,840	1,860	2,164	133,051
January.....	1,290	1,220	1,243	76,443	January.....	2,170	1,620	1,795	110,390
February.....	6,630	1,140	1,906	105,878	February.....	5,870	1,530	2,581	143,345
March.....	1,650	1,150	1,398	85,944	March.....	4,530	1,760	2,778	170,816
April.....	11,690	1,350	2,727	162,288	April.....	11,880	1,390	2,070	123,193
May.....	21,380	1,440	5,704	350,697	May.....	31,600	1,510	4,327	266,083
June.....	13,150	3,130	5,615	334,096	June.....	11,950	1,620	3,855	229,388
July.....	14,600	4,140	8,515	523,597	July.....	5,700	1,370	2,370	145,745
August.....	12,350	2,160	6,262	385,031	August.....	3,670	1,550	2,264	139,180
September.....	8,750	3,150	5,242	311,940	September.....	11,540	1,650	4,816	286,552
The year.	21,380	1,140	3,620	2,630,000	The year.	31,600	1,370	2,960	2,150,000

RIO GRANDE AT EAGLE PASS, TEX.

Location.—Half a mile above the highway bridge between Eagle Pass, Tex., and Ciudad Porfirio Diaz, Mexico.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical and inclined staff.

Channel.—Very shifting and subject to overflow for a width of 1,500 feet, beginning at a stage of 22 feet.

Discharge measurements.—Made from car and cable.

Floods.—The maximum recorded flood occurred at midnight June 29, 1905, and reached a stage of 34.6 feet. The flood of September, 1904, reached a maximum 24-hour stage of 23.1 feet with a corresponding discharge of 172,300 second-feet.

Diversions.—No data.

Accuracy.—Owing to the shifting channel, discharge measurements are made very frequently and the estimates of daily discharge based almost directly on these measurements.

Cooperation.—This station is maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1902.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 27.....	4.20	7,321	Aug. 26.....	3.30	4,300	Apr. 29.....	1.7	1,319
30.....	3.80	5,182	28.....	2.90	3,482	May 3.....	1.6	1,261
June 6.....	3.90	6,098	30.....	2.70	2,853	5.....	4.65	8,742
8.....	3.80	5,867	Sept. 2.....	3.10	3,800	10.....	2.2	1,624
11.....	3.70	4,900	4.....	2.90	3,357	13.....	2.0	1,849
15.....	3.90	6,030	6.....	2.80	2,926	17.....	1.9	1,428
18.....	4.30	6,743	9.....	8.70	43,173	19.....	8.0	a 34,300
21.....	3.80	5,329	11.....	3.95	6,716	21.....	2.95	2,609
22.....	3.60	4,794	14.....	3.80	5,855	23.....	2.3	2,118
25.....	3.70	5,042	16.....	4.35	8,040	26.....	2.1	1,959
29.....	3.50	4,519	18.....	3.40	4,574	30.....	1.9	1,707
July 2.....	3.70	4,451	21.....	4.40	7,901	June 3.....	2.0	1,721
6.....	3.80	4,994	23.....	4.10	7,115	7.....	1.8	1,498
9.....	4.00	5,839	25.....	3.57	5,547	10.....	1.7	1,326
13.....	4.20	7,401	28.....	3.20	4,005	14.....	2.2	1,960
14.....	5.55	16,111	Oct. 2.....	2.90	3,407	17.....	1.9	1,517
16.....	5.80	16,733	4.....	2.80	3,049	21.....	2.2	2,207
23.....	3.90	5,766	7.....	2.70	3,019	24.....	2.0	1,544
30.....	4.80	10,359	11.....	3.30	4,439	28.....	1.9	1,462
Aug. 3.....	5.30	12,524	14.....	2.60	2,777	July 1.....	1.8	1,369
6.....	6.30	17,026	17.....	2.50	2,430	2.....	3.7	4,248
20.....	4.50	8,187	20.....	2.40	2,388	7.....	1.8	1,360
23.....	4.85	9,353	23.....	2.50	2,385	10.....	2.0	1,592
27.....	4.20	6,556	26.....	3.10	3,700	12.....	2.9	3,027
31.....	4.10	6,369	29.....	4.40	8,135	15.....	4.75	7,906
Sept. 3.....	4.40	7,689	31.....	3.50	4,762	17.....	3.6	4,122
11.....	3.90	6,506	Nov. 2.....	3.20	3,982	19.....	3.3	3,552
14.....	4.55	10,138	5.....	3.00	3,594	22.....	3.55	4,495
29.....	4.50	13,851	7.....	3.00	3,556	24.....	4.5	7,404
Oct. 2.....	4.40	12,307	9.....	3.00	3,604	26.....	7.5	a 22,980
5.....	4.80	12,320	14.....	3.30	4,177	28.....	6.4	16,676
8.....	4.20	8,900	18.....	3.40	4,248	30.....	6.4	17,283
15.....	3.80	6,599	21.....	3.00	3,548	Aug. 2.....	4.85	9,819
23.....	4.20	7,674	23.....	2.80	3,108	4.....	4.3	7,741
25.....	4.10	6,896	26.....	2.60	2,679	7.....	3.5	4,987
26.....	4.20	7,333	29.....	2.80	3,043	9.....	3.55	5,210
Nov. 5.....	3.90	6,748	Dec. 2.....	2.70	2,522	11.....	3.0	3,915
7.....	3.60	5,759	5.....	2.70	2,670	15.....	5.2	9,600
12.....	3.40	5,618	7.....	2.60	2,602	19.....	4.1	6,050
17.....	3.20	5,924	10.....	2.60	2,380	21.....	3.9	5,574
16.....	3.20	4,837	14.....	2.50	2,264	23.....	3.9	5,523
19.....	3.30	5,766	17.....	2.50	2,129	26.....	4.4	7,388
21.....	3.30	4,830	21.....	2.40	2,039	28.....	4.7	8,305
21.....	3.30	4,781	24.....	2.40	2,051	30.....	4.0	6,166
26.....	3.20	4,877	27.....	2.40	2,017	Sept. 2.....	5.9	14,448
28.....	3.20	4,729	31.....	2.30	2,009	4.....	5.0	8,649
30.....	3.10	4,859	1902.			9.....	7.05	25,740
Dec. 4.....	3.10	4,468	Jan. 3.....	2.3	2,041	10.....	8.7	30,902
5.....	3.10	4,532	7.....	2.3	1,945	13.....	7.7	25,612
11.....	3.10	4,379	10.....	2.5	2,253	18.....	4.6	8,884
27.....	2.90	3,454	13.....	2.5	2,304	20.....	4.1	8,046
1901.			17.....	2.4	2,152	22.....	4.85	10,644
Jan. 8.....	2.90	3,396	25.....	2.2	1,888	24.....	3.5	5,542
14.....	2.90	2,912	28.....	2.2	1,848	26.....	3.15	4,423
18.....	2.90	2,961	31.....	2.2	1,828	29.....	2.9	3,890
21.....	2.90	2,876	Feb. 4.....	2.2	1,965	Oct. 1.....	2.9	3,826
25.....	2.80	2,847	8.....	2.2	2,017	3.....	3.05	4,183
28.....	2.70	2,776	11.....	2.2	2,054	6.....	3.5	5,157
Feb. 8.....	2.70	2,665	15.....	2.2	1,957	8.....	2.9	3,743
11.....	2.70	2,660	18.....	2.2	2,034	10.....	2.6	3,130
16.....	2.80	2,594	22.....	2.1	1,916	13.....	3.0	4,085
18.....	2.70	2,513	25.....	2.1	1,954	15.....	2.9	3,356
22.....	2.70	2,552	Mar. 1.....	2.0	1,901	17.....	2.6	3,019
25.....	2.70	2,551	8.....	1.9	1,826	20.....	2.5	2,460
Mar. 16.....	2.60	2,250	11.....	1.9	1,600	22.....	2.4	2,335
Apr. 22.....	2.20	1,836	15.....	1.9	1,530	25.....	2.3	2,270
26.....	2.20	1,776	18.....	1.8	1,478	27.....	2.3	2,263
May 12.....	2.70	2,329	22.....	1.8	1,415	29.....	2.2	2,078
20.....	2.90	3,676	25.....	1.8	1,431	31.....	2.2	2,084
27.....	2.90	3,682	29.....	1.8	1,495	Nov. 3.....	2.8	3,175
June 3.....	3.20	4,412	Apr. 1.....	1.7	1,437	5.....	2.5	2,671
20.....	2.60	3,040	4.....	1.7	1,314	7.....	3.0	3,920
27.....	2.30	2,466	8.....	1.7	1,270	10.....	2.4	2,428
July 7.....	2.00	2,112	12.....	1.7	1,347	12.....	2.2	2,279
30.....	3.50	4,172	15.....	2.75	2,976	14.....	2.1	2,086
Aug. 6.....	3.60	5,482	19.....	2.0	1,633	17.....	2.1	1,969
13.....	3.30	4,885	23.....	1.7	1,377	19.....	2.1	1,963
19.....	2.80	3,047	26.....	1.7	1,325	21.....	2.55	2,632
						23.....	2.1	2,035

a Partly estimated.

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1902.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1904.	<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 26.....	2.1	2,056	July 22.....	3.2	4,571	Apr. 4.....	1.95	2,074
Dec. 4.....	2.1	2,257	25.....	2.9	3,976	7.....	1.8	1,916
6.....	2.1	2,354	28.....	2.7	3,457	11.....	1.6	1,604
9.....	2.2	2,542	31.....	2.7	3,501	14.....	1.6	1,555
11.....	2.2	2,582	Aug. 4.....	2.6	3,327	18.....	1.6	1,553
13.....	2.2	2,559	7.....	3.0	4,234	20.....	1.5	1,378
16.....	2.2	2,572	11.....	2.6	3,274	23.....	1.6	1,498
18.....	2.1	2,420	14.....	2.3	2,585	27.....	1.5	1,340
20.....	2.2	2,557	18.....	2.7	3,663	30.....	1.4	1,282
23.....	2.2	2,494	22.....	2.5	3,029	May 3.....	1.4	1,283
26.....	2.1	2,419	26.....	3.0	4,231	7.....	1.7	1,798
29.....	2.1	2,402	28.....	2.7	3,672	10.....	1.4	1,323
31.....	2.1	2,398	31.....	3.4	4,885	13.....	1.3	1,248
			Sept. 4.....	4.2	7,883	17.....	1.6	1,691
1903.			7.....	3.9	6,671	21.....	1.4	1,303
Jan. 2.....	2.1	2,385	9.....	3.7	6,407	25.....	2.5	2,651
5.....	2.1	2,332	11.....	5.0	10,291	June 2.....	2.7	3,496
7.....	2.1	2,381	14.....	2.8	3,511	5.....	1.9	2,365
9.....	2.0	2,047	17.....	3.55	5,011	8.....	4.05	7,643
12.....	2.0	2,129	19.....	3.3	4,315	11.....	2.8	3,577
16.....	2.55	2,985	22.....	3.1	4,581	14.....	2.95	3,723
18.....	2.4	2,688	25.....	3.25	5,081	17.....	2.4	3,220
20.....	2.3	2,454	29.....	4.05	7,427	19.....	2.0	2,277
22.....	2.3	2,451	Oct. 2.....	4.35	8,286	23.....	3.0	4,427
24.....	2.3	2,428	5.....	4.9	11,784	25.....	2.6	3,260
27.....	2.3	2,438	8.....	3.95	7,421	28.....	7.4	31,122
29.....	2.25	2,391	10.....	3.5	5,494	29.....	8.75	34,928
31.....	2.2	2,262	13.....	3.1	4,456	July 3.....	2.9	5,555
Feb. 3.....	2.2	2,273	16.....	2.8	3,803	7.....	2.15	2,809
5.....	2.3	2,267	19.....	2.7	3,487	11.....	1.9	2,238
7.....	2.3	2,280	22.....	2.6	3,227	14.....	1.6	1,923
10.....	2.4	2,379	24.....	2.6	3,230	18.....	1.5	1,842
12.....	2.2	2,353	27.....	2.4	3,052	21.....	1.9	2,130
13.....	2.2	2,289	31.....	2.4	3,017	25.....	3.75	6,100
17.....	2.8	3,598	Nov. 4.....	2.3	2,632	27.....	2.1	2,393
20.....	2.6	2,936	7.....	2.2	2,524	30.....	2.1	2,348
23.....	2.5	2,689	10.....	2.2	2,513	Aug. 3.....	1.8	1,866
25.....	2.6	2,935	14.....	2.2	2,547	6.....	1.8	1,883
27.....	2.6	2,805	17.....	2.2	2,565	9.....	2.0	2,035
Mar. 3.....	2.8	3,203	20.....	2.0	2,353	13.....	1.5	1,726
5.....	2.7	2,931	23.....	2.0	2,330	17.....	1.5	1,658
7.....	2.6	2,889	26.....	2.0	2,335	20.....	1.7	1,755
10.....	2.5	2,769	30.....	2.0	2,414	23.....	1.4	1,664
12.....	2.4	2,622	Dec. 3.....	2.0	2,223	26.....	1.9	1,961
19.....	2.2	2,322	6.....	2.0	2,387	29.....	2.0	1,948
25.....	2.0	2,087	10.....	2.0	2,243	31.....	2.4	2,249
30.....	1.9	1,882	14.....	2.0	2,250	Sept. 3.....	2.1	2,715
Apr. 1.....	1.9	2,008	17.....	2.0	2,292	7.....	6.4	14,534
3.....	1.9	1,799	21.....	2.0	2,416	9.....	7.95	37,852
6.....	1.8	1,714	24.....	2.0	2,263	14.....	19.0	a106,697
8.....	1.8	1,696	28.....	2.0	2,063	16.....	22.0	a153,568
10.....	1.7	1,763	31.....	2.0	2,072	18.....	10.2	a32,056
14.....	1.7	1,694	1904.			20.....	8.85	29,753
17.....	1.6	1,656	Jan. 4.....	2.0	2,147	23.....	11.1	39,349
21.....	1.8	1,856	7.....	1.9	2,027	26.....	6.2	19,025
23.....	1.8	1,946	11.....	1.9	1,973	28.....	6.6	19,520
27.....	1.8	1,703	14.....	1.9	2,088	30.....	6.2	13,900
30.....	2.7	3,614	18.....	1.9	2,061	Oct. 4.....	5.75	10,596
May 7.....	2.0	2,142	21.....	1.9	1,963	7.....	5.2	8,802
11.....	2.1	2,278	25.....	1.8	1,914	11.....	5.3	9,403
14.....	3.0	4,400	28.....	1.8	1,907	15.....	9.0	32,435
16.....	2.3	2,274	31.....	1.8	1,882	20.....	9.2	31,417
19.....	3.3	4,694	Feb. 3.....	1.8	1,821	22.....	8.4	26,383
26.....	2.6	3,250	7.....	1.8	1,834	25.....	8.1	25,912
28.....	2.6	3,516	10.....	1.8	1,875	28.....	6.5	17,035
31.....	2.6	3,170	14.....	1.8	1,862	31.....	6.2	15,628
June 2.....	3.0	4,191	17.....	1.8	1,844	Nov. 4.....	5.65	12,516
6.....	2.6	3,037	20.....	1.8	1,843	8.....	5.35	11,047
8.....	3.45	5,339	23.....	1.8	1,824	11.....	4.9	10,521
15.....	7.35	20,203	26.....	1.8	1,854	14.....	4.6	8,136
18.....	4.55	8,053	29.....	1.8	1,836	17.....	4.3	7,357
28.....	4.05	7,029	Mar. 29.....	1.8	1,836	20.....	4.1	6,729
30.....	4.15	7,462	3.....	1.8	1,731	23.....	3.9	5,580
July 2.....	3.9	7,101	7.....	1.8	1,738	26.....	3.8	4,785
6.....	3.9	6,630	10.....	1.8	1,700	30.....	3.6	4,467
9.....	4.4	8,795	14.....	1.7	1,660	Dec. 4.....	3.6	4,338
13.....	4.5	8,149	25.....	1.6	1,633	8.....	4.45	8,207
16.....	4.1	7,175	28.....	1.6	1,625	12.....	4.05	5,929
18.....	3.65	5,964	31.....	1.6	1,618	16.....	3.8	5,191

a Float measurement.

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Dec. 1904.	<i>Fect.</i>	<i>Sec.-ft.</i>	Sept. 1905.	<i>Fect.</i>	<i>Sec.-ft.</i>	1906.	<i>Fect.</i>	<i>Sec.-ft.</i>
19.....	4.0	5,620	7.....	3.8	6,646	18.....	2.8	4,005
22.....	3.9	5,268	11.....	5.9	15,228	22.....	3.1	5,216
24.....	3.8	4,960	14.....	5.7	14,344	25.....	3.4	5,805
28.....	3.4	4,553	19.....	5.55	12,683	28.....	3.6	5,933
31.....	3.3	4,256	22.....	4.55	9,008	31.....	3.8	6,862
			25.....	4.0	7,991	June 3.....	3.9	7,611
			28.....	7.85	30,834	7.....	4.3	9,140
Jan. 3.....	3.3	4,373	29.....	8.3	34,695	10.....	3.7	7,794
7.....	3.1	4,048	Oct. 2.....	5.9	14,515	13.....	3.9	6,996
11.....	3.1	3,221	5.....	6.35	18,172	16.....	3.2	5,745
14.....	3.1	3,158	9.....	6.3	18,728	19.....	3.2	5,209
17.....	3.0	3,370	17.....	3.9	6,973	22.....	3.2	5,235
21.....	2.8	3,416	20.....	3.5	5,344	25.....	3.1	4,949
24.....	2.8	3,259	24.....	3.3	4,752	28.....	3.35	6,088
28.....	2.95	3,462	27.....	3.2	4,484	30.....	3.4	6,343
31.....	3.1	3,590	31.....	3.0	4,472	July 3.....	3.4	6,839
Feb. 3.....	3.0	3,229	Nov. 4.....	3.3	5,526	7.....	4.0	8,359
7.....	2.7	3,131	7.....	2.9	4,622	10.....	6.15	16,725
11.....	2.9	3,452	11.....	2.7	4,127	13.....	6.5	19,380
14.....	2.8	3,254	15.....	5.0	12,039	16.....	6.1	16,960
17.....	2.8	3,239	18.....	4.85	12,041	19.....	6.9	22,023
21.....	2.8	3,213	22.....	4.9	14,756	22.....	7.8	27,782
24.....	3.25	4,024	25.....	4.2	6,768	25.....	7.3	21,642
28.....	3.2	4,126	28.....	3.7	6,216	28.....	7.85	26,671
Mar. 4.....	3.2	4,143	30.....	3.6	5,419	31.....	6.2	15,372
6.....	3.4	4,498	Dec. 4.....	3.3	5,438	Aug. 3.....	5.7	15,936
9.....	4.1	7,126	8.....	4.3	7,498	9.....	9.4	35,310
10.....	5.4	15,851	11.....	3.8	6,273	13.....	18.5	a160,652
14.....	4.0	7,406	14.....	3.7	5,785	15.....	10.6	a57,445
16.....	5.1	14,945	18.....	3.6	5,584	17.....	8.4	28,179
19.....	4.6	8,902	21.....	4.8	12,817	20.....	6.8	19,109
23.....	4.7	9,226	26.....	4.95	16,242	23.....	6.25	16,150
27.....	4.15	6,850	28.....	4.4	7,718	26.....	8.2	30,007
31.....	4.0	6,715	31.....	3.85	6,327	28.....	10.2	a53,527
Apr. 1.....	5.5	13,534	Jan. 1906.			31.....	11.0	a57,830
2.....	6.75	27,061	Jan. 3.....	3.6	5,553	Sept. 3.....	10.2	a52,734
6.....	3.8	5,792	7.....	3.4	4,966	5.....	8.15	27,058
10.....	3.6	5,207	10.....	3.3	5,333	7.....	7.1	18,616
13.....	3.7	5,250	14.....	3.0	5,209	10.....	6.35	17,290
17.....	3.5	5,010	17.....	3.0	4,785	13.....	5.5	13,007
20.....	3.35	4,478	20.....	2.9	4,809	16.....	4.85	12,087
24.....	6.4	18,395	23.....	2.8	4,692	20.....	4.7	10,648
27.....	4.0	6,370	26.....	2.8	4,618	23.....	5.3	15,474
30.....	4.25	8,298	29.....	2.8	4,217	27.....	4.8	11,670
May 4.....	4.4	8,447	31.....	2.7	4,029	30.....	4.6	10,534
8.....	4.5	8,188	Feb. 3.....	2.8	4,099	Oct. 3.....	3.0	10,492
11.....	4.5	7,895	6.....	2.8	3,984	6.....	3.9	8,906
15.....	4.9	9,994	9.....	2.8	4,274	9.....	3.8	8,897
18.....	4.4	8,341	13.....	3.7	7,528	12.....	3.5	6,542
21.....	4.5	9,905	16.....	4.1	7,942	16.....	3.4	6,711
25.....	5.05	11,370	20.....	3.7	7,642	19.....	3.3	5,944
28.....	5.25	12,150	23.....	4.4	10,023	22.....	3.3	5,376
31.....	4.8	11,580	26.....	4.1	9,087	25.....	3.2	4,856
June 3.....	5.1	10,593	28.....	3.0	7,854	28.....	3.2	4,571
7.....	5.05	11,395	Mar. 3.....	3.45	7,317	31.....	3.1	4,337
10.....	5.95	16,014	6.....	3.1	5,355	Nov. 3.....	3.0	4,366
13.....	6.35	18,445	9.....	3.0	4,458	9.....	2.9	4,691
17.....	7.4	23,980	12.....	2.8	4,288	12.....	2.9	4,453
20.....	7.2	21,834	17.....	2.6	3,886	15.....	2.9	4,506
23.....	7.1	21,090	25.....	2.3	3,137	18.....	3.0	4,492
27.....	6.9	19,559	28.....	2.2	2,982	21.....	3.0	4,598
July 10.....	4.8	12,529	31.....	2.0	2,680	24.....	3.0	4,829
14.....	4.0	7,418	Apr. 3.....	2.0	2,403	30.....	3.1	4,971
17.....	4.0	7,214	6.....	2.0	2,724	Dec. 3.....	3.3	5,243
21.....	5.0	11,082	9.....	2.0	2,620	6.....	3.2	5,239
25.....	4.3	8,261	12.....	2.0	2,410	10.....	3.3	5,169
28.....	5.25	11,815	15.....	2.0	2,297	13.....	3.5	6,191
31.....	6.7	17,575	18.....	2.0	2,227	16.....	3.55	6,422
Aug. 4.....	6.0	14,458	21.....	2.0	2,248	19.....	3.4	5,852
7.....	5.4	14,247	24.....	2.0	2,011	22.....	3.4	5,458
10.....	5.6	13,488	27.....	2.1	2,373	26.....	3.2	5,214
16.....	5.7	14,915	30.....	2.3	2,865	29.....	3.0	5,454
19.....	6.0	16,000	May 4.....	2.5	3,566	31.....	2.9	5,148
23.....	6.0	17,014	6.....	2.7	4,538	Jan. 1907.		
26.....	5.5	13,512	9.....	3.0	4,830	Jan. 3.....	2.8	4,977
29.....	5.4	13,614	12.....	3.0	4,615	6.....	2.7	4,375
31.....	4.8	10,782	15.....	2.9	4,213	10.....	2.7	4,194
Sept. 4.....	4.4	8,329						

a Float measurement.

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	Sept. 1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	May 1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
13.....	2.7	4,306	12.....	5.55	15,802	9.....	2.3	3,424
16.....	2.7	4,284	15.....	4.5	11,296	13.....	2.2	3,675
19.....	3.0	4,789	18.....	4.2	9,189	16.....	2.0	3,430
22.....	2.9	4,569	21.....	6.05	16,792	19.....	2.3	2,941
25.....	2.9	4,443	24.....	5.05	13,001	22.....	2.1	2,778
28.....	2.9	4,422	27.....	4.4	9,621	24.....	9.8	a57, 214
31.....	3.2	5,021	30.....	4.3	9,206	25.....	4.5	8,999
Feb. 3.....	3.0	4,556	Oct. 3.....	3.9	7,906	28.....	2.65	3,522
6.....	3.1	4,619	6.....	4.55	10,685	31.....	2.3	4,374
9.....	2.8	4,119	10.....	3.2	4,882	June 3.....	2.3	3,989
12.....	2.7	3,787	13.....	2.9	4,704	6.....	2.5	3,809
15.....	2.6	3,760	16.....	2.7	4,078	9.....	2.5	4,119
18.....	2.6	3,763	19.....	2.7	3,961	12.....	2.2	2,974
21.....	2.7	3,907	22.....	2.7	3,847	15.....	2.2	2,718
25.....	2.6	3,616	25.....	2.6	3,188	18.....	1.8	2,486
28.....	2.5	3,563	28.....	3.35	5,724	21.....	1.7	2,517
Mar. 3.....	2.5	3,128	31.....	3.5	5,842	24.....	1.5	2,112
7.....	2.4	3,054	Nov. 3.....	3.8	6,770	27.....	2.15	3,508
10.....	2.5	3,446	7.....	4.0	8,066	30.....	1.7	2,641
13.....	2.5	3,435	9.....	6.45	22,559	July 3.....	1.5	2,736
16.....	2.4	3,215	12.....	5.55	12,440	6.....	1.4	2,538
19.....	2.3	2,968	15.....	4.3	9,400	9.....	3.3	4,774
22.....	2.2	2,838	18.....	3.9	9,957	12.....	1.7	2,351
25.....	2.1	2,873	21.....	3.6	6,619	16.....	1.7	2,081
28.....	2.1	2,642	24.....	3.4	6,311	19.....	1.7	2,052
31.....	2.1	2,640	27.....	3.2	5,956	22.....	1.6	1,854
Apr. 3.....	2.0	2,565	Dec. 3.....	3.4	6,564	25.....	1.65	2,024
6.....	2.0	2,526	5.....	3.5	5,783	28.....	3.0	4,663
9.....	2.4	3,231	8.....	5.5	13,656	31.....	4.1	9,067
12.....	2.3	3,097	12.....	4.8	12,564	Aug. 3.....	3.0	4,446
15.....	2.2	2,920	15.....	4.4	8,400	6.....	6.7	17,104
18.....	2.2	2,661	18.....	4.1	8,433	10.....	4.5	8,633
21.....	2.2	2,579	21.....	3.6	7,618	13.....	5.25	12,951
24.....	2.2	2,721	24.....	3.5	5,895	16.....	7.4	25,893
27.....	2.45	3,475	27.....	3.3	5,967	19.....	4.6	11,921
30.....	3.3	5,552	31.....	3.2	5,453	22.....	4.0	8,071
May 3.....	3.4	5,512	1908.	3.1	4,751	25.....	3.9	7,564
6.....	3.1	4,799	Jan. 3.....	3.0	4,753	28.....	4.2	8,500
10.....	2.9	4,708	6.....	2.9	4,366	31.....	4.3	8,375
13.....	3.0	4,369	9.....	2.9	4,267	Sept. 3.....	6.15	17,510
16.....	2.9	4,617	12.....	2.7	4,320	6.....	6.7	21,680
19.....	2.8	4,314	15.....	2.6	4,024	9.....	6.35	18,968
22.....	2.8	4,228	18.....	2.6	3,838	12.....	4.8	10,783
25.....	2.7	3,838	22.....	2.5	3,616	15.....	5.3	13,389
28.....	2.9	5,048	25.....	2.5	3,757	18.....	4.0	8,260
31.....	2.9	5,081	28.....	2.5	3,663	21.....	3.3	5,345
June 3.....	3.1	5,406	31.....	2.5	3,275	24.....	2.85	4,584
6.....	3.3	5,701	Feb. 3.....	2.3	3,066	27.....	2.5	4,069
9.....	3.6	6,893	6.....	2.3	2,694	30.....	2.3	3,379
12.....	3.9	8,066	9.....	2.5	3,728	Oct. 3.....	2.2	3,252
15.....	3.7	6,942	12.....	2.4	3,510	6.....	2.1	3,090
18.....	3.85	7,728	15.....	2.3	3,153	9.....	2.3	3,567
21.....	4.2	8,511	18.....	2.2	2,799	13.....	1.9	3,314
24.....	4.4	10,190	21.....	2.2	2,836	16.....	1.7	2,828
27.....	4.1	8,289	24.....	2.2	2,826	19.....	1.6	2,652
30.....	4.1	8,045	27.....	2.1	2,792	22.....	1.6	2,738
July 3.....	4.4	9,721	29.....	2.1	2,710	25.....	1.6	2,412
6.....	4.3	9,629	Mar. 3.....	2.1	2,751	28.....	1.6	2,418
10.....	3.8	7,354	6.....	2.1	2,618	31.....	1.6	2,311
13.....	3.9	7,683	10.....	1.9	2,568	Nov. 3.....	1.5	2,239
16.....	4.0	7,416	13.....	1.8	2,406	6.....	1.5	2,228
19.....	3.9	8,170	21.....	1.7	2,261	9.....	1.5	2,234
22.....	3.6	7,404	24.....	1.7	2,232	12.....	1.5	2,381
25.....	3.4	6,375	27.....	1.7	2,172	15.....	1.5	2,269
28.....	3.3	5,643	31.....	1.7	2,120	18.....	1.5	2,355
31.....	3.5	6,873	Apr. 3.....	1.7	2,121	21.....	1.5	2,316
Aug. 3.....	3.7	7,248	7.....	1.8	2,195	24.....	1.5	2,313
6.....	3.3	5,657	10.....	1.8	2,292	27.....	1.5	2,291
9.....	3.45	5,523	13.....	2.3	3,340	30.....	1.5	2,276
12.....	3.0	4,882	16.....	2.0	2,843	Dec. 3.....	1.5	2,229
15.....	3.0	4,922	19.....	4.4	9,511	6.....	1.5	2,199
18.....	3.0	4,853	22.....	2.75	3,691	9.....	1.5	2,156
21.....	2.6	4,394	25.....	2.1	3,273	12.....	1.5	2,153
24.....	2.5	4,183	28.....	2.0	3,107	15.....	1.4	2,205
27.....	2.4	3,880	30.....	2.0	2,874	18.....	1.4	2,251
31.....	3.3	5,527	May 3.....	2.7	3,435	21.....	1.4	2,175
Sept. 3.....	3.7	7,668	6.....	2.5	3,284	24.....	1.4	2,212
6.....	4.7	11,869				27.....	1.4	2,212
9.....	4.9	12,639				31.....	1.4	2,169

a Float measurement.

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1900.	<i>Fect.</i>	<i>Sec.-ft.</i>	1909.	<i>Fect.</i>	<i>Sec.-ft.</i>	1910.	<i>Fect.</i>	<i>Sec.-ft.</i>
Jan. 3.....	1.4	2,232	Aug. 31.....	2.7	5,781	May 6.....	1.5	2,201
6.....	1.4	2,252	Sept. 3.....	2.7	4,650	9.....	2.5	4,043
9.....	1.4	2,240	7.....	4.5	11,873	13.....	2.5	3,990
12.....	1.4	2,316	10.....	3.6	7,836	16.....	2.7	4,867
16.....	1.4	2,351	13.....	2.8	6,122	19.....	3.1	5,798
18.....	1.4	2,236	16.....	3.4	7,121	22.....	3.1	6,140
21.....	1.4	2,195	19.....	4.3	8,571	26.....	2.7	5,389
24.....	1.4	2,167	22.....	5.05	14,533	28.....	2.5	4,817
27.....	1.4	2,191	25.....	4.0	8,872	31.....	2.6	5,092
31.....	1.4	2,144	28.....	3.5	8,469	June 3.....	2.3	3,870
Feb. 3.....	1.4	2,181	30.....	3.0	6,414	6.....	2.0	3,625
6.....	1.4	2,150	Oct. 3.....	2.6	5,800	9.....	1.5	3,166
9.....	1.3	2,102	6.....	2.4	5,179	12.....	1.2	2,621
12.....	1.3	2,071	10.....	2.0	2,861	15.....	1.1	1,913
16.....	1.4	2,040	13.....	2.0	2,745	18.....	1.0	2,152
19.....	1.2	2,037	16.....	2.0	2,678	21.....	1.0	1,888
22.....	1.2	2,030	19.....	1.7	2,608	24.....	1.0	2,124
25.....	1.2	1,904	22.....	1.6	2,571	28.....	2.4	5,814
28.....	1.2	1,882	25.....	1.5	2,644	30.....	3.0	6,254
Mar. 3.....	1.2	1,882	28.....	1.5	2,594	July 3.....	2.4	5,944
6.....	1.1	1,784	31.....	1.5	2,592	7.....	2.6	5,449
9.....	1.1	1,768	Nov. 3.....	1.5	2,493	10.....	2.3	3,877
12.....	1.1	2,274	6.....	1.4	2,393	13.....	1.65	2,324
16.....	1.1	1,843	9.....	1.3	2,321	16.....	1.5	2,276
19.....	1.0	1,748	12.....	1.3	2,344	19.....	1.5	2,210
22.....	1.0	1,665	15.....	1.3	2,378	22.....	1.5	2,148
25.....	1.1	1,873	18.....	1.4	2,340	25.....	1.2	2,098
28.....	.9	1,680	21.....	1.4	2,327	28.....	1.2	1,964
31.....	.9	1,727	24.....	1.4	2,188	31.....	1.0	1,669
Apr. 3.....	.9	1,670	27.....	1.4	2,089	Aug. 3.....	.7	1,314
6.....	.9	1,739	30.....	1.4	1,943	6.....	.6	1,224
9.....	.9	1,651	Dec. 3.....	1.4	1,964	10.....	.6	1,140
12.....	.8	1,536	6.....	1.3	1,747	13.....	.6	1,059
16.....	.8	1,538	9.....	1.2	1,862	16.....	.6	1,169
19.....	.8	1,538	13.....	1.2	1,981	19.....	.6	1,258
22.....	.8	1,531	16.....	1.2	2,040	22.....	.6	1,178
25.....	.8	1,458	22.....	1.2	2,069	25.....	.6	1,228
28.....	1.8	2,545	25.....	1.2	2,052	28.....	1.95	2,879
30.....	.9	1,642	28.....	1.2	2,019	31.....	2.3	3,441
May 3.....	.7	1,488	31.....	1.2	2,000	Sept. 3.....	1.7	2,264
6.....	.7	1,413	1910.			6.....	1.4	1,808
9.....	1.6	2,204	Jan. 3.....	2.8	5,054	8.....	4.85	14,701
13.....	1.6	2,294	6.....	2.0	3,034	12.....	1.5	4,556
16.....	1.5	2,126	9.....	1.9	2,934	15.....	3.0	6,846
19.....	1.5	2,336	9.....	1.8	2,684	18.....	2.3	4,023
22.....	2.7	4,601	27.....	1.5	2,304	21.....	1.6	4,877
25.....	2.8	4,439	31.....	1.5	2,198	24.....	1.6	4,219
28.....	3.0	5,295	June 3.....	1.5	2,436	27.....	2.5	5,364
31.....	2.9	5,261	6.....	1.5	2,457	30.....	2.0	4,519
June 3.....	3.15	5,346	9.....	1.4	2,229	Oct. 3.....	1.9	4,948
6.....	2.8	4,648	12.....	1.3	2,073	6.....	2.05	4,267
9.....	2.3	4,902	15.....	1.3	1,978	9.....	1.5	3,159
12.....	2.2	4,871	18.....	1.2	1,958	12.....	1.5	2,951
15.....	2.55	5,500	21.....	1.2	1,942	15.....	1.5	2,717
18.....	2.2	3,421	24.....	1.2	1,917	18.....	1.0	2,245
21.....	2.85	6,011	28.....	1.2	1,924	21.....	1.0	2,268
24.....	3.1	7,044	Mar. 3.....	1.0	1,435	24.....	.9	2,174
27.....	3.2	7,428	6.....	1.0	1,454	27.....	.9	2,076
30.....	3.0	6,625	9.....	.9	1,347	31.....	.8	1,878
July 3.....	2.8	6,096	13.....	.8	1,145	Nov. 3.....	.8	1,791
6.....	3.0	5,744	16.....	.8	1,076	6.....	.8	1,760
9.....	3.15	5,959	19.....	.8	1,076	9.....	.7	1,633
12.....	5.3	14,831	22.....	1.5	1,874	12.....	.7	1,625
16.....	5.4	14,977	25.....	1.5	1,901	15.....	.7	1,720
18.....	4.4	11,401	28.....	1.5	1,741	19.....	.7	1,611
21.....	3.7	7,120	31.....	2.05	2,971	21.....	.7	1,659
24.....	8.35	27,644	Apr. 3.....	1.7	2,922	24.....	.7	1,661
27.....	3.4	5,518	6.....	1.7	2,481	27.....	.7	1,602
31.....	4.0	8,275	10.....	3.75	8,502	30.....	.7	1,606
Aug. 3.....	4.4	12,644	13.....	2.0	3,120	Dec. 3.....	.7	1,659
6.....	4.35	11,106	16.....	1.5	2,501	6.....	.7	1,605
9.....	4.3	8,639	19.....	1.5	2,533	9.....	.7	1,584
13.....	3.7	9,106	22.....	1.4	2,361	12.....	.7	1,650
16.....	3.8	8,517	25.....	1.3	2,240	15.....	.7	1,618
19.....	3.9	8,921	28.....	1.2	1,997	18.....	.7	1,673
22.....	4.9	13,329	30.....	1.25	1,972	21.....	.7	1,683
25.....	3.75	8,502	May 3.....	1.5	2,263	24.....	.7	1,646
28.....	3.3	6,160				27.....	.7	1,582
						31.....	.7	1,575

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>
Jan. 3	0.7	1,476	Sept. 3	1.9	3,468	Apr. 27	1.8	2,310
6	.7	1,428	6	3.7	6,752	30	1.4	1,796
9	.7	1,416	9	3.6	6,677	May 3	1.0	1,669
12	.7	1,363	12	3.4	6,204	6	1.0	1,795
15	.7	1,338	15	3.3	5,881	9	.9	1,474
18	.7	1,609	18	3.0	6,775	12	.9	1,143
21	.7	1,575	21	2.2	4,734	15	.9	1,235
24	.7	1,570	24	2.1	4,431	18	2.4	3,583
27	.7	1,532	27	2.4	5,351	21	2.4	4,026
31	.7	1,481	30	2.8	6,167	24	2.6	3,529
Feb. 3	.7	1,507	3	2.2	4,845	27	2.8	4,940
6	.7	1,494	6	1.9	4,076	31	2.6	4,819
9	.7	1,444	9	3.6	8,963	June 3	3.0	5,216
12	.7	1,422	12	2.6	6,567	6	2.9	5,209
15	.7	1,423	13	5.0	13,863	9	3.0	5,123
18	.7	1,398	15	3.3	7,993	12	3.8	8,700
21	2.1	3,192	18	3.7	8,316	15	4.5	11,573
24	1.7	2,526	21	3.9	10,358	21	5.0	12,794
28	1.7	2,462	24	3.8	9,241	24	4.4	10,592
Mar. 3	1.7	2,273	27	3.4	8,052	27	3.6	6,723
6	1.7	2,083	31	3.2	7,030	30	3.0	5,277
9	1.4	1,996	Nov. 3	3.0	6,193	July 3	2.9	5,136
12	1.2	1,871	6	2.7	5,153	6	2.7	4,552
15	1.0	1,772	9	3.0	5,806	9	2.7	4,661
18	1.0	1,742	12	2.5	4,691	12	2.4	3,815
21	1.5	2,187	15	2.4	4,403	15	2.45	4,102
24	1.5	2,303	18	2.3	5,114	18	1.9	3,010
27	1.2	2,136	21	2.2	4,680	21	1.8	2,615
31	1.1	1,819	24	2.1	4,343	24	1.8	2,643
Apr. 3	1.0	1,728	27	2.0	4,052	27	1.7	2,399
5	4.7	5,166	30	2.0	3,738	31	1.9	2,825
8	2.3	2,891	Dec. 3	2.0	4,165	Aug. 3	1.8	2,745
11	1.0	1,800	6	1.9	3,844	6	2.4	3,989
14	1.0	1,689	9	1.8	3,550	9	1.9	2,773
17	1.0	1,700	12	1.8	3,383	12	1.7	2,490
20	1.0	1,604	15	1.7	3,263	15	1.4	1,977
23	1.0	1,611	18	1.6	3,042	18	1.6	2,445
28	1.7	2,725	21	1.6	2,893	21	2.5	3,981
30	1.7	2,641	24	1.5	2,852	24	5.35	15,888
May 3	2.0	2,904	27	1.4	2,722	27	5.8	16,323
6	1.0	1,789	31	1.3	2,653	31	4.5	11,336
9	.8	1,472	Jan. 1912.			Sept. 3	5.7	15,097
12	.8	1,417	Jan. 3	1.3	2,426	6	5.3	14,266
15	.7	1,312	6	1.3	2,391	9	4.9	13,149
16	3.3	6,431	9	2.1	3,063	12	4.5	12,010
18	4.8	9,822	12	1.9	2,705	15	6.6	28,534
21	4.5	7,750	15	1.7	2,483	18	6.0	21,706
24	3.0	5,706	18	1.7	2,504	21	6.0	20,641
27	2.8	5,010	21	1.7	2,790	24	3.8	8,173
31	4.0	6,692	24	1.8	2,712	27	3.1	5,844
June 3	2.9	5,354	27	1.7	2,683	30	4.8	12,785
6	2.5	4,680	31	1.8	2,581	Oct. 4	3.85	8,555
9	1.8	3,622	Feb. 3	1.8	2,696	6	3.6	7,692
12	1.6	3,276	6	1.6	2,233	9	3.6	8,178
15	1.4	2,995	9	1.6	2,574	12	3.95	9,517
16	3.5	7,482	12	1.5	2,003	15	2.7	5,036
17	5.0	11,506	15	1.4	2,024	18	2.4	3,952
20	3.5	7,082	18	1.4	2,068	21	2.2	3,597
23	2.5	4,566	21	1.4	1,913	24	2.05	3,075
26	3.4	6,291	24	1.4	1,833	27	1.8	2,677
30	2.3	4,917	27	1.2	1,714	31	1.7	2,466
July 3	2.3	4,531	29	1.2	1,793	Nov. 3	1.5	2,196
6	2.3	4,422	Mar. 3	1.1	1,703	6	1.45	1,998
9	3.5	6,655	6	1.1	1,480	9	1.4	1,924
12	4.9	11,492	9	1.0	1,345	12	1.35	2,018
15	4.2	10,662	12	1.0	1,581	15	1.3	1,892
18	4.2	9,953	15	1.0	1,379	18	1.7	2,621
21	3.8	8,973	18	.9	1,400	21	1.65	2,579
24	3.8	8,506	21	.9	1,406	24	1.5	2,210
27	6.0	18,191	24	.9	1,324	27	1.5	2,206
31	4.5	11,107	27	1.1	1,634	30	1.45	2,044
Aug. 3	5.1	14,217	Apr. 3	1.0	1,598	Dec. 3	1.55	2,115
6	5.4	14,975	6	.9	1,348	6	1.5	2,084
9	4.0	9,940	9	1.7	2,666	9	1.6	2,280
12	3.7	8,102	12	1.4	1,847	12	1.65	2,521
15	3.3	7,276	15	1.7	2,666	15	1.65	2,444
18	3.1	6,218	18	1.0	2,003	18	1.65	2,378
21	1.7	3,857	21	1.0	1,632	21	1.65	2,339
24	1.7	3,715	24	1.3	1,768	24	1.7	2,214
27	2.1	4,687	27	1.6	2,103	27	1.75	2,302
31	3.8	8,653	31	1.7	2,354	31	1.8	2,426

Discharge measurements of Rio Grande at Eagle Pass, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>	Apr. 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>	July 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 3.....	1.6	2,144	Apr. 6.....	1.1	1,399	July 3.....	2.5	3,644
6.....	1.6	2,269	9.....	1.1	1,411	6.....	2.4	3,485
9.....	1.6	2,076	12.....	1.0	1,199	9.....	1.9	2,939
12.....	1.5	1,941	15.....	.9	1,031	12.....	1.8	2,792
15.....	1.4	1,890	18.....	.9	1,108	15.....	1.6	2,620
18.....	1.4	1,853	21.....	.9	1,201	18.....	1.3	2,110
21.....	1.4	1,785	24.....	1.2	1,384	21.....	1.2	2,048
24.....	1.3	1,821	25.....	5.2	15,401	24.....	1.2	2,088
27.....	1.4	1,752	27.....	1.7	2,345	27.....	1.1	2,088
31.....	1.3	1,635	30.....	1.1	1,706	31.....	1.4	2,382
Feb. 3.....	1.2	1,671	May 3.....	2.75	4,891	Aug. 3.....	1.5	2,465
6.....	1.2	1,632	4.....	8.05	29,519	6.....	1.2	2,078
9.....	1.2	1,611	6.....	6.3	17,600	9.....	1.4	2,320
12.....	1.35	1,787	9.....	2.4	4,522	12.....	1.2	2,231
15.....	1.3	1,700	12.....	1.9	2,294	15.....	1.05	2,110
18.....	1.2	1,701	15.....	1.5	1,955	18.....	1.6	2,703
20.....	3.1	5,853	18.....	1.6	2,180	21.....	1.5	2,421
24.....	2.3	4,024	21.....	1.5	2,055	24.....	2.3	3,463
27.....	2.1	3,612	24.....	1.5	1,886	27.....	1.8	2,766
28.....	2.1	3,580	27.....	1.4	1,692	31.....	1.7	2,688
Mar. 3.....	1.8	2,418	June 3.....	1.3	1,508	Sept. 3.....	1.6	2,343
6.....	1.8	2,337	6.....	1.0	1,359	5.....	3.0	4,733
9.....	2.5	4,146	9.....	1.0	1,346	6.....	2.0	3,027
12.....	2.4	3,731	12.....	2.7	4,501	9.....	2.8	4,052
15.....	2.2	3,358	15.....	1.4	2,818	12.....	3.6	6,468
18.....	1.9	2,684	18.....	1.3	2,345	15.....	3.4	5,812
21.....	1.7	2,387	21.....	2.0	3,111	18.....	2.8	4,404
24.....	1.6	2,220	24.....	4.05	9,639	21.....	2.3	3,346
27.....	1.45	2,122	27.....	9.45	39,383	24.....	2.0	2,866
31.....	1.3	1,995	29.....	3.5	8,941	27.....	3.5	5,997
Apr. 3.....	1.2	1,533	30.....	2.8	4,097	30.....	1.8	2,415

NOTE.—Measurements made by J. D. Dillard, D. Griggs, W. D. Greet, O. B. Powell, R. F. Dowe, W. W. Sentman, J. K. Wilson, Pedro Rosales, E. T. Rucker, jr., Robert Boubel, R. L. Guy, and J. S. Denike.

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.	
1900.						1900.						
1.....	3.7	3.8	3.75	5.4	5.15	16.....	6.55	4.0	5.8	5.2	4.4	
2.....	3.55	3.8	3.7	5.3	4.0	17.....	4.8	4.5	5.35	4.9	4.35	
3.....	3.45	3.75	3.75	5.2	4.45	18.....	4.3	4.35	5.3	4.85	4.25	
4.....	3.35	4.65	3.9	5.65	4.0	19.....	4.3	3.8	4.7	4.6	4.0	
5.....	3.25	4.15	4.0	5.5	4.4	20.....	4.2	3.7	4.35	4.5	4.05	
6.....	3.2	3.9	4.3	6.15	6.2	21.....	4.2	3.8	4.05	5.15	3.9	
7.....	4.0	4.0	4.1	5.7	5.3	22.....	5.3	3.6	3.9	5.2	5.8	
8.....	3.5	3.8	4.0	5.9	4.2	23.....	5.1	3.6	3.9	5.0	11.7	
9.....	3.2	4.1	3.7	9.75	3.9	24.....	5.05	3.6	3.9	4.9	10.8	
10.....	3.35	3.7	3.45	7.9	3.7	25.....	4.95	3.65	3.8	4.35	9.95	
11.....	3.5	3.7	3.45	7.35	3.6	26.....	4.55	3.4	4.1	4.2	6.1	
12.....	3.5	3.7	3.85	6.6	3.9	27.....	4.15	3.1	4.65	4.3	5.45	
13.....	3.5	3.65	4.2	6.05	4.1	28.....	3.9	3.9	4.95	4.55	4.9	
14.....	7.4	3.8	5.55	5.65	4.6	29.....	3.85	3.4	4.8	4.45	4.65	
15.....	10.5	3.95	5.85	5.45	4.55	30.....	3.8	6.0	4.75	4.3	5.2	
						31.....	3.8		5.15	4.1		
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	5.05	3.8	3.2	2.9	2.8	2.7	2.4	2.9	3.0	2.2	3.2	2.75
2.....	4.7	4.0	3.2	2.9	2.8	2.8	2.4	2.8	3.65	2.2	3.55	3.15
3.....	4.9	3.8	3.2	2.9	2.8	2.7	2.4	2.8	3.15	2.2	3.4	3.1
4.....	4.95	3.65	3.1	2.9	2.8	2.7	2.4	2.8	3.25	2.15	3.4	2.9
5.....	4.7	3.6	3.1	2.9	2.8	2.7	2.4	2.75	3.35	2.1	3.65	2.8
6.....	4.45	3.5	3.1	2.9	2.8	2.7	2.4	2.7	3.2	2.0	3.55	2.75
7.....	4.5	3.5	3.1	2.9	2.8	2.7	2.3	2.7	3.2	2.0	3.5	2.7
8.....	4.4	3.45	3.1	2.9	2.8	2.7	2.3	2.7	3.2	2.2	3.6	2.75
9.....	4.35	3.4	3.1	2.9	2.8	2.7	2.3	3.0	3.25	2.2	3.6	7.15
10.....	4.3	3.5	3.1	2.9	2.8	2.7	2.4	2.85	3.3	2.2	3.6	4.3

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	4.2	3.45	3.1	2.9	2.8	2.7	2.45	2.75	3.2	2.1	3.5	3.9
12.....	4.15	3.4	3.1	2.9	2.8	2.7	2.4	2.7	3.15	2.2	3.4	3.45
13.....	4.0	3.35	3.1	2.9	2.8	2.7	2.4	2.7	3.0	2.15	3.3	3.45
14.....	3.95	3.3	3.1	2.9	2.8	2.7	2.3	2.6	3.0	2.0	3.3	4.45
15.....	3.85	3.4	3.1	2.9	2.8	2.6	2.3	2.6	3.05	2.4	3.2	3.8
16.....	3.85	3.35	3.1	2.9	2.8	2.6	2.3	2.6	3.1	2.3	3.1	4.25
17.....	3.9	3.3	3.05	2.9	2.7	2.6	2.25	2.6	3.05	2.2	3.0	3.65
18.....	4.5	3.3	3.0	2.9	2.7	2.6	2.2	2.55	3.0	2.65	2.9	3.35
19.....	4.15	3.3	3.0	2.9	2.7	2.6	2.2	2.7	2.85	2.9	2.8	3.3
20.....	4.95	3.3	3.0	2.9	2.7	2.5	2.2	2.9	2.65	2.65	2.8	3.65
21.....	5.3	3.3	2.95	2.9	2.7	2.5	2.2	2.9	2.5	2.45	3.25	4.3
22.....	4.45	3.3	2.9	2.9	2.7	2.5	2.2	2.8	2.5	2.4	3.5	4.35
23.....	4.15	3.3	2.95	2.9	2.7	2.5	2.2	2.9	2.5	2.55	3.5	4.05
24.....	4.05	3.25	3.0	2.85	2.7	2.5	2.2	2.85	2.5	2.35	3.5	3.85
25.....	4.05	3.2	3.0	2.8	2.7	2.5	2.2	3.1	2.45	2.6	3.5	3.55
26.....	4.45	3.2	2.9	2.8	2.7	2.5	2.2	2.9	2.3	2.95	3.4	3.4
27.....	4.05	3.2	2.9	2.8	2.7	2.5	2.2	2.9	2.3	2.95	3.15	3.3
28.....	4.2	3.2	2.9	2.8	2.7	2.5	2.2	3.15	2.2	2.9	2.95	3.15
29.....	3.95	3.2	2.9	2.8	-----	2.5	2.4	3.2	2.2	3.0	2.75	3.0
30.....	3.9	3.2	2.9	2.8	-----	2.5	2.55	3.2	2.2	3.1	2.7	2.95
31.....	4.05	-----	2.9	2.8	-----	2.4	-----	3.1	-----	3.1	2.65	-----
1901-2.												
1.....	2.9	3.35	2.7	2.3	2.2	2.0	1.7	1.7	2.15	1.8	5.35	5.25
2.....	2.9	3.2	2.7	2.3	2.2	2.0	1.7	1.7	2.1	3.65	4.9	5.75
3.....	2.8	3.15	2.7	2.3	2.2	2.0	1.7	1.6	2.05	2.35	4.55	5.1
4.....	2.8	3.0	2.7	2.3	2.2	2.0	1.7	3.95	1.95	1.95	4.25	4.95
5.....	2.8	3.0	2.7	2.3	2.2	1.9	1.7	4.7	1.9	1.85	4.2	5.3
6.....	2.85	2.9	2.65	2.3	2.2	1.9	1.7	3.15	1.8	1.8	3.9	5.9
7.....	2.7	2.95	2.6	2.3	2.2	1.9	1.7	2.75	1.8	1.75	3.55	5.9
8.....	2.6	2.9	2.6	2.3	2.2	1.9	1.7	2.45	1.8	1.7	3.8	6.25
9.....	2.65	3.05	2.6	2.45	2.2	1.9	1.7	2.35	1.75	1.95	3.7	7.25
10.....	4.25	3.3	2.6	2.5	2.2	1.9	1.7	2.15	1.7	1.95	3.35	8.6
11.....	3.35	3.3	2.5	2.5	2.2	1.9	1.7	2.0	1.7	2.3	3.05	8.9
12.....	3.05	3.3	2.5	2.5	2.2	1.9	1.7	2.0	1.7	2.9	3.0	8.0
13.....	2.85	3.3	2.5	2.5	2.2	1.9	1.7	2.0	1.9	2.75	2.95	7.6
14.....	2.65	3.3	2.5	2.5	2.2	1.9	1.85	2.0	2.25	4.45	3.2	6.95
15.....	2.6	3.4	2.5	2.5	2.2	1.9	2.4	1.9	2.05	4.6	5.15	6.0
16.....	2.5	3.4	2.5	2.45	2.2	1.9	2.45	1.9	2.0	3.8	4.35	5.35
17.....	2.5	3.4	2.5	2.4	2.2	1.8	2.15	1.9	1.9	3.55	4.05	4.9
18.....	2.4	3.4	2.5	2.4	2.2	1.8	2.0	4.45	2.2	3.3	3.95	4.6
19.....	2.4	3.25	2.45	2.4	2.2	1.8	2.0	7.35	2.0	3.3	4.1	4.4
20.....	2.4	3.1	2.4	2.3	2.2	1.8	1.85	3.75	1.9	3.3	4.1	4.0
21.....	2.5	3.0	2.4	2.3	2.1	1.8	1.8	2.75	2.2	3.2	3.85	3.85
22.....	2.5	2.9	2.4	2.3	2.1	1.8	1.8	2.35	2.3	3.35	3.65	4.85
23.....	2.5	2.8	2.4	2.3	2.1	1.8	1.75	2.3	2.25	3.30	3.85	4.35
24.....	2.5	2.7	2.4	2.3	2.1	1.8	1.7	2.25	2.0	4.05	3.75	3.5
25.....	2.5	2.7	2.4	2.2	2.1	1.8	1.7	2.2	1.9	5.0	3.9	3.3
26.....	2.95	2.6	2.4	2.2	2.1	1.8	1.7	2.1	1.9	7.4	4.25	3.15
27.....	2.85	2.6	2.4	2.2	2.1	1.8	1.7	2.1	2.0	6.45	4.85	2.95
28.....	3.75	2.7	2.35	2.2	2.0	1.9	1.7	2.0	1.9	6.3	4.65	2.9
29.....	4.3	2.8	2.3	2.2	-----	1.8	1.7	1.95	1.85	6.4	4.25	2.9
30.....	3.85	2.75	2.3	2.2	-----	1.8	1.7	1.9	1.8	6.35	4.0	2.9
31.....	3.55	-----	2.3	2.2	-----	1.8	-----	2.3	-----	5.8	4.55	-----
1902-3.												
1.....	2.9	2.2	4.5	2.1	2.05	2.9	1.9	2.8	2.4	4.05	3.05	2.95
2.....	3.0	2.65	3.8	2.1	2.0	2.85	1.9	2.5	2.7	3.9	2.9	2.2
3.....	3.1	2.8	2.35	2.1	2.15	2.8	1.9	2.3	2.75	3.8	2.7	2.2
4.....	3.2	2.55	2.1	2.1	2.3	2.75	1.9	2.2	3.05	4.35	2.6	4.2
5.....	3.0	2.5	2.1	2.1	2.3	2.7	1.75	2.05	2.6	3.85	2.5	3.95
6.....	3.4	2.65	2.1	2.1	2.3	2.6	1.8	2.0	2.6	3.9	3.0	4.0
7.....	3.15	2.95	2.75	2.1	2.3	2.6	1.8	1.95	2.5	3.95	2.95	3.85
8.....	2.85	2.75	3.4	2.0	2.3	2.55	1.8	2.0	3.2	4.25	2.6	3.6
9.....	2.65	2.55	2.25	2.0	2.3	2.45	1.8	1.85	2.7	4.4	2.4	3.6
10.....	2.55	2.4	2.2	2.0	2.35	2.45	1.7	1.8	3.45	4.55	2.4	3.5
11.....	2.45	2.3	2.2	2.0	2.25	2.45	1.7	2.05	3.25	4.6	2.5	5.15
12.....	2.5	2.2	2.2	2.0	2.2	2.4	1.7	3.65	3.5	4.65	2.4	3.2
13.....	3.0	2.2	2.2	2.0	2.1	2.4	1.75	4.3	10.55	4.45	2.35	3.0
14.....	2.9	2.1	2.2	2.05	2.75	2.3	1.65	2.85	12.0	4.35	2.3	2.85
15.....	2.85	2.1	2.2	2.15	2.95	2.3	1.65	2.4	7.55	4.1	2.45	2.8

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	2.75	2.15	2.2	2.55	2.9	2.3	1.6	2.35	5.95	4.05	2.7	3.2
17.....	2.65	2.2	2.2	2.55	2.8	2.3	1.6	6.1	5.1	3.85	2.7	3.6
18.....	2.55	2.1	2.1	2.4	2.75	2.3	1.6	4.45	4.65	3.65	2.65	3.2
19.....	2.5	2.1	2.15	2.4	2.7	2.2	1.6	3.2	4.4	3.55	2.4	3.3
20.....	2.5	2.1	2.2	2.3	2.65	2.2	1.6	2.5	4.2	3.4	2.4	3.15
21.....	2.5	2.4	2.2	2.3	2.6	2.4	1.8	2.85	4.25	3.3	2.5	3.05
22.....	2.45	2.1	2.2	2.3	2.6	2.2	1.85	3.3	4.3	3.15	2.5	3.1
23.....	2.4	2.1	2.15	2.3	2.5	2.05	1.8	2.9	4.35	3.15	3.35	3.2
24.....	2.4	2.1	2.15	2.3	2.5	2.0	1.75	2.9	4.35	3.05	3.1	2.95
25.....	2.3	2.25	2.2	2.3	2.55	2.0	1.7	2.75	4.2	2.9	3.0	3.0
26.....	2.3	2.2	2.15	2.3	2.7	2.0	1.65	2.6	4.2	2.9	3.0	3.2
27.....	2.3	2.0	2.1	2.3	2.6	1.95	1.8	2.6	4.15	2.75	2.85	3.95
28.....	2.3	2.2	2.1	2.25	2.9	1.9	1.85	2.6	4.15	2.6	2.7	4.3
29.....	2.2	2.15	2.1	2.2	.....	1.9	5.4	2.6	4.15	2.6	3.05	4.15
30.....	2.2	2.15	2.1	2.2	.....	1.9	3.55	3.05	4.1	3.0	3.8	3.95
31.....	2.2	.....	2.1	2.2	.....	1.9	.....	2.55	.....	2.8	3.2	.....
1903-4.												
1.....	3.95	2.35	2.0	2.0	1.8	1.8	1.6	1.4	2.7	3.9	1.85	2.4
2.....	4.25	2.3	2.0	2.0	1.8	1.8	1.75	1.4	2.7	3.2	1.8	2.25
3.....	4.7	2.3	2.0	2.0	1.8	1.8	1.9	1.4	2.2	2.8	1.75	2.1
4.....	4.5	2.3	2.0	2.0	1.8	1.8	1.95	1.4	2.0	2.5	1.65	2.5
5.....	4.9	2.3	2.0	1.9	1.8	1.8	1.8	1.4	1.9	2.5	1.7	2.45
6.....	4.85	2.2	2.0	1.9	1.8	1.8	1.8	1.4	2.75	2.35	1.85	2.35
7.....	4.2	2.2	2.0	1.9	1.8	1.8	1.8	1.7	2.7	2.15	2.0	7.1
8.....	3.95	2.2	2.0	1.9	1.8	1.8	1.7	1.5	3.85	2.0	2.2	6.65
9.....	3.75	2.2	2.0	1.9	1.8	1.8	1.7	1.45	3.45	2.0	1.95	8.0
10.....	3.55	2.2	2.0	1.9	1.8	1.8	1.6	1.4	2.4	2.1	2.1	7.0
11.....	3.45	2.2	2.0	1.9	1.8	1.75	1.6	1.35	3.5	1.9	1.75	6.85
12.....	3.3	2.2	2.0	1.9	1.8	1.7	1.6	1.3	3.65	1.8	1.5	9.3
13.....	3.15	2.2	2.0	1.9	1.8	1.7	1.6	1.3	3.45	1.65	1.65	12.1
14.....	3.05	2.2	2.0	1.9	1.8	1.7	1.6	1.4	2.75	1.6	1.5	18.15
15.....	2.9	2.2	2.0	1.9	1.8	1.7	1.6	1.5	2.9	1.6	1.5	23.1
16.....	2.85	2.2	2.0	1.9	1.8	1.7	1.5	1.6	2.55	1.6	1.45	22.6
17.....	2.7	2.2	2.0	1.9	1.8	1.7	1.65	1.6	2.3	1.55	1.45	13.75
18.....	2.7	2.1	2.0	1.9	1.8	1.65	1.55	1.55	2.15	1.5	1.4	10.0
19.....	2.7	2.05	2.0	1.9	1.8	1.6	1.5	1.5	2.0	1.5	1.35	9.05
20.....	2.65	2.0	2.0	1.9	1.8	1.6	1.5	1.4	1.85	1.7	1.5	8.75
21.....	2.6	2.0	2.0	1.9	1.8	1.6	1.4	1.4	1.7	1.9	1.4	9.2
22.....	2.6	2.0	2.0	1.9	1.8	1.6	1.4	1.4	2.25	1.85	1.4	10.7
23.....	2.6	2.0	2.0	1.9	1.8	1.6	1.9	1.4	2.95	2.2	1.6	10.55
24.....	2.6	2.0	2.0	1.8	1.8	1.6	1.55	1.4	2.75	4.1	1.55	8.5
25.....	2.55	2.0	2.0	1.8	1.8	1.6	1.5	2.45	2.55	3.4	1.55	6.85
26.....	2.45	2.0	2.0	1.8	1.8	1.6	1.5	2.25	2.3	2.35	1.6	6.1
27.....	2.4	2.0	2.0	1.8	1.8	1.6	1.45	2.6	2.1	2.1	1.7	6.95
28.....	2.4	2.0	2.0	1.8	1.8	1.6	1.4	3.4	7.3	1.85	1.95	6.6
29.....	2.4	2.0	2.0	1.8	1.8	1.6	1.4	3.75	8.5	2.15	2.1	6.45
30.....	2.4	2.0	2.0	1.8	.....	1.6	1.4	4.7	5.15	2.05	2.3	6.15
31.....	2.4	.....	2.0	1.8	.....	1.6	.....	3.3	.....	1.9	2.4	.....
1904-5.												
1.....	6.55	6.3	3.3	3.0	3.0	3.2	5.8	4.65	5.0	14.0	6.45	4.45
2.....	6.35	6.4	3.6	3.3	3.0	3.2	7.1	4.5	5.05	13.0	6.05	4.25
3.....	5.95	6.4	3.6	3.3	3.0	3.1	4.65	4.4	5.1	11.0	6.0	4.4
4.....	5.7	5.7	3.6	3.2	2.8	3.2	4.0	4.35	5.0	10.2	5.95	4.35
5.....	5.95	5.5	3.6	3.2	2.8	3.4	3.8	4.5	4.9	6.9	5.6	4.0
6.....	5.35	5.35	3.6	3.1	2.75	3.4	3.8	4.6	4.95	6.3	5.45	3.9
7.....	5.15	5.7	4.35	3.1	2.7	3.5	3.8	4.45	5.1	6.2	5.35	3.75
8.....	5.1	5.4	4.45	3.1	2.7	3.95	3.8	4.5	5.3	6.15	5.4	3.75
9.....	5.2	5.3	4.4	3.1	2.9	4.05	3.7	4.6	5.8	5.95	5.45	4.15
10.....	5.2	5.05	4.4	3.1	2.9	5.45	3.6	5.4	6.0	4.85	5.65	4.45
11.....	5.45	4.85	4.25	3.1	2.9	4.8	3.8	4.6	5.85	4.55	5.55	5.9
12.....	6.1	4.7	4.1	3.1	2.9	4.2	3.85	4.4	5.95	4.4	5.4	7.2
13.....	6.35	4.65	3.9	3.1	2.9	4.0	3.7	4.3	6.35	4.15	5.7	5.65
14.....	7.25	4.55	3.9	3.1	2.8	4.0	3.7	4.4	6.7	3.95	6.5	5.8
15.....	8.8	4.4	3.8	3.0	2.8	4.2	3.6	4.9	6.95	3.75	6.25	5.95
16.....	8.6	4.45	3.8	3.0	2.8	5.5	3.55	4.7	7.2	3.55	5.7	5.45
17.....	8.5	4.3	4.0	3.0	2.8	4.6	3.5	4.4	7.4	4.0	5.9	5.25
18.....	8.55	4.3	4.0	2.9	2.8	4.6	3.4	4.4	7.4	4.0	6.25	5.3
19.....	8.75	4.2	4.05	2.9	2.8	4.6	3.3	4.3	7.4	3.95	6.0	5.65
20.....	9.2	4.1	4.0	2.8	2.8	4.5	3.3	4.55	7.2	4.8	6.15	5.4

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	8.7	4.0	3.95	2.8	2.8	4.65	3.35	4.5	7.45	5.0	6.65	4.85
22.....	8.45	3.9	3.9	2.8	2.8	4.7	3.55	4.7	7.2	4.7	7.0	4.55
23.....	8.5	3.85	3.9	2.8	3.0	4.65	3.5	4.65	7.1	5.3	5.95	4.3
24.....	7.95	3.8	3.8	2.8	3.15	4.5	5.35	5.15	7.0	4.5	5.5	4.2
25.....	8.05	3.8	3.7	2.75	3.4	4.4	4.8	5.65	7.0	4.9	5.35	4.0
26.....	7.35	3.8	3.6	2.7	3.4	4.3	4.55	6.9	6.95	6.7	5.55	5.95
27.....	6.9	3.7	3.45	2.7	3.3	4.15	4.0	5.35	6.9	5.85	5.8	7.15
28.....	6.45	3.7	3.4	2.95	3.2	4.2	4.4	5.6	6.45	5.25	5.75	7.8
29.....	6.1	3.65	3.4	3.2	.....	4.1	4.05	5.0	16.8	5.65	5.35	8.1
30.....	5.85	3.6	3.4	3.1	.....	4.05	4.65	4.8	25.4	6.3	4.95	6.3
31.....	6.1	.....	3.3	3.05	.....	4.0	.....	4.85	.....	6.7	4.75	.....
1905-6.												
1.....	5.8	3.0	3.5	3.7	2.85	3.8	2.6	3.8	3.85	3.8	6.25	11.35
2.....	5.9	3.0	3.4	3.65	2.9	3.7	2.0	2.6	3.9	3.6	5.85	10.85
3.....	6.3	3.35	3.3	3.65	2.85	3.45	2.0	2.35	3.9	3.4	5.7	10.0
4.....	6.8	3.3	3.35	3.6	2.8	3.35	2.0	2.35	5.1	3.4	5.6	9.2
5.....	6.2	3.15	3.5	3.6	2.8	3.2	2.0	2.6	5.85	3.2	6.1	8.15
6.....	5.5	2.95	4.6	3.5	2.8	3.25	2.0	2.7	4.65	3.2	6.75	8.05
7.....	5.3	2.85	4.45	3.4	2.8	3.4	2.0	2.7	4.3	4.1	8.6	7.15
8.....	5.85	2.85	4.3	3.3	2.8	3.1	2.0	3.0	4.2	5.5	8.9	7.1
9.....	6.3	2.8	4.2	3.3	2.8	2.95	2.0	3.0	3.95	6.55	9.55	6.65
10.....	5.7	2.7	3.85	3.3	2.7	2.9	2.0	3.0	3.9	6.4	10.35	6.3
11.....	5.1	2.7	3.8	3.2	2.7	2.8	2.0	3.0	3.8	6.25	10.8	6.0
12.....	4.8	2.85	3.75	3.2	3.05	2.8	2.0	3.0	3.7	6.45	14.0	5.7
13.....	4.55	2.9	3.8	3.15	3.6	2.7	2.0	2.95	3.7	6.45	19.7	5.45
14.....	4.45	3.75	3.7	3.0	3.8	2.7	2.0	2.9	3.6	6.4	15.0	5.15
15.....	4.25	4.55	3.6	3.0	4.1	2.7	2.0	2.9	3.3	6.2	10.7	4.95
16.....	4.1	5.4	3.6	3.0	4.15	2.7	2.0	2.75	3.2	6.0	9.45	4.85
17.....	3.85	4.95	3.6	3.0	3.95	2.6	2.0	2.7	3.25	6.2	8.25	4.7
18.....	3.65	4.75	3.55	3.0	3.85	2.6	2.0	2.8	3.25	5.95	8.3	4.7
19.....	3.6	4.95	3.45	2.95	3.8	2.5	2.0	3.15	3.2	7.0	7.4	4.65
20.....	3.55	4.95	4.6	2.9	3.7	2.4	2.0	3.5	3.4	7.25	6.8	4.7
21.....	3.7	4.85	4.85	2.9	3.7	2.35	2.0	3.7	3.4	7.65	6.45	4.75
22.....	3.5	4.9	4.8	2.9	4.5	2.3	2.0	3.1	3.2	7.85	6.25	4.85
23.....	3.4	4.65	4.7	2.8	4.4	2.3	2.0	3.2	3.2	8.0	6.45	5.35
24.....	3.35	4.35	4.65	2.8	4.2	2.3	2.0	3.35	3.1	7.4	7.9	4.8
25.....	3.3	4.15	5.3	2.8	4.2	2.3	2.0	3.4	3.1	7.15	8.2	4.45
26.....	3.2	4.0	4.95	2.8	4.15	2.3	2.0	3.6	3.3	7.65	8.0	4.7
27.....	3.2	3.75	4.65	2.8	3.95	2.2	2.05	3.55	3.3	7.7	8.1	4.8
28.....	3.15	3.7	4.35	2.8	3.9	2.2	2.25	3.6	3.35	7.9	10.25	4.85
29.....	3.1	3.6	4.2	2.8	.....	2.15	2.35	3.6	3.4	8.65	9.7	4.7
30.....	3.0	3.55	4.3	2.7	.....	2.1	2.3	3.65	3.4	8.4	10.25	4.5
31.....	3.05	.....	3.85	2.7	.....	2.0	.....	3.7	.....	6.35	10.7	.....
1906-7.												
1.....	4.15	3.1	3.2	2.8	3.0	2.7	2.1	3.35	2.9	4.2	3.6	3.3
2.....	4.1	3.0	3.25	2.8	3.0	2.6	2.1	3.4	3.0	4.2	3.65	3.35
3.....	4.0	3.0	3.3	2.8	3.0	2.5	2.0	3.4	3.15	4.4	3.7	4.05
4.....	3.9	3.0	3.3	2.7	3.0	2.4	2.0	3.3	3.2	4.3	3.35	4.7
5.....	3.9	3.0	3.3	2.7	3.0	2.4	2.0	3.2	3.3	4.3	3.3	4.3
6.....	3.85	3.0	3.2	2.7	3.1	2.4	2.0	3.1	3.3	4.3	3.3	4.75
7.....	3.8	3.0	3.1	2.7	3.0	2.4	2.4	3.0	3.1	4.05	3.35	4.9
8.....	3.8	3.0	3.1	2.7	2.9	2.4	2.4	3.1	3.5	3.95	3.45	4.8
9.....	3.8	2.9	3.1	2.7	2.8	2.5	2.4	2.95	3.65	3.8	3.45	5.0
10.....	3.75	2.9	3.25	2.7	2.9	2.5	2.4	2.9	3.8	3.75	3.25	5.25
11.....	3.6	2.9	3.45	2.7	2.85	2.4	2.35	2.95	3.9	3.7	3.2	5.6
12.....	3.5	2.9	3.5	2.7	2.7	2.45	2.25	3.0	3.95	3.8	3.0	5.65
13.....	3.5	2.9	3.5	2.7	2.7	2.5	2.25	3.0	4.1	4.0	3.0	5.1
14.....	3.75	2.75	3.4	2.7	2.7	2.5	2.25	2.9	3.9	4.4	3.05	4.6
15.....	3.5	3.0	3.6	2.7	2.6	2.45	2.2	2.9	3.7	4.2	3.0	4.5
16.....	3.4	2.9	3.55	2.7	2.6	2.4	2.3	2.9	3.6	3.95	3.0	4.45
17.....	3.45	2.9	3.45	2.7	2.7	2.4	2.3	2.9	3.7	3.9	3.05	4.25
18.....	3.35	2.9	3.4	3.0	2.6	2.3	2.2	2.9	3.9	3.95	2.95	4.35
19.....	3.3	3.0	3.4	3.0	2.65	2.3	2.15	2.8	4.65	3.95	2.9	4.15
20.....	3.3	3.0	3.4	2.9	2.7	2.25	2.2	3.0	4.25	3.9	2.6	4.1
21.....	3.3	3.0	3.4	2.9	2.7	2.2	2.2	3.0	4.25	3.7	2.55	6.1
22.....	3.3	3.0	3.4	2.9	2.7	2.2	2.2	2.8	4.5	3.6	2.5	5.85
23.....	3.2	3.0	3.3	2.9	2.7	2.15	2.2	2.7	4.65	3.55	2.5	5.65
24.....	3.2	3.0	3.3	2.9	2.65	2.1	2.2	2.7	4.35	3.6	2.5	5.05
25.....	3.2	3.0	3.25	2.9	2.6	2.1	2.15	2.7	4.2	3.4	2.5	5.0

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	3.2	3.05	3.2	2.9	2.6	2.1	2.1	2.8	4.1	3.55	2.4	4.6
27.....	3.2	3.1	3.1	2.9	2.6	2.1	2.5	2.85	4.1	3.65	2.4	4.4
28.....	3.15	3.2	3.1	2.85	2.5	2.1	2.8	2.9	4.1	3.3	3.65	4.4
29.....	3.1	3.2	3.0	2.8	.....	2.25	3.15	2.9	4.1	3.5	3.45	4.4
30.....	3.1	3.25	3.0	2.8	.....	2.1	3.3	2.9	4.1	3.55	3.3	4.3
31.....	3.1	.....	2.9	3.2	.....	2.1	.....	2.9	.....	3.5	3.25	.....
1907-8.												
1.....	4.3	3.5	3.4	3.1	2.4	2.1	1.7	2.5	2.2	1.6	3.7	4.65
2.....	3.0	3.4	3.4	3.1	2.35	2.1	1.7	2.65	2.2	1.55	3.5	4.6
3.....	3.9	3.85	4.55	3.0	2.3	2.1	1.75	2.7	2.35	1.5	3.05	6.05
4.....	3.9	3.85	6.45	3.0	2.3	2.1	1.85	2.6	2.3	1.5	3.05	6.55
5.....	4.7	3.85	5.4	3.0	2.3	2.1	1.9	2.55	2.3	1.5	5.6	6.9
6.....	4.4	4.0	5.05	2.95	2.3	2.1	1.85	2.45	2.7	1.35	6.7	6.7
7.....	3.65	4.0	4.85	2.9	2.3	2.0	1.8	2.4	2.6	1.2	5.45	6.85
8.....	3.55	4.0	4.75	2.85	2.3	2.0	1.8	2.4	2.5	4.9	5.8	6.9
9.....	3.45	6.4	4.6	2.8	2.45	1.9	1.8	2.3	2.5	3.25	4.95	6.2
10.....	3.15	7.4	4.4	2.8	2.4	1.9	1.85	2.3	2.45	3.35	6.55	5.4
11.....	2.9	6.15	4.3	2.8	2.4	1.9	1.85	2.3	2.25	3.2	4.1	4.9
12.....	2.9	5.55	4.35	2.75	2.4	1.9	2.6	2.3	2.2	2.1	3.4	4.8
13.....	2.9	5.0	4.3	2.7	2.35	1.85	2.4	2.2	2.2	2.25	5.7	5.7
14.....	2.85	4.6	4.2	2.7	2.3	1.8	2.1	2.15	2.2	2.0	7.2	5.5
15.....	2.8	4.3	4.1	2.65	2.3	1.8	2.05	2.0	2.2	1.8	7.85	5.25
16.....	2.7	4.3	3.9	2.6	2.3	1.8	2.0	2.0	2.1	1.7	7.45	4.8
17.....	2.7	4.05	3.8	2.6	2.25	1.8	2.0	2.15	1.95	1.8	7.15	4.35
18.....	2.7	3.9	3.6	2.6	2.2	1.7	2.2	2.3	1.75	1.75	5.3	4.0
19.....	2.7	3.7	3.5	2.55	2.2	1.7	4.45	2.25	1.7	1.65	4.5	3.75
20.....	2.7	3.6	3.5	2.5	2.2	1.7	4.4	2.2	1.7	1.6	4.25	3.5
21.....	2.7	3.6	3.45	2.5	2.2	1.7	3.45	2.2	1.7	1.6	4.3	3.35
22.....	2.65	3.6	3.4	2.5	2.2	1.7	2.7	2.1	1.65	1.6	4.2	3.2
23.....	2.6	3.5	3.3	2.5	2.25	1.7	2.15	4.45	1.55	3.2	4.2	3.0
24.....	2.6	3.4	3.3	2.5	2.15	1.7	2.1	8.9	1.5	2.05	4.1	2.85
25.....	2.6	3.3	3.25	2.5	2.1	1.7	2.1	4.9	3.8	1.65	3.9	2.6
26.....	3.35	3.2	3.2	2.5	2.1	1.7	2.1	3.55	2.5	4.1	4.2	2.55
27.....	3.2	3.25	3.2	2.5	2.1	1.7	2.05	2.85	2.15	3.75	4.65	2.5
28.....	3.35	3.5	3.1	2.5	2.1	1.7	2.0	2.6	1.85	2.95	4.2	2.4
29.....	3.6	3.4	3.1	2.5	2.1	1.8	2.0	2.35	1.75	2.65	4.1	2.3
30.....	3.85	3.4	3.1	2.5	.....	1.7	2.0	2.3	1.65	3.5	4.7	2.3
31.....	3.5	.....	3.1	2.5	.....	1.7	.....	2.25	.....	3.95	4.25	.....
1908-9.												
1.....	2.3	1.5	1.5	1.4	1.4	1.2	.9	.9	2.9	2.9	4.6	2.45
2.....	2.3	1.5	1.5	1.4	1.4	1.2	.9	.7	3.1	2.8	4.4	2.4
3.....	2.25	1.5	1.5	1.4	1.4	1.2	.9	.7	3.15	2.8	4.3	2.6
4.....	2.1	1.5	1.5	1.4	1.4	1.2	.9	.7	2.9	2.9	4.3	2.55
5.....	2.1	1.5	1.4	1.4	1.1	1.1	.9	.7	2.95	2.9	4.8	4.25
6.....	2.05	1.5	1.5	1.4	1.4	1.1	.9	1.1	2.8	3.0	4.3	5.35
7.....	2.2	1.5	1.5	1.4	1.4	1.1	.9	1.9	2.4	3.7	4.0	4.4
8.....	2.55	1.5	1.5	1.4	1.35	1.1	.9	1.75	2.3	3.05	4.35	4.0
9.....	2.45	1.5	1.5	1.4	1.3	1.1	.9	1.55	2.25	3.1	4.25	3.5
10.....	2.4	1.5	1.4	1.4	1.3	1.1	.9	1.4	2.25	4.5	3.85	3.5
11.....	2.15	1.5	1.5	1.4	1.3	1.25	.9	1.4	2.2	5.45	3.65	3.25
12.....	1.95	1.5	1.5	1.4	1.3	1.4	.8	1.4	2.2	5.3	3.45	2.8
13.....	1.85	1.5	1.5	1.4	1.3	1.35	.8	1.6	2.2	5.35	3.75	2.7
14.....	1.8	1.5	1.4	1.4	1.3	1.3	.8	1.6	2.65	5.3	3.9	2.7
15.....	1.8	1.5	1.4	1.4	1.4	1.25	.8	1.55	2.45	5.6	4.0	5.55
16.....	1.7	1.5	1.4	1.4	1.35	1.1	.8	1.5	2.0	5.4	3.85	3.1
17.....	1.65	1.5	1.4	1.4	1.3	1.0	.8	1.5	2.1	4.7	4.1	4.1
18.....	1.6	1.5	1.4	1.4	1.25	1.0	.8	1.45	2.2	4.4	4.0	4.5
19.....	1.6	1.5	1.4	1.4	1.2	1.0	.8	1.55	2.7	4.3	4.0	4.5
20.....	1.6	1.5	1.4	1.4	1.2	1.05	.8	1.95	2.75	4.0	4.65	5.2
21.....	1.6	1.5	1.4	1.4	1.2	1.0	.8	2.35	2.95	3.7	4.9	4.35
22.....	1.6	1.5	1.4	1.2	1.2	1.0	.8	2.65	2.85	3.4	4.9	5.0
23.....	1.6	1.5	1.4	1.4	1.2	1.0	.8	2.7	2.95	5.9	4.2	4.8
24.....	1.6	1.5	1.4	1.4	1.2	1.4	.8	2.85	3.1	8.0	3.85	4.25
25.....	1.6	1.5	1.4	1.4	1.2	1.15	.8	2.8	3.4	4.5	3.65	4.0
26.....	1.6	1.5	1.4	1.4	1.2	1.05	.8	2.95	3.25	4.0	3.4	3.85
27.....	1.6	1.5	1.4	1.4	1.2	.95	1.55	2.9	3.2	3.4	3.15	3.6
28.....	1.6	1.5	1.4	1.4	1.2	.9	1.65	2.95	3.0	3.55	3.35	3.45
29.....	1.6	1.5	1.4	1.4	.....	.9	.9	2.9	3.05	3.6	3.2	3.35
30.....	1.6	1.5	1.4	1.4	.....	.9	.9	2.95	2.95	3.5	2.9	3.0
31.....	1.55	.....	1.4	1.4	.....	.9	.....	2.9	.....	4.3	2.65	.....

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.
1909-10.												
1.....	3.0	1.5	1.4	2.65	1.5	1.0	1.9	1.5	2.55	2.4	0.75	2.05
2.....	2.6	1.5	1.4	3.1	1.5	1.0	1.7	1.5	2.45	2.4	.7	1.85
3.....	2.6	1.5	1.4	2.85	1.5	1.0	1.7	1.5	2.3	2.4	.7	1.7
4.....	2.55	1.5	1.35	2.8	1.5	1.0	1.7	1.5	2.1	2.5	.65	1.6
5.....	2.45	1.4	1.35	2.3	1.5	1.0	1.7	1.5	2.0	2.95	.6	1.6
6.....	2.4	1.4	1.3	2.0	1.45	1.0	1.7	1.5	2.0	2.7	.6	1.4
7.....	2.35	1.3	1.3	2.0	1.4	1.0	1.7	1.75	1.95	2.6	.6	10.2
8.....	2.25	1.3	1.2	2.0	1.4	1.0	1.8	2.35	1.7	2.8	.6	4.4
9.....	2.2	1.3	1.2	1.9	1.3	.9	5.1	2.5	1.45	2.7	.6	2.95
10.....	2.0	1.3	1.2	1.9	1.3	.9	3.35	2.5	1.25	2.3	.6	2.7
11.....	2.0	1.3	1.2	1.8	1.3	.9	2.3	2.5	1.2	2.3	.6	2.3
12.....	2.0	1.3	1.2	1.8	1.3	.8	2.0	2.5	1.2	1.8	.6	1.6
13.....	2.0	1.35	1.2	1.75	1.3	.8	2.0	2.5	1.2	1.65	.6	2.25
14.....	2.0	1.3	1.2	1.7	1.3	.8	2.25	2.5	1.1	1.5	.6	2.5
15.....	2.0	1.3	1.2	1.7	1.3	.8	1.85	2.6	1.05	1.05	.6	2.9
16.....	2.0	1.35	1.2	1.7	1.3	.8	1.5	2.7	1.0	1.5	.6	2.7
17.....	1.7	1.4	1.2	1.85	1.25	.8	1.5	3.25	1.0	1.5	.6	2.5
18.....	1.7	1.4	1.2	2.0	1.2	.8	1.5	3.1	1.0	1.5	.6	2.3
19.....	1.7	1.4	1.2	1.95	1.2	2.55	1.5	3.1	1.0	1.5	.6	2.25
20.....	1.7	1.5	1.2	1.85	1.2	1.3	1.5	4.25	1.0	1.5	.6	1.6
21.....	1.65	1.4	1.2	1.8	1.2	1.3	1.4	4.55	1.0	1.5	.6	1.6
22.....	1.6	1.4	1.2	1.8	1.2	1.5	1.4	3.1	1.0	1.5	.6	1.6
23.....	1.5	1.4	1.2	1.75	1.2	1.5	1.3	2.7	1.0	1.5	.6	1.6
24.....	1.5	1.4	1.2	1.7	1.2	1.55	1.3	2.6	1.0	1.2	.6	1.6
25.....	1.5	1.4	1.2	1.7	1.2	1.5	1.3	2.65	1.0	1.2	.75	3.1
26.....	1.5	1.4	1.2	1.7	1.2	1.5	1.2	2.7	1.0	1.2	1.3	2.8
27.....	1.5	1.4	1.2	1.5	1.2	1.5	1.2	2.7	1.0	1.2	1.4	2.5
28.....	1.5	1.4	1.2	1.5	1.2	1.5	1.2	2.5	2.4	1.2	1.75	2.3
29.....	1.5	1.4	1.2	1.5	-----	1.5	1.2	2.5	4.1	1.2	1.85	2.1
30.....	1.5	1.4	1.2	1.5	-----	2.95	1.35	2.5	3.0	1.2	1.75	2.0
31.....	1.5	-----	1.2	1.5	-----	2.25	-----	2.6	-----	.95	2.3	-----
1910-11.												
1.....	2.0	.8	.7	.7	.7	1.7	1.0	1.6	3.45	2.3	4.9	2.95
2.....	2.15	.8	.7	.7	.7	1.7	1.0	1.6	3.3	2.3	5.35	2.05
3.....	1.9	.8	.7	.7	.7	1.7	1.0	2.0	2.9	2.3	5.05	1.9
4.....	2.05	.8	.7	.7	.7	1.7	3.25	1.45	2.7	2.3	5.2	2.1
5.....	3.2	.8	.7	.7	.7	1.7	3.85	1.35	2.5	2.3	5.15	2.75
6.....	2.2	.8	.7	.7	.7	1.65	2.85	1.0	2.5	2.3	5.4	3.45
7.....	1.75	.8	.7	.7	.7	1.6	2.55	.8	2.25	2.3	5.25	3.0
8.....	1.55	.7	.7	.7	.7	1.45	2.2	.8	1.9	2.3	4.4	3.05
9.....	1.5	.7	.7	.7	.7	1.35	2.0	.8	1.8	3.5	3.9	3.6
10.....	1.5	.7	.7	.7	.7	1.3	1.85	.8	.8	3.0	3.8	3.5
11.....	1.5	.7	.7	.7	.7	1.2	1.0	.8	1.7	2.75	3.7	3.5
12.....	1.5	.7	.7	.7	.7	1.1	1.0	.8	1.6	4.9	3.7	3.4
13.....	1.5	.7	.7	.7	.7	1.0	1.0	.8	1.55	4.6	3.5	3.4
14.....	1.5	.7	.7	.7	.7	1.0	1.0	.8	1.4	4.4	3.35	3.35
15.....	1.5	.7	.7	.7	.7	1.0	1.0	.7	1.4	4.2	3.3	3.3
16.....	1.1	.7	.7	.7	.7	1.0	1.0	3.3	3.5	3.45	3.2	3.35
17.....	1.1	.7	.7	.7	.7	1.0	1.0	7.45	5.0	3.3	3.2	3.0
18.....	1.0	.7	.7	.7	.7	1.0	1.0	4.9	4.8	4.2	3.05	2.85
19.....	1.0	.7	.7	.7	.7	1.0	1.0	4.95	3.7	5.3	3.0	2.7
20.....	1.0	.7	.7	.7	2.85	1.5	1.0	4.5	3.5	3.95	3.3	2.6
21.....	1.0	.7	.7	.7	2.05	1.5	1.0	4.5	3.2	3.8	1.7	2.2
22.....	1.0	.7	.7	.7	2.0	1.5	1.0	4.5	2.55	3.8	1.7	2.2
23.....	.9	.7	.7	.7	1.9	1.5	1.0	2.8	2.5	3.8	1.7	2.2
24.....	.9	.7	.7	.7	1.7	1.5	1.1	3.0	2.5	3.8	1.7	2.05
25.....	.9	.7	.7	.7	1.7	1.5	1.1	2.9	2.5	3.8	1.5	2.3
26.....	.9	.7	.7	.7	1.7	1.2	1.1	2.8	3.2	3.9	1.5	2.35
27.....	.9	.7	.7	.7	1.7	1.2	1.7	2.8	2.8	5.75	2.1	2.35
28.....	.9	.7	.7	.7	1.7	1.1	1.7	2.6	2.7	4.9	2.0	2.1
29.....	.9	.7	.7	.7	-----	1.1	1.7	3.25	2.4	4.55	2.05	2.8
30.....	.9	.7	.7	.7	-----	1.1	2.05	3.75	2.3	4.3	2.3	2.75
31.....	.8	-----	.7	.7	-----	1.1	-----	3.75	-----	4.5	3.65	-----
1911-12.												
1.....	2.6	3.1	1.8	1.3	1.8	1.2	1.0	1.4	2.95	3.0	1.9	4.6
2.....	2.3	3.05	1.8	1.3	1.8	1.15	.95	1.15	3.0	2.95	1.85	4.85
3.....	2.2	3.0	2.0	1.3	1.8	1.1	.9	1.0	3.0	2.9	1.8	5.8
4.....	2.2	3.0	1.95	1.3	1.7	1.1	.9	1.0	2.9	2.85	1.8	6.1
5.....	2.05	2.75	1.9	1.3	1.6	1.1	.95	1.1	2.95	2.8	1.9	5.9

Daily gage height, in feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	1.9	2.7	1.9	1.3	1.6	1.1	1.35	1.05	2.9	2.7	2.4	5.3
7.....	1.9	3.2	1.85	1.3	1.6	1.1	1.45	1.0	3.0	2.7	2.0	5.45
8.....	1.95	3.2	1.8	1.4	1.6	1.05	3.85	.95	3.05	2.7	1.9	5.3
9.....	3.5	3.0	1.8	2.1	1.6	1.0	1.75	.9	3.0	2.7	1.9	4.9
10.....	2.85	3.0	1.8	1.95	1.55	1.0	1.6	.9	3.0	2.65	2.15	4.75
11.....	2.75	3.0	1.8	1.9	1.5	1.0	1.5	.9	3.15	2.55	1.95	4.65
12.....	2.6	2.5	1.8	1.9	1.5	1.0	1.0	.9	3.8	2.45	1.7	4.5
13.....	4.75	2.5	1.7	1.9	1.6	1.0	1.0	.9	3.85	2.4	1.65	4.2
14.....	3.6	2.4	1.7	1.8	1.5	1.0	1.0	.9	4.25	2.4	1.55	5.65
15.....	3.3	2.4	1.7	1.7	1.4	1.0	1.0	.9	4.55	2.45	1.4	6.4
16.....	3.3	2.4	1.7	1.7	1.5	1.0	1.0	.9	4.6	2.35	1.4	6.7
17.....	3.45	2.35	1.6	1.7	1.45	1.0	.95	1.15	5.05	2.1	1.5	6.4
18.....	3.65	2.3	1.6	1.6	1.4	.9	1.3	2.2	11.6	1.9	1.6	6.05
19.....	3.75	2.3	1.6	1.6	1.4	.9	1.45	2.4	6.45	1.9	1.6	5.9
20.....	3.9	2.3	1.6	1.6	1.4	.9	1.6	2.4	5.55	1.75	1.75	5.85
21.....	3.8	2.2	1.6	1.7	1.4	.9	1.65	2.4	4.9	1.75	2.6	6.25
22.....	3.6	2.2	1.6	1.8	1.4	.95	1.8	2.4	4.8	1.8	2.95	5.65
23.....	3.8	2.2	1.5	1.8	1.4	.9	2.0	2.45	4.5	1.8	3.65	4.75
24.....	3.8	2.1	1.5	1.8	1.4	.9	1.7	2.6	4.4	1.8	5.35	3.9
25.....	3.7	2.1	1.45	1.8	1.4	.9	1.8	2.65	4.35	1.8	5.55	3.6
26.....	3.7	2.1	1.4	1.8	1.3	.95	1.85	2.75	4.1	2.1	5.9	3.25
27.....	3.4	2.0	1.4	1.7	1.2	1.05	1.8	2.8	3.7	1.7	5.8	3.1
28.....	3.2	2.0	1.35	1.8	1.2	1.1	1.75	2.8	3.55	1.7	5.55	3.0
29.....	3.2	2.0	1.3	1.8	1.2	1.05	1.6	2.75	2.9	1.7	5.4	3.15
30.....	3.2	2.0	1.3	1.8	.....	1.0	1.4	2.6	3.0	1.75	5.3	4.45
31.....	3.2	.....	1.3	1.8	.....	1.0	.....	2.55	.....	1.9	4.65	.....
1912-13.												
1.....	3.4	1.65	1.4	1.8	1.2	2.0	1.3	1.1	1.25	3.1	1.4	1.6
2.....	2.85	1.6	1.5	1.7	1.2	1.9	1.25	1.1	1.15	3.3	1.8	1.6
3.....	3.1	1.55	1.5	1.7	1.2	1.8	1.2	3.3	1.0	2.55	1.55	1.6
4.....	3.6	1.5	1.5	1.6	1.2	1.8	1.2	8.1	1.0	2.5	1.5	2.7
5.....	3.8	1.5	1.5	1.6	1.2	1.8	1.15	6.95	1.0	2.5	1.4	3.2
6.....	3.6	1.4	1.5	1.6	1.2	1.8	1.1	6.35	1.5	2.35	1.25	2.2
7.....	3.5	1.4	1.5	1.6	1.2	2.05	1.1	3.8	1.4	2.3	1.25	2.0
8.....	3.8	1.4	1.6	1.6	1.2	2.25	1.15	2.9	1.85	2.15	1.4	2.0
9.....	3.55	1.4	1.6	1.6	1.2	2.45	1.1	2.5	3.05	1.9	1.4	2.7
10.....	3.45	1.4	1.6	1.5	1.2	2.6	1.1	2.05	1.9	1.9	1.3	3.1
11.....	3.5	1.4	1.6	1.5	1.25	2.55	1.05	1.9	1.65	1.85	1.25	3.45
12.....	4.05	1.3	1.65	1.5	1.35	2.4	1.0	1.9	1.4	1.8	1.2	3.7
13.....	3.7	1.3	1.7	1.5	1.3	2.35	1.0	1.75	2.25	1.8	1.15	3.8
14.....	3.15	1.3	1.7	1.5	1.3	2.3	1.0	1.6	1.9	1.7	1.05	3.65
15.....	2.75	1.3	1.7	1.4	1.3	2.2	.9	1.5	1.35	1.55	1.0	3.45
16.....	3.1	1.3	1.6	1.4	1.3	2.1	.9	1.5	1.3	1.4	1.0	3.15
17.....	2.8	1.55	1.6	1.4	1.2	2.0	.9	1.7	1.6	1.35	1.1	2.95
18.....	2.5	1.75	1.6	1.4	1.2	1.9	.9	1.65	2.0	1.3	1.6	2.8
19.....	2.3	2.0	1.6	1.4	2.2	1.85	.9	1.6	1.95	1.3	1.55	2.65
20.....	2.25	1.75	1.6	1.4	3.05	1.8	.9	1.8	2.6	1.3	1.4	2.5
21.....	2.2	1.6	1.6	1.4	2.9	1.7	.9	1.5	4.05	1.2	1.5	2.25
22.....	2.15	1.5	1.6	1.4	2.65	1.7	.9	1.5	3.25	1.2	1.4	2.15
23.....	2.1	1.5	1.65	1.4	2.5	1.65	.95	1.5	3.0	1.15	1.85	2.0
24.....	2.0	1.5	1.7	1.3	2.3	1.6	1.25	1.5	8.45	1.1	2.25	2.3
25.....	1.95	1.5	1.95	1.3	2.25	1.55	4.95	1.4	4.8	1.1	2.0	2.3
26.....	1.85	1.5	1.95	1.3	2.25	1.5	2.3	1.4	3.9	1.1	1.8	3.35
27.....	1.8	1.5	1.8	1.45	2.1	1.45	1.75	1.4	3.45	1.1	1.8	3.65
28.....	1.8	1.5	1.8	1.4	2.1	1.45	1.7	1.4	3.3	1.1	1.65	2.7
29.....	1.75	1.4	1.8	1.3	.....	1.4	1.35	1.4	3.1	1.1	2.05	1.95
30.....	1.7	1.4	1.8	1.3	.....	1.35	1.15	1.3	2.85	1.35	2.4	1.75
31.....	1.7	.....	1.8	1.2	.....	1.3	.....	1.3	.....	1.45	1.75	.....

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.	
1900.						1900.						
1.....	5,050	5,180	4,740	12,980	11,010	16.....	20,000	6,250	16,730	11,630	9,330	
2.....	4,650	5,180	4,450	12,320	5,910	17.....	10,500	7,500	13,700	10,160	9,050	
3.....	4,350	5,100	4,740	12,060	7,910	18.....	7,800	6,800	13,350	9,920	8,480	
4.....	4,150	8,000	5,600	14,120	5,910	19.....	7,800	5,700	10,000	8,680	7,070	
5.....	3,850	6,600	6,220	13,430	7,690	20.....	7,300	5,000	8,230	8,190	7,360	
6.....	3,750	6,100	8,000	16,360	15,670	21.....	7,300	5,330	6,540	10,340	6,510	
7.....	6,250	6,250	6,830	14,340	11,670	22.....	13,100	4,800	5,850	10,510	17,150	
8.....	4,500	5,870	6,220	15,230	8,200	23.....	12,000	4,700	5,760	9,850	50,090	
9.....	3,750	6,500	4,450	32,560	6,510	24.....	11,700	4,700	5,650	9,570	45,090	
10.....	4,150	5,050	3,430	24,930	5,400	25.....	11,300	4,850	5,000	7,220	40,360	
11.....	4,500	4,900	3,430	22,220	4,830	26.....	9,150	4,250	6,830	6,560	22,800	
12.....	4,500	4,900	5,300	18,530	6,510	27.....	7,020	3,500	9,780	6,990	19,160	
13.....	4,500	4,800	7,400	15,810	7,650	28.....	5,700	6,100	11,200	8,090	16,090	
14.....	24,000	5,720	16,100	13,840	10,430	29.....	5,450	4,250	10,360	7,650	14,770	
15.....	45,000	6,170	17,000	12,860	10,140	30.....	5,180	18,500	10,180	6,990	17,700	
						31.....	5,180	.....	12,600	6,370	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	15,940	6,420	4,860	3,420	2,740	2,550	2,020	3,680	3,680	1,770	4,100	2,940
2.....	13,990	7,080	4,860	3,420	2,730	2,610	2,020	3,000	5,430	1,770	5,020	3,950
3.....	15,100	6,420	4,860	3,420	2,720	2,550	2,020	3,000	4,270	1,770	4,570	3,800
4.....	15,390	5,930	4,400	3,420	2,710	2,530	2,020	3,000	4,520	1,700	4,570	3,360
5.....	11,750	5,760	4,460	3,420	2,700	2,510	2,020	2,670	4,750	1,650	5,240	2,930
6.....	10,320	5,690	4,460	3,420	2,690	2,490	2,020	2,330	4,410	1,600	4,920	2,840
7.....	10,610	5,690	4,460	3,420	2,680	2,470	1,930	2,330	4,410	1,600	4,850	2,850
8.....	10,030	5,650	4,460	3,400	2,670	2,450	1,930	2,330	4,410	1,840	5,180	2,840
9.....	9,750	5,620	4,460	3,320	2,660	2,420	1,930	4,270	4,520	1,820	5,180	21,460
10.....	9,460	5,690	4,460	3,240	2,660	2,390	2,020	3,350	4,630	1,780	5,080	7,840
11.....	8,900	5,650	4,460	3,160	2,660	2,360	2,080	2,670	4,410	1,670	4,850	6,580
12.....	8,600	5,920	4,460	3,080	2,650	2,340	2,020	2,330	4,175	1,840	4,580	5,060
13.....	7,740	5,800	4,460	3,000	2,640	2,310	2,020	2,330	3,680	1,800	4,300	5,060
14.....	7,450	5,600	4,460	2,910	2,630	2,280	1,930	2,250	3,680	1,650	4,300	8,450
15.....	6,870	5,600	4,460	2,920	2,610	2,260	1,930	2,250	3,730	2,140	4,120	5,850
16.....	6,870	5,600	4,460	2,930	2,590	2,250	1,930	2,250	3,960	1,980	3,850	7,640
17.....	6,890	5,760	4,200	2,950	2,550	2,230	1,880	2,250	3,730	1,900	3,600	5,720
18.....	8,670	5,760	3,940	2,960	2,510	2,210	1,840	2,200	3,680	2,750	3,390	4,420
19.....	7,630	5,760	3,940	2,930	2,520	2,190	1,840	2,330	3,430	3,360	3,080	4,280
20.....	10,000	5,760	3,940	2,900	2,530	2,170	1,840	3,680	3,135	2,800	3,050	5,720
21.....	11,030	4,810	3,680	2,880	2,540	2,160	1,840	3,680	2,850	2,580	4,190	7,900
22.....	8,510	4,810	3,420	2,880	2,550	2,150	1,840	3,000	2,850	2,520	4,800	8,040
23.....	7,630	4,810	3,680	2,870	2,550	2,140	1,830	3,680	2,850	2,650	4,780	6,970
24.....	6,440	4,810	3,940	2,860	2,550	2,130	1,810	3,340	2,850	2,460	4,750	6,020
25.....	6,440	4,800	3,940	2,850	2,550	2,120	1,800	3,950	2,760	2,760	4,750	5,540
26.....	7,850	4,800	3,420	2,830	2,550	2,100	1,780	3,680	2,470	3,440	4,540	4,570
27.....	7,050	4,800	3,420	2,810	2,550	2,080	1,780	3,680	2,470	3,440	3,960	4,180
28.....	7,330	4,800	3,420	2,780	2,550	2,060	1,780	4,070	1,840	3,300	3,500	3,950
29.....	6,860	4,800	3,420	2,770	.....	2,040	2,020	4,410	1,800	3,700	2,920	3,650
30.....	6,750	4,860	3,420	2,760	.....	2,030	2,300	4,410	1,770	3,800	2,850	3,480
31.....	7,050	.....	3,420	2,750	.....	2,020	.....	3,950	.....	3,800	2,800	.....
1901-2.												
1.....	3,410	4,400	2,520	2,020	1,830	1,900	1,440	1,310	1,900	1,370	12,140	11,300
2.....	3,410	3,980	2,520	2,030	1,870	1,900	1,390	1,290	1,840	4,160	10,020	13,500
3.....	3,050	3,880	2,570	2,040	1,920	1,900	1,350	1,260	1,780	2,040	8,770	9,300
4.....	3,050	3,590	2,620	2,020	1,970	1,900	1,310	6,220	1,670	1,540	7,570	8,300
5.....	3,050	3,590	2,670	2,000	1,990	1,830	1,300	8,920	1,610	1,420	7,400	10,800
6.....	3,230	3,350	2,600	1,980	2,000	1,830	1,290	3,150	1,500	1,360	6,380	15,000
7.....	3,020	3,450	2,600	1,950	2,010	1,830	1,280	2,270	1,500	1,310	5,160	15,200
8.....	2,780	3,350	2,530	1,950	2,020	1,830	1,270	1,880	1,500	1,270	6,040	18,000
9.....	2,910	3,670	2,460	2,170	2,030	1,750	1,290	1,770	1,410	1,540	5,720	26,360
10.....	7,350	4,180	2,380	2,250	2,040	1,670	1,310	1,590	1,330	1,540	4,760	30,400
11.....	4,590	4,180	2,260	2,270	2,050	1,600	1,330	1,510	1,330	2,080	4,040	32,000
12.....	3,600	4,180	2,260	2,290	2,030	1,590	1,350	1,500	1,330	3,030	3,920	27,200
13.....	3,230	4,180	2,260	2,300	2,010	1,580	1,360	1,490	1,350	2,790	3,800	25,100
14.....	2,910	4,180	2,260	2,300	1,990	1,570	1,480	1,480	2,020	7,050	4,450	21,600
15.....	2,780	4,310	2,220	2,300	1,960	1,550	2,170	1,450	1,740	7,480	9,500	16,460

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16	2,430	4,290	2,180	2,220	1,980	1,550	2,260	1,440	1,670	4,780	7,770	12,950
17	2,430	4,270	2,130	2,150	2,000	1,480	1,810	1,430	1,520	4,030	5,930	10,500
18	2,380	4,250	2,130	2,150	2,030	1,480	1,650	8,020	2,000	3,550	5,690	8,880
19	2,380	4,050	2,080	2,150	2,030	1,470	1,630	29,200	1,680	3,550	6,050	8,480
20	2,380	3,790	2,040	2,020	2,030	1,460	1,500	5,500	1,520	3,550	6,050	7,600
21	2,430	3,550	2,040	2,020	1,920	1,440	1,460	2,460	2,210	3,420	5,450	7,300
22	2,420	3,400	2,040	2,020	1,920	1,420	1,460	2,160	2,330	3,860	4,970	10,640
23	2,410	3,110	2,050	2,020	1,930	1,420	1,420	2,120	2,170	3,710	5,430	8,640
24	2,400	2,890	2,050	2,020	1,940	1,430	1,380	2,080	1,540	6,030	5,200	5,540
25	2,390	2,890	2,040	1,890	1,950	1,430	1,350	2,040	1,460	9,330	5,710	4,900
26	3,380	2,680	2,030	1,880	1,950	1,450	1,330	1,960	1,460	22,400	6,880	4,420
27	3,230	2,680	2,020	1,860	1,950	1,470	1,330	1,960	1,540	16,980	8,800	4,000
28	5,450	2,890	2,020	1,850	1,900	1,550	1,320	1,840	1,460	16,150	8,160	3,900
29	7,600	3,110	2,020	1,840	.....	1,500	1,320	1,770	1,430	17,000	6,920	3,890
30	5,810	3,000	2,010	1,830	.....	1,500	1,310	1,710	1,400	17,000	6,170	3,980
31	4,880	.....	2,010	1,830	.....	1,500	.....	2,070	.....	13,600	7,860	.....
1902-3.												
1	3,830	2,080	8,400	2,390	2,060	3,460	2,000	3,820	2,670	7,200	4,360	3,980
2	4,070	2,920	6,050	2,380	2,000	3,330	1,900	3,190	3,340	7,100	4,000	2,480
3	4,290	3,180	2,690	2,370	2,200	3,200	1,800	2,770	3,480	6,840	3,540	2,480
4	4,510	2,750	2,260	2,300	2,270	3,060	1,800	2,560	4,330	8,370	3,330	7,880
5	4,070	2,670	2,300	2,340	2,270	2,930	1,670	2,240	3,040	6,680	3,120	7,030
6	4,920	3,050	2,350	2,360	2,280	2,890	1,710	2,140	3,040	6,630	4,230	7,080
7	4,330	3,800	3,470	2,380	2,280	2,890	1,700	2,040	2,790	6,840	4,110	6,600
8	3,640	3,300	4,900	2,130	2,280	2,830	1,700	2,140	4,660	8,140	3,270	6,100
9	3,210	2,800	2,630	2,050	2,280	2,690	1,800	1,810	3,310	8,800	2,810	6,100
10	3,010	2,430	2,560	2,080	2,370	2,690	1,760	1,700	5,340	9,010	2,810	5,900
11	2,770	2,350	2,580	2,110	2,360	2,690	1,740	2,200	4,790	8,920	3,040	10,750
12	2,890	2,280	2,570	2,130	2,350	2,620	1,720	5,500	5,490	8,830	2,810	4,710
13	4,080	2,280	2,560	2,130	2,250	2,620	1,760	7,500	40,100	8,030	2,700	4,110
14	3,600	2,090	2,560	2,200	3,500	2,470	1,680	3,950	47,400	7,790	2,590	3,660
15	3,360	2,090	2,560	2,360	3,900	2,470	1,680	2,570	21,100	7,180	2,950	3,510
16	3,190	2,130	2,570	2,990	3,800	2,470	1,660	2,420	14,000	7,040	3,600	4,300
17	3,020	2,170	2,570	2,990	3,600	2,470	1,660	15,500	10,300	6,500	3,630	5,140
18	2,640	1,970	2,420	2,690	3,430	2,470	1,660	8,100	8,350	5,960	3,530	4,110
19	2,460	1,960	2,490	2,690	3,270	2,320	1,660	4,480	7,750	5,650	2,790	4,310
20	2,460	1,960	2,560	2,630	3,100	2,320	1,660	3,030	7,350	5,170	2,790	4,230
21	2,460	2,410	2,540	2,450	2,930	2,620	1,860	3,770	7,440	4,860	3,030	4,250
22	2,400	2,040	2,520	2,450	2,930	2,320	1,980	4,700	7,540	4,470	3,030	4,580
23	2,340	2,040	2,460	2,440	2,690	2,150	1,940	3,880	7,630	4,470	4,930	4,850
24	2,340	2,040	2,460	2,430	2,690	2,090	1,840	3,880	7,630	4,270	4,430	4,420
25	2,270	2,240	2,490	2,440	2,810	2,090	1,740	3,570	7,330	3,980	4,230	4,560
26	2,260	2,180	2,460	2,450	3,100	2,090	1,640	3,250	7,330	3,950	4,230	4,980
27	2,260	1,930	2,420	2,460	2,800	1,980	1,700	3,380	7,230	3,580	3,950	7,080
28	2,260	2,180	2,410	2,390	3,520	1,880	1,800	3,520	7,320	3,350	3,670	8,180
29	2,080	2,120	2,400	2,200	.....	1,880	11,200	3,400	7,410	3,350	4,280	7,730
30	2,080	2,120	2,400	2,380	.....	1,880	4,800	4,230	7,250	4,170	6,190	7,130
31	2,080	.....	2,400	2,260	.....	1,880	.....	3,050	.....	3,700	4,540	.....
1903-4.												
1	7,120	2,880	2,340	2,080	1,860	1,800	1,620	1,280	3,500	8,860	1,950	2,480
2	7,960	2,730	2,280	2,100	1,840	1,770	1,810	1,280	α 3,500	6,550	1,870	2,600
3	10,480	2,680	2,220	2,120	α 1,820	α 1,730	2,030	α 1,280	2,780	α 5,190	α 1,830	α 2,720
4	9,920	2,380	2,280	α 2,140	1,820	1,730	α 2,070	1,280	2,500	4,080	1,750	3,720
5	11,780	2,630	2,340	2,040	1,830	1,730	1,920	1,280	α 2,360	4,080	1,790	3,600
6	11,540	2,520	2,390	2,030	1,830	1,740	1,920	1,280	4,440	3,530	α 1,920	3,350
7	8,560	2,520	2,350	α 2,030	α 1,830	α 1,740	α 1,920	α 1,800	4,320	α 2,810	2,040	α 17,330
8	7,420	2,520	2,310	2,020	1,840	1,720	1,760	1,480	α 6,990	2,470	2,200	15,530
9	6,540	2,520	2,270	2,010	1,860	1,710	1,760	1,400	5,690	2,470	α 2,000	α 38,050
10	5,680	2,520	2,240	1,990	α 1,870	α 1,700	1,600	α 1,320	3,040	2,700	2,040	18,100
11	5,300	2,520	2,240	α 1,970	1,870	1,680	α 1,600	1,280	α 5,850	α 2,240	1,890	17,200
12	4,910	2,520	2,240	2,010	1,870	1,660	1,590	1,280	6,300	2,130	1,730	46,000
13	4,570	2,530	2,250	2,050	1,800	1,660	1,570	α 1,250	5,600	1,970	α 1,830	62,800
14	4,350	2,550	2,250	α 2,090	α 1,800	α 1,660	α 1,560	1,390	α 3,540	α 1,920	1,710	α 100,700
15	4,020	2,550	2,200	2,080	1,860	1,660	1,560	1,540	3,680	1,920	1,690	α 172,300
16	3,910	2,550	2,270	2,070	1,850	1,660	1,400	1,690	3,360	1,920	1,650	α 163,800
17	3,530	2,560	2,290	2,060	α 1,840	1,660	1,630	α 1,690	α 2,990	1,880	α 1,640	60,500
18	3,510	2,450	2,320	α 2,060	1,840	1,650	α 1,460	1,590	2,630	α 1,840	1,620	α 31,720
19	3,490	2,400	2,350	2,020	1,840	1,640	1,380	1,500	α 2,280	1,840	1,600	30,110
20	3,360	2,350	2,380	1,990	α 1,840	1,640	α 1,380	1,300	2,040	1,980	α 1,690	α 29,580

α Date of measurement.

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21.	3,230	2,350	2,410	a 1,960	1,840	1,640	1,280	a 1,300	1,800	a 2,130	1,660	31,220
22.	3,230	2,340	2,360	1,960	1,840	1,630	1,280	1,300	2,750	2,090	1,660	37,550
23.	3,230	2,330	2,310	1,960	a 1,830	1,630	a 1,080	1,300	a 4,500	2,730	a 1,800	a 36,920
24.	3,230	2,330	2,290	1,910	1,830	1,630	1,420	1,300	3,690	6,940	1,770	28,450
25.	3,180	2,330	2,210	a 1,910	1,840	a 1,630	1,350	a 2,570	a 3,120	a 5,260	1,770	21,680
26.	3,090	2,340	2,160	1,910	a 1,850	1,630	1,340	2,300	2,990	2,910	a 1,800	a 18,520
27.	3,050	2,360	2,110	1,910	1,850	1,630	a 1,310	2,900	2,810	a 2,390	1,830	22,000
28.	3,050	2,380	2,060	a 1,910	1,840	a 1,630	1,280	4,900	a 30,600	2,070	1,950	a 19,520
29.	3,040	2,400	2,060	1,900	a 1,840	1,620	1,280	6,220	a 34,180	2,410	a 2,020	a 16,950
30.	3,030	2,410	2,270	1,890	-----	1,620	a 1,280	10,300	12,930	a 2,280	2,170	a 13,650
31.	3,020	-----	2,070	a 1,880	-----	a 1,620	-----	4,640	-----	2,130	a 2,250	-----
1904-5.												
1.	15,400	16,100	4,430	4,290	3,230	4,130	a 15,200	9,450	11,650	75,500	16,460	8,640
2.	14,640	16,570	4,400	4,330	3,230	4,130	a 29,100	8,850	11,120	66,500	14,680	7,880
3.	11,880	16,570	4,370	a 4,370	a 3,230	3,950	9,000	8,450	a 10,590	50,500	14,460	8,330
4.	a 10,430	a 12,770	a 4,340	4,210	3,160	a 4,140	6,390	a 8,250	10,440	44,900	a 14,210	a 8,190
5.	11,600	11,800	4,340	4,210	3,160	4,500	5,790	8,690	10,290	25,100	13,390	7,210
6.	9,280	11,060	4,340	4,050	3,140	a 4,500	a 5,790	8,930	10,740	21,500	13,570	6,930
7.	a 8,640	12,770	7,640	a 4,500	a 3,130	4,750	5,790	8,160	a 11,650	20,900	a 14,000	a 6,510
8.	8,470	a 11,300	a 8,210	3,840	3,130	6,530	5,790	a 8,190	12,680	20,600	13,660	6,510
9.	8,800	10,990	7,920	3,630	3,450	a 6,930	5,500	8,490	15,240	19,400	13,330	8,080
10.	8,800	10,700	7,920	3,420	3,450	a 16,050	a 5,210	12,500	a 16,320	a 12,830	a 13,740	9,310
11.	a 10,000	a 10,320	7,070	a 3,220	a 3,450	10,400	5,600	a 8,300	15,410	10,930	13,900	a 15,230
12.	13,900	9,420	a 6,210	3,200	3,450	8,000	5,700	7,500	16,010	9,970	12,800	21,700
13.	15,400	8,780	5,480	3,180	3,450	7,400	a 5,250	7,100	a 18,450	8,370	14,450	14,120
14.	20,800	a 7,960	5,480	a 3,160	a 3,250	a 7,400	5,250	7,500	20,300	8,170	18,610	a 14,840
15.	a 31,000	7,570	5,190	3,160	3,250	8,000	5,130	a 9,990	21,620	6,480	17,510	15,400
16.	29,600	7,700	a 5,190	3,260	3,240	a 16,550	5,070	9,330	22,930	5,710	a 14,910	12,720
17.	28,560	a 7,360	5,620	a 3,370	a 3,240	8,900	a 5,010	8,340	a 23,980	a 7,210	15,640	11,540
18.	28,420	7,360	5,620	3,330	3,240	8,900	4,650	a 8,340	23,980	7,210	1,720	11,610
19.	29,170	7,050	a 5,770	3,390	3,230	a 8,900	4,300	8,330	23,980	7,020	a 16,000	a 12,180
20.	a 31,420	a 6,730	5,620	3,350	3,220	8,580	4,300	9,720	a 21,830	10,300	17,000	12,130
21.	28,420	6,250	5,440	a 3,420	a 3,210	9,070	4,480	a 9,900	23,690	a 11,080	19,750	10,110
22.	a 26,580	5,770	a 5,270	3,360	3,210	9,230	5,280	10,440	21,830	9,870	21,750	a 9,010
23.	26,780	a 5,440	5,270	3,310	3,570	a 9,010	5,080	10,310	a 21,090	12,280	a 16,660	8,550
24.	25,090	5,120	a 4,900	a 3,260	a 3,840	8,360	a 12,100	11,770	20,320	9,060	13,510	8,370
25.	a 25,640	4,960	4,850	3,210	4,320	7,930	9,570	a 14,500	20,320	a 10,500	12,760	a 7,990
26.	21,720	a 4,790	4,750	3,160	4,320	7,500	8,570	20,900	19,940	17,600	a 13,760	15,500
27.	19,240	4,630	4,600	3,160	4,220	a 6,830	a 6,370	12,900	a 19,560	14,200	15,210	25,100
28.	a 16,800	4,630	a 4,550	a 3,460	4,130	6,970	7,970	a 14,000	17,300	a 11,810	15,160	a 30,400
29.	15,160	4,550	4,520	3,460	-----	6,840	6,570	11,830	166,600	13,510	a 13,380	a 33,000
30.	13,980	a 4,470	4,490	3,470	-----	6,780	a 9,900	11,580	238,300	15,980	11,480	17,200
31.	a 15,160	-----	a 4,260	a 3,340	-----	a 6,720	-----	a 11,780	-----	a 17,580	a 10,540	-----
1905-6.												
1.	14,010	4,470	5,350	5,860	4,290	7,730	2,590	6,860	7,170	7,880	16,430	63,530
2.	a 14,510	4,470	5,280	5,710	4,350	7,610	2,500	3,780	7,480	7,360	15,680	59,030
3.	16,980	5,700	5,210	a 5,710	a 4,200	a 7,320	a 2,400	3,270	a 7,610	a 6,840	a 15,940	a 50,230
4.	19,950	a 5,530	a 5,540	5,550	4,060	6,700	2,510	a 3,270	12,340	6,840	15,410	40,210
5.	a 17,420	5,190	5,850	5,550	4,020	5,980	2,620	4,050	15,340	6,340	18,030	a 27,060
6.	14,120	4,740	8,120	5,260	a 3,980	a 5,660	a 2,720	a 4,540	10,540	6,340	21,440	26,250
7.	13,320	a 4,500	7,810	a 4,970	4,070	5,720	2,690	4,440	a 9,140	a 8,750	31,120	a 19,020
8.	16,270	4,500	a 7,500	4,960	4,170	4,890	2,660	4,940	8,800	14,210	32,700	19,680
9.	a 18,730	4,370	7,250	5,150	a 4,270	a 4,410	a 2,620	a 4,830	7,960	19,130	a 36,660	18,040
10.	15,790	4,180	6,390	a 5,330	4,070	4,370	2,550	4,760	a 7,790	a 18,230	a 43,860	a 17,940
11.	12,850	a 4,130	a 6,270	5,290	4,070	4,290	2,480	4,690	7,420	17,510	49,930	15,530
12.	11,380	4,500	6,080	5,290	5,280	a 4,290	a 2,410	a 4,620	7,060	18,900	93,150	14,010
13.	10,160	4,620	6,080	5,270	a 7,180	4,090	2,370	4,440	a 7,000	a 19,080	a 178,650	a 12,800
14.	9,670	7,170	a 5,790	a 5,210	7,630	4,090	2,330	4,270	6,750	18,780	114,920	12,160
15.	8,690	a 10,240	5,590	5,070	7,940	4,090	a 2,300	a 4,210	6,000	17,570	a 58,750	11,920
16.	7,950	13,840	5,590	4,930	a 8,000	4,090	2,280	3,900	a 5,750	a 16,360	42,150	a 12,090
17.	a 6,770	12,240	5,580	a 4,790	7,830	3,890	2,250	3,000	5,700	17,590	27,330	11,280
18.	5,960	a 11,640	a 5,480	4,860	7,750	3,870	a 2,230	a 4,000	5,520	16,060	27,610	11,070
19.	5,750	13,070	5,280	4,840	7,710	3,650	2,230	4,970	a 5,210	a 22,660	22,510	10,660
20.	a 5,550	13,700	11,610	a 4,810	a 7,670	3,430	2,240	5,930	5,720	24,260	a 19,110	a 10,650

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
21.	6, 140	13, 930	13, 020	4, 810	7, 670	3, 310	a 2, 250	6, 530	5, 730	26, 820	17, 230	11, 660
22.	5, 340	a14, 760	12, 820	4, 810	10, 360	3, 190	2, 170	a 5, 220	a 5, 230	a28, 180	16, 150	12, 870
23.	5, 050	12, 130	12, 420	a 4, 690	a10, 020	3, 170	2, 090	5, 410	5, 220	29, 350	a17, 570	15, 670
24.	a 4, 900	9, 100	12, 220	4, 660	9, 400	3, 150	a 2, 010	5, 740	4, 960	22, 740	27, 880	13, 020
25.	4, 750	a 6, 720	17, 300	4, 640	9, 400	a 3, 140	2, 060	a 5, 800	a 4, 950	a20, 590	30, 010	11, 170
26.	4, 480	6, 550	a16, 240	a 4, 620	9, 240	3, 140	2, 110	6, 220	5, 660	24, 480	a28, 590	11, 720
27.	a 4, 480	6, 280	11, 590	4, 480	8, 320	2, 980	a 2, 270	5, 940	5, 810	25, 220	29, 300	a11, 670
28.	4, 480	a 6, 220	a 7, 600	4, 350	7, 850	a 2, 980	2, 700	a 5, 930	a 6, 090	a27, 070	a54, 130	11, 760
29.	4, 480	5, 670	7, 220	a 4, 220	.....	2, 900	2, 930	6, 040	6, 290	33, 070	48, 530	11, 040
30.	4, 350	a 5, 270	7, 470	4, 030	.....	2, 830	a 2, 860	6, 300	a 6, 340	31, 070	52, 460	a10, 130
31.	a 4, 600	.....	a 6, 330	4, 030	.....	2, 680	.....	a 6, 560	.....	16, 270	a55, 680	.....
1906-7.												
1.	9, 520	4, 420	4, 970	4, 980	4, 600	3, 760	2, 640	5, 580	5, 080	8, 600	7, 060	5, 530
2.	10, 110	4, 290	5, 110	4, 980	4, 580	3, 440	2, 640	5, 600	5, 240	8, 760	7, 150	5, 790
3.	a10, 490	a 4, 370	a 5, 240	a 4, 980	a 4, 560	a 3, 130	a 2, 500	a 5, 510	a 5, 490	a 9, 720	a 7, 250	a 9, 140
4.	9, 700	4, 450	5, 310	4, 640	4, 560	3, 050	2, 550	5, 270	5, 550	9, 430	6, 280	11, 870
5.	9, 310	4, 540	5, 370	4, 510	4, 560	3, 050	2, 540	5, 040	5, 700	9, 530	5, 920	10, 190
6.	a 8, 710	4, 630	a 5, 240	a 4, 370	a 4, 620	3, 050	a 2, 530	a 4, 800	a 5, 700	a 9, 630	a 5, 660	a12, 060
7.	8, 640	4, 710	4, 970	4, 330	4, 450	a 3, 050	3, 110	4, 660	5, 400	8, 490	5, 610	12, 640
8.	8, 770	4, 800	4, 900	4, 280	4, 280	3, 140	3, 170	5, 000	6, 600	8, 040	5, 670	12, 250
9.	a 8, 900	4, 690	4, 840	4, 240	a 4, 120	3, 350	3, 230	4, 730	a 7, 090	7, 350	a 5, 520	a13, 130
10.	8, 320	4, 610	a 5, 070	a 4, 190	4, 250	a 3, 450	3, 230	a 4, 710	7, 670	a 7, 190	5, 240	14, 340
11.	7, 330	4, 530	5, 680	4, 230	4, 110	3, 320	3, 230	4, 640	8, 070	7, 030	5, 170	16, 050
12.	a 6, 540	a 4, 450	5, 980	4, 270	a 3, 790	3, 380	a 3, 160	4, 570	a 8, 270	7, 360	a 4, 880	a16, 230
13.	6, 670	4, 350	a 6, 190	a 4, 310	3, 840	a 3, 430	3, 040	a 4, 370	8, 760	a 8, 080	4, 900	13, 870
14.	7, 680	3, 950	6, 030	4, 300	3, 890	3, 400	3, 040	4, 290	7, 550	9, 680	5, 010	11, 330
15.	6, 930	a 4, 360	6, 480	4, 290	a 3, 760	3, 310	a 2, 920	4, 450	a 6, 940	8, 550	a 4, 920	a11, 300
16.	a 6, 710	4, 270	a 6, 420	a 4, 280	3, 760	a 3, 220	2, 950	a 4, 620	6, 660	a 7, 220	4, 900	10, 940
17.	6, 700	4, 390	6, 130	4, 280	3, 920	3, 170	2, 870	4, 620	7, 110	7, 400	4, 980	9, 540
18.	6, 240	a 4, 510	5, 940	4, 790	a 3, 760	3, 010	a 2, 660	4, 620	a 7, 840	7, 900	a 4, 800	a10, 240
19.	a 5, 940	4, 600	a 5, 850	a 4, 790	3, 830	a 2, 970	2, 570	a 4, 310	10, 310	a 8, 370	4, 740	8, 980
20.	5, 750	4, 600	5, 720	4, 570	3, 910	2, 900	2, 610	4, 750	8, 710	8, 170	4, 390	8, 780
21.	5, 560	a 4, 600	5, 590	4, 570	a 3, 910	2, 840	a 2, 580	4, 750	a 8, 710	7, 660	a 4, 290	a16, 980
22.	a 5, 380	4, 600	a 5, 460	a 4, 570	3, 870	a 2, 840	2, 630	a 4, 230	10, 000	a 7, 400	4, 180	16, 030
23.	5, 000	4, 600	5, 340	4, 530	3, 830	2, 830	2, 670	3, 960	10, 900	7, 120	4, 150	15, 280
24.	4, 930	a 4, 600	5, 340	4, 480	3, 720	2, 820	a 2, 720	3, 900	a 9, 900	7, 150	a 4, 180	a13, 000
25.	a 4, 860	4, 600	5, 270	a 4, 440	a 3, 620	a 2, 870	2, 660	a 3, 840	9, 160	a 6, 370	4, 150	12, 740
26.	4, 760	4, 710	a 5, 210	4, 440	3, 640	2, 800	2, 600	4, 320	8, 510	6, 770	3, 910	10, 660
27.	a 4, 670	a 4, 830	5, 230	4, 430	3, 670	2, 720	a 3, 600	4, 680	a 8, 290	7, 000	a 3, 880	a 9, 620
28.	a 4, 450	4, 970	5, 440	a 4, 320	a 3, 560	a 2, 640	4, 330	a 5, 050	8, 210	a 5, 640	6, 630	9, 620
29.	4, 340	4, 970	a 5, 450	4, 220	.....	2, 820	5, 180	5, 060	8, 130	6, 520	6, 000	9, 620
30.	4, 340	a 5, 040	5, 400	4, 220	.....	2, 640	5, 550	5, 070	a 8, 040	6, 870	5, 530	a 9, 210
31.	a 4, 340	.....	5, 150	a 5, 020	.....	a 2, 640	.....	5, 080	.....	a 6, 870	a 5, 430	.....
1907-8.												
1.	9, 210	5, 840	6, 640	4, 820	3, 140	2, 730	2, 120	3, 590	4, 130	2, 650	7, 390	10, 100
2.	7, 910	5, 530	5, 910	4, 880	3, 100	2, 740	2, 120	3, 610	4, 000	2, 700	6, 550	9, 860
3.	a 7, 910	a 6, 970	a11, 760	a 4, 750	a 3, 070	a 2, 750	a 2, 160	a 3, 440	a 4, 050	a 2, 740	a 4, 620	a17, 020
4.	7, 910	7, 090	22, 560	4, 690	2, 940	2, 710	2, 230	3, 320	3, 850	2, 740	4, 620	20, 540
5.	11, 350	7, 220	a13, 560	4, 630	2, 820	2, 660	2, 270	3, 300	3, 710	2, 410	13, 340	23, 200
6.	a10, 050	7, 940	12, 950	a 4, 470	a 2, 690	a 2, 620	2, 230	a 3, 180	a 4, 210	a 2, 510	a17, 100	a21, 680
7.	6, 820	a 8, 070	12, 640	4, 370	2, 890	2, 590	a 2, 190	3, 260	4, 110	2, 420	12, 290	22, 840
8.	6, 380	8, 070	a12, 390	4, 320	3, 090	2, 590	2, 230	3, 440	4, 010	10, 800	13, 640	23, 230
9.	5, 950	a22, 270	11, 180	a 4, 270	a 3, 620	2, 570	2, 260	a 3, 420	a 4, 120	a 4, 670	10, 370	a18, 180
10.	a 4, 730	28, 260	9, 800	4, 350	3, 510	a 2, 570	a 2, 400	3, 530	3, 980	4, 870	a 8, 830	13, 950
11.	4, 220	17, 570	8, 760	4, 430	3, 510	2, 550	2, 400	3, 650	3, 170	4, 570	7, 750	11, 310
12.	4, 460	a12, 440	a 8, 250	a 4, 420	a 3, 510	2, 530	3, 970	3, 760	a 2, 970	a 2, 350	6, 200	a10, 780
13.	a 4, 700	11, 100	8, 410	4, 290	3, 360	a 2, 460	a 3, 550	a 3, 670	2, 800	2, 650	a15, 660	15, 470
14.	4, 550	10, 130	8, 420	4, 260	3, 210	2, 400	3, 010	3, 610	2, 800	2, 390	24, 690	14, 430
15.	4, 390	a 9, 400	a 8, 430	a 4, 120	a 3, 150	2, 390	2, 920	3, 430	a 2, 720	2, 180	28, 600	a13, 190
16.	a 4, 080	9, 800	8, 110	3, 960	3, 100	2, 390	a 2, 840	a 3, 430	2, 660	a 2, 080	a26, 200	11, 410
17.	4, 040	9, 910	7, 940	3, 900	2, 950	2, 380	2, 840	3, 330	2, 570	2, 150	24, 640	9, 640
18.	4, 000	a 9, 950	7, 620	a 3, 840	a 2, 800	2, 280	3, 240	3, 220	a 2, 460	2, 100	15, 400	a 8, 260
19.	3, 960	8, 600	6, 910	3, 730	2, 810	2, 270	9, 700	2, 880	2, 460	a 1, 950	a11, 280	7, 220
20.	3, 920	7, 490	6, 400	3, 620	2, 820	2, 270	9, 510	2, 850	2, 490	1, 850	9, 670	6, 170

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
21.....	3,880	a 6,620	a 5,690	3,620	a 2,840	a 2,260	6,060	2,870	a 2,520	1,850	10,000	a 5,550
22.....	3,700	6,620	5,850	a 3,620	2,900	a 2,250	a 3,660	a 2,780	a 2,420	a 1,850	a 9,100	5,180
23.....	3,430	6,460	5,810	3,660	3,060	2,240	3,310	12,180	2,210	5,060	9,100	4,840
24.....	3,310	a 6,310	a 5,970	3,710	a 2,910	a 2,230	3,270	a 49,560	a 2,110	2,810	8,580	a 4,580
25.....	3,190	6,130	5,760	a 3,760	2,790	2,210	a 3,270	a 12,630	7,060	a 2,020	a 7,560	4,220
26.....	5,720	5,960	5,570	3,730	2,790	2,190	3,270	6,190	4,260	7,840	9,060	4,140
27.....	5,220	a 6,110	a 5,450	3,700	a 2,790	2,210	a 2,170	3,190	4,120	a 3,510	6,830	a 4,070
28.....	5,720	6,870	5,130	a 3,660	2,750	2,160	a 3,110	a 3,420	a 2,930	a 4,560	a 8,500	3,770
29.....	6,470	6,590	5,000	3,530	a 2,710	2,250	2,990	3,440	2,740	3,960	8,000	3,470
30.....	7,220	a 6,560	4,880	3,410	.....	2,130	a 2,870	3,850	a 2,540	6,950	11,000	a 3,380
31.....	5,840	.....	a 4,750	a 3,280	.....	a 2,120	.....	a 4,270	.....	a 8,540	a 8,020	.....
1908-9.												
1.....	3,380	2,240	2,260	2,190	2,160	1,880	1,710	1,640	5,260	6,360	12,070	4,780
2.....	3,380	2,240	2,240	2,210	2,170	1,880	1,690	1,490	5,330	6,100	11,860	4,580
3.....	a 3,330	a 2,240	a 2,230	a 2,230	a 2,180	a 1,880	a 1,670	a 1,490	a 5,350	a 6,100	a 12,340	a 4,450
4.....	3,090	2,240	2,220	2,240	2,170	1,880	1,690	1,460	4,850	6,040	12,340	4,350
5.....	3,090	2,230	2,210	2,240	2,160	1,780	1,720	1,440	4,950	5,790	13,840	10,900
6.....	a 2,970	a 2,230	a 2,200	a 2,250	a 2,150	a 1,780	a 1,740	a 1,760	a 4,650	a 5,740	a 10,860	15,700
7.....	3,330	2,230	2,180	2,250	2,150	1,780	1,710	2,470	4,500	7,840	8,620	a 11,420
8.....	4,160	2,230	2,170	2,250	2,120	1,770	1,680	2,340	4,650	5,610	9,630	9,630
9.....	a 3,930	a 2,230	a 2,160	a 2,240	a 2,100	a 1,770	a 1,650	a 2,160	a 4,890	a 5,780	a 8,490	7,350
10.....	3,870	2,250	2,160	2,260	2,090	1,840	1,640	2,070	4,890	11,520	7,860	a 7,620
11.....	3,590	2,270	2,160	2,290	2,080	2,060	1,630	2,090	4,870	15,440	7,820	7,090
12.....	3,370	a 2,280	a 2,150	a 2,320	a 2,070	a 2,270	a 1,540	2,110	a 4,870	a 14,830	7,790	6,120
13.....	a 3,250	2,280	2,200	2,330	2,040	2,190	1,540	a 2,290	4,870	15,030	a 9,260	a 5,920
14.....	3,110	2,270	2,150	2,340	2,100	2,110	1,540	2,290	5,680	14,830	9,410	5,920
15.....	3,030	a 2,270	2,200	2,350	2,070	2,020	1,540	2,210	a 5,300	16,030	9,410	16,500
16.....	a 2,830	2,260	2,220	a 2,350	a 1,190	a 1,840	a 1,540	a 2,130	3,940	a 14,980	a 8,660	a 6,640
17.....	2,750	2,260	2,230	2,290	2,010	1,750	1,540	2,200	3,680	12,480	9,330	8,250
18.....	2,680	a 2,260	a 2,250	a 2,240	a 2,020	1,750	1,540	2,220	a 3,420	a 11,400	9,720	8,890
19.....	a 2,650	2,280	2,220	2,220	a 2,040	a 1,750	a 1,540	a 2,430	5,410	10,790	a 9,320	a 9,370
20.....	2,680	2,300	2,200	2,210	2,040	1,770	1,540	3,190	5,610	8,950	12,230	13,160
21.....	2,710	a 2,320	a 2,180	a 2,190	2,030	1,690	1,530	3,940	a 6,420	a 7,120	13,330	10,740
22.....	a 2,740	2,320	2,190	2,180	a 2,030	a 1,660	a 1,530	a 4,510	6,010	5,790	a 13,330	a 14,260
23.....	2,630	2,310	2,200	2,170	1,990	1,660	1,510	4,490	6,420	16,830	10,390	13,180
24.....	2,520	a 2,310	a 2,210	a 2,170	1,950	2,060	1,480	a 4,640	a 7,040	a 23,100	8,920	10,220
25.....	a 2,410	2,310	2,210	2,170	a 1,910	a 1,910	a 1,460	a 4,440	5,200	10,430	a 8,100	a 8,870
26.....	2,410	2,300	2,210	2,180	1,900	1,820	1,460	4,870	7,620	8,200	7,100	8,750
27.....	2,420	a 2,290	a 2,210	a 2,190	1,890	1,720	2,280	4,940	a 7,430	a 5,520	6,100	8,550
28.....	a 2,420	2,290	2,200	2,180	a 1,880	a 1,680	a 2,390	a 5,200	6,630	6,210	a 6,260	a 8,260
29.....	2,380	2,280	2,190	2,170	.....	1,690	1,640	5,260	6,830	6,440	6,100	7,850
30.....	2,350	a 2,280	2,180	2,160	.....	1,710	1,640	5,280	a 6,490	5,980	5,910	a 6,410
31.....	a 2,260	.....	a 2,170	a 2,150	.....	a 1,730	.....	a 5,260	.....	a 9,780	a 5,700	.....
1909-10.												
1.....	6,410	2,560	1,930	4,770	2,280	1,620	2,950	2,260	4,830	5,940	1,370	2,950
2.....	5,800	2,530	1,950	5,360	2,360	1,530	2,920	2,260	4,430	5,940	1,310	2,560
3.....	a 5,800	a 2,490	a 1,960	a 5,150	a 2,440	a 1,430	a 2,920	a 2,260	a 3,870	a 6,940	a 1,310	a 2,260
4.....	5,640	2,490	1,870	5,050	2,440	1,440	2,780	2,240	3,710	6,140	1,270	2,110
5.....	5,330	2,390	1,840	3,790	2,450	1,450	2,630	2,220	3,620	7,040	1,230	2,110
6.....	a 5,180	a 2,390	a 1,750	a 3,030	a 2,460	a 1,450	a 2,480	a 2,200	a 3,620	5,900	a 1,210	a 1,800
7.....	4,750	2,320	1,820	3,030	2,360	1,450	2,480	2,660	3,580	5,450	1,230	53,000
8.....	4,170	2,320	1,790	3,030	2,270	1,450	2,600	3,760	3,350	5,850	1,190	a 13,340
9.....	3,740	a 2,320	a 1,860	a 2,940	a 2,230	a 1,350	a 14,800	a 4,040	a 3,120	5,460	1,160	8,950
10.....	a 2,860	2,330	1,890	2,930	a 2,110	1,320	a 7,200	4,030	2,530	a 3,880	a 1,140	8,190
11.....	2,820	2,340	1,920	2,780	2,090	1,300	3,790	4,020	2,700	3,880	1,120	6,980
12.....	2,780	a 2,340	1,950	2,770	a 2,070	1,170	3,120	4,000	a 2,620	2,680	1,110	a 4,860
13.....	a 2,740	2,400	a 1,980	2,690	2,040	a 1,150	a 3,120	a 3,990	a 2,420	a 2,320	a 1,090	5,690
14.....	2,720	2,370	2,000	2,610	2,010	1,120	3,620	4,080	2,110	2,280	1,120	6,080
15.....	2,700	a 2,380	2,020	2,600	a 1,080	1,100	3,020	4,470	a 1,860	2,280	1,140	a 6,630
16.....	a 2,680	2,380	a 2,040	2,590	1,980	a 1,080	a 2,500	a 4,870	1,930	a 2,280	1,170	5,700
17.....	2,610	2,350	2,040	2,790	1,970	1,080	2,510	6,520	2,040	2,250	1,200	4,860
18.....	2,610	a 2,340	2,050	2,990	a 1,960	1,080	2,520	5,800	a 2,150	2,230	1,230	a 4,020
19.....	2,610	2,340	2,050	2,900	1,950	a 4,430	a 2,530	a 5,800	a 2,060	a 2,210	a 1,260	4,160
20.....	2,610	2,430	2,060	a 2,750	1,950	1,650	2,520	10,790	1,980	2,190	1,230	3,390
21.....	2,590	a 2,330	2,060	2,680	a 1,940	1,650	2,380	12,120	a 1,990	2,170	1,200	3,600
22.....	a 2,570	2,280	a 2,070	2,680	a 1,930	a 1,870	a 2,360	a 6,140	a 1,870	a 2,150	a 1,180	3,800
23.....	2,570	2,230	2,060	2,620	1,930	1,880	2,240	5,390	2,050	2,150	1,190	4,010
24.....	2,610	a 2,190	2,060	2,560	a 1,920	1,940	2,240	5,190	a 2,120	2,100	1,210	a 4,220
25.....	a 2,640	2,150	a 2,050	2,560	1,920	a 1,900	a 2,240	5,390	2,120	a 2,100	a 1,410	6,470

a Date of measurement.

Daily discharge, in second-feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
26	2,630	2,120	2,040	2,560	1,920	1,850	2,080	a 5,390	2,120	2,050	2,080	5,920
27	2,610	a 2,090	2,030	a 2,300	1,920	1,790	2,040	5,390	2,120	2,010	2,200	a 5,360
28	a 2,590	2,030	a 2,020	2,280	1,920	a 1,740	a 2,000	a 4,820	a 5,810	a 1,960	a 2,680	5,030
29	2,590	1,970	2,010	2,250	.....	1,740	2,000	4,820	10,900	1,920	2,780	4,690
30	2,590	a 1,910	2,010	2,220	.....	5,430	a 2,090	4,820	a 6,250	1,870	2,680	4,520
31	a 2,590	.....	a 2,000	a 2,200	.....	a 3,520	.....	a 5,090	.....	a 1,620	a 3,440	.....
1910-11.												
1	4,720	1,850	1,620	1,540	1,490	2,400	1,730	2,550	6,020	4,790	13,190	6,330
2	5,170	1,820	1,640	1,510	1,500	2,340	1,730	2,550	5,840	4,660	15,010	3,880
3	a 4,950	a 1,790	a 1,640	a 1,480	a 1,510	a 2,270	a 1,730	a 2,900	a 5,350	a 4,530	a 14,090	a 3,470
4	5,210	1,780	1,640	1,460	1,500	2,210	3,820	2,290	5,020	4,490	14,470	3,830
5	7,180	1,770	1,620	1,440	1,500	2,150	a 4,360	2,180	4,680	4,460	14,340	5,020
6	a 4,640	a 1,760	a 1,610	a 1,430	a 1,490	a 2,070	3,410	a 1,790	a 4,680	a 4,420	a 14,980	a 6,500
7	3,660	1,760	1,600	1,420	1,480	2,040	3,120	1,550	4,300	4,420	14,430	5,390
8	3,260	1,650	1,590	1,420	1,460	2,000	2,810	1,510	3,770	4,420	11,380	5,540
9	a 3,160	a 1,650	a 1,580	a 1,420	a 1,440	a 1,960	2,640	a 1,470	a 3,620	a 6,650	a 9,590	a 6,680
10	3,090	1,640	1,610	1,400	1,440	1,930	2,510	1,450	3,620	5,650	8,980	6,410
11	3,020	1,640	1,630	1,380	1,430	1,870	a 1,800	1,440	3,450	5,150	8,360	6,440
12	a 2,950	a 1,630	a 1,650	a 1,360	a 1,420	a 1,820	a 1,760	a 1,420	a 3,280	a 11,490	a 8,100	a 6,200
13	2,870	1,660	1,650	1,360	1,420	1,770	1,730	1,410	3,210	11,130	7,690	6,160
14	2,800	1,690	1,650	1,350	1,420	1,770	a 1,690	1,400	3,000	10,900	7,380	6,020
15	a 2,720	a 1,720	a 1,650	a 1,340	a 1,420	a 1,770	1,690	a 1,310	a 3,000	a 10,660	a 7,280	a 5,880
16	2,340	1,690	1,660	1,430	1,420	1,760	1,700	a 6,430	a 7,480	8,410	6,850	6,480
17	2,340	1,670	1,660	1,520	1,410	1,750	a 1,700	23,050	a 11,510	7,960	6,640	6,280
18	a 2,250	1,640	a 1,670	a 1,610	a 1,400	a 1,740	1,670	a 10,300	10,920	a 9,950	a 6,130	a 6,480
19	2,250	a 1,610	1,680	1,600	1,400	1,740	1,640	9,880	7,820	9,580	6,050	6,030
20	2,260	1,640	1,680	1,590	1,490	2,190	a 1,600	8,140	a 7,080	9,340	4,870	5,680
21	a 2,270	a 1,660	a 1,680	a 1,580	a 3,110	a 2,190	1,610	a 7,750	6,320	a 8,970	a 3,860	a 4,730
22	2,270	1,660	1,670	1,570	3,020	2,230	1,610	7,750	4,690	8,840	3,840	4,680
23	2,170	1,660	1,660	1,570	2,860	2,260	a 1,610	5,440	a 4,570	8,700	3,830	4,630
24	a 2,170	a 1,660	a 1,650	a 1,570	a 2,530	a 2,300	1,800	a 5,710	4,570	a 8,570	a 3,820	a 4,330
25	2,140	1,640	1,630	1,560	2,510	2,300	1,910	5,410	4,570	8,570	3,430	4,940
26	2,110	1,620	1,600	1,540	2,490	2,140	2,020	5,110	a 6,040	8,870	3,430	5,140
27	a 2,080	a 1,600	a 1,580	a 1,530	2,480	a 2,140	2,610	a 5,010	5,540	a 17,000	a 4,690	a 5,250
28	2,050	1,600	1,580	1,520	a 2,460	2,000	a 2,720	4,730	5,420	13,000	4,450	4,740
29	2,030	1,600	1,580	1,510	.....	1,940	2,680	5,640	5,040	11,350	4,570	6,170
30	2,000	a 1,610	1,580	1,490	.....	1,880	2,950	6,340	a 4,920	10,170	5,150	a 6,070
31	a 1,880	.....	a 1,570	a 1,480	.....	a 1,820	.....	a 6,340	.....	a 11,110	a 8,300	.....
1911-12.												
1	5,730	6,670	3,580	2,580	2,620	1,790	1,550	1,800	5,160	5,280	2,830	11,650
2	5,070	6,430	3,720	2,500	2,660	1,750	1,450	1,720	5,220	5,210	2,780	12,430
3	a 4,850	a 6,190	a 4,160	a 2,430	a 2,700	a 1,700	a 1,350	a 1,670	a 5,220	a 5,140	a 2,750	a 15,500
4	4,790	6,100	4,030	2,410	2,510	1,630	1,350	1,710	5,310	3,980	2,750	16,700
5	4,430	5,370	3,900	2,400	2,320	1,560	1,400	1,800	5,310	4,810	2,950	16,090
6	a 4,080	a 5,150	a 3,840	a 2,390	a 2,230	a 1,480	a 1,800	a 1,820	a 5,300	a 4,550	a 3,990	a 14,270
7	4,080	6,240	3,720	2,390	2,350	1,480	1,900	1,710	5,310	4,590	3,120	14,680
8	4,220	6,240	3,600	2,470	2,460	1,410	8,800	1,590	5,320	4,620	2,850	14,270
9	a 8,720	a 5,810	a 3,550	a 3,060	a 2,570	a 1,340	2,810	a 1,470	a 5,120	a 4,660	a 2,770	a 13,150
10	7,160	5,810	3,490	2,820	2,370	1,420	2,570	1,360	5,120	4,480	3,130	12,720
11	6,920	5,810	3,440	2,730	2,160	1,500	2,480	1,250	5,500	4,200	2,840	12,440
12	a 6,570	a 4,690	a 3,380	a 2,710	a 2,000	a 1,580	a 2,000	a 1,140	a 8,700	a 3,920	a 2,490	a 12,010
13	a 13,110	4,660	3,260	2,710	2,140	1,510	1,880	1,170	9,200	3,880	2,410	11,110
14	9,280	4,430	3,260	2,590	2,080	1,450	1,760	1,210	10,570	3,940	2,230	21,640
15	a 7,990	a 4,400	a 3,260	a 2,480	a 2,020	a 1,380	a 1,630	a 1,240	a 11,720	a 4,100	a 1,980	a 27,080
16	7,990	4,710	3,220	a 2,520	2,140	1,430	1,630	1,310	11,870	3,900	2,020	28,660
17	8,110	4,910	3,080	2,560	2,100	1,470	1,610	1,620	13,220	3,410	2,230	25,580
18	a 8,270	a 5,110	a 3,040	a 2,500	a 2,070	a 1,400	a 1,770	a 3,260	66,200	a 3,010	a 2,450	a 22,100
19	8,950	5,040	2,990	2,570	2,020	1,400	1,940	3,730	17,700	2,940	2,350	20,850
20	9,880	4,960	2,940	2,630	1,960	1,400	2,100	3,880	14,660	2,580	2,700	20,250
21	a 10,060	a 4,680	a 2,890	a 2,790	a 1,910	a 1,410	a 2,180	a 4,030	a 12,540	a 2,510	a 4,230	a 21,890
22	9,190	4,630	2,890	2,830	1,890	1,430	2,400	4,030	12,060	2,620	5,110	18,400
23	9,510	4,590	2,850	2,770	1,860	1,350	2,700	4,140	11,080	2,630	8,250	13,410
24	a 9,240	a 4,340	a 2,850	a 2,710	a 1,830	a 1,320	a 2,350	a 4,480	a 10,590	a 2,640	a 15,890	a 8,670
25	8,930	4,310	2,790	2,710	1,830	1,360	2,410	4,600	9,840	2,630	16,230	7,510
26	8,870	4,280	2,740	2,710	1,770	1,450	2,410	4,830	8,600	3,210	17,180	6,340
27	a 8,050	a 4,050	a 2,720	a 2,680	a 1,710	a 1,580	a 2,310	a 4,940	a 6,970	a 2,400	a 16,320	a 5,840
28	7,420	3,950	2,680	2,730	1,750	1,630	2,250	4,940	6,540	2,400	15,370	5,540
29	7,290	3,840	2,650	2,680	a 1,790	1,620	2,050	4,910	5,160	2,400	14,790	6,150
30	7,160	a 3,740	2,650	2,630	.....	1,600	a 1,800	4,820	a 5,280	2,510	14,400	a 11,370
31	7,030	.....	a 2,650	a 2,580	.....	a 1,600	.....	a 4,790	.....	a 2,820	a 11,910	.....

a Date of measurement.

Daily discharge, in second feet, of Rio Grande at Eagle Pass, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	7,180	2,400	2,010	2,430	1,640	3,190	1,880	1,710	1,480	5,000	2,380	2,440
2.....	4,990	2,330	2,080	2,280	1,660	2,810	1,710	1,710	1,430	5,600	2,860	2,390
3.....	5,880	a 2,660	a 2,080	a 2,280	a 1,670	a 2,420	a 1,530	a 7,450	a 1,360	a 3,770	a 2,530	a 2,340
4.....	a 7,660	2,150	2,080	2,190	1,660	2,390	1,530	a 29,750	1,350	3,640	2,460	4,220
5.....	8,380	2,110	2,080	2,230	1,640	2,360	1,470	22,030	1,350	3,640	2,340	a 5,080
6.....	a 7,690	a 1,920	a 2,080	a 2,270	a 1,630	a 2,340	a 1,400	a 17,940	a 2,280	a 3,430	a 2,140	a 3,360
7.....	7,500	1,920	2,100	2,200	1,630	2,980	1,400	9,200	2,090	3,380	2,140	3,030
8.....	8,720	1,920	2,260	2,140	1,620	3,500	1,460	6,180	2,930	3,210	2,320	3,030
9.....	a 7,990	a 1,920	a 2,280	a 2,080	a 1,610	a 4,020	a 1,410	a 4,850	a 5,160	a 2,940	a 2,320	a 3,920
10.....	7,600	1,980	2,340	1,940	1,610	4,330	1,370	2,960	3,460	2,940	2,280	4,960
11.....	7,790	2,030	2,390	1,940	1,670	4,150	1,290	2,290	3,140	2,870	2,250	6,010
12.....	a 9,880	a 1,950	a 2,520	a 1,940	a 1,790	a 3,730	a 1,200	a 2,290	a 2,820	a 2,790	a 2,230	a 6,800
13.....	8,620	1,930	2,570	1,940	1,720	3,640	1,180	2,170	3,460	2,790	2,190	7,120
14.....	6,650	1,910	2,540	1,940	1,710	3,540	1,150	2,040	3,050	2,700	2,110	6,630
15.....	a 5,220	a 1,890	a 2,510	a 1,890	a 1,700	a 3,360	a 1,030	a 1,960	a 2,420	a 2,530	a 2,060	a 5,970
16.....	6,480	1,890	2,350	1,880	1,730	3,130	1,060	1,990	2,350	2,280	2,060	5,220
17.....	5,400	2,350	2,330	1,870	1,670	2,910	1,080	2,260	2,670	2,200	2,160	4,750
18.....	a 4,310	a 2,720	a 2,310	a 1,850	a 1,700	a 2,680	a 1,110	a 2,240	a 3,110	a 2,110	a 2,700	a 4,400
19.....	3,770	3,220	2,300	1,880	2,700	2,610	1,140	2,180	3,060	2,110	2,590	4,090
20.....	3,690	2,760	2,280	1,810	a 5,740	2,540	1,170	2,430	5,020	2,110	2,470	3,770
21.....	a 3,600	a 2,510	a 2,270	a 1,790	5,390	a 2,390	a 1,200	a 2,050	a 9,640	a 2,050	a 2,420	a 3,270
22.....	3,420	2,320	2,200	1,820	4,820	2,390	1,200	2,000	7,240	2,080	2,290	3,110
23.....	3,250	2,260	2,210	1,860	4,480	2,300	1,230	1,940	6,490	2,080	2,880	2,870
24.....	a 2,990	a 2,210	a 2,210	a 1,820	a 4,020	a 2,220	a 1,410	a 1,890	a 33,000	a 2,090	a 3,390	a 3,490
25.....	2,920	2,210	2,650	1,770	3,920	2,190	a 14,470	1,690	15,400	2,070	3,040	3,490
26.....	2,760	2,210	2,650	1,720	3,920	2,150	4,580	1,690	10,930	2,050	2,770	5,690
27.....	a 2,680	a 2,210	a 2,390	a 1,790	a 3,610	a 2,120	a 2,530	a 1,690	a 8,600	a 2,040	a 2,770	a 6,310
28.....	2,600	2,180	2,400	1,750	a 3,580	2,120	2,340	1,690	7,560	2,040	2,650	4,310
29.....	2,570	2,000	2,410	1,640	.....	2,080	1,970	1,690	6,170	2,040	2,960	2,730
30.....	2,480	a 1,970	2,420	a 1,640	.....	2,040	a 1,760	1,510	a 4,440	2,330	3,230	a 2,310
31.....	a 2,470	.....	a 2,430	1,630	.....	a 2,000	.....	a 1,510	.....	a 2,440	a 2,730	.....

a Date of measurement.

Monthly discharge of Rio Grande at Eagle Pass, Tex., for 1900-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.					1901-2.				
May.....	45,000	3,750	8,820	542,200	January.....	2,300	1,830	2,052	126,189
June.....	18,500	3,500	5,952	354,060	February.....	2,050	1,830	1,973	109,587
July.....	17,000	3,430	8,247	506,990	March.....	1,900	1,420	1,606	98,737
August.....	32,560	6,370	12,597	774,555	April.....	2,260	1,270	1,448	86,182
September.....	50,090	4,830	13,882	826,020	May.....	29,200	1,260	3,382	207,967
The period.....	.....	.....	.....	3,000,000	June.....	2,330	1,330	1,648	98,063
1900-1901.					The year.....				
October.....	15,940	6,440	9,190	565,071	32,000	1,260	3,910	2,840,000	
November.....	7,080	4,800	5,509	327,808	1902-3.				
December.....	4,860	3,420	4,121	253,390	October.....	4,920	2,080	3,070	188,787
January.....	3,420	2,750	3,054	187,795	November.....	3,800	1,930	2,385	141,937
February.....	2,740	2,510	2,616	145,369	December.....	8,400	2,260	2,904	178,532
March.....	2,610	2,020	2,277	140,033	January.....	2,990	2,050	2,385	146,038
April.....	2,300	1,780	1,934	115,081	February.....	3,900	2,000	2,761	153,362
May.....	4,410	2,200	3,108	191,107	March.....	3,460	1,880	2,508	154,215
June.....	5,430	1,770	3,571	212,509	April.....	11,200	1,640	2,174	129,362
July.....	3,800	1,600	2,376	146,122	May.....	15,500	1,700	3,880	238,592
August.....	5,240	2,800	4,249	261,243	June.....	47,400	2,670	9,225	548,906
September.....	21,460	2,840	5,593	332,807	July.....	9,010	3,350	6,156	378,506
The year.....	21,460	1,600	3,970	2,880,000	August.....	6,190	2,590	3,630	223,180
1901-2.					The year.....				
October.....	7,600	2,380	3,444	211,775	47,400	1,640	3,870	2,800,000	
November.....	4,400	2,680	3,644	216,833					
December.....	2,670	2,010	2,245	138,089					

Monthly discharge of Rio Grande at Eagle Pass, Tex., for 1900-1913—Continued.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1903-4.					1908-9.				
October	11,780	3,020	5,248	322,691	October	4,160	2,260	2,959	181,924
November	2,880	2,330	2,490	148,165	November	2,320	2,230	2,270	135,074
December	2,410	2,060	2,256	138,744	December	2,260	2,150	2,199	135,193
January	2,140	1,880	2,002	123,094	January	2,350	2,150	2,233	137,276
February	1,870	1,820	1,844	106,096	February	2,180	1,880	2,033	114,030
March	1,800	1,620	1,673	102,843	March	2,270	1,600	1,841	113,217
April	2,070	1,280	1,577	93,838	April	2,390	1,460	1,644	97,805
May	10,300	1,250	2,167	133,269	May	5,280	1,440	3,042	187,061
June	34,180	1,800	5,886	350,261	June	8,200	3,420	5,535	329,375
July	8,860	1,840	3,088	189,858	July	26,100	5,520	10,001	614,955
August	2,250	1,600	1,843	113,296	August	13,840	5,700	9,423	579,372
September	172,300	2,480	35,622	2,119,636	September	16,500	4,350	8,859	527,127
The year.	172,300	1,250	5,470	3,940,000	The year.	26,100	1,440	4,340	3,150,000
1904-5.					1909-10.				
October	31,420	8,470	18,735	1,151,960	October	6,410	2,570	3,392	208,542
November	16,570	4,470	8,716	518,658	November	2,560	1,910	2,305	137,137
December	8,210	4,260	5,423	333,461	December	2,070	1,750	1,974	121,349
January	4,370	3,160	3,542	217,805	January	5,360	2,200	3,024	185,911
February	4,320	3,130	3,434	190,711	February	2,460	1,920	2,100	116,628
March	16,550	3,950	7,674	471,868	March	5,430	1,080	1,773	109,012
April	29,100	4,300	7,324	435,788	April	14,800	2,000	3,156	187,795
May	20,900	7,100	10,139	623,445	May	12,120	2,200	4,736	291,233
June	238,300	10,290	29,939	1,781,474	June	10,900	1,860	3,206	190,770
July	75,500	5,710	18,757	1,153,309	July	7,040	1,620	3,363	206,757
August	21,750	10,540	14,936	918,387	August	3,440	1,090	1,488	91,517
September	33,000	6,510	12,810	762,228	September	53,000	1,800	6,577	391,379
The year.	238,300	3,130	11,800	8,560,000	The year.	53,000	1,090	3,090	2,240,000
1905-6.					1910-11.				
October	19,950	4,350	9,641	592,820	October	7,180	1,880	3,033	186,466
November	14,760	4,130	7,646	454,968	November	1,850	1,600	1,679	99,908
December	17,300	5,210	8,125	499,597	December	1,680	1,570	1,630	100,225
January	5,860	4,030	4,960	304,959	January	1,610	1,340	1,483	91,200
February	10,360	3,980	6,600	366,545	February	4,690	1,400	1,918	106,512
March	7,730	2,680	4,311	265,071	March	2,400	1,740	2,024	124,463
April	2,930	2,010	2,414	143,663	April	4,360	1,600	2,122	131,621
May	6,860	3,270	5,008	307,954	May	23,050	1,310	4,847	298,017
June	15,340	4,950	7,086	421,646	June	11,510	3,000	5,311	316,026
July	33,070	6,340	18,567	1,141,646	July	17,000	4,420	8,329	512,152
August	178,650	15,410	40,610	2,497,011	August	15,010	3,430	8,038	494,241
September	63,530	10,130	19,432	1,156,304	September	6,680	3,470	5,514	328,086
The year.	178,650	2,010	11,200	8,150,000	The year.	23,050	1,310	3,830	2,790,000
1906-7.					1911-12.				
October	10,490	4,340	6,825	419,683	October	13,110	4,080	7,515	462,049
November	5,040	3,950	4,568	271,815	November	6,670	3,740	5,038	299,782
December	6,480	4,840	5,494	337,825	December	4,160	2,650	3,220	197,990
January	5,020	4,190	4,479	275,405	January	3,060	2,390	2,622	161,197
February	4,620	3,560	4,035	224,073	February	2,700	1,170	2,132	122,618
March	3,760	2,640	3,066	188,509	March	1,790	1,320	1,498	62,993
April	5,550	2,530	3,053	181,646	April	8,800	1,350	2,221	132,179
May	5,600	3,840	4,712	289,745	May	4,940	1,140	2,805	172,502
June	10,900	5,080	7,666	456,158	June	66,200	5,120	10,346	615,649
July	9,720	5,640	7,806	479,980	July	5,280	2,400	3,644	224,073
August	7,250	3,880	5,239	322,135	August	17,180	1,980	6,239	383,603
September	16,980	5,530	11,579	688,978	September	28,660	5,540	14,943	889,190
The year.	16,980	2,530	5,710	4,140,000	The year.	66,200	1,140	5,190	3,750,000
1907-8.					1912-13.				
October	11,350	3,190	5,621	345,600	October	9,880	2,470	5,394	331,636
November	28,260	5,530	9,262	551,107	November	3,220	1,890	2,188	130,195
December	22,560	4,750	8,337	512,608	December	2,650	2,010	2,314	142,274
January	4,880	3,280	4,058	249,521	January	2,430	1,630	1,941	119,326
February	3,620	2,690	3,022	173,811	February	5,740	1,610	2,580	143,286
March	2,750	2,120	2,408	148,086	March	4,330	2,000	2,795	171,828
April	9,700	2,120	3,373	200,707	April	14,470	1,030	1,975	117,540
May	49,560	2,780	5,588	343,596	May	29,750	1,510	4,677	287,564
June	4,260	2,110	3,320	197,573	June	33,000	1,350	5,449	324,218
July	10,800	1,850	3,722	228,853	July	5,600	2,040	2,753	169,289
August	28,600	4,620	11,905	732,040	August	3,390	2,060	2,507	154,155
September	23,230	3,380	11,056	657,877	September	7,120	2,310	4,237	252,119
The year.	49,560	1,850	5,970	4,340,000	The year.	33,000	1,030	3,230	2,340,000

RIO GRANDE NEAR LAREDO, TEX.

Location.—At Fort McIntosh, 2 miles above Laredo. No important tributary within many miles.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff. The original gage was located near the bridge connecting Laredo with Nuevo Laredo, but was moved to its present location August 1, 1903.

Channel.—Very shifting.

Discharge measurements.—Made from car and cable.

Floods.—The highest flood recorded is 32.2 feet and occurred on the night of June 30, 1905.

Accuracy.—Although frequent discharge measurements have been obtained, no estimates of daily discharge have been made by the commission.

Cooperation.—This station is maintained by the Mexican section of the International Water Commission, by whom the base data are furnished.

Discharge measurements of Rio Grande near Laredo, Tex., in 1900, 1903-1913.

[By E. Zayas and Luis Varela.]

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1904.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 7.....	0.8	5,253	Aug. 11.....	2.3	3,270	Feb. 21.....	1.5	2,309
8.....	.7	4,951	15.....	2.3	2,965	25.....	1.5	2,345
9.....	1.2	6,437	20.....	2.2	2,625	29.....	1.5	2,360
15.....	12.0	75,141	25.....	3.1	4,755	Mar. 1.....	1.5	2,374
23.....	3.0	13,377	30.....	2.9	4,446	5.....	1.5	2,340
28.....	2.2	9,710	Sept. 4.....	3.0	4,665	8.....	1.5	2,325
31.....	1.5	6,483	8.....	3.8	7,476	14.....	1.3	2,166
June 1.....	8.0	31,544	10.....	12.55	^b 34,291	19.....	1.3	2,147
7.....	1.7	9,161	12.....	9.45	50,702	23.....	1.3	2,077
9.....	1.6	7,311	18.....	3.7	7,817	28.....	1.3	2,069
11.....	1.5	5,852	22.....	2.8	5,631	Apr. 3.....	4.0	9,780
15.....	1.3	6,333	29.....	3.9	7,529	5.....	2.55	5,146
20.....	1.6	7,134	Oct. 3.....	4.2	9,966	12.....	1.3	2,304
22.....	1.3	6,445	9.....	3.8	8,053	16.....	1.3	2,269
25.....	1.2	5,576	14.....	2.9	5,255	21.....	1.3	2,230
July 2.....	2.1	8,142	19.....	2.6	5,086	23.....	1.3	2,242
6.....	1.4	6,672	22.....	2.5	4,292	26.....	1.6	2,674
9.....	1.5	6,950	26.....	2.45	3,322	May 1.....	1.6	2,203
14.....	.8	4,719	30.....	2.4	3,084	5.....	1.55	2,145
16.....	3.5	18,607	Nov. 4.....	2.1	2,721	10.....	1.5	2,116
20.....	2.6	10,039	7.....	2.0	2,556	19.....	1.4	1,859
24.....	1.5	6,178	10.....	2.0	2,441	22.....	1.0	1,225
26.....	2.2	9,256	17.....	2.0	2,594	24.....	1.0	1,274
28.....	1.6	7,129	21.....	1.9	2,360	28.....	1.9	2,444
30.....	2.5	9,728	24.....	1.9	2,365	31.....	4.2	8,298
Aug. 3.....	3.0	13,328	28.....	1.9	2,461	June 4.....	2.30	3,033
7.....	3.7	16,279	Dec. 1.....	1.9	2,303	8.....	2.40	3,329
10.....	6.85	46,528	5.....	1.8	2,193	14.....	3.50	6,106
13.....	4.0	17,533	10.....	1.8	2,357	20.....	1.90	2,456
16.....	3.1	11,688	19.....	1.7	1,844	23.....	2.00	2,507
20.....	2.35	9,236	23.....	1.7	1,855	28.....	2.10	2,663
22.....	3.3	15,059	26.....	1.7	2,092	30.....	8.10	21,047
25.....	2.5	12,069	29.....	1.7	2,067	July 5.....	2.5	4,067
31.....	2.05	8,858				9.....	1.9	2,746
Sept. 3.....	2.1	10,669	1904.			12.....	1.8	2,611
6.....	2.0	10,254	Jan. 5.....	1.7	2,208	18.....	1.3	2,389
7.....	3.8	^a 17,872	10.....	1.7	2,317	23.....	1.2	1,981
12.....	1.25	6,079	14.....	1.6	2,213	26.....	3.9	7,944
15.....	1.9	9,174	18.....	1.6	2,170	31.....	1.6	2,448
18.....	2.0	8,626	23.....	1.6	2,332	Aug. 5.....	1.4	1,840
21.....	1.6	7,248	27.....	1.5	2,316	9.....	1.4	2,216
24.....	8.55	48,715	31.....	1.5	2,260	13.....	1.5	1,948
			Feb. 3.....	1.5	2,216	20.....	1.2	1,500
1903.			8.....	1.5	2,277	24.....	1.1	1,592
Aug. 1.....	3.55	6,303	13.....	1.55	2,305	27.....	1.2	1,448
5.....	2.6	3,680	17.....	1.45	2,281	31.....	1.4	1,857

^a Observations made on September 7 and 8, 1900.

^b Extreme high water September 10, 1903, due to backwater from floods in streams below Laredo.

Discharge measurements of Rio Grande near Laredo, Tex., in 1900, 1903-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1906.	<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 3	1.9	2,718	Oct. 4	7.0	15,998	Sept. 25	5.9	10,616
9	6.5	19,098	10	7.25	17,534	29	5.75	12,838
13	17.7	48,235	17	4.85	7,456	Oct. 3	5.0	9,036
27	6.5	18,548	18	4.8	7,101	8	4.7	7,576
30	5.8	15,598	26	4.3	5,574	13	4.3	6,183
Oct. 4	4.8	11,860	30	3.9	4,627	18	4.2	4,993
8	4.0	8,454	Nov. 3	3.8	4,438	22	4.1	4,840
12	4.2	8,779	12	3.1	3,671	27	4.0	4,636
19	8.5	28,841	15	3.9	4,760	30	3.9	4,930
27	7.0	21,438	17	6.65	13,855	Nov. 4	3.8	4,452
31	5.2	14,236	24	5.5	9,823	9	3.9	4,991
Nov. 7	5.8	12,750	30	4.4	5,221	14	3.7	4,484
3	4.6	8,384	Dec. 3	4.3	5,201	20	3.9	4,745
11	4.3	7,368	8	5.3	6,807	29	4.0	5,267
19	3.2	6,460	14	4.7	6,823	Dec. 5	4.0	4,746
25	2.7	5,437	16	4.5	5,549	8	3.9	5,288
29	2.6	5,051	22	5.8	9,812	11	4.0	5,003
Dec. 6	2.4	4,838	26	6.2	11,793	17	4.5	6,489
9	3.4	6,715	Jan. -1906.			21	4.4	5,814
14	3.1	6,093	Jan. 8	4.1	5,269	27	4.1	5,432
20	3.1	6,144	15	3.9	4,735	31	3.9	4,732
23	2.9	5,162	16	3.9	4,467	1907.		
30	2.4	4,216	20	3.8	4,213	Jan. 4	3.9	4,388
Jan. 1905.			25	3.7	3,671	10	3.9	4,929
Jan. 1	2.3	4,023	29	3.6	3,593	14	3.8	4,862
5	2.2	3,453	Feb. 7	3.6	3,550	18	3.8	4,835
10	2.2	3,339	14	4.3	4,944	23	3.8	5,102
17	1.8	3,096	15	4.8	6,345	28	3.8	4,647
21	1.7	3,036	15	5.2	7,837	Feb. 1	3.8	4,814
24	1.65	3,140	24	5.4	8,460	8	4.0	4,638
28	1.6	2,956	28	4.85	7,030	11	3.7	4,325
Feb. 5	1.6	3,064	Mar. 6	4.0	4,109	16	3.6	3,770
11	1.5	2,797	12	3.8	3,956	21	3.6	3,808
15	1.5	2,851	20	3.2	2,967	26	3.6	3,816
18	1.5	2,944	23	3.25	3,353	Mar. 4	3.4	3,246
23	1.5	2,876	27	3.15	2,968	9	3.3	3,238
27	1.5	2,927	30	3.0	2,489	13	3.3	3,410
Mar. 1	1.5	2,870	Apr. 5	2.9	2,479	19	3.3	3,226
6	2.2	3,404	11	3.0	2,613	23	3.1	2,877
10	3.1	5,169	14	3.2	3,102	28	3.0	2,672
15	3.2	4,909	18	3.0	2,559	Apr. 3	3.0	2,674
17	4.95	11,642	23	3.0	2,696	9	3.2	3,202
24	3.9	9,480	28	3.0	2,764	13	3.3	3,274
28	3.0	4,889	May 1	3.3	3,077	22	3.1	2,870
May 7	3.2	5,329	3	4.65	6,897	25	3.0	2,848
13	3.3	5,066	13	4.8	4,344	29	3.45	3,570
19	3.6	5,208	20	4.8	6,863	May 1	4.25	5,642
21	3.0	4,416	23	6.35	12,888	7	4.3	5,557
24	3.3	5,516	29	4.7	6,730	11	4.1	5,051
25	4.2	6,049	June 6	6.8	9,851	17	3.9	4,801
27	7.55	17,256	15	7.1	11,377	22	4.1	5,426
June 10	5.8	13,646	22	4.3	6,364	27	4.4	5,739
12	5.0	10,710	25	4.2	4,768	June 8	4.3	6,114
14	6.0	13,867	29	4.4	5,153	12	4.8	8,001
18	7.0	14,760	July 2	4.8	7,063	15	4.8	8,189
23	7.75	17,407	8	5.95	11,050	19	4.95	8,518
25	6.6	14,005	9	7.3	18,514	20	5.45	11,795
July 2	12.2	30,749	14	7.5	17,069	25	5.3	10,320
3	11.9	28,044	20	8.3	17,293	29	5.0	8,950
13	6.3	8,369	23	9.6	23,855	July 4	5.6	10,814
16	5.8	6,603	27	8.8	18,983	8	5.85	11,952
23	5.5	6,025	28	8.9	19,399	15	5.05	8,791
26	5.4	5,751	30	11.0	27,903	20	4.7	7,270
27	7.2	9,854	Aug. 3	6.65	15,476	25	4.4	6,481
Aug. 8	5.0	6,426	8	10.25	21,564	30	4.2	5,698
11	8.2	21,602	12	12.8	32,529	Aug. 5	4.4	6,305
15	6.45	12,318	13	18.0	49,288	10	4.4	6,165
16	6.6	14,091	14	22.0	53,648	18	4.0	4,890
21	5.4	11,993	15	15.8	40,070	22	3.7	3,815
27	6.2	11,893	20	8.8	22,043	28	3.4	3,199
29	6.5	12,777	24	7.5	18,215	30	4.5	6,554
Sept. 2	5.1	8,867	26	9.9	26,964	Sept. 5	5.8	11,506
7	4.2	8,627	30	11.5	31,219	8	6.1	12,239
13	8.35	23,416	Sept. 3	12.8	35,547	11	6.55	15,528
16	7.0	16,227	7	9.4	18,373	13	7.25	17,317
22	5.8	10,256	15	6.0	10,974	19	5.5	10,545
27	6.55	11,981	19	5.6	9,247	22	7.65	18,577
29	9.9	23,270	22	5.5	11,219	30	5.4	9,452
						Oct. 5	4.65	6,808

Discharge measurements of Rio Grande near Laredo, Tex., in 1900, 1903-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1909.	<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 8.....	4.8	7,010	Oct. 5.....	3.6	3,530	Oct. 15.....	3.2	2,951
14.....	4.0	4,496	11.....	3.9	4,310	21.....	3.0	2,584
19.....	4.0	4,216	15.....	3.2	3,023	26.....	2.8	2,271
25.....	4.0	4,177	20.....	3.3	3,112	31.....	2.8	2,286
30.....	4.7	7,648	25.....	2.9	2,769	Nov. 5.....	2.7	2,036
Nov. 6.....	5.1	8,269	31.....	2.7	2,440	11.....	2.6	1,983
31.....	5.0	7,823	Nov. 5.....	2.5	2,336	17.....	2.5	2,024
10.....	7.85	14,267	11.....	2.3	2,196	21.....	2.4	2,151
11.....	9.7	20,511	15.....	2.5	2,384	26.....	2.4	2,055
18.....	5.0	8,730	20.....	2.1	2,040	30.....	2.35	2,028
25.....	4.4	6,636	25.....	2.3	2,170	Dec. 5.....	2.4	1,992
29.....	4.4	6,889	30.....	2.6	2,311	11.....	2.3	1,836
Dec. 5.....	8.0	18,181	Dec. 5.....	2.5	2,330	16.....	2.3	1,745
10.....	5.6	10,675	11.....	2.5	2,342	21.....	2.5	2,005
15.....	5.2	9,194	15.....	2.7	2,636	27.....	2.5	2,007
21.....	4.5	7,044	21.....	2.9	3,010	31.....	2.5	2,005
27.....	4.3	6,086	25.....	2.6	2,466			
31.....	4.2	5,557	31.....	2.4	2,272	1910.		
1908.			1909.			Jan. 3.....	4.5	6,041
Jan. 5.....	4.0	5,123	Jan. 6.....	2.5	2,333	11.....	3.3	2,731
13.....	3.9	4,056	10.....	2.6	2,388	18.....	2.9	2,374
18.....	3.8	4,309	16.....	2.8	2,845	21.....	3.1	2,614
21.....	3.7	4,180	21.....	2.4	2,328	25.....	2.9	2,248
25.....	3.8	5,092	26.....	2.0	1,933	31.....	2.7	2,232
31.....	3.2	3,431	31.....	2.5	2,229	Feb. 5.....	2.5	2,306
Feb. 5.....	3.3	3,478	Feb. 5.....	2.3	2,167	11.....	2.7	1,862
10.....	3.2	3,282	9.....	2.5	2,349	16.....	2.3	1,777
15.....	3.1	2,98	14.....	2.5	2,808	20.....	2.3	1,605
20.....	3.1	3,030	20.....	2.2	2,239	25.....	2.2	1,669
25.....	3.0	2,819	25.....	2.1	2,232	28.....	2.2	1,601
29.....	3.0	2,872	Mar. 1.....	2.0	1,950	Mar. 5.....	2.0	1,460
Mar. 5.....	3.1	2,960	5.....	2.4	2,816	12.....	2.0	1,552
10.....	3.1	3,087	10.....	2.2	2,284	17.....	1.9	1,216
15.....	2.9	2,665	13.....	4.4	6,598	21.....	3.65	3,699
20.....	2.9	2,578	18.....	2.0	1,731	26.....	2.6	2,167
25.....	2.7	2,215	26.....	2.2	2,278	31.....	2.55	1,995
31.....	2.6	2,065	31.....	2.1	1,817	Apr. 7.....	2.7	2,194
Apr. 5.....	2.6	2,060	Apr. 5.....	2.2	2,001	10.....	7.4	16,802
11.....	2.8	2,254	12.....	2.3	2,258	15.....	3.1	2,645
13.....	5.5	9,119	16.....	2.1	1,857	21.....	2.4	1,973
16.....	7.3	17,356	21.....	2.1	1,887	26.....	2.6	2,083
19.....	3.5	3,611	25.....	2.0	1,843	May 5.....	2.7	2,272
21.....	11.0	34,536	30.....	2.3	2,148	8.....	3.0	2,818
25.....	3.5	4,402	May 6.....	2.0	1,833	13.....	3.8	4,299
30.....	3.0	3,082	11.....	2.3	2,065	18.....	6.6	13,130
May 6.....	3.5	3,478	15.....	2.5	2,144	26.....	3.8	4,336
11.....	3.3	3,161	22.....	4.6	6,752	31.....	4.1	4,760
15.....	5.0	6,762	27.....	5.6	9,691	June 6.....	3.5	3,452
20.....	3.3	2,872	31.....	4.5	5,997	11.....	2.7	2,313
26.....	6.25	12,206	June 6.....	4.0	3,756	15.....	2.2	1,717
30.....	3.9	4,302	11.....	3.4	3,281	20.....	1.9	1,427
June 5.....	3.5	3,817	16.....	2.5	2,116	25.....	2.8	2,408
11.....	3.2	3,222	21.....	2.6	2,272	26.....	4.25	5,040
16.....	2.9	2,639	25.....	3.5	3,266	30.....	4.7	7,241
20.....	2.7	2,334	30.....	3.0	2,620	July 7.....	4.05	4,139
25.....	2.5	2,263	July 7.....	4.2	3,692	9.....	4.15	5,228
29.....	3.0	2,952	12.....	4.7	4,403	16.....	2.9	2,370
July 4.....	2.3	2,130	16.....	7.0	13,433	22.....	2.2	1,868
9.....	8.5	27,439	23.....	4.0	3,789	27.....	2.2	1,469
14.....	3.5	3,902	24.....	8.8	29,931	31.....	1.9	1,242
19.....	2.6	2,354	25.....	8.1	21,319	Aug. 5.....	1.8	1,011
24.....	2.4	2,219	31.....	3.0	3,335	11.....	1.6	1,103
28.....	5.4	9,127	Aug. 3.....	4.4	4,020	20.....	1.7	1,024
31.....	4.5	6,110	9.....	4.3	3,873	26.....	1.6	1,270
Aug. 1.....	6.3	11,556	14.....	4.3	3,827	30.....	3.8	4,127
6.....	7.55	14,561	19.....	3.5	3,210	31.....	3.95	4,391
11.....	10.7	37,745	22.....	5.1	6,270	Sept. 6.....	2.7	2,343
15.....	5.8	10,971	29.....	5.6	7,138	8.....	10.75	26,160
16.....	10.4	32,261	Sept. 3.....	3.3	2,809	14.....	4.1	5,259
23.....	5.0	8,052	7.....	6.5	8,312	20.....	3.6	4,050
30.....	5.5	8,789	14.....	3.7	3,497	26.....	2.9	2,619
Sept. 4.....	8.2	22,491	16.....	6.7	9,768	30.....	3.7	3,890
10.....	7.7	20,511	21.....	6.3	11,758	Oct. 4.....	7.4	14,240
15.....	6.2	14,007	27.....	5.8	8,078	11.....	2.7	2,459
21.....	4.4	6,853	30.....	4.9	5,776	15.....	2.6	2,193
26.....	4.0	4,711	Oct. 5.....	4.0	4,310	20.....	2.4	1,880
30.....	3.8	3,986	10.....	3.7	3,349	26.....	2.3	1,881
						31.....	2.1	1,545

Discharge measurements of Rio Grande near Laredo, Tex., in 1900, 1903-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1910.	<i>Fect.</i>	<i>Sec.-ft.</i>	1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>
Nov. 5.....	2.1	1,685	Oct. 15.....	5.0	9,657	Oct. 5.....	3.5	4,893
10.....	2.1	1,579	21.....	5.5	9,572	9.....	5.6	9,537
20.....	2.1	1,559	27.....	5.3	9,408	15.....	4.2	6,801
26.....	2.1	1,417	Nov. 1.....	4.9	7,038	19.....	3.7	5,561
30.....	2.1	1,507	7.....	4.6	6,040	25.....	3.1	2,897
Dec. 6.....	2.0	1,541	13.....	4.5	5,588	30.....	2.7	2,813
11.....	2.0	1,573	18.....	4.1	4,787	Nov. 4.....	2.5	2,578
16.....	2.1	1,557	24.....	4.1	4,645	9.....	2.4	2,408
21.....	2.1	1,335	29.....	4.0	4,089	15.....	2.3	2,051
26.....	2.0	1,295	Dec. 5.....	3.9	3,364	20.....	2.5	2,571
30.....	2.0	1,536	9.....	3.8	3,712	26.....	2.5	2,682
1911.			16.....	3.8	3,599	30.....	2.3	2,184
Jan. 6.....	2.0	1,228	22.....	3.7	3,715	Dec. 5.....	2.4	2,585
11.....	2.1	1,206	26.....	3.5	3,294	13.....	2.8	2,943
16.....	2.0	1,379	29.....	3.5	3,178	18.....	2.5	3,016
21.....	2.0	1,293	1912.			23.....	2.7	2,903
26.....	2.0	1,360	Jan. 5.....	3.4	2,845	27.....	2.9	3,301
31.....	2.0	1,233	9.....	3.3	2,741	31.....	2.7	3,035
Feb. 4.....	1.9	1,220	15.....	3.8	3,374	1913.		
12.....	2.0	1,392	20.....	3.4	3,132	Jan. 10.....	2.4	2,636
16.....	2.0	1,319	26.....	3.5	3,086	14.....	2.3	2,152
19.....	4.2	5,598	30.....	3.4	2,926	18.....	2.3	2,240
25.....	3.0	2,565	Feb. 3.....	3.6	3,192	24.....	2.2	2,009
28.....	2.5	1,990	9.....	3.3	2,866	30.....	2.2	2,125
Mar. 5.....	2.4	1,776	15.....	3.1	2,504	Feb. 4.....	1.9	1,614
10.....	2.1	1,567	21.....	2.1	2,294	12.....	2.0	1,903
16.....	1.9	1,271	24.....	1.9	2,184	21.....	4.2	6,095
21.....	2.1	1,572	28.....	1.8	2,134	25.....	3.5	5,019
22.....	5.0	7,518	Mar. 6.....	1.7	1,900	28.....	3.4	4,338
31.....	1.9	1,616	11.....	1.6	1,713	Mar. 5.....	3.8	3,035
Apr. 5.....	5.0	7,129	16.....	1.5	1,550	12.....	3.7	4,613
6.....	6.4	12,771	21.....	1.6	1,604	24.....	2.6	2,607
11.....	2.8	2,138	26.....	1.6	1,776	27.....	2.4	2,416
15.....	2.6	1,994	30.....	1.8	1,918	Apr. 5.....	2.2	2,273
20.....	2.6	1,990	Apr. 4.....	1.6	1,708	31.....	1.9	1,780
29.....	2.2	1,689	9.....	6.7	14,523	12.....	1.8	1,719
May 1.....	3.9	4,093	15.....	2.3	2,386	17.....	1.6	1,601
7.....	2.7	2,302	21.....	2.0	2,187	21.....	1.6	1,580
12.....	2.1	1,418	26.....	2.6	2,844	25.....	1.6	1,448
13.....	6.4	11,946	30.....	2.6	2,615	26.....	6.4	13,690
18.....	9.7	24,786	May 5.....	2.1	2,258	30.....	2.6	2,465
20.....	5.0	8,232	6.....	4.2	6,327	May 6.....	8.6	17,082
26.....	4.4	5,357	12.....	1.7	1,711	10.....	3.5	4,522
30.....	4.1	5,133	17.....	1.4	1,394	17.....	3.6	4,614
June 2.....	5.1	7,589	21.....	3.2	3,760	21.....	3.0	3,278
8.....	3.6	3,585	25.....	3.5	4,355	26.....	2.5	2,626
13.....	3.1	2,846	31.....	3.9	4,881	31.....	2.4	2,493
17.....	4.6	6,300	June 3.....	5.4	9,948	June 6.....	2.0	1,891
19.....	6.8	13,908	8.....	4.1	5,683	11.....	3.5	4,587
23.....	4.3	5,760	14.....	5.5	9,608	16.....	3.1	3,549
29.....	4.4	5,086	20.....	16.0	40,923	21.....	3.5	4,559
July 5.....	4.4	5,224	21.....	9.0	16,500	25.....	12.9	37,459
12.....	4.5	5,514	26.....	5.8	8,134	30.....	4.1	5,561
15.....	5.2	8,184	30.....	3.9	3,078	July 5.....	3.5	4,478
17.....	6.5	12,321	July 5.....	3.9	5,278	11.....	2.9	3,221
22.....	5.4	7,859	10.....	3.7	5,304	16.....	2.6	2,561
26.....	8.0	19,434	14.....	3.2	4,587	22.....	2.2	2,253
29.....	5.5	10,724	20.....	2.7	3,042	26.....	2.0	1,767
Aug. 3.....	6.5	12,723	26.....	2.5	2,891	31.....	2.8	2,920
8.....	6.9	13,621	31.....	2.4	3,115	Aug. 6.....	2.7	2,375
13.....	4.6	5,740	Aug. 4.....	3.3	2,584	10.....	2.1	1,876
18.....	4.0	4,155	9.....	2.9	3,817	16.....	1.9	1,564
23.....	3.5	2,799	14.....	2.1	2,789	22.....	2.5	2,365
29.....	2.9	3,784	20.....	2.4	2,806	26.....	3.3	3,747
Sept. 2.....	4.7	5,837	24.....	6.2	10,654	30.....	2.8	2,803
8.....	4.7	5,932	26.....	7.2	15,079	Sept. 3.....	2.4	2,139
12.....	5.5	9,881	31.....	6.9	14,145	7.....	4.0	4,664
19.....	4.6	5,643	Sept. 5.....	7.9	18,459	11.....	5.4	8,944
25.....	4.0	3,322	11.....	7.2	16,385	14.....	5.5	9,111
30.....	4.2	4,402	15.....	7.4	18,888	20.....	3.8	4,957
Oct. 5.....	3.6	3,131	21.....	8.6	22,694	27.....	2.9	3,198
11.....	3.8	4,076	25.....	6.2	9,608	30.....	3.1	3,615
14.....	18.0	43,701	29.....	4.0	6,471			

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	3.35	6.75	3.4	2.9	1.85	16.....	9.15	1.6	3.5	3.1	2.1
2.....	1.9	3.3	1.8	2.75	2.7	17.....	3.9	1.45	3.3	2.85	2.1
3.....	1.4	2.0	1.25	3.0	2.1	18.....	2.55	1.65	2.9	2.6	2.0
4.....	1.1	2.05	1.25	2.85	1.8	19.....	2.0	1.95	3.35	2.5	1.9
5.....	1.05	2.4	1.3	3.3	1.85	20.....	2.75	1.6	2.6	2.35	1.75
6.....	1.0	1.85	1.45	3.25	2.0	21.....	2.4	1.4	2.0	2.35	1.6
7.....	.85	1.65	1.85	3.7	3.8	22.....	2.1	1.3	1.75	3.3	1.7
8.....	.7	1.7	2.1	3.45	3.1	23.....	2.75	1.3	1.55	2.65	8.1
9.....	1.15	1.65	1.5	3.9	2.2	24.....	3.75	1.1	1.5	2.7	8.55
10.....	.85	1.5	1.5	6.85	1.65	25.....	2.85	1.2	1.8	2.5	9.95
11.....	.8	1.5	1.25	4.85	1.45	26.....	2.35	1.3	2.15	2.05	5.35
12.....	1.1	1.4	.95	4.55	1.25	27.....	2.25	1.15	1.65	1.8	3.5
13.....	1.0	1.3	.8	4.0	1.4	28.....	2.0	1.05	1.95	1.8	3.0
14.....	1.05	1.3	1.2	3.65	1.55	29.....	1.9	.95	2.6	2.25	2.7
15.....	8.7	1.35	2.6	3.4	1.9	30.....	1.5	2.85	2.5	2.1	2.3
						31.....	1.5		2.7	2.05	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3.2	1.5			0.4	0.3	0.25	5.6	2.4	0.4	0.4	0.9
2.....	2.75	1.5			.4	.3	.25	3.5	2.4	.4	.4	.9
3.....	2.35	1.6			.4	.3	.25	3.0	1.9	.4	.4	.9
4.....	2.6	1.55			.4	.3	.25	3.0	1.8	.4	.4	.9
5.....	2.5	1.35			.4	.3	.25	2.5	1.6	.4	.4	2.0
6.....	2.3	1.3			.4	.3	.25	2.5	1.5	.4	.5	2.0
7.....	2.2	2.2			.4	.3	.25	2.5	1.5	.4	.6	3.0
8.....	2.2	1.25			.4	.3	.25	2.5	1.4	.4	.7	4.0
9.....	2.3	1.3			.4	.3	.25	4.5	1.4	.4	.7	4.5
10.....	2.05	1.2			.4	.3	.25	3.0	1.4	.4	.9	5.5
11.....	2.0	1.2			.4	.3	.25	3.0	1.3	.4	.9	3.5
12.....	1.9	1.1			.4	.3	.25	2.5	1.3	.4	.7	3.0
13.....	1.8	1.1			.4	.3	.25	2.5	1.2	.4	.5	3.0
14.....	1.75	1.0			.4	.3	.25	2.5	1.2	.4	.4	2.0
15.....	1.7	1.0			.4	.3	.25	2.5	1.2	.4	.4	2.8
16.....	1.6	1.1			.3	.3	.25	2.5	1.2	.4	.5	2.8
17.....	1.5	1.1			.3	.3	.25	2.5	1.0	.4	.6	2.3
18.....	1.8	1.1			.3	.3	.25	3.5	1.0	.4	.7	2.6
19.....	1.8	1.1			.3	.3	.25	3.0	1.0	.4	.8	2.6
20.....	2.05	1.1			.3	.3	.25	2.5	1.0	.4	.8	2.5
21.....	2.0	1.15			.3	.3	.25	2.5	1.0	.4	.8	2.3
22.....	2.1	1.0			.3	.3	.25	2.5	1.0	.4	.8	2.2
23.....	2.05	1.0			.3	.3	.25	2.5	.9	.4	.8	2.2
24.....	2.05	1.0			.3	.3	.25	3.2	.9	.4	.8	2.1
25.....	2.15	1.0			.3	.3	.25	2.9	.9	.4	.9	2.1
26.....	2.2	1.0			.3	.3	.25	2.5	.8	.4	.9	2.0
27.....	2.1	.9			.3	.3	.25	2.5	.8	.4	.9	2.15
28.....	2.15	.9			.3	.3	.25	2.5	.7	.4	.9	2.4
29.....	2.7	.9			.3	.3	.25	2.5	.7	.4	.9	2.4
30.....	1.9	.9				.2	.25	2.5	.5	.4	.9	2.4
31.....	1.95							2.8		.4	.9	
1901-2.												
1.....	2.5	2.4	3.2	2.3	2.3	1.2	.4	.4	.6	.6	3.3	1.95
2.....	2.5	2.4	3.2	2.3	2.3	1.2	.4	.4	.9	.5	3.05	2.85
3.....	2.6	2.4	3.2	2.2	2.3	1.2	.4	.4	1.0	1.45	2.65	4.05
4.....	2.7	2.4	3.2	2.2	2.2	1.1	.4	.4	.9	1.8	2.25	3.9
5.....	2.8	2.4	3.2	2.2	2.2	1.1	.4	1.8	.8	.95	2.1	3.3
6.....	2.2	2.4	3.2	2.2	2.2	1.1	.4	3.65	.7	.75	2.0	3.75
7.....	2.2	2.4	3.2	2.2	2.1	1.0	.4	2.6	.65	.6	1.7	3.65
8.....	2.2	2.4	3.2	2.2	2.1	1.0	.4	1.85	.6	.55	1.2	3.45
9.....	2.1	2.3	3.2	2.2	2.1	1.0	.4	1.7	.6	.5	1.1	3.85
10.....	2.1	2.3	3.2	2.2	2.0	.9	.4	1.3	.6	.5	1.3	4.95
11.....	2.1	2.2	3.2	2.2	2.0	.9	.4	.95	.5	.6	1.05	6.3
12.....	2.0	2.2	3.2	2.2	2.0	.8	.4	.85	.5	.7	.9	6.25
13.....	2.0	2.2	3.2	2.2	1.9	.8	.4	.8	.5	1.0	.8	5.4
14.....	2.0	2.2	3.2	2.2	1.9	.7	.4	.75	.5	1.4	.7	4.95
15.....	2.0	2.2	2.3	2.2	1.9	.7	.4	.7	.6	1.65	.6	4.35

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
16.	2.6	2.2	2.3	2.2	1.7	0.6	0.4	0.6	0.7	2.95	2.8	3.65
17.	2.6	2.2	2.3	2.2	1.7	.6	1.35	.6	.8	2.45	2.1	3.15
18.	2.6	2.2	2.3	2.2	1.7	.5	1.15	.6	.7	1.95	1.7	2.65
19.	2.5	4.0	2.3	2.2	1.7	.5	.85	2.35	.65	1.85	1.7	3.05
20.	2.5	4.0	2.2	2.2	1.6	.5	.75	4.6	.7	1.85	1.65	3.25
21.	2.4	4.0	2.2	2.2	1.6	.5	.7	2.8	.65	1.85	1.5	2.15
22.	2.4	4.0	2.2	2.3	1.6	.5	.65	1.65	.6	1.7	1.5	1.8
23.	2.4	4.0	2.2	2.3	1.4	.5	.6	1.25	.85	1.7	1.45	2.25
24.	2.4	4.0	2.2	2.3	1.4	.5	.5	1.05	1.0	1.85	1.4	2.3
25.	2.4	4.0	2.2	2.3	1.4	.5	.45	1.0	.9	2.2	1.4	1.6
26.	2.4	4.0	2.2	2.3	1.3	.5	.4	.9	.75	3.0	1.3	1.3
27.	2.4	3.6	2.2	2.3	1.3	.5	.4	.85	.65	5.5	1.6	1.25
28.	2.4	3.6	2.2	2.3	1.3	.45	.4	.8	.6	4.7	2.45	1.0
29.	2.4	3.5	2.2	2.3	.....	.4	.4	.8	.7	3.7	2.45	.95
30.	2.4	3.4	2.2	2.3	.....	.4	.4	.7	.7	3.6	2.0	1.8
31.	2.4	.....	2.3	2.3	.....	.4	.....	.7	.....	3.95	1.7	.....
1902-3.												
1.	1.7	.25	.5	.3	.4	.....	.....	.....	.....	.....	3.75	2.9
2.	1.2	.35	3.95	.2	.4	.....	.....	.....	.....	.....	3.95	2.9
3.	1.3	1.0	2.8	.2	.3	.....	.....	.....	.....	.....	3.05	3.2
4.	1.05	1.1	1.0	.2	.3	.....	.....	.....	.....	.....	2.65	3.45
5.	1.8	.8	.5	.2	.4	.....	.....	.....	.....	.....	2.45	3.85
6.	1.45	.6	.3	.2	.4	.....	.....	.....	.....	.....	2.2	3.8
7.	1.0	.5	.3	.2	.4	.....	.....	.....	.....	.....	2.4	3.75
8.	1.1	.65	.35	.2	.4	.....	.....	.....	.....	.....	2.8	3.8
9.	.95	.75	.4	.2	.4	.....	.....	.....	.....	.....	2.75	3.5
10.	.7	.6	.4	.2	.5	.....	.....	.....	.....	.....	2.35	9.5
11.	.6	.5	.35	.2	.45	.....	.....	.....	.....	.....	2.15	6.6
12.	.5	.5	.4	.25	.4	.....	.....	.....	.....	.....	2.1	6.95
13.	.5	.5	.4	.3	.4	.....	.....	.....	.....	.....	2.3	3.7
14.	.65	.5	.4	.4	.5	.....	.....	.....	.....	.....	2.25	2.3
15.	1.05	.5	.4	.4	.4	.....	.....	.....	.....	.....	2.4	2.3
16.	1.6	.4	.3	.4	.9	.....	.....	.....	.....	.....	2.5	2.6
17.	.95	.7	.3	.1	.9	.....	.....	.....	.....	.....	2.45	2.7
18.	1.2	1.0	.3	.75	.9	.....	.....	.....	.....	.....	2.4	3.6
19.	.4	.8	.3	.45	.8	.....	.....	.....	.....	.....	2.45	2.85
20.	.4	.6	.2	.45	.8	.....	.....	.....	.....	.....	2.4	2.7
21.	.4	.4	.2	.45	.6	.....	.....	.....	.....	.....	2.3	2.6
22.	.4	1.0	.2	.4	.6	.....	.....	.....	.....	.....	2.2	2.6
23.	.4	.8	.3	.4	.6	.....	.....	.....	.....	.....	2.4	2.65
24.	.4	.5	.3	.4	.6	.....	.....	.....	.....	.....	2.3	2.75
25.	.4	.35	.3	.4	.7	.....	.....	.....	.....	.....	3.15	2.75
26.	.4	.2	.3	.4	1.6	.....	.....	.....	.....	.....	3.35	2.6
27.	.4	.3	.3	.4	1.75	.....	.....	.....	.....	.....	3.05	3.0
28.	.4	.3	.3	.4	.85	.....	.....	.....	.....	.....	2.8	3.1
29.	.4	.3	.3	.4	.....	.....	.....	.....	.....	.....	2.55	4.45
30.	.3	.3	.3	.4	.....	.....	.....	.....	.....	.....	2.6	3.6
31.	.3	.....	.3	.4	.....	.....	.....	.....	.....	.....	3.5	.....
1903-4.												
1.	2.85	2.4	1.9	1.7	1.5	1.45	1.3	1.5	3.25	5.3	1.6	1.75
2.	3.7	2.4	1.9	1.7	1.5	1.4	4.0	1.5	2.8	4.1	1.55	1.95
3.	3.05	2.1	1.8	1.7	1.5	1.4	4.2	1.3	2.35	3.65	1.5	1.9
4.	3.9	2.1	1.8	1.7	1.5	1.4	3.3	1.3	2.2	2.85	1.45	1.85
5.	4.15	2.05	1.8	1.7	1.5	1.45	2.45	1.35	1.9	2.4	1.4	2.4
6.	4.1	2.0	1.8	1.7	1.5	1.5	1.95	1.2	1.9	2.3	1.35	2.35
7.	3.7	2.0	1.8	1.7	1.5	1.5	1.55	1.2	2.05	2.15	1.3	2.45
8.	3.55	2.0	1.8	1.7	1.5	1.45	1.5	1.2	2.5	2.05	1.3	7.5
9.	3.4	2.0	1.8	1.7	1.5	1.3	1.4	1.25	3.55	1.9	1.45	7.15
10.	2.8	2.0	1.8	1.7	1.5	1.3	1.35	1.35	3.4	1.8	1.5	8.45
11.	2.85	2.0	1.8	1.7	1.85	1.3	1.3	1.2	2.9	1.65	1.55	7.0
12.	2.9	2.0	1.8	1.6	1.65	1.3	1.3	1.2	2.35	1.7	1.6	9.8
13.	2.8	2.0	1.8	1.6	1.55	1.3	1.3	1.2	3.55	1.65	1.5	15.8
14.	2.8	2.0	1.8	1.6	1.5	1.3	1.3	3.95	3.4	1.65	1.6	15.65
15.	2.8	2.0	1.8	1.6	1.5	1.3	1.3	2.65	3.0	1.5	1.55	20.75
16.	2.8	2.0	1.8	1.6	1.5	1.3	1.3	2.1	2.7	1.35	1.5	24.25
17.	2.8	2.0	1.8	1.6	1.45	1.3	1.3	2.4	2.65	1.3	1.4	25.0
18.	2.6	1.9	1.8	1.6	1.4	1.3	1.3	1.65	2.35	1.3	1.4	18.25
19.	2.6	1.9	1.7	1.6	1.4	1.3	1.3	1.35	2.05	1.3	1.35	8.1
20.	2.55	1.9	1.7	1.6	1.45	1.3	1.3	1.2	1.95	1.3	1.2	7.0

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21.....	2.5	1.9	1.7	1.6	1.5	1.3	1.3	1.1	2.45	1.25	1.2	8.5
22.....	2.5	2.0	1.7	1.6	1.5	1.3	1.3	1.0	2.15	1.2	1.0	9.95
23.....	2.5	1.95	1.7	1.6	1.5	1.3	1.3	1.0	1.9	1.25	1.0	14.0
24.....	2.45	1.9	1.7	1.6	1.5	1.3	1.3	.95	2.25	1.4	1.1	12.1
25.....	2.4	1.9	1.7	1.6	1.5	1.3	1.55	.9	2.65	1.85	1.2	10.5
26.....	2.45	1.9	1.7	1.6	1.5	1.3	1.5	.9	2.4	3.5	1.3	7.9
27.....	2.5	1.9	1.7	1.5	1.5	1.3	1.3	2.0	2.2	2.5	1.2	8.0
28.....	2.95	1.9	1.7	1.5	1.5	1.3	1.35	1.85	2.0	1.9	1.15	7.1
29.....	2.6	1.9	1.7	1.5	1.5	1.3	1.5	2.25	6.7	1.75	1.2	6.8
30.....	2.4	1.9	1.7	1.5	1.5	1.3	1.75	2.75	8.8	1.55	1.3	5.8
31.....	2.4	.....	1.7	1.5	.....	1.3	.....	4.7	.....	1.55	1.4	.....
1904-5.												
1.....	5.1	5.75	2.5	2.3	1.6	1.5	2.9	3.55	4.5	18.6	7.25	5.6
2.....	5.2	5.95	2.4	2.3	1.6	1.6	4.25	3.6	4.15	11.2	7.05	5.15
3.....	5.35	5.8	2.4	2.25	1.6	1.7	6.65	3.75	4.2	10.5	7.05	4.8
4.....	4.9	5.45	2.4	2.2	1.6	1.75	3.2	3.55	4.2	9.8	7.15	4.4
5.....	4.7	5.05	2.35	2.15	1.65	1.9	3.2	3.5	4.45	9.3	6.85	4.65
6.....	4.7	4.8	2.4	2.0	1.7	2.2	3.0	3.35	4.5	8.1	6.45	4.8
7.....	4.3	4.55	2.45	2.0	1.7	2.3	2.9	3.3	4.45	7.75	5.65	4.55
8.....	4.0	4.55	2.75	2.05	1.7	2.45	2.9	3.65	3.75	7.5	5.1	4.6
9.....	4.0	4.65	3.5	2.2	1.7	2.5	2.8	3.55	4.25	7.25	7.05	4.7
10.....	3.9	4.55	3.55	2.2	1.6	2.8	2.6	3.7	5.2	7.05	7.0	4.55
11.....	4.05	4.25	3.3	2.15	1.5	4.1	3.15	3.85	5.0	6.8	8.25	5.1
12.....	4.2	4.1	3.1	2.0	1.5	3.3	2.9	3.85	5.0	6.3	7.5	6.9
13.....	4.4	3.9	3.2	1.9	1.5	3.3	2.8	3.55	5.05	6.25	6.85	7.9
14.....	5.4	3.65	3.15	1.9	1.5	3.25	2.6	4.1	6.0	6.05	6.7	7.25
15.....	6.9	3.6	2.95	1.9	1.5	3.2	2.6	5.1	6.1	5.95	7.15	7.25
16.....	8.95	3.45	2.8	1.85	1.5	4.45	2.5	4.7	6.7	5.75	6.8	7.0
17.....	8.35	3.05	2.9	1.8	1.5	4.65	2.45	3.65	7.3	5.6	6.8	6.65
18.....	8.4	2.95	2.9	1.8	1.5	3.65	2.4	3.7	7.0	5.55	7.2	6.2
19.....	8.35	3.2	2.9	1.8	1.5	3.0	2.3	3.45	7.45	5.6	7.15	6.1
20.....	8.7	3.15	2.9	1.7	1.5	3.5	2.25	3.05	7.45	5.4	6.25	6.65
21.....	9.05	3.0	2.95	1.7	1.5	3.7	2.25	3.15	6.95	5.0	5.6	6.35
22.....	8.35	2.95	2.9	1.7	1.5	3.7	2.45	5.0	7.7	5.3	6.1	5.6
23.....	8.05	2.8	2.9	1.6	1.5	3.85	2.95	3.75	7.25	5.55	5.55	5.1
24.....	8.05	2.7	2.85	1.6	1.5	3.85	2.9	3.85	7.4	5.85	5.25	5.0
25.....	7.7	2.7	2.75	1.6	1.5	3.5	4.25	4.5	6.55	5.95	5.2	4.75
26.....	7.45	2.75	2.65	1.6	1.5	3.5	4.1	5.6	6.55	6.1	5.1	4.85
27.....	6.9	2.65	2.5	1.6	1.5	3.35	3.55	7.1	6.7	7.2	6.1	6.6
28.....	6.4	2.6	2.4	1.6	1.5	3.1	3.2	6.1	6.55	7.4	6.15	9.2
29.....	6.05	2.6	2.4	1.6	.....	3.0	3.05	5.65	6.35	7.55	6.45	9.55
30.....	5.55	2.5	2.35	1.6	.....	3.0	3.35	4.3	23.0	7.55	5.45	8.75
31.....	5.25	.....	2.3	1.6	.....	2.95	.....	4.0	.....	7.8	5.3	.....
1905-6.												
1.....	7.2	3.9	4.45	5.0	3.5	4.75	3.0	3.15	4.8	4.65	9.8	12.9
2.....	6.65	3.95	4.45	4.9	3.5	4.6	2.9	4.4	4.85	4.8	7.1	14.0
3.....	6.5	3.7	4.25	4.85	3.5	4.5	2.9	5.0	4.95	4.9	6.9	12.75
4.....	7.4	4.2	4.25	4.7	3.5	4.4	2.9	5.0	5.15	5.0	6.2	12.25
5.....	8.2	4.05	5.3	4.45	3.5	4.35	2.9	4.75	6.65	5.25	6.8	10.85
6.....	6.8	3.9	5.3	4.4	3.5	4.3	2.9	4.7	6.95	4.8	7.2	9.3
7.....	6.35	3.85	5.35	4.35	3.6	4.2	2.9	4.8	6.25	4.8	8.15	9.3
8.....	6.15	3.6	5.35	4.25	3.6	4.05	2.9	4.8	5.35	5.75	10.3	8.6
9.....	6.55	3.35	5.3	4.2	3.6	4.0	3.0	4.8	4.95	7.2	9.7	8.3
10.....	7.15	3.55	5.3	4.15	3.75	3.9	3.0	4.8	4.85	8.05	11.25	8.0
11.....	6.9	3.5	5.35	4.1	3.8	3.85	3.05	4.8	4.65	8.0	12.0	8.05
12.....	5.95	3.05	4.45	4.1	3.9	3.8	3.1	4.8	4.55	8.15	13.0	7.55
13.....	5.55	3.25	4.9	4.0	4.05	3.7	3.2	4.8	4.5	8.25	15.9	7.0
14.....	5.35	4.0	4.75	4.0	4.3	3.7	3.3	4.9	4.4	7.4	21.0	6.65
15.....	5.2	3.95	4.7	3.9	4.8	3.6	3.4	5.2	4.3	6.85	17.5	6.1
16.....	5.0	5.15	4.65	3.9	5.4	3.55	3.2	5.15	4.25	6.45	12.15	5.9
17.....	4.9	6.8	4.6	3.85	5.2	3.5	3.2	5.0	4.15	7.3	11.3	5.8
18.....	4.75	6.2	4.55	3.8	5.0	3.4	3.1	5.0	4.1	7.25	9.5	5.65
19.....	4.55	6.35	4.4	3.8	4.95	3.4	3.05	5.6	4.1	7.4	9.75	5.55
20.....	4.55	5.9	4.4	3.7	4.9	3.2	3.0	4.75	4.3	7.95	8.65	5.55
21.....	4.6	6.0	4.4	3.65	4.85	3.2	3.0	4.7	4.3	8.45	8.65	5.65
22.....	4.4	5.85	5.8	3.6	5.35	3.2	3.0	4.8	4.3	8.85	9.9	5.55
23.....	4.4	5.45	5.85	3.6	5.4	3.15	3.0	5.85	4.2	9.55	8.75	5.8
24.....	4.5	5.45	6.15	3.7	5.45	3.1	3.0	5.25	4.2	9.2	7.75	6.55
25.....	4.45	5.1	6.0	3.6	5.3	3.1	3.0	4.95	4.2	8.8	9.3	5.8

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26	4.25	4.9	6.3	3.55	5.2	3.1	3.0	4.8	4.3	8.2	9.8	5.8
27	4.1	4.7	5.7	3.5	5.05	3.05	3.0	4.7	4.35	8.8	9.7	5.7
28	3.9	4.65	5.0	3.5	4.95	3.0	3.0	4.7	4.55	8.9	9.75	5.8
29	3.95	4.55	4.8	3.55	-----	3.0	3.0	4.7	4.4	10.25	11.25	5.8
30	3.85	4.45	4.6	3.4	-----	3.0	3.15	4.7	4.55	10.95	11.25	5.7
31	3.95	-----	4.35	3.5	-----	3.0	-----	4.7	-----	10.35	12.05	-----
1906-7.												
1	5.65	3.9	4.0	3.9	3.85	3.5	3.0	4.4	4.0	5.0	4.45	4.2
2	5.35	3.9	4.0	3.9	3.9	3.4	3.0	4.4	4.0	5.05	4.4	4.15
3	5.0	3.85	3.9	3.85	3.9	3.4	3.1	4.4	4.0	5.75	4.4	4.2
4	5.0	3.85	4.0	3.8	3.8	3.45	3.05	4.45	4.25	5.4	4.35	4.8
5	5.1	3.9	4.0	3.8	3.8	3.4	3.0	4.4	4.2	5.25	4.35	5.75
6	4.95	3.9	4.0	3.8	3.9	3.4	3.05	4.35	4.3	5.2	4.2	5.3
7	4.75	3.95	3.9	3.8	4.0	3.45	3.1	4.4	4.0	5.3	4.25	5.85
8	4.7	3.9	3.9	3.8	4.0	3.4	3.2	4.35	4.1	6.0	4.3	6.1
9	4.65	3.9	3.95	3.8	3.95	3.4	3.25	4.25	4.35	5.25	4.35	6.05
10	4.6	3.8	3.95	3.85	3.95	3.3	3.3	4.1	4.45	5.0	4.35	6.75
11	4.5	3.85	4.0	3.85	3.75	3.3	3.3	4.05	4.6	4.95	4.0	6.5
12	4.4	3.8	4.1	3.9	3.9	3.3	3.3	4.2	4.2	5.0	4.0	6.85
13	4.35	3.8	4.2	3.8	3.8	3.3	3.3	4.1	5.0	5.05	4.0	7.2
14	4.35	3.7	4.25	3.8	3.7	3.3	3.2	4.1	5.0	5.1	4.0	6.0
15	4.5	3.7	4.3	3.8	3.6	3.2	3.25	4.0	4.7	5.45	4.05	5.35
16	4.6	3.6	4.5	3.8	3.6	3.3	3.3	4.0	4.65	5.25	4.05	5.3
17	4.5	3.6	4.5	3.8	3.6	3.2	3.25	4.05	5.2	5.2	4.05	5.05
18	4.75	3.75	4.35	3.8	3.6	3.3	3.5	4.0	5.3	5.35	4.0	5.1
19	4.3	3.8	4.3	3.85	3.65	3.2	3.35	4.0	5.05	4.85	4.0	5.5
20	4.2	3.9	4.3	3.85	3.6	3.2	3.25	4.1	5.7	4.8	3.9	5.2
21	4.25	3.9	4.4	3.8	3.65	3.2	3.2	4.1	5.15	4.6	3.8	6.55
22	4.2	3.85	4.3	3.8	3.7	3.1	3.15	4.0	5.25	4.5	3.7	7.6
23	4.05	3.95	4.25	3.8	3.7	3.05	3.1	4.0	5.3	4.4	3.65	7.2
24	4.1	4.0	4.25	3.8	3.7	3.0	3.05	4.0	5.35	4.5	3.6	6.85
25	4.1	4.0	4.3	3.8	3.7	3.0	3.0	3.8	5.35	4.5	3.55	6.15
26	4.05	3.95	4.25	3.75	3.6	3.05	3.0	4.0	5.35	4.55	3.4	5.6
27	4.0	3.95	4.05	3.8	3.6	3.0	3.1	4.2	5.0	4.5	3.35	5.55
28	3.95	3.9	4.0	3.8	3.5	2.95	3.15	4.25	5.0	4.5	3.4	5.35
29	4.0	4.0	3.95	3.8	-----	2.95	3.85	4.05	4.95	4.4	3.9	5.35
30	3.9	4.0	3.95	3.8	-----	3.05	4.7	3.9	5.0	4.5	4.45	5.35
31	3.95	-----	3.9	3.8	-----	3.1	-----	4.05	-----	4.45	4.3	-----
1907-8.												
1	5.3	4.5	4.4	4.15	3.2	3.05	2.6	3.0	3.7	2.4	6.3	5.5
2	5.15	4.5	4.4	4.1	3.2	3.1	2.6	2.9	3.5	2.4	6.05	5.8
3	4.85	4.25	4.3	4.05	3.2	3.1	2.6	3.2	3.45	2.55	4.95	6.5
4	4.6	4.65	5.65	4.0	3.2	3.1	2.6	3.35	3.35	2.5	3.7	7.65
5	4.55	4.8	7.75	4.0	3.3	3.1	2.6	3.5	3.5	2.2	2.95	8.8
6	5.5	5.0	6.85	4.05	3.2	3.05	2.6	3.5	3.55	2.35	8.75	8.5
7	6.15	5.05	6.35	4.1	3.2	3.05	2.6	3.45	3.6	2.25	8.15	8.45
8	4.7	4.95	6.0	4.1	3.2	3.0	2.6	3.4	3.65	2.4	5.35	8.25
9	4.6	4.9	5.75	4.1	3.2	3.1	2.6	3.35	3.6	7.9	5.5	8.6
10	4.45	8.1	5.6	4.1	3.2	3.1	2.6	3.3	3.4	4.45	5.8	7.5
11	4.25	9.55	5.55	3.95	3.2	3.1	2.9	3.3	3.25	3.75	5.7	5.5
12	4.0	7.2	5.5	3.9	3.2	3.05	5.3	3.3	3.3	3.45	5.15	4.55
13	4.0	6.65	5.5	3.9	3.2	3.0	4.8	3.3	3.2	3.4	4.85	4.35
14	4.0	6.15	5.35	3.8	3.15	2.9	3.95	5.65	3.3	3.5	5.85	5.3
15	4.0	5.6	5.2	3.8	3.1	2.9	3.55	4.85	3.1	3.3	9.3	5.65
16	4.0	5.4	5.05	3.8	3.1	2.9	6.2	3.6	2.9	3.05	10.6	6.25
17	4.0	5.0	4.9	3.8	3.1	2.9	4.6	3.2	2.95	2.95	8.2	5.65
18	4.0	5.0	4.65	3.8	3.1	2.9	3.9	3.2	2.8	2.7	5.45	5.35
19	4.0	5.0	4.6	3.7	3.1	2.9	3.4	3.1	2.7	2.55	5.0	5.0
20	4.0	4.85	4.5	3.7	3.1	2.9	5.25	3.3	2.7	2.45	4.6	4.8
21	4.0	4.45	4.5	3.7	3.1	2.8	10.5	3.2	2.6	2.4	4.6	4.35
22	4.0	4.35	4.5	3.7	3.1	2.8	7.3	3.25	2.55	2.35	4.95	4.3
23	3.95	4.4	4.4	3.7	3.1	2.7	6.75	3.3	2.35	2.35	5.0	4.1
24	3.8	4.4	4.35	3.7	3.0	2.7	4.95	4.05	2.35	2.7	4.9	4.1
25	3.85	4.4	4.3	3.8	3.0	2.7	3.5	10.3	2.5	2.5	5.2	4.0
26	3.9	4.35	4.3	3.7	3.0	2.7	3.15	5.85	2.5	2.35	5.3	4.0
27	4.2	4.35	4.3	3.6	3.0	2.7	3.0	4.65	2.55	3.6	5.4	3.95
28	4.45	4.4	4.3	3.5	3.0	2.65	3.0	4.1	2.75	5.2	5.6	3.8
29	4.8	4.4	4.2	3.4	3.0	2.6	3.0	3.9	2.9	3.7	4.9	3.75
30	4.75	4.4	4.2	3.2	-----	2.6	3.0	3.9	2.6	3.15	5.4	3.8
31	5.55	-----	4.2	3.2	-----	2.6	-----	3.85	-----	4.25	6.05	-----

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1	3.8	2.8	2.6	2.5	2.5	2.0	2.2	2.2	4.5	2.8	3.1	3.6
2	3.9	2.8	2.5	2.55	2.6	2.1	2.2	2.1	5.45	2.8	3.75	3.4
3	3.7	2.75	2.5	2.5	2.5	2.1	2.15	2.05	4.6	2.5	4.3	3.4
4	3.65	2.65	2.5	2.5	2.4	2.3	2.1	2.0	4.75	2.8	3.6	3.6
5	3.6	2.55	2.5	2.4	2.3	2.4	2.2	2.0	4.1	3.15	3.95	3.3
6	3.5	2.5	2.4	2.45	2.3	2.3	2.2	2.0	4.1	3.7	4.55	3.9
7	3.5	2.5	2.35	2.5	2.3	2.3	2.15	2.0	4.1	4.95	4.3	6.05
8	4.0	2.4	2.3	2.4	2.4	2.15	2.15	2.1	3.7	5.4	3.7	5.6
9	3.5	2.4	2.4	2.45	2.5	2.1	2.2	2.2	3.5	3.65	4.4	5.0
10	3.75	2.35	2.5	2.6	2.5	2.2	2.2	2.3	3.4	3.1	4.1	4.6
11	3.8	2.25	2.5	2.6	2.45	2.2	2.1	2.3	3.4	4.1	3.6	4.3
12	3.55	2.25	2.5	2.5	2.3	2.5	2.2	2.2	2.95	5.0	3.85	4.3
13	3.55	2.65	2.5	2.4	2.3	4.45	2.3	2.2	2.65	5.7	3.45	4.1
14	3.4	2.65	2.45	2.6	2.45	3.3	2.3	2.1	2.5	6.65	4.15	3.85
15	3.2	2.5	2.7	2.75	2.3	2.45	2.2	2.5	2.5	5.6	3.2	5.85
16	3.1	2.5	2.7	2.8	2.3	2.2	2.1	2.4	2.5	7.15	3.35	6.5
17	3.0	2.4	2.65	2.75	2.4	2.05	2.1	2.5	2.4	5.9	3.8	5.0
18	3.1	2.35	2.6	2.65	2.3	2.0	2.2	2.6	2.4	5.05	3.4	5.5
19	3.15	2.2	2.6	2.6	2.2	2.1	2.2	2.75	2.2	5.15	3.55	5.8
20	3.3	2.1	2.65	2.4	2.2	2.1	2.1	2.4	2.45	5.6	3.45	6.4
21	3.3	2.15	2.9	2.4	2.15	2.1	2.1	3.5	2.55	4.85	3.75	6.15
22	3.25	2.2	2.8	2.3	2.1	2.1	2.1	4.3	2.4	4.25	5.25	5.6
23	3.55	2.3	2.6	2.3	2.2	2.25	2.1	3.25	2.75	4.15	5.0	4.8
24	3.2	2.3	2.6	2.2	2.1	2.6	2.0	3.25	2.8	9.2	4.3	5.15
25	2.9	2.3	2.5	2.15	2.1	2.35	2.0	3.2	3.25	6.65	3.85	4.3
26	2.85	2.2	2.6	2.0	2.05	2.2	2.0	4.25	3.15	4.4	4.5	4.9
27	2.8	2.35	2.45	2.0	2.0	2.2	2.0	5.4	3.25	3.5	4.5	5.65
28	2.8	2.45	2.45	2.0	2.0	2.2	2.05	4.45	3.3	2.75	4.8	5.6
29	2.75	2.5	2.5	2.1	.....	2.15	2.25	4.0	3.2	2.85	5.45	5.15
30	2.7	2.6	2.45	2.35	.....	2.1	2.25	4.0	3.0	2.55	4.85	4.9
31	2.7	.....	2.4	2.5	.....	2.1	.....	4.1	.....	2.85	4.4	.....
1909-10.												
1	4.6	2.7	2.35	2.4	2.7	2.1	4.05	2.8	4.0	4.35	1.9	4.05
2	4.7	2.55	2.4	2.4	2.7	2.1	3.5	2.8	3.75	3.95	1.9	3.7
3	4.4	2.5	2.4	4.45	2.7	2.05	3.0	2.8	3.55	3.65	1.9	3.3
4	4.05	2.7	2.4	4.25	2.7	2.0	2.75	2.8	3.65	3.35	1.85	3.05
5	3.95	2.7	2.4	4.05	2.7	2.0	2.7	2.65	4.15	3.65	1.8	2.9
6	3.9	2.6	2.3	3.85	2.7	2.0	2.65	2.6	3.5	4.05	1.8	2.7
7	3.55	2.5	2.3	3.65	2.65	2.0	2.65	2.65	3.05	3.95	1.8	2.8
8	3.45	2.4	2.3	3.5	2.6	2.0	2.8	3.05	2.95	3.75	1.7	10.8
9	3.6	2.5	2.2	3.4	2.55	2.0	2.8	3.45	2.7	4.15	1.6	5.25
10	3.7	2.6	2.2	3.35	2.5	2.0	6.85	3.8	2.65	4.05	1.6	4.45
11	3.6	2.55	2.3	3.25	2.45	1.95	5.35	3.7	2.7	3.65	1.6	4.2
12	3.9	2.45	2.3	3.15	2.4	2.0	4.3	3.9	2.55	3.55	1.6	3.7
13	3.7	2.2	2.3	3.1	2.4	2.0	3.8	3.75	2.3	3.25	1.6	3.4
14	3.4	2.1	2.3	3.2	2.35	1.9	3.25	3.7	2.2	3.1	1.6	4.65
15	3.35	2.3	2.3	3.15	2.3	1.9	3.1	3.7	2.15	3.05	1.6	4.8
16	3.35	2.35	2.3	3.05	2.3	1.9	3.75	3.75	2.1	2.9	1.6	5.7
17	3.2	2.45	2.3	3.0	2.3	1.9	3.15	3.9	2.1	3.1	1.55	4.2
18	3.75	2.4	2.3	2.9	2.3	1.8	2.85	6.4	2.1	3.4	1.6	3.85
19	3.7	2.4	2.3	3.15	2.3	1.9	2.7	4.6	1.95	3.0	1.65	3.65
20	3.2	2.4	2.45	3.15	2.3	2.0	2.6	4.1	1.9	2.85	1.7	3.55
21	3.0	2.4	2.5	3.1	2.3	3.45	2.55	4.95	2.05	2.55	1.7	3.3
22	2.95	2.4	2.5	3.05	2.3	2.35	2.5	5.45	2.1	2.5	1.65	3.2
23	2.6	2.4	2.5	2.95	2.3	2.25	2.5	4.4	2.1	2.45	1.6	3.1
24	2.9	2.4	2.5	2.9	2.2	2.3	2.5	3.95	2.1	2.4	1.6	3.0
25	2.95	2.4	2.5	2.85	2.2	2.5	2.45	3.8	4.0	2.3	1.6	2.9
26	2.8	2.4	2.5	2.8	2.2	2.6	2.4	3.8	3.7	2.2	1.8	3.35
27	2.45	2.4	2.5	2.75	2.2	2.75	2.5	3.85	2.4	2.2	2.1	4.1
28	2.2	2.4	2.5	2.7	2.2	2.6	2.45	4.05	2.25	2.2	2.3	3.9
29	2.65	2.4	2.5	2.65	.....	2.5	2.5	4.15	2.25	2.1	2.45	3.7
30	2.8	2.35	2.5	2.7	.....	2.5	2.65	4.2	4.75	2.05	3.7	3.6
31	2.8	.....	2.5	2.7	.....	2.55	.....	4.1	.....	1.9	3.95	.....
1910-11.												
1	3.4	2.1	2.1	2.1	1.95	2.5	2.0	3.85	4.15	4.2	6.1	5.1
2	3.3	2.1	2.1	2.0	1.9	2.4	2.1	3.5	5.0	4.1	6.5	4.7
3	3.45	2.0	2.0	2.0	1.9	2.4	2.0	3.1	4.4	4.15	6.4	3.55
4	7.05	2.2	2.0	2.0	1.9	2.4	2.5	3.05	4.3	4.25	6.55	3.2
5	5.35	2.1	2.0	2.0	1.9	2.4	4.5	2.7	4.3	4.4	6.8	3.0

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
6.....	4.65	2.1	2.0	2.0	1.9	2.4	6.2	2.7	4.2	4.3	6.8	3.15
7.....	3.95	2.1	2.0	2.0	1.9	2.3	4.35	2.7	3.95	4.3	6.85	3.55
8.....	3.6	2.1	2.0	2.0	1.9	2.2	3.45	2.45	3.6	4.15	6.75	4.65
9.....	3.35	2.1	2.0	2.0	1.9	2.1	2.95	2.3	3.15	4.1	6.2	4.55
10.....	3.15	2.1	2.0	2.1	2.0	2.1	2.8	2.3	3.0	4.1	5.9	4.65
11.....	2.7	2.1	2.0	2.1	2.0	2.1	2.75	2.1	3.0	4.15	5.6	5.55
12.....	2.7	2.1	2.0	2.05	2.0	2.1	2.65	2.1	3.1	4.45	5.1	5.45
13.....	2.7	2.1	2.0	2.0	2.0	2.0	2.6	5.2	3.1	4.6	4.6	5.25
14.....	2.6	2.2	2.05	2.0	2.0	1.9	2.6	3.45	3.0	4.85	4.45	5.0
15.....	2.6	2.2	2.1	2.0	2.0	1.9	2.6	3.1	3.05	5.3	4.3	4.9
16.....	2.5	2.1	2.1	2.0	2.0	1.9	2.6	3.0	3.25	6.55	4.25	4.9
17.....	2.45	2.1	2.1	2.0	2.0	2.0	2.6	4.0	4.7	6.7	4.15	4.85
18.....	2.4	2.1	2.1	2.0	2.0	2.05	2.6	9.55	6.7	5.75	4.0	4.7
19.....	2.4	2.1	2.0	2.0	4.1	2.1	2.6	8.1	6.5	5.5	3.9	4.6
20.....	2.4	2.1	2.05	2.0	3.4	2.1	2.6	4.7	5.2	5.45	3.9	4.4
21.....	2.35	2.1	2.1	2.0	3.05	2.1	2.5	4.05	4.9	5.45	3.8	4.4
22.....	2.2	2.1	2.1	1.9	2.8	4.0	2.3	4.0	4.8	5.45	3.75	4.3
23.....	2.1	2.2	2.1	1.9	2.65	3.15	2.3	3.7	4.3	6.2	3.5	4.25
24.....	2.1	2.1	2.05	1.9	2.7	2.7	2.3	3.7	4.4	6.5	3.2	4.05
25.....	2.2	2.2	2.0	1.9	3.0	2.6	2.3	4.1	4.5	6.9	3.1	4.0
26.....	2.3	2.2	2.0	2.0	2.85	2.6	2.3	4.4	4.45	7.9	3.0	4.15
27.....	2.3	2.2	2.0	2.0	2.5	2.55	2.2	4.3	4.4	6.55	2.95	4.2
28.....	2.3	2.1	2.0	2.0	2.5	2.5	2.2	4.2	4.4	5.6	2.9	4.0
29.....	2.25	2.1	2.0	2.0	.....	2.5	2.2	4.05	4.35	5.5	3.5	3.95
30.....	2.15	2.1	2.0	2.0	.....	2.3	2.2	4.55	4.3	5.4	4.5	4.15
31.....	2.1	.....	2.0	2.0	.....	1.9	.....	4.05	.....	5.3	5.4	.....
1911-12.												
1.....	4.1	4.95	4.05	3.45	3.45	1.8	1.8	2.4	4.1	3.85	2.4	6.45
2.....	4.15	4.95	4.0	3.4	3.5	1.75	1.75	3.35	5.45	4.0	2.65	6.3
3.....	3.95	4.85	4.15	3.5	3.6	1.9	1.65	2.45	5.3	3.9	3.15	6.1
4.....	3.95	4.8	4.1	3.4	3.55	1.8	1.6	2.15	3.95	3.9	3.3	7.15
5.....	3.55	4.65	3.9	3.4	3.45	1.75	1.55	2.1	3.85	3.9	3.15	7.7
6.....	3.45	4.55	3.9	3.35	3.45	1.7	1.6	4.75	3.85	3.85	2.6	7.15
7.....	3.65	4.6	3.85	3.4	3.5	1.5	1.5	3.8	4.55	3.8	2.65	6.95
8.....	3.7	4.5	3.85	3.3	3.35	1.7	1.75	2.6	4.1	3.7	2.8	6.8
9.....	3.55	4.65	3.8	3.3	3.3	1.65	6.95	2.35	4.0	3.7	2.9	6.5
10.....	3.5	4.7	3.7	3.25	3.35	1.6	3.75	2.0	4.15	3.7	2.8	6.45
11.....	3.8	4.75	3.7	3.3	3.25	1.6	2.75	1.9	4.1	3.7	2.7	7.1
12.....	4.45	4.7	3.6	3.4	3.2	1.55	2.5	1.7	4.0	3.5	2.6	6.55
13.....	6.8	4.6	3.6	3.45	3.3	1.5	2.4	1.55	4.5	3.35	2.45	6.05
14.....	14.75	4.5	3.75	3.7	3.25	1.5	2.4	1.5	5.5	3.2	2.4	5.75
15.....	5.0	4.5	3.8	3.8	3.1	1.5	2.3	1.55	5.65	3.1	2.25	7.55
16.....	4.85	4.35	3.8	3.75	3.0	1.5	2.25	1.4	6.2	3.1	2.05	7.55
17.....	5.05	4.25	3.85	3.7	3.0	1.5	2.2	1.4	6.5	3.0	1.9	7.3
18.....	5.2	4.1	3.8	3.6	2.95	1.55	2.1	2.95	8.75	2.9	1.95	8.1
19.....	5.35	4.1	3.9	3.5	2.85	1.55	2.05	3.05	19.85	2.75	2.15	7.7
20.....	5.45	4.25	3.9	3.4	2.45	1.6	1.9	3.2	15.95	2.7	2.4	7.9
21.....	5.45	4.1	3.7	3.45	2.1	1.6	2.0	3.2	9.0	2.65	2.4	8.6
22.....	5.4	4.1	3.7	3.5	2.05	1.6	2.15	3.25	6.75	2.6	3.6	8.25
23.....	5.4	4.0	3.6	3.6	1.95	1.6	2.55	3.5	6.2	2.55	5.35	7.2
24.....	5.3	4.1	3.65	3.55	1.9	1.6	2.7	3.5	6.2	2.5	6.4	6.65
25.....	5.25	4.1	3.65	3.6	1.95	1.6	2.7	3.5	5.95	2.5	7.0	6.1
26.....	5.3	4.0	3.5	3.5	1.9	1.6	2.6	3.45	5.8	2.5	6.95	5.55
27.....	5.25	4.05	3.55	3.45	1.85	1.6	2.7	3.55	5.55	2.8	6.9	4.8
28.....	5.15	4.05	3.55	3.45	1.8	1.65	2.75	3.7	5.05	2.45	6.65	4.2
29.....	5.15	4.0	3.5	3.45	1.8	1.7	2.65	3.95	4.55	2.4	6.7	4.0
30.....	4.85	4.1	3.55	3.4	.....	1.8	2.6	4.2	3.9	2.4	6.9	3.9
31.....	4.9	.....	3.5	3.45	.....	1.8	.....	3.85	.....	2.4	6.9	.....
1912-13.												
1.....	3.95	2.65	2.3	2.7	2.0	3.3	2.2	2.45	2.25	3.95	2.6	2.65
2.....	3.8	2.6	2.3	2.6	2.0	3.3	2.1	2.2	2.2	4.2	2.7	2.55
3.....	3.65	2.5	2.35	2.65	1.95	3.2	2.1	2.05	2.15	4.0	3.0	2.35
4.....	3.5	2.5	2.4	2.8	1.9	2.85	2.0	3.0	2.1	3.55	2.95	2.25
5.....	3.5	2.4	2.4	2.5	1.9	2.8	1.9	7.15	2.05	3.4	2.75	2.85
6.....	3.6	2.4	2.4	2.5	1.95	2.8	1.9	9.3	2.2	3.25	2.7	3.65
7.....	3.55	2.4	2.4	2.5	2.0	2.8	1.8	7.0	3.25	3.55	2.6	4.0
8.....	4.5	2.4	2.4	2.4	2.0	2.75	1.8	5.05	3.55	3.25	2.55	3.7
9.....	5.75	2.4	2.4	2.4	2.0	4.05	1.8	3.95	3.3	3.15	2.3	3.25
10.....	6.0	2.4	2.4	2.4	2.0	4.0	1.8	3.4	3.6	3.0	2.1	5.35

Daily gage height, in feet, of Rio Grande near Laredo, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
11.....	5.7	2.35	2.55	2.35	2.1	3.8	1.8	3.05	3.35	2.9	2.2	5.75
12.....	5.1	2.3	2.75	2.3	2.0	3.7	1.8	2.85	2.9	2.9	2.15	6.65
13.....	4.7	2.3	2.8	2.3	2.0	3.5	1.8	2.75	2.75	2.8	2.1	5.95
14.....	4.35	2.3	2.8	2.3	2.0	3.5	1.8	2.6	3.3	2.75	2.05	5.35
15.....	4.2	2.3	2.7	2.3	2.0	3.45	1.7	2.75	3.1	2.6	1.9	4.65
16.....	4.15	2.3	2.65	2.25	2.0	3.3	1.6	2.8	3.05	2.55	1.9	4.4
17.....	4.05	2.35	2.55	2.3	2.0	3.3	1.6	3.7	2.75	2.5	1.9	4.3
18.....	3.9	2.4	2.5	2.3	2.0	3.2	1.6	3.1	3.0	2.4	2.0	4.35
19.....	3.7	2.45	2.5	2.25	2.0	3.15	1.6	2.85	4.15	2.4	2.4	3.9
20.....	3.6	2.5	2.4	2.2	2.15	2.9	1.6	2.7	3.65	2.3	2.35	3.75
21.....	3.5	2.5	2.55	2.2	4.05	2.9	1.6	2.8	3.45	2.25	2.45	3.55
22.....	3.45	2.5	2.55	2.2	4.0	2.8	1.6	2.9	4.05	2.2	2.5	3.35
23.....	3.3	2.5	2.7	2.2	3.9	2.7	1.6	2.45	3.8	2.2	2.45	3.15
24.....	3.2	2.5	2.75	2.2	3.5	2.6	1.6	2.4	3.45	2.15	2.4	3.2
25.....	3.15	2.5	2.8	2.1	3.5	2.5	1.6	2.5	12.3	2.0	2.65	4.55
26.....	3.1	2.5	2.9	2.2	3.4	2.45	6.65	2.45	5.9	2.0	3.25	3.5
27.....	2.95	2.4	2.9	2.25	3.4	2.4	3.7	2.25	4.8	1.9	2.95	2.85
28.....	2.8	2.4	2.8	2.3	3.4	2.2	2.95	2.2	4.55	1.8	2.9	4.45
29.....	2.7	2.35	2.75	2.25	.....	2.2	2.65	2.2	4.45	2.3	2.85	3.45
30.....	2.7	2.3	2.7	2.2	.....	2.2	2.6	2.35	4.1	2.65	2.75	3.05
31.....	2.7	.....	2.7	2.2	.....	2.2	.....	2.35	.....	2.75	2.7	.....

RIO GRANDE NEAR ROMA, TEX.

Location.—Near Roma.

Records available.—August 14, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff.

Channel.—Shifting; subject to overflow to a width of 250 feet.

Discharge measurements.—Made from car and cable.

Accuracy.—Although frequent discharge measurements have been obtained, no estimates of daily discharge have been made by the commission.

Cooperation.—This station is maintained by the Mexican section of the International Water Commission, by whom the base data are furnished.

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913.

[By S. P. Vale, A. Argänder, and H. P. Guerra.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 9.....	6.45	16,489	Dec. 8.....	4.1	4,032	Mar. 3.....	3.8	3,080
13.....	4.6	6,661	13.....	4.1	3,992	8.....	3.6	2,620
17.....	5.6	8,914	17.....	4.1	4,174	12.....	3.5	2,573
22.....	4.95	7,209	21.....	4.0	3,895	16.....	3.4	2,413
26.....	12.9	43,626	25.....	3.9	3,588	20.....	3.2	2,150
29.....	5.85	12,443	29.....	3.9	3,420	24.....	3.1	2,098
Oct. 4.....	6.2	10,026				28.....	3.0	1,908
8.....	5.8	9,168	1901.			10.....	2.8	1,974
16.....	5.1	7,515	Jan. 2.....	4.0	3,211	14.....	2.9	2,062
19.....	5.0	7,177	7.....	3.9	3,218	17.....	2.8	2,123
24.....	5.7	9,744	11.....	3.9	3,344	20.....	2.7	2,011
26.....	5.4	8,011	15.....	3.8	3,280	23.....	2.6	1,786
30.....	6.3	12,021	19.....	3.7	3,011	27.....	2.6	1,729
Nov. 3.....	4.9	6,554	23.....	3.8	3,062	29.....	2.5	1,761
7.....	4.7	6,040	26.....	4.0	3,298	May 3.....	5.8	11,080
11.....	4.5	5,262	30.....	3.9	3,131	9.....	5.35	8,778
14.....	4.4	5,097	Feb. 3.....	3.9	2,901	14.....	3.8	3,348
17.....	4.4	5,101	7.....	3.9	2,989	18.....	3.6	2,807
21.....	4.4	5,100	11.....	3.8	2,886	22.....	3.6	3,027
24.....	4.4	5,128	15.....	3.7	2,859	26.....	6.6	10,206
28.....	4.2	4,532	19.....	3.7	2,722	30.....	3.8	3,479
Dec. 1.....	4.1	3,951	23.....	3.6	2,600	June 4.....	4.2	4,040
5.....	4.1	4,015	27.....	3.5	2,572	8.....	4.0	3,734

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913—Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1902.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
June 12.....	4.15	3,861	May 4.....	1.8	1,162	May 15.....	5.5	13,121
16.....	4.0	3,177	6.....	8.4	a 19,833	20.....	5.4	10,750
20.....	4.0	3,010	10.....	3.95	4,378	23.....	3.4	3,915
25.....	3.3	2,290	19.....	2.5	1,573	26.....	3.7	4,723
30.....	5.9	10,044	21.....	8.5	a 21,184	June 2.....	3.85	4,109
July 4.....	3.2	2,275	26.....	3.2	2,283	5.....	4.1	6,293
10.....	2.9	1,828	31.....	2.9	1,764	9.....	3.2	3,198
14.....	2.9	1,556	June 3.....	2.5	1,411	18.....	11.6	33,972
18.....	2.7	1,435	6.....	3.0	1,982	20.....	8.4	19,009
21.....	2.8	1,521	11.....	2.3	1,339	23.....	7.1	12,600
26.....	3.3	2,049	11.....	2.3	1,453	26.....	6.8	13,329
30.....	4.0	2,779	16.....	2.0	1,118	July 3.....	5.8	10,263
Aug. 3.....	4.2	3,095	20.....	2.5	1,459	7.....	8.6	27,358
7.....	4.6	3,707	25.....	2.8	1,776	10.....	5.3	10,966
11.....	4.7	4,048	29.....	2.4	1,429	14.....	5.9	12,415
15.....	4.6	3,916	July 5.....	4.0	3,717	18.....	5.1	9,799
20.....	3.9	2,898	9.....	2.4	1,408	22.....	4.1	6,915
25.....	4.4	3,691	12.....	2.1	1,231	Aug. 4.....	5.3	10,104
29.....	4.3	3,513	17.....	5.4	a 7,113	8.....	3.3	4,124
Sept. 1.....	3.5	2,532	21.....	3.45	3,681	11.....	3.4	4,164
7.....	3.7	3,576	26.....	3.85	3,831	15.....	3.2	3,668
10.....	3.35	2,734	29.....	10.1	b 29,847	18.....	4.3	5,432
11.....	7.6	14,332	Aug. 4.....	5.8	9,511	20.....	4.0	5,077
16.....	4.1	3,225	8.....	4.9	6,667	22.....	3.5	3,766
20.....	4.15	4,186	13.....	4.0	3,823	Sept. 3.....	4.2	4,964
24.....	5.25	8,075	16.....	4.0	3,198	7.....	5.6	8,077
28.....	4.55	5,575	16.....	4.0	3,301	12.....	7.55	15,731
Oct. 2.....	3.8	3,520	22.....	4.7	6,034	15.....	3.8	5,606
7.....	3.6	2,816	26.....	4.8	5,745	21.....	3.7	5,304
11.....	3.6	2,919	Sept. 3.....	6.2	10,788	25.....	3.5	4,665
13.....	5.25	7,834	7.....	5.4	9,108	29.....	3.9	4,881
15.....	3.8	3,568	11.....	8.75	21,363	Oct. 7.....	5.9	11,151
20.....	3.5	2,441	13.....	10.1	28,188	13.....	3.8	6,704
24.....	3.5	2,977	17.....	7.0	14,155	17.....	3.6	5,942
29.....	4.0	3,866	21.....	7.5	15,435	20.....	2.7	4,189
Nov. 4.....	4.45	5,392	25.....	5.8	7,390	24.....	2.5	3,901
8.....	4.05	4,481	29.....	4.2	3,995	27.....	2.4	3,808
12.....	3.9	4,243	Oct. 3.....	7.75	15,055	31.....	2.3	3,601
17.....	4.2	4,692	4.....	4.4	4,746	Nov. 3.....	2.0	3,108
21.....	4.2	4,616	7.....	3.6	2,512	6.....	1.9	3,006
25.....	3.7	3,570	11.....	7.0	13,161	10.....	1.7	2,650
29.....	5.0	6,564	16.....	9.1	21,161	13.....	1.7	2,691
Dec. 4.....	3.8	3,143	21.....	4.2	4,394	17.....	1.7	2,648
9.....	3.7	3,044	26.....	3.3	2,666	21.....	1.6	2,605
13.....	3.55	2,732	30.....	3.1	2,280	26.....	1.5	2,568
18.....	3.4	2,524	Nov. 4.....	3.8	3,943	Dec. 1.....	1.5	2,593
22.....	3.35	2,432	12.....	3.3	3,679	4.....	1.5	2,586
26.....	3.25	2,427	16.....	2.9	3,379	8.....	1.4	2,398
31.....	3.2	2,058	20.....	2.6	2,700	11.....	1.4	2,384
1902.			24.....	3.8	4,125	15.....	1.4	2,488
Jan. 4.....	3.1	2,190	28.....	3.1	3,379	18.....	1.4	2,352
8.....	3.1	2,156	Dec. 4.....	5.8	7,135	26.....	1.4	2,291
13.....	3.4	2,401	9.....	4.3	4,431			
17.....	3.5	2,540	13.....	2.9	2,338	1904.		
22.....	3.2	2,218	17.....	2.9	2,394	Jan. 2.....	1.4	2,263
26.....	3.0	2,095	21.....	2.8	2,084	5.....	1.4	2,081
30.....	2.9	1,922	25.....	2.8	1,908	8.....	1.4	2,137
Feb. 5.....	2.9	2,100	31.....	2.8	1,642	12.....	1.5	2,283
9.....	3.0	2,139				15.....	1.4	2,269
13.....	2.95	2,071	Jan. 5.....	2.7	1,535	20.....	1.4	2,211
17.....	2.9	1,951	9.....	2.7	1,410	23.....	1.3	2,171
21.....	2.8	1,820	17.....	3.0	1,619	Feb. 2.....	1.5	2,020
26.....	2.7	1,888	21.....	2.9	1,499	5.....	1.5	2,016
3.....	2.6	1,743	25.....	2.9	1,476	9.....	1.4	1,915
8.....	2.3	1,565	29.....	2.7	1,426	12.....	1.9	2,201
12.....	2.2	1,509	31.....	2.7	1,446	23.....	1.4	1,939
17.....	2.2	1,460	Feb. 4.....	2.7	1,450	26.....	1.5	1,972
19.....	2.1	1,370	8.....	2.8	1,519	29.....	1.4	1,931
23.....	2.0	1,304	12.....	2.6	1,370	Mar. 4.....	1.3	1,839
27.....	2.1	1,385	17.....	2.4	1,231	8.....	1.2	1,626
31.....	1.9	1,324	18.....	2.7	3,938	11.....	1.1	1,564
Apr. 4.....	1.8	1,308	20.....	3.2	3,658	15.....	1.1	1,574
9.....	1.9	1,339	24.....	3.0	3,508	18.....	1.0	1,483
13.....	1.8	1,243	28.....	3.1	3,481	22.....	1.0	1,678
15.....	4.3	a 4,932	May 5.....	3.2	3,631	25.....	.9	1,461
22.....	2.8	1,941	8.....	2.7	2,569	Apr. 5.....	3.9	7,767
27.....	2.0	1,380	12.....	2.9	3,473	8.....	2.3	2,552
						12.....	1.4	1,581

a Measurements April 15, May 6 and 21, July 17, 1902, made by floats.
 b Measurement July 29, 1902, made by floats. Maximum gage height 11.5 feet.

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Fect.</i>	<i>Sec.-ft.</i>	1905.	<i>Fect.</i>	<i>Sec.-ft.</i>	1906.	<i>Fect.</i>	<i>Sec.-ft.</i>
Apr. 15	1.2	1,397	Mar. 17	5.4	12,331	Mar. 16	3.5	4,019
19	1.0	1,243	23	4.6	8,066	23	3.1	3,489
22	1.2	1,470	Apr. 4	6.7	14,303	28	2.8	3,026
26	.9	1,171	7	4.1	6,811	Apr. 9	2.5	2,678
May 3	1.2	1,329	11	3.8	5,260	14	2.3	2,463
9	5.65	13,461	18	3.9	5,760	17	2.7	2,955
13	1.5	1,300	24	4.4	6,876	21	3.0	3,400
16	6.95	14,058	26	5.6	12,422	23	3.2	3,735
20	2.8	2,851	27	4.8	8,991	28	2.1	2,181
24	1.8	1,428	May 2	4.6	7,528	May 2	3.0	3,188
27	1.6	1,264	9	5.0	7,858	4	4.5	5,435
June 1	5.0	8,959	12	5.1	12,740	8	3.3	3,941
6	8.6	23,287	16	5.6	10,770	19	5.5	9,526
9	4.1	5,855	23	5.55	10,628	23	6.3	13,275
14	4.3	5,969	26	7.4	17,312	28	4.9	7,326
17	3.3	3,569	31	6.9	15,450	June 4	5.3	8,443
21	3.2	3,266	June 2	7.3	16,624	7	6.7	14,293
24	2.9	2,685	6	5.6	10,546	13	4.8	6,904
July 1	9.7	24,299	13	6.2	12,308	16	4.5	6,303
6	3.3	4,186	16	6.9	15,481	21	4.1	5,305
9	3.2	2,897	19	7.8	18,803	28	5.7	9,281
13	2.6	2,285	22	8.3	20,966	July 2	4.6	6,179
18	2.0	1,651	27	9.0	23,973	7	6.9	14,276
22	1.9	1,517	July 3	17.0	43,041	9	13.3	28,812
26	2.9	2,878	5	11.5	29,642	11	15.6	34,009
Aug. 1	2.4	1,736	7	8.7	22,568	19	9.0	19,277
4	2.4	1,828	10	7.3	14,387	24	10.1	21,550
8	1.9	1,665	14	6.1	11,289	31	11.3	26,698
10	2.1	1,850	17	5.7	10,531	Aug. 2	8.2	16,866
15	2.2	2,058	20	5.3	9,633	6	7.6	15,821
17	1.7	1,655	Aug. 8	6.2	12,437	10	10.8	24,953
23	1.5	1,566	11	6.6	13,641	13	13.9	30,012
Sept. 6	3.0	3,492	15	7.7	17,767	15	17.6	47,122
8	7.6	18,414	17	7.2	14,267	20	10.5	23,337
13	15.8	46,893	22	6.9	13,912	25	9.0	17,717
20	14.0	29,100	24	7.9	19,116	29	12.1	28,608
24	15.3	34,869	Sept. 5	5.2	9,016	Sept. 3	13.2	27,321
27	10.7	23,203	8	4.9	8,277	7	11.2	25,440
30	9.1	20,304	13	7.8	18,789	10	10.0	22,197
Oct. 7	7.3	18,912	19	12.7	33,475	14	8.4	18,231
11	6.2	15,235	21	9.7	23,783	17	7.5	14,770
14	6.9	17,081	23	7.1	16,643	21	7.0	13,671
18	9.4	26,139	29	8.1	19,481	25	7.8	19,722
20	9.7	28,661	Oct. 5	8.5	21,263	29	7.2	14,457
28	8.4	22,373	7	7.2	16,878	Oct. 2	6.8	12,115
31	7.1	17,163	9	6.8	14,079	5	6.6	11,630
Nov. 4	7.4	18,132	13	6.1	11,944	9	6.3	10,682
9	6.3	12,944	17	5.5	10,047	13	5.8	9,564
15	5.3	11,136	20	5.1	7,382	18	6.0	10,118
18	5.0	10,159	24	4.5	6,688	24	5.7	9,423
22	4.7	8,561	Nov. 7	4.4	5,893	30	5.5	8,363
25	4.5	7,743	10	4.0	4,390	Nov. 2	5.5	8,426
28	4.6	7,797	17	6.0	12,322	7	5.3	7,712
Dec. 2	4.1	6,716	20	6.6	13,200	12	5.4	7,975
6	4.5	7,702	25	5.5	9,866	17	5.2	7,603
9	4.4	7,338	28	5.0	8,622	23	5.7	9,173
16	4.6	8,036	Dec. 9	5.3	9,394	29	5.6	9,089
21	4.8	9,063	11	4.9	7,872	Dec. 4	5.8	10,247
26	4.5	8,434	14	4.7	7,531	10	5.6	9,607
28	4.4	7,508	20	4.4	7,027	14	6.2	11,343
			23	5.8	10,370	18	6.4	12,222
			38	5.5	9,514	22	6.0	10,887
						29	5.5	9,025
1905.			1906.			1907.		
Jan. 3	3.8	6,452	Jan. 4	4.5	7,204	Jan. 2	5.4	5,605
6	3.5	5,644	8	4.3	5,952	7	5.0	4,827
14	3.1	4,193	12	4.1	5,310	14	4.9	4,550
17	2.9	3,740	19	4.6	7,344	19	4.8	4,304
20	3.0	3,959	26	4.0	4,836	26	5.1	4,961
24	2.8	3,532	31	3.9	4,561	Feb. 2	5.0	4,956
Feb. 27	2.7	3,262	Feb. 8	3.9	4,392	5	5.3	5,648
8	2.5	3,089	13	3.7	4,110	11	4.8	4,525
11	2.6	3,205	17	5.7	7,829	14	4.6	4,165
14	2.6	3,512	19	5.3	6,595	23	4.4	3,820
17	2.5	3,100	22	5.0	6,154	Mar. 2	4.2	3,107
20	2.7	3,642	26	5.5	7,335	5	4.0	3,000
23	2.5	3,257	Mar. 5	4.8	4,821	12	3.7	2,998
Mar. 3	3.2	4,263	9	4.1	4,821	19	3.5	2,648
6	4.0	5,689	13	3.7	4,273			
7	7.05	15,600						
13	4.5	7,716						

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 26.....	3.3	2,444	Mar. 2.....	3.2	3,020	Dec. 26.....	2.8	2,065
Apr. 2.....	2.9	2,598	6.....	2.8	2,791	30.....	2.8	2,063
8.....	2.4	2,299	10.....	2.6	2,524			
12.....	3.0	3,102	14.....	2.5	2,380	1909.		
15.....	2.9	2,611	18.....	2.3	2,372	Jan. 2.....	2.9	2,286
20.....	2.85	2,568	22.....	2.3	2,220	6.....	2.8	2,101
29.....	2.7	2,358	26.....	2.3	2,041	10.....	2.8	2,068
May 3.....	4.7	5,056	30.....	2.2	1,766	14.....	2.8	2,097
7.....	5.1	5,609	Apr 2.....	2.0	1,723	18.....	2.7	2,008
11.....	4.5	5,019	7.....	2.0	1,769	22.....	2.7	2,010
16.....	4.1	3,807	11.....	5.2	5,074	26.....	2.7	2,021
25.....	4.3	4,160	13.....	7.2	14,439	30.....	2.5	2,020
27.....	10.6	32,091	17.....	5.2	7,347	Feb. 2.....	2.5	1,954
30.....	4.5	4,991	21.....	13.0	31,249	6.....	2.4	1,862
June 3.....	4.0	3,904	24.....	6.0	8,185	10.....	2.4	1,851
7.....	4.7	4,193	29.....	3.7	2,761	14.....	2.4	1,857
11.....	5.0	4,560	May 2.....	3.3	2,470	18.....	2.0	1,721
15.....	5.9	6,511	6.....	3.3	2,502	23.....	2.0	1,729
19.....	5.7	5,863	10.....	3.9	2,916	27.....	2.0	1,726
24.....	5.6	5,765	15.....	11.8	20,812	Mar. 2.....	1.9	1,600
28.....	5.4	5,456	19.....	4.5	4,074	6.....	1.9	1,605
July 2.....	5.5	5,592	23.....	3.7	3,253	10.....	1.9	1,608
4.....	11.3	21,054	26.....	10.8	20,616	14.....	4.3	3,372
8.....	9.0	12,315	30.....	4.3	3,144	18.....	2.0	1,701
12.....	5.3	5,173	June 2.....	4.4	3,217	22.....	2.0	1,707
17.....	6.3	7,357	6.....	3.9	2,030	26.....	2.5	1,918
21.....	5.6	5,725	10.....	4.4	3,160	30.....	1.9	1,618
25.....	5.2	4,971	14.....	3.5	2,505	Apr. 2.....	1.9	1,600
29.....	4.9	4,506	18.....	2.9	2,223	6.....	1.7	1,444
Aug. 2.....	5.0	4,894	22.....	2.7	2,096	8.....	4.3	3,400
6.....	5.3	5,828	26.....	2.6	2,000	12.....	2.5	1,934
24.....	3.8	4,429	29.....	3.7	2,732	17.....	1.7	1,458
28.....	3.1	3,705	July 2.....	3.2	2,364	22.....	1.0	1,184
31.....	5.2	5,533	7.....	5.0	4,795	26.....	1.0	1,177
Sept. 2.....	4.9	5,007	10.....	6.5	9,761	29.....	1.0	1,186
6.....	6.2	11,201	14.....	6.0	7,878	May 2.....	2.5	1,924
10.....	6.1	10,279	18.....	3.0	2,186	6.....	1.0	1,215
14.....	7.1	13,467	22.....	2.9	2,130	10.....	1.0	1,221
18.....	5.5	7,877	26.....	3.7	2,894	12.....	2.5	1,996
24.....	7.3	15,489	30.....	5.9	8,274	17.....	1.8	1,534
28.....	5.9	9,256	Aug. 2.....	6.0	8,256	21.....	2.4	1,900
Oct. 7.....	5.7	8,231	7.....	10.0	19,689	22.....	4.0	3,214
7.....	7.3	13,883	11.....	7.2	14,417	25.....	4.3	3,441
11.....	5.0	4,931	15.....	8.2	16,987	27.....	5.0	5,286
15.....	4.7	4,048	19.....	7.6	15,818	28.....	7.7	16,337
19.....	4.3	3,304	23.....	7.1	13,796	June 2.....	9.8	20,467
24.....	5.0	4,912	27.....	6.3	10,067	6.....	4.4	3,731
29.....	5.5	5,812	30.....	6.0	8,535	10.....	3.7	3,011
Nov. 2.....	5.0	4,943	Sept. 2.....	6.4	10,207	14.....	3.4	2,794
6.....	5.9	6,841	6.....	11.0	21,033	18.....	3.3	2,698
11.....	8.3	17,336	10.....	8.6	18,717	22.....	4.3	3,605
15.....	6.5	10,588	14.....	7.3	15,070	26.....	5.4	6,604
20.....	5.6	6,071	18.....	7.0	13,443	29.....	5.4	6,929
25.....	5.3	5,738	22.....	5.5	7,085	July 2.....	12.7	32,157
29.....	5.2	5,354	26.....	4.8	4,820	6.....	18.3	53,442
Dec. 2.....	5.2	5,479	29.....	4.4	3,493	10.....	8.4	18,380
6.....	8.0	15,328	Oct. 2.....	4.0	3,205	14.....	9.1	19,390
11.....	6.1	10,305	6.....	3.9	3,114	18.....	8.7	18,841
15.....	5.8	6,240	10.....	4.8	4,885	22.....	8.2	17,394
20.....	5.4	5,347	14.....	3.7	3,007	25.....	10.2	22,162
24.....	5.0	5,065	18.....	3.3	2,540	30.....	6.6	11,482
30.....	4.9	4,888	23.....	11.0	21,092	Aug. 2.....	6.6	11,493
			26.....	3.5	2,920	6.....	6.8	12,435
			30.....	3.4	2,880	10.....	7.6	16,066
1908.			Nov. 2.....	3.3	2,760	13.....	9.4	19,870
Jan. 2.....	5.0	5,303	6.....	3.0	2,428	17.....	7.6	16,198
6.....	5.0	5,336	10.....	3.0	2,209	22.....	6.6	11,840
11.....	4.8	4,724	14.....	4.3	3,372	26.....	6.6	11,854
15.....	4.6	4,137	18.....	3.0	2,463	28.....	13.2	33,246
20.....	4.4	3,758	22.....	3.0	2,449	30.....	19.0	59,129
24.....	4.3	3,670	26.....	3.0	2,389	Sept. 2.....	11.6	26,809
30.....	3.7	3,203	29.....	2.8	2,029	6.....	7.6	16,168
Feb. 1.....	4.2	3,568	Dec. 2.....	2.9	2,157	10.....	7.3	15,007
5.....	3.7	3,292	6.....	2.9	2,132	14.....	6.4	10,838
10.....	3.6	3,202	10.....	2.9	2,151	18.....	6.4	10,859
14.....	3.4	3,073	14.....	2.9	2,128	22.....	8.0	16,921
19.....	3.3	3,019	18.....	2.8	2,071	26.....	7.6	16,249
23.....	3.3	3,037	22.....	2.8	2,066	29.....	6.4	10,808
28.....	3.2	3,033						

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1909.	<i>Feet.</i>	<i>Sec.-ft.</i>	1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 2.....	6.3	10,665	July 14.....	4.4	3,475	May 8.....	3.5	2,346
6.....	4.9	5,013	18.....	3.8	2,897	12.....	2.8	1,541
10.....	4.5	4,151	22.....	4.2	3,312	16.....	3.1	1,841
14.....	4.0	3,230	26.....	3.2	2,253	19.....	10.7	22,527
18.....	3.8	3,049	31.....	3.0	2,030	June 2.....	7.0	14,053
22.....	3.9	3,160	Aug. 2.....	3.0	2,025	6.....	5.6	6,526
26.....	3.7	3,005	6.....	2.5	1,204	10.....	4.2	3,122
30.....	3.0	2,444	10.....	2.4	1,134	14.....	3.8	2,683
Nov. 2.....	3.0	2,457	14.....	2.3	1,042	18.....	5.9	7,658
6.....	2.8	2,236	18.....	2.3	1,049	22.....	6.0	5,474
10.....	2.8	2,269	22.....	2.3	1,039	26.....	5.5	4,431
14.....	3.7	3,011	26.....	2.3	1,034	30.....	5.4	4,187
18.....	3.7	3,013	31.....	3.8	2,409	July 4.....	5.0	3,900
22.....	3.4	2,719	Sept. 1.....	9.2	18,341	8.....	5.1	3,957
26.....	3.4	2,724	5.....	5.5	6,394	12.....	5.6	4,607
29.....	3.5	2,736	9.....	11.8	28,003	17.....	7.4	12,240
Dec. 2.....	3.5	2,738	14.....	11.0	24,084	21.....	6.4	9,340
6.....	3.5	2,734	17.....	20.0	77,338	25.....	7.8	12,231
10.....	3.5	2,739	20.....	12.8	30,600	29.....	7.5	12,704
14.....	3.4	2,637	24.....	7.1	14,032	Aug. 2.....	7.0	11,631
18.....	3.4	2,666	27.....	6.3	9,950	7.....	7.3	12,217
22.....	3.4	2,662	30.....	6.3	9,953	11.....	6.1	8,690
26.....	3.7	2,905	Oct. 2.....	6.2	8,762	15.....	5.3	3,978
30.....	3.7	2,953	4.....	8.7	17,888	19.....	4.9	3,684
1910.			9.....	5.9	7,753	Sept. 1.....	6.6	9,746
Jan. 2.....	3.6	2,803	14.....	4.5	3,792	5.....	4.9	3,664
6.....	5.6	6,819	18.....	4.4	3,487	9.....	5.4	5,536
10.....	5.0	5,453	22.....	4.0	3,057	13.....	6.3	9,169
14.....	4.8	4,857	26.....	3.8	2,711	18.....	5.9	8,454
18.....	4.3	3,442	31.....	3.8	2,645	24.....	5.1	4,421
22.....	4.3	3,458	Nov. 2.....	3.8	2,660	26.....	4.9	4,159
26.....	4.3	3,452	6.....	3.6	2,358	30.....	4.6	3,701
30.....	3.8	3,059	10.....	3.6	2,342	Oct. 4.....	4.8	4,003
Feb. 2.....	3.8	3,091	14.....	3.4	2,096	8.....	21.6	77,571
6.....	3.8	3,038	18.....	3.4	2,099	10.....	6.6	5,977
10.....	3.8	3,026	22.....	3.4	2,100	14.....	14.5	43,511
14.....	3.8	3,030	26.....	3.4	2,106	18.....	6.4	8,285
17.....	3.6	2,828	30.....	3.4	2,095	22.....	6.9	8,206
20.....	3.2	2,337	Dec. 2.....	3.3	2,001	26.....	6.4	7,900
24.....	3.2	2,355	6.....	3.1	1,873	30.....	6.1	6,608
26.....	3.2	2,332	10.....	3.0	1,620	Nov. 3.....	7.5	10,170
Mar. 2.....	3.0	2,045	14.....	3.0	1,576	8.....	6.8	7,850
6.....	3.0	2,047	18.....	3.2	1,924	13.....	6.1	6,430
10.....	3.0	2,051	22.....	3.0	1,573	18.....	5.3	4,580
14.....	2.8	1,855	26.....	3.0	1,573	24.....	5.1	4,219
18.....	2.8	1,867	30.....	3.0	1,575	28.....	4.6	3,451
23.....	5.6	6,853	1911.			Dec. 2.....	4.3	2,925
27.....	3.6	2,799	Jan. 2.....	3.0	1,578	6.....	4.2	2,753
31.....	3.6	2,758	6.....	3.0	1,577	12.....	4.1	2,571
Apr. 2.....	5.6	6,719	10.....	2.9	1,489	16.....	4.0	2,416
6.....	4.8	4,755	14.....	2.9	1,475	20.....	3.8	2,152
10.....	4.5	3,725	18.....	2.9	1,478	27.....	3.7	2,022
11.....	6.6	11,378	22.....	2.7	1,313	1912.		
15.....	4.8	4,702	26.....	2.7	1,320	Jan. 2.....	3.6	1,910
19.....	4.2	3,027	30.....	2.7	1,309	6.....	3.4	1,711
22.....	4.0	2,955	Feb. 2.....	2.6	1,239	10.....	3.2	1,554
26.....	3.2	2,347	6.....	2.6	1,236	15.....	4.2	2,937
29.....	3.3	2,371	10.....	2.6	1,236	19.....	3.6	2,186
May 1.....	3.2	2,311	14.....	2.7	1,305	23.....	3.4	1,848
5.....	3.8	2,879	18.....	2.6	1,235	27.....	3.5	2,026
9.....	5.6	6,604	20.....	4.0	3,042	Feb. 1.....	3.3	1,714
14.....	5.2	5,601	23.....	5.0	5,489	5.....	3.4	1,854
19.....	7.7	16,133	28.....	3.6	2,340	10.....	3.2	1,583
23.....	7.3	15,197	Mar. 2.....	3.4	2,097	15.....	3.0	1,567
26.....	5.2	5,576	6.....	3.0	1,560	19.....	2.8	1,530
30.....	5.6	6,565	10.....	2.9	1,468	26.....	2.5	1,304
June 2.....	5.8	7,593	14.....	2.9	1,463	Mar. 2.....	2.4	1,203
7.....	8.2	17,443	18.....	2.6	1,242	8.....	2.2	1,073
10.....	5.2	5,575	22.....	2.9	1,464	15.....	2.0	963
14.....	4.4	3,511	24.....	4.8	4,751	22.....	1.8	854
18.....	3.2	2,265	30.....	3.8	2,610	29.....	1.7	809
22.....	3.0	2,065	Apr. 2.....	3.4	2,104	Apr. 2.....	2.1	1,068
25.....	3.0	2,041	6.....	6.1	8,366	6.....	1.8	874
27.....	5.3	5,735	10.....	4.5	3,590	10.....	6.5	9,419
30.....	4.0	2,976	14.....	3.8	2,581	16.....	2.9	2,188
July 2.....	6.0	8,093	18.....	3.0	1,598	22.....	2.7	2,011
6.....	4.8	4,795	22.....	2.9	1,464	29.....	3.5	2,804
10.....	5.2	5,590	May 2.....	4.6	4,395	May 2.....	3.8	3,089

Discharge measurements of Rio Grande near Roma, Tex., in 1900-1913—Continued.

1912.			1912.			1913.		
Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
May 8	6.0	8,224	Oct. 10	6.3	8,307	Mar. 4	4.2	3,365
13	2.8	2,134	15	6.0	7,500	10	4.95	4,691
18	2.3	1,755	19	6.6	8,788	15	4.5	3,922
23	4.3	3,498	24	4.9	5,126	21	4.0	3,092
28	4.8	4,068	30	4.2	2,721	26	3.4	2,378
June 2	7.1	10,183	Nov. 2	3.9	2,618	31	2.8	1,792
6	5.3	4,383	7	3.6	2,095	Apr. 3	2.6	1,597
10	5.7	4,771	12	3.4	1,890	7	2.5	1,068
15	7.4	10,814	19	4.1	2,695	11	2.6	1,416
20	21.0	^a 86,623	23	3.7	2,169	16	2.3	1,263
24	12.0	30,467	28	3.6	2,074	21	2.1	978
28	7.3	10,719	Dec. 2	3.4	1,960	29	4.1	2,351
July 1	6.7	9,208	9	3.5	2,073	May 2	3.6	2,016
5	5.6	4,627	13	3.7	2,410	8	6.9	9,260
10	5.3	4,354	16	3.9	2,743	15	4.0	2,139
15	4.7	3,737	20	3.8	2,409	19	5.0	3,889
19	4.3	3,374	24	3.7	2,374	24	4.2	1,959
24	3.8	2,932	30	4.2	2,902	28	3.6	1,923
29	4.0	3,110				June 2	3.5	1,292
Aug. 1	3.7	2,879	Jan. 1913.			8	8.3	13,324
5	3.5	2,587	3	3.8	2,501	10	4.9	4,988
9	4.5	2,563	8	3.5	2,048	14	4.3	2,345
14	3.3	2,432	11	3.4	1,978	18	6.4	10,037
19	2.7	1,953	17	3.3	1,843	29	9.4	13,950
24	6.9	10,344	21	3.3	2,055	July 1	5.9	6,537
30	8.5	14,722	25	3.0	1,969	8	5.2	5,465
Sept. 2	7.5	11,372	29	3.2	2,042	16	4.4	2,477
7	8.2	13,754	Feb. 1	3.2	1,939	22	3.6	1,362
11	7.9	12,829	5	2.9	1,788	Aug. 5	3.4	1,877
17	8.5	14,302	12	3.1	2,110	9	3.8	2,074
21	8.9	16,080	17	3.0	1,950	15	2.9	1,498
26	6.2	8,975	21	3.0	1,969	19	2.5	1,272
Oct. 1	10.2	22,789	25	4.8	4,908	23	3.5	1,946
5	5.1	4,340	Mar. 1	4.7	3,827	28	4.4	2,898

^a Approximate.

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1900.			1900.			1900.		
1		5.4	11		4.85	21	6.1	5.1
2		5.2	12		4.75	22	5.9	4.95
3		6.05	13		4.6	23	6.55	4.9
4		5.6	14		7.8	24	6.6	8.95
5		5.5	15		7.6	25	6.4	12.95
6		5.8	16		7.1	26	6.15	12.9
7		5.9	17		6.85	27	5.7	8.45
8		7.65	18		6.7	28	5.3	6.75
9		6.25	19		6.4	29	5.3	5.85
10		5.35	20		6.35	30	5.75	6.2
						31	5.5	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1	6.4	4.9	4.2	3.9	3.9	3.55	3.0	4.05	4.0	4.2	4.5	3.55
2	7.15	5.0	4.1	3.95	3.9	3.6	2.9	6.7	3.9	3.55	4.3	3.35
3	6.6	4.85	4.1	4.05	3.9	3.85	2.9	5.7	4.0	3.35	4.25	5.2
4	6.2	4.85	4.15	4.0	3.9	3.8	2.8	4.25	4.35	3.25	4.8	5.2
5	6.35	5.05	4.1	4.05	3.8	3.8	2.8	3.9	4.75	3.05	4.75	4.55
6	6.25	4.75	4.1	4.05	3.9	3.7	2.7	3.8	4.05	2.9	4.6	5.0
7	6.05	4.7	4.15	3.95	3.9	3.65	2.7	3.8	4.0	2.9	4.6	3.8
8	5.8	4.6	4.1	3.95	3.8	3.6	2.8	3.95	4.0	2.9	4.8	3.5
9	5.65	4.6	4.1	3.9	3.8	3.6	2.8	5.65	4.0	3.35	4.75	3.5
10	5.65	4.55	4.1	3.9	3.8	3.55	2.8	6.0	4.0	3.25	4.65	3.35

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	5.4	4.5	4.1	3.9	3.8	3.5	2.9	4.7	4.05	2.95	4.75	7.25
12.....	5.4	4.55	4.2	4.0	3.8	3.5	2.9	4.2	4.15	2.95	4.8	5.2
13.....	5.3	4.5	4.15	4.0	3.8	3.5	2.9	4.1	4.2	3.0	4.8	4.85
14.....	5.15	4.45	4.2	3.85	3.7	3.5	2.9	3.85	4.15	2.9	4.7	4.45
15.....	5.1	4.4	4.15	3.8	3.7	3.45	2.9	3.7	4.0	2.8	4.65	4.0
16.....	5.1	4.4	4.15	3.8	3.7	3.4	2.8	3.7	3.95	2.8	4.45	4.15
17.....	5.0	4.4	4.1	3.85	3.7	3.4	2.75	3.7	3.95	2.75	4.25	4.85
18.....	4.9	4.4	4.1	3.9	3.7	3.3	2.7	3.6	4.0	2.7	3.9	4.8
19.....	5.55	4.45	4.1	3.75	3.7	3.3	2.65	4.3	4.1	2.7	4.0	4.65
20.....	5.7	4.45	4.05	3.8	3.7	3.2	2.6	4.25	4.1	3.05	3.9	4.2
21.....	5.5	4.4	4.0	3.8	3.65	3.2	2.6	3.95	4.1	2.85	3.75	3.95
22.....	5.7	4.4	4.0	3.8	3.65	3.2	2.6	3.6	3.85	3.4	3.55	3.95
23.....	6.3	4.35	4.0	3.8	3.6	3.15	2.6	3.65	3.6	3.8	3.45	4.75
24.....	5.7	4.3	3.9	3.9	3.6	3.1	2.6	3.7	3.35	3.6	3.95	5.1
25.....	5.35	4.25	3.9	3.95	3.6	3.1	2.6	3.95	3.25	3.3	4.5	5.0
26.....	5.35	4.2	3.9	4.0	3.5	3.05	2.6	6.6	3.15	3.35	4.7	5.35
27.....	5.6	4.2	3.95	4.1	3.5	3.0	2.55	4.65	3.2	3.35	4.55	4.85
28.....	5.55	4.2	4.0	4.05	3.5	3.0	2.5	4.35	4.85	3.15	4.45	4.6
29.....	5.35	4.1	4.0	4.0	.....	3.0	2.55	3.95	6.55	3.4	4.35	4.35
30.....	6.3	4.1	4.0	3.95	.....	3.0	2.6	3.75	5.3	3.9	4.1	4.2
31.....	5.3	.....	3.95	3.9	.....	3.0	.....	4.0	.....	3.95	3.75	.....
1901-2.												
1.....	3.9	5.3	3.55	3.2	2.9	2.75	1.95	1.85	2.65	2.25	7.3	4.85
2.....	3.8	4.75	3.6	3.15	2.9	2.65	1.95	1.8	2.6	2.35	6.85	5.35
3.....	3.7	4.6	3.6	3.1	2.9	2.55	1.85	1.8	2.5	2.25	6.25	6.3
4.....	3.6	4.45	3.65	3.1	2.9	2.45	1.85	1.75	2.95	2.15	5.75	7.15
5.....	3.7	4.3	3.7	3.1	2.9	2.4	1.9	1.85	3.05	4.0	5.5	6.25
6.....	3.65	4.1	3.75	3.1	2.9	2.4	1.9	5.9	3.0	3.6	5.25	5.75
7.....	3.6	4.0	3.75	3.1	2.9	2.35	1.85	7.15	2.8	3.15	5.05	6.1
8.....	3.65	4.0	3.8	3.1	2.9	2.3	1.8	5.6	2.55	2.65	4.80	7.0
9.....	3.85	4.0	3.75	3.1	3.0	2.3	1.9	4.2	2.45	2.35	4.35	7.7
10.....	3.75	4.0	3.7	3.1	3.0	2.3	1.9	3.85	2.35	2.15	4.7	7.6
11.....	3.6	3.9	3.65	3.1	3.0	2.3	1.8	3.65	2.3	2.1	4.6	9.3
12.....	4.05	3.95	3.6	3.25	3.0	2.25	1.8	3.3	2.25	2.05	4.15	10.5
13.....	5.05	4.15	3.55	3.4	2.95	2.2	1.8	3.05	2.05	2.05	3.95	9.7
14.....	4.8	4.25	3.5	3.5	2.9	2.2	2.25	2.9	2.0	2.3	3.8	8.7
15.....	3.9	4.2	3.5	3.55	2.9	2.15	3.3	2.9	2.0	2.65	4.0	8.15
16.....	3.65	4.2	3.45	3.75	2.9	2.15	3.65	2.8	2.0	3.7	3.95	7.75
17.....	3.55	4.2	3.5	3.5	2.9	2.15	3.5	2.7	2.1	5.25	5.85	6.85
18.....	3.45	4.2	3.5	3.4	2.9	2.1	4.25	2.6	2.45	4.45	5.3	6.3
19.....	3.45	4.2	3.45	3.35	2.9	2.1	4.6	2.5	2.65	4.0	4.8	6.55
20.....	3.5	4.2	3.4	3.3	2.85	2.1	3.4	4.8	2.55	3.65	4.85	6.5
21.....	3.5	4.15	3.4	3.25	2.8	2.05	3.0	7.95	2.45	3.5	4.9	6.65
22.....	5.15	4.05	3.4	3.2	2.8	2.05	2.85	4.95	2.5	3.5	4.65	5.6
23.....	4.05	3.95	3.4	3.15	2.7	2.05	2.55	3.85	3.05	3.5	4.8	5.1
24.....	3.55	3.85	3.3	3.1	2.6	2.1	2.4	3.4	2.75	3.5	4.7	5.1
25.....	4.25	3.75	3.3	3.05	2.6	2.0	2.25	3.25	2.9	3.8	4.5	5.6
26.....	4.0	3.65	3.25	3.0	2.7	2.1	2.15	3.2	3.05	3.95	4.75	4.85
27.....	4.0	3.6	3.2	3.0	2.65	2.05	2.0	3.15	3.0	5.55	4.65	4.6
28.....	4.0	4.4	3.2	2.9	2.6	2.0	2.0	3.0	2.6	9.95	5.05	4.45
29.....	3.95	4.8	3.2	2.9	.....	2.0	2.0	2.9	2.35	9.5	4.85	4.3
30.....	4.25	3.9	3.2	2.9	.....	1.9	1.9	2.9	2.2	7.6	3.65	4.75
31.....	5.3	.....	3.2	2.9	.....	1.9	.....	2.9	.....	7.5	4.3	.....
1902-3.												
1.....	5.1	3.0	4.4	2.8	2.65	.....	.....	5.6	3.6	6.35	12.65	4.25
2.....	4.9	3.05	4.2	2.8	2.7	.....	.....	4.45	3.95	6.0	9.4	5.0
3.....	7.15	3.4	6.6	2.75	2.65	.....	.....	3.25	4.0	5.75	7.05	4.05
4.....	6.7	3.6	5.5	2.7	2.65	.....	.....	3.35	5.25	5.45	5.1	3.55
5.....	5.0	3.0	4.55	2.7	2.65	.....	.....	3.35	3.85	6.1	4.3	3.55
6.....	4.5	3.0	3.85	2.7	2.7	.....	.....	3.55	3.65	8.6	3.8	5.3
7.....	4.45	2.8	3.55	2.75	2.75	.....	.....	2.85	3.65	8.65	3.55	5.5
8.....	4.4	2.9	4.0	2.75	2.8	.....	.....	2.7	3.65	6.45	3.3	5.3
9.....	4.4	3.35	3.8	2.7	2.7	.....	.....	2.8	3.2	5.45	3.8	5.3
10.....	4.35	3.7	3.0	2.7	2.7	.....	.....	3.25	3.55	5.35	3.7	5.0
11.....	3.75	3.35	5.0	2.7	2.65	.....	.....	3.65	4.35	5.6	3.7	12.85
12.....	3.75	3.4	3.55	2.65	2.6	.....	.....	3.15	4.95	5.8	4.25	8.85
13.....	3.7	3.5	2.9	2.75	2.6	.....	1.9	3.5	10.9	5.9	3.6	5.8
14.....	6.05	3.7	2.9	2.8	2.5	.....	1.8	5.25	15.75	5.9	3.3	4.63
15.....	7.7	3.0	3.1	2.9	2.45	.....	1.8	5.25	18.5	5.85	3.2	3.75

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	8.65	2.95	2.95	3.0	2.4	-----	1.8	3.9	19.25	5.6	4.5	3.45
17.....	6.65	2.9	2.9	3.0	2.4	-----	1.9	3.35	17.0	5.25	4.8	3.25
18.....	5.45	2.9	2.9	2.85	3.45	-----	1.75	4.25	11.4	5.0	4.15	3.35
19.....	4.4	2.95	2.9	2.8	3.2	-----	1.7	6.35	8.3	4.8	3.95	5.0
20.....	4.3	2.65	2.9	2.75	3.2	-----	1.65	5.1	8.2	4.3	4.15	4.25
21.....	4.1	2.85	2.85	2.9	3.1	-----	1.6	4.05	7.6	4.2	4.0	3.9
22.....	3.7	2.85	2.8	3.0	3.0	-----	1.6	3.5	7.3	3.95	3.45	3.95
23.....	3.6	4.4	2.8	2.9	3.1	-----	1.55	3.4	7.05	3.7	3.3	3.85
24.....	3.45	3.8	2.8	2.9	3.0	-----	1.5	4.15	6.95	3.5	3.25	3.65
25.....	3.4	3.5	2.8	2.9	3.0	-----	1.6	4.15	6.8	3.4	3.3	3.5
26.....	3.3	3.0	2.8	2.75	3.0	-----	1.95	3.7	6.8	3.35	4.2	3.7
27.....	3.2	3.15	2.8	2.7	3.0	-----	2.15	3.6	6.95	3.15	4.35	3.55
28.....	3.15	3.0	2.8	2.7	3.15	-----	1.85	3.6	6.75	5.05	4.1	3.7
29.....	3.1	3.1	2.8	2.7	-----	-----	3.3	3.65	6.55	6.9	3.75	4.85
30.....	3.05	3.6	2.8	2.7	-----	-----	3.1	3.6	6.45	4.9	3.4	6.25
31.....	3.0	-----	2.8	2.7	-----	-----	-----	4.05	-----	10.9	3.25	-----
1903-4.												
1.....	5.25	2.2	1.5	1.4	1.5	1.4	.95	.9	5.25	9.0	2.4	1.95
2.....	4.7	1.95	1.5	1.4	1.5	1.4	1.0	1.55	4.05	5.95	2.7	2.2
3.....	4.7	2.0	1.5	1.4	1.5	1.3	4.3	1.6	3.55	4.75	2.65	2.75
4.....	5.15	1.95	1.5	1.4	1.5	1.3	4.6	7.0	3.35	4.3	2.4	2.85
5.....	5.75	1.9	1.5	1.4	1.5	1.3	4.15	4.45	3.2	3.65	2.2	2.7
6.....	5.5	1.9	1.5	1.4	1.5	1.3	3.05	2.65	7.87	3.35	2.1	2.85
7.....	5.9	1.8	1.4	1.4	1.5	1.3	2.75	1.8	7.05	3.2	2.0	3.6
8.....	5.7	1.9	1.4	1.4	1.5	1.2	2.4	1.8	6.8	3.2	1.9	7.2
9.....	5.9	1.8	1.4	1.4	1.45	1.1	2.0	4.8	4.2	3.1	2.0	10.7
10.....	4.6	1.7	1.4	1.4	1.5	1.1	1.75	3.0	4.35	3.0	2.1	9.85
11.....	4.15	1.7	1.4	1.45	1.7	1.1	1.55	1.9	4.35	2.85	2.3	11.15
12.....	3.95	1.7	1.4	1.5	2.05	1.1	1.4	1.75	3.9	2.7	2.65	9.9
13.....	3.8	1.7	1.4	1.4	1.6	1.0	1.3	2.6	3.2	2.6	2.55	16.0
14.....	3.7	1.7	1.4	1.4	1.5	1.0	1.25	4.6	4.4	2.6	2.4	17.5
15.....	3.5	1.6	1.4	1.4	1.6	1.1	1.2	4.5	4.1	2.45	2.25	22.65
16.....	3.45	1.6	1.4	1.4	1.75	1.1	1.1	7.25	4.0	2.25	2.3	25.75
17.....	3.45	1.6	1.4	1.5	1.6	1.0	1.1	6.5	3.45	2.05	2.0	25.7
18.....	2.85	1.6	1.4	1.5	1.5	1.0	1.0	5.45	3.4	2.0	1.95	24.75
19.....	2.7	1.6	1.4	1.5	1.4	1.0	1.0	3.8	3.4	1.9	1.75	18.25
20.....	2.65	1.6	1.4	1.4	1.45	1.0	.9	2.85	3.2	1.9	1.65	14.4
21.....	2.6	1.6	1.4	1.4	1.5	1.0	.9	2.65	3.05	1.95	1.65	13.65
22.....	2.6	1.55	1.4	1.4	1.5	1.0	1.2	2.4	3.5	1.9	1.5	13.4
23.....	2.5	1.5	1.4	1.3	1.4	1.0	1.05	2.05	3.15	1.9	1.5	14.85
24.....	2.45	1.5	1.4	1.3	1.4	1.0	1.0	1.85	2.9	2.0	1.5	15.1
25.....	2.4	1.5	1.4	1.3	1.5	.9	.9	1.8	2.6	3.35	1.7	14.1
26.....	2.4	1.5	1.4	1.4	1.5	.9	.9	1.75	3.0	2.9	1.65	12.0
27.....	2.35	1.5	1.4	1.4	1.4	1.0	1.0	1.65	3.55	4.5	1.55	10.9
28.....	3.6	1.5	1.4	1.4	1.4	.9	1.6	1.5	3.25	3.55	1.6	10.15
29.....	2.8	1.5	1.4	1.4	1.4	.9	1.15	3.1	3.0	3.15	1.45	9.7
30.....	2.4	1.5	1.4	1.4	-----	.9	1.1	3.35	9.0	2.95	1.45	9.2
31.....	2.25	-----	1.4	1.4	-----	.9	-----	3.5	-----	2.8	1.65	-----
1904-5.												
1.....	8.75	7.3	4.2	3.8	3.0	2.7	4.1	5.3	6.35	17.7	7.65	5.8
2.....	8.1	8.3	4.1	3.8	3.0	3.05	4.35	4.6	7.0	22.3	7.75	5.55
3.....	8.65	7.6	4.1	3.8	2.85	3.15	4.8	4.7	6.35	16.55	7.35	5.35
4.....	8.15	7.4	4.1	3.7	2.8	2.9	6.75	4.75	6.3	13.75	7.1	5.05
5.....	7.65	7.05	4.1	3.65	2.7	3.2	4.75	4.7	5.85	10.9	6.9	5.2
6.....	7.2	6.7	4.35	3.55	2.7	3.85	4.2	4.7	5.6	9.15	6.75	5.4
7.....	7.25	6.45	4.05	3.45	2.6	6.35	4.05	4.75	5.65	8.55	6.65	5.0
8.....	6.6	6.5	4.35	3.4	2.55	4.7	3.9	4.8	5.55	7.9	6.35	4.9
9.....	6.3	6.3	4.5	3.4	2.5	3.65	4.0	5.1	5.6	7.35	6.1	4.8
10.....	6.1	6.2	4.85	3.3	2.6	3.45	3.9	5.0	5.7	7.15	6.4	4.8
11.....	6.15	6.1	4.85	3.3	2.6	3.75	3.85	5.05	6.15	6.95	6.5	5.1
12.....	6.1	5.85	4.6	3.25	2.6	4.5	3.9	6.0	6.2	6.7	6.6	5.45
13.....	6.2	5.6	4.45	3.2	2.6	4.4	3.9	5.15	6.15	6.45	6.5	7.35
14.....	6.9	5.4	4.3	3.15	2.6	3.95	4.1	4.8	6.4	6.2	6.35	7.45
15.....	7.3	5.3	4.3	3.05	2.5	3.9	4.25	5.5	6.75	5.95	7.7	6.4
16.....	8.8	5.2	4.6	3.0	2.5	3.9	4.0	5.7	6.95	5.75	7.35	6.5
17.....	9.95	5.15	4.2	2.9	2.5	4.85	3.9	5.05	7.4	5.8	7.05	6.55
18.....	9.5	5.0	4.2	2.9	2.55	5.25	3.95	4.75	7.55	6.4	6.7	6.1
19.....	9.75	5.0	4.3	2.95	2.95	4.45	4.0	4.55	7.75	5.65	7.2	11.3
20.....	9.7	4.9	4.4	3.0	2.75	4.35	3.95	4.45	7.7	5.45	6.9	10.1

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	10.35	4.8	4.7	2.9	2.6	4.4	3.9	4.5	7.75	5.6	6.9	9.3
22.....	10.65	4.7	4.4	2.9	2.6	4.55	3.9	4.5	8.15	6.9	6.95	8.7
23.....	9.5	4.7	4.4	2.8	2.6	4.6	3.95	5.15	8.15	7.2	7.55	7.5
24.....	9.4	4.6	4.4	2.8	2.45	4.5	4.5	4.65	7.95	6.95	7.7	5.9
25.....	9.35	4.5	4.25	2.8	2.4	4.5	4.35	4.8	7.85	6.85	6.7	5.65
26.....	9.05	4.55	4.4	2.8	2.35	4.4	4.85	6.75	7.65	7.15	6.4	5.55
27.....	8.8	4.6	4.4	2.7	2.3	4.4	4.95	6.4	8.8	7.2	6.4	5.45
28.....	8.45	4.6	4.4	2.85	2.15	4.4	4.65	6.8	8.35	7.65	6.25	6.4
29.....	8.05	4.7	3.9	2.9	-----	4.3	5.1	6.55	8.0	6.9	6.75	8.3
30.....	7.55	4.6	3.9	3.0	-----	4.2	5.8	7.3	8.25	6.85	6.45	8.9
31.....	7.15	-----	3.8	3.0	-----	4.2	-----	6.5	-----	6.95	6.2	-----
1905-6.												
1.....	8.2	4.75	4.75	4.9	3.9	5.15	2.5	2.35	4.9	4.45	9.4	12.65
2.....	6.9	4.65	4.7	4.8	3.8	5.0	2.4	2.9	5.15	4.6	8.1	13.25
3.....	6.6	4.55	4.65	4.65	3.8	5.0	2.4	2.95	5.3	4.55	7.95	13.1
4.....	7.15	4.45	4.6	4.55	3.8	4.9	2.4	4.4	5.35	5.35	7.8	12.8
5.....	8.5	4.6	4.55	4.5	4.2	4.8	2.3	3.5	5.6	5.5	7.7	12.8
6.....	7.85	4.55	4.7	4.45	4.2	4.55	2.3	3.1	5.95	5.7	7.9	11.7
7.....	7.05	4.45	4.95	4.35	4.0	4.45	2.4	3.05	6.4	6.7	8.55	11.1
8.....	6.5	4.15	5.45	4.25	3.9	4.25	2.4	3.25	5.45	9.6	9.35	10.65
9.....	6.55	4.3	5.35	4.2	3.9	4.15	2.5	3.2	5.05	13.65	10.9	10.05
10.....	7.1	4.05	5.25	4.2	3.9	4.05	2.5	3.3	5.0	14.7	10.75	9.65
11.....	7.2	4.0	5.05	4.1	3.9	3.95	2.55	3.6	4.95	15.3	11.5	9.0
12.....	6.6	4.0	4.9	4.1	3.8	3.9	2.5	3.7	4.9	12.95	12.25	8.95
13.....	6.2	4.05	4.8	4.35	3.7	3.75	2.4	3.7	4.75	13.0	13.45	8.6
14.....	5.85	4.0	4.75	4.2	3.8	3.65	2.35	3.7	4.6	10.3	15.95	8.45
15.....	5.65	4.3	4.65	4.1	3.8	3.6	2.95	3.75	4.65	9.45	17.9	7.85
16.....	5.55	4.25	4.6	4.25	5.45	3.5	2.7	3.7	4.5	8.85	15.35	7.7
17.....	5.5	5.55	4.5	4.35	5.75	3.6	2.65	3.6	4.25	9.0	12.4	7.45
18.....	5.3	6.15	4.5	4.45	5.75	3.45	2.6	3.9	4.2	8.75	11.0	7.25
19.....	5.3	5.6	4.5	4.5	5.4	3.35	2.5	4.9	4.5	9.05	10.5	7.05
20.....	5.55	6.45	4.45	4.4	5.15	3.3	2.6	6.4	4.5	9.05	10.6	7.5
21.....	5.6	5.9	4.4	4.4	5.1	3.25	2.85	5.6	4.2	9.15	10.1	7.0
22.....	5.8	5.9	5.1	4.35	5.0	3.2	2.8	4.5	4.65	9.7	9.2	7.15
23.....	5.1	5.8	4.7	4.15	5.55	3.05	3.15	5.7	4.75	10.0	8.65	9.05
24.....	4.5	5.75	5.55	4.0	5.75	3.0	2.8	5.65	4.55	10.1	8.55	8.65
25.....	4.35	5.55	5.6	4.0	5.5	3.0	2.55	4.45	4.3	9.65	9.25	8.6
26.....	4.5	5.35	5.75	3.95	5.45	2.9	2.45	4.05	4.35	9.1	10.2	8.4
27.....	4.4	5.05	5.7	3.9	5.65	2.9	2.25	4.3	4.5	9.05	10.5	6.95
28.....	4.45	4.95	5.55	3.9	5.2	2.8	2.15	4.85	5.55	9.3	10.0	7.15
29.....	4.3	4.85	5.4	3.9	-----	2.7	2.25	4.8	4.45	9.45	11.55	7.25
30.....	4.2	4.8	5.15	3.9	-----	2.6	2.3	4.75	4.35	9.75	12.2	7.15
31.....	4.3	-----	5.0	3.9	-----	2.5	-----	4.8	-----	11.05	12.0	-----
1906-7.												
1.....	7.05	5.6	5.8	5.4	4.9	4.25	3.05	2.8	4.9	5.45	5.4	5.25
2.....	6.8	5.45	5.8	5.4	4.95	4.2	2.9	4.3	4.35	5.55	5.25	4.9
3.....	6.6	5.5	5.8	5.3	5.2	4.0	2.9	4.75	4.05	5.7	5.3	4.8
4.....	6.75	5.45	5.75	5.15	5.3	4.0	2.8	5.4	4.0	10.25	5.45	4.95
5.....	6.65	5.45	5.8	5.1	5.25	3.95	2.8	5.5	4.0	6.5	5.5	5.65
6.....	6.85	5.4	5.8	5.0	5.0	3.9	2.65	5.2	4.65	6.0	5.3	6.2
7.....	6.6	5.35	5.8	5.0	5.0	3.8	2.5	5.1	4.75	6.25	5.15	5.85
8.....	6.45	5.3	5.8	5.0	5.1	3.8	2.4	4.9	4.9	8.0	4.95	6.25
9.....	6.35	5.3	5.7	5.0	5.0	3.7	2.4	4.6	4.95	6.75	4.8	6.2
10.....	6.25	5.35	5.65	5.0	4.9	3.7	2.4	5.0	5.05	5.75	4.95	6.25
11.....	6.1	5.5	5.65	5.0	4.8	3.7	2.9	4.5	5.2	5.4	5.1	7.45
12.....	6.0	5.4	5.7	5.0	4.7	3.7	3.05	4.15	5.2	5.4	4.85	6.4
13.....	5.9	5.35	5.8	5.0	4.6	3.7	3.1	4.45	5.4	5.5	4.75	7.1
14.....	5.8	5.3	6.0	4.9	4.55	3.7	3.0	4.35	5.9	5.8	4.55	7.3
15.....	5.85	5.2	6.0	5.0	4.4	3.7	2.9	4.25	5.85	5.95	4.45	6.35
16.....	6.0	5.2	6.1	5.0	4.4	3.7	2.95	4.1	5.65	6.15	4.55	5.95
17.....	5.95	5.3	6.5	5.0	4.4	3.6	3.0	4.1	5.5	6.2	4.6	5.8
18.....	5.85	5.35	6.3	5.0	4.4	3.5	3.0	4.3	5.5	5.75	4.45	5.5
19.....	5.7	5.35	6.0	4.9	4.4	3.5	2.95	4.3	5.6	5.65	4.35	5.5
20.....	5.6	5.45	6.0	4.9	4.4	3.5	2.85	4.3	5.3	5.85	4.15	5.95
21.....	5.7	5.4	6.0	4.95	4.4	3.5	3.0	4.5	5.3	5.75	4.05	5.7
22.....	5.7	5.5	6.0	5.0	4.4	3.5	3.0	5.5	5.25	5.6	3.85	6.75
23.....	5.7	5.6	5.95	5.0	4.4	3.5	2.9	5.4	5.45	5.5	3.8	7.35
24.....	5.65	5.5	5.85	5.0	4.4	3.4	2.8	4.95	5.6	5.45	3.7	7.25
25.....	5.6	5.5	5.7	5.0	4.4	3.35	2.8	4.25	5.7	5.3	3.25	6.9

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	5.6	5.65	5.7	5.05	4.4	3.3	2.8	4.15	5.6	5.2	3.1	6.4
27.....	5.6	5.6	5.65	4.9	4.4	3.3	2.8	8.8	5.4	5.25	3.1	5.85
28.....	5.6	5.6	5.6	4.9	4.4	3.3	2.8	6.25	5.4	5.05	3.05	5.85
29.....	5.6	5.7	5.55	4.8	.....	3.3	2.7	4.85	5.4	5.1	3.0	5.7
30.....	5.55	5.8	5.5	4.8	.....	3.3	2.7	4.35	5.35	5.25	3.0	5.75
31.....	5.65	.....	5.45	4.8	.....	3.2	.....	4.0	.....	5.25	5.3	.....
1907-8.												
1.....	5.8	5.1	5.2	4.9	4.2	3.2	2.1	3.5	4.25	3.5	5.1	6.65
2.....	5.7	5.0	5.2	5.0	4.0	3.2	2.3	3.3	4.3	3.15	6.05	6.3
3.....	5.7	5.4	5.4	5.05	3.8	3.0	2.3	3.2	3.95	3.0	6.2	7.1
4.....	5.4	5.5	5.3	5.0	3.7	2.9	2.2	3.2	3.75	2.95	5.4	6.8
5.....	5.15	5.7	6.8	4.95	3.65	2.9	2.3	4.0	3.6	2.75	5.25	8.35
6.....	5.0	6.0	7.6	4.9	3.6	2.75	2.1	4.0	3.85	3.1	5.15	9.75
7.....	7.6	6.0	7.5	4.9	3.6	2.7	2.05	4.0	4.45	4.95	9.75	8.65
8.....	9.0	6.1	6.9	4.8	3.6	2.7	2.0	4.0	4.4	4.2	8.45	8.45
9.....	6.8	6.3	6.55	4.8	3.5	2.6	2.35	4.0	4.35	3.2	8.65	8.65
10.....	5.05	8.5	6.35	4.8	3.6	2.6	2.7	4.0	4.35	6.25	7.9	8.55
11.....	5.0	9.1	6.25	4.7	3.45	2.6	5.05	4.0	4.05	5.0	7.15	7.8
12.....	4.9	8.5	6.1	4.65	3.4	2.5	7.4	4.0	3.85	4.75	6.8	7.1
13.....	4.8	7.55	6.0	4.6	3.4	2.5	6.95	4.0	3.65	4.6	6.65	6.65
14.....	4.55	6.9	5.95	4.6	3.4	2.5	5.9	4.0	3.45	5.9	6.5	7.4
15.....	4.5	6.4	5.85	4.5	3.3	2.5	5.75	11.6	3.25	4.55	7.45	8.95
16.....	4.5	6.25	5.75	4.5	3.3	2.4	4.25	6.8	3.1	4.05	10.0	8.15
17.....	4.5	6.1	5.55	4.4	3.3	2.4	5.2	5.9	3.05	3.65	10.1	7.25
18.....	4.4	6.0	5.4	4.4	3.3	2.3	4.7	5.2	2.95	3.15	8.85	6.85
19.....	4.4	5.85	5.4	4.4	3.3	2.3	4.0	4.25	2.9	2.95	7.5	6.25
20.....	4.3	5.65	5.4	4.4	3.3	2.3	3.8	3.5	2.9	2.75	7.2	5.85
21.....	4.3	5.55	5.3	4.4	3.3	2.3	10.15	3.2	2.8	2.65	7.1	5.65
22.....	4.2	5.5	5.15	4.3	3.3	2.3	10.8	3.1	2.7	2.75	7.1	5.45
23.....	4.35	5.4	5.0	4.3	3.3	2.3	7.15	3.55	2.6	2.5	6.7	5.25
24.....	5.05	5.4	5.0	4.3	3.3	2.3	5.95	3.0	2.6	2.45	6.45	5.05
25.....	4.95	5.3	4.95	4.2	3.2	2.3	4.7	11.0	2.6	2.5	6.45	4.85
26.....	4.85	5.3	4.9	4.2	3.1	2.3	4.45	10.75	2.7	3.55	6.3	4.65
27.....	4.95	5.2	4.9	4.1	3.0	2.2	4.2	7.95	2.6	3.55	6.3	4.55
28.....	5.5	5.1	4.9	4.1	3.1	2.2	3.65	6.65	3.1	4.45	6.45	4.35
29.....	5.5	5.15	4.9	3.8	3.1	2.2	3.6	5.2	4.0	5.8	6.75	4.25
30.....	5.5	5.2	4.9	3.7	.....	2.2	3.6	4.3	3.7	5.4	6.4	4.2
31.....	5.5	.....	4.85	4.0	.....	2.2	.....	4.3	.....	5.1	6.25	.....
1908-9.												
1.....	4.15	3.2	2.9	2.9	2.5	2.0	1.9	1.5	5.0	7.9	6.35	15.95
2.....	4.0	3.3	2.95	2.9	2.5	1.9	1.9	2.15	9.6	13.3	6.6	13.55
3.....	3.95	3.15	3.0	2.9	2.5	1.9	1.7	1.6	6.55	18.7	7.3	11.15
4.....	3.9	3.0	3.0	2.9	2.5	1.9	1.7	1.15	4.4	18.65	6.95	8.4
5.....	3.8	3.0	2.95	2.8	2.5	1.9	1.75	1.0	4.4	18.65	6.8	7.6
6.....	3.7	3.0	2.9	2.8	2.4	1.9	1.8	.9	4.4	18.3	7.0	7.7
7.....	3.6	3.0	2.9	2.8	2.4	1.9	1.7	.9	4.25	14.4	7.5	8.95
8.....	5.3	3.0	2.9	2.8	2.4	1.9	4.05	.8	4.15	10.3	7.85	9.35
9.....	5.75	3.0	2.9	2.8	2.4	1.9	2.85	.8	4.0	9.35	7.65	8.55
10.....	4.85	3.0	2.9	2.8	2.4	1.9	2.45	.85	3.8	8.1	7.4	7.4
11.....	4.5	2.9	2.9	2.8	2.4	1.9	2.55	2.3	3.85	7.25	7.05	7.25
12.....	4.15	3.05	2.9	2.8	2.4	1.9	2.1	2.35	3.8	8.2	8.2	7.1
13.....	4.0	3.75	2.9	2.8	2.4	1.9	1.85	2.15	3.7	8.8	8.95	6.8
14.....	3.7	4.2	2.9	2.75	2.35	3.1	1.75	2.0	3.45	9.15	7.25	6.35
15.....	3.5	3.75	2.9	2.7	2.25	3.5	1.55	1.9	3.4	8.95	7.0	6.65
16.....	3.35	3.45	2.9	2.7	2.1	3.05	1.35	1.8	3.4	8.8	6.85	6.5
17.....	3.3	3.25	2.8	2.7	2.05	2.4	1.1	1.8	3.4	9.15	6.7	6.55
18.....	3.3	3.05	2.8	2.7	2.0	2.1	1.0	1.95	3.3	8.5	6.95	6.7
19.....	3.2	3.0	2.8	2.7	2.0	1.95	1.0	2.2	3.3	7.9	6.95	8.0
20.....	3.15	3.0	2.8	2.7	2.0	1.9	1.0	2.5	3.4	9.15	6.75	7.85
21.....	3.0	3.05	2.8	2.7	2.0	1.9	1.0	2.45	3.5	8.8	6.65	8.0
22.....	2.9	3.0	2.8	2.7	2.0	1.95	1.0	3.95	4.1	7.75	6.6	7.95
23.....	9.1	3.0	2.75	2.7	2.0	1.8	1.0	4.0	4.3	7.1	7.35	7.75
24.....	5.5	3.0	2.75	2.7	2.0	1.7	1.0	3.65	4.75	6.8	7.15	7.75
25.....	4.05	3.0	2.8	2.7	2.0	1.95	1.0	4.0	4.9	9.5	6.8	7.65
26.....	3.45	2.95	2.8	2.65	2.0	2.3	1.0	4.9	5.3	8.2	6.55	7.5
27.....	3.4	2.9	2.8	2.55	2.0	1.9	1.0	6.25	5.45	7.2	8.7	6.9
28.....	3.35	3.0	2.8	2.5	2.0	2.65	1.0	7.7	5.4	6.7	12.75	6.7
29.....	3.35	2.85	2.8	2.5	.....	2.05	1.0	5.5	5.4	6.65	16.95	6.5
30.....	3.35	2.9	2.8	2.5	.....	1.85	1.0	5.25	5.4	6.5	18.95	6.35
31.....	3.25	.....	2.9	2.5	.....	1.8	.....	4.9	.....	6.35	17.05	.....

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-10.												
1.....	6.2	3.0	3.5	3.4	3.8	3.15	3.6	3.25	5.6	4.85	3.0	8.25
2.....	6.05	3.1	3.5	3.5	3.8	3.05	5.25	3.5	5.7	5.85	2.95	9.55
3.....	5.7	3.05	3.5	3.6	3.8	3.0	3.55	3.75	5.4	5.5	2.8	7.75
4.....	5.6	3.0	3.5	4.4	3.8	3.0	3.5	4.0	5.35	5.1	2.8	5.35
5.....	5.2	3.0	3.4	5.1	3.8	3.0	3.6	3.7	5.3	4.85	2.7	4.9
6.....	4.9	2.85	3.4	5.4	3.8	3.0	4.75	3.6	5.5	4.75	2.65	4.6
7.....	4.8	2.85	3.5	5.35	3.75	3.0	3.8	3.35	7.6	5.1	2.6	4.35
8.....	4.65	3.1	3.5	5.25	3.7	3.1	3.7	3.6	6.25	5.6	2.5	4.2
9.....	4.5	3.6	3.5	5.1	3.8	3.0	3.7	5.2	5.2	5.2	2.4	10.85
10.....	4.45	2.9	3.5	5.0	3.8	2.95	5.05	4.4	5.2	5.35	2.4	7.9
11.....	4.35	3.15	3.4	5.0	3.7	2.9	7.2	5.1	4.5	5.55	2.3	6.6
12.....	4.25	3.7	3.4	4.9	3.7	2.9	7.05	5.15	4.3	5.05	2.3	5.65
13.....	4.15	3.7	3.4	4.9	3.7	2.8	5.9	5.2	4.35	4.75	2.3	5.35
14.....	4.05	3.7	3.4	4.8	3.6	2.8	5.25	5.3	4.35	4.5	2.3	6.95
15.....	4.0	3.65	3.4	4.8	3.5	2.8	4.9	5.2	3.8	4.4	2.3	13.0
16.....	3.9	3.6	3.4	4.65	3.4	2.75	4.45	5.5	3.5	4.15	2.3	19.75
17.....	3.9	3.6	3.4	4.45	3.35	2.7	4.95	5.8	3.35	3.95	2.3	19.25
18.....	3.8	3.6	3.4	4.35	3.3	2.8	4.65	6.45	3.3	3.8	2.3	16.2
19.....	4.3	3.6	3.4	4.3	3.3	2.7	4.25	7.5	3.2	4.05	2.3	13.95
20.....	5.1	3.6	3.4	4.3	3.2	2.8	4.2	6.35	3.2	4.25	2.3	11.9
21.....	3.9	3.5	3.4	4.3	3.2	3.05	4.2	5.8	3.1	4.25	2.3	8.9
22.....	3.85	3.4	3.4	4.35	3.2	4.0	4.1	7.1	3.1	4.1	2.3	7.75
23.....	3.75	3.4	3.8	4.4	3.2	5.25	3.7	6.9	3.0	3.75	2.2	7.1
24.....	3.7	3.4	3.85	4.3	3.2	4.65	3.5	5.9	3.0	3.5	2.2	7.0
25.....	3.7	3.4	3.7	4.3	3.1	3.95	3.3	5.45	3.4	3.4	2.3	6.75
26.....	3.65	3.4	3.7	4.25	3.2	3.75	3.3	5.1	4.6	3.25	2.3	6.55
27.....	3.5	3.5	3.7	4.05	3.2	3.6	3.35	5.0	5.15	3.2	2.5	6.95
28.....	3.35	3.5	3.7	3.95	3.15	3.75	3.3	5.05	4.25	3.2	3.0	6.85
29.....	3.3	3.5	3.7	3.9	-----	3.75	3.3	5.25	4.0	3.2	3.2	6.65
30.....	3.15	3.5	3.7	3.8	-----	3.65	3.2	5.4	3.8	3.15	3.35	6.25
31.....	3.0	-----	3.7	3.8	-----	3.6	-----	5.6	-----	3.0	4.45	-----
1910-11.												
1.....	6.2	3.8	3.3	3.0	2.6	3.45	3.3	3.2	6.4	5.3	6.3	6.65
2.....	6.2	3.8	3.3	3.0	2.6	3.35	3.3	3.75	6.55	5.2	6.7	6.5
3.....	6.2	3.8	3.2	3.0	2.6	3.2	3.05	4.45	6.55	5.25	7.15	5.8
4.....	8.5	3.7	3.2	3.0	2.6	3.15	3.0	4.2	6.05	5.3	7.0	5.45
5.....	8.3	3.6	3.1	3.0	2.7	3.1	3.35	3.85	5.5	5.5	7.1	5.1
6.....	7.05	3.6	3.0	3.0	2.65	3.05	5.15	4.25	5.4	5.3	7.4	4.5
7.....	6.4	3.6	3.0	2.9	2.6	3.0	6.15	4.05	5.45	5.15	7.3	4.7
8.....	6.0	3.6	3.0	2.9	2.6	3.0	5.75	3.55	4.75	5.0	7.4	5.65
9.....	5.65	3.6	3.0	2.9	2.6	3.0	5.05	3.25	4.65	5.25	7.25	5.45
10.....	5.15	3.6	3.0	2.9	2.6	2.9	4.4	3.05	4.3	5.05	6.5	5.75
11.....	4.95	3.5	3.0	2.9	2.6	2.9	4.05	2.95	4.0	4.9	6.2	6.45
12.....	4.75	3.5	3.0	2.9	2.6	2.95	3.9	2.8	3.8	5.6	5.8	6.85
13.....	4.65	3.5	3.0	2.9	2.65	2.9	3.85	4.95	3.8	5.9	5.65	6.45
14.....	4.6	3.4	3.0	2.85	2.65	2.8	3.7	6.4	3.8	6.7	5.55	6.3
15.....	4.5	3.4	3.0	2.8	2.55	2.75	3.45	4.5	3.8	6.65	5.4	6.05
16.....	4.45	3.4	3.0	2.8	2.5	2.7	3.15	3.3	3.9	6.85	5.3	5.8
17.....	4.4	3.4	3.05	2.7	2.5	2.6	3.0	2.75	4.05	7.2	5.15	5.6
18.....	4.35	3.4	3.25	2.7	2.6	2.6	3.0	2.45	5.45	7.35	5.05	5.85
19.....	4.25	3.5	3.1	2.7	2.6	2.5	2.9	10.5	7.6	6.65	4.95	6.15
20.....	4.15	3.5	3.1	2.7	3.6	2.45	2.9	7.45	7.25	6.5	4.9	5.7
21.....	4.05	3.4	3.1	2.7	5.3	2.4	3.0	6.4	6.4	6.4	4.75	5.6
22.....	3.95	3.4	3.0	2.7	4.5	2.4	2.95	6.8	6.4	6.35	4.7	5.7
23.....	3.85	3.4	3.0	2.7	5.35	3.0	2.9	6.05	5.7	6.45	4.6	5.45
24.....	3.8	3.4	3.0	2.7	4.7	4.65	2.9	5.55	5.5	7.25	4.35	5.05
25.....	3.8	3.4	3.0	2.7	4.15	4.25	4.35	5.35	5.4	7.35	4.05	4.95
26.....	3.8	3.4	3.0	2.7	3.95	3.85	4.05	5.45	5.7	8.4	3.85	4.85
27.....	3.8	3.4	3.0	2.7	3.75	4.2	3.85	5.65	5.95	8.0	3.65	5.05
28.....	3.8	3.4	3.0	2.7	3.6	4.05	3.5	5.75	5.75	7.75	3.55	4.85
29.....	3.8	3.4	3.0	2.7	-----	3.9	3.35	5.65	5.65	7.6	3.6	4.75
30.....	3.8	3.4	3.0	2.7	-----	3.7	3.25	5.55	5.45	7.3	4.2	4.6
31.....	3.8	-----	3.0	2.65	-----	3.45	-----	5.8	-----	7.0	6.55	-----
1911-12.												
1.....	4.5	6.35	4.3	3.7	3.3	2.45	1.95	3.6	5.3	6.7	3.7	7.85
2.....	5.1	6.7	4.3	3.6	3.3	2.4	2.15	3.8	7.05	6.3	3.6	7.4
3.....	5.15	7.25	4.3	3.6	3.4	2.4	2.05	4.5	6.95	5.95	3.55	7.3
4.....	4.9	7.7	4.2	3.5	3.4	2.4	1.9	3.85	6.1	5.75	3.5	8.2
5.....	4.7	6.35	4.2	3.5	3.35	2.4	1.8	3.3	5.5	5.6	3.5	8.55

Daily gage height, in feet, of Rio Grande near Roma, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	4.5	5.65	4.2	3.4	3.3	2.3	1.75	3.05	5.3	5.6	3.5	8.45
7.....	4.85	6.15	4.3	3.35	3.3	2.3	1.7	2.9	5.55	5.5	3.65	8.15
8.....	20.2	6.75	4.2	3.3	3.25	2.25	1.85	6.3	5.95	5.4	4.25	8.4
9.....	8.25	6.55	4.15	3.2	3.2	2.2	3.65	4.1	5.8	5.3	4.4	8.3
10.....	6.8	6.4	4.1	3.2	3.2	2.15	6.7	3.5	5.7	5.3	3.95	7.9
11.....	5.75	5.65	4.1	3.2	3.2	2.1	4.7	3.25	5.75	5.2	3.75	7.5
12.....	6.7	5.75	4.1	3.55	3.1	2.1	4.2	2.95	5.7	5.2	3.65	7.65
13.....	6.4	6.2	4.1	3.95	3.1	2.0	3.95	2.7	6.15	4.95	3.5	7.4
14.....	10.9	5.65	4.1	4.15	3.0	2.0	3.5	2.35	6.8	4.85	3.35	6.85
15.....	12.45	5.35	4.0	4.1	3.0	1.95	3.15	2.4	7.4	4.65	3.2	6.7
16.....	7.0	5.25	4.0	3.85	2.9	1.9	2.95	2.4	7.45	4.55	3.1	8.5
17.....	6.0	5.2	4.0	3.7	2.9	1.9	2.85	2.3	7.4	4.5	2.95	8.55
18.....	6.35	5.25	4.0	3.6	2.8	1.9	2.8	2.3	8.1	4.5	2.9	8.15
19.....	6.65	5.3	3.85	3.55	2.8	1.9	2.7	2.3	16.35	4.35	2.75	8.6
20.....	6.9	5.4	3.75	3.45	2.7	1.8	2.6	3.85	20.45	4.2	2.7	8.8
21.....	6.65	5.35	3.7	3.35	2.7	1.8	2.7	4.2	17.45	4.05	2.9	8.85
22.....	6.9	5.2	3.7	3.3	2.6	1.8	2.75	4.3	13.95	3.85	3.0	9.1
23.....	6.65	5.1	3.85	3.4	2.6	1.9	2.9	4.3	12.4	3.8	4.0	7.9
24.....	6.5	5.05	3.95	3.25	2.6	1.9	3.2	4.4	11.5	3.8	6.6	6.75
25.....	6.35	4.95	3.95	3.35	2.6	1.8	3.4	4.5	10.8	3.8	7.7	6.3
26.....	6.35	4.75	3.85	3.5	2.5	1.8	3.5	4.5	10.0	3.7	8.05	6.1
27.....	6.35	4.65	3.7	3.5	2.5	1.8	3.5	4.6	8.0	3.65	8.05	6.15
28.....	6.45	4.6	3.7	3.5	2.5	1.7	3.5	4.7	7.25	3.65	8.45	5.9
29.....	6.4	4.5	3.7	3.5	2.5	1.7	3.5	4.85	7.05	3.95	8.3	5.45
30.....	6.15	4.4	3.7	3.5	.....	1.7	3.6	5.05	6.95	3.8	8.5	6.75
31.....	6.05	.....	3.7	3.4	.....	1.7	.....	5.25	.....	3.8	8.4	.....
1912-13.												
1.....	9.9	4.0	3.5	3.9	3.2	4.7	2.8	3.75	3.35	5.9	4.6	3.8
2.....	7.9	3.9	3.4	3.9	3.2	4.5	2.7	3.6	3.45	5.85	4.15	3.65
3.....	6.0	3.8	3.4	3.8	3.0	4.4	2.6	3.4	3.45	6.75	3.75	3.4
4.....	5.3	3.75	3.5	3.8	3.0	4.25	2.65	3.2	3.3	5.9	3.55	3.3
5.....	4.95	3.7	3.5	3.7	2.9	4.05	2.6	3.0	3.1	5.65	3.4	3.05
6.....	5.5	3.7	3.5	3.6	2.9	3.9	2.6	8.45	3.0	5.4	4.25	5.7
7.....	6.3	3.6	3.5	3.6	3.0	3.95	2.5	9.7	2.9	5.3	4.1	5.5
8.....	5.8	3.6	3.4	3.5	3.0	4.1	2.5	7.2	6.1	5.2	3.95	5.15
9.....	6.05	3.55	3.4	3.5	3.0	3.85	2.45	6.1	6.75	5.2	3.8	5.1
10.....	6.3	3.5	3.4	3.5	3.0	4.7	2.4	5.05	5.9	5.0	3.65	4.7
11.....	6.2	3.45	3.5	3.4	3.0	5.4	2.55	4.6	6.4	4.95	3.5	6.35
12.....	6.1	3.4	3.5	3.4	3.0	5.35	3.3	4.4	5.0	4.8	3.35	7.2
13.....	6.3	3.4	3.65	3.4	3.1	5.3	2.7	4.35	4.6	4.8	3.3	7.3
14.....	6.35	3.35	3.75	3.4	3.1	4.95	2.5	4.25	4.3	4.65	3.2	6.25
15.....	6.05	3.3	3.9	3.4	3.0	4.6	2.35	4.0	4.35	4.45	2.95	5.7
16.....	6.05	3.3	3.9	3.4	3.0	4.5	2.3	3.95	4.8	4.35	2.85	6.0
17.....	6.4	3.3	3.8	3.3	3.0	4.5	2.25	4.4	4.45	4.2	2.75	5.85
18.....	7.3	3.4	3.8	3.3	3.0	4.5	2.2	5.1	5.3	3.95	2.6	5.7
19.....	6.3	4.05	3.7	3.3	3.0	4.3	2.15	5.1	5.55	3.85	2.5	5.8
20.....	5.2	3.65	3.8	3.3	3.0	4.05	2.05	4.55	5.75	3.7	2.5	5.4
21.....	4.95	3.45	3.8	3.3	3.0	4.0	2.1	4.5	5.4	3.65	3.55	4.9
22.....	5.35	3.65	3.8	3.3	3.85	3.85	2.05	5.05	5.75	3.6	3.65	4.9
23.....	6.25	3.7	3.7	3.2	5.0	3.75	2.0	4.4	6.8	3.55	3.55	4.9
24.....	5.15	3.6	3.7	3.2	4.9	3.65	2.0	4.2	6.05	3.5	3.5	4.8
25.....	4.75	3.7	3.7	3.0	4.8	3.6	2.0	3.8	5.9	3.5	3.35	16.35
26.....	4.55	3.9	3.8	3.0	4.8	3.45	2.0	3.7	11.6	3.45	3.3	16.5
27.....	4.45	3.85	4.2	3.3	4.75	3.25	5.9	3.75	7.15	3.3	4.05	9.35
28.....	4.35	3.65	4.2	3.3	4.75	3.15	4.65	3.65	6.4	3.0	4.45	7.6
29.....	4.25	3.6	4.2	3.2	.....	3.0	4.15	3.45	9.2	3.05	4.1	6.85
30.....	4.2	3.5	4.2	3.3	.....	2.9	3.9	3.35	6.65	2.8	3.95	6.0
31.....	4.1	.....	4.0	3.3	.....	2.8	.....	3.3	.....	4.65	4.0	.....

RIO GRANDE NEAR BROWNSVILLE, TEX.

Location.—One mile above Brownsville, opposite Matamoros, Mexico.

Records available.—April 29, 1900, to September 30, 1913.

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—Made from car and cable.

Natural storage.—Between Roma and Brownsville there are many lagoons (old river channels) which take river water during moderate floods, and a large area is overflowed deeply in large floods. Much of this water returns slowly to the river as the floods subside, thus making the flow more uniform at Brownsville than at Roma. Large quantities also leave the river entirely, reaching the Gulf of Mexico by other channels.

Accuracy.—Although frequent discharge measurements have been obtained, no estimates of daily discharge have been made by the commission.

Cooperation.—This station is maintained by the Mexican section of the International Water Commission, by whom the base data are furnished.

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913.

[By P. Guerra.]

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 19.....	3.0	4,192	May 21.....	2.7	4,066	Nov. 13.....	3.6	5,063
22.....	3.2	4,768	25.....	2.8	3,933	17.....	3.6	5,433
25.....	2.5	4,118	29.....	4.3	7,256	21.....	3.7	5,184
29.....	2.3	4,014	June 1.....	2.9	4,300	25.....	3.4	4,887
1901.			5.....	2.4	3,505	29.....	3.05	5,017
Jan. 3.....	2.2	3,587	7.....	5.4	9,663	Dec. 3.....	3.75	5,480
7.....	2.0	3,579	11.....	2.4	3,452	7.....	2.8	4,274
11.....	2.05	3,744	15.....	2.2	3,493	11.....	2.4	3,854
12.....	2.0	3,662	18.....	2.0	3,364	15.....	2.0	3,483
16.....	2.05	3,836	22.....	1.7	2,943	19.....	1.6	2,877
19.....	2.0	3,548	26.....	1.4	2,812	23.....	1.6	2,849
22.....	1.9	3,440	30.....	4.4	9,806	27.....	1.7	2,927
26.....	1.8	3,335	July 1.....	11.0	27,956	31.....	1.3	2,660
30.....	1.7	2,237	5.....	4.0	4,427			
Feb. 2.....	1.6	3,644	8.....	3.2	3,386	1902.		
5.....	1.5	3,655	12.....	6.0	9,834	Jan. 4.....	1.1	2,653
9.....	1.5	3,502	16.....	3.0	2,813	8.....	1.0	2,637
13.....	1.4	3,505	20.....	1.8	2,434	12.....	1.0	2,646
16.....	1.4	3,150	24.....	1.5	2,152	16.....	1.0	2,517
20.....	1.2	3,128	28.....	1.8	2,461	20.....	1.5	2,885
24.....	1.15	3,117	Aug. 1.....	1.5	2,217	24.....	1.1	2,560
27.....	1.1	3,000	5.....	2.2	3,116	28.....	.9	2,259
Mar. 2.....	1.0	2,745	9.....	2.9	3,775	Feb. 1.....	.7	2,192
6.....	1.05	2,773	13.....	2.9	3,753	5.....	.6	2,092
9.....	1.2	3,189	17.....	3.0	4,125	9.....	.6	2,103
13.....	.9	2,870	21.....	2.2	3,461	13.....	.6	2,213
17.....	.8	2,762	25.....	1.6	2,816	17.....	.5	1,999
20.....	.7	2,592	29.....	2.2	3,621	21.....	.45	2,001
24.....	.6	2,463	Sept. 2.....	2.1	3,473	25.....	.3	1,875
28.....	.3	2,336	6.....	7.9	14,731	Mar. 1.....	.2	1,932
Apr. 1.....	.3	2,306	10.....	2.9	3,907	5.....	.0	1,766
4.....	.1	2,206	14.....	5.45	9,680	9.....	— .1	1,625
8.....	.0	1,996	18.....	3.7	4,937	13.....	— .3	1,599
12.....	.0	2,002	22.....	4.75	6,236	17.....	— .4	1,489
16.....	— .1	1,914	26.....	4.9	7,662	21.....	— .5	1,360
20.....	— .1	1,914	30.....	7.3	14,461	25.....	— .6	1,325
24.....	— .3	1,751	Oct. 4.....	5.2	9,898	29.....	— .7	1,322
28.....	— .5	1,691	8.....	4.0	4,834	Apr. 3.....	— .8	1,276
May 2.....	— .55	1,638	12.....	3.4	4,483	7.....	— .8	1,278
3.....	— .5	1,639	16.....	5.7	9,774	11.....	— 1.0	1,178
4.....	5.5	12,721	20.....	3.0	3,758	15.....	— 1.0	1,177
5.....	5.6	10,771	24.....	6.5	14,352	19.....	1.0	2,630
9.....	2.2	3,561	28.....	4.4	7,310	23.....	2.5	3,430
13.....	4.2	6,502	Nov. 1.....	4.6	6,639	27.....	.5	1,799
17.....	2.7	3,747	5.....	5.2	6,661	May 3.....	— .8	1,126
			9.....	4.1	5,521	7.....	— .9	1,099

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913—Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1902.	<i>Fect.</i>	<i>Sec.-ft.</i>	1903.	<i>Fect.</i>	<i>Sec.-ft.</i>	1904.	<i>Fect.</i>	<i>Sec.-ft.</i>
May 10.....	5.8	10,258	May 25.....	2.5	4,022	Apr. 5.....	7.6	7,901
15.....	2.45	2,737	29.....	2.6	4,307	10.....	2.7	3,563
20.....	1.0	1,674	June 2.....	1.7	3,511	14.....	1.0	1,998
24.....	4.7	7,075	5.....	3.1	5,736	19.....	— 0	1,328
28.....	2.0	2,389	9.....	3.0	5,462	23.....	— 3	1,205
June 2.....	.9	1,656	12.....	2.6	4,278	28.....	— 3	1,208
6.....	.3	1,381	16.....	12.2	31,158	May 2.....	.1	1,578
10.....	.6	1,565	19.....	12.7	33,699	6.....	8.5	8,626
13.....	.1	1,254	25.....	9.6	14,015	10.....	4.6	5,529
18.....	— .3	1,025	29.....	9.1	12,731	14.....	2.85	3,702
23.....	— 1	1,198	July 3.....	8.1	10,173	18.....	10.25	10,138
27.....	— 1	1,201	7.....	10.1	19,159	23.....	3.3	3,830
July 1.....	.3	1,601	12.....	7.1	7,685	27.....	1.9	2,192
5.....	— 4	1,216	16.....	7.6	8,596	31.....	1.1	1,525
9.....	.4	1,917	20.....	6.2	7,776	June 4.....	5.2	6,136
13.....	.8	2,062	24.....	5.3	6,425	9.....	10.9	22,180
18.....	— 4	1,251	29.....	4.2	5,495	13.....	5.5	7,898
21.....	3.7	4,957	Aug. 2.....	12.2	29,898	17.....	4.9	5,767
25.....	2.2	3,504	7.....	8.2	11,146	21.....	3.5	4,061
30.....	8.7	19,957	11.....	5.3	5,752	26.....	4.0	4,652
Aug. 3.....	9.0	21,254	15.....	5.2	5,624	29.....	2.4	3,351
7.....	5.8	8,488	19.....	12.2	31,670	July 3.....	10.8	22,487
11.....	4.6	5,660	23.....	6.8	9,695	7.....	4.5	5,711
15.....	3.6	4,305	28.....	5.3	8,308	11.....	3.2	3,748
19.....	5.1	7,677	Sept. 1.....	4.8	4,952	16.....	2.0	2,336
21.....	5.0	6,715	5.....	5.3	5,533	21.....	1.2	1,925
21.....	5.0	6,922	10.....	6.2	7,757	25.....	.9	1,436
28.....	3.9	5,224	15.....	11.0	19,434	29.....	4.6	5,945
30.....	4.0	5,622	19.....	5.3	6,072	Aug. 2.....	2.5	3,075
Sept. 4.....	6.4	6,776	24.....	5.5	6,275	6.....	1.5	2,398
8.....	6.4	11,062	28.....	4.7	5,471	10.....	1.0	2,090
13.....	10.8	19,486	Oct. 2.....	7.4	10,714	14.....	1.9	2,677
15.....	11.9	23,509	7.....	6.9	10,448	18.....	2.5	3,146
19.....	8.8	14,023	11.....	7.5	11,356	22.....	1.3	2,341
23.....	9.1	14,493	15.....	4.9	5,671	26.....	.5	1,945
28.....	6.85	9,422	19.....	4.3	5,862	30.....	.4	1,736
Oct. 2.....	7.2	10,362	23.....	3.1	4,456	Sept. 3.....	.1	1,413
6.....	7.5	11,533	26.....	2.7	4,249	7.....	.7	1,718
10.....	4.7	5,506	29.....	2.6	4,080	11.....	11.7	25,168
14.....	3.8	4,326	Nov. 2.....	2.5	3,579	14.....	12.5	27,490
18.....	11.95	24,325	6.....	2.0	3,441	19.....	12.9	29,203
22.....	5.25	6,108	11.....	1.8	3,160	24.....	12.9	29,407
26.....	3.9	4,046	15.....	1.4	2,846	29.....	12.7	27,874
29.....	3.3	3,368	20.....	1.3	2,677	Oct. 3.....	12.5	27,369
3.....	3.8	4,047	24.....	1.2	2,611	12.....	10.2	22,087
7.....	2.7	3,144	28.....	1.1	2,541	16.....	10.9	23,900
11.....	3.1	3,525	Dec. 2.....	1.0	2,429	20.....	12.5	27,276
14.....	3.0	3,556	6.....	1.0	2,430	24.....	12.7	27,516
18.....	2.1	2,786	10.....	.9	2,236	29.....	12.6	28,586
23.....	1.5	2,210	14.....	.8	2,173	Nov. 3.....	12.4	25,218
27.....	1.95	2,870	18.....	.8	2,140	7.....	11.4	21,546
Dec. 5.....	1.7	2,727	22.....	.8	2,129	11.....	10.4	19,295
9.....	8.4	15,232	26.....	.8	2,135	15.....	9.0	16,741
10.....	3.8	4,746	30.....	.7	2,086	19.....	8.1	12,956
15.....	2.1	3,182	Jan. 1904.			23.....	7.6	10,308
17.....	1.9	2,937	Jan. 3.....	.7	2,077	28.....	7.0	9,298
21.....	1.5	2,571	7.....	.7	2,050	Dec. 2.....	7.1	9,683
26.....	1.2	2,443	11.....	.7	2,054	6.....	6.7	9,288
1903.			15.....	.6	2,039	10.....	6.4	8,647
Jan. 7.....	1.1	2,361	19.....	.5	1,981	14.....	7.0	9,627
12.....	1.1	2,294	23.....	.5	1,954	18.....	6.6	9,031
17.....	.9	2,257	28.....	.4	1,910	22.....	6.2	8,470
16.....	1.0	2,313	Feb. 1.....	.2	1,876	26.....	6.3	8,561
20.....	1.45	2,797	5.....	.2	1,878	20.....	5.9	8,076
25.....	1.5	2,830	9.....	.2	1,853	1905.		
29.....	1.1	2,534	13.....	.2	1,872	Jan. 2.....	5.3	7,492
3.....	1.0	2,492	16.....	.7	2,299	6.....	4.7	7,036
7.....	.8	2,174	20.....	.0	1,885	10.....	4.3	6,230
11.....	.8	2,185	24.....	.0	1,889	14.....	4.1	5,935
15.....	.8	2,129	28.....	.2	2,009	18.....	3.8	5,545
19.....	.9	2,239	Mar. 3.....	.0	1,912	22.....	3.5	5,384
23.....	1.8	3,132	7.....	— 3	1,678	26.....	3.4	5,295
27.....	1.7	3,100	11.....	— 4	1,544	30.....	3.2	4,853
May 1.....	.5	1,790	15.....	— 6	1,382	Feb. 3.....	3.4	5,053
4.....	4.9	7,925	19.....	— 6	1,451	7.....	3.5	5,204
8.....	2.3	4,242	23.....	— 7	1,420	11.....	3.0	4,711
13.....	2.8	4,904	27.....	— 7	1,373	16.....	2.9	4,583
17.....	5.7	9,188	30.....	— 7	1,391	24.....	3.1	4,961
21.....	6.8	11,616	Apr. 3.....	— 5	1,278	27.....	2.8	4,595

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913—Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1905.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1906.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1906.	<i>Fcet.</i>	<i>Sec.-ft.</i>
Mar. 3.....	2.9	4,796	Jan. 23.....	4.4	5,588	Dec. 7.....	5.8	6,776
7.....	3.5	5,259	27.....	4.0	5,168	11.....	5.7	6,678
13.....	5.2	7,653	30.....	3.7	4,887	15.....	5.7	6,659
17.....	5.7	8,414	Feb. 3.....	3.6	4,765	19.....	6.6	8,045
20.....	7.6	10,548	7.....	4.0	5,161	23.....	6.5	7,915
25.....	6.5	10,058	11.....	4.2	5,352	27.....	6.2	7,441
29.....	6.5	10,163	15.....	3.9	5,033	31.....	5.6	6,858
Apr. 2.....	5.8	9,043	19.....	5.5	7,340			
6.....	9.25	18,251	23.....	6.6	8,363	1907.		
11.....	5.1	6,206	27.....	7.7	10,405	Jan. 3.....	5.3	6,199
16.....	4.9	6,901	Mar. 3.....	7.6	9,863	7.....	5.0	6,148
24.....	4.0	5,135	7.....	6.2	7,459	11.....	4.7	5,797
28.....	6.8	11,362	11.....	5.1	6,053	15.....	4.5	5,573
May 2.....	7.65	10,885	15.....	4.4	5,479	19.....	4.4	5,437
6.....	6.3	8,771	19.....	3.8	4,745	23.....	4.2	5,292
10.....	6.0	8,024	24.....	3.1	4,202	27.....	4.3	5,362
14.....	7.5	10,623	28.....	2.7	3,873	31.....	4.3	5,407
18.....	7.9	13,120	Apr. 1.....	2.3	3,490	Feb. 3.....	4.2	5,299
22.....	6.1	8,596	5.....	1.9	3,163	7.....	4.4	5,483
26.....	6.8	11,162	10.....	1.6	2,917	11.....	4.3	5,366
30.....	10.5	23,258	14.....	1.7	3,086	15.....	4.0	5,097
June 3.....	11.2	24,294	19.....	2.0	3,245	19.....	3.5	4,596
6.....	10.8	20,716	23.....	2.0	3,248	23.....	3.2	4,386
11.....	8.4	15,583	27.....	4.4	5,429	28.....	3.1	4,323
15.....	9.0	16,772	May 1.....	2.7	4,015	Mar. 4.....	3.0	4,246
20.....	11.7	24,397	5.....	2.4	3,569	7.....	2.7	4,075
24.....	12.7	28,515	9.....	3.3	4,498	11.....	2.5	4,033
28.....	12.2	28,485	13.....	2.6	3,837	15.....	2.3	3,402
July 2.....	13.1	28,091	17.....	3.0	4,195	19.....	2.4	3,503
6.....	13.5	29,168	21.....	6.5	11,427	23.....	2.2	3,341
10.....	13.3	25,099	26.....	7.6	14,650	27.....	1.8	3,138
12.....	11.0	18,734	31.....	5.1	6,434	31.....	1.7	3,095
18.....	8.8	11,949	June 4.....	5.2	6,814	Apr. 2.....	1.7	3,055
22.....	9.5	14,452	8.....	7.5	12,386	6.....	1.6	3,044
26.....	9.3	14,231	12.....	5.5	7,849	10.....	1.3	2,897
30.....	11.65	18,275	16.....	5.3	7,484	14.....	1.2	2,830
Aug. 3.....	11.3	21,236	20.....	4.5	5,634	18.....	2.1	3,163
7.....	10.5	18,382	24.....	4.6	5,748	22.....	2.1	3,185
11.....	9.4	14,697	28.....	4.8	6,137	26.....	1.9	3,136
15.....	9.6	15,135	July 1.....	5.1	6,622	30.....	1.6	2,985
19.....	10.6	18,435	5.....	6.6	11,563	May 2.....	2.2	3,283
24.....	10.8	19,390	9.....	8.9	18,265	6.....	7.8	14,593
28.....	9.25	14,399	12.....	13.2	28,275	10.....	5.1	6,015
Sept. 1.....	9.6	15,773	16.....	13.8	30,314	14.....	6.0	6,604
6.....	7.5	9,946	20.....	13.4	31,296	18.....	4.7	5,773
10.....	7.1	8,937	24.....	14.1	34,765	22.....	4.1	5,437
14.....	7.3	9,301	28.....	14.1	34,797	28.....	5.4	6,290
18.....	9.8	16,287	Aug. 1.....	14.2	35,564	30.....	13.3	31,604
21.....	12.8	28,944	5.....	13.8	24,799	June 3.....	5.7	6,604
25.....	13.1	31,029	9.....	13.8	26,051	7.....	5.1	6,011
29.....	8.1	10,259	13.....	14.0	26,804	11.....	5.4	6,126
Oct. 3.....	12.8	23,081	17.....	14.0	25,794	15.....	6.1	7,977
7.....	13.1	26,749	21.....	14.1	26,469	19.....	6.6	8,322
11.....	11.3	16,714	25.....	14.0	25,626	21.....	8.25	13,193
15.....	10.7	16,121	29.....	14.1	26,671	25.....	8.0	12,749
20.....	8.1	10,171	Sept. 2.....	14.0	25,573	29.....	7.1	10,312
24.....	8.5	11,476	6.....	14.1	28,078	July 3.....	6.4	9,633
29.....	6.5	6,802	10.....	14.0	25,673	6.....	13.4	30,296
Nov. 2.....	6.1	7,338	14.....	13.7	24,318	10.....	13.7	30,885
6.....	7.9	10,956	18.....	12.0	19,161	14.....	7.3	8,675
8.....	8.1	11,697	22.....	11.4	18,168	18.....	7.75	9,648
14.....	6.7	8,237	26.....	13.8	24,742	22.....	6.8	8,221
18.....	6.5	7,833	30.....	11.9	18,889	26.....	6.2	7,464
22.....	10.1	20,002	Oct. 3.....	10.7	17,246	30.....	5.5	6,377
26.....	8.7	13,500	7.....	10.5	16,848	Aug. 3.....	5.2	6,018
29.....	7.9	11,011	11.....	8.7	11,280	7.....	5.3	6,104
Dec. 3.....	6.6	8,970	15.....	8.1	10,491	11.....	4.9	5,814
8.....	6.3	7,638	19.....	8.4	11,130	15.....	4.5	5,562
12.....	7.8	10,506	23.....	7.4	9,750	19.....	4.0	5,187
17.....	6.9	9,394	27.....	7.0	9,075	23.....	3.7	4,948
21.....	6.3	7,767	31.....	6.7	8,703	27.....	2.6	3,422
25.....	8.0	11,487	Nov. 3.....	6.7	7,842	31.....	2.3	3,156
29.....	8.6	14,349	7.....	6.5	7,566	Sept. 3.....	3.0	4,141
			11.....	6.4	7,388	7.....	5.7	11,453
			15.....	6.2	7,300	11.....	7.8	12,752
1906.			19.....	5.9	6,879	15.....	8.0	12,854
Jan. 3.....	7.1	9,840	23.....	5.7	6,797	19.....	6.7	10,641
7.....	6.4	8,122	27.....	5.8	6,802	23.....	8.3	13,574
11.....	5.6	6,601	30.....	5.9	6,870	27.....	8.7	13,178
15.....	5.1	6,234	Dec. 3.....	5.9	6,922	30.....	7.0	10,645
19.....	4.7	5,885						

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Fect.</i>	<i>Sec.-ft.</i>	1908.	<i>Fect.</i>	<i>Sec.-ft.</i>	1909.	<i>Fect.</i>	<i>Sec.-ft.</i>
Oct. 3.....	6.9	10,207	July 26.....	1.7	2,452	May 18.....	0.2	1,365
10.....	6.0	9,077	30.....	2.4	2,837	22.....	.3	1,386
17.....	11.4	19,340	Aug. 2.....	8.6	13,124	26.....	2.6	2,983
14.....	5.8	6,152	6.....	6.0	8,034	30.....	9.2	10,959
16.....	4.8	5,152	9.....	11.2	21,862	June 3.....	8.2	9,643
22.....	4.4	4,843	13.....	9.0	12,790	7.....	5.0	4,656
26.....	4.6	4,934	17.....	11.8	23,148	11.....	4.1	4,169
30.....	5.4	5,642	19.....	13.0	27,785	14.....	3.0	3,525
Nov. 3.....	7.0	10,270	23.....	9.3	13,629	18.....	2.8	3,335
7.....	6.8	10,030	27.....	8.1	12,033	22.....	2.4	3,118
11.....	8.6	13,238	31.....	8.8	13,662	26.....	2.7	3,280
15.....	10.6	18,174	Sept. 3.....	8.2	12,336	30.....	4.4	4,529
19.....	7.9	11,531	7.....	11.0	19,897	July 3.....	12.4	25,488
23.....	6.9	8,696	11.....	12.1	24,561	7.....	13.4	28,999
27.....	6.4	8,147	15.....	10.0	17,626	11.....	13.8	30,235
30.....	6.1	7,703	18.....	11.8	21,726	15.....	11.4	17,249
Dec. 3.....	6.2	7,904	22.....	7.8	9,315	19.....	11.1	16,282
7.....	9.9	20,476	26.....	6.8	8,153	23.....	8.9	11,847
11.....	8.2	12,154	30.....	5.6	7,135	27.....	12.3	23,385
15.....	7.7	11,599	Oct. 3.....	4.9	4,371	31.....	7.0	8,549
19.....	7.1	10,943	7.....	4.3	4,096	Aug. 3.....	6.7	8,219
23.....	6.6	8,146	11.....	6.1	7,477	7.....	8.1	10,373
27.....	6.1	7,561	15.....	4.1	3,804	11.....	8.6	11,331
31.....	5.6	7,108	19.....	3.3	3,376	15.....	13.8	27,687
			23.....	3.1	3,212	19.....	9.5	12,782
			25.....	9.8	17,125	23.....	8.8	11,943
Jan. 1908.			29.....	4.0	3,590	27.....	12.0	21,087
3.....	5.3	6,325	Nov. 2.....	3.2	3,407	31.....	13.9	29,543
7.....	5.1	6,033	6.....	2.6	2,325	Sept. 3.....	14.0	30,188
11.....	4.6	5,615	10.....	2.3	2,087	7.....	14.3	31,655
15.....	4.1	5,173	14.....	6.1	7,488	11.....	13.6	28,331
19.....	3.9	4,931	18.....	4.0	3,651	15.....	11.2	18,707
23.....	3.8	4,769	22.....	2.7	2,424	19.....	13.8	28,921
27.....	3.6	4,550	26.....	2.3	2,039	23.....	12.8	25,470
31.....	3.6	4,540	30.....	2.0	1,932	26.....	13.5	27,742
Feb. 3.....	3.3	3,180	Dec. 3.....	2.0	1,950	30.....	10.4	16,959
7.....	2.9	2,993	7.....	2.1	2,058	Oct. 3.....	9.2	12,195
11.....	2.6	2,763	11.....	1.9	1,850	7.....	8.0	10,396
15.....	2.6	2,728	15.....	1.8	1,723	11.....	7.4	7,839
19.....	2.5	2,628	19.....	1.7	1,731	15.....	6.8	6,183
23.....	2.2	2,593	23.....	1.6	1,726	19.....	6.0	5,431
27.....	2.1	2,563	27.....	1.5	1,722	23.....	6.4	5,731
Mar. 2.....	2.0	2,257	31.....	1.5	1,730	27.....	5.3	5,004
6.....	1.9	2,232				30.....	4.7	4,569
10.....	1.6	2,179	1909.			Nov. 3.....	4.4	4,820
14.....	1.3	1,959	Jan. 3.....	1.5	1,825	7.....	4.1	4,357
18.....	1.2	1,914	7.....	1.5	1,815	11.....	4.0	4,229
22.....	1.1	1,873	11.....	1.5	1,831	15.....	3.9	4,087
26.....	1.0	1,842	15.....	1.4	1,789	19.....	3.3	3,731
30.....	.9	1,839	19.....	1.4	1,815	23.....	3.1	3,574
Apr. 3.....	.8	1,756	23.....	1.3	1,790	28.....	2.9	3,396
7.....	.6	1,634	27.....	1.3	1,782	Dec. 2.....	2.8	3,254
11.....	.5	1,600	31.....	1.2	1,756	6.....	3.0	3,542
14.....	12.7	29,014	Feb. 3.....	1.1	1,741	10.....	2.7	3,132
18.....	7.1	8,508	7.....	1.1	1,722	14.....	2.5	2,986
20.....	6.5	7,732	11.....	1.1	1,715	18.....	2.5	2,989
24.....	13.4	28,805	15.....	.9	1,414	22.....	2.6	3,010
28.....	5.4	6,552	19.....	.5	1,404	26.....	2.8	3,191
May 3.....	4.0	3,612	23.....	.4	1,379	30.....	2.9	3,399
7.....	3.6	2,594	27.....	.3	1,340			
11.....	3.8	3,409	Mar. 3.....	.2	1,314	1910.		
15.....	3.4	2,525	7.....	.1	1,270	Jan. 3.....	2.8	3,134
17.....	13.6	27,705	11.....	.1	1,267	7.....	3.1	3,541
21.....	5.0	6,058	15.....	.0	1,228	11.....	4.6	5,172
25.....	4.0	5,298	19.....	1.0	1,697	15.....	3.8	4,461
27.....	9.1	12,999	23.....	.4	1,383	19.....	3.5	4,185
29.....	8.3	12,089	27.....	.2	1,354	23.....	3.0	3,418
June 2.....	5.1	6,215	30.....	—	1,227	27.....	3.1	3,557
6.....	4.2	3,760	Apr. 2.....	—	1,133	31.....	2.6	2,978
10.....	3.8	3,445	6.....	—	1,077	Feb. 3.....	2.4	2,879
15.....	3.2	3,315	10.....	—	1,192	7.....	2.3	2,837
18.....	2.8	3,080	14.....	2.0	2,759	11.....	2.1	2,758
22.....	2.3	2,802	18.....	.7	1,717	15.....	1.7	2,485
26.....	1.9	2,552	22.....	—	1,068	19.....	1.5	2,300
30.....	3.9	3,578	26.....	—	954	23.....	1.2	2,160
July 3.....	3.4	3,466	30.....	—	943	27.....	.9	2,100
6.....	2.5	3,042	May 2.....	—	890	Mar. 3.....	1.1	1,955
10.....	4.6	4,130	6.....	—	1,086	7.....	.6	1,819
14.....	5.4	7,030	10.....	—	1,036	11.....	.4	1,660
18.....	5.0	5,399	14.....	—	1,089	15.....	.3	1,604
22.....	2.3	2,907						

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Mar. 1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	Jan. 1911.	<i>Feet.</i>	<i>Sec.-ft.</i>	Nov. 1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
19.	0.2	1,471	14.	1.5	2,024	24.	5.0	4,736
23.	.2	1,447	18.	1.3	1,804	28.	4.5	4,355
27.	2.8	3,206	22.	1.1	1,687	1.	3.8	4,061
31.	1.5	2,329	26.	1.2	1,774	5.	3.6	3,793
Apr. 3.	1.7	2,455	30.	1.1	1,678	9.	3.3	3,402
7.	4.4	4,920	Feb. 3.	.6	1,470	17.	3.1	3,143
11.	2.4	2,877	7.	.4	1,357	21.	2.9	3,133
15.	6.0	5,113	11.	.5	1,425	25.	2.8	2,881
19.	3.4	4,046	15.	.3	1,311	29.	2.7	2,710
23.	2.4	2,852	19.	.6	1,461			
27.	1.4	2,255	23.	1.4	1,934	Jan. 1912.		
30.	1.1	2,026	27.	3.0	3,133	Jan. 2.	2.7	2,702
May 3.	.9	1,939	Mar. 3.	1.6	2,022	6.	2.3	2,575
7.	1.1	2,052	7.	1.2	1,749	11.	2.0	2,394
11.	2.4	2,872	11.	.4	1,365	15.	2.7	2,217
15.	2.7	3,122	15.	.5	1,399	19.	2.4	2,646
19.	2.6	3,003	19.	.6	1,452	26.	2.1	2,378
23.	6.2	5,403	23.	.3	1,042	30.	2.2	2,474
27.	6.4	5,676	27.	2.4	2,341	Feb. 3.	2.1	2,366
31.	3.8	4,316	31.	4.2	3,569	7.	2.0	2,248
June 3.	4.0	4,484	Apr. 3.	4.0	3,503	11.	1.7	2,309
7.	3.7	4,140	7.	1.9	2,520	15.	1.6	2,138
11.	4.5	5,096	11.	5.3	6,120	19.	1.6	2,123
15.	2.6	2,957	15.	2.2	2,623	23.	1.2	1,939
19.	1.4	2,238	19.	1.3	2,289	29.	1.0	1,792
23.	.4	1,455	23.	1.1	2,159	Mar. 3.	1.0	1,813
27.	.2	1,275	27.	1.5	2,437	7.	.5	1,578
30.	3.2	3,680	May 2.	5.4	6,247	11.	3	1,465
July 3.	2.4	2,848	6.	4.1	3,596	15.	.2	1,397
7.	3.2	3,754	10.	3.8	3,179	19.	1	1,304
11.	3.8	4,292	14.	3.6	2,929	23.	—	1,140
15.	3.3	3,932	18.	5.0	5,599	27.	—	1,068
19.	1.8	2,442	22.	9.6	15,445	31.	—	975
23.	1.4	2,274	26.	5.7	6,663	Apr. 3.	—	923
27.	.8	1,650	30.	5.1	5,815	7.	—	1,052
30.	.4	1,444	June 3.	5.4	6,234	11.	3.7	3,832
Aug. 3.	—	1,109	7.	5.2	5,734	15.	3.5	3,601
7.	—	1,062	11.	3.6	2,951	19.	1.8	2,396
11.	—	870	15.	2.1	2,538	23.	.9	1,911
15.	—	785	19.	1.8	2,432	30.	1.1	1,466
19.	—	705	23.	6.0	7,102	May 3.	1.1	1,854
23.	—	649	27.	4.5	3,872	7.	.5	1,741
27.	—	598	30.	4.3	3,813	11.	7	2,173
31.	—	890	July 3.	4.5	3,913	15.	4.4	4,070
Sept. 3.	8.55	19,075	7.	4.0	3,488	19.	1.2	1,880
7.	5.8	5,252	11.	3.7	3,034	21.	—	838
11.	11.0	19,882	15.	3.4	2,896	25.	1.0	1,771
15.	6.9	6,384	19.	8.3	10,204	29.	1.9	2,480
19.	13.7	22,540	23.	6.3	7,396	June 2.	4.0	3,952
23.	14.2	24,708	27.	8.6	10,476	6.	6.5	8,798
27.	11.3	20,827	30.	8.9	12,746	10.	5.7	6,398
30.	9.7	9,847	Aug. 3.	7.1	7,631	14.	5.3	5,735
Oct. 3.	9.0	8,997	7.	8.8	13,039	18.	8.2	11,035
7.	14.0	25,497	11.	8.3	9,669	22.	13.9	19,426
11.	8.0	8,123	15.	5.7	6,645	26.	14.1	21,182
15.	6.5	5,888	19.	4.7	4,192	30.	13.7	18,773
19.	5.7	4,707	23.	3.5	3,411	July 3.	8.6	9,348
23.	5.0	4,538	27.	3.2	3,623	7.	7.5	7,554
27.	4.5	4,118	31.	1.7	1,991	11.	6.5	5,594
31.	4.3	3,876	Sept. 3.	6.2	7,177	15.	5.4	4,945
Nov. 3.	4.2	3,585	7.	3.9	3,926	19.	4.3	3,493
7.	3.6	3,066	11.	5.4	5,794	23.	4.2	3,216
11.	3.0	2,834	15.	6.6	7,737	27.	2.8	2,553
15.	2.8	2,642	19.	5.5	5,045	31.	3.0	2,689
19.	2.6	2,515	23.	5.0	6,142	Aug. 3.	3.6	3,137
23.	2.4	2,340	27.	3.8	3,900	7.	2.8	2,472
27.	2.5	2,409	Oct. 3.	3.2	3,242	11.	3.1	3,092
Dec. 1.	2.2	2,233	7.	2.9	3,202	15.	2.1	2,229
5.	1.9	2,174	11.	3.1	3,184	19.	2.0	2,139
9.	1.6	1,988	15.	10.8	15,908	23.	1.2	1,581
13.	2.0	2,291	19.	4.9	4,609	27.	7.25	12,200
17.	1.8	2,098	20.	6.7	6,581	31.	10.0	16,134
21.	1.9	2,197	24.	7.9	9,281	Sept. 4.	7.8	10,763
25.	2.1	2,401	28.	7.4	8,391	8.	11.0	16,968
29.	1.7	2,068	31.	7.1	8,037	12.	9.5	13,236
1911.			Nov. 4.	9.55	18,364	16.	8.0	11,146
Jan. 2.	1.8	2,141	8.	6.5	7,652	20.	11.5	19,037
6.	1.3	1,758	12.	7.8	8,740	24.	13.0	21,386
10.	1.4	1,902	16.	5.9	5,588	29.	8.1	11,171
			20.	5.2	5,072	Oct. 3.	13.6	23,431

Discharge measurements of Rio Grande near Brownsville, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Oct. 1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	Dec. 1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	Mar. 1913.	<i>Feet.</i>	<i>Sec.-ft.</i>
7.....	6.7	7,369	27.....	2.4	2,784	11.....	2.5	2,918
11.....	7.6	8,321	31.....	2.7	3,081	15.....	4.0	4,455
15.....	8.3	11,585				19.....	3.5	3,703
19.....	8.5	12,167	Jan. 1913.			23.....	2.5	2,893
23.....	6.3	5,639	3.....	2.7	3,094	27.....	1.9	2,237
27.....	7.0	7,683	7.....	2.4	2,761	31.....	1.1	1,774
31.....	5.0	4,224	11.....	2.0	2,372	Apr. 3.....	.7	1,685
Nov. 3.....	4.1	5,361	15.....	1.9	2,270	7.....	.4	1,539
7.....	3.4	3,142	19.....	1.8	2,172	11.....	— .1	1,297
12.....	2.5	2,437	23.....	1.7	2,030	15.....	— .3	1,150
15.....	2.1	2,163	27.....	1.6	2,015	19.....	.5	1,584
19.....	2.3	2,317	31.....	1.5	1,998	23.....	— .7	950
23.....	2.9	3,049	Feb. 3.....	1.5	1,984	28.....	— .4	1,109
27.....	2.8	2,902	7.....	1.2	1,892	Mar. 3.....	2.2	2,467
30.....	3.0	3,153	11.....	1.3	1,910	8.....	8.0	15,340
Dec. 3.....	2.7	3,063	15.....	1.3	1,912	10.....	9.8	18,153
7.....	2.8	3,201	19.....	1.2	1,813	14.....	4.1	3,818
11.....	2.6	2,917	23.....	1.1	1,715	18.....	2.4	2,125
15.....	2.5	2,875	27.....	3.8	4,166	22.....	4.3	4,134
19.....	2.5	2,886	Mar. 3.....	3.4	3,744	26.....	4.2	3,990
23.....	2.3	2,616	7.....	2.8	3,102	31.....	1.9	2,294

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1900.							1900.						
1.....	6.0	6.35	4.05	10.0	6.65	16.....	3.45	5.3	3.95	11.95	5.1		
2.....	8.9	6.05	3.9	9.15	6.5	17.....	8.7	5.15	5.85	10.75	5.3		
3.....	10.4	10.4	6.4	8.4	6.45	18.....	11.95	5.0	10.05	9.8	5.85		
4.....	9.1	12.5	7.25	8.0	6.3	19.....	12.55	5.0	11.0	9.35	6.55		
5.....	6.95	10.25	6.5	7.7	6.85	20.....	12.85	5.25	9.4	8.65	6.5		
6.....	5.4	8.25	5.5	7.4	7.35	21.....	11.8	5.5	7.95	8.3	6.2		
7.....	4.9	11.0	4.7	7.35	7.05	22.....	9.5	6.45	7.65	8.1	6.05		
8.....	4.55	10.9	4.9	8.15	7.4	23.....	11.45	7.85	6.5	7.7	5.85		
9.....	4.4	8.3	6.1	8.6	8.95	24.....	12.4	6.25	5.7	7.5	5.55		
10.....	4.2	6.65	5.7	9.25	10.45	25.....	11.3	5.4	5.4	7.9	6.75		
11.....	4.0	6.05	5.5	9.95	8.2	26.....	10.25	4.9	5.05	8.4	11.4		
12.....	3.95	6.0	5.15	12.1	6.6	27.....	9.25	4.45	4.9	8.1	12.45		
13.....	3.95	6.0	4.75	12.75	5.9	28.....	8.3	4.2	4.8	7.7	12.9		
14.....	3.9	5.75	4.65	12.95	5.55	29.....	5.75	7.7	4.2	5.65	7.0	12.6	
15.....	3.55	5.45	4.35	12.8	5.25	30.....	7.1	7.2	4.2	5.5	6.45	10.45	
						31.....	6.7	—	7.7	6.3	—	—	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	9.1	—	—	2.3	1.65	1.0	0.3	—0.5	3.0	10.15	1.5	2.25
2.....	8.2	—	—	2.3	1.6	1.0	.25	— .5	2.55	11.6	1.6	2.05
3.....	8.05	—	—	2.2	1.6	1.0	.2	— .4	2.5	8.75	1.8	1.85
4.....	8.7	—	—	2.2	1.6	1.0	— .15	5.3	2.5	5.35	1.95	2.1
5.....	8.3	—	—	2.2	1.55	1.0	.1	5.75	2.4	4.15	2.15	7.75
6.....	7.65	—	—	2.0	1.5	1.0	.1	3.8	3.25	3.65	2.25	7.35
7.....	7.7	—	—	2.0	1.5	1.1	.1	2.9	5.5	3.2	2.5	5.5
8.....	7.6	—	—	2.0	1.5	1.1	.0	2.4	4.2	2.95	2.9	4.6
9.....	7.3	—	—	2.0	1.5	1.2	.0	2.2	3.1	2.8	2.95	3.45
10.....	6.95	—	—	2.0	1.5	1.1	.0	2.6	2.55	2.75	2.9	2.95
11.....	6.9	—	—	2.0	1.5	1.0	.0	5.6	2.4	4.75	2.9	2.55
12.....	6.75	—	—	2.0	1.5	1.0	.0	5.95	2.3	6.1	3.0	4.25
13.....	6.45	—	—	2.0	1.4	.9	.0	4.4	2.25	4.75	2.95	7.65
14.....	6.4	—	—	2.0	1.4	.9	.0	4.2	2.2	4.05	2.9	5.15
15.....	6.15	—	—	2.0	1.4	.9	— .1	3.75	2.2	3.6	2.95	4.3
16.....	5.95	—	—	2.0	1.4	.9	— .1	2.95	2.15	3.1	3.0	3.85
17.....	5.8	—	—	2.0	1.4	.8	— .1	2.65	2.1	2.6	3.0	3.6
18.....	5.55	—	—	2.0	1.4	.8	— .1	2.35	2.0	2.3	2.8	3.7
19.....	5.5	—	3.0	2.0	1.4	.8	— .1	2.25	1.9	2.0	2.65	4.5
20.....	5.35	—	2.85	1.9	1.2	.75	— .1	2.1	1.75	1.85	2.45	5.35

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
21.	5.05	.....	2.8	1.9	1.2	.7	— .2	2.55	1.7	1.75	2.25	5.25
22.	6.5	.....	3.1	1.9	1.2	.6	— .2	3.55	1.7	1.55	1.95	4.75
23.	6.55	.....	2.85	1.9	1.2	.6	— .3	3.65	1.7	1.5	1.8	4.25
24.	6.6	.....	2.65	1.8	1.25	.6	— .3	3.1	1.6	1.45	1.75	3.7
25.	7.5	.....	2.5	1.8	1.1	.5	— .3	2.65	1.55	1.4	1.55	3.9
26.	6.65	.....	2.4	1.8	1.1	.45	— .35	2.35	1.45	1.6	1.45	4.85
27.	6.05	.....	2.35	1.8	1.1	.4	— .4	3.45	1.2	1.8	1.5	6.3
28.	5.95	.....	2.3	1.8	1.1	.3	— .5	5.5	1.05	1.8	1.85	9.1
29.	6.5	.....	2.3	1.8	.....	.3	— .5	4.3	.95	1.7	2.1	9.1
30.	6.5	.....	2.3	1.7	.....	.3	— .5	3.8	4.35	1.55	2.35	7.45
31.	7.1	.....	2.3	1.7	.....	.3	.....	3.55	.....	1.5	2.4	.....
1901-2.												
1.	5.5	4.5	5.95	1.2	.7	.1	— .8	— .45	1.0	.3	11.0	6.05
2.	4.75	5.9	4.55	1.2	.7	.1	— .8	— .65	.85	.25	10.05	5.55
3.	4.75	5.8	3.65	1.1	.6	.1	— .8	— .75	.75	.05	8.8	5.0
4.	5.2	5.35	3.25	1.1	.6	.1	— .8	— .8	.65	— .15	9.1	5.0
5.	4.85	5.2	3.05	1.05	.6	.0	— .8	— .8	.45	— .35	7.9	7.85
6.	4.4	4.85	2.95	1.0	.6	.0	— .8	— .85	.35	— .4	6.3	7.65
7.	4.05	4.45	2.75	1.0	.6	.0	— .8	— .9	.3	— .4	5.65	6.75
8.	3.95	4.25	2.6	1.0	.6	— .5	— .9	3.7	.3	— .25	5.35	6.4
9.	3.8	4.1	2.5	1.0	.6	— .15	— .9	7.87	.5	.5	5.1	7.5
10.	3.65	3.95	2.5	1.0	.6	— .25	— 1.0	6.67	.6	1.05	5.0	8.5
11.	3.55	3.65	2.4	1.0	.6	— .3	— 1.0	4.1	.45	1.3	4.45	9.35
12.	3.5	3.6	2.3	1.0	.6	— .3	— 1.0	3.2	.25	1.15	4.05	9.8
13.	3.35	3.55	2.2	1.0	.6	— .3	— 1.0	3.05	.05	.7	3.9	10.85
14.	3.85	3.5	2.1	1.0	.6	— .35	— 1.0	2.8	— .1	— .25	4.0	11.6
15.	8.1	3.5	2.0	1.0	.6	— .4	— 1.0	2.4	— .2	— .1	3.6	11.95
16.	6.4	3.5	1.9	1.0	.6	— .4	— 1.0	2.05	— .2	— .25	3.2	12.0
17.	3.9	3.6	1.8	1.1	.5	— .4	— .9	1.75	— .2	— .35	2.95	11.7
18.	3.35	3.65	1.75	1.3	.5	— .5	— .25	1.4	.3	— .4	2.75	10.7
19.	3.15	3.7	1.65	1.35	.5	— .5	.8	1.15	— .4	1.75	4.35	9.05
20.	2.95	3.7	1.6	1.45	.5	— .5	5.1	.95	— .5	3.7	5.5	8.05
21.	2.75	3.7	1.6	1.4	.5	— .5	5.2	.75	— .55	3.8	5.15	7.65
22.	2.6	3.7	1.6	1.25	.4	— .6	3.35	2.8	— .3	3.4	4.85	10.2
23.	2.8	3.6	1.6	1.15	.4	— .6	2.4	6.7	— .15	3.2	4.7	8.9
24.	6.35	3.5	1.5	1.1	.4	— .6	1.75	4.4	— .1	2.5	4.65	7.15
25.	5.55	3.4	1.5	1.05	.3	— .6	1.35	2.9	— .1	2.15	4.45	6.6
26.	4.6	3.25	1.5	1.0	.3	— .6	.9	2.4	— .1	1.95	4.3	7.45
27.	4.9	3.05	1.6	.95	.3	— .6	.5	2.15	— .1	1.85	4.1	7.2
28.	4.45	2.9	1.4	.9	.1	— .6	.1	1.9	.15	2.25	3.95	6.7
29.	4.15	3.05	1.35	.8	.....	— .7	— .1	1.7	.2	5.55	3.85	5.85
30.	4.1	6.3	1.3	.8	.....	— .7	— .35	1.4	.2	9.0	3.95	5.45
31.	4.1	.....	1.3	.7	.....	— .8	.....	1.2	.....	10.6	5.4	.....
1902-3.												
1.	6.25	3.2	1.85	1.1	1.0	.....	.....	— .5	1.75	8.85	9.25	4.9
2.	7.05	3.75	1.7	1.1	1.0	.....	.....	— .45	1.7	8.65	12.2	4.6
3.	9.8	3.85	4.7	1.05	1.0	.....	.....	2.4	1.7	8.2	12.65	4.5
4.	10.15	3.4	6.6	1.0	.9	.....	.....	4.75	1.6	7.7	12.8	5.0
5.	10.3	2.95	8.3	1.0	.8	.....	.....	3.3	2.35	7.25	13.0	5.3
6.	8.0	2.7	6.7	1.0	.8	.....	.....	2.5	3.75	7.0	11.5	5.1
7.	5.9	2.6	4.95	1.0	.8	.....	.....	2.3	4.25	9.45	8.2	4.9
8.	5.0	3.1	4.2	.9	.75	.....	.....	2.25	3.15	11.8	6.8	4.9
9.	4.7	3.5	3.65	.9	.7	.....	.....	2.45	3.0	11.7	6.05	5.8
10.	4.7	3.3	3.9	.9	.7	.....	.....	2.25	2.95	9.75	5.6	6.2
11.	4.6	3.0	3.95	.9	.8	.....	.....	1.8	2.7	7.5	5.3	6.7
12.	4.55	2.75	3.35	.85	.8	.....	.....	1.6	2.55	7.1	5.3	11.1
13.	4.15	2.8	2.65	.8	.8	.....	.....	2.45	3.25	7.25	5.15	12.45
14.	3.8	2.95	2.25	.8	.8	.....	— .4	3.1	6.8	7.45	5.15	12.65
15.	3.45	2.8	2.1	.9	.8	.....	— .4	4.3	10.6	7.55	5.2	11.5
16.	7.6	2.55	2.0	1.0	.85	.....	— .4	5.8	12.05	7.55	4.9	7.65
17.	10.9	2.45	1.85	1.0	.9	.....	— .4	5.9	12.25	7.35	4.55	6.0
18.	12.05	2.2	1.7	1.05	.9	.....	— .4	4.2	12.5	7.1	8.0	5.45
19.	11.25	1.95	1.65	1.1	1.05	.....	— .4	3.0	12.8	6.75	12.35	5.3
20.	7.4	1.75	1.55	1.45	1.3	.....	— .5	3.9	13.05	6.35	11.6	5.25
21.	5.75	1.65	1.5	2.15	1.55	.....	— .6	6.65	13.1	6.1	8.5	6.15
22.	5.2	1.5	1.5	2.4	1.7	.....	— .65	5.85	13.2	5.9	7.3	6.4
23.	5.0	1.5	1.4	2.15	1.8	.....	— .75	4.3	13.05	5.55	6.9	5.8
24.	4.45	1.5	1.3	1.85	1.8	.....	— .8	3.25	11.95	5.25	6.25	5.45
25.	4.15	1.45	1.3	1.6	1.9	.....	— .9	2.4	9.75	5.05	5.65	5.35

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
26.....	3.85	1.45	1.2	1.4	1.75	.....	-.9	2.2	9.15	4.75	5.3	5.2
27.....	3.65	2.0	1.2	1.25	1.65	.....	-.9	2.6	9.05	4.55	5.15	4.95
28.....	3.5	2.3	1.2	1.15	1.6	.....	-.9	2.8	9.05	4.35	5.3	4.8
29.....	3.35	2.15	1.2	1.1	.....	.....	-.9	2.55	9.15	4.6	5.6	4.65
30.....	3.15	1.95	1.15	1.1	.....	.....	-.75	2.25	8.9	7.7	5.4	4.3
31.....	3.1	.....	1.1	1.05	.....	.....	.....	2.1	.....	8.35	5.2	.....
1903-4.												
1.....	4.35	3.65	1.0	.7	.2	0.0	-.8	.0	1.3	2.8	2.95	.2
2.....	7.2	2.85	1.0	.7	.2	.0	-.65	.1	3.05	9.6	2.5	.1
3.....	6.75	2.5	1.0	.7	.2	.0	-.55	.0	4.7	10.7	2.1	.1
4.....	5.85	2.35	1.0	.7	.2	-.1	-.5	.0	5.2	7.4	1.75	.1
5.....	5.75	2.2	1.0	.7	.2	-.2	5.45	.7	4.25	5.8	1.55	.3
6.....	5.9	2.05	1.0	.7	.2	-.2	6.4	7.3	3.8	5.35	1.5	.55
7.....	6.65	2.0	1.0	.7	.2	-.25	5.2	6.5	3.75	4.7	1.45	.75
8.....	7.1	2.0	.9	.7	.2	-.3	4.05	4.0	7.6	4.05	1.25	1.0
9.....	7.4	1.85	.9	.7	.2	-.3	3.35	2.75	11.1	3.85	1.05	2.0
10.....	7.55	1.8	.9	.7	.2	-.3	2.8	3.5	10.55	3.65	.95	9.25
11.....	7.45	1.8	.85	.7	.2	-.35	2.25	6.7	7.5	3.3	.9	11.07
12.....	6.45	1.7	.8	.7	.2	-.4	1.8	4.9	5.8	2.9	.9	12.35
13.....	5.7	1.6	.8	.6	.2	-.4	1.35	3.7	5.35	2.65	1.15	12.55
14.....	5.2	1.55	.8	.6	.25	-.5	.95	3.0	4.7	2.35	2.1	12.5
15.....	4.95	1.45	.8	.6	.45	-.6	.7	5.7	4.4	2.15	2.95	12.7
16.....	4.65	1.4	.8	.6	.65	-.6	.45	7.2	4.7	1.95	3.4	12.8
17.....	4.35	1.4	.8	.6	.55	-.6	.25	7.9	4.9	1.75	2.9	12.8
18.....	4.2	1.3	.8	.6	.25	-.6	.1	10.2	4.9	1.6	2.35	12.9
19.....	4.3	1.3	.8	.5	.15	-.6	.0	9.3	4.6	1.45	1.8	12.9
20.....	4.0	1.3	.8	.5	.0	-.6	-.1	6.6	4.0	1.3	1.45	13.0
21.....	3.6	1.3	.8	.5	.0	-.6	-.15	5.05	3.4	1.2	1.4	13.0
22.....	3.3	1.3	.8	.5	.0	-.6	-.25	4.15	3.2	1.1	1.25	13.0
23.....	3.05	1.25	.8	.5	.0	-.7	-.3	3.55	3.45	1.0	.95	12.9
24.....	2.9	1.2	.8	.4	.0	-.7	-.4	3.0	4.65	1.0	.65	12.9
25.....	2.8	1.2	.8	.4	.05	-.7	-.4	2.6	4.8	.9	.5	12.8
26.....	2.7	1.1	.8	.4	.2	-.7	-.3	2.2	3.9	.9	.5	12.8
27.....	2.6	1.1	.7	.4	.2	-.7	-.2	1.85	3.25	4.25	.45	12.7
28.....	2.6	1.05	.7	.4	.15	-.7	-.3	1.65	2.65	4.75	.4	12.7
29.....	2.6	1.0	.7	.3	.0	-.7	-.2	1.45	2.35	4.65	.4	12.7
30.....	3.25	1.0	.7	.3	.....	-.7	.0	1.25	2.15	4.15	.4	12.7
31.....	4.05	.....	.7	.2	.....	-.7	.....	1.1	.....	3.6	.3	.....
1904-5.												
1.....	12.6	12.3	7.3	5.45	3.2	2.7	6.1	7.4	11.05	12.7	10.7	9.5
2.....	12.6	12.2	7.2	5.35	3.4	2.7	5.75	7.5	10.35	13.0	10.9	8.9
4.....	12.55	12.4	7.1	5.15	3.4	2.9	5.55	6.3	11.8	13.1	11.3	8.4
4.....	12.45	12.5	7.0	4.95	3.4	3.15	5.65	6.05	12.5	13.15	11.55	8.0
5.....	12.4	12.05	6.85	4.85	3.45	3.35	9.0	6.15	11.7	13.4	11.1	7.7
6.....	12.25	11.85	6.7	4.65	3.6	3.4	9.25	6.3	11.05	13.5	10.65	7.45
7.....	12.05	11.3	6.6	4.6	3.45	3.45	6.75	6.3	9.7	13.5	10.45	7.2
8.....	11.7	10.65	6.5	4.5	3.25	5.85	5.6	6.2	8.8	13.5	10.25	7.35
9.....	11.7	10.15	6.4	4.35	3.1	7.7	5.3	6.05	8.55	13.5	9.9	7.35
10.....	11.15	9.95	6.4	4.25	3.05	7.7	5.2	6.1	8.45	12.95	9.6	7.15
11.....	10.25	10.45	6.4	4.25	2.95	6.0	5.15	6.45	8.4	11.65	9.4	6.95
12.....	10.25	10.1	6.85	4.15	2.9	5.05	5.1	6.6	8.55	10.9	9.55	6.75
13.....	10.1	9.55	7.0	4.25	2.9	5.1	5.0	6.5	8.9	10.6	9.65	6.75
14.....	10.15	9.25	7.0	4.1	2.9	6.1	5.0	7.35	9.0	10.3	9.75	7.5
15.....	10.4	8.9	7.0	4.0	2.9	6.1	4.95	7.5	9.05	9.7	9.5	11.0
16.....	10.9	8.5	6.9	3.95	2.9	5.85	4.9	6.85	9.35	9.15	9.15	10.95
17.....	11.5	8.3	6.8	3.9	2.9	5.7	4.8	7.7	10.15	8.95	9.9	9.8
18.....	12.25	8.2	6.65	3.8	2.9	5.7	4.75	7.75	10.7	8.75	10.95	9.75
19.....	12.4	8.1	6.45	3.8	2.9	6.95	4.65	6.6	11.35	10.45	10.5	9.55
20.....	12.5	8.0	6.3	3.7	2.9	7.55	4.45	6.1	11.75	12.4	10.4	9.75
21.....	12.5	7.9	6.2	3.6	2.9	6.6	4.4	6.1	12.0	10.8	10.75	12.85
22.....	12.5	7.75	6.2	3.5	3.0	6.15	4.25	6.1	12.05	9.95	10.5	13.05
23.....	12.65	7.6	6.2	3.5	3.1	6.1	4.1	6.1	12.5	8.3	10.3	13.25
24.....	12.75	7.45	6.3	3.5	3.1	6.35	4.05	6.1	12.7	9.2	10.7	13.4
25.....	12.8	7.25	6.4	3.5	2.9	6.5	3.85	6.75	12.65	9.6	11.5	12.25
26.....	12.7	7.1	6.3	3.4	2.9	6.65	3.8	6.8	12.3	9.3	11.65	9.75
27.....	12.7	7.0	6.2	3.3	2.8	6.7	4.6	6.95	12.05	9.8	9.65	8.75
28.....	12.6	7.0	6.1	3.2	2.8	6.65	6.55	9.4	12.3	10.4	9.15	8.35
29.....	12.6	7.2	6.0	3.2	.....	6.5	6.55	9.75	12.75	11.7	8.6	8.1
30.....	12.5	7.2	5.9	3.2	.....	6.35	6.1	10.4	12.8	11.4	9.2	8.0
31.....	12.5	.....	5.65	3.2	.....	6.15	.....	10.6	.....	10.9	9.7	.....

Dailygage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1	12.75	6.2	7.05	7.35	3.6	7.9	2.3	2.65	5.2	5.4	14.2	14.0
2	13.1	6.1	6.85	7.2	3.6	7.85	2.2	2.55	5.2	4.65	14.15	14.0
3	12.95	6.65	6.65	7.1	3.6	7.5	2.1	2.5	5.2	4.5	14.15	14.0
4	11.45	11.55	6.55	6.95	3.5	7.05	2.0	2.45	5.2	4.7	14.0	14.05
5	10.85	10.1	6.45	6.8	3.5	6.85	1.9	2.4	5.3	6.0	13.7	14.1
6	12.65	8.05	6.3	6.65	3.65	6.5	1.8	2.4	5.35	7.9	12.85	14.05
7	13.1	7.4	6.3	6.45	4.05	6.25	1.7	3.1	7.15	7.3	12.45	13.95
8	13.05	8.1	6.3	6.25	4.05	5.9	1.7	3.35	7.6	5.85	13.15	13.9
9	13.0	8.35	6.9	5.95	4.5	5.55	1.6	3.25	7.85	7.9	13.65	14.0
10	12.25	7.9	7.7	5.75	4.35	5.35	1.6	2.85	5.85	12.5	14.0	14.0
11	11.25	7.45	8.0	5.65	4.2	5.15	1.6	2.65	5.65	13.1	14.0	14.0
12	11.65	7.25	7.7	5.5	4.1	4.95	1.65	2.6	5.5	13.25	14.0	14.1
13	11.55	6.95	7.35	5.4	4.0	4.75	1.7	2.6	5.5	13.4	14.0	13.95
14	11.1	6.75	7.2	5.25	4.0	4.55	1.7	2.75	5.5	13.55	14.0	13.75
15	10.5	6.55	7.1	5.1	3.9	4.35	1.7	3.2	5.4	13.7	14.0	13.55
16	9.7	6.4	7.05	5.0	3.8	4.2	1.7	3.0	5.25	13.75	14.0	13.25
17	9.0	6.4	6.9	4.9	3.8	4.05	1.9	3.05	5.05	13.8	14.0	12.55
18	8.65	6.5	6.8	4.8	4.15	3.9	2.55	3.15	4.95	13.75	14.05	11.9
19	8.4	8.95	6.65	4.7	5.3	3.8	2.2	3.2	4.65	13.65	14.1	11.5
20	8.15	9.7	6.45	4.6	6.15	3.7	2.0	3.3	4.45	13.45	14.1	11.15
21	8.15	9.3	6.3	4.55	6.45	3.55	2.05	5.65	4.25	13.3	14.05	11.1
22	8.95	10.15	6.15	4.5	6.5	3.4	2.0	8.6	4.2	13.5	14.0	11.4
23	8.5	10.15	6.55	4.4	6.6	3.25	2.0	6.9	4.35	13.75	14.0	11.4
24	8.5	9.4	7.8	4.25	6.6	3.1	2.1	5.3	4.5	14.05	14.0	11.9
25	8.35	9.1	8.0	4.1	6.9	2.95	4.1	7.5	4.75	14.1	14.0	13.6
26	7.6	8.8	7.9	4.05	7.45	2.85	4.75	7.3	4.9	14.1	14.0	13.85
27	6.9	8.45	7.8	4.0	7.7	2.75	4.4	5.6	4.65	14.1	14.0	13.8
28	6.65	8.05	8.5	3.9	7.6	2.65	3.85	4.75	4.75	14.1	14.1	13.55
29	6.45	7.75	8.55	3.8	-----	2.5	3.4	4.5	6.05	14.1	14.05	12.55
30	6.35	7.3	8.2	3.7	-----	2.45	3.0	4.8	6.75	14.15	14.0	11.8
31	6.25	-----	7.6	3.6	-----	2.4	-----	5.15	-----	14.2	14.0	-----
1906-7.												
1	11.4	6.8	6.0	5.5	4.2	3.1	1.7	2.1	7.6	6.45	5.2	2.25
2	11.05	6.8	6.0	5.4	4.1	3.0	1.7	2.2	5.9	6.4	5.2	2.45
3	10.55	6.75	5.9	5.3	4.2	3.0	1.7	2.2	5.7	6.4	5.2	3.25
4	10.05	6.7	5.85	5.25	4.2	3.0	1.7	2.2	5.7	7.3	5.2	4.1
5	9.85	6.6	5.8	5.2	4.2	2.9	1.7	3.5	5.7	11.15	5.3	4.75
6	10.15	6.5	5.8	5.1	4.3	2.8	1.6	6.55	5.3	13.4	5.3	5.35
7	10.45	6.5	5.8	5.05	4.4	2.7	1.6	10.85	5.1	12.0	5.3	5.8
8	10.0	6.4	5.8	4.9	4.5	2.65	1.5	7.65	5.0	10.4	5.3	6.4
9	9.15	6.4	5.8	4.8	4.4	2.6	1.4	5.5	5.15	13.0	5.2	6.7
10	8.95	6.4	5.7	4.7	4.4	2.5	1.3	5.05	5.35	13.65	5.05	7.05
11	8.75	6.4	5.7	4.7	4.3	2.5	1.25	5.6	5.45	11.8	4.85	7.8
12	8.55	6.4	5.6	4.6	4.3	2.45	1.2	6.6	5.65	9.05	4.65	7.9
13	8.35	6.35	5.6	4.55	4.25	2.4	1.2	6.35	5.85	7.8	4.5	9.15
14	8.25	6.3	5.6	4.5	4.1	2.35	1.2	5.95	6.0	7.3	4.5	8.25
15	8.05	6.2	5.7	4.5	3.95	2.3	1.55	5.45	6.1	7.2	4.45	7.95
16	7.85	6.15	6.1	4.4	3.8	2.4	1.75	5.15	6.2	7.15	4.25	7.85
17	7.8	6.05	6.3	4.4	3.7	2.4	1.95	4.85	6.3	7.1	4.1	7.75
18	8.05	5.95	6.4	4.4	3.6	2.4	2.1	4.65	6.4	7.65	4.1	7.3
19	8.4	5.9	6.6	4.4	3.5	2.4	2.1	4.45	6.65	7.45	4.1	6.7
20	8.05	5.8	6.7	4.3	3.4	2.3	2.1	4.25	7.8	7.25	4.0	6.7
21	7.9	5.8	6.7	4.3	3.3	2.3	2.1	4.1	8.35	6.95	4.0	6.6
22	7.7	5.7	6.55	4.2	3.2	2.2	2.1	4.25	7.2	6.85	3.9	6.6
23	7.4	5.7	6.45	4.2	3.2	2.2	2.1	4.7	7.35	6.65	3.75	7.8
24	7.3	5.7	6.4	4.2	3.2	2.1	2.0	5.5	7.75	6.5	3.5	9.8
25	7.15	5.7	6.3	4.2	3.2	2.0	2.0	5.6	8.0	6.35	3.15	10.1
26	7.0	5.7	6.2	4.3	3.2	1.9	1.9	5.5	7.6	6.15	2.95	9.4
27	6.95	5.75	6.15	4.3	3.2	1.8	1.8	5.5	7.35	5.85	2.65	8.85
28	6.9	5.8	5.95	4.3	3.1	1.8	1.7	5.4	7.15	5.7	2.45	8.35
29	6.8	5.9	5.75	4.3	-----	1.7	1.6	12.0	7.05	5.6	2.3	7.65
30	6.7	5.9	5.6	4.3	-----	1.7	1.6	13.0	6.7	5.45	2.3	6.95
31	6.7	-----	5.6	4.3	-----	1.7	-----	9.7	-----	5.25	2.25	-----
1907-8.												
1	6.9	6.0	6.0	5.4	3.5	2.0	.85	4.4	5.1	3.55	5.4	8.0
2	6.9	7.75	6.2	5.3	3.3	2.0	.8	4.15	5.15	3.35	8.45	7.75
3	6.95	7.1	6.2	5.25	3.25	2.0	.8	3.95	5.5	3.2	7.65	8.15
4	7.0	6.0	6.25	5.2	3.1	1.9	.7	3.8	5.2	3.05	7.3	9.25
5	6.7	5.95	6.4	5.1	3.1	1.9	.7	3.75	4.75	2.8	6.95	9.2

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
6.	6.3	6.5	7.7	5.1	3.0	1.85	.65	3.6	4.3	2.4	6.55	9.25
7.	6.05	6.7	9.95	5.1	2.9	1.75	.6	3.55	4.0	2.15	5.5	10.85
8.	6.35	7.1	10.0	5.0	2.85	1.7	.6	3.75	3.8	2.3	8.05	11.6
9.	10.4	7.55	9.2	4.8	2.8	1.6	.5	4.1	3.8	3.45	10.9	11.7
10.	11.55	7.85	8.7	4.7	2.8	1.55	.5	3.85	3.85	4.6	10.75	11.8
11.	8.85	8.45	8.3	4.6	2.6	1.5	.5	3.75	4.0	5.1	10.85	12.1
12.	6.6	9.5	8.05	4.5	2.6	1.4	.75	3.65	4.0	6.15	9.9	11.65
13.	6.15	11.55	7.85	4.35	2.6	1.35	7.5	3.5	4.0	6.75	8.7	9.8
14.	5.9	11.55	7.7	4.15	2.6	1.3	12.25	3.45	3.85	5.65	8.1	9.45
15.	5.5	10.6	7.7	4.1	2.6	1.3	13.05	3.4	3.35	5.1	7.75	9.55
16.	5.15	9.35	7.6	4.0	2.6	1.2	10.45	8.0	3.2	5.45	8.65	11.65
17.	4.95	8.9	7.45	3.95	2.6	1.2	8.25	13.5	2.95	5.65	11.4	12.4
18.	4.8	8.4	7.25	3.9	2.5	1.2	7.4	12.4	2.75	5.2	12.75	11.4
19.	4.7	8.0	7.1	3.9	2.5	1.1	6.9	7.65	2.55	5.0	13.0	10.2
20.	4.6	7.75	7.0	3.85	2.5	1.1	6.65	5.75	2.4	3.25	11.65	9.4
21.	4.5	7.55	6.85	3.8	2.4	1.1	5.9	4.8	2.3	2.85	9.9	8.6
22.	4.4	7.3	6.7	3.8	2.3	1.1	9.5	4.3	2.25	2.4	9.45	7.9
23.	4.3	6.95	6.55	3.75	2.2	1.1	13.15	4.0	2.0	2.05	9.2	7.55
24.	4.2	6.9	6.4	3.7	2.1	1.1	13.2	4.0	2.0	1.9	8.85	7.3
25.	4.2	6.75	6.3	3.6	2.1	1.0	9.7	4.0	2.0	1.85	8.6	7.05
26.	4.7	6.55	6.25	3.6	2.1	1.0	6.5	4.0	1.9	1.75	8.2	6.8
27.	5.05	6.4	6.15	3.6	2.1	1.0	5.55	8.25	1.9	1.45	8.1	6.5
28.	5.2	6.3	5.75	3.6	2.0	1.0	5.35	10.5	5.7	1.2	7.95	6.15
29.	5.3	6.2	5.6	3.6	2.0	1.0	5.05	8.0	4.5	1.6	7.7	5.9
30.	5.45	6.1	5.6	3.6	2.0	.9	4.7	5.95	3.8	2.4	7.95	5.55
31.	5.65	5.55	3.6	3.6	2.0	.9	5.0	5.0	2.55	8.7	8.7	5.55
1908-9.												
1.	5.35	3.3	2.0	1.5	1.1	.3	-.1	-.8	6.35	6.3	6.6	14.0
2.	5.1	3.15	2.0	1.5	1.1	.3	-.2	-.9	5.4	8.8	6.6	14.0
3.	4.9	2.95	2.0	1.5	1.1	.2	-.2	-.75	7.6	11.85	6.75	14.0
4.	4.75	2.75	1.9	1.5	1.1	.2	-.3	-.55	10.1	13.05	7.2	14.2
5.	4.55	2.7	1.9	1.5	1.1	.2	-.4	-.4	9.3	13.2	8.0	14.2
6.	4.45	2.6	1.9	1.5	1.1	.1	-.4	-.3	7.85	13.25	8.3	14.2
7.	4.2	2.5	2.1	1.5	1.1	.1	-.45	-.4	5.0	13.45	8.15	14.3
8.	4.0	2.4	2.1	1.5	1.1	.1	-.5	-.5	4.8	13.55	8.2	14.2
9.	3.85	2.4	2.0	1.5	1.1	.1	-.45	-.6	4.5	13.75	8.55	14.15
10.	3.9	2.3	1.95	1.5	1.1	.1	-.2	-.7	4.25	13.8	8.45	14.1
11.	6.1	2.2	1.9	1.5	1.1	.1	.0	-.7	4.0	13.8	8.4	13.8
12.	6.05	2.25	1.9	1.5	1.1	.1	1.9	-.7	3.7	13.8	10.15	13.1
13.	5.35	4.15	1.85	1.5	1.0	.05	2.2	-.7	3.2	12.95	13.15	12.2
14.	4.65	6.4	1.8	1.4	.95	.0	2.0	-.6	3.0	11.2	13.5	11.45
15.	4.2	5.25	1.8	1.4	.9	.0	1.7	-.55	3.0	11.6	13.75	11.05
16.	3.9	4.55	1.7	1.4	.8	.05	1.2	-.35	2.95	11.9	13.9	10.6
17.	3.65	4.25	1.7	1.4	.6	.25	.95	.2	2.9	11.8	13.6	11.5
18.	3.45	3.9	1.7	1.4	.6	.65	.75	.2	2.8	11.45	11.45	12.3
19.	3.25	3.45	1.7	1.4	.5	1.2	.55	.2	2.75	11.2	9.7	13.9
20.	3.05	3.15	1.7	1.4	.5	1.45	.15	.2	2.65	10.2	9.1	13.35
21.	2.85	2.85	1.65	1.3	.5	1.2	-.2	.25	2.6	9.65	8.9	13.05
22.	2.65	2.65	1.6	1.3	.4	.55	-.45	.3	2.45	11.05	8.8	12.9
23.	3.05	2.55	1.6	1.3	.4	.4	-.6	.4	2.2	10.65	8.8	12.75
24.	4.35	2.5	1.6	1.3	.4	.4	-.7	.6	2.2	8.75	9.75	12.65
25.	9.55	2.4	1.5	1.3	.3	.35	-.7	1.2	2.35	7.95	10.05	12.9
26.	7.25	2.25	1.5	1.3	.3	.3	-.8	2.3	2.6	8.35	10.45	13.55
27.	5.25	2.1	1.5	1.3	.3	.2	-.8	2.95	3.2	12.1	11.85	12.4
28.	4.4	2.0	1.5	1.2	.3	.1	-.8	3.35	3.6	11.05	12.35	11.1
29.	3.9	2.0	1.5	1.2	.3	.0	-.8	7.3	3.95	8.3	13.15	10.55
30.	3.65	2.0	1.5	1.2	.3	-.05	-.8	9.3	4.3	7.45	13.65	10.3
31.	3.4	1.5	1.2	1.2	.3	-.1	7.25	7.25	6.65	13.9	13.9	10.3
1909-10.												
1.	9.8	4.5	2.85	2.8	2.5	1.05	1.7	1.05	3.8	2.85	.2	.8
2.	9.45	4.45	2.8	2.8	2.45	1.0	1.6	1.0	3.9	1.9	.1	.9
3.	9.25	4.4	2.75	2.75	2.35	.9	1.6	.95	3.95	2.2	-.1	8.0
4.	8.9	4.3	2.7	2.7	2.3	.8	2.2	.9	4.25	2.7	-.3	13.1
5.	8.65	4.2	2.7	2.7	2.3	.75	3.0	.95	4.15	3.2	-.3	11.7
6.	8.4	4.2	2.9	2.85	2.3	.7	3.75	1.0	3.95	3.75	-.4	7.65
7.	8.05	4.0	2.9	3.25	2.3	.6	4.35	1.1	3.6	3.3	-.4	6.1
8.	7.85	3.75	2.9	3.7	2.2	.5	4.55	1.2	3.55	3.0	-.4	5.15
9.	7.75	3.55	2.8	4.1	2.2	.4	3.75	1.95	4.8	2.95	-.45	4.55
10.	7.65	3.5	2.75	4.45	2.1	.4	3.05	2.25	5.0	3.5	-.65	7.2

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	7.45	4.0	2.7	4.55	2.1	0.4	2.4	2.35	4.65	3.75	-0.75	10.0
12.....	7.25	4.15	2.65	4.4	2.1	.4	2.7	2.45	3.9	3.55	-.9	8.05
13.....	7.1	4.15	2.5	4.05	2.0	.4	3.55	2.55	3.5	3.4	-.9	6.95
14.....	6.95	4.1	2.5	3.95	1.85	.4	6.0	2.6	2.95	3.35	-1.0	5.9
15.....	6.75	3.95	2.5	3.8	1.75	.35	6.2	2.7	2.65	3.25	-1.0	6.35
16.....	6.55	3.8	2.5	3.7	1.65	.3	5.3	2.7	2.2	2.95	-1.0	7.65
17.....	6.35	3.55	2.5	3.6	1.55	.3	4.8	2.8	1.8	2.6	-1.05	13.45
18.....	6.15	3.4	2.5	3.6	1.5	.25	4.15	2.75	1.65	2.25	-1.1	13.6
19.....	6.5	3.3	2.5	3.5	1.45	.2	3.45	2.65	1.45	1.9	-1.1	13.7
20.....	5.85	3.25	2.5	3.4	1.4	.2	3.2	2.6	1.25	1.65	-1.1	13.9
21.....	5.75	3.2	2.5	3.3	1.35	.2	3.05	2.5	.85	1.35	-1.2	14.0
22.....	6.05	3.15	2.55	3.15	1.3	.2	2.7	5.2	.55	1.2	-1.2	14.1
23.....	6.45	3.1	2.45	3.0	1.2	.2	2.45	6.1	.45	1.4	-1.2	14.2
24.....	6.25	3.0	2.55	3.0	1.15	.2	2.25	6.6	.35	1.35	-1.3	14.3
25.....	5.85	3.0	2.75	3.0	1.1	.85	2.0	6.7	.3	1.25	-1.3	13.5
26.....	5.45	3.0	2.8	3.05	1.1	1.95	1.65	6.6	.25	1.05	-1.3	12.15
27.....	5.25	3.0	2.9	3.1	1.1	2.8	1.3	6.15	.2	.75	-1.3	10.95
28.....	5.05	2.9	2.9	3.0	1.1	2.6	1.2	5.4	.4	.6	-1.3	10.15
29.....	4.85	2.9	2.9	2.85	.....	2.6	1.1	4.6	1.75	.5	-1.3	9.7
30.....	4.65	2.9	2.9	2.7	.....	1.5	1.1	3.95	3.15	.35	-1.25	9.7
31.....	4.5	.....	2.9	2.6	.....	1.5	.....	3.85	.....	.2	-.8	.....
1910-11.												
1.....	9.65	4.3	2.2	1.65	.9	2.4	4.4	6.2	5.0	4.6	7.8	1.7
2.....	9.3	4.25	2.05	1.8	.75	2.05	4.7	5.35	4.95	4.6	7.7	3.2
3.....	8.95	4.2	1.8	1.65	.55	1.55	3.9	5.1	5.3	4.5	7.1	6.4
4.....	8.8	4.05	1.85	1.55	.5	1.35	2.85	4.65	5.9	4.4	7.5	6.65
5.....	10.25	3.85	1.9	1.45	.5	1.4	2.3	4.25	6.25	4.25	8.15	5.55
6.....	13.95	3.7	2.0	1.35	.5	1.45	2.0	4.0	5.95	4.05	8.4	4.9
7.....	14.0	3.6	2.05	1.3	.45	1.25	1.9	3.75	5.45	3.95	8.65	4.3
8.....	11.25	3.45	1.85	1.3	.25	.75	1.75	3.55	4.7	3.9	8.75	3.9
9.....	9.3	3.25	1.55	1.4	.2	.5	2.25	3.5	4.25	4.15	8.7	3.95
10.....	8.5	3.05	1.7	1.4	.5	.4	4.85	3.9	3.95	3.95	8.65	4.05
11.....	7.85	3.0	1.8	1.4	.5	.4	5.35	4.3	3.5	3.75	8.2	5.1
12.....	7.35	2.9	1.95	1.3	.5	.5	4.3	4.3	3.1	3.55	7.35	6.0
13.....	7.0	2.9	2.0	1.4	.5	.6	3.5	4.15	2.8	3.25	6.65	6.4
14.....	6.65	2.8	2.1	1.5	.45	.75	3.15	3.75	2.55	3.1	6.3	6.6
15.....	6.5	2.75	2.0	1.5	.3	.55	2.3	3.35	2.05	3.25	5.8	6.65
16.....	6.4	2.7	1.9	1.5	.3	.1	2.1	4.0	1.85	5.4	5.35	6.45
17.....	6.3	2.7	1.8	1.4	.4	.0	2.05	5.45	1.7	6.25	5.0	6.25
18.....	6.0	2.7	1.9	1.3	.45	.2	1.5	4.85	1.7	6.45	4.9	6.0
19.....	5.75	2.6	1.9	1.2	.55	.8	1.25	4.55	1.8	7.85	4.75	5.6
20.....	5.65	2.6	1.9	1.2	.6	.2	1.2	5.25	1.85	8.1	4.65	5.2
21.....	5.4	2.55	1.95	1.1	.75	.1	.95	10.2	4.05	7.2	4.4	5.25
22.....	5.15	2.45	2.0	1.1	.95	-.2	.95	9.7	6.55	6.5	4.0	5.25
23.....	4.95	2.35	2.1	1.2	1.35	-.3	1.1	7.55	6.15	6.3	3.6	4.9
24.....	4.85	2.2	2.1	1.2	1.65	-.1	1.2	7.4	5.45	6.35	3.4	4.2
25.....	4.75	2.2	2.1	1.2	2.55	.3	1.3	6.25	5.15	6.4	3.2	4.15
26.....	4.65	2.35	2.1	1.15	2.85	1.6	1.35	5.55	5.0	7.2	3.2	3.95
27.....	4.45	2.5	2.1	1.0	3.05	2.5	1.45	5.15	4.5	8.7	3.2	3.75
28.....	4.25	2.4	2.0	.9	3.05	3.85	1.7	5.0	4.5	9.15	2.6	3.5
29.....	4.1	2.3	1.75	1.1	.....	4.4	5.8	5.1	4.35	9.7	2.2	3.35
30.....	4.2	2.2	1.6	1.1	.....	4.5	6.95	5.1	4.35	8.8	1.85	3.2
31.....	4.3	.....	1.5	1.0	.....	4.25	.....	5.1	.....	7.9	1.7	.....
1911-12.												
1.....	3.15	6.85	3.8	2.7	2.1	1.0	-.7	.95	2.0	11.05	3.95	10.0
2.....	3.05	6.35	3.75	2.7	2.1	1.0	-.7	.8	3.05	9.9	3.85	9.25
3.....	2.95	6.45	3.7	2.6	2.05	1.0	-.7	.7	6.65	9.0	3.65	8.45
4.....	2.8	8.2	3.6	2.5	2.0	1.0	-.7	.6	7.1	8.5	3.45	7.85
5.....	3.0	11.5	3.55	2.4	2.0	.6	-.7	.5	6.9	8.25	3.25	8.25
6.....	3.2	10.1	3.35	2.3	2.0	.5	-.6	.75	6.55	7.9	3.05	9.25
7.....	3.1	7.85	3.2	2.3	2.0	.5	-.5	1.5	5.8	7.45	2.85	10.6
8.....	3.1	6.7	3.25	2.3	1.85	.5	-.6	1.5	5.25	7.25	2.65	11.1
9.....	8.25	6.25	3.3	2.25	1.75	.4	-.8	1.05	5.1	6.9	2.45	10.3
10.....	13.3	7.05	3.3	2.15	1.7	.3	.6	2.75	5.5	6.65	2.25	10.1
11.....	11.5	8.0	3.3	2.05	1.7	.3	3.85	4.4	6.1	6.45	3.05	10.4
12.....	7.85	7.95	3.3	1.95	1.7	.7	4.7	3.4	6.2	6.15	2.55	9.75
13.....	5.85	7.2	3.3	1.85	1.75	.35	5.1	2.2	6.1	5.95	3.25	9.5
14.....	5.1	6.6	3.3	1.75	1.7	.2	4.5	1.75	5.35	5.75	2.75	9.2
15.....	5.65	6.35	3.3	1.7	1.6	.2	3.75	1.1	5.35	5.55	2.2	8.55

Daily gage height, in feet, of Rio Grande near Brownsville, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.		
1911-12.														
16.....	13.15	5.95	3.2	1.75	1.5	0.2	3.05	0.35	5.9	5.3	2.45	8.05		
17.....	13.35	5.75	3.1	2.5	1.5	.2	2.9	.05	7.3	5.05	2.25	8.9		
18.....	8.75	5.6	3.0	2.55	1.5	.2	2.5	—	3	8.0	4.85	2.1	11.25	
19.....	6.95	5.45	2.95	2.4	1.6	.05	1.9	—	.45	8.8	4.4	2.05	11.15	
20.....	6.75	5.15	2.9	2.4	1.6	—	0.5	1.5	—	6.5	4.15	1.9	11.4	
21.....	6.9	4.95	2.9	2.3	1.4	—	.2	1.25	—	.85	13.75	4.3	1.45	11.9
22.....	7.3	4.7	2.75	2.2	1.0	—	.3	1.05	—	.9	13.95	4.2	1.2	12.3
23.....	7.8	4.75	2.55	2.2	1.15	—	.35	.85	—	.9	14.0	3.95	1.2	12.75
24.....	7.9	4.95	2.5	2.25	1.2	—	.4	.5	—	.05	14.0	3.4	1.6	13.0
25.....	7.95	4.9	2.85	2.2	1.3	—	.4	.15	—	.95	14.1	3.0	1.75	11.5
26.....	7.8	4.75	3.1	2.1	1.2	—	.4	.0	1.4	14.15	2.9	2.2	9.6	
27.....	7.7	4.65	2.95	2.1	1.2	—	.45	.4	1.5	14.2	2.85	7.3	8.65	
28.....	7.4	4.45	2.8	2.2	1.1	—	.5	.85	1.5	14.2	2.7	8.95	8.4	
29.....	7.3	4.25	2.7	2.2	1.0	—	.5	1.0	1.85	14.2	2.6	9.55	8.0	
30.....	7.2	3.95	2.7	2.2	—	—	.6	1.15	1.9	13.55	2.55	9.9	7.8	
31.....	7.05	—	2.7	2.2	—	—	.6	—	2.0	—	2.85	10.0	—	
1912-13.														
1.....	8.75	4.45	3.05	2.7	1.5	3.9	.95	3.2	—	—	—	—	2.8	
2.....	11.65	4.25	2.85	2.8	1.5	3.75	.8	2.6	—	—	—	—	2.9	
3.....	13.6	4.15	2.7	2.7	1.5	3.45	.7	2.1	—	—	—	—	2.75	
4.....	12.35	3.95	2.8	2.65	1.4	3.25	.6	1.7	—	—	—	—	2.55	
5.....	9.15	3.55	2.8	2.55	1.35	3.1	.5	1.35	—	—	—	—	2.15	
6.....	7.35	3.5	2.9	2.5	1.3	3.0	.4	1.25	—	—	—	—	1.95	
7.....	6.65	3.3	2.8	2.4	1.2	2.85	.35	1.7	—	—	—	—	1.85	
8.....	6.75	3.05	2.75	2.3	1.3	2.65	.15	7.95	—	—	—	—	1.8	
9.....	7.65	2.75	2.7	2.2	1.4	2.6	.0	11.65	—	—	—	2.0	1.85	
10.....	7.65	2.6	2.6	2.1	1.3	2.55	—	.1	9.15	—	—	2.9	3.45	
11.....	7.65	2.7	2.6	2.05	1.3	2.5	—	.1	7.15	—	—	2.0	4.55	
12.....	8.05	2.5	2.5	2.0	1.3	2.5	—	.2	5.75	—	—	2.8	4.7	
13.....	8.15	2.5	2.5	1.9	1.3	2.9	—	.3	5.0	—	—	1.85	8.15	
14.....	7.95	2.25	2.5	1.9	1.3	3.75	—	.2	4.25	—	—	1.65	11.95	
15.....	8.3	2.1	2.5	1.85	1.3	4.0	—	.3	3.6	—	—	1.3	—	
16.....	8.65	2.1	2.5	1.8	1.3	3.9	—	.15	3.25	—	—	1.3	—	
17.....	8.35	2.15	2.5	1.8	1.3	3.8	—	.15	2.8	—	—	1.3	—	
18.....	7.95	2.2	2.5	1.8	1.2	3.65	—	.35	2.45	—	—	1.3	—	
19.....	8.35	2.3	2.5	1.8	1.2	3.4	—	.4	2.25	—	—	1.4	—	
20.....	9.85	2.3	2.4	1.8	1.1	3.15	—	.1	2.55	—	—	1.4	—	
21.....	8.25	2.5	2.4	1.7	1.1	2.9	—	.5	3.4	—	—	1.45	—	
22.....	7.4	2.8	2.3	1.7	1.1	2.65	—	.6	4.15	—	—	1.5	—	
23.....	6.5	2.95	2.3	1.65	1.1	2.5	—	.7	4.45	—	—	3.55	—	
24.....	7.75	3.05	2.2	1.6	1.1	2.5	—	.7	4.55	—	—	3.9	—	
25.....	8.3	3.15	2.2	1.6	1.55	2.35	—	.6	4.35	—	—	2.0	—	
26.....	7.95	2.95	2.3	1.6	2.75	2.15	—	.55	4.2	—	—	1.6	—	
27.....	7.3	2.85	2.4	1.6	3.5	1.95	—	.5	4.15	—	—	1.9	—	
28.....	6.6	2.7	2.3	1.6	3.95	1.75	—	.4	4.05	—	—	2.05	—	
29.....	5.9	2.85	2.45	1.5	—	1.55	—	.4	3.55	—	—	2.25	—	
30.....	5.15	3.0	2.6	1.5	—	1.35	—	1.75	2.85	—	—	2.45	—	
31.....	4.85	—	2.7	1.5	—	1.15	—	—	2.1	—	—	2.65	—	

CLEAR CREEK BASIN.

CLEAR CREEK NEAR CREEDE, COLO.

Location.—At highway bridge at Texas Club, in sec. 32, T. 41 N., R. 2 W., about 20 miles southwest of Creede. There is no tributary of importance between the station and the mouth a quarter of a mile below.

Records available.—August 12 to October 16, 1910; one measurement in 1911.

Drainage area.—136 square miles (Forest Atlas).

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made from bridge at high water and by wading at other stages.

Diversions.—There are adjudicated decrees for diversions of 14 second-feet from Clear Creek above the station and 4 second-feet from tributaries.

Cooperation.—Station maintained and records furnished by the State engineer.

Clear Creek rises in the southeastern part of Hinsdale County, Colo., and flows in a general southeasterly direction to its junction with the Rio Grande in Mineral County. The creek is about 20 miles long.

Discharge measurements of Clear Creek near Creede, Colo., in 1910-11.

Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 12	Christiansen and Grieve.....	2.20	58
Sept. 12	I. G. Ferguson.....	2.06	38
1911.			
Aug. 9	.....	2.50	94

Daily gage height, in feet, of Clear Creek near Creede, Colo., for 1910.

Day.	Aug.	Sept.	Oct.	Day.	Aug.	Sept.	Oct.	Day.	Aug.	Sept.	Oct.
1.....		2.1	2.05	11.....		2.05	2.05	21.....	2.15	2.1	.....
2.....		2.1	2.05	12.....	2.2	2.05	2.05	22.....	2.1	2.1	.....
3.....		2.1	2.05	13.....	2.2	2.05	2.05	23.....	2.15	2.1	.....
4.....		2.1	2.05	14.....	2.2	2.1	2.05	24.....	2.15	2.1	.....
5.....		2.1	2.05	15.....	2.1	2.1	2.05	25.....	2.1	2.05	.....
6.....		2.05	2.05	16.....	2.1	2.1	2.1	26.....	2.1	2.05	.....
7.....		2.05	2.05	17.....	2.1	2.1	.....	27.....	2.1	2.05	.....
8.....		2.05	2.05	18.....	2.1	2.1	.....	28.....	2.1	2.05	.....
9.....		2.05	2.05	19.....	2.1	2.1	.....	29.....	2.1	2.05	.....
10.....		2.05	2.05	20.....	2.1	2.1	.....	30.....	2.1	2.05	.....
								31.....	2.1	.....	.....

Daily discharge, in second-feet, of Clear Creek near Creede, Colo., for 1910.

Day.	Aug.	Sept.	Oct.	Day.	Aug.	Sept.	Oct.	Day.	Aug.	Sept.	Oct.
1.....		46	40	11.....		40	40	21.....	52	46	.....
2.....		46	40	12.....	58	40	40	22.....	46	46	.....
3.....		46	40	13.....	58	40	40	23.....	52	46	.....
4.....		46	40	14.....	58	46	40	24.....	52	46	.....
5.....		46	40	15.....	46	46	40	25.....	46	40	.....
6.....		40	40	16.....	46	46	46	26.....	46	40	.....
7.....		40	40	17.....	46	46	.....	27.....	46	40	.....
8.....		40	40	18.....	46	46	.....	28.....	46	40	.....
9.....		40	40	19.....	46	46	.....	29.....	46	40	.....
10.....		40	40	20.....	46	46	.....	30.....	46	40	.....
								31.....	46	.....	.....

Monthly discharge of Clear Creek near Creede, Colo., for 1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
August 12-31.....	58	46	48.7	1,930
September.....	46	40	43.2	2,570
October 1-16.....	46	40	40.4	1,280

SOUTH FORK OF RIO GRANDE BASIN.

SOUTH FORK OF RIO GRANDE AT SOUTH FORK, COLO.

Location.—At highway bridge, half a mile west of the South Fork station of the Denver & Rio Grande Railroad, in sec. 34, T. 40 N., R. 3 E. No tributaries between the station and the mouth and none for several miles above.

Records available.—August 9, 1910, to September 30, 1913. Also a number of discharge measurements made in 1909 by the United States Geological Survey.

Drainage area.—216 square miles (State engineer's report).

Gage.—Inclined staff. The original gage was washed out by flood October 5, 1911, and was replaced by a new gage October 16, at a different datum. May 12, 1912, a chain gage was established at the original location, but referred to a different datum.

Channel.—Apparently permanent at present location.

Discharge measurements.—Made from bridge.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—There are court decrees for diversions of 11 second-feet from South Fork above the station; none below.

Cooperation.—Station is maintained and records are furnished by the State engineer.

The South Fork of the Rio Grande, a stream about 15 miles long, rises near Summitville, in Rio Grande County, and flows northward to its junction with the main stream at South Fork.

Discharge measurements of South Fork of Rio Grande at South Fork, Colo., in 1909-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1909.				1912.			
May 17			932	Jan. 20 ^a	B. S. Clayton		54
June 21			1,140	Feb. 20 ^a	do.	2.30	50
Aug. 4			142	Apr. 4	do.	1.93	134
Oct. 1			111	May 12	do.	2.12	540
1910.				June 5	C. C. Hezmalhalch	3.22	1,510
Aug. 1	G. H. Russell	1.43	87	July 11	do.	1.73	362
Aug. 9	Grieve and Christiansen	1.42	71	Aug. 23	do.	.82	78
Sept. 22	I. G. Ferguson	1.33	50	Sept. 13	C. E. Turner	.65	59
Oct. 18	E. O. Christiansen	1.40	67	Oct. 17	do.	.74	67
1911.				Nov. 15	do.	.79	73
Jan. 20 ^a	G. H. Russell		37	1913.			
Feb. 26 ^a	Clayton & Turner	2.23	34	Jan. 25 ^a	C. E. Turner		31
Mar. 29	B. S. Clayton	2.08	139	Feb. 8 ^a	do.		33
Apr. 30	do.	2.83	378	Mar. 22 ^a	do.		45
June 3	do.	2.81	369	May 24	C. O. Crisman	2.34	777
July 18	do.	4.01	1,100	June 20	do.	1.85	487
Sept. 10	do.	2.82	391	July 23	do.	.89	121
Oct. 16	do.	1.90	110	Aug. 26	do.	.52	53
Nov. 19	do.	2.40	272	Sept. 24	do.	.62	66
		1.92	118				

^a Ice present.

Daily gage height, in feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1910.			1910.			1910.		
1		1.3	11	1.5	1.2	21	1.4	1.2
2		1.3	12	1.75	1.2	22	1.5	1.3
3		1.3	13	1.55	1.25	23	1.45	1.2
4		1.3	14	1.6	1.2	24	1.45	1.2
5		1.3	15	1.5	1.2	25	1.5	1.2
6		1.3	16	1.4	1.3	26	1.35	1.2
7		1.3	17	1.4	1.2	27	1.35	1.2
8		1.25	18	1.4	1.2	28	1.3	1.2
9	1.45	1.2	19	1.4	1.3	29	1.3	1.15
10	1.5	1.2	20	1.45	1.3	30	1.3	1.15
						31	1.3	

Daily gage height, in feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1	1.2	1.35	-----	2.0	2.2	2.2	1.8	2.9	3.85	3.8	2.2	1.95
2	1.25	1.25	-----	2.0	2.2	2.2	1.75	2.7	3.9	3.65	2.2	1.85
3	1.4	1.3	-----	2.0	2.2	2.2	2.0	2.7	3.85	4.4	2.3	1.95
4	1.3	1.3	-----	2.1	2.2	2.2	2.0	3.0	3.9	4.35	2.15	1.85
5	1.2	1.3	-----	2.15	2.2	2.2	2.0	3.7	4.05	3.85	2.1	1.75
6	1.2	1.3	-----	2.2	2.2	2.2	1.9	3.6	4.25	3.4	1.95	1.8
7	1.2	1.25	-----	2.25	2.2	2.2	2.15	3.45	4.4	3.6	1.9	1.75
8	1.2	1.3	-----	2.25	2.2	2.2	2.0	3.6	4.55	3.15	1.9	1.75
9	1.2	1.2	-----	2.25	2.2	2.2	2.0	3.3	4.85	3.3	1.9	1.65
10	1.2	1.2	-----	2.3	2.2	2.3	1.9	3.7	4.35	3.1	1.9	1.65
11	1.2	1.2	-----	2.3	2.2	2.3	1.7	3.45	4.75	2.9	1.8	1.65
12	1.2	1.2	-----	2.3	2.2	2.25	1.95	3.5	4.65	3.1	1.7	1.65
13	1.2	1.25	-----	2.3	2.2	2.2	1.9	3.45	4.55	3.35	1.75	1.65
14	1.2	1.2	-----	2.3	2.2	2.2	1.9	3.5	4.25	3.25	1.9	1.6
15	1.25	1.2	-----	2.3	2.2	2.2	1.9	3.6	3.6	3.4	1.7	1.6
16	1.4	1.3	-----	2.25	2.2	2.2	2.0	3.3	3.55	3.15	1.6	1.55
17	1.6	1.25	-----	2.25	2.2	2.2	2.1	3.3	3.5	3.1	1.65	1.6
18	1.4	1.35	-----	2.25	2.2	2.15	2.35	3.35	3.5	2.75	1.55	1.6
19	1.35	1.35	-----	2.25	2.2	2.1	2.0	3.4	3.7	2.75	1.65	2.25
20	1.4	1.3	-----	2.25	2.2	2.0	2.25	3.3	3.65	2.75	1.65	2.15
21	1.4	1.3	-----	2.25	2.2	1.75	2.4	3.0	3.55	2.7	2.45	2.0
22	1.5	1.4	-----	2.25	2.2	1.65	2.35	3.1	3.75	2.7	2.4	1.95
23	1.35	1.2	-----	2.25	2.2	1.6	2.65	3.5	3.6	2.7	2.15	1.85
24	1.4	1.3	-----	2.25	2.2	1.6	2.6	3.4	3.5	2.8	2.05	1.5
25	1.5	1.35	-----	2.25	2.2	1.6	2.65	3.0	3.45	2.7	1.95	1.6
26	1.75	1.45	-----	2.25	2.2	1.5	2.7	3.55	3.5	2.6	1.8	2.05
27	1.4	1.35	-----	2.25	2.2	1.6	2.6	3.55	3.4	2.6	1.75	2.4
28	1.3	1.3	-----	2.25	2.2	1.65	2.75	3.65	3.25	2.55	1.85	2.25
29	1.3	1.35	-----	2.25	-----	1.85	3.15	3.6	3.15	2.45	1.95	2.1
30	1.3	1.35	-----	2.25	-----	1.9	2.8	3.5	3.6	2.45	1.95	1.8
31	1.35	-----	-----	2.25	-----	2.1	-----	3.5	-----	2.3	2.0	-----
1911-12.												
1	3.0	2.0	2.0	2.6	2.2	2.4	2.2	2.9	3.1	2.25	1.15	0.7
2	2.8	2.0	2.0	2.6	2.2	2.4	2.2	2.95	3.1	2.2	1.1	.7
3	2.25	2.0	2.0	2.5	2.2	2.3	2.2	2.55	3.3	2.1	.9	.7
4	2.3	2.0	2.0	2.5	2.2	2.3	1.95	2.45	3.2	2.1	.9	.7
5	-----	2.0	2.0	2.4	2.2	2.2	1.95	2.6	3.3	1.9	1.0	.7
6	-----	2.0	2.0	2.5	2.2	2.3	1.95	2.4	3.2	1.85	.95	.75
7	-----	2.05	2.0	2.6	2.2	2.2	1.95	2.75	3.3	1.9	.85	.65
8	-----	2.05	2.0	2.5	2.2	2.1	1.95	3.05	3.25	1.8	.8	.65
9	-----	2.0	1.95	2.45	2.2	1.9	1.7	2.9	3.2	1.75	.9	.7
10	-----	2.0	1.95	2.4	2.2	1.9	1.7	2.75	2.9	1.7	.8	.75
11	-----	2.0	1.95	2.4	2.1	1.9	2.4	2.95	2.8	1.65	.9	.7
12	-----	2.0	1.9	2.35	2.1	1.9	2.15	2.1	2.7	1.7	.9	.7
13	-----	2.0	1.9	2.3	2.1	1.9	2.0	2.05	2.6	1.55	.8	.5
14	-----	2.0	1.9	2.3	2.1	1.9	2.0	2.05	2.5	1.7	1.2	.6
15	-----	2.0	1.9	2.3	2.1	1.9	2.0	1.95	2.7	1.65	1.1	.6
16	2.4	2.0	1.9	2.3	2.1	1.9	1.8	2.2	2.7	1.6	.95	.6
17	2.4	2.0	2.0	2.3	2.1	1.9	1.75	2.45	2.6	1.4	.9	.6
18	2.3	2.0	2.3	2.3	2.1	1.9	1.75	2.8	2.3	1.5	.85	.5
19	2.3	2.0	2.5	2.25	2.1	1.9	1.75	3.3	2.3	1.45	.85	.5
20	2.3	2.0	2.6	2.2	2.1	1.9	1.7	3.15	2.2	1.45	.85	.5
21	2.2	2.0	2.6	2.2	2.1	1.9	2.0	3.4	2.3	1.4	.85	.5
22	2.2	2.0	2.65	2.2	2.3	1.9	1.8	3.2	2.5	1.3	.8	.5
23	2.2	2.0	2.85	2.2	2.3	1.9	1.8	3.15	2.65	1.4	.7	.55
24	2.1	2.0	3.0	2.1	2.3	1.9	2.0	3.0	2.85	1.45	.7	.5
25	2.1	2.0	3.25	2.1	2.3	1.9	2.3	3.1	2.6	1.4	.7	.5
26	2.1	2.0	3.5	2.1	2.3	1.9	1.95	3.15	2.7	1.3	.7	.6
27	2.05	2.0	3.5	2.2	2.3	1.9	1.95	3.15	2.7	1.4	.7	.5
28	2.05	2.0	3.55	2.2	2.3	2.0	2.2	3.2	2.65	1.3	.7	.5
29	2.0	2.0	3.6	2.2	2.3	2.0	2.55	3.2	2.55	1.2	.7	.7
30	2.0	2.0	3.6	2.2	-----	2.0	2.7	3.3	2.6	1.2	.7	.65
31	2.0	-----	3.6	2.2	-----	2.0	-----	3.2	-----	1.2	.9	-----
1912-13.												
1	.7	1.2	.8	-----	-----	-----	-----	1.5	2.4	1.4	.55	.5
2	.9	1.2	.8	-----	-----	-----	-----	1.45	2.5	1.3	.5	.6
3	.6	.95	1.1	-----	-----	-----	-----	1.6	2.4	1.2	.5	.65
4	.8	1.0	1.1	-----	-----	-----	-----	1.8	2.3	1.2	.6	.7
5	.9	1.0	1.2	-----	-----	-----	-----	1.5	2.4	1.1	.5	.9

Daily gage height, in feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
6.....	.7	1.0	1.15					1.7	2.2	1.1	0.5	.09
7.....	.7	.9						1.8	2.25	1.0	.6	.7
8.....	.7	.8						1.85	2.2	.85	.5	.7
9.....	.8	.8						1.7	2.1	.9	.6	.6
10.....	.7	.7						1.8	2.2	.9	.5	.7
11.....	.6	.6						2.4	2.3	.85	.7	.7
12.....	.65	.7						2.3	2.1	.8	.8	.75
13.....	.6	.9					1.5	2.2	1.9	.85	.7	.7
14.....	.6	.8					1.65	2.1	1.8	.65	.65	.6
15.....	.6	.9					1.85	1.8	1.85	.8	.5	.6
16.....	.7	.85					1.95	1.9	1.85	.6	.4	.6
17.....	.5	.8					1.6	2.25	1.9	.7	.4	.5
18.....	.6	.8					1.45	2.1	1.8	.9	.4	.5
19.....	.75	.8					1.35	2.2	1.9	.8	.45	.5
20.....	.8	.8					1.6	2.0	1.9	1.05	.4	.45
21.....	.75	.8					1.65	2.1	1.9	.8	.6	.4
22.....	.6	.75					1.5	1.9	1.8	.9	.8	.5
23.....	.5	.7					1.4	2.2	1.7	.9	.6	1.1
24.....	.65	.7					1.45	2.35	1.55	.8	.6	.95
25.....	.75	.65					1.25	2.3	1.45	.6	.65	.8
26.....	.75	.8					1.3	2.2	1.5	.6	.7	.7
27.....	.7	.8					1.35	2.4	1.5	.6	.5	.7
28.....	1.3	.9					1.55	2.5	1.5	.55	.5	.6
29.....	1.0	.9					1.75	2.3	2.1	.55	.45	.7
30.....	1.15	.9					1.95	2.4	1.4	.5	.5	.75
31.....	1.2							2.4		.6	.5	

NOTE.—Ice present Dec. 1, 1910, to Mar. 22, 1911; Dec. 17, 1911, to Apr. 3, 1912; Dec. 3-31, 1912. Station discontinued during winter of 1912-13. Gage heights after Oct. 16, 1911, refer to a new datum.

Daily discharge, in second-feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1910.								
1.....		50	11.....	90	35	21.....	70	35
2.....		50	12.....	170	35	22.....	90	50
3.....		50	13.....	105	42	23.....	80	35
4.....		50	14.....	120	35	24.....	80	35
5.....		50	15.....	90	35	25.....	90	35
6.....		50	16.....	70	0	26.....	60	35
7.....		50	17.....	70	35	27.....	60	35
8.....		42	18.....	70	35	28.....	50	35
9.....	80	35	19.....	70	50	29.....	50	30
10.....	90	35	20.....	80	50	30.....	50	30
						31.....	50	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	35	60					134	528	1,166	1,127	240	170
2.....	42	42					123	430	1,206	1,014	240	145
3.....	70	50					182	430	1,166	1,621	372	170
4.....	50	50					182	582	1,206	1,578	225	145
5.....	35	50					182	1,052	1,326	1,166	210	123
6.....	35	50					157	977	1,492	833	170	134
7.....	35	42					225	869	1,621	977	157	123
8.....	35	50					182	977	1,754	670	157	123
9.....	35	35					182	765	2,029	765	157	102
10.....	35	35					157	1,052	1,578	640	157	102
11.....	35	35					112	869	1,937	528	134	102
12.....	35	35					170	905	1,845	640	112	102
13.....	35	42					157	869	1,754	799	123	102
14.....	35	35					157	905	1,492	733	157	92
15.....	42	35					157	977	977	833	112	92

Daily discharge, in second-feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.	70	50	-----	-----	-----	-----	182	765	941	670	92	84
17.	120	42	-----	-----	-----	-----	210	765	905	640	102	92
18.	70	60	-----	-----	-----	-----	290	799	905	454	84	92
19.	60	60	-----	-----	-----	-----	182	833	1,052	454	102	256
20.	70	50	-----	-----	-----	-----	256	765	1,014	454	102	225
21.	70	50	-----	-----	-----	-----	307	582	941	430	326	182
22.	90	70	-----	-----	-----	-----	290	640	1,090	430	307	170
23.	60	35	-----	-----	-----	92	408	905	977	430	225	145
24.	70	50	-----	-----	-----	92	386	833	905	477	196	75
25.	90	60	-----	-----	-----	92	408	582	869	430	170	92
26.	170	80	-----	-----	-----	75	430	941	905	386	134	196
27.	70	60	-----	-----	-----	92	386	941	833	386	123	307
28.	50	50	-----	-----	-----	102	454	1,014	733	365	146	256
29.	50	60	-----	-----	-----	146	670	977	670	326	170	210
30.	50	60	-----	-----	-----	157	477	905	977	326	170	134
31.	60	-----	-----	-----	-----	210	-----	905	-----	272	182	-----
1911-12.												
1.	582	140	140	-----	-----	-----	-----	510	1,390	635	152	62
2.	477	140	140	-----	-----	-----	-----	540	1,390	600	140	62
3.	256	140	140	-----	-----	-----	-----	332	1,610	540	95	62
4.	272	140	140	-----	-----	-----	132	290	1,500	540	95	62
5.	-----	140	140	-----	-----	-----	132	355	1,610	430	115	62
6.	-----	140	140	-----	-----	-----	132	270	1,500	405	105	68
7.	-----	155	140	-----	-----	-----	132	428	1,610	430	85	57
8.	-----	155	140	-----	-----	-----	132	600	1,555	380	75	57
9.	-----	140	130	-----	-----	-----	83	510	1,500	360	95	62
10.	-----	140	130	-----	-----	-----	83	428	1,180	340	75	68
11.	-----	140	130	-----	-----	-----	270	540	1,080	320	95	62
12.	-----	140	116	-----	-----	-----	185	540	990	340	95	62
13.	-----	140	116	-----	-----	-----	145	510	900	280	75	45
14.	-----	140	116	-----	-----	-----	145	510	820	340	165	52
15.	-----	140	116	-----	-----	-----	145	455	990	320	140	52
16.	272	140	116	-----	-----	-----	100	600	990	300	105	52
17.	272	140	-----	-----	-----	-----	92	780	900	225	95	52
18.	230	140	-----	-----	-----	-----	92	1,080	670	260	85	45
19.	230	140	-----	-----	-----	-----	92	1,610	670	242	85	45
20.	230	140	-----	-----	-----	-----	83	1,445	600	242	85	45
21.	200	140	-----	-----	-----	-----	145	1,720	670	225	85	45
22.	200	140	-----	-----	-----	-----	100	1,500	820	190	75	45
23.	200	140	-----	-----	-----	-----	100	1,445	945	225	62	48
24.	170	140	-----	-----	-----	-----	145	1,280	1,130	242	62	45
25.	170	140	-----	-----	-----	-----	230	1,390	900	225	62	45
26.	170	140	-----	-----	-----	-----	132	1,445	990	190	62	52
27.	155	140	-----	-----	-----	-----	132	1,445	990	225	62	45
28.	155	140	-----	-----	-----	-----	200	1,500	945	190	62	45
29.	140	140	-----	-----	-----	-----	332	1,555	860	165	62	62
30.	140	140	-----	-----	-----	-----	400	1,610	900	165	62	57
31.	140	-----	-----	-----	-----	-----	-----	1,500	-----	165	95	-----
1912-13.												
1.	62	165	75	-----	-----	-----	-----	305	840	265	58	50
2.	95	165	75	-----	-----	-----	-----	285	920	230	50	65
3.	52	105	-----	-----	-----	-----	-----	350	840	200	50	72
4.	75	115	-----	-----	-----	-----	-----	445	765	200	65	80
5.	95	115	-----	-----	-----	-----	-----	305	840	170	50	120
6.	62	115	-----	-----	-----	-----	-----	395	695	170	50	120
7.	62	95	-----	-----	-----	-----	-----	445	730	145	65	80
8.	62	75	-----	-----	-----	-----	-----	472	695	110	50	80
9.	75	75	-----	-----	-----	-----	-----	395	625	120	65	65
10.	62	62	-----	-----	-----	-----	-----	445	695	120	50	80
11.	52	52	-----	-----	-----	-----	-----	840	765	110	80	80
12.	57	62	-----	-----	-----	-----	-----	765	625	100	100	90
13.	52	95	-----	-----	-----	-----	305	695	500	110	80	80
14.	52	75	-----	-----	-----	-----	372	625	445	72	72	65
15.	52	95	-----	-----	-----	-----	472	445	472	100	50	65
16.	62	85	-----	-----	-----	-----	530	500	472	65	40	65
17.	45	75	-----	-----	-----	-----	350	730	500	80	40	50
18.	52	75	-----	-----	-----	-----	285	625	445	120	40	50
19.	68	75	-----	-----	-----	-----	248	695	500	100	45	50
20.	75	75	-----	-----	-----	-----	350	560	500	158	40	45

Daily discharge, in second-feet, of South Fork of Rio Grande at South Fork, Colo., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
21.....	68	75					372	625	500	100	65	40
22.....	52	68					305	500	445	120	100	50
23.....	45	62					265	695	395	120	65	170
24.....	57	62					285	802	328	100	65	132
25.....	68	57					215	765	285	65	72	100
26.....	68	75					230	695	305	65	80	80
27.....	62	75					248	840	305	65	50	80
28.....	190	95					328	920	305	58	50	65
29.....	115	95					420	765	625	58	45	80
30.....	152	95					530	840	265	50	50	90
31.....	165							840		65	50	

Monthly discharge of South Fork of Rio Grande at South Fork, Colo., for 1910-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1910.				
August 9-31.....	170	50	79.8	3,640
September.....	50	30	40.6	2,420
1910-11.				
October.....	170	35	58.4	3,590
November.....	80	35	49.4	2,940
December.....			^a 40.0	2,460
January.....			^a 36.2	2,230
February.....			^a 33.3	1,850
March.....	210		^a 65.1	4,000
April.....	670	112	260	15,500
May.....	1,050	430	817	50,300
June.....	2,030	670	1,210	71,900
July.....	1,620	272	673	41,400
August.....	326	84	169	10,400
September.....	307	75	145	8,610
The year.....	2,030		296	215,000
1911-12.				
October 1-4, 16-31.....	582	140	^b 233	14,300
November.....	155	140	141	8,390
December.....	140		^a 106	6,540
January.....			^a 59	3,600
February.....			^a 50	2,880
March.....			^a 68	4,200
April.....	400	83	147	8,770
May.....	1,720	270	927	57,000
June.....	1,610	600	1,090	64,700
July.....	635	165	314	19,300
August.....	165	62	91	5,570
September.....	68	45	54	3,220
The year.....	1,720		273	198,000
1912-13.				
October.....	165	45	75	4,580
November.....	165	52	87	5,180
December.....			^a 45	2,770
January.....			^a 32	1,955
February.....			^a 38	2,138
March.....			^a 43	2,619
April.....	530		^a 289	17,197
May.....	920	285	600	36,892
June.....	920	265	554	32,965
July.....	265	50	116	7,133
August.....	100	40	59	3,628
September.....	170	40	78	4,641
The year.....	920		168	122,000

^a Estimated on account of ice.

^b Assumed as mean for the month.

SAN LUIS CREEK BASIN.

GENERAL FEATURES.

San Luis Creek rises in Poncha Pass at an elevation of about 9,000 feet and flows southward across the San Luis Valley to the San Luis lakes. Although the San Luis itself rises at a comparatively low altitude, its numerous tributaries take their rise in the high mountains of the Sangre de Cristo and Saguache ranges at altitudes of 12,000 feet and over. From the Sangre de Cristo the larger tributaries are Cotton, Wild Cherry, Rito Alto, San Isabel, Crestone, Willow, Spanish, Cottonwood, Deadman, and Arena creeks. Many of the tributaries from the eastern range reach the San Luis. Of those from the western ranges—Saguache and La Garita—only Kerber and Saguache creeks reach it, the other streams sinking into the porous soil of the valley soon after leaving the mountains.

The San Luis drains the northern part of the San Luis Valley, which may be considered an interior basin as no surface water escapes from it. The drainage of the northern part of the valley is toward the San Luis lakes, where the water is lost by seepage and evaporation. The old overflow channel to the Rio Grande still exists, but it has been so blocked by incipient sand dunes as to be almost obliterated in many places.

The rock formations of the western boundary of the drainage area dip toward and extend beneath the valley, as in the Conejos Range described in connection with the Alamosa and Conejos drainage basins. Little is known of the geology of the Sangre de Cristo Range, which forms the eastern boundary of the drainage area, but the axis of the range is in general made up of intrusive granite flanked on both sides by conglomerate.

Between the eastern boundary and the western, where the higher peaks reach elevations of 14,000 feet above sea level, is the high-level plateau comprising the San Luis Valley. The slope of the eastern range of mountains is much more abrupt than that of the western, so that the alluvial fans formed where the streams debouch onto the valley floor are much steeper on that side. From the axis of the valley, which is occupied by the channel of San Luis Creek, the country rises to the foothills, steeply eastward, very gently westward, at first not more than 3 to 6 feet to the mile, but gradually increasing until near the foothills the rise is quite perceptible to the eye. The floor of the valley, ranging in elevation from 7,500 to 8,000 feet above sea level, is covered with a series of blue clays and interstratified sands which yield artesian water. Flowing wells are most numerous in the area drained by Saguache Creek.

Precipitation in the San Luis Valley probably ranges from 16 to 20 inches or more in the mountains to 13 inches at the upper end and 8 or 9 inches at the lower, but, owing to the porous character of the soil and to the lack of drainage channels, only a small part of the rainfall reaches the San Luis, the remainder being lost by seepage, as shown by the fairly abundant supply of underground water, and by evaporation. A general description of precipitation in the valley is presented on page 23.

The waters of the San Luis and its feeders are used for irrigation and are greatly overappropriated, there being adjudicated decrees for diversions of 1,900 second-feet, of which approximately 750 second-feet are for diversion from the Saguache and its tributaries.

So far as known the only reservoir that has been built in the basin is the State reservoir near Saguache. It has a capacity of 954 acre-feet, but as it has no adjudicated rights, and as the flood flow of the Saguache is entirely appropriated, it has not been used to any extent.

GAGING STATION RECORDS.

SAN LUIS CREEK AT VILLA GROVE, COLO.

Location.—In sec. 12, T. 46 N., R. 9 E, opposite Villa Grove post office, a short distance below the mouth of Kerber Creek.

Records available.—July 30, 1911, to September 30, 1912.

Gage.—Vertical staff.

Channel.—Apparently permanent.

Discharge measurements.—Made from footbridge.

Winter flow.—Ice causes backwater during the winter and the records are discontinued.

Diversions.—There are court decrees for diversions from San Luis Creek of 34 second-feet above the station and 111 second-feet below.

Cooperation.—Station is maintained and records are furnished by the State engineer.

Discharge measurements of San Luis Creek at Villa Grove, Colo., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Fcet.</i>	<i>Sec.-ft.</i>	1912.		<i>Fcet.</i>	<i>Sec.-ft.</i>
July 28	B. S. Clayton.....	1.68	48.1	Jan. 13	B. S. Clayton.....	0.65	5.0
Sept. 11	.....do.....	1.22	11.4	Feb. 25	C. C. Hezmalhalch....	.82	6.8
Oct. 11	.....do.....	1.41	24.1	Apr. 6	B. S. Clayton.....	1.22	43
Nov. 20 ^a	.....do.....	1.22	11.2	May 10	.....do.....	1.52	46
				June 8	C. C. Hezmalhalch....	2.05	102
				July 13	.....do.....	1.20	20
				Sept. 16	C. E. Turner.....	1.12	14

^a Very slight effect of ice.

Daily gage height, in feet, of San Luis Creek at Villa Grove, Colo., for 1911-12.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Day.	July.	Aug.	Sept.	Oct.	Nov.
1911.						1911.					
1		1.5	1.15	1.4	1.2	16		1.05	1.25	1.35	1.3
2		1.5	1.25	1.3	1.2	17		1.1	1.2	1.35	1.2
3		1.55	1.25	1.3	1.2	18		1.15	1.2	1.35	1.2
4		1.4	1.3	1.3	1.3	19		1.1	1.2	1.35	1.2
5		1.4	1.3	2.0	1.3	20		1.1	1.3	1.25	1.25
6		1.35	1.3	1.85	1.3	21		1.1	1.25	1.15	1.25
7		1.3	1.25	1.5	1.2	22		1.4	1.2	1.2	1.2
8		1.2	1.2	1.5	1.3	23		1.5	1.2	1.2	1.2
9		1.1	1.25	1.45	1.3	24		1.35	1.2	1.2	1.2
10		1.15	1.25	1.4	1.3	25		1.4	1.2	1.3	1.2
11		1.15	1.25	1.4	1.3	26		1.3	1.25	1.3	1.2
12		1.15	1.2	1.4	1.3	27		1.3	1.3	1.2	1.2
13		1.2	1.2	1.4	1.3	28		1.3	1.25	1.3	1.15
14		1.15	1.25	1.4	1.3	29		1.25	1.3	1.3	1.15
15		1.1	1.3	1.35	1.3	30		1.65	1.2	1.35	1.3
						31		1.5	1.2	1.3	1.1

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1912.						1912.					
1		2.2	1.5	1.3	1.1	16		1.4	1.5	1.2	1.3
2		2.1	1.4	1.3	1.0	17		1.5	1.7	1.3	1.1
3		2.0	1.3	1.3	1.0	18		1.5	1.5	1.3	1.1
4		1.9	1.3	1.3	1.0	19		1.7	1.9	1.3	1.2
5		2.0	1.3	1.3	1.1	20		1.7	1.8	1.4	1.1
6		2.0	1.2	1.3	1.1	21		1.7	1.6	1.4	1.2
7		1.9	1.2	1.3	1.1	22		2.1	1.7	1.3	1.2
8		2.0	1.1	1.2	1.1	23		2.1	1.7	1.4	1.1
9		2.2	1.1	1.2	1.1	24		2.1	1.7	1.4	1.1
10		2.0	1.0	1.2	1.1	25		2.2	1.8	1.4	1.1
11		1.8	1.1	1.0	1.1	26		2.2	1.8	1.3	1.1
12		1.6	1.1	1.0	1.1	27		2.2	1.7	1.3	1.1
13		1.6	1.2	1.1	1.1	28		2.3	1.6	1.4	1.1
14		1.5	1.2	1.2	1.1	29		2.2	1.6	1.4	1.2
15		1.5	1.2	1.2	1.1	30		2.2	1.5	1.4	1.2
						31		2.4	1.3	1.2	1.1

Daily discharge, in second-feet, of San Luis Creek at Villa Grove, Colo., for 1911-12.

Day.	Aug.	Sept.	Oct.	Nov.	Day.	Aug.	Sept.	Oct.	Nov.		
1911.					1911.						
1		31	8	23	10	16		4	13	20	16
2		31	13	16	10	17		6	10	20	10
3		36	13	16	10	18		8	10	20	10
4		23	16	16	16	19		6	10	20	10
5		23	16	82	16	20		6	16	13	13
6		20	16	66	16	21		6	13	8	13
7		16	13	31	10	22		23	10	10	10
8		10	10	31	16	23		31	10	10	10
9		6	13	27	16	24		20	10	10	10
10		8	13	23	16	25		23	10	16	10
11		8	13	23	16	26		16	13	16	10
12		8	10	23	16	27		16	16	10	10
13		10	10	23	16	28		16	13	16	8
14		8	13	23	16	29		13	16	16	8
15		6	16	20	16	30		10	20	16	6
						31		10	16	16	

Daily discharge, in second-feet, of San Luis Creek at Villa Grove, Colo., for 1911-12—Con.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1912.						1912.					
1.....	44	120	44	27	15	16.....	35	44	20	27	15
2.....	44	108	35	27	11	17.....	44	64	27	27	15
3.....	44	97	27	27	11	18.....	44	44	27	27	15
4.....	44	85	27	27	11	19.....	64	85	27	20	15
5.....	48	97	27	27	15	20.....	64	74	35	20	15
6.....	48	97	20	27	15	21.....	64	54	35	20	15
7.....	48	85	20	27	15	22.....	108	64	27	20	15
8.....	48	97	15	20	15	23.....	108	64	35	15	15
9.....	54	120	15	20	15	24.....	108	64	35	15	15
10.....	54	97	11	20	15	25.....	120	74	35	15	15
11.....	54	74	15	11	15	26.....	120	74	27	15	15
12.....	54	74	15	11	15	27.....	120	64	27	15	15
13.....	54	64	20	15	15	28.....	132	54	35	27	15
14.....	44	64	20	20	15	29.....	120	54	35	20	15
15.....	44	54	20	20	15	30.....	120	44	35	20	15
						31.....	145	.....	27	20	.....

Monthly discharge of San Luis Creek at Villa Grove, Colo., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1911.					1912.				
August.....	36.0	4.0	15.0	908	May.....	145.0	44.0	92.0	5,640
September.....	20.0	8.0	13.0	760	June.....	120.0	44.0	75.0	4,470
October.....	82.0	8.0	22.0	1,350	July.....	44.0	11.0	26.0	1,630
November.....	16.0	6.0	12.0	734	August.....	27.0	11.0	21.0	1,290
					September.....	15.0	11.0	15.0	869

SAN LUIS CREEK NEAR VILLA GROVE, COLO.

Location.—About sec. 5, T. 45 N., R. 10 E., at highway bridge, 5 miles south of Villa Grove.

Records available.—September 8 to November 30, 1910.

Drainage area.—218 square miles. (State engineer's report.)

Gage.—Vertical staff bolted to bridge.

Channel.—Not liable to shift.

Discharge measurements.—Made from bridge or by wading.

Diversions.—There are court decrees for diversion of 33 second-feet between Villa Grove and the station.

Cooperation.—Station maintained and records furnished by the State engineer.

Discharge measurements of San Luis Creek near Villa Grove, Colo., in 1910.

Date.	Hydrographer.	Gage height.	Dis-charge.
Sept. 8	I. C. Ferguson.....	0.20	0.9
Oct. 7	E. O. Christiansen.....	.30	2.2

Daily gage height, in feet, and discharge, in second-feet, of San Luis Creek near Villa Grove, Colo., for 1910.

Day.	September.		October.		November.		Day.	September.		October.		November.	
	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.		Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
1.....			0.3	2.2	0.2	0.9	16....	0.3	2.2	0.4	4.0	0.3	2.2
2.....			.3	2.2	.2	.9	17....	.3	2.2	.4	4.0	.3	2.2
3.....			.3	2.2	.2	.9	18....	.4	4.0	.35	3.1	.3	2.2
4.....			.3	2.2	.2	.9	19....	.3	2.2	.3	2.2	.3	2.2
5.....			.3	2.2	.2	.9	20....	.3	2.2	.3	2.2	.3	2.2
6.....			.3	2.2	.2	.9	21....	.4	4.0	.25	1.6	.3	2.2
7.....			.3	2.2	.2	.9	22....	.3	2.2	.3	2.2	.3	2.2
8.....	0.2	0.9	.3	2.2	.2	.9	23....	.3	2.2	.3	2.2	.3	2.2
9.....	.2	.9	.3	2.2	.2	.9	24....	.3	2.2	.3	2.2	.3	2.2
10....	.25	1.6	.3	2.2	.2	.9	25....	.3	2.2	.3	2.2	.3	2.2
11....	.3	2.2	.3	2.2	.2	.9	26....	.3	2.2	.3	2.2	.3	2.2
12....	.3	2.2	.3	2.2	.2	.9	27....	.3	2.2	.3	2.2	.3	2.2
13....	.3	2.2	.3	2.2	.2	.9	28....	.3	2.2	.3	2.2	.3	2.2
14....	.3	2.2	.3	2.2	.2	.9	29....	.3	2.2	.25	1.6	.3	2.2
15....	.3	2.2	.3	2.2	.3	2.2	30....	.3	2.2	.2	.9	.25	1.6
							31....			.2	.9		

Monthly discharge of San Luis Creek near Villa Grove, Colo., for 1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
September 8-30.....	4.0	0.9	2.22	101
October.....	4.0	.9	2.22	137
November.....	2.2	.9	1.57	94

KERBER CREEK NEAR VILLA GROVE, COLO.

Location.—Six miles above Villa Grove, about sec. 19, T. 46 N., R. 9 E.

Records available.—October 17, 1911, to June 30, 1912.

Drainage area.—80 square miles (State engineer's report).

Gage.—Vertical staff.

Channel.—Records not sufficient to show.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes some backwater during the winter months.

Diversions.—There are court decrees for diversions of 10 second-feet from Kerber Creek above the station and 45 second-feet below.

Cooperation.—Station is maintained and records are furnished by the State engineer.

Discharge measurements of Kerber Creek near Villa Grove, Colo., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 17	B. S. Clayton.....	1.01	10.0	Apr. 6	B. S. Clayton.....	1.20	20
Nov. 20 ^a	.....do.....	1.10	11.6	May 10	.....do.....	1.37	33
				July 13	C. C. Hezmalhalch.....	1.10	15
1912.				Sept. 16	C. E. Turner.....	.95	6.8
Jan. 15 ^a	B. S. Clayton.....		4.0				
Feb. 25 ^a	C. C. Hezmalhalch.....		5.1				

^a Ice conditions.

Daily gage height, in feet, of Kerber Creek near Villa Grove, Colo., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Apr.	May.	June.	Day.	Oct.	Nov.	Dec.	Jan.	Apr.	May.	June.
1911-12.								1911-12.							
1.....		1.1	1.3	1.9		1.3	2.2	16.....		1.2	1.4	1.1	1.1	1.4	1.55
2.....		1.1	1.3	1.95		1.35	2.15	17.....	1.0	1.15	1.4	1.2	1.1	1.45	1.5
3.....		1.1	1.4	2.0		1.4	1.95	18.....	1.0	1.2	1.4	1.2	1.1	1.6	1.5
4.....		1.1	1.4	2.0		1.35	1.95	19.....	1.0	1.2	1.4	1.2	1.1	1.65	1.45
5.....		1.1	1.4	2.15		1.3	1.8	20.....	1.05	1.2	1.6	1.2	1.1	1.75	1.45
6.....		1.1	1.35	2.3		1.3	1.8	21.....	1.1	1.2	1.7	1.1	1.1	2.1	1.5
7.....		1.1	1.3	2.35	1.2	1.3	1.8	22.....	1.2	1.15	1.7	1.0	1.1	2.15	1.5
8.....		1.1	1.35	2.4	1.35	1.35	1.75	23.....	1.3	1.1	1.75	1.0	1.15	2.2	1.5
9.....		1.1	1.4	2.4	1.35	1.35	1.7	24.....	1.2	1.3	1.8	1.0	1.2	2.35	1.5
10.....		1.1	1.4	2.4	1.3	1.45	1.7	25.....	1.1	1.3	1.8	1.0	1.25	2.45	1.55
11.....	1.0	1.35	2.4	1.2	1.45	1.65		26.....	1.1	1.3	1.8	1.0	1.3	2.4	1.6
12.....	1.05	1.3	2.4	1.2	1.45	1.6		27.....	1.1	1.3	1.85	1.0	1.25	2.35	1.6
13.....	1.2	1.3	2.35	1.2	1.5	1.6		28.....	1.1	1.3	1.9	1.0	1.25	2.25	1.6
14.....	1.3	1.3	2.3	1.1	1.35	1.6		29.....	1.1	1.3	1.9	1.25	1.25	2.25	1.6
15.....	1.2	1.4	1.0	1.1	1.35	1.6		30.....	1.1	1.3	1.85	1.2	1.25	2.35	1.6
								31.....	1.1		1.85	1.2	1.35	2.3	

NOTE.—Ice present from Nov. 21, 1911, to Apr. 6, 1912

Daily discharge, in second-feet, of Kerber Creek near Villa Grove, Colo., for 1911-12.

Day.	Oct.	Nov.	Apr.	May.	June.	Day.	Oct.	Nov.	Apr.	May.	June.
1911-12.						1911-12.					
1.....		14		27	153	16.....		20	14	36	52
2.....		14		32	144	17.....		17	14	41	46
3.....		14		36	108	18.....	9	20	14	57	46
4.....		14		32	108	19.....	9	20	14	64	41
5.....		14		27	84	20.....	12	20	14	77	41
6.....		14		27	84	21.....	14	20	14	134	46
7.....		14	20	27	84	22.....	20		14	144	46
8.....		14	32	32	77	23.....	27		17	153	46
9.....		14	32	32	70	24.....	20		20	182	46
10.....		14	27	41	70	25.....	14		24	202	52
11.....		9	20	41	64	26.....	14		27	192	57
12.....		12	20	41	57	27.....	14		24	182	57
13.....		20	20	46	57	28.....	14		24	162	57
14.....		27	14	32	57	29.....	14		24	162	57
15.....		20	14	32	57	30.....	14		32	182	57
						31.....				172	

Monthly discharge of Kerber Creek near Villa Grove, Colo., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).	
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.		
1911-12.					1911-12.					
October 18-31.....		27	9	15	387	April.....	32	14	20	1,200
November.....		27	9	15	904	May.....	202	27	85	5,250
December.....				7	416	June.....	153	41	67	4,010
January.....				4	246					
February.....				5	282	The period				13,400
March.....				11	678					

NOTE.—The monthly estimates for the winter period are based on discharge measurements made during that time.

SAGUACHE RIVER NEAR SAGUACHE, COLO.

Location.—At the dam site of the Stark-Hagadorn Irrigation Co., 9 miles above Saguache. Ford Creek, the nearest important tributary, enters some distance below.

Records available.—August 7, 1910, to September 23, 1912.

Drainage area.—595 square miles (State engineer's report).

Gage.—An automatic recording gage.

Channel.—Shifting.

Discharge measurements.—Made from footbridge during high water and by wading at ordinary stages.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—There are court decrees for diversions of 46 second-feet from Saguache River above the station and 365 second-feet below.

Cooperation.—Records are furnished by the State engineer, through the courtesy of the Stark-Hagadorn Irrigation Co.

Discharge measurements of Saguache River near Saguache, Colo., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 3	I. C. Ferguson	1.10	50	Jan. 14 ^a	B. S. Clayton	1.67	29
Oct. 6	E. O. Christiansen	.92	36	Apr. 7	do.	1.04	82
				May 9	do.	2.51	268
				June 8	C. C. Hezmalhalch	2.91	355
1911.				July 13	do.	1.38	113
Mar. 30	B. S. Clayton	.50	39	Sept. 16	C. E. Turner	1.06	66
May 1	do.	.75	71				
May 30	do.	1.27	156				
July 30	do.	1.52	189				
Sept. 11	do.	.74	69				
Oct. 11	do.	1.04	129				

^a Ice present.

Daily gage height, in feet, of Saguache River near Saguache, Colo., for 1910-1912.

Day.	Aug.	Sept.	Day.	Aug.	Sept.
1910.			1910.		
1		1.1	16	1.1	1.05
2		1.1	17	1.1	1.0
3		1.05	18	1.1	1.0
4		1.05	19	1.1	1.0
5		1.05	20	1.1	1.0
6		1.05	21	1.1	1.0
7	1.15	1.0	22	1.1	1.0
8	1.15	.95	23	1.15	1.1
9	1.15	.95	24	1.15	1.05
10	1.25	.95	25	1.1	1.0
11	1.2	.95	26	1.05	1.0
12	1.2	1.0	27	1.0	1.0
13	1.2	1.1	28	1.0	1.0
14	1.15	1.1	29	1.1	1.0
15	1.1	1.05	30	1.1	1.0
			31	1.1	1.0

Daily gage height, in feet, of Saguache River near Saguache, Colo., for 1910-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	1.0	0.95				1.8	0.75	0.85	1.6	1.5	1.5	1.05
2.....	1.0	.95				2.45	.85	.85	1.6	1.85	1.4	1.0
3.....	1.0	.95				1.9	.90	.85	1.55	2.2	1.35	1.0
4.....	1.0	.95				1.65	.75	.9	1.55	2.0	1.25	1.0
5.....	1.0	1.0				1.95	.75	1.05	1.6	1.65	1.25	1.0
6.....	1.0					2.05	.65	1.15	1.65	1.65	1.15	1.0
7.....	1.0					1.9	.6	1.25	1.65	1.85	1.1	.85
8.....	1.0					1.85	.6	1.3	1.7	1.9	1.1	.8
9.....	1.0					2.1	.5	1.4	1.75	1.65	1.1	.85
10.....	1.0					2.3	.5	1.35	1.8	1.5	1.1	.8
11.....	.9					2.3	.45	1.25	1.7	1.45	1.1	.75
12.....	.9					2.0	.45	1.2	1.6	1.55	1.05	.7
13.....	1.0					1.6	.4	1.2	1.6	1.5	1.2	.65
14.....	1.0					1.3	.35	1.1	1.55	1.65	1.15	.65
15.....	.95					.85	.4	1.15	1.7	1.6	1.15	.5
16.....	.95					.85	.6	1.15	1.7	1.55	1.0	.4
17.....	1.0					.7	.65	1.1	1.65	1.35	1.0	.35
18.....	1.15					.7	.65	1.1	1.7	1.5	1.05	.3
19.....	1.1					.7	.7	1.2	1.65	1.8	1.0	.3
20.....	1.1					.7	.8	1.15	1.65	1.8	1.0	.3
21.....	1.1					.75	.85	1.1	1.65	1.85	1.0	.3
22.....	.9					.8	.95	1.2	1.9	1.85	1.35	.4
23.....	.95					.75	1.0	1.2	1.7	1.7	1.7	.65
24.....	1.05					.75	1.0	1.3	1.55	1.65	1.35	.65
25.....	1.05					.7	.85	1.35	1.5	1.65	1.15	.65
26.....	1.05					.6	.85	1.4	1.4	1.8	1.15	.65
27.....	1.0					.5	.95	1.4	1.35	1.9	1.15	.65
28.....	.95					.5	1.0	1.35	1.3	1.7	1.1	.65
29.....	.95					.6	1.0	1.35	1.35	1.55	1.05	.65
30.....	.95					.6	.9	1.35	1.35	1.55	1.0	.7
31.....	.95					.65		1.4		1.5	1.0	
1911-12.												
1.....	.9	.65						2.25	3.15	1.9	1.6	1.1
2.....	.95	.6						2.5	2.9	1.65		
3.....	.9	.55						1.6	2.2	2.75	1.45	
4.....	1.0	.55						1.9	1.45	2.75	1.35	
5.....	1.2	.6						1.9	1.25	2.75	1.45	
6.....	1.4	.6						1.75	1.15	2.8	1.4	
7.....	1.3	.55						1.3	1.5	2.65	1.4	
8.....	1.05	.55						1.4	2.1	2.85	1.45	
9.....	1.0	.55						1.4	2.5	2.85	1.35	1.0
10.....	1.05	.5						1.5	2.25	2.75	1.35	1.0
11.....	1.0	.6						1.15	2.0	2.55	1.35	1.0
12.....	.9	.5						1.1	2.0	2.35	1.35	1.0
13.....	1.05							.7	2.25	2.2	1.35	1.0
14.....	1.0	.65						.6	2.0	2.1	1.35	1.6
15.....	1.0	.8						.7	1.65	2.0	1.45	2.0
16.....	.95	.65						.7	1.65	1.9	1.65	2.0
17.....	.95	.9						.7	1.8	2.65	1.65	1.85
18.....	.75	.9						.7	2.4	2.15	1.5	1.7
19.....	.7	1.0						.7	2.75	2.0	1.5	1.45
20.....	.75	1.05						.6	2.9	1.75	1.6	1.35
21.....	.8	1.0						.5	3.0	1.65	1.35	1.25
22.....	.8	.95						.4	3.1	1.7	1.6	1.15
23.....	.85	.9						.5	3.1	1.85	2.2	1.05
24.....	.85	.85						.5	3.0	2.0	2.0	1.05
25.....	.85	.85						.85	3.0	1.8	2.0	1.0
26.....	.85	.85						.85	3.2	1.8	2.6	1.0
27.....	.85	.8						.8	3.2	1.85	1.65	1.0
28.....	.85	.6						.75	3.15	1.8	2.1	1.0
29.....	.8	.65						1.3	3.1	1.8	1.95	1.0
30.....	.8	.65						1.85	3.1	2.1	1.75	1.05
31.....	.7								3.15		1.65	1.1

NOTE.—Ice present Mar. 1-16, 1911, and from Nov. 13, 1911, to Mar. 31, 1912. Gage heights estimated Apr. 3-10, 1912. Gage height estimated at 1.6 feet from Aug. 2-13, 1912.

Daily discharge, in second-feet, of Saguache River near Saguache, Colo., for 1910-1912.

Day.		Aug.	Sept.	Day.		Aug.	Sept.
1910.							
1	.....		50	16	.....	50	46
2	.....		50	17	.....	50	42
3	.....		46	18	.....	50	42
4	.....		46	19	.....	50	42
5	.....		46	20	.....	50	42
6	.....		46	21	.....	50	42
7	.....	54	42	22	.....	50	42
8	.....	54	38	23	.....	54	50
9	.....	54	38	24	.....	54	46
10	.....	62	38	25	.....	50	42
11	.....	58	38	26	.....	46	42
12	.....	58	42	27	.....	42	42
13	.....	58	50	28	.....	42	42
14	.....	54	50	29	.....	50	42
15	.....	50	46	30	.....	50	42
				31	.....	50	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1	42	38					71	86	220	192	186	115
2	42	38					86	86	220	260	168	107
3	42	38					93	86	209	329	159	107
4	42	38					71	93	209	290	140	108
5	42	42					71	118	218	220	140	108
6	42						58	135	227	220	124	108
7	42						51	153	227	259	116	86
8	42						51	162	237	269	116	78
9	42						39	181	246	219	116	86
10	42						39	172	256	191	117	78
11	34						34	153	236	182	117	71
12	34						34	144	217	200	109	64
13	42						29	144	217	190	135	58
14	42						24	126	206	217	127	58
15	38						29	135	235	208	127	39
16	38						51	135	235	197	102	29
17	42					64	58	126	225	160	102	24
18	54					64	58	126	234	189	111	20
19	50					64	64	144	224	246	103	20
20	50					64	78	135	224	246	103	20
21	50					71	86	126	224	255	104	20
22	34					78	101	144	283	255	166	29
23	38					71	109	144	233	226	233	58
24	46					71	109	162	204	216	167	58
25	46					64	86	172	194	216	130	58
26	46					51	86	181	175	244	130	58
27	42					39	101	181	165	264	131	58
28	38					39	109	172	156	224	122	58
29	38					51	109	172	165	196	114	58
30	38					51	93	172	165	196	106	64
31	38					58		181		186	106	.....
1911-12.												
1	93	66					80	224	413	168	131	87
2	101	60					80	268	353	136	131	85
3	93	53					80	215	320	116	131	85
4	109	53					80	116	320	106	131	85
5	146	60					80	98	320	116	131	85
6	185	60					80	90	331	111	131	80
7	169	53					82	121	298	111	131	80
8	125	53					82	198	342	116	131	80
9	118	53					87	268	342	106	131	80
10	129	48					87	224	320	106	131	80
11	122	60					90	183	278	106	131	80
12	105	48					87	183	240	106	131	80
13	130						64	224	215	106	131	80
14	122						60	183	198	106	131	80
15	122						64	136	183	116	183	80

Daily discharge, in second-feet, of Saguache River near Saguache, Colo., for 1910-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
16.....	113						64	136	168	136	183	74
17.....	113						64	155	298	136	162	71
18.....	81						64	249	206	121	142	66
19.....	74						64	320	183	121	116	66
20.....	81						60	353	148	131	106	66
21.....	89						56	377	136	106	98	66
22.....	89						53	401	142	131	90	64
23.....	97						56	401	162	215	84	64
24.....	97						56	377	183	183	84	
25.....	97						71	377	155	183	80	
26.....	97						71	425	155	131	80	
27.....	97						68	425	162	136	80	
28.....	97						66	413	155	198	80	
29.....	89						102	401	155	176	80	
30.....	89						162	401	198	148	84	
31.....	74							413		136	87	

Monthly discharge of Saguache River near Saguache, Colo., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Month.	Discharge in second-feet.			Run-off (total in acre- feet).
	Maxi- mum.	Mini- mum.	Mean.			Maxi- mum.	Mini- mum.	Mean.	
1910.					1911-12.				
August 7-31...	62	42	51.6	2,560	October.....	185	74	108	6,640
September.....	50	38	43.7	2,600	November.....			^a 48	2,850
1910-11.					April.....	162	53	75	4,480
October.....	50	34	41.9	2,570	May.....	425	90	270	16,600
March.....			^a 60	3,660	June.....	413	136	236	14,000
April.....	109	24	69.3	4,120	July.....	215	106	133	8,170
May.....	181	86	143	8,790	August.....	183	80	118	7,250
June.....	283	156	216	12,900	September 1-23	87	64	77	3,500
July.....	329	160	225	13,800					
August.....	233	102	130	7,990					
September.....	115	20	63.4	3,770					

^a Estimated.

RIO ALAMOSA BASIN.

GENERAL FEATURES.

Rio Alamosa, one of the important tributaries of the Rio Grande in its upper course, rises in the Conejos Mountains at the western edge of the San Luis Valley, near the crest of the Continental Divide. Its general course is eastward across San Luis Valley, and it joins the Rio Grande about 6 miles below Alamosa. It has a few short tributaries in the mountainous part of its course but none after reaching the valley.

The upper fourth of the Alamosa basin lies in the Conejos Range, where the elevations reach 12,000 feet and more above sea level and the river and its tributaries flow through narrow valleys. The detritus brought down from this mountainous section has been deposited

at its entrance to the valley in the form of an alluvial fan of sand or gravel, similar to those built up by practically all of the mountain streams entering the valley. As the gradients of the streams issuing from the Conejos Range are not so steep as those of streams flowing from the Sangre de Cristo Range, the resulting fans are not so prominent. Across the valley the river flows in a shallow channel only a few feet deep, and owing to the porous character of the alluvial fan it probably loses water by seepage after it leaves the mountains.

The following description of the geology of the Alamosa basin is taken from "Geology and water resources of the San Luis Valley," by C. E. Siebenthal:¹

The western mountains, the Saguache and Conejos ranges are made up on their eastern flanks, adjacent to the San Luis Valley, of alternations of gravel beds, andesitic flows, and rhyolitic tuffs cut through in places by dikes and volcanic necks of centers of effusion. These flows incline toward the valley with dips varying from 6° to 15°, and extend under it, being penetrated in some of the wells at the south end of the valley. [In the valley proper these flows are covered with a series of blue clays, having interstratified sand beds.]

Alamosa Creek leaves the foothills about 6 miles west of Capulin, through a defile in the lava rim. The south side of the defile rises into a bluff a hundred feet high which is capped with pyroxenite-andesite 40 feet in maximum thickness. * * * The lower part is massive and lies upon a water-sorted conglomerate, at the contact with which the lava is much broken. Boulders from the conglomerate seem to be drawn up into the lava, and it is penetrated by crevices and "chimneys" of loose-textured rock, apparently the result of steam escaping when the flow covered the conglomerate. The conglomerate has a burnt, reddish color, and the sandy matrix is more or less consolidated and indurated. These gravel beds rise upstream and 300 yards west come to the top of the bluff where they are interbedded with and underlain by brecciated pumice or rhyolitic tuffs. * * * [It is believed that a period of local glaciation antedated the last lava flow in this vicinity.] The Alamosa glacier manifestly occupied the U-shaped valley down nearly to the "box-canyon," spreading across the flat west of Chiquita Peak into the valley of Cat Creek. Below the "box-canyon" there are two terraces both developed on the south side of the valley. The lower one, apparently alluvial, is 60 feet high and 100 to 150 yards wide. The upper one, 30 feet higher, is covered with boulders, in part glacial, and has an irregular surface. * * * A mile farther down the creek a third terrace sets in 35 feet high above the valley bottom.

Precipitation on the Conejos Mountains, in which the Alamosa rises, is heavier than in any other part of the region drained by the Rio Grande. At Platoro (elevation 9,800) the mean precipitation is upward of 23 inches, and at Summit (elevation 10,800) the mean for 2 years shows approximately 36 inches. On the mountain summits it is probable that the precipitation is even greater, as it increases with the altitude. A large part of this occurs in the form of snow, which is the source of the high-water in the streams in May and

¹U. S. Geol. Survey Water-Supply Paper 240, pp. 29, 30, 33, 1910.

June. The precipitation in the valley part of the drainage basin is approximately 8 inches.

The only artificial storage on the Alamosa is that afforded by the Terrace reservoir, near Terrace post office in T. 36 N., R. 6 E. Its capacity is approximately 17,000 acre-feet at the present time, and it is designed to store the flood waters for use in irrigating lands in the Terrace Irrigation District. The waters of the Alamosa are used extensively for irrigation in the San Luis Valley, there being court decrees for appropriation of 1,700 second-feet by direct diversion from the Alamosa.

GAGING STATION RECORDS.

RIO ALAMOSA NEAR MONTE VISTA, COLO.

Location.—In the Rio Grande National Forest, in sec. 2, T. 36 N., R. 5 E., 28 miles southwest of Monte Vista, a short distance below the mouth of French Creek, and about 6 miles above the Terrace reservoir dam.

Records available.—September 29, 1911, to June 4, 1912.

Drainage area.—91 square miles¹ (measured from Forest Atlas).

Gage.—Vertical staff.

Channel.—Data too few to be conclusive.

Discharge measurements.—Made from bridge 1 mile above gage during high water and by wading at ordinary stages.

Winter flow.—No information.

Diversions.—The station is above all diversions except a ditch and flume used for hydraulic power at Terrace reservoir, which takes water half a mile above. There are court decrees for diversions of 1,700 second-feet from Alamosa River below the station.

Accuracy.—Conditions are favorable for fairly accurate results and the estimates are considered fair.

Cooperation.—Station maintained in cooperation with the United States Forest Service.

Discharge measurements of Rio Alamosa near Monte Vista, Colo., 1911-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 29	H. B. Waha.....	2.97	123	Jan. 20 ²	H. B. Waha.....	2.20	14.5
Nov. 20	.....do.....	2.40	52.2	Mar. 14 ²	.....do.....	1.90	19.9
21	.....do.....	2.33	48.8	Apr. 30	.....do.....	3.50	175
				May 21	.....do.....	5.55	1,000
				22	.....do.....	5.40	916

¹ Revised since report for 1911.

² Ice present.

Daily gage height, in feet, of Rio Alamosa near Monte Vista, Colo., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....	3.70	2.58	2.25	2.00	2.20	2.20	2.25	3.50				
2.....	3.50	2.56	2.24	.....	2.20	2.15	2.25	3.25				
3.....	3.15	2.56	2.24	2.00	2.32	2.15	2.25	3.20				
4.....	3.20	2.56	2.24	2.00	2.32	2.15	2.25	3.15	6.00			
5.....	11.00	2.54	2.22	2.05	2.32	2.20	2.25	3.15				
6.....	5.00	2.54	2.22	2.05	2.35	2.22	2.30	3.30				
7.....	.....	2.52	2.22	2.05	2.35	2.22	2.50	3.60				
8.....	.....	2.47	2.22	2.00	2.30	2.20	2.50	3.95				
9.....	3.80	2.47	2.21	2.00	2.30	2.30	2.65	3.85				
10.....	3.65	2.45	2.22	2.05	2.32	2.20	2.75	3.50				
11.....	3.40	2.42	2.20	2.05	2.32	2.20	2.55	3.50				
12.....	3.30	2.42	2.20	2.05	2.30	2.20	2.51	3.60				
13.....	3.18	2.42	2.20	2.10	2.30	2.15	2.46	3.50				
14.....	3.08	2.40	.....	2.10	2.30	.....	2.48	3.60				
15.....	3.00	2.42	2.20	.....	2.30	.....	2.42	3.40				
16.....	2.95	2.45	2.20	.....	2.30	.....	.....	3.60				
17.....	2.96	2.60	2.20	2.20	2.28	.....	.....	4.15				
18.....	2.81	2.60	.....	2.15	2.28	.....	.....	4.70				
19.....	2.79	2.60	2.20	2.10	2.20	.....	2.34	4.90				
20.....	2.76	2.40	.....	2.15	2.22	2.10	2.38	5.20				
21.....	2.75	2.38	2.20	2.15	2.22	2.12	2.30	5.60				
22.....	2.74	2.35	.....	2.15	2.22	2.00	2.24	5.50				
23.....	2.70	2.36	2.20	2.20	2.20	2.00	2.40	.....			
24.....	2.69	2.39	2.00	2.20	2.20	2.05	2.60	5.60				
25.....	2.68	2.36	2.00	2.15	2.20	2.05	2.64	.....			
26.....	2.65	2.39	.....	2.20	2.20	2.05	2.58	.....			
27.....	2.64	2.25	2.10	2.22	2.20	2.05	2.62	.....			
28.....	2.62	2.29	2.00	2.20	2.20	2.05	2.70	.....			
29.....	2.60	2.29	.....	2.22	2.20	2.10	2.98	.....			
30.....	2.58	2.28	2.00	2.20	.....	2.00	3.40	.....			
31.....	2.58	.....	2.00	2.20	.....	.....	.....	.....

NOTE.—Ice present Jan. 1 to Mar. 13, 1912.

Daily discharge, in second-feet, of Rio Alamosa near Monte Vista, Colo., for 1911-12.

Day.	Oct.	Nov.	Dec.	Mar.	Apr.	May.	Day.	Oct.	Nov.	Dec.	Mar.	Apr.	May.
1.....	220	69	42	.....	42	185	16.....	109	58	38	24	54	200
2.....	185	67	41	.....	42	149	17.....	110	71	38	26	52	348
3.....	135	67	41	.....	42	142	18.....	93	71	38	28	50	570
4.....	142	67	41	.....	42	135	19.....	91	71	38	30	48	660
5.....	4,250	66	39	.....	42	135	20.....	88	53	38	31	51	810
6.....	710	66	39	.....	45	156	21.....	86	51	38	32	45	1,020
7.....	555	64	39	.....	62	200	22.....	85	49	38	25	41	970
8.....	400	59	39	.....	62	285	23.....	81	50	38	25	53	995
9.....	245	59	39	.....	76	258	24.....	80	52	25	28	71	1,020
10.....	210	58	39	.....	86	185	25.....	79	50	25	28	75	1,040
11.....	170	55	38	.....	66	185	26.....	76	52	28	28	69	1,060
12.....	156	55	38	.....	63	200	27.....	75	42	31	28	73	1,080
13.....	139	55	38	.....	58	185	28.....	73	44	25	28	81	1,100
14.....	125	53	38	.....	20	200	29.....	71	44	25	31	113	1,120
15.....	115	55	38	22	55	170	30.....	69	44	25	25	170	1,140
							31.....	69	.....	25	33	.....	1,160

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Rio Alamosa near Monte Vista, Colo., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October.....	4,250	69	293	18,000	B.
November.....	69	42	57.2	3,400	B.
December.....	42	25	35.5	2,180	B.
January.....			15.0	922	D.
February.....			17.5	1,010	D.
March.....	33		24.3	1,490	C.
April.....	170	41	63.0	3,750	B.
May.....	1,160	135	550	33,800	C.
The period.....				64,600	

NOTE.—Monthly estimates for the winter period based on two discharge measurements.

RIO ALAMOSA AT TERRACE RESERVOIR, NEAR LA JARA, COLO.

Location.—About 1,000 feet below the Terrace reservoir dam, in sec. 14, T. 36 N., R. 6 E., about 24 miles northwest of La Jara. No important tributary within several miles.

Records available.—April 18, 1909, to October 22, 1912.

Drainage area.—120 square miles (State engineer's report).

Gage.—Vertical staff located at lower end of box canyon.

Channel.—Fairly permanent.

Artificial control.—The flow from the reservoir is controlled by two 4-foot circular valves, and therefore the records, though they show the entire amount of the natural flow (less seepage and evaporation losses), do not represent the natural fluctuations. The total capacity of the reservoir is 17,000 acre-feet, of which about 7,000 acre-feet was utilized during 1912.

Cooperation.—The records have been taken from the report of the State engineer, and were furnished by Mr. John E. Field, engineer for the San Luis Land and Irrigation Co.

Daily discharge, in second-feet, of Alamosa River at Terrace reservoir, near La Jara, Colo., for 1909-1912.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1909.							1909.						
1.....		194	411	354			16.....		510	645	144		
2.....		194	469	318			17.....		555	645	144		
3.....		290	645	301			18.....	391	622	599	133		
4.....		391	722	284			19.....	555	645	599	122		
5.....		555	874	252			20.....	354	599	645	122		
6.....		645	874	237			21.....	284	490	599	144		
7.....		670	978	237			22.....		429	555	155		
8.....		695	874	222			23.....	194	391	510	167		
9.....		555	941	222			24.....	180	336	510	167		
10.....		410	740	194			25.....	105	318	510	155		
11.....		510	722	194			26.....	133	372	510	144		
12.....		510	645	181			27.....	159	490	490	122		
13.....		510	722	167			28.....	284	555	449	122		
14.....		510	695	167			29.....	194	391	391	105		
15.....		490	645	194			30.....	188	469	351	90		
							31.....		411		82		

Daily discharge, in second-feet, of Alamosa River at Terrace reservoir, near La Jara, Colo., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1	75	35	90	60			70	469	645	144	122	45
2	97	35	60	75			105	429	645	122	105	45
3	105	25	75	60			105	391	645	122	105	35
4	105	35	60	75			85	391	645	122	90	35
5	90	35	222	60			85	391	555	105	222	35
6	90	35	222	60			85	469	469	105	167	25
7	90	35	144	60			105	429	429	105	144	35
8	75	35	105	75		75	122	469	252	105	105	25
9	75	35	75	75		75	167	510	252	90	105	25
10	90	35	75	75		90	118	599	284	90	144	35
11	75	45	90	90		75	144	645	284	90	144	25
12	75	35	167	75		90	142	645	284	90	167	35
13	75	35	167	75		90	167	645	397	90	167	25
14	60	35	105	75		90	144	599	354	90	167	25
15	60	35	60	75		75	144	510	318	90	167	25
16	60	75	75	75		75	105	469	318	90	167	25
17	60	90	75			90	122	429	194	90	144	25
18	60	105	75			75	144	429	222	75	122	25
19	60	90	60			90	167	429	222	75	105	25
20	60	60	75			75	167	391	252	75	105	25
21	45	60	105			75	167	391	252	75	90	35
22	45	35	105			105	167	318	252	75	75	35
23	45	45	122			167	167	284	252	60	45	25
24	45	45	122			144	252	252	194	60	45	25
25	35	60	75			167	318	252	167	60	45	35
26	35	60	75			144	354	429	167	60	45	25
27	35	45	75			122	354	469	167	60	45	25
28	35	45	60			105	429	555	144	60	45	25
29	35	60	60			90	510	645	144	144	45	25
30	35	60	75			105	510	645	144	144	45	25
31	25		75			90		645		144	45	
1910-11.												
1	25						60	222	555	530	235	100
2	25						75	252	599	670	235	100
3	25						75	252	599	720	215	100
4	25						60	284	555	720	215	100
5	25						60	354	555	670	215	100
6	25						60	469	599	530	215	100
7	25						60	510	599	410	68	100
8	25						60	555	872	335	68	100
9	25						60	599	1,080	335	68	100
10	25						60	599	1,080	335	47	100
11	25						60	555	1,080	335	68	100
12	25						45	469	645	335	68	100
13	25						45	429	645	335	100	100
14	25						45	354	645	335	135	100
15	25						60	391	645	335	135	100
16	25						75	429	645	335	135	100
17	25						105	469	645	235	100	100
18	25						105	510	645	235	100	100
19	25						122	555	645	235	100	100
20	25						122	510	749	235	100	100
21							144	391	808	235	100	215
22							194	391	808	235	100	215
23							194	510	812	235	100	215
24							194	555	808	235	100	175
25							194	599	808	235	100	175
26								222	599	555	235	100
27								284	555	429	235	100
28								252	510	429	235	100
29								284	469	429	235	100
30								252	510	510	235	100
31								555		235	100	

Daily discharge, in second-feet, of Alamosa River at Terrace reservoir, near La Jara, Colo., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1911-12.													
1	215				53	53	53	166	1,030	480	290	65	43
2	255				53	53	53	210	1,030	480	290	65	43
3	335				53	53	53	176	1,100	460	290	65	43
4	530				53	53	72	156	795	420	290	65	43
5	1,085				53	53	86	146	678	380	290	65	43
6	1,310				53	53	86	176	708	360	290	65	43
7	1,165				53	53	94	240	631	360	290	65	43
8	810				53	53	94	360	609	360	290	53	43
9	510				53	53	86	305	661	360	290	53	43
10	252				53	53	102	225	692	325	290	53	43
11	144				53	53	86	198	695	325	288	53	43
12	0				53	53	78	240	670	308	286	53	43
13	0				53	53	65	240	595	342	180	53	43
14	0				53	53	53	210	460	360	122	53	43
15	0				53	53	53	240	380	360	104	53	43
16	695				53	53	53	240	400	360	126	53	43
17	695				53	53	53	360	400	360	142	53	43
18	122				53	65	53	528	400	360	130	53	43
19	90				53	78	53	650	400	360	96	53	43
20	90				53	78	53	825	360	325	94	53	43
21	90				53	53	53	890	360	325	94	53	43
22	90				53	53	53	925	360	325	94	53	35
23	90				53	53	59	1,030	360	325	94	53	.....
24	90				53	53	59	1,030	360	325	102	43	.....
25	90				53	53	59	995	380	325	86	43	.....
26	90				53	53	59	1,030	400	325	78	43	.....
27	90				53	53	72	1,030	460	325	78	43	.....
28	90				53	53	65	1,030	480	325	86	43	.....
29	90				53	53	86	1,030	480	325	65	43	.....
30	90				53	53	136	1,030	480	325	65	43	.....
31	90				53	53	.....	1,030	.....	290	65	.....	.....

Monthly discharge of Rio Alamosa at Terrace reservoir, near La Jara, Colo., for 1909-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1909.					1910-11.				
April 18-30	555	105	252	6,000	October 1-20	25	25	25.0	992
May	695	194	475	29,200	April	284	45	121	7,200
June	978	354	632	37,600	May	599	222	465	28,600
July	354	82	182	11,200	June	1,090	429	684	40,700
1909-10.					July	720	235	348	21,400
October	105	25	63.0	3,870	August	235	47	120	7,380
November	105	25	48.7	2,900	September	215	100	120	7,200
December	222	60	97.6	6,000	1911-12.				
January 1-16	90	60	71.2	2,260	October	1,310	0	300	18,400
March 8-31	167	75	99.1	4,720	February	53	53	53.0	3,050
April	510	70	191	11,400	March	78	53	55.0	3,380
May	645	252	472	29,000	April	136	53	69.3	4,120
June	645	144	318	18,900	May	1,030	146	547	33,600
July	144	60	93.8	5,770	June	1,100	360	561	33,400
August	222	45	108	6,640	July	480	290	354	21,800
September	45	25	29.3	1,740	August	290	65	173	10,500
					September	65	43	53.5	3,180
					October 1-22	43	35	43.0	1,880

CONEJOS RIVER BASIN.

GENERAL FEATURES.

Conejos River rises on the eastern slope of the Conejos Mountains, on the southwestern boundary of San Luis region near the headwaters of the Alamosa, nearly at the crest of the Continental Divide, flows northeastward as far as Platoro, then makes a sharp turn to the south following that direction for 10 miles, when it gradually bears to the eastward and then northward, entering the Rio Grande at Austin, about 6 miles below the mouth of the Alamosa. Just east of Conejos the river divides and flows to a point east of Manassa in two channels which there unite. Three miles above the mouth it again divides and enters the Rio Grande at two points a mile or more apart. Within the mountains the Conejos has many short tributaries, but after reaching the valley it receives only one tributary of importance, the Rio San Antonio.

The upper third of the Conejos basin lies in the mountains, with elevations reaching 12,000 feet. The detritus brought down in this portion of the basin has formed a long alluvial fan at the point of debouching into the valley. This fan is in part confined between the Mogotes Mountains and the San Luis Hills and in part extends south of the latter into New Mexico. Owing to the porous character of the material of the alluvial fan, it is probable that there is some seepage loss in the flow of the Conejos after leaving the mountains. The river flows across the San Luis Valley in a shallow channel, skirting the western edge of the San Luis Hills.

The mountains of the Conejos Range, which comprise the upper third of the area drained by the Conejos, are made up in their eastern slopes (adjacent to the valley) of alternations of gravel beds, andesitic flows, and rhyolitic tuffs cut through in places by dikes and the volcanic necks of centers of effusion. These flows incline toward the valley with dips varying from 6° to 15° and extend under it. In the valley proper these flows are covered with a series of blue clays interstratified with sand beds, which yield flowing artesian water in many wells in the lower part of the drainage area.

The rainfall on the Conejos Mountains is heavier than in any other part of the region drained by the Rio Grande. At Platoro (elevation, 9,800) the mean precipitation is upward of 23 inches and at Cumbres (elevation, 10,015) it is about 26 inches. A large part of this precipitation is snowfall, which is a natural storage until May and June when its melting causes the high water. The precipitation rapidly decreases with the altitude, falling to about 8 inches in the valley section of the drainage.

The waters of the Conejos are extensively utilized for irrigation in the valley, there being adjudicated decrees for appropriations of 3,476 second-feet by direct diversion. This amount is equal to the entire flow of the river during the height of the flood period.

GAGING STATION RECORDS.

CONEJOS RIVER NEAR MOGOTE, COLO.

Location.—At highway bridge near Mogote.

Records available.—From September 1, 1899, to March 31, 1900, and from April 17, 1903, to October 31, 1905, at a station about 4 miles above Mogote; April 22 to June 21, 1906, and March 21, 1907, to October 5, 1911, at Jacob's ranch, 8 miles above Mogote. January 1, 1912, to September 30, 1913, at present site.

Drainage area.—Not measured.

Gage.—Staff gage, originally located at wagon bridge at Conejos, but moved to a point 500 feet below on November 5, 1899. The datum of the gage remained permanent as long as used. At the station established in 1907 a chain gage was used, referred to the same datum as a rod gage used by Mr. Antoine Jacob during 1905 and 1906. This datum remained unchanged until the station was changed in 1911.

Channel.—Fairly permanent at present site but shifting at original site.

Discharge measurements.—Made from bridge.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—There are court decrees for diversions of 3,476 second-feet from Conejos Rivér, all but about 66 second-feet being diverted below the present station.

Accuracy.—Data prior to 1903 too meager to permit estimates of daily discharge being made. From 1903 to 1905 conditions were favorable for estimates, which are considered fair; the estimates since 1907 are considered good and for some months even excellent.

Cooperation.—During 1912 and 1913 station was maintained by the State engineer, who furnished the complete records.

Discharge measurements of Conejos River near Mogote, Colo., in 1899–1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1899.		<i>Feet.</i>	<i>Sec. ft.</i>	1907.		<i>Feet.</i>	<i>Sec. ft.</i>
Aug. 25	A. L. Fellows.....	1.00	76	May 13	W. B. Freeman.....	1.77	573
Nov. 28	do.....	2.20	70	June 11	do.....	2.77	1,990
				27	do.....	3.07	2,310
1900.				July 30	do.....	1.88	775
Mar. 28	A. L. Fellows.....	1.68	144	Aug. 29	C. L. Chatfield.....	1.22	280
May 11	do.....	3.10	1,090	Oct. 2	J. B. Stewart.....	.79	134
June 23	do.....	2.30	467	Nov. 8	W. B. Freeman.....	.50	83
Aug. 17	do.....	1.15	33				
1903.				1908.			
Apr. 17	F. Cogswell.....	1.90	185	Mar. 27	J. B. Stewart.....	.75	138
May 18	do.....	3.30	1,110	May 18	W. B. Freeman.....	2.03	709
June 9	do.....	3.70	1,770	June 9	J. B. Stewart.....	2.54	1,200
July 1	do.....	3.40	1,260	July 11	do.....	1.52	423
July 30	do.....	1.80	292	Dec. 1 ^a	do.....	.70	52
Aug. 24	do.....	1.50	195	6 ^a	do.....	.82	67
Sept. 12	do.....	1.40	167				
Oct. 10	do.....	1.30	85	1909.			
Nov. 7	do.....	1.00	58	May 15	W. B. Freeman.....	2.35	1,070
1904.				June 23	do.....	2.80	1,710
May 3	G. B. Monk.....	2.22	305	Aug. 3	G. H. Russell.....	1.00	272
June 8	do.....	2.40	412	Sept. 30	do.....	.65	124
17	do.....	2.45	424	Nov. 13 ^a	J. B. Stewart.....	.35	57
27	do.....	1.95	188	Dec. 20 ^a	G. H. Russell.....		74
July 21	do.....	1.45	39				
Aug. 29	do.....	1.85	101	1910.			
Aug. 25	do.....	1.90	159	Jan. 26 ^a	J. B. Stewart.....		46
1905.				Feb. 24	G. H. Russell.....		53
Apr. 21	R. I. Meeker.....	2.20	328	Apr. 10	J. B. Stewart.....	1.20	304
June 22	do.....	3.65	1,360	May 27	G. H. Russell.....	2.25	1,110
July 27	do.....	2.00	246	June 25	do.....	1.30	352
Sept. 19	do.....	1.30	62	Aug. 5	do.....	1.20	344
1907.				18	E. O. Christiansen.....	.63	140
Mar. 21	R. I. Meeker.....	1.38	374	Sept 9	do.....	.30	71
Apr. 22	do.....	1.50	402	23	do.....	.32	63
				Oct. 22 ^a	Hezmalhalch and Chris- tiansen.....	.42	72
				Dec. 12 ^a	G. H. Russell.....	.28	65

^a Ice present.

Daily measurements of Conejos River near Mogote, Colo., in 1899-1913—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 21 ^a	G. H. Russell	.....	50.0	Aug. 23	C. C. Hezmalhalch	2.00	115
Feb. 24 ^a	Clayton and Turner	.....	31.0	Sept. 17	C. E. Turner	1.85	65
Mar. 26	B. S. Clayton	.....	83.0	Oct. 18	.....	1.93	77
Apr. 25	.....	1.80	661	Nov. 16	.....	1.92	78
May 28	.....	2.60	1,570				
July 2	.....	3.25	2,590	1913.			
Sept. 6	.....	.99	259	Jan. 26 ^a	C. E. Turner	.....	46
Nov. 18	.....	.....	157	Feb. 10 ^a	.....	.....	45
				Mar. 20 ^a	.....	.....	51
1912.				May 16	C. O. Crisman	3.48	935
Jan. 17 ^a	B. S. Clayton	.....	74	.....	.....	4.30	1,603
Feb. 27 ^a	.....	.....	46	June 28	.....	3.09	580
Apr. 5	.....	1.24	199	July 28	.....	2.00	113
May 14	.....	2.68	875	Aug. 29	.....	1.78	68
June 10	C. C. Hezmalhalch	4.40	2,110	Sept. 29	.....	1.90	92
July 12	.....	3.00	634				

^a Ice present.

Daily gage height, in feet, of Conejos River near Mogote, Colo., for 1899-1913.

Day.	Sept.	Oct.	Nov.	Day.	Sept.	Oct.	Nov.	Day.	Sept.	Oct.	Nov.
1899.				1899.				1899.			
1.....	0.95	1.02	1.15	11.....	1.00	1.00	1.57	21.....	1.22	1.30	1.58
2.....	.92	1.05	1.12	12.....	.98	1.20	1.57	22.....	1.20	1.32	1.55
3.....	.92	1.10	1.12	13.....	.95	1.38	1.57	23.....	1.18	1.30	1.50
4.....	.92	1.12	1.10	14.....	.98	1.32	1.57	24.....	1.15	1.28	1.48
5.....	.90	1.10	1.55	15.....	2.00	1.25	1.57	25.....	1.10	1.25	1.40
6.....	.90	1.07	1.57	16.....	1.75	1.22	1.65	26.....	1.05	1.25	1.55
7.....	.87	1.07	1.57	17.....	1.65	1.25	1.70	27.....	1.05	1.15	1.90
8.....	.87	1.05	1.57	18.....	1.50	1.28	1.70	28.....	1.05	1.20	2.20
9.....	1.02	1.05	1.57	19.....	1.30	1.25	1.70	29.....	1.05	1.18	2.10
10.....	1.05	1.02	1.57	20.....	1.22	1.20	1.60	30.....	1.05	1.15	1.60
								31.....	.....	1.15	.....

Day.	Mar.	Day.	Mar.	Day.	Mar.	Day.	Mar.
1900.		1900.		1900.		1900.	
1.....	2.60	9.....	2.55	17.....	1.85	25.....	1.80
2.....	2.60	10.....	2.45	18.....	1.75	26.....	1.80
3.....	2.62	11.....	1.75	19.....	1.70	27.....	1.80
4.....	2.62	12.....	1.85	20.....	1.80	28.....	1.85
5.....	2.65	13.....	1.85	21.....	1.80	29.....	1.80
6.....	2.65	14.....	1.98	22.....	1.80	30.....	1.75
7.....	2.30	15.....	1.85	23.....	1.80	31.....	1.95
8.....	2.50	16.....	1.85	24.....	1.80		

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1903.							1903.						
1.....	2.9	4.3	3.45	1.45	1.3	16.....	3.85	3.95	2.75	1.45	1.25	1.25
2.....	3.0	4.35	3.15	1.7	1.3	17.....	1.95	3.85	4.6	3.05	1.7	1.35
3.....	3.05	4.35	3.2	1.55	1.2	18.....	1.85	3.7	4.65	2.65	1.5	1.25
4.....	3.4	3.65	3.2	1.4	1.3	19.....	1.9	3.15	4.45	2.45	1.35	1.25
5.....	3.4	3.8	3.0	1.35	1.3	20.....	2.0	2.95	4.25	2.25	1.45	1.2
6.....	3.4	3.75	2.9	1.4	1.4	21.....	1.95	3.05	4.4	2.5	1.45	1.3
7.....	3.5	4.3	3.0	1.4	1.95	22.....	2.2	2.75	4.35	2.5	1.45	1.25
8.....	3.5	4.0	2.5	1.5	1.8	23.....	2.55	2.8	4.05	2.35	1.4	1.2
9.....	3.6	3.85	2.5	1.45	1.4	24.....	2.75	2.85	4.05	2.4	1.45	1.25
10.....	3.6	3.65	3.0	1.4	1.4	25.....	2.9	2.85	3.75	2.45	1.45	1.4
							26.....	2.85	3.3	3.8	1.9	1.35	1.35
11.....	3.4	3.75	3.05	1.35	1.35	27.....	2.65	3.35	3.85	1.85	1.3	1.4
12.....	3.4	3.85	2.7	1.4	1.5	28.....	2.65	3.8	3.75	2.45	1.3	1.4
13.....	3.5	3.85	2.65	1.4	1.4	29.....	2.6	3.35	3.8	1.9	1.3	1.4
14.....	3.5	3.95	2.45	1.4	1.4	30.....	2.7	3.55	3.75	1.85	1.3	1.4
15.....	3.65	3.9	2.7	1.4	1.3	31.....	.....	4.05	.....	1.85	1.25	.....

Daily gage height, in feet, of Conejos River near Mogote, Colo., for 1899-1913—Contd.

Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4								1904-5							
1....	1.4	1.6	2.5	2.55	1.9	2.45	2.55	1....	3.6	1.65	3.4	4.8	3.2	1.7	1.7
2....	1.45	1.75	2.35	2.45	1.9	2.35	2.45	2....	3.0	1.4	3.4	5.1	3.0	2.2	1.6
3....	1.4	1.6	2.15	2.35	1.8	2.35	2.35	3....	2.75	1.5	3.0	5.15	3.0	2.25	1.5
4....	1.4	1.6	2.1	2.15	1.8	2.6	2.3	4....	2.6	1.55	2.8	5.55	3.35	2.4	1.5
5....	1.4	1.55	2.1	2.1	1.7	2.75	2.2	5....	2.5	1.6	2.7	5.65	3.6	2.1	1.55
6....	1.4	1.65	2.15	2.1	1.65	2.25	2.2	6....	2.4	1.6	2.55	4.4	3.65	.2	1.55
7....	1.35	1.55	2.2	2.2	1.55	2.35	2.1	7....	3.0	1.75	2.7	5.05	2.35	2.2	1.6
8....	1.3	1.6	2.35	2.45	1.55	2.45	2.0	8....	3.0	1.85	2.85	5.35	2.65	2.15	1.5
9....	1.3	1.6	2.35	2.5	1.5	2.25	2.0	9....	3.25	2.0	3.0	5.05	2.4	2.05	1.5
10....	1.3	1.55	2.45	2.3	1.5	2.1	1.9	10....	3.05	2.1	2.85	4.9	2.55	1.9	1.5
11....	1.25	1.8	2.6	2.3	1.5	2.1	1.9	11....	2.95	2.0	2.75	4.85	2.55	2.25	1.5
12....	1.4	1.85	2.65	2.45	1.5	2.0	1.8	12....	2.85	2.0	2.75	4.7	2.45	2.1	1.4
13....	1.4	2.2	2.8	2.3	1.45	2.0	1.8	13....	2.75	2.05	3.0	4.7	2.4	1.9	1.4
14....	1.25	2.4	2.8	2.35	1.4	2.15	1.7	14....	2.65	2.0	3.1	4.6	2.4	1.9	1.4
15....	1.2	2.5	2.5	2.3	1.4	2.2	1.7	15....	2.55	2.1	3.55	4.7	2.5	1.8	1.4
16....	1.25	2.4	2.55	2.4	1.4	2.2	1.7	16....	2.55	2.05	3.9	4.55	2.5	1.7	1.4
17....	1.2	2.5	2.55	2.45	1.4	2.1	1.7	17....	2.5	2.15	4.15	4.3	2.3	1.7	1.3
18....	1.3	2.5	2.75	2.3	1.3	2.1	1.65	18....	2.45	2.2	4.3	4.2	2.2	1.65	1.35
19....	1.3	2.5	2.85	2.2	1.4	2.25	1.6	19....	2.3	2.35	4.35	4.1	2.25	1.6	1.3
20....	1.25	2.45	2.8	2.15	1.4	2.2	1.6	20....	2.2	2.2	4.45	3.95	2.4	1.65	1.3
21....	1.3	2.45	2.8	2.1	1.5	2.1	1.6	21....	2.2	2.25	4.45	3.8	2.45	1.6	1.3
22....	1.3	2.1	2.65	2.25	1.5	2.0	1.6	22....	2.15	2.35	4.5	3.7	2.45	1.6	1.3
23....	1.25	2.15	2.8	2.0	1.5	2.0	1.65	23....	2.1	2.3	4.6	3.8	2.4	1.6	1.3
24....	1.25	2.0	2.8	2.1	1.6	2.05	1.8	24....	2.1	2.2	4.75	3.7	2.2	1.6	1.25
25....	1.3	2.15	2.55	1.9	1.7	2.0	1.8	25....	2.1	2.2	4.75	3.6	2.1	1.8	1.25
26....	1.25	2.5	2.5	1.95	1.6	2.05	1.8	26....	2.1	2.3	4.85	3.55	2.0	1.7	1.4
27....	1.25	2.55	2.55	2.0	1.65	2.05	1.7	27....	1.95	2.5	4.8	3.55	2.05	1.7	1.4
28....	1.25	2.75	2.5	2.05	1.8	2.0	1.8	28....	1.9	2.7	4.6	3.5	2.2	1.65	1.4
29....	1.25	2.55	2.5	1.9	2.1	2.0	2.02	29....	1.9	2.9	4.05	3.4	2.4	1.75	1.4
30....	1.2	2.45	2.55	1.85	2.1	2.45	4.0	30....	1.9	3.05	4.25	3.3	2.3	1.7	1.65
31....	1.2	.....	2.5	.....	1.95	2.5	.....	31....	1.8	.....	4.5	.....	2.15	1.7	.....

Day.	Oct.	Apr.	May.	June.	Day.	Oct.	Apr.	May.	June.	Day.	Oct.	Apr.	May.	June.
1905-6a					1905-6.					1905-6.				
1....	1.6	.....	1.45	2.55	11....	1.2	.....	2.8	3.7	21....	1.3	.....	3.3	3.0
2....	1.55	.....	1.4	2.75	12....	1.2	.....	2.65	3.7	22....	1.3	1.8	3.25	.....
3....	1.5	.....	1.4	2.6	13....	1.2	.....	2.5	3.75	23....	1.4	1.9	3.15	.....
4....	1.4	.....	1.85	.....	14....	1.2	.....	2.55	3.6	24....	1.5	1.9	2.85	.....
5....	1.4	.....	1.95	2.75	15....	1.2	.....	2.55	3.65	25....	1.5	1.85	.....	.....
6....	1.4	.....	.....	3.25	16....	1.2	.....	2.7	3.65	26....	1.4	1.75	2.45	.....
7....	1.35	.....	2.0	3.5	17....	1.3	.....	2.8	3.55	27....	1.4	1.75	2.45	.....
8....	1.3	.....	2.4	3.4	18....	1.3	.....	2.85	3.4	28....	1.4	1.75	2.75	.....
9....	1.3	.....	2.5	3.4	19....	1.3	.....	3.0	3.25	29....	1.4	1.45	2.65	.....
10....	1.3	.....	2.75	3.5	20....	1.3	.....	2.95	3.15	30....	1.4	1.4	2.5	.....
										31....	1.4	.....	2.45	.....

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.							
1....	1.0	1.55	2.0	3.45	1.95	1.55
2....	1.0	1.4	2.15	3.4	1.9	1.5
3....	1.0	1.4	2.45	3.25	1.85	1.4
4....	1.05	1.4	2.7	3.1	1.8	1.3
5....	1.05	1.4	2.9	3.1	1.8	1.2
6....	1.1	1.4	3.0	3.0	1.7	1.2
7....	1.1	1.4	3.0	3.2	1.75	1.2
8....	1.2	1.4	2.95	3.0	1.6	1.2
9....	1.3	1.4	2.75	2.9	1.6	1.3
10....	1.5	1.45	2.7	2.95	1.55	1.2
11....	1.8	1.65	2.9	2.8	1.45	1.2
12....	2.0	1.9	3.0	2.7	1.4	1.05
13....	2.1	1.75	3.1	2.75	1.8	.95
14....	2.15	1.65	3.1	3.25	1.55	.9
15....	2.2	1.6	3.2	3.25	1.45	.9

a Records during 1906 kept by Mr. Antoine Jacob and furnished the Survey through his courtesy. They refer to the same location and datum as the gage established by the Survey in 1907.

Daily gage height, in feet, of Conejos River near Mogote, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.												
16.							2.15	1.75	3.15	2.7	1.4	0.9
17.							2.0	2.05	3.0	2.45	1.3	.9
18.							2.0	2.2	3.0	2.35	1.3	.9
19.							2.0	2.45	3.0	2.35	1.3	1.0
20.							2.0	2.8	2.85	2.3	1.3	1.0
21.						1.4	2.0	3.0	2.7	2.4	1.4	.9
22.						1.5	1.55	3.05	2.7	2.3	1.4	.9
23.						1.25	1.5	3.05	2.7	2.25	1.3	.8
24.						1.2	1.45	2.75	2.9	2.25	1.2	.8
25.						1.2	1.5	2.5	2.95	2.35	1.3	.8
26.						1.2	1.5	2.5	3.05	2.15	1.3	.8
27.						1.1	1.5	2.45	3.05	2.15	1.2	.7
28.						1.05	1.5	2.4	3.15	1.95	1.2	.7
29.						1.0	1.6	2.25	3.25	1.95	1.2	.7
30.						1.0	1.6	2.1	3.25	2.0	2.0	.6
31.						1.0		2.05		1.9	1.75	
1907-8.												
1.	0.6	0.5	0.5				.55	1.4	2.05	2.0	1.35	.9
2.	.6	.5	.5				.6	1.65	2.2	1.85	1.6	.8
3.	.6	.5	.6				.65	1.75	2.35	1.85	1.5	.85
4.	.7	.5	.6				.75	1.5	2.35	1.8	1.35	.7
5.	.7	.5	.5				.75	1.8	2.4	1.7	1.25	.7
6.	.75	.5	.5				.75	1.7	2.4	1.75	1.15	.7
7.	.8	.5	.5				.75	1.3	2.25	1.7	1.1	.6
8.	.7	.5	.6				.75	1.55	2.15	1.8	1.15	.6
9.	.7	.5	.6				.75	1.65	2.55	1.6	1.1	.6
10.	.7	.5	.6				.75	1.5	2.75	1.5	1.1	.6
11.	.7	.5	.7				.75	1.55	2.9	1.5	1.15	.5
12.	.6	.5	.7				.75	1.65	2.75	1.7	1.1	.5
13.	.6	.5	.7				.8	1.4	2.75	1.6	1.0	.5
14.	.6	.4	.7				.95	1.3	2.8	1.55	1.15	.6
15.	.6	.4	.7			0.8	1.1	1.4	2.8	1.6	1.25	.6
16.	.6	.4	.7			.8	1.25	1.7	2.85	1.6	1.2	.6
17.	.6	.5	.7			.8	1.2	1.9	2.75	1.65	1.7	.6
18.	.6	.5	.7			.85	1.25	2.05	2.4	1.5	1.35	.5
19.	.6	.5	.7			.8	1.25	2.2	2.2	1.45	1.4	.5
20.	.6	.5	.7			.8	1.15	2.2	2.25	1.4	1.4	.5
21.	.6	.5	.7			.8	1.25	2.0	2.25	1.35	1.5	.5
22.	.5	.5	.7			.75	1.45	2.1	2.25	1.3	1.45	.5
23.	.5	.5	.7			.7	1.5	1.95	2.25	1.55	1.4	.5
24.	.5	.6	.7			.75	1.35	1.8	2.25	1.5	1.2	.5
25.	.6	.5	.7			.75	1.3	1.8	2.25	1.55	1.15	1.2
26.	.6	.5	.7			.75	1.25	1.9	2.5	1.2	1.1	1.0
27.	.6	.5	.7			.75	1.2	1.8	2.5	1.15	1.05	.9
28.	.6	.5	.7			.65	1.15	1.75	2.4	1.15	1.0	.8
29.	.6	.6	.7			.55	1.25	1.85	2.2	1.1	1.0	.8
30.	.6	.6	.7			.55	1.3	1.95	2.05	1.2	1.0	.7
31.	.6		.7			.55		2.1		1.3	.9	
1908-9.												
1.	.7	.5	.7					1.4	2.5	2.2	.95	1.35
2.	.7	.5						1.45	2.65	2.3	1.05	1.4
3.	.7	.5						1.85	2.95	2.25	1.05	1.4
4.	.7	.5						2.2	3.25	2.15	1.05	1.45
5.	.6	.5						2.7	3.55	2.1	1.1	2.1
6.	.6	.5						2.7	3.65	2.1	1.2	2.5
7.	.6	.5						2.8	3.55	2.05	1.25	2.45
8.	.6	.5						2.8	3.45	2.05	1.15	2.2
9.	.6	.5						2.4	3.4	1.95	1.1	1.9
10.	.6	.5						2.45	3.35	1.85	1.15	1.8
11.	.6	.5						2.4	3.25	1.8	1.0	1.7
12.	.6	.5						2.45	3.3	1.7	1.0	1.55
13.	.6	.5						2.4	3.2	1.55	1.2	1.6
14.	.6	.5						2.5	3.05	1.4	1.05	1.5
15.	.6	.5						2.45	2.95	1.35	1.0	1.5
16.	.5	.5						2.6	2.95	1.3	1.1	1.4
17.	.55	.5						2.7	2.95	1.25	1.0	1.3
18.	.6	.5						2.8	3.1	1.25	1.05	1.25
19.	.6	.5						2.9	3.0	1.25	1.0	1.2
20.	.6	.5						2.7	3.05	1.25	1.0	1.1

Daily gage height, in feet, of Conejos River near Mogote, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
21.....	0.7	0.5	.....	.....	.....	.....	.....	2.7	3.05	1.2	1.0	1.1
22.....	.7	.5	.....	.....	.....	.....	.....	2.7	2.95	1.25	.95	1.1
23.....	.7	.6	.....	.....	.....	.....	.....	2.45	2.8	1.25	1.15	1.1
24.....	.7	.6	.....	.....	.....	.....	.....	2.3	2.8	1.4	1.25	.95
25.....	.7	.6	.....	.....	.....	.....	1.35	2.2	2.75	1.35	1.4	.95
26.....	.6	.6	.....	.....	.....	.....	1.55	2.35	2.6	1.25	1.25	.85
27.....	.5	.6	.....	.....	.....	.....	1.55	2.5	2.55	1.2	1.4	.85
28.....	.5	.6	.....	.....	.....	.....	1.65	2.75	2.4	1.1	1.35	.7
29.....	.5	.6	.....	.....	.....	.....	1.65	2.6	2.4	1.1	1.9	.7
30.....	.5	.6	.....	.....	.....	.....	1.3	2.4	2.35	1.1	1.6	.65
31.....	.5	.....	.....	.....	.....	.....	.....	2.4	.....	.95	1.45	.....
1909-10.												
1.....	.6	.5	0.45	0.5	0.4	0.45	.95	2.35	2.7	1.1	.85	.5
2.....	.6	.45	.45	.5	.4	.45	.95	2.1	2.7	1.1	.8	.5
3.....	.6	.4	.5	.5	.4	.45	.95	2.1	2.65	1.0	.75	.4
4.....	.7	.4	.5	.4	.4	.45	.95	2.2	2.6	1.0	.7	.4
5.....	.85	.4	.4	.5	.4	.5	.95	2.3	2.5	1.0	1.15	.4
6.....	1.0	.4	.4	.5	.4	.5	1.05	2.2	2.3	1.0	1.05	.4
7.....	1.0	.4	.4	.5	.4	.5	1.05	2.15	2.2	.95	.8	.35
8.....	1.05	.4	.5	.5	.4	.5	1.15	2.4	2.1	.9	.8	.3
9.....	.85	.4	.5	.4	.4	.5	1.15	2.5	2.05	.85	.8	.3
10.....	.8	.4	.5	.4	.4	.5	1.15	2.65	1.95	.8	.9	.3
11.....	.8	.4	.5	.4	.4	.5	1.15	2.8	1.9	.8	1.15	.3
12.....	.8	.5	.4	.4	.4	.55	1.3	2.9	1.95	.8	1.15	.3
13.....	.8	.4	.4	.5	.4	.6	1.3	2.8	1.85	.8	1.05	.3
14.....	.8	.4	.5	.5	.4	.65	1.2	2.8	1.75	.8	1.0	.3
15.....	.8	.5	.5	.5	.4	.75	1.15	2.6	1.75	.8	.85	.3
16.....	.7	.5	.4	.5	.4	.8	1.25	2.35	1.7	.75	.8	.3
17.....	.7	.5	.4	.5	.4	.85	1.25	2.3	1.65	.7	.7	.3
18.....	.7	.5	.4	.5	.4	.85	1.25	2.35	1.6	.7	.7	.3
19.....	.7	.5	.4	.5	.4	.85	1.3	2.15	1.5	.7	.7	.3
20.....	.7	.5	.4	.5	.4	.95	1.3	2.15	1.45	.6	.7	.3
21.....	.6	.5	.4	.5	.4	1.15	1.45	2.1	1.45	.6	.6	.3
22.....	.6	.6	.4	.5	.4	1.15	1.45	2.05	1.45	.8	.6	.35
23.....	.6	.5	.4	.5	.4	1.3	1.45	1.9	1.45	.75	.75	.3
24.....	.6	.4	.4	.5	.4	1.2	1.8	1.85	1.25	.7	.65	.3
25.....	.6	.4	.4	.5	.4	1.25	2.15	1.9	1.3	.7	.6	.3
26.....	.6	.4	.3	.5	.4	1.15	2.3	2.0	1.3	.65	.55	.3
27.....	.6	.4	.3	.5	.4	1.0	2.3	2.2	1.25	.6	.5	.3
28.....	.55	.4	.4	.5	.4	1.05	2.45	2.55	1.2	.65	.5	.25
29.....	.55	.45	.4	.5	.4	1.05	2.5	2.7	1.2	.6	.5	.2
30.....	.55	.5	.4	.4	.....	1.0	2.45	2.85	1.2	.65	.55	.2
31.....	.55	.....	.4	.4	.....	.95	.....	2.75	.....	.95	.5	.....
1910-11.												
1.....	.2	.4	.3	.3	.4	.....	.95	1.65	2.9	2.7	1.6	1.1
2.....	.2	.4	.3	.3	.4	.....	.95	1.7	3.2	3.2	1.45	1.05
3.....	.2	.4	.3	.3	.4	.....	1.0	1.9	3.2	2.85	1.4	1.15
4.....	.2	.4	.3	.3	.4	.....	.95	2.0	3.0	2.7	1.3	1.05
5.....	.2	.4	.3	.3	.4	.....	.8	2.15	3.1	2.7	1.25	1.0
6.....	.2	.35	.3	.3	.4	.....	.8	2.45	3.1	2.45	1.2	1.0
7.....	.2	.4	.3	.3	.4	.....	.7	2.7	3.1	2.4	1.2	.9
8.....	.2	.3	.3	.3	.3	.....	.8	2.8	3.2	2.25	1.15	.85
9.....	.2	.3	.3	.3	.3	.....	.8	2.8	3.5	2.15	1.05	.8
10.....	.2	.3	.3	.3	.3	.....	.8	2.7	3.4	2.1	1.0	.85
11.....	.2	.3	.3	.3	.3	.....	.75	2.55	3.2	2.0	1.0	.8
12.....	.2	.3	.3	.3	.3	.....	.6	.8	2.4	3.1	2.05	.8
13.....	.2	.3	.3	.3	.3	.....	.5	.8	2.4	3.0	2.2	1.05
14.....	.2	.3	.3	.3	.3	.....	.5	.75	2.3	2.95	2.25	.95
15.....	.2	.3	.3	.3	.3	.....	.55	.9	2.3	2.9	2.1	.9
16.....	.3	.3	.3	.3	.3	.....	.5	1.0	2.4	2.9	2.1	.9
17.....	.4	.25	.3	.3	.3	.....	.45	1.0	2.6	2.8	2.1	.9
18.....	.4	.2	.3	.3	.3	.....	.45	1.0	2.6	2.75	2.05	.9
19.....	.5	.2	.3	.3	.3	.....	.45	1.15	2.55	2.8	2.65	1.05
20.....	.5	.2	.3	.3	.3	.....	.45	1.45	2.5	2.9	2.4	.9
21.....	.45	.2	.3	.3	.3	.....	.4	1.55	2.3	2.95	2.35	.95
22.....	.3	.2	.3	.3	.3	.....	.4	1.65	2.2	3.0	2.25	1.5
23.....	.3	.2	.3	.3	.3	.....	.45	1.7	2.4	2.9	2.05	1.7
24.....	.4	.2	.3	.3	.3	.....	.45	1.7	2.6	2.85	2.15	1.45
25.....	.45	.2	.3	.3	.4	.....	.45	1.75	2.8	2.7	2.0	1.45

Daily gage height, in feet, of Conejos River near Mogote, Colo., for 1899-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
26.	0.45	0.2	0.3	0.4	0.4	0.45	1.85	2.8	2.5	2.0	1.35	1.65
27.	.5	.25	.3	.4	.4	.5	2.0	2.65	2.4	1.85	1.25	1.45
28.	.45	.3	.3	.4	.4	.55	1.95	2.6	2.45	1.85	1.3	1.25
29.	.4	.3	.3	.4		.7	2.0	2.6	2.5	1.8	1.25	1.3
30.	.4	.3	.3	.4		.7	1.75	2.7	2.5	1.75	1.15	1.7
31.	.4		.3	.4		.8		2.8		1.6	1.05	
1911-12.												
1.	2.45							2.4	4.6	3.6	2.55	1.95
2.	2.28							2.6	4.45	3.4	2.5	1.85
3.	1.85							2.55	4.8	3.3	2.55	1.9
4.	1.75							2.2	4.9	3.2	2.2	1.85
5.	4.4						1.25	2.1	4.6	2.85	2.2	1.85
6.							1.2	2.2	4.7	2.8	2.2	1.85
7.							1.35	2.7	4.8	3.0	2.15	1.8
8.							1.4	2.9	4.7	3.4	2.1	1.75
9.							1.3	2.85	4.75	2.9	2.05	1.85
10.							1.6	2.55	4.35	2.85	2.0	1.8
11.							1.3	2.55	4.25	2.9	2.0	1.9
12.							1.3	2.7	3.9	3.05	2.0	1.9
13.							1.1	2.7	3.9	3.05	1.95	1.85
14.							1.15	2.55	3.8	3.05	2.0	1.8
15.							1.1	2.4	4.25	3.6	2.85	1.85
16.							1.1	2.65	3.95	3.2	2.15	1.9
17.							1.1	3.2	3.95	3.05	2.0	1.8
18.							1.1	3.4	3.7	2.9	2.05	1.85
19.							1.1	3.8	3.4	2.9	2.0	1.8
20.							1.1	4.1	3.35	2.85	2.05	1.8
21.							1.0	4.45	3.55	2.9	2.1	1.75
22.							1.0	4.65	3.8	2.95	2.2	1.8
23.							1.2	5.15	3.7	2.85	2.0	1.8
24.							1.5	4.6	3.85	2.8	1.95	1.8
25.							1.6	4.95	3.7	2.75	1.9	1.8
26.							1.4	5.0	3.55	2.75	1.95	1.8
27.							1.5	5.15	3.65	2.75	1.9	1.8
28.							1.5	5.15	3.65	2.7	1.9	1.8
29.							1.8	4.6	3.5	2.7	1.95	1.85
30.							2.2	4.7	3.65	2.6	1.85	1.8
31.							2.2	4.6		2.55	1.95	
1912-13.												
1.				1.75	1.9	2.0		2.85	4.05	2.8	1.7	1.75
2.				1.75	1.95	1.9		2.55	4.05	2.8	1.7	1.65
3.				1.8	1.9	1.9		2.35	3.95	2.8	1.65	1.65
4.				1.8	1.8	2.0		2.4	3.9	2.75	1.6	1.7
5.				1.9	1.9	2.0		2.6	3.9	2.6	1.6	1.8
6.				1.95	1.85	2.0		2.8	3.75	2.5	1.8	1.8
7.				1.9	1.85			2.9	3.65	2.4	1.7	1.8
8.				1.85	1.85			2.9	3.7	2.15	1.8	1.85
9.				1.85	1.9			2.85	3.75	2.35	1.75	1.85
10.				1.85	1.95		2.05	3.0	3.5	2.35	1.65	1.8
11.				1.9	1.9		2.0	3.1	3.5	2.35	1.8	1.75
12.				1.85	1.9		2.0	3.25	3.35	2.3	2.1	1.9
13.				1.9	1.9		2.3	3.25	3.45	2.1	2.05	1.85
14.				1.85	1.95		2.5	3.05	3.05	2.05	2.0	1.75
15.				1.9	1.9		2.6	2.8	3.35	2.05	1.95	1.75
16.				1.85	1.85		2.55	3.15	3.3	2.1	1.8	1.7
17.				1.85	1.85		2.35	3.75	3.3	2.05	1.75	1.7
18.				1.9	1.9		2.1	3.75	3.2	2.0	1.75	1.65
19.				1.9	1.85		2.05	3.85	3.0	2.0	1.8	1.65
20.				1.95	1.85		2.25	3.8	3.0	2.2	1.9	1.65
21.				1.9	1.95		2.3	3.75	3.15	2.3	1.75	1.65
22.				1.9	1.9		2.1	3.85	2.9	2.35	1.8	1.75
23.				1.8	1.85		1.8	3.85	2.95	2.25	1.8	1.9
24.				1.85	1.85		1.5	4.1	3.0	2.3	1.85	1.85
25.				1.85	1.85		1.55	4.3	3.05	2.1	1.8	1.85
26.				1.9	1.85		1.65	4.5	3.15	2.0	1.75	1.9
27.				1.85	2.05		1.85	4.5	3.25	1.8	1.65	1.8
28.				2.4	2.15		2.15	4.3	3.15	1.75	1.75	1.8
29.				2.1	2.2		2.25	3.95	2.9	1.75	1.65	1.85
30.				1.95	2.0		2.8	4.1	2.85	1.8	1.75	1.85
31.				1.95				4.05		1.7	1.7	

NOTE.—Ice present Dec. 7-31, 1907; Nov. 23 to Dec. 31, 1908; Jan. to Mar. 8, 1910; Dec. 1, 1910, to Mar. 11, 1911.

Daily discharge, in second-feet, of Conejos River near Mogote, Colo., for 1903-1913.

Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.
1903.								1903-4							
1.....			730	2,790	1,350	182	137	1.....	167	60	480	515	160	450	515
2.....			810	2,880	955	258	137	2.....	182	105	390	450	160	390	450
3.....			855	2,880	1,000	212	109	3.....	167	60	280	390	120	390	390
4.....			1,270	1,680	1,000	167	137	4.....	167	60	255	280	120	550	360
5.....			1,270	1,940	840	152	137	5.....	167	50	255	255	90	660	305
6.....			1,270	1,860	770	167	167	6.....	167	75	280	255	75	330	305
7.....			1,430	2,790	840	167	343	7.....	152	50	305	305	50	390	255
8.....			1,430	2,280	558	197	291	8.....	137	60	390	450	50	450	205
9.....			1,600	2,020	558	182	167	9.....	137	60	390	480	40	330	205
10.....			1,600	1,680	840	167	167	10.....	137	50	450	360	40	255	160
11.....			1,270	1,860	875	152	152	11.....	123	120	550	360	40	255	160
12.....			1,270	2,020	655	167	197	12.....	167	140	585	450	40	205	120
13.....			1,430	2,020	630	167	167	13.....	167	305	700	360	30	205	120
14.....			1,430	2,200	536	167	167	14.....	123	420	700	390	20	280	90
15.....			1,680	2,110	655	167	137	15.....	109	480	480	360	20	305	90
16.....			2,020	2,200	683	182	123	16.....	123	420	515	420	20	305	90
17.....		205	2,020	3,300	875	258	152	17.....	109	480	515	450	20	255	90
18.....		165	1,770	3,380	630	197	123	18.....	137	480	660	360	10	255	75
19.....		185	955	3,040	536	152	123	19.....	137	480	740	305	20	330	60
20.....		226	805	2,700	453	182	109	20.....	123	450	700	280	20	305	60
21.....		205	875	2,960	558	182	137	21.....	137	450	700	255	40	255	60
22.....		315	683	2,880	558	182	123	22.....	137	255	585	330	40	205	60
23.....		503	710	2,360	493	167	109	23.....	123	280	700	205	40	205	75
24.....		627	740	2,360	514	182	123	24.....	123	205	700	255	60	230	120
25.....		730	740	1,860	536	182	167	25.....	137	280	515	160	90	205	120
26.....	695	1,120	1,940	325	152	152	167	26.....	123	480	480	180	60	230	120
27.....	563	1,200	2,020	308	137	167	167	27.....	123	515	515	205	75	230	90
28.....	563	1,940	1,860	536	137	167	167	28.....	123	660	480	230	120	205	120
29.....	532	1,200	1,940	308	137	167	167	29.....	123	515	480	160	255	205	215
30.....	594	1,520	1,860	308	137	167	167	30.....	109	450	515	140	255	450	1,900
31.....		2,360		308	123			31.....	109		480		180	480	

Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Oct.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.								1904-5							
1.....	1,440	102	1,120	2,690	950	155	155	16.....	515	252	1,610	2,360	480	155	80
2.....	865	25	1,120	3,090	795	330	125	17.....	480	298	1,880	2,060	375	155	60
3.....	660	55	795	3,160	795	352	100	18.....	450	320	2,060	1,940	330	140	70
4.....	550	70	660	3,720	1,080	425	100	19.....	360	398	2,130	1,830	352	125	60
5.....	480	85	600	3,880	1,310	290	112	20.....	305	320	2,240	1,660	425	140	60
6.....	420	85	510	2,180	1,300	330	112	21.....	305	345	2,240	1,510	452	125	60
7.....	865	138	600	3,020	400	330	125	22.....	280	398	2,300	1,410	452	125	60
8.....	865	172	692	3,440	570	310	100	23.....	255	370	2,430	1,510	425	135	60
9.....	1,090	230	795	3,020	425	270	100	24.....	255	320	2,620	1,410	330	125	52
10.....	910	275	692	2,820	510	215	100	25.....	255	320	2,620	1,310	290	185	52
11.....	820	230	630	2,760	510	352	100	26.....	255	370	2,760	1,260	250	155	80
12.....	740	230	630	2,560	452	290	80	27.....	180	480	2,690	1,260	270	155	80
13.....	660	252	795	2,560	425	215	80	28.....	160	600	2,430	1,210	330	140	80
14.....	585	230	870	2,430	425	215	80	29.....	160	725	1,780	1,120	425	170	80
15.....	515	275	1,260	2,560	480	185	80	30.....	160	832	2,000	1,030	375	155	140
								31.....	120		2,300		310	155	

Day.	Oct.	Apr.	May.	June.	Day.	Oct.	Apr.	May.	June.	Day.	Oct.	Apr.	May.	June.
1905-6. ^a					1905-6.					1905-6.				
1.....	125		378	1,300	11.....	45		1,650	3,200	21.....	60		2,500	1,980
2.....	112		353	1,580	12.....	45		1,430	3,200	22.....	60	583	2,420	
3.....	100		353	1,360	13.....	45		1,230	3,290	23.....	80	653	2,240	
4.....	80		618	1,470	14.....	45		1,300	3,030	24.....	100	653	1,730	
5.....	80		690	1,580	15.....	45		1,300	3,120	25.....	100	618	1,450	
6.....	80		709	2,420	16.....	45		1,500	3,120	26.....	80	550	1,170	
7.....	70		728	2,860	17.....	60		1,650	2,940	27.....	80	550	1,170	
8.....	60		1,110	2,680	18.....	60		1,730	2,680	28.....	80	550	1,580	
9.....	60		1,230	2,680	19.....	60		1,980	2,420	29.....	80	378	1,430	
10.....	60		1,580	2,860	20.....	60		1,900	2,240	30.....	80	353	1,230	
										31.....	80		1,170	

^a Estimates for 1906 were computed from records taken by Mr. Antoine Jacob at the gage used by the Geological Survey beginning Mar. 21, 1907.

Daily discharge, in second-feet, of Conejos River near Mogote, Colo., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.												
1.....							200	430	728	2,770	690	430
2.....							200	353	855	2,680	653	403
3.....							200	353	1,170	2,420	618	353
4.....							216	353	1,500	2,160	583	308
5.....							216	353	1,810	2,160	583	268
6.....							232	353	1,980	1,980	518	268
7.....							232	353	1,980	2,330	550	268
8.....							268	353	1,900	1,980	458	268
9.....							308	353	1,580	1,810	458	308
10.....							403	378	1,500	1,900	430	268
11.....							583	488	1,810	1,650	378	268
12.....							728	653	1,980	1,500	353	216
13.....							810	550	2,160	1,580	583	186
14.....							855	488	2,160	2,420	430	172
15.....							900	458	2,330	2,420	378	172
16.....							855	550	2,240	1,500	353	172
17.....							728	769	1,980	1,170	308	172
18.....							728	900	1,980	1,060	308	172
19.....							728	1,170	1,980	1,060	308	200
20.....							728	1,650	1,730	1,000	308	200
21.....						353	728	1,980	1,500	1,110	353	172
22.....						403	430	2,070	1,500	1,000	353	172
23.....						288	403	2,070	1,500	950	308	146
24.....						268	378	1,580	1,810	950	268	146
25.....						268	403	1,230	1,900	1,060	308	146
26.....						268	403	1,230	2,070	855	308	146
27.....						232	403	1,170	2,070	855	268	122
28.....						216	403	1,110	2,240	690	268	122
29.....						200	458	950	2,420	690	268	122
30.....						200	458	810	2,590	728	728	101
31.....						200	200	769	769	653	550	.....
1907-S.												
1.....	101	83	83	.....	.....	.....	92	353	769	728	330	172
2.....	101	83	83	.....	.....	.....	101	488	900	618	458	146
3.....	101	83	101	.....	.....	.....	112	550	1,060	618	403	159
4.....	122	83	101	.....	.....	.....	134	403	1,060	583	330	122
5.....	122	83	83	.....	.....	.....	134	583	1,110	518	288	122
6.....	134	83	83	.....	.....	.....	134	518	1,110	550	250	122
7.....	146	83	83	.....	.....	.....	134	308	950	518	232	101
8.....	122	83	.....	.....	.....	.....	134	430	855	583	250	101
9.....	122	83	.....	.....	.....	.....	134	488	1,300	458	232	101
10.....	122	83	.....	.....	.....	.....	134	403	1,580	403	232	101
11.....	122	83	.....	.....	.....	.....	134	430	1,810	403	250	83
12.....	101	83	.....	.....	.....	.....	134	488	1,580	518	232	83
13.....	101	83	.....	.....	.....	.....	146	353	1,580	458	200	83
14.....	101	68	.....	.....	.....	.....	186	308	1,650	430	250	101
15.....	101	68	.....	.....	.....	146	232	353	1,650	458	288	101
16.....	101	68	.....	.....	.....	146	288	518	1,730	458	268	101
17.....	101	83	.....	.....	.....	146	268	653	1,580	488	518	101
18.....	101	83	.....	.....	.....	159	288	769	1,110	403	330	83
19.....	101	83	.....	.....	.....	146	288	900	900	378	353	83
20.....	101	83	.....	.....	.....	146	250	900	950	353	353	83
21.....	101	83	.....	.....	.....	146	288	728	950	330	403	83
22.....	83	83	.....	.....	.....	134	378	810	950	308	378	83
23.....	83	83	.....	.....	.....	122	403	690	950	430	353	83
24.....	83	83	.....	.....	.....	134	330	583	950	403	268	83
25.....	101	83	.....	.....	.....	134	308	583	950	430	250	268
26.....	101	83	.....	.....	.....	134	288	653	1,230	268	232	200
27.....	101	83	.....	.....	.....	134	268	583	1,230	250	216	172
28.....	101	83	.....	.....	.....	112	250	550	1,110	250	200	146
29.....	101	101	.....	.....	.....	92	288	618	900	232	200	146
30.....	101	101	.....	.....	.....	92	308	690	769	268	200	122
31.....	101	.....	.....	.....	.....	92	.....	810	.....	308	172	.....

Daily discharge, in second-feet, of Conejos River near Mogote, Colo., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	122	83	.....	.....	.....	.....	.....	353	1,230	1,010	222	388
2.....	122	83	.....	.....	.....	.....	.....	378	1,430	1,120	259	413
3.....	122	83	.....	.....	.....	.....	.....	618	1,900	1,060	259	413
4.....	122	83	.....	.....	.....	.....	.....	900	2,420	960	259	440
5.....	101	83	.....	.....	.....	.....	.....	1,500	2,940	910	278	910
6.....	101	83	.....	.....	.....	.....	.....	1,500	3,120	910	319	1,360
7.....	101	83	.....	.....	.....	.....	.....	1,650	2,940	865	341	1,300
8.....	101	83	.....	.....	.....	.....	.....	1,650	2,770	865	298	1,010
9.....	101	83	.....	.....	.....	.....	.....	1,110	2,680	780	278	740
10.....	101	83	.....	.....	.....	.....	.....	1,170	2,590	701	298	662
11.....	101	83	.....	.....	.....	.....	.....	1,110	2,420	662	240	592
12.....	101	83	.....	.....	.....	.....	.....	1,170	2,500	592	240	498
13.....	101	83	.....	.....	.....	.....	.....	1,110	2,330	498	319	528
14.....	101	83	.....	.....	.....	.....	.....	1,230	2,070	413	259	468
15.....	101	83	.....	.....	.....	.....	.....	1,170	1,900	388	240	468
16.....	83	83	.....	.....	.....	.....	.....	1,360	1,900	363	278	413
17.....	92	83	.....	.....	.....	.....	.....	1,500	1,900	341	240	363
18.....	101	83	.....	.....	.....	.....	.....	1,650	2,160	341	259	341
19.....	101	83	.....	.....	.....	.....	.....	1,810	1,980	341	240	319
20.....	101	83	.....	.....	.....	.....	.....	1,500	2,070	341	240	278
21.....	122	83	.....	.....	.....	.....	.....	1,500	2,070	319	240	278
22.....	122	83	.....	.....	.....	.....	.....	1,500	1,900	341	222	278
23.....	122	80	.....	.....	.....	.....	.....	1,170	1,650	341	298	278
24.....	122	80	.....	.....	.....	.....	.....	1,000	1,650	413	341	222
25.....	122	80	.....	.....	.....	.....	330	900	1,580	388	413	222
26.....	101	80	.....	.....	.....	.....	330	1,060	1,360	341	341	190
27.....	83	80	.....	.....	.....	.....	430	1,230	1,300	319	413	190
28.....	83	80	.....	.....	.....	.....	488	1,580	1,110	278	388	147
29.....	83	80	.....	.....	.....	.....	488	1,360	1,110	278	740	147
30.....	83	80	.....	.....	.....	.....	308	1,110	1,060	278	528	134
31.....	83	.....	.....	.....	.....	.....	.....	1,110	.....	222	440	.....
1909-10.												
1.....	120	95	85	.....	.....	50	222	1,180	1,630	278	190	95
2.....	120	85	85	.....	.....	50	222	910	1,630	278	175	95
3.....	120	75	95	.....	.....	50	222	910	1,560	240	161	75
4.....	147	75	95	.....	.....	50	222	1,010	1,490	240	147	75
5.....	190	75	75	.....	.....	50	222	1,120	1,360	240	298	75
6.....	240	75	75	.....	.....	50	259	1,010	1,120	240	259	75
7.....	240	75	75	.....	.....	50	259	960	1,010	222	175	68
8.....	259	75	95	.....	.....	50	298	1,240	910	205	175	60
9.....	190	75	95	.....	.....	75	298	1,360	865	190	175	60
10.....	175	75	95	.....	.....	75	298	1,560	780	175	205	60
11.....	175	75	95	.....	.....	75	298	1,770	740	175	298	60
12.....	175	95	75	.....	.....	108	363	1,920	780	175	298	60
13.....	175	75	75	.....	.....	120	363	1,770	701	175	259	60
14.....	175	75	95	.....	.....	134	319	1,770	627	175	240	60
15.....	175	95	95	.....	.....	161	298	1,490	627	175	190	60
16.....	147	95	75	.....	.....	175	341	1,180	592	161	175	60
17.....	147	95	75	.....	.....	190	341	1,120	560	147	147	60
18.....	147	95	75	.....	.....	190	341	1,180	528	147	147	60
19.....	147	95	75	.....	.....	190	363	960	468	147	147	60
20.....	147	95	75	.....	.....	222	363	960	440	120	147	60
21.....	120	95	75	.....	.....	298	440	910	440	120	120	60
22.....	120	120	75	.....	.....	298	440	865	440	175	120	68
23.....	120	95	75	.....	.....	363	440	740	440	161	161	60
24.....	120	75	75	.....	.....	319	662	701	341	147	134	60
25.....	120	75	75	.....	.....	341	960	740	363	147	120	60
26.....	120	75	60	.....	.....	298	1,120	820	363	134	108	60
27.....	120	75	60	.....	.....	240	1,120	1,010	341	120	95	60
28.....	108	75	75	.....	.....	259	1,300	1,420	319	134	95	54
29.....	108	85	75	.....	.....	259	1,360	1,630	319	120	95	47
30.....	108	95	75	.....	.....	240	1,300	1,840	319	134	108	47
31.....	108	.....	75	.....	.....	222	.....	1,700	.....	222	95	.....

Daily discharge, in second-feet, of Conejos River near Mogote, Colo., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1	47	75	.....	.....	.....	.....	222	560	2,010	1,710	542	290
2	47	75	.....	.....	.....	.....	222	590	2,500	2,500	455	271
3	47	75	.....	.....	.....	.....	240	750	2,500	1,940	428	311
4	47	75	.....	.....	.....	.....	222	835	2,170	1,710	378	271
5	47	75	.....	.....	.....	.....	175	980	2,330	1,710	355	253
6	47	68	.....	.....	.....	.....	175	1,340	2,330	1,370	332	253
7	47	75	.....	.....	.....	.....	147	1,680	2,330	1,900	332	219
8	47	60	.....	.....	.....	.....	175	1,830	2,500	1,120	311	204
9	47	60	.....	.....	.....	.....	175	1,830	3,040	1,010	271	188
10	47	60	.....	.....	.....	.....	175	1,680	2,850	959	253	204
11	47	60	.....	.....	.....	.....	161	1,480	2,500	860	253	188
12	47	60	.....	.....	.....	100	175	1,290	2,330	910	253	188
13	47	60	.....	.....	.....	95	175	1,290	2,170	1,070	271	236
14	47	60	.....	.....	.....	95	161	1,160	2,090	1,120	236	188
15	47	60	.....	.....	.....	108	205	1,160	2,010	959	219	271
16	60	60	.....	.....	.....	95	240	1,290	2,010	959	219	236
17	75	54	.....	.....	.....	85	240	1,550	1,860	959	219	219
18	75	47	.....	.....	.....	85	240	1,550	1,780	910	219	188
19	95	47	.....	.....	.....	85	298	1,500	1,860	1,640	271	253
20	95	47	.....	.....	.....	85	440	1,440	2,010	1,300	219	428
21	85	47	.....	.....	.....	75	498	1,180	2,090	1,240	236	332
22	60	47	.....	.....	.....	75	560	1,070	2,170	1,120	482	290
23	60	47	.....	.....	.....	85	592	1,300	2,010	910	610	290
24	75	47	.....	.....	.....	85	592	1,570	1,940	1,010	455	253
25	85	47	.....	.....	.....	85	627	1,860	1,710	860	455	253
26	85	47	.....	.....	.....	85	701	1,860	1,440	860	403	576
27	95	54	.....	.....	.....	95	820	1,640	1,300	728	355	455
28	85	60	.....	.....	.....	108	780	1,570	1,370	728	378	355
29	75	60	.....	.....	.....	147	820	1,570	1,440	686	355	378
30	75	60	.....	.....	.....	147	627	1,710	1,440	648	311	610
31	75	.....	.....	.....	.....	175	.....	1,860	.....	542	271	.....
1911-12.												
1	1,370	.....	.....	.....	.....	.....	190	665	2,600	1,170	342	95
2	1,070	.....	.....	.....	.....	.....	190	805	2,175	975	315	68
3	728	.....	.....	.....	.....	.....	200	768	2,650	880	342	80
4	648	.....	.....	.....	.....	.....	200	545	2,790	790	180	68
5	4,500	.....	.....	.....	.....	.....	200	490	2,370	525	180	68
6	.....	.....	.....	.....	.....	.....	190	545	2,510	490	180	68
7	.....	.....	.....	.....	.....	.....	222	885	2,650	635	162	55
8	.....	.....	.....	.....	.....	.....	235	1,060	2,510	975	145	48
9	.....	.....	.....	.....	.....	.....	210	1,015	2,580	560	128	68
10	.....	.....	.....	.....	.....	.....	295	768	2,045	525	110	55
11	.....	.....	.....	.....	.....	.....	210	768	1,920	560	110	80
12	.....	.....	.....	.....	.....	.....	210	885	1,500	672	110	80
13	.....	.....	.....	.....	.....	.....	170	885	1,500	635	95	68
14	.....	.....	.....	.....	.....	.....	180	768	1,390	672	110	55
15	.....	.....	.....	.....	.....	.....	170	665	1,920	1,170	525	68
16	.....	.....	.....	.....	.....	.....	170	845	1,560	790	162	80
17	.....	.....	.....	.....	.....	.....	170	1,375	1,560	672	110	55
18	.....	.....	.....	.....	.....	.....	170	1,605	1,280	560	128	68
19	.....	.....	.....	.....	.....	.....	170	2,110	975	560	110	55
20	.....	.....	.....	.....	.....	.....	170	2,530	928	525	128	55
21	.....	.....	.....	.....	.....	.....	155	3,060	1,120	590	145	48
22	.....	.....	.....	.....	.....	.....	155	3,390	1,390	598	180	55
23	.....	.....	.....	.....	.....	.....	190	4,290	1,280	525	110	55
24	.....	.....	.....	.....	.....	.....	265	3,300	1,445	490	95	55
25	.....	.....	.....	.....	.....	.....	295	3,650	1,280	460	80	55
26	.....	.....	.....	.....	.....	.....	235	3,460	1,120	460	95	55
27	.....	.....	.....	.....	.....	.....	265	3,450	1,225	460	80	55
28	.....	.....	.....	.....	.....	.....	265	3,200	1,225	430	80	55
29	.....	.....	.....	.....	.....	.....	365	3,420	1,070	430	95	68
30	.....	.....	.....	.....	.....	.....	545	3,300	1,225	370	68	55
31	.....	.....	.....	.....	.....	.....	.....	2,870	.....	342	95	.....

Daily discharge, in second-feet, of Conejos River near Mogote, Colo., for 1903-1913—
Continued.

Day.	Jan.	Feb.	Oct.	Nov.	Dec.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	48	80	.....	.....	.....	.....	90	458	1,388	430	50	60
2.....	48	95	.....	.....	.....	.....	90	310	1,388	430	50	42
3.....	55	80	.....	.....	.....	.....	90	230	1,292	430	42	42
4.....	55	55	.....	.....	.....	.....	100	250	1,245	405	35	50
5.....	80	80	.....	.....	.....	.....	100	330	1,245	330	35	70
6.....	95	68	.....	.....	.....	.....	100	430	1,110	290	70	70
7.....	80	68	.....	.....	.....	.....	110	485	1,022	250	50	70
8.....	68	68	.....	.....	.....	.....	120	485	1,065	160	70	80
9.....	68	80	.....	.....	.....	.....	120	458	1,110	230	60	80
10.....	68	95	.....	.....	.....	.....	130	547	895	230	42	70
11.....	80	95	.....	.....	.....	.....	115	605	895	230	70	60
12.....	68	80	.....	.....	.....	.....	115	705	778	210	145	90
13.....	80	80	.....	.....	.....	.....	210	705	855	145	130	80
14.....	68	95	.....	.....	.....	.....	290	575	575	130	115	60
15.....	80	80	.....	.....	.....	.....	330	430	778	130	102	60
16.....	68	68	.....	.....	.....	.....	310	638	740	145	70	50
17.....	68	68	.....	.....	.....	.....	230	1,110	740	130	60	50
18.....	80	80	.....	.....	.....	.....	145	1,110	670	115	60	42
19.....	80	68	.....	.....	.....	.....	130	1,200	545	115	70	42
20.....	95	68	.....	.....	.....	.....	192	1,155	545	175	90	42
21.....	80	95	.....	.....	.....	.....	210	1,110	638	210	60	42
22.....	80	80	.....	.....	.....	.....	145	1,200	485	230	70	60
23.....	55	68	.....	.....	.....	.....	70	1,200	515	192	70	90
24.....	68	68	.....	.....	.....	.....	25	1,435	545	210	80	80
25.....	68	68	.....	.....	.....	.....	30	1,635	575	145	70	80
26.....	80	68	.....	.....	.....	.....	42	1,840	638	115	60	90
27.....	68	128	.....	.....	.....	.....	80	1,840	705	70	42	70
28.....	205	162	.....	.....	.....	.....	160	1,635	638	60	60	70
29.....	145	180	.....	.....	.....	.....	192	1,292	485	60	42	80
30.....	95	110	.....	.....	.....	.....	430	1,435	458	70	60	80
31.....	95	.....	.....	.....	.....	.....	.....	1,388	.....	50	50	.....

NOTE.—Daily discharge for 1903 computed from fairly well-defined rating curves. Daily discharge for 1904 computed from a fairly well defined rating table. Daily discharge for 1905 computed from a rating curve fairly well defined below 1,400 second-feet but somewhat uncertain above. Daily discharges for 1907 and 1908 are computed from a rating curve well defined below 2,400 second-feet but somewhat uncertain above. Daily discharges for 1909 are computed from two fairly well defined rating curves. Daily discharges for 1910 are computed from a fairly well defined rating curve. Discharge Apr. 1-9, 1913, estimated.

Monthly discharge of Conejos River near Mogote, Colo., for 1903-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
April 17-30.....	730	165	436	12,100	.....
May.....	2,360	683	1,290	79,400	.....
June.....	3,380	1,680	2,320	138,000	.....
July.....	1,350	308	645	39,700	.....
August.....	258	123	173	10,600	.....
September.....	343	109	157	9,340	.....
The period.....	.....	.....	.....	289,000	.....
1903-4.					
October.....	182	109	138	8,480	.....
April.....	660	50	283	16,800	.....
May.....	740	255	509	31,300	.....
June.....	515	140	320	19,000	.....
July.....	255	10	76.1	4,680	.....
August.....	660	205	316	19,400	.....
September.....	1,900	60	233	13,900	.....

Monthly discharge of Conejos River near Mogote, Colo., for 1903-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904-5.					
October.....	1,440	120	515	31,700	.....
April.....	832	25	297	17,700	.....
May.....	2,760	510	1,544	94,900	.....
June.....	3,880	1,030	2,226	132,000	.....
July.....	1,360	250	528	32,500	.....
August.....	425	125	213	13,100	.....
September.....	155	52	87.4	5,200	.....
1905-6. ^a					
October.....	125	45	71.5	4,400	.....
April 22-30.....	653	353	543	9,690	A.
May.....	2,500	353	1,340	82,400	A.
June 1-21.....	3,290	1,300	2,480	103,300	B.
1907.					
March 21-31.....	403	200	263	5,740	A.
April.....	900	200	486	28,900	A.
May.....	2,070	353	848	52,100	A.
June.....	2,590	728	1,830	109,000	A.
July.....	2,770	653	1,520	93,500	A.
August.....	728	268	427	26,300	A.
September.....	430	101	216	12,900	B.
The period.....				328,000	
1907-8.					
October.....	146	83	106	6,520	C.
November.....	101	68	82.7	4,920	D.
December.....			75.0	4,610	D.
March 15-31.....	159	92	130	4,380	C.
April.....	403	92	219	13,000	B.
May.....	900	308	564	34,700	A.
June.....	1,810	769	1,170	69,600	A.
July.....	728	232	432	26,600	A.
August.....	518	172	288	17,700	A.
September.....	268	83	118	7,020	C.
1908-9.					
October.....	122	83	103	6,330	C.
November.....	83	80	82.2	4,890	D.
April 25-30.....	488	308	396	4,710	B.
May.....	1,810	353	1,220	75,000	B.
June.....	3,120	1,060	2,000	119,000	B.
July.....	1,120	222	548	33,700	B.
August.....	740	222	314	19,300	B.
September.....	1,360	134	466	27,700	B.
1909-10.					
October.....	259	108	151	9,280	C.
November.....	120	75	84.5	5,030	C.
December.....	95	60	79.8	4,910	D.
January.....			658.0	3,570	D.
February.....			650.0	2,780	D.
March.....	363	50	169	10,400	C.
April.....	1,360	222	502	29,900	A.
May.....	1,920	701	1,220	75,000	A.
June.....	1,630	319	737	43,900	A.
July.....	278	120	178	10,900	A.
August.....	298	95	171	10,500	A.
September.....	95	47	63.8	3,800	B.
The year.....	1,926		289	210,000	
1910-11.					
October.....	95	47	63.2	3,890	B.
November.....	75	47	59.0	3,510	B.
December.....			60.0	3,690	C.
January.....			654.8	3,370	C.
February.....			644.9	2,490	C.
March.....	175		60.8	4,970	B.
April.....	820	147	363	21,600	A.
May.....	1,860	560	1,390	85,500	A.
June.....	3,040	1,300	2,070	123,000	A.
July.....	2,500	542	1,140	70,100	A.
August.....	610	219	334	20,500	A.
September.....	610	188	288	17,100	A.
The year.....	3,040		496	360,000	

^a Values of accuracy for 1906 are based on the assumption that the stream bed remained permanent, as the rating used is based on measurements made in 1907 and 1908.

^b Estimated.

Monthly discharge of Conejos River near Mogote, Colo., for 1903-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October 1-5.....	4,500	648	1,660	16,500	A.
January.....			a 76	4,680	.....
February.....			a 55	3,140	.....
March.....			a 91	5,600	.....
April.....	545	155	222	13,200	.....
May.....	4,290	490	1,850	114,000	.....
June.....	2,790	928	1,726	103,000	.....
July.....	1,170	342	628	38,600	.....
August.....	525	68	155	9,510	.....
September.....	95	48	63.1	3,750	.....
1912-13.					
October.....	265	48	81.7	5,020	.....
November.....	180	55	85.9	5,110	.....
April 11-30.....	430	25	171	7,123	.....
May.....	1,840	230	910	55,954	.....
June.....	1,388	458	819	48,734	.....
July.....	430	50	197	12,113	.....
August.....	145	35	67	4,120	.....
September.....	90	42	65	3,868	.....

^a Estimated.

NOTE.—Estimate for December, 1907, revised since being published originally. Daily discharge estimated November 23 to 30, 1908. Estimates for January, February, and March 1-8, 1910, are based on two discharge measurements made during that period. Estimates for December, 1910, and January, February, and March 1-11, 1911, are based on three discharge measurements made during that period. Estimates for January, February, and March, 1912, are based on two discharge measurements made during that period. The State engineer of Colorado estimated the discharge for January, February, and March, 1913, at 43 second-feet, 44 second-feet, and 56 second-feet, respectively.

RIO SAN ANTONIO NEAR ORTIZ, COLO.

Location.—At the lower San Antonio ranger station in the Carson National Forest, in sec. 1, T. 30 N., R. 7 E.; nearest tributary a small stream entering from the south just above the station; Nutritus Creek enters 2 miles above.

Records available.—June 16, 1911, to November 27, 1911.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater during the winter months and the records are discontinued.

Diversions.—Four small diversions above the station.

Accuracy.—Owing to lack of discharge measurements, estimates of flow can not be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service.

The following discharge measurement was made by H. B. Waha:
June 16, 1911: Gage height, 1.10 feet; discharge, 8.5 second-feet.

Daily gage height, in feet, of Rio San Antonio near Ortiz, Colo., for 1911.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Day.	June.	July.	Aug.	Sept.	Oct.	Nov.
1.....		1.0	1.1			1.0	16.....	1.1	1.1		0.8		
2.....		1.1	1.0	1.1		1.0	17.....	1.1	1.1				1.1
3.....		1.1	1.0	.0	0.8		18.....	1.1	1.15		.8		1.1
4.....			1.0	.4	.8	1.0	19.....	1.1	1.15		.8		1.0
5.....		1.0	1.0	.8			20.....	1.0	1.0		.8		1.0
6.....		1.05	.0	.8			21.....	1.0	1.0				1.1
7.....		1.05	.0	.8			22.....		1.05				
8.....		1.0	.0	.82			23.....	1.0	1.15			0.0	
9.....		1.0	.0	.8			24.....	1.0	1.25				
10.....		1.1	.0				25.....	1.0	1.25		.8	1.0	1.2
11.....		1.1	.0				26.....	.0	1.2		.8	1.1	1.1
12.....		1.1	.0				27.....	.5	1.2		.8	1.1	1.1
13.....		1.55	.0				28.....	.5	1.15		.8	1.1	
14.....		1.35				1.1	29.....	.0	1.1		.8		
15.....		1.1					30.....	1.0	1.1		.8	1.1	
							31.....		1.1			1.0	

COSTILLA CREEK BASIN.

GENERAL FEATURES.

Costilla Creek rises on the western slope of the Sangre de Cristo Range (locally known as the Costilla Mountain) in the Sangre de Cristo grant, Taos County, N. Mex.; it first flows southward, then, making a sharp turn, flows northwest, entering Colorado near Costilla; at Eastdale it turns to the southwest, again crosses into New Mexico, and joins the Rio Grande a few miles south of the Colorado-New Mexico line. It has no important tributaries and sends no water to the Rio Grande except during the spring high stage and after heavy rains.

The upper part of the drainage area comprises the western slope of the Sangre de Cristo Mountains from which the greater part of the water supply is derived. The lower and by far greater part of the area is included in the Cerro Mesa, a smooth tract of land at a general elevation of 8,000 feet above sea level.

Precipitation in the Costilla basin decreases from 23 inches or more at the crest of the Sangre de Cristo Mountains to 13 inches or less at the mouth.

GAGING STATION RECORDS.

COSTILLA CREEK NEAR MOUTH, N. MEX.

Location.—In sec. 5, T. 1 S., R. 74 W., a mile or more above the mouth, on the Questa road, and 7 miles from the State bridge.

Records available.—April 23, 1912, to September 30, 1913.

Drainage area.—Not measured.

Cooperation.—Station is maintained and complete records are furnished by the United States Reclamation Service.

Discharge measurements of Costilla Creek near mouth, New Mexico, in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 23	French and Schenfeldt		a 8	May 14	French and Schenfeldt	5.05	127
27	do	4.25	16.8	17	French and Norega	5.30	137
30	do	5.15	117	22	do	5.92	326
May 2	French and Norega	5.85	238	27	do	5.55	217
5	French and Ortega	5.00	104	June 2	French and Ortega	5.45	199
8	French and Norega	5.30	153	6	do	5.85	293
10	do	5.20	154	14	French and Davidson	5.25	169

a Estimated.

Daily gage height, in feet, of Costilla Creek near mouth, New Mexico, for 1912.

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1.		5.5	5.1	4.7	16.		5.05	5.05	
2.		5.7	5.45	4.6	17.		5.3	5.3	
3.		5.5	5.45	4.4	18.		5.4	5.2	
4.		5.1	5.5	4.4	19.		5.5	5.15	
5.		5.0	5.6	4.35	20.		5.6	5.0	
6.		5.1	5.75	4.1	21.		5.8	4.9	
7.		5.3	6.0	4.0	22.		5.95	4.9	
8.		5.2	5.9		23.		6.0	5.05	
9.		5.4	5.9		24.		6.0	5.3	
10.		5.2	5.85		25.		5.1	5.2	
11.		5.15	5.6		26.		5.55	5.1	
12.		5.15	5.65		27.	4.25	5.55	5.0	
13.		5.1	5.5		28.	4.7	5.7	4.95	
14.		5.1	5.2		29.	4.9	5.6	4.9	
15.	4.9	5.2			30.	5.3	5.65	4.85	
					31.		5.1		

NOTE.—No flow after July 7.

Daily discharge, in second-feet, of Costilla Creek near mouth, New Mexico, for 1912.

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1.		198	126	69	16.		118	118	
2.		245	188	56	17.		160	160	
3.		198	188	34	18.		178	143	
4.		126	198	34	19.		198	134	
5.		110	220	29	20.		220	110	
6.		126	258	7	21.		273	96	
7.		160	344	.3	22.		324	96	
8.		143	306		23.		344	118	
9.		178	306		24.		344	160	
10.		143	288		25.		126	143	
11.		134	220		26.		209	126	
12.		134	232		27.	20	209	110	
13.		126	198		28.	69	245	103	
14.		126	143		29.	96	220	96	
15.	96	143	143		30.	160	232	89	
					31.		126		

NOTE.—No flow after July 7, 1912, nor from May 1 to Sept. 30, 1913.

Monthly discharge of Costilla Creek near mouth, New Mexico, for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
Apr. 27-30	160	20	86.2	684
May	344	110	186	11,400
June	344	89	172	10,200
July 1-7	69	.3	32.7	454

NOTE.—The above results have been changed slightly to conform to the computation rules of the United States Geological Survey. No flow May 1 to Sept. 30, 1913.

RIO COLORADO¹ BASIN.

GENERAL FEATURES.

Rio Colorado drains an area lying on the western slope of the Sangre de Cristo Mountains in northern New Mexico. It rises in the southeastern corner of T. 28 N., R. 14 E., at an elevation of nearly 10,000 feet above sea level, flows north for a distance of 6 miles, then turns and flows in a general westerly course to its junction with the Rio Grande, in sec. 17, T. 28 N., R. 12 E. Its principal tributaries are Bitter and Cabresto creeks from the north and Goose, Placer, Pioneer, and Columbine creeks from the south.

Above Questa the country is mountainous, with elevations ranging from 8,000 feet at Questa to more than 10,000 feet at the divide. In this section the tributaries flow through narrow valleys, though the valley of the Colorado itself has gently sloping sides. Below Questa and north of the river the basin includes the southern end of a large smooth mesa known as Cerro Mesa, but south of the Colorado the surface is more broken.

The mean annual precipitation in the upper part of the drainage basin, on the western slope of the mountain range, is 24 inches or more; at the mouth of the river, on the mesa, it is about 13 inches.

W. W. Follett, in his report on the "Distribution of waters of the Rio Grande," states that irrigation is carried on extensively in the southern portion of the Cerro Mesa, in the vicinity of Questa. There are no reservoirs in operation in the basin of the Rio Colorado.

GAGING STATION RECORDS

RIO COLORADO ABOVE QUESTA, N. MEX.

Location.—Five miles above Questa, in Taos County, and about 5 miles above Cabresto Creek, the nearest tributary, near sec. 2, T. 28 N., R. 13 E.

Records available.—April 5, 1910, to September 4, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Vertical staff; table of gage heights for 1910 refer to a gage at a different datum and location.

Channel.—Apparently permanent.

Discharge measurements.—Made by wading.

Winter flow.—No information available.

Diversions.—No data.

Accuracy.—Owing to the small number of gage heights, satisfactory estimates can not be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

¹ Also known as Red River.

Discharge measurements of Rio Colorado above Questa, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 13	.....	.....	21.0	Jan. 27	G. H. Russell.....	0.50	11.2
Oct. 14 ^a	J. B. Stewart.....	0.61	20.4	Mar. 8	.....do.....	.65	16.5
Dec. 14 ^b	Russell and Digby.....	.60	15.5	Apr. 20	.....do.....	1.05	46.6
				June 13	H. B. Waha.....	2.10	188.

^a Measurement made 3 miles above Questa.

^b Measurement made 5 miles above Questa.

Daily gage height, in feet, of Rio Colorado above Questa, N. Mex., for 1910-11.

Day.	Apr.	July.	Aug.	Sept.	Oct.	Day.	Apr.	July.	Aug.	Sept.	Oct.
1910.						1910.					
1.....	.....	.....	0.66	0.66	0.49	16.....	1.10	.....	0.66	0.56	.....
2.....	.....	.....	.66	.61	.49	17.....	1.15	.....	.61	.51	.....
3.....	.....	.....	.71	.61	.49	18.....	1.15	.....	.61	.46	.....
4.....	.....	.....	.71	.61	.49	19.....	1.20	.....	.86	.51	.....
5.....	0.95	.....	1.26	.56	.49	20.....	1.20	.....	.76	.53	.....
6.....	.95	.....	.96	.56	.49	21.....	1.25	.....	.76	.51	.....
7.....	1.00	.....	.66	.53	.49	22.....	1.25	.....	.76	.61	.....
8.....	1.00	.....	.66	.51	.49	23.....	1.35	.....	1.16	.52	.....
9.....	1.00	.....	.66	.51	.48	24.....	1.45	.....	1.06	.49	.....
10.....	1.00	.....	.66	.53	.48	25.....	1.65	.....	.96	.51	.....
11.....	1.00	.....	.66	.51	.48	26.....	1.70	.....	.76	.50	.....
12.....	1.05	.....	.76	.51	.48	27.....	1.85	.....	.71	.49	.....
13.....	1.25	.....	.71	.51	.48	28.....	1.90	0.56	.66	.48	.....
14.....	1.20	.....	.71	.51	.48	29.....	.....	.56	.61	.49	.....
15.....	1.10	.....	.66	.51	.....	30.....	.....	.66	.61	.49	.....
						31.....	.....	.66	.66	.....	.....

NOTE.—Gage heights are referred to datum of gage established in March by one of Field, Fellows & Hinderlider's engineers.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.									
1.....	0.2	0.2	.....	1.15	2.1	.....	.....	.....
2.....	1.8	.....	.....
3.....2	.....	.....	.....	.....	1.8	.....	.....
4.....	1.5	.....	1.1
5.....	1.8	.....	.....
6.....	1.9	.....	.....
7.....	1.6	.....	.....
8.....4	.65	.....	.....	.....	.....	.....	.....
9.....
10.....	0.6	.....	.....	1.8	.....	.....
11.....
12.....	1.4	.....	.....
13.....	1.2	2.1	1.4	.....
14.....3	.....	2.05	.....	.....
15.....3	.....	.....	.....	.....
16.....	1.4	.....
17.....
18.....3	.4	.....	.....	.....	.....	.....	.....
19.....3	.....	.....	.....	.....	.....	.....	.....
20.....	1.05	.....	1.9	1.5	-0.05
21.....
22.....9	1.8	.....	.....	.....
23.....	1.9	.....	.....	.....
24.....	1.0	1.7	.....	.....
25.....	2.0	1.55	1.3	.....
26.....	1.7	.....	1.2
27.....	0.5	.4	.....	.....	.....	1.3	.....	1.2
28.....	1.0
29.....	2.2	1.6	.....	.....
30.....
31.....

NOTE.—Gage reader reported a shift in the channel during the first part of August.

RIO COLORADO NEAR QUESTA, N. MEX.

Location.—Two miles above Questa, $1\frac{1}{2}$ miles above the mouth of Cabresto Creek, half a mile above the Eagle Rock ranger station of the United States Forest Service, near sec. 33, T. 29 N., R. 13 E.

Records available.—October 6, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Chain gage.

Channel.—Subject to shift during high water; permanent at medium and low stages.

Discharge measurements.—Made by wading.

Winter flow.—Backwater from ice during the winter months.

Diversions.—No diversions of consequence above this station. The discharge approximates the natural run-off at this point.

Cooperation.—Maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Rio Colorado near Questa, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 6	Gray and Powers.....	0.85	35.7	Feb. 18 ^a	J. E. Powers.....		19.6
Nov. 2	J. E. Powers.....	.70	17.9	Mar. 30 ^a	.....do.....		23.0
Dec. 14	.....do.....	.65	16.5	May 1	.....do.....	1.55	71.7
				June 1	.....do.....	1.88	132.0
1913.				July 1	.....do.....	1.40	70.9
Jan. 21 ^a	.....do.....		22.3	Aug. 24	.....do.....	1.00	30.7

^a Ice present.

Daily gage height, in feet, of Rio Colorado near Questa, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....		0.74	0.70					1.55	1.9	1.45		0.9
2.....		.70	.75					1.55		1.05		
3.....			.80				0.85	1.55	1.8	1.25		.85
4.....			.70	.75			.85	1.5	1.7		1.05	
5.....							.85	1.5		1.25	1.0	.85
6.....	.85	.75	.60					1.55	1.7	1.25		
7.....	.95	.80									.95	.8
8.....		.80	.65					1.7				
9.....		.83	.62					1.95		1.25		
10.....	.95	.83	.60							1.25	.9	.8
11.....	.95	.83	.67					1.75	1.8			
12.....	.94	.80	.80							1.25	.9	
13.....	.92	.80						1.8		1.2		.85
14.....		.77	.65					1.8	1.6	1.1	.9	.8
15.....		.70	.80					1.75				
16.....		.80	.70							1.1		.85
17.....		.80	.70					1.8				
18.....		.80						1.8	1.7	1.1		
19.....	.90										1.0	
20.....	.90	.77						1.75		1.15	1.0	
21.....	.90	.77								1.15	1.0	
22.....		.75						1.7	1.7			.85
23.....		.80										1.1
24.....		.80						1.7			1.0	
25.....		.80						1.75	1.6			
26.....		.80								1.2		1.0
27.....	.87	.80						1.9		1.15		
28.....	.87	.77						2.0	1.5		.95	.9
29.....		.75						1.35	2.05	1.5	1.15	
30.....	.87	.70						1.55	2.0	1.45	.9	
31.....										1.1		

NOTE.—Gage heights affected by ice Dec. 18, 1912, to Mar. 2, 1913.

Daily discharge, in second-feet, of Rio Colorado near Questa, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....		21	18				23	72	133	77	37	26
2.....		18	22				23	72	125	68	34	25
3.....		18	28				24	72	118	58	34	23
4.....		18	22				24	67	106	58	34	23
5.....		20	19				24	67	106	58	32	23
6.....	36	22	16				26	72	106	58	30	22
7.....	56	28	16				30	80	108	58	29	22
8.....	56	28	16				32	87	110	58	29	22
9.....	56	32	16				34	119	112	58	28	22
10.....	56	32	16				36	107	114	58	26	22
11.....	56	32	17				40	95	118	56	26	22
12.....	54	28	28				42	98	110	54	26	23
13.....	49	28	22				44	102	102	50	26	24
14.....	49	24	16				46	102	94	44	26	22
15.....	48	18	28				48	98	97	44	26	23
16.....	47	28	18				50	102	100	44	27	24
17.....	46	28	18				52	107	103	44	28	24
18.....	45	28	18				54	108	106	44	30	24
19.....	45	26	18				56	105	106	46	32	24
20.....	45	24	18				58	103	106	47	32	24
21.....	45	24	18				60	100	106	44	31	24
22.....	44	22	18				62	98	106	45	31	24
23.....	43	28	18				62	99	102	45	30	41
24.....	42	28	18				60	101	98	46	30	39
25.....	41	28	18				60	107	94	46	30	37
26.....	40	28	20				58	119	90	47	29	35
27.....	39	28	20				56	131	86	44	28	32
28.....	39	24	20				56	146	82	44	28	30
29.....	39	22	20				54	155	82	44	27	30
30.....	39	18	20				72	148	77	42	26	30
31.....	30		20					140		40	26	

NOTE.—Daily discharge determined from two well-defined curves and by the indirect method for shifting channels. Discharge estimated or interpolated on days of no gage height except Jan. 1 to Mar. 31, 1913.

Monthly discharge of Rio Colorado near Questa, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October.....	56	30	45.6	2,350	A.
November.....	32	18	25.0	1,490	A.
December.....	28	16	19.4	1,190	B.
January.....			α 20.0	1,230	C.
February.....			α 20.0	1,110	C.
March.....			α 22.0	1,350	C.
April.....	72	23	45.5	2,710	C.
May.....	155	67	102	6,270	B.
June.....	133	77	103	6,130	B.
July.....	77	40	50.6	3,110	B.
August.....	37	26	29.3	1,800	B.
September.....	41	22	26.2	1,560	B.
The year.....	155		42.4	30,300	

α Estimated from discharge measurements on account of ice.

RIO COLORADO BELOW QUESTA, N. MEX.

Location.—Two miles below Questa, at the head of Lower Canyon, near sec. 1, T. 28 N., R. 12 E., below all important tributaries, the nearest one above being Cabresto Creek.

Records available.—April 8, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Shifting during high water.

Discharge measurements.—Made by wading or from car and cable,

Winter flow.—Slightly affected by ice during December and January of each year.

Diversions.—There are no diversions below, but, for several miles above, diversions are made for irrigation.

Accuracy.—Owing to radical changes in the stream bed, estimates of discharge were not made in 1910 and 1911. The estimates made during the first part of 1912 can not be considered better than fair, but those thereafter can be rated as good.

Cooperation.—Station maintained in cooperation with the United States Reclamation Service and the State engineer.

Discharge measurements of Rio Colorado below Questa, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.				1912.			
Apr 8	J. B. Stewart.....	1.52	80	Apr. 27	W. B. Freeman	3.67	66.2
July 13	.....do.....	1.48	45.6	Sept. 21	R. L. Cooper.....	3.40	41.2
Sept. 12	C. D. Miller.....	1.17	26.5	Oct. 6	Gray and Powers.....	3.55	49.9
Oct. 14	J. B. Stewart.....	1.18	25.2	Nov. 2	J. E. Powers.....	3.30	25.2
Dec. 14	C. B. Digby.....	1.14	25.8	Dec. 14	.....do.....	3.30	31.7
1911.				1913.			
Jan. 27	G. H. Russell.....	2.16	25.8	Jan. 22	J. E. Powers.....	3.22	19.9
Mar. 8	.....do.....	2.24	30.5	Feb. 18	.....do.....	3.34	26.4
Apr. 20	.....do.....	2.50	54.1	Mar. 30	.....do.....	3.30	27.3
June 7	R. L. Cooper.....	3.10	209	Apr. 30	.....do.....	3.96	89.0
1912.				May 31	.....do.....	4.20	130
Apr. 23	W. B. Freeman.....	3.48	46.4	July 1	.....do.....	3.90	71.4
				Aug. 24	.....do.....	3.50	32.1

Daily gage height, in feet, of Rio Colorado below Questa, N. Mex., for 1910-1913.

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1910.					1910.				
1.....		2.4	1.9	1.4	16.....	1.6	2.25	1.7	.....
2.....		2.3	1.9	1.3	17.....	1.6	2.2	1.6	.....
3.....		2.3	1.9	1.35	18.....	1.65	2.15	1.55	.....
4.....		2.3	2.0	1.3	19.....	1.65	2.1	1.5	.....
5.....		2.3	1.9	1.3	20.....	1.7	2.0	1.5	.....
6.....		2.25	1.9	1.3	21.....	1.85	1.9	1.5	.....
7.....		2.2	1.9	1.25	22.....	1.8	1.95	1.45	.....
8.....	1.5	2.2	1.8	1.2	23.....	1.9	1.9	1.4	.....
9.....	1.55	2.3	1.8	1.2	24.....	2.0	1.75	1.4	.....
10.....	1.5	2.3	1.7	.....	25.....	2.3	1.7	1.4	.....
11.....	1.6	2.3	1.7	.....	26.....	2.4	1.65	1.45	.....
12.....	1.6	2.3	1.7	.....	27.....	2.35	1.8	1.5	.....
13.....	1.7	2.45	1.6	.....	28.....	2.45	1.75	1.5	.....
14.....	1.6	2.45	1.6	.....	29.....	2.55	1.9	1.4	.....
15.....	1.6	2.35	1.55	.....	30.....	2.5	1.9	1.4	.....
					31.....	.....	2.0	.....	.....

Daily gage height, in feet, of Rio Colorado below Questa, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1		1.1	1.1		2.2	2.1	2.5	3.1	3.2	2.8		2.5
2		1.1	1.1		2.3	2.35	2.6	3.1	3.25	2.8		2.4
3		1.1	1.1		2.15	2.35	2.6	3.1	3.25	2.8		2.45
4		1.1	1.1	2.2	2.15	2.3	2.5	3.1	3.25	2.8		2.45
5		1.1	1.1	2.15	2.2	2.3	2.5	3.2	3.2	2.8		2.4
6		1.1	1.1	2.15	2.15	2.3	2.5	3.45	3.15	2.8		2.4
7		1.1	1.05	2.15	2.3	2.3	2.5	3.65	3.15	2.75	2.5	2.4
8		1.1	1.05	2.2	2.1	2.3	2.45	3.65	3.15	2.7	2.4	2.4
9		1.1	1.05	2.1	2.1	2.3	2.4	3.7	3.15	2.7	2.4	2.45
10		1.1	1.05	2.15	2.15	2.3	2.5	3.7	3.15	2.65	2.35	2.4
11		1.1	1.1	2.3	2.15	2.4	2.5	3.6	3.15	2.6	2.3	2.4
12		1.1	1.1	2.3	2.3	2.4	2.5	3.45	3.05	2.65	2.3	2.4
13		1.1	1.1	2.4	2.2	2.4	2.5	3.35	3.05	2.65	2.35	2.35
14	1.2	1.1	1.1	2.3	2.2	2.35	2.4	3.4	3.0	2.65	2.3	2.3
15	1.2	1.1	1.0	2.25	2.2	2.2	2.4	3.45	3.0	2.65	2.3	2.4
16	1.2	1.1	1.05	2.25	2.2	2.25	2.45	3.5	3.0	2.65	2.3	2.35
17	1.2	1.1	1.0	2.25	2.3	2.3	2.5	3.45	3.0	2.65	2.4	2.3
18	1.2	1.1	1.0	2.35	2.2	2.3	2.5	3.45	2.95	2.6	2.4	2.3
19	1.2	1.1	1.0	2.2	2.15	2.3	2.5	3.4	2.9	2.6	2.35	2.3
20	1.1	1.1	1.0	2.2	2.15	2.3	2.5	3.25	2.9	2.6	2.3	2.4
21	1.1	1.1	1.0	2.2	2.15	2.4	2.6	3.2	2.9	2.7	2.3	2.3
22	1.1	1.1	1.0	2.2	2.05	2.4	2.7	3.05	2.85	2.6	2.45	2.3
23	1.2	1.1	1.0	2.3	2.0	2.4	2.8	3.05	2.85	2.7	2.7	2.3
24	1.2	1.1	1.0	2.1	2.0	2.4	2.9	3.05	2.8	2.8	2.65	2.3
25	1.2	1.1	1.05	2.1	2.15	2.3	2.95	3.05	2.75	2.7	2.8	2.3
26	1.15	1.1	1.1	2.1	2.15	2.25	2.95	3.15	2.75	2.75	2.65	2.3
27	1.1	1.1	1.05	2.1	2.25	2.2	3.0	3.25	2.75	2.7	2.6	2.3
28	1.1	1.1	1.05	2.2	2.15	2.3	3.1	3.2	2.7	2.7	2.55	2.3
29	1.1	1.1	1.05	2.2		2.3	3.1	3.15	2.7	2.75	2.5	2.3
30	1.1	1.1	1.05	2.2		2.4	3.1	3.1	2.7	2.75	2.5	2.5
31	1.1		1.0	2.2		2.5		3.1		2.7	2.5	
1911-12.												
1	2.5	3.9	3.45	3.45	3.40	3.35	3.40	4.20	4.30	3.05	3.40	3.60
2	2.4	3.9	3.55	3.40	3.40	3.40	3.35	4.35	4.35	3.05	3.35	3.60
3	2.4	3.8	3.55	3.40	3.45	3.40	3.40	4.40	4.25	3.10	3.35	3.60
4	2.45	3.8	3.55	3.40	3.45	3.40	3.40	4.30	4.50	3.25	3.30	3.60
5	4.0	3.8	3.6	3.45	3.40	3.40	3.50	4.20	5.15	3.35	3.25	3.55
6	5.05	3.8	3.6	3.50	3.45	3.40	3.60	4.20	5.15	3.55	3.25	3.55
7	5.25	3.8	3.6	3.55	3.45	3.40	3.60	4.35	5.15	3.55	3.25	3.55
8	4.95	3.8	3.6	3.55	3.45	3.40	3.60	4.45	5.10	3.55	3.20	3.55
9	4.7	3.8	3.6	3.55	3.40	3.40	3.60	4.50	5.10	3.45	3.20	3.50
10	4.75	3.8	3.6	3.55	3.40	3.40	3.60	4.40	4.80	3.45	3.20	3.45
11	4.7	3.8	3.6	3.55	3.40	3.40	3.60	4.40	4.75	3.45	3.20	3.45
12	4.7	3.55	3.45	3.60	3.40	3.40	3.70	4.35	4.20	3.50	3.20	3.45
13	4.6	3.7	3.45	3.45	3.40	3.40	3.60	4.30	3.80	3.45	3.20	3.45
14	4.45	3.7	3.4	3.50	3.35	3.40	3.60	4.30	3.50	3.45	3.25	3.45
15	4.35	3.7	3.4	3.50	3.40	3.30	3.60	4.25	3.40	3.55	3.30	3.45
16	4.25	3.7	3.45	3.50	3.35	3.35	3.60	4.30	3.35	3.55	3.35	3.45
17	4.2	3.7	3.45	3.50	3.35	3.40	3.60	4.45	3.35	3.55	3.40	3.45
18	4.2	3.7	3.55	3.50	3.40	3.40	3.60	4.50	3.25	3.50	3.35	3.45
19	4.2	3.7	3.6	3.50	3.40	3.40	3.60	4.50	3.15	3.45	3.35	3.40
20	4.15	3.7	3.55	3.50	3.35	3.55	3.60	4.55	2.95	3.45	3.40	3.40
21	4.1	3.7	3.5	3.35	3.25	3.50	3.60	4.75	3.00	3.45	3.65	3.40
22	4.1	3.7	3.5	3.40	3.30	3.50	3.60	5.20	3.00	2.95	3.70	3.40
23	4.1	3.7	3.45	3.45	3.35	3.50	3.60	5.00	3.20	2.90	3.60	3.40
24	4.05	3.55	3.55	3.45	3.35	3.45	3.60	5.05	3.05	3.00	3.60	3.40
25	4.05	3.55	3.6	3.50	3.35	3.40	3.65	5.60	3.00	3.25	3.55	3.40
26	4.0	3.6	3.4	3.45	3.30	3.40	3.70	5.40	2.95	3.60	3.55	3.40
27	4.05	3.65	3.25	3.50	3.35	3.40	3.70	5.25	3.00	3.55	3.50	3.45
28	4.0	3.4	3.35	3.50	3.35	3.40	3.70	4.50	3.10	3.50	3.55	3.40
29	4.0	3.4	3.5	3.45	3.30	3.40	3.80	4.45	3.05	3.50	3.60	3.45
30	3.95	3.4	3.55	3.35		3.40	3.90	4.45	3.10	3.45	3.60	3.45
31	3.9		3.35	3.40		3.40		4.35		3.45		

Daily gage height, in feet, of Rio Colorado below Questa, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	3.50	3.35	3.28	3.25	3.30	3.20	3.32	4.02	4.18	3.85	3.50	3.38
2.....	3.50	3.32	3.25	3.20	3.30	3.20	3.38	4.08	4.15	3.82	3.50	3.35
3.....	3.50	3.35	3.25	3.25	3.28	3.30	3.38	4.08	4.15	3.78	3.48	3.32
4.....	3.50	3.35	3.20	3.28	3.25	3.30	3.35	4.08	4.15	3.75	3.48	3.32
5.....	3.70	3.35	3.28	3.10	3.25	3.30	3.38	4.08	4.10	3.72	3.45	3.30
6.....	3.58	3.35	3.20	3.20	3.28	3.30	3.40	4.10	4.05	3.70	3.45	3.32
7.....	3.52	3.35	3.10	3.22	3.28	3.30	3.45	4.15	4.05	3.70	3.45	3.35
8.....	3.52	3.35	3.10	3.20	3.30	3.30	3.48	4.18	4.05	3.70	3.42	3.38
9.....	3.50	3.35	3.20	3.30	3.30	3.30	3.42	4.12	4.05	3.70	3.40	3.40
10.....	3.50	3.35	3.22	3.30	3.28	3.30	3.40	4.08	4.02	3.68	3.38	3.40
11.....	3.48	3.30	3.20	3.30	3.28	3.30	3.38	4.12	4.18	3.62	3.40	3.40
12.....	3.48	3.30	3.20	3.30	3.25	3.32	3.38	4.15	4.12	3.60	3.40	3.40
13.....	3.50	3.30	3.20	3.32	3.25	3.32	3.38	4.20	4.08	3.60	3.40	3.40
14.....	3.48	3.30	3.22	3.32	3.25	3.20	3.48	4.20	4.05	3.60	3.38	3.40
15.....	3.48	3.30	3.22	3.30	3.30	3.20	3.62	4.20	3.05	3.52	3.35	3.38
16.....	3.45	3.30	3.28	3.30	3.32	3.22	3.70	4.18	4.02	3.50	3.38	3.40
17.....	3.45	3.30	3.25	3.30	3.32	3.28	3.82	4.15	4.02	3.50	3.32	3.40
18.....	3.42	3.30	3.20	3.25	3.35	3.32	3.78	4.15	4.05	3.50	3.32	3.40
19.....	3.40	3.25	3.22	3.30	3.32	3.30	3.88	4.15	4.02	3.50	3.45	3.38
20.....	3.40	3.25	3.22	3.30	3.30	3.30	3.88	4.15	4.00	3.68	3.48	3.38
21.....	3.40	3.28	3.20	3.20	3.25	3.30	3.92	4.15	4.08	3.52	3.48	3.32
22.....	3.40	3.25	3.25	3.30	3.25	3.30	3.98	4.12	4.05	3.50	3.52	3.30
23.....	3.40	3.25	3.20	3.30	3.25	3.30	3.98	4.12	4.08	3.58	3.52	3.65
24.....	3.40	3.25	3.20	3.25	3.22	3.30	3.95	4.15	4.08	3.60	3.48	3.58
25.....	3.40	3.25	3.22	3.28	3.30	3.30	3.88	4.12	4.00	3.60	3.48	3.52
26.....	3.40	3.25	3.25	3.25	3.30	3.25	3.78	5.15	3.98	3.60	3.40	3.50
27.....	3.40	3.20	3.22	3.25	3.28	3.20	3.80	6.12	3.95	3.58	3.40	3.50
28.....	3.42	3.22	3.20	3.28	3.28	3.25	3.82	4.22	3.90	3.55	3.38	3.42
29.....	3.42	3.25	3.28	3.25	3.25	3.28	3.88	4.22	3.90	3.52	3.40	3.40
30.....	3.40	3.25	3.28	3.28	3.30	3.30	3.92	4.20	3.88	3.50	3.40	3.40
31.....	3.38	3.25	3.25	3.25	3.30	3.30	3.30	4.18	3.50	3.50	3.38	3.40

NOTE.—Gage height affected by ice Nov. 28 to Dec 31, 1911.

Daily discharge, in second-feet, of Rio Colorado below Questa, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912.												
1.....				43	38	33	38			13	41	62
2.....				38	38	38	33			13	36	62
3.....				38	43	38	38			16	36	62
4.....				38	43	38	38			28	32	62
5.....				43	38	38	48			36	28	56
6.....				48	43	38	59			56	28	56
7.....				54	43	38	59			56	28	56
8.....				54	43	38	59			56	23	56
9.....				54	38	38	59			46	23	51
10.....				54	38	38	59			46	23	46
11.....				54	38	38	59			46	23	46
12.....				48	38	38	70			51	23	46
13.....				43	38	38	59		86	46	23	46
14.....				48	33	38	59		51	46	28	46
15.....				48	38	28	59		41	56	32	46
16.....				48	33	33	59		36	56	36	46
17.....				48	33	38	59		36	56	41	46
18.....				48	38	38	59		28	51	36	46
19.....				48	38	38	59		20	46	36	41
20.....				48	33	54	59		8	46	41	41
21.....				33	23	48	59		10	46	68	41
22.....				38	28	48	59		10	8	74	41
23.....				43	33	48	59		23	5	62	41
24.....				43	33	43	59		13	10	62	41
25.....				48	33	38	64		10	28	56	41
26.....				43	28	38	70		8	62	56	41
27.....				48	33	38	70		10	56	51	46
28.....				48	33	38	70		16	51	56	41
29.....				43	28	38	83		13	51	62	46
30.....				33	38	38	96		16	46	62	46
31.....				38	38	38	38		46	68	68	46

Daily discharge, in second-feet, of Rio Colorado below Questa, N. Mex., for 1912-13—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	51	30	30	28	25	17	29	96	127	68	31	20
2.....	51	27	28	24	25	17	34	104	122	62	31	18
3.....	51	30	28	28	23	27	34	104	122	58	29	16
4.....	51	30	23	32	21	27	32	104	120	55	29	18
5.....	70	30	30	18	21	27	34	104	113	52	26	14
6.....	53	30	23	27	23	27	36	108	106	50	26	16
7.....	46	30	16	29	22	27	40	115	106	50	26	18
8.....	46	30	16	28	24	27	43	119	106	50	24	20
9.....	44	30	23	27	24	27	38	111	104	50	22	22
10.....	44	30	25	27	22	27	36	107	100	48	20	22
11.....	42	25	23	27	22	27	34	112	122	42	22	22
12.....	42	25	23	27	20	29	34	116	112	40	22	22
13.....	44	25	23	29	19	29	34	123	107	40	22	22
14.....	42	25	25	29	19	18	42	124	103	40	20	22
15.....	42	27	25	27	23	18	56	124	102	33	18	20
16.....	39	27	30	27	25	20	65	122	98	31	20	22
17.....	39	28	28	27	25	25	78	117	96	31	16	22
18.....	36	28	23	22	28	29	73	117	100	31	16	22
19.....	34	23	25	27	25	27	81	119	96	31	26	20
20.....	34	23	25	27	23	27	84	119	93	48	29	20
21.....	34	26	23	18	19	27	88	119	103	33	29	16
22.....	34	23	28	27	20	27	95	115	99	31	33	14
23.....	34	23	23	27	20	27	94	115	102	38	33	45
24.....	34	23	23	22	17	27	90	120	102	40	29	38
25.....	34	23	25	24	25	27	82	116	90	40	29	33
26.....	34	23	28	22	25	22	68	120	88	40	22	31
27.....	34	21	25	22	23	18	71	116	83	38	22	31
28.....	36	24	23	24	24	22	73	132	77	36	20	24
29.....	36	28	30	22	.....	25	79	132	76	33	22	22
30.....	34	28	30	24	.....	27	84	129	73	31	22	22
31.....	32	.....	28	21	.....	27	.....	127	.....	31	20	.....

NOTE.—Daily discharge determined from rating curves covering short periods of time and by the indirect method for shifting channels.

Monthly discharge of Rio Colorado below Questa, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
January.....	54	33	45.3	2,790	C.
February.....	43	23	35.8	2,060	C.
March.....	54	28	39.0	2,400	C.
April.....	96	33	59.3	3,530	C.
June 13-30.....	86	8	24.1	860	C.
July.....	62	5	41.1	2,530	C.
August.....	74	23	41.7	2,560	B.
September.....	62	41	48.1	2,860	B.
1912-13.					
October.....	70	32	41.2	2,530	B.
November.....	30	21	26.5	1,580	B.
December.....	30	16	25.1	1,540	B.
January.....	32	18	25.5	1,570	B.
February.....	28	17	22.6	1,260	B.
March.....	29	17	25.8	1,540	B.
April.....	95	29	58.8	3,500	B.
May.....	132	96	117	7,190	B.
June.....	127	73	102	6,070	B.
July.....	68	31	42.0	2,580	B.
August.....	33	16	24.4	1,500	B.
September.....	45	14	22.4	1,330	B.
The year.....	132	14	44.4	32,200	

RIO HONDO BASIN.

GENERAL FEATURES.

Rio Hondo, one of the comparatively few perennial tributaries of the Rio Grande, rises near the crest of the Taos Mountains—the southern extension of the Sangre de Cristo Range—and takes a general westerly course to its junction with the Rio Grande about sec. 31, T. 27 N., R. 12 E. Its chief tributaries are Long Canyon, Lake Creek, South Fork, and Turkey Creek.

The drainage of the Rio Hondo is mountainous for the most part. The Hondo reaches 10,000 feet, while of its tributaries Long Canyon nearly reaches 11,000, Lake Fork 12,000, and the South Fork 10,000 feet, insuring a supply of water from the snows of the higher mountains. In the lower half of the area the altitude ranges between 8,000 and 9,000 feet.

No records have been taken within the Rio Hondo basin, but from records of neighboring areas it is probable that the mean annual precipitation for the lower portion of the basin is between 14 and 15 inches, while in the upper portion it may reach 24 inches, owing to the greater altitude.

In Follett's report on the "Distribution of the waters of the Rio Grande" it was stated that prior to 1896 there were six irrigation ditches having a total capacity of 69 second-feet taking water from the Rio Hondo for irrigation in the valley below Cristone.

GAGING STATION RECORDS.

RIO HONDO NEAR ARROYO HONDO, N. MEX.

Location.—At highway bridge at Dunn's ranch, 200 yards above the mouth of the stream, 1 mile west of Arroyo Hondo post office, near sec. 31, T. 27 N., R. 12 E.
No tributary between station and mouth.

Records available.—April 8, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff.

Channel.—Shifting.

Discharge measurements.—Made by wading at low stages and from a bridge at high stages.

Winter flow.—Ice causes slight backwater during portions of the winter months.

Diversions.—None below, but several diversions for irrigation are made above.

Accuracy.—Owing to the discrepancy in the gage heights recorded by the hydrographer and the observer, no estimates of discharge were made in 1911 and the first part of 1912. The estimates for the last part of 1912 and those for 1913 are considered good.

Cooperation.—Station maintained in cooperation with the United States Reclamation Service and the State engineer.

Discharge measurements of Rio Hondo near Arroyo Hondo, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Fect.</i>	<i>Sec. ft.</i>	1912.		<i>Fect.</i>	<i>Sec. ft.</i>
Apr. 6	W. B. Freeman	1.85	31.4	Apr. 23	W. B. Freeman	1.70	a 4.5
July 12	J. B. Stewart	1.55	5.2	Sept. 22	R. L. Cooper	1.75	10.8
Oct. 15	do.	1.65	10.1	Oct. 5	Gray and Powers	1.80	11.8
Dec. 16	Russell and Digby	1.80	5.4	Nov. 1	J. E. Powers	2.00	11.6
1911.				Dec. 15	do.	2.00	21.4
Jan. 29	G. H. Russell	1.60	10.7	1913.			
Mar. 9	do.	1.65	12.6	Jan. 1 ^b	J. E. Powers	2.10	12.7
Apr. 23	do.	2.27	56.0	Feb. 17 ^b	do.	1.80	15.3
June 7	R. L. Cooper	2.90	129	Mar. 30	do.	1.88	13.8
				May 1	do.	2.13	33.1
				June 1	do.	2.41	56.5
				Aug. 30	do.	2.00	21.3
				Aug. 23	do.	1.56	4.8

a Estimated.

b Ice present.

Daily gage height, in feet, of Rio Hondo near Arroyo Hondo, N. Mex., for 1910-1913.

Day.	Apr.	May.	June.	July.	Aug.	Day.	Apr.	May.	June.	July.	Aug.
1910.						1910.					
1		2.8	2.65	1.5	1.5	16	2.1	2.75	2.2	1.5	1.1
2		2.6	2.6	1.5	2.5	17	1.95	2.7	2.2	1.5	1.5
3		2.5	2.6	1.5	2.6	18	2.0	2.65	2.15	1.5	1.5
4		2.5	2.55	1.5	2.5	19	2.15	2.6	2.2	1.5	1.5
5		2.5	2.5	1.5	2.5	20	2.3	2.6	2.2	1.5	1.5
6	1.85	2.5	2.5	1.45	2.5	21	2.3	2.55	2.2	1.5	1.5
7		2.6	2.55	1.45	2.5	22	2.2	2.5	2.2	1.5	
8	1.85	2.55	2.5	1.5	2.0	23	2.25	2.55	2.15	1.5	
9		2.55	2.4	1.5	2.0	24	2.2	2.5	2.15	1.5	
10		2.55	2.3	1.95	2.0	25	2.4	2.5	2.1	1.5	
11		2.6	2.2	1.8	2.0	26	2.5	2.5	2.1	1.5	
12		2.7	2.2	1.55	2.0	27	2.4	2.5	2.0	1.5	
13		2.7	2.2	1.55	2.0	28	2.7	2.45	2.0	2.5	
14		2.8	2.2	1.5	1.1	29	2.7	2.5	2.0	3.0	
15		2.8	2.2	1.5	1.1	30	2.75	2.55	2.0	2.5	
						31		2.5			

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.												
1				1.88	1.82	1.75	2.22	2.15	3.00		2.00	1.25
2				1.88	1.82	1.75	2.22	2.18	3.00	2.60	2.00	2.70
3				1.92	1.82	1.72	2.25	2.18	3.00	2.25	2.00	3.40
4				1.90	1.70	1.72	2.25	2.28	3.00	2.00	2.00	4.10
5				1.68	1.70	1.95	2.30	2.28	3.10	2.00	1.95	3.20
6				1.70	1.70	1.95	2.28	2.28	3.00	1.90	1.95	2.60
7				1.70	1.70	1.95	2.20	2.30	3.00	1.82	1.95	2.60
8				1.70	1.70	1.95	2.20	2.45	3.00	1.80	1.95	2.45
9				1.70	1.70	1.80	2.20	3.40	3.00	1.80	1.85	2.20
10				1.70	1.65	1.88	2.12	3.40	3.00	3.00	1.80	2.15
11				1.70	1.65	1.88	2.12	3.20	3.00	2.50	1.80	2.15
12				1.70	1.65	1.72	2.12	3.00	3.00	2.10	1.80	2.15
13				1.75	1.65	1.72	2.12	3.00	2.90	2.22	1.70	2.10
14				1.65	1.65	1.72	2.12	3.20	2.90	2.25	1.70	2.10
15				1.65	1.65	1.72	2.08	3.20	2.90	2.25	1.65	2.05
16				1.68	1.65	1.92	2.08	3.20	3.00	2.25	1.65	2.05
17				1.70	1.62	2.05	2.08	3.20	3.90	2.18	1.65	2.05
18				1.70	1.65	2.05	2.08	3.20	3.00	3.70	1.60	2.05
19				1.70	1.65	2.05	2.02	3.30	2.90	2.32	1.60	2.00
20				1.70	1.65	2.05	2.02	3.10	2.70	2.20	1.60	2.00
21				1.60	1.65	1.88	2.02	3.00	2.60	2.20	1.55	2.00
22				1.60	1.65	1.88	2.02	3.00	2.42	2.32	1.50	2.00
23				1.60	1.70	1.88	2.02	3.00	2.15	2.25	1.50	1.95
24				1.60	1.70	1.70	2.02	3.00	2.10	2.25	1.50	1.95
25				1.68	1.65	1.70	2.02	3.20	2.05	2.25	1.40	1.95
26				1.62	1.65	1.70	2.12	3.00	2.02	2.20	1.40	2.42
27				1.62	1.65	1.92	2.15	3.00	2.00	2.15	1.40	2.45
28				1.60	1.75	2.20	2.15	3.00	1.88	2.15	1.40	2.45
29				1.77		2.20	2.15	3.10	1.70	2.15	1.35	3.20
30				1.85		2.20	2.15	3.00	2.18	2.05	1.25	3.20
31				1.85		2.28	2.15	2.90		2.02	1.25	

Daily gage height, in feet, of Rio Hondo near Arroyo Hondo, N. Mex., for 1910-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1	3.00	2.15	2.00	.....	.....	1.92	2.05	2.15	3.08	2.12	2.08	2.00
2	3.00	2.15	2.00	.....	.....	1.95	2.10	2.58	3.02	2.10	2.05	2.00
3	2.90	2.15	2.00	.....	.....	1.95	2.08	3.32	3.18	2.12	2.02	2.00
4	2.90	2.15	2.00	.....	.....	2.02	2.08	2.18	3.12	2.10	2.00	2.00
5	2.90	2.15	2.00	.....	1.98	2.18	2.10	2.18	3.15	2.15	2.00	2.00
6	2.90	2.15	2.00	.....	2.25	2.25	2.08	2.10	3.30	2.10	2.02	2.00
7	4.25	2.15	2.00	.....	2.10	2.22	2.08	2.08	3.28	2.10	2.02	2.00
8	4.25	2.15	2.00	.....	2.10	1.95	2.10	2.10	3.25	2.10	2.02	2.00
9	4.25	2.15	2.00	.....	1.92	1.95	2.10	2.20	3.25	2.12	2.00	2.00
10	4.25	2.15	2.00	.....	1.92	2.00	2.08	2.15	3.22	2.18	2.02	2.00
11	4.25	2.15	2.00	.....	1.92	2.05	2.10	2.18	3.25	2.12	2.05	2.00
12	4.25	2.60	2.00	.....	.....	2.12	2.10	2.12	3.08	2.12	2.05	2.00
13	4.25	2.20	2.00	.....	.....	2.10	2.08	2.12	3.08	2.12	2.00	2.00
14	4.25	2.00	1.95	.....	.....	2.10	2.02	2.10	3.02	2.12	2.00	2.00
15	3.10	2.00	1.95	.....	.....	2.10	2.05	2.10	3.02	2.10	2.00	2.00
16	3.10	2.00	1.95	.....	.....	2.10	2.05	2.12	2.68	2.12	2.00	2.00
17	2.50	2.00	1.95	.....	.....	2.12	2.05	2.18	2.28	2.10	2.05	2.00
18	2.40	2.00	1.95	.....	.....	2.08	2.05	2.58	2.28	2.10	2.00	2.00
19	2.20	2.00	1.95	.....	.....	2.18	2.05	3.05	2.22	2.10	2.00	2.00
20	2.20	2.00	1.95	.....	.....	2.28	2.05	3.18	2.28	2.10	2.00	2.00
21	2.20	2.00	1.90	.....	.....	2.48	2.02	3.28	2.28	2.10	2.00	1.70
22	2.15	2.05	1.90	.....	1.95	2.48	2.02	3.30	2.25	2.10	2.00	1.85
23	2.15	2.05	1.90	.....	2.05	2.80	2.05	3.25	2.18	2.10	2.00	2.00
24	2.15	2.05	1.90	.....	2.12	3.05	2.05	3.22	2.12	2.10	2.00	1.70
25	2.15	2.05	1.90	.....	2.12	2.98	2.02	3.20	2.12	2.10	2.00	1.85
26	2.15	2.05	1.90	.....	2.02	2.88	2.02	3.18	2.10	2.10	2.00	1.85
27	2.15	2.05	1.90	.....	2.00	2.78	2.05	3.22	2.12	2.10	2.00	2.00
28	2.15	2.00	1.80	.....	2.00	2.62	2.05	3.25	2.10	2.10	2.00	2.00
29	2.15	2.00	1.80	.....	2.00	2.40	2.12	3.25	2.12	2.10	2.00	1.85
30	2.15	2.00	1.80	.....	.....	2.18	2.15	3.22	2.08	2.10	2.00	1.85
31	2.15	.....	1.80	.....	.....	2.10	.....	3.20	.....	2.10	2.00	.....
1912-13.												
1	1.75	1.72	1.81	2.01	1.95	1.82	1.75	2.13	2.38	2.20	1.55	1.66
2	1.70	1.76	1.81	1.95	1.92	1.82	1.76	2.10	2.40	2.05	1.55	1.67
3	1.70	1.82	1.85	1.95	1.98	1.81	1.76	2.08	2.35	2.00	1.58	1.66
4	1.75	1.78	1.90	1.95	1.96	1.81	1.77	2.05	2.35	2.00	1.55	1.67
5	1.78	1.80	1.92	1.94	1.92	1.80	1.81	2.05	2.30	2.00	2.35	1.68
6	1.76	1.82	1.91	2.00	1.96	1.80	1.85	2.10	2.25	2.00	2.00	1.68
7	1.72	1.82	2.38	1.95	1.94	1.81	1.88	2.12	2.40	2.00	1.95	1.68
8	1.70	1.82	1.98	1.90	1.88	1.82	1.86	2.15	2.35	2.00	1.95	1.68
9	1.70	1.81	2.28	2.02	1.82	1.86	1.82	2.15	2.31	2.00	1.88	1.73
10	1.70	1.85	2.05	1.80	1.80	1.88	1.85	2.15	2.35	2.45	1.70	1.71
11	1.72	1.89	2.25	1.82	1.78	1.88	1.86	2.18	2.26	2.10	1.70	1.72
12	1.72	1.88	2.12	1.90	1.76	1.82	1.88	2.21	2.26	2.00	1.70	1.75
13	1.74	1.86	2.15	1.82	1.78	1.82	1.88	2.30	2.32	2.00	1.68	1.76
14	1.68	1.88	2.38	1.90	1.80	1.86	1.85	2.26	2.25	2.00	1.70	1.74
15	1.62	1.86	2.10	1.85	1.78	1.82	1.92	2.25	2.25	2.00	1.62	1.74
16	1.60	1.86	2.05	1.88	1.78	1.85	1.98	2.25	2.25	2.00	1.58	1.75
17	1.61	1.88	2.25	1.88	1.81	1.81	2.01	2.25	2.26	2.58	1.65	1.67
18	1.58	1.89	2.00	1.96	1.81	1.80	2.06	2.25	2.25	2.30	1.60	1.66
19	1.55	1.88	2.12	1.95	1.78	1.80	2.08	2.25	2.25	2.35	1.60	1.60
20	1.59	1.89	2.15	1.95	1.78	1.82	2.15	2.35	2.18	2.10	1.60	1.60
21	1.62	1.88	1.95	1.95	1.76	1.82	2.06	2.35	2.18	2.00	1.60	1.59
22	1.70	1.92	1.92	1.92	1.79	1.84	2.05	2.40	2.25	2.00	1.62	2.20
23	1.70	1.90	1.95	1.96	1.78	1.80	2.10	2.35	2.25	1.92	1.60	1.80
24	1.70	1.80	1.95	1.85	1.78	1.82	2.14	2.26	2.25	1.91	.....	1.74
25	1.74	1.89	2.25	1.85	1.78	1.82	2.15	2.35	2.25	1.62	1.68	1.72
26	1.80	1.90	2.00	1.98	1.78	1.82	2.12	2.45	2.22	1.60	1.66	1.73
27	1.80	1.90	2.25	1.94	1.78	1.82	2.05	2.55	2.20	1.60	1.66	1.75
28	1.79	1.91	1.95	1.92	1.79	.....	2.05	2.60	2.20	1.60	1.66	1.73
29	1.79	1.84	1.92	1.91	.....	.....	1.96	2.50	2.25	1.60	1.66	1.72
30	1.78	1.85	1.95	1.98	.....	1.88	1.96	2.55	2.00	1.55	1.66	1.73
31	1.76	.....	2.22	1.91	.....	.....	.....	2.55	.....	1.55	1.66	.....

Daily discharge, in second-feet, of Rio Hondo near Arroyo Hondo, N. Mex., for 1912-13.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1912.											
1.....	39	35	29	11.....	39	33	29	21.....	37	29	11
2.....	37	33	29	12.....	39	33	29	22.....	37	29	19
3.....	39	31	29	13.....	39	29	29	23.....	37	29	29
4.....	37	29	29	14.....	39	29	29	24.....	37	29	11
5.....	42	29	29	15.....	37	29	29	25.....	37	29	19
6.....	37	31	29	16.....	39	29	29	26.....	37	29	18
7.....	37	31	29	17.....	37	33	29	27.....	37	29	28
8.....	37	31	29	18.....	37	29	29	28.....	37	29	28
9.....	39	29	29	19.....	37	29	29	29.....	37	29	18
10.....	44	31	29	20.....	37	29	29	30.....	37	29	18
								31.....	37	29	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	12	9	12	22	11	12	8.9	33	53	37	4.8	7.0
2.....	10	10	12	18	10	12	9.2	31	55	24	4.8	7.2
3.....	10	13	14	18	11	12	9.5	28	50	21	5.2	7.0
4.....	12	11	16	18	11	12	9.8	26	50	21	4.8	7.2
5.....	13	12	17	16	10	11	11	25	46	21	5.0	7.5
6.....	12	13	16	18	11	11	13	29	42	21	21	7.5
7.....	10	13	49	15	13	12	15	30	55	21	18	7.5
8.....	9	13	20	11	14	12	14	32	50	21	18	7.5
9.....	9	12	41	10	14	14	12	32	47	21	15	8.9
10.....	9	14	24	8	14	15	14	32	50	60	8.0	8.3
11.....	9	15	39	8	13	15	14	35	42	28	8.0	8.6
12.....	9	15	29	9	12	12	15	38	42	21	8.0	9.5
13.....	10	14	32	8	13	12	15	46	48	21	7.5	9.8
14.....	8	15	49	9	14	14	14	42	42	21	8.0	9.2
15.....	5	14	28	8	13	12	17	42	42	21	6.0	9.2
16.....	4	14	24	8	13	14	20	42	42	21	5.2	9.5
17.....	4	15	39	8	15	12	22	42	42	75	6.8	7.2
18.....	4	16	21	10	15	11	25	42	42	46	5.5	7.0
19.....	3	15	29	11	13	11	27	42	42	50	5.5	5.5
20.....	4	16	32	12	13	12	32	50	35	28	5.5	5.5
21.....	4	15	18	12	12	12	25	50	35	21	5.5	5.4
22.....	7	17	17	11	14	13	24	55	42	21	6.0	37
23.....	8	16	18	10	12	11	28	50	42	17	5.5	11
24.....	8	12	18	8	11	12	32	42	42	16	6.5	9.2
25.....	9	16	39	8	10	12	32	50	42	6.0	7.5	8.6
26.....	12	16	21	11	10	12	30	60	39	5.5	7.0	8.9
27.....	12	16	39	11	10	12	24	72	37	5.5	7.0	9.5
28.....	12	16	18	10	11	12	24	77	37	5.5	7.0	8.9
29.....	12	14	17	10	.....	13	19	66	42	5.5	7.0	8.6
30.....	11	14	18	11	.....	14	19	72	21	4.8	7.0	8.9
31.....	10	.....	37	10	.....	11	.....	72	.....	4.8	7.0	.....

NOTE.—Daily discharge determined from two fairly well defined rating curves and by the indirect method for shifting channels. Discharge estimated Jan. 1 to Feb. 28, 1913, on account of ice. Discharge interpolated for other days for which gage heights are missing. Stream dry Jan. 1 to Feb. 4 and Feb. 12-21, 1912

Monthly discharge of Rio Hondo near Arroyo Hondo, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
July.....	44	37	37.9	2,330	C.
August.....	35	29	30.0	1,840	C.
September.....	29	11	26.0	1,550	B.
1912-13.					
October.....	13	3.0	8.7	535	B.
November.....	17	9.0	14.0	833	B.
December.....	49	12	25.9	1,590	C.
January.....	22	8.0	11.5	707	C.
February.....	15	10	12.3	683	C.
March.....	15	11	12.3	756	B.
April.....	32	8.9	19.6	1,170	B.
May.....	77	25	44.7	2,750	B.
June.....	55	21	43.2	2,570	B.
July.....	75	4.8	23.0	1,410	B.
August.....	50	4.8	7.86	483	B.
September.....	37	5.4	9.09	541	B.
The year.....	75	3.0	19.4	14,000	

RIO TAOS BASIN.

GENERAL FEATURES.

Rio Taos is formed by the junction of the Rio Pueblo, Rio Fernando, and Rio Grande del Rancho near Los Cordovas, a few miles west of Taos. The headwater streams rise on the western slope of the southern extension of the Sangre de Cristo range, known locally as the Taos Mountains. The general course of the streams is westward, and below the junction Rio Taos flows southwestward, joining the Rio Grande about 7 miles below the junction. The chief tributary of Rio Pueblo is Rio Lucero. Rio Fernando has no important tributary. The principal tributaries of the Rio Grande del Rancho are Rio Chiquito and Arroyo Miranda.

Above the junction of the principal headwater streams the area is mountainous, elevations ranging between 7,000 and 10,000 feet or higher, and the streams flow in canyons. Below the junction Rio Taos crosses a level mesa, which is 7,000 feet in altitude and is known as Taos Valley.

At the crest of the mountains the mean annual precipitation is 24 inches or more, but it decreases rapidly with decrease in altitude, being only about 14 inches at Taos and throughout the lower part of the basin. The precipitation in the mountains is largely in the form of snow, which is the chief source of supply of the stream.

In his report on the Rio Grande, issued in 1896, W. W. Follett states that the area of irrigable land in Taos Valley is fully 40,000 acres, but that the water supply is only sufficient for about half this land, and it has been utilized for the last 50 years or more. At the time the report was issued it was estimated that ditches having a total capacity of 316 second-feet diverted water from Rio Taos and its tributaries.

GAGING STATION RECORDS.

RIO PUEBLO DE TAOS NEAR TAOS, N. MEX.

Location.—Two miles above Taos Pueblo, $4\frac{1}{2}$ miles northeast of Taos, at Glorietta Grove, near sec. 2, T. 25 N., R. 13 E. A number of intermittent tributaries enter above and below the station.

Records available.—March 12, 1910, to September 30, 1913. Gage height records prior to December, 1910, are fragmentary and not published.

Drainage area.—Not measured.

Gage.—Automatic recording. Installed by the United States Indian Service December 19, 1910. A vertical staff gage was installed first, but was destroyed before July 12, 1910. On October 12, 1910, a new gage was installed which was referred to a datum 0.27 foot lower than the original. The automatic gage was referred to the datum of the second gage.

Channel.—Somewhat shifting, especially during high stages.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater during the winter period.

Diversions.—None above this station, but several are made just below.

Accuracy.—The few discharge measurements indicate that there was not much shift during 1911, and therefore the estimates may be considered fairly good. The estimates for 1912 are fragmentary and can only be considered fair. Those for 1913 may be considered good.

Cooperation.—Station maintained in cooperation with the United States Forest Service, United States Indian Service, and State engineer.

Discharge measurements of Rio Pueblo de Taos near Taos, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.ft.</i>	1912.		<i>Feet.</i>	<i>Sec.ft.</i>
Mar. 12	S. S. Carroll.....		27.7	Oct. 4	Gray and Powers.....	1.10	9.9
Apr. 7	J. B. Stewart.....	1.50	43	Oct. 31	J. E. Powers.....	1.05	10.2
May 12	do.....		28	Dec. 12	do.....	1.20	13.7
July 12	do.....		14				
Sept. 15	C. D. Miller.....		7.2	1913.			
Oct. 15	J. B. Stewart.....	.66	6.8	Jan. 19 ^a	J. E. Powers.....	.92	9.1
Dec. 19 ^a	Digby and Russell.....	1.08	5.0	Feb. 16 ^a	do.....		13.0
				Mar. 27 ^a	do.....	1.14	13.0
1911.				Apr. 27	do.....	1.72	32.6
Jan. 28	G. H. Russell.....	1.11	7.8	May 29	do.....	2.00	54.8
Mar. 11	do.....	1.96	42.0	June 28	do.....	1.46	24.3
Apr. 21	do.....	2.15	57.0	Aug. 22	Gray and Powers.....	1.20	12.5
June 9	R. L. Cooper.....	2.50	87.2	Sept. 30	J. E. Powers.....	1.10	9.5

^a Ice present.

Daily gage height, in feet, of Rio Pueblo de Taos near Taos, N. Mex., for 1910-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....				1.9	1.15	1.2	1.9	2.7	2.65	1.65	1.55	1.5
2.....				1.85	1.1	1.15	1.95	2.7	2.7	1.7	1.55	1.5
3.....				2.0	1.15	1.15	1.95	2.75	2.65	1.65	1.55	1.4
4.....				2.0	1.15	1.15	1.85	2.85	2.6	1.6	1.5	1.4
5.....				1.8	1.15	1.25	1.8	3.15	2.55	1.55	1.4	1.4
6.....				1.8	1.1	1.35	1.7	3.3	2.5	1.55	1.4	1.4
7.....				2.1	1.2	1.35	1.65	3.5	2.5	1.6	1.4	1.35
8.....				2.1	1.15	1.35		3.5	2.45	1.6	1.35	1.35
9.....				2.1	1.2	1.45		3.6	2.5	1.5	1.4	1.35
10.....				2.1	1.25	1.6		3.55	2.5	1.45	1.4	1.35
11.....				2.1	1.25	1.85		3.25	2.3	1.45	1.4	1.3
12.....				2.1	1.3	1.6	1.65	3.1	2.25	1.5	1.4	1.35
13.....				2.1	1.3	1.5	1.6	3.05	2.25	1.45	1.3	1.35
14.....				2.1	1.25	1.45	1.6	2.95	2.2	1.5	1.25	1.4
15.....				2.1	1.25	1.5	1.65	2.95	2.2	1.5	1.25	1.45
16.....				2.1	1.25	1.55	1.75	2.95	2.2	1.5	1.25	1.4
17.....				2.1	1.3	1.55	1.9	2.95	2.0	1.5	1.35	1.35
18.....				2.1	1.3	1.5	1.95	2.9	2.0	1.5	1.35	1.3
19.....			1.1	2.1	1.25	1.5	1.9	2.9	1.95	1.5	1.35	1.3
20.....			1.05	2.1	1.35	1.55	1.95	2.8	1.9	1.6	1.2	.....
21.....			1.05	1.0	1.3	1.55	2.1	2.65	1.95	1.6	1.2	.....
22.....			1.0	1.05	1.25	1.6	2.3	2.55	1.9	1.6	1.4	.....
23.....			1.4	1.05	1.3	1.55	2.5	2.45	1.9	1.55	1.65	1.25
24.....			1.6	1.1	1.35	1.55	2.45	2.45	1.85	1.7	1.6	1.2
25.....			1.4	1.1	1.3	1.5	2.55	2.6	1.7	1.65	1.6	1.15
26.....			1.05	1.1	1.1	1.4	2.65	2.7	1.6	1.65	1.5	1.15
27.....			1.05	1.1	1.05	1.4	2.8	2.7	1.75	1.6	1.45	1.15
28.....			1.1	1.05	1.0	1.45	2.85	2.65	1.65	1.65	1.4	1.25
29.....			1.2	1.05	.....	1.6	2.85	2.6	1.65	1.6	1.45	1.4
30.....			1.6	1.05	.....	1.7	2.8	2.55	1.7	1.65	1.55	1.9
31.....			1.1	.....	1.85	.....	2.55	.....	1.6	1.5	.....

Daily gage height, in feet, of Rio Pueblo de Taos near Taos, N. Mex., for 1910-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1.7	1.5	2.3	.....	.....	.....	1.45	2.80	.....	1.35	1.10	1.10
2.....	1.55	1.55	1.95	.....	.....	.....	1.55	3.20	.....	1.35	1.15	1.10
3.....	1.45	1.55	1.5	.....	.....	.....	1.65	3.50	.....	1.30	1.05	1.10
4.....	1.5	1.55	1.5	.....	.....	.....	1.75	3.55	.....	1.20	1.05	1.10
5.....	2.45	1.55	1.5	.....	.....	.....	1.95	3.20	.....	1.15	1.05	1.15
6.....	3.3	1.55	1.5	.....	.....	.....	2.05	3.15	.....	1.20	1.05	1.15
7.....	2.9	1.5	1.5	.....	.....	.....	1.95	3.20	.....	1.15	1.05	1.10
8.....	2.6	1.5	1.5	.....	.....	1.40	2.00	3.25	.....	1.15	1.05	1.10
9.....	2.35	1.55	1.5	.....	.....	1.38	2.05	3.30	.....	1.15	1.10	1.10
10.....	2.15	1.55	1.42	.....	.....	1.42	2.15	3.25	.....	1.15	1.05	1.10
11.....	2.05	1.6	1.45	.....	.....	1.40	2.00	3.20	.....	1.15	1.05	1.10
12.....	1.95	1.5	1.45	.....	.....	1.40	2.30	3.20	.....	1.20	1.05	1.10
13.....	1.95	1.55	.....	.....	.....	1.42	2.15	3.20	.....	1.20	1.05	1.15
14.....	1.85	1.55	.....	.....	.....	1.38	2.00	3.00	.....	1.20	1.05	1.05
15.....	1.8	1.5	.....	.....	.....	1.30	1.90	3.00	.....	1.20	1.05	1.05
16.....	1.7	1.55	.....	.....	.....	1.43	1.85	3.05	.....	1.25	1.10	1.05
17.....	1.65	1.5	.....	.....	.....	1.28	1.90	3.20	1.65	1.25	1.05	1.05
18.....	1.65	1.5	.....	.....	.....	1.28	1.90	3.35	1.50	1.20	1.05	1.05
19.....	1.65	1.5	.....	.....	.....	1.43	1.90	3.55	1.50	1.25	1.05	1.10
20.....	1.65	1.45	.....	.....	.....	1.70	1.90	3.80	1.50	1.20	1.05	1.10
21.....	1.65	1.5	.....	.....	.....	1.70	1.75	4.50	1.60	1.15	1.05	1.10
22.....	1.6	1.55	.....	.....	.....	1.63	1.70	4.55	1.65	1.10	1.10	1.05
23.....	1.6	1.55	.....	.....	.....	1.65	1.70	4.30	1.70	1.15	1.10	1.05
24.....	1.6	1.5	.....	.....	.....	1.50	1.90	3.40	1.55	1.15	1.10	1.05
25.....	1.55	1.5	.....	.....	.....	1.50	2.20	.....	1.55	1.15	1.05	1.05
26.....	1.6	1.5	.....	.....	.....	1.55	2.20	.....	1.55	1.20	1.00	1.10
27.....	1.6	1.5	.....	.....	.....	1.60	2.30	.....	1.55	1.15	1.00	1.10
28.....	1.6	1.5	.....	.....	.....	1.60	2.25	.....	1.55	1.10	1.00	.....
29.....	1.6	1.8	.....	.....	.....	1.60	2.40	.....	1.55	1.10	1.05	.....
30.....	1.6	2.1	.....	.....	.....	1.60	2.60	.....	1.45	1.10	1.00	.....
31.....	1.55	.....	.....	.....	.....	1.50	.....	.....	.....	1.10	1.10	.....
1912-13.												
1.....	.....	.....	.....	.....	.95	.98	1.32	2.35	1.86	1.40	1.08	.....
3.....	.....	.....	.....	2.00	.97	.90	1.38	2.35	1.75	1.36	1.07	.....
4.....	.....	.....	.....	1.90	.92	.97	1.33	2.20	1.72	1.34	1.06	.....
4.....	1.10	.....	.....	1.50	.90	.93	1.20	2.05	1.70	1.31	1.02	.....
5.....	.....	.....	.....	1.20	.90	.94	1.25	2.00	1.70	1.30	1.00	.....
6.....	.....	.....	.....	1.20	.90	.99	1.47	2.05	.....	1.25	.99	.94
7.....	.....	.....	.....	.95	.92	1.00	1.50	2.10	1.68	1.20	.99	.87
8.....	.....	.....	.....	.85	.93	.99	1.40	2.10	1.65	1.25	.98	.88
9.....	.....	.....	.....	.95	.91	.98	1.35	2.10	1.60	1.30	.97	.95
10.....	.....	.....	.....	.95	.90	.95	1.25	2.10	1.62	1.25	.97	.93
11.....	.....	.....	.....	.90	.93	.96	1.22	2.25	1.70	1.20	1.01	.96
12.....	.....	.....	1.20	.95	.95	1.00	1.25	2.25	1.72	1.24	1.03	.97
13.....	.....	.....	1.10	.90	.90	.99	1.35	2.30	1.73	1.17	1.00	.95
14.....	1.12	.....	1.00	.90	.90	.94	1.75	2.20	1.70	1.10	1.00	.90
15.....	.....	.....	1.05	.90	.92	1.00	2.00	2.15	1.64	1.11	.98	.85
16.....	.....	.....	1.05	.90	.90	.90	2.08	2.10	1.62	1.12	.96	.92
17.....	.....	.....	1.00	.90	.91	.90	2.12	2.10	1.60	1.12	.91	.94
18.....	.....	.....	1.15	.90	.95	.95	2.10	2.08	1.62	1.13	.90	.91
19.....	1.10	.....	1.45	.90	.99	1.00	2.08	2.08	1.61	1.20	.91	.94
20.....	.....	.....	1.55	.85	1.00	1.05	2.10	2.08	1.58	1.31	.95	.95
21.....	.....	.....	1.65	.85	1.00	1.00	2.00	2.06	1.57	1.32	1.00	.85
22.....	.....	.....	1.70	.90	.98	1.02	2.00	2.05	1.65	1.32	1.14	.95
23.....	.....	.....	1.70	.90	.98	1.00	1.93	2.00	1.60	1.25	1.10	1.30
24.....	.....	.....	1.80	.90	.95	.99	1.75	1.98	1.60	1.28	1.05	1.30
25.....	.....	.....	2.00	.90	1.00	.90	1.70	1.98	1.58	1.18	1.07	1.15
26.....	.....	.....	2.30	.90	1.03	.90	1.75	1.95	1.55	1.15	1.00	1.10
27.....	.....	.....	2.35	.85	1.02	1.00	1.75	1.98	1.54	1.09	.95	1.10
28.....	.....	.....	2.35	.90	1.01	1.03	1.85	2.00	1.55	1.08	.95	1.10
29.....	.....	.....	2.30	.90	.....	1.02	2.05	2.00	1.50	1.06	1.00	1.15
30.....	.....	.....	2.30	.90	.....	1.08	2.25	1.94	1.45	1.03	1.05	1.00
31.....	1.05	.....	2.30	.90	.....	1.15	.....	1.92	.....	1.05	.....	.....

NOTE.—Gage heights affected by ice Jan. and Dec. 13-31, 1911, and Dec. 18, 1912, to Apr. 9, 1913.

Daily discharge, in second-feet, of Rio Pueblo de Taos near Taos, N. Mex., for 1911-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.												
1.					11	12	40	111	104	28	24	22
2.					10	11	43	111	111	30	24	22
3.					11	11	43	118	104	28	24	18
4.					11	11	38	133	98	26	22	18
5.					11	14	35	186	92	24	18	18
6.					10	16	30	215	86	24	18	18
7.					12	16	28	260	86	26	18	16
8.					11	16	28	260	81	26	16	16
9.					12	20	28	285	86	22	18	16
10.					14	25	28	272	86	20	18	16
11.					14	38	28	205	67	20	18	15
12.					15	26	28	176	63	22	18	16
13.					15	22	26	167	63	20	15	16
14.					14	20	26	150	59	22	14	18
15.					14	22	28	150	59	22	14	20
16.					14	24	32	150	59	22	14	18
17.					15	24	40	150	46	22	16	16
18.					15	22	43	141	46	22	16	15
19.					14	22	40	141	43	22	16	15
20.					16	24	43	125	40	26	12	15
21.					15	24	52	104	43	26	12	14
22.					14	26	67	92	40	26	18	14
23.					15	24	86	81	40	24	28	14
24.					16	24	81	81	38	30	26	12
25.					15	22	92	98	30	28	26	11
26.					10	18	104	111	26	28	22	11
27.					9	18	125	111	32	26	20	11
28.					8	20	133	104	28	28	18	14
29.						26	133	98	28	26	20	18
30.						30	125	92	30	28	24	40
31.						38		92		26	22	
1911-12.												
1.	30	22	67				20	127		18	10	10
2.	24	24	43				24	192		18	12	10
3.	20	24	22				28	248		16	9.5	10
4.	22	24	22				32	219		13	9.5	10
5.	81	24	22				43	192		12	9.5	12
6.	215	24	22				49	188		13	9.5	12
7.	141	22	22				43	192		12	9.5	10
8.	98	22	22			19	46	201		12	9.5	10
9.	72	24	22			18	49	210		12	10	10
10.	56	24	20			20	56	201		12	9.5	10
11.	49	26	20			19	46	192		12	9.5	10
12.	43	22	20			19	67	192		13	9.5	10
13.	43	24				20	56	192		13	9.5	12
14.	38	24				18	46	158		13	9.5	9.5
15.	35	22				16	40	158		13	9.5	9.5
16.	30	24				20	38	166		14	10	9.5
17.	28	22				15	40	192	28	14	9.5	9.5
18.	28	22				15	40	219	22	13	9.5	9.5
19.	28	22				20	40	258	22	14	9.5	10
20.	28	20				30	40	308	22	13	9.5	10
21.	28	22				30	32	430	26	12	9.5	10
22.	26	24				27	30	440	28	10	10	9.5
23.	26	24				28	30	388	30	12	10	9.5
24.	26	22				22	40	228	24	12	10	9.5
25.	24	22				22	59		24	12	9.5	9.5
26.	26	22				24	59		24	13	8.5	10
27.	26	22				26	67		24	12	8.5	10
28.	26	22				26	63		24	10	8.5	10
29.	26	35				26	77		24	10	9.5	10
30.	26	52				26	99		20	10	8.5	10
31.	24					22				10	10	

Daily discharge, in second-feet, of Rio Pueblo de Taos near Taos, N. Mex., for 1911-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....			8.0				13	74	44	21	10	8.5
2.....			8.0				13	74	38	20	9.9	8.5
3.....			8.0				13	61	36	19	9.7	8.0
4.....	10		8.0				13	51	35	18	8.9	7.5
5.....			8.0				13	48	35	18	8.5	7.3
6.....			7.0				14	51	35	16	8.3	7.3
7.....			7.0				14	55	34	14	8.3	6.0
8.....			9.0				14	55	32	16	8.1	6.2
9.....			9.0				14	55	30	17	7.9	7.5
10.....			11				14	56	30	16	7.9	7.1
11.....			12				14	67	34	14	8.7	7.7
12.....			13				14	67	36	15	9.1	7.9
13.....			10				18	73	36	13	8.5	7.5
14.....	11		8.5				32	64	34	11	8.5	6.5
15.....			9.5				46	60	31	12	8.1	5.8
16.....			9.5				51	57	30	12	7.7	6.9
17.....			8.5				53	57	29	12	6.7	7.3
18.....			8.0				52	56	30	12	6.5	6.7
19.....	10		8.0				51	56	30	14	6.7	7.3
20.....			8.0				52	56	28	17	7.5	7.5
21.....			8.0				46	55	28	17	8.5	5.8
22.....			8.0				46	55	31	17	12	7.5
23.....			8.0				42	51	29	15	10	16
24.....			8.0				32	50	29	16	9.5	16
25.....			8.0				30	51	28	13	9.9	11
26.....			8.0				32	49	27	12	8.5	9.9
27.....			8.0				32	51	26	10	7.5	9.9
28.....			8.0				38	53	27	10	7.5	9.7
29.....			8.0				50	55	24	9.7	8.5	11
30.....			8.0				64	49	22	9.1	9.5	7.5
31.....	9.5		8.0					48		9.5	9.0	

NOTE.—Daily discharge determined as follows: Feb. 1 to Dec. 12, 1911, from a curve well defined below 100 second-feet; during 1912, from a fairly well-defined curve; Apr. 10-27, and July 29 to Sept. 22, 1913, from a well-defined curve; Apr. 28 to July 28, and Sept. 23-30, by the indirect method for shifting channels. Discharge estimated Dec. 1-11, and 18-31, 1912, and Apr. 1-9, 1913.

Monthly discharge of Rio Pueblo de Taos near Taos, N. Mex., for 1911-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
January.....			^a 7.0	430	D.
February.....	16	8	12.9	716	B.
March.....	38	11	21.5	1,320	B.
April.....	133	26	55.8	3,320	A.
May.....	285	81	147	9,040	B.
June.....	111	26	60.5	3,600	A.
July.....	30	20	24.8	1,520	B.
August.....	28	12	19.0	1,170	B.
September.....	40	11	16.8	1,000	B.
The period.....				22,100	
1911-12.					
October.....	215	20	44.9	2,760	B.
November.....	52	20	24.3	1,450	B.
December.....	67		^a 19.6	1,210	D.
March 8-31.....	30	15	22.0	1,050	B.
April.....	99	20	46.6	2,770	B.
May 1-24.....	440	127	229	10,900	B.
June 17-30.....	30	20	24.4	677	B.
July.....	18	10	12.7	781	B.
August.....	12	8.5	9.56	588	B.
September.....	12	9.5	10.0	595	B.

^a Estimated.

Monthly discharge of Rio Pueblo de Taos near Taos, N. Mex., for 1911-1913—Contd.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912-13.					
October.....			a 10.0	615	C.
November.....			a 9.0	536	C.
December.....	13	7	8.58	528	C.
January.....			a 9.0	553	C.
February.....			a 13.0	722	C.
March.....			a 13.0	799	C.
April.....	64	13	31.0	1,840	A.
May.....	74	48	56.8	3,490	A.
June.....	44	22	31.3	1,860	A.
July.....	21	9.1	14.4	885	A.
August.....	12	6.5	8.58	528	A.
September.....	16	5.8	8.31	494	A.
The year.....	74		17.8	12,800	

a Estimated.

RIO TAOS ¹ AT LOS CORDOVAS, N. MEX.

Location.—At Los Cordovas, 100 feet below the mouths of Little Rio Grande and Arroyo seco, near sec. 22, T. 25 N., R. 12 E.

Records available.—April 6, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes some backwater during a portion of the winter months.

Diversions.—Several are made above this station.

Accuracy.—Conditions are favorable for accurate results and estimates may be considered good.

Cooperation.—Station maintained in cooperation with the United States Reclamation Service and State engineer.

Discharge measurements of Rio Taos at Los Cordovas, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Feet.</i>	1912.		<i>Feet.</i>	<i>Feet.</i>
Apr. 6	J. B. Stewart.....	1.47	72	Sept. 23	R. L. Cooper.....	.89	10.6
July 12	do.....	.73	3.0	Oct. 4	Gray and Powers.....	.92	15.6
Sept. 15	C. D. Miller.....	.80	3.2	Nov. 1	J. E. Powers.....	1.05	25.8
Oct. 16	J. B. Stewart.....	.85	6.0	Dec. 13	do.....	1.15	45.8
Dec. 18	Digby and Russell.....	1.17	24.4				
1911.				1913.			
Jan. 28	G. H. Russell.....	1.08	21.4	Jan. 20	J. E. Powers.....	1.00	26.8
Mar. 12	do.....	1.30	50.1	Feb. 17 ²	do.....	1.05	24.1
Apr. 22	do.....	1.46	68.7	Mar. 28 ²	do.....	1.02	26.0
June 9	R. L. Cooper.....	1.70	103	Apr. 28	do.....	1.40	77.4
				May 30	do.....	1.16	43.0
				June 29	do.....	.85	12.8
				Aug. 23	do.....	.78	10.1

¹ Called Rio Pueblo de Taos in previous reports.

² Ice present.

Daily gage height, in feet, of Rio Taos at Los Cordovas, N. Mex., for 1910-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1910.													
1.....		2.5	1.4	0.7	0.75	0.8	16.....	1.75	2.05	0.8	0.7	0.8	0.8
2.....		2.4	1.3	.7	.7	.8	17.....	1.8	2.0	.8	.7	.8	.8
3.....		2.3	1.3	.7	.7	.8	18.....	1.85	1.9	.75	.7	.8	.8
4.....		2.3	1.2	.7	.8	.8	19.....	1.9	1.8	.75	.7	.8	.8
5.....		2.25	1.2	.7	.8	.8	20.....	2.0	1.7	.7	.7	.8	.8
6.....	1.45	2.2	1.1	.7	.8	.8	21.....	2.1	1.65	.7	.7	.8	.8
7.....	1.5	2.2	1.05	.7	.8	.8	22.....	2.15	1.7	.7	.7	.8	.8
8.....	1.55	2.15	.95	.7	.8	.8	23.....	2.1	1.6	.7	.7	.8	.8
9.....	1.5	2.25	.9	.7	.7	.8	24.....	2.1	1.5	.7	.7	.8	.8
10.....	1.5	2.1	.9	.8	.7	.8	25.....	2.15	1.4	.7	.7	.8	.8
11.....	1.5	2.1	.8	.8	.75	.8	26.....	2.3	1.25	.8	.7	.8	.8
12.....	1.5	2.1	.8	.75	.8	.75	27.....	2.3	1.2	.8	.7	.8	.8
13.....	1.8	2.1	.8	.8	.8	.7	28.....	2.4	1.15	.7	.7	.8	.8
14.....	1.9	2.1	.8	.8	.8	.8	29.....	2.5	1.2	.7	.7	.8	.8
15.....	1.8	2.2	.8	.7	.7	.8	30.....	2.55	1.25	.7	.85	.8	.8
							31.....		1.35		.8	.8	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1910-11.													
1.....	0.8	1.0	1.0	1.15	1.10	1.10	1.52	1.90	2.15	1.15	.....	1.10
2.....	.8	1.0	1.0	1.15	1.10	1.15	1.60	1.85	2.20	1.35	.....	1.10
3.....	.9	1.0	1.0	1.15	1.10	1.20	1.65	1.90	2.10	1.45	.....	1.10
4.....	.9	1.0	1.0	1.15	1.10	1.25	1.60	1.95	2.05	1.40	.....	1.10
5.....	.85	1.0	1.1	1.15	1.18	1.32	1.52	1.95	2.00	1.35	.....	1.05
6.....	.8	1.0	1.1	1.15	1.12	1.48	1.50	2.10	1.85	1.40	0.90	1.00	
7.....	.85	1.0	1.1	1.15	1.10	1.30	1.48	2.30	1.80	1.35	.80	1.00	
8.....	.8	1.0	1.05	1.15	1.08	1.22	1.40	2.45	1.80	1.25	.80	1.00	
9.....	.85	1.0	1.1	1.35	1.08	1.28	1.40	2.60	1.80	1.30	.75	1.10	
10.....	.85	1.0	1.05	1.32	1.08	1.38	1.35	2.65	1.80	1.20	.75	1.00	
11.....	.9	1.0	1.1	1.45	1.08	1.65	1.32	2.45	1.70	1.15	.80	1.00	
12.....	.85	1.0	1.05	1.35	1.08	1.35	1.32	2.45	1.65	1.50	.75	1.05	
13.....	.85	1.0	1.05	1.28	1.12	1.42	1.35	2.40	1.55	1.40	.80	1.05	
14.....	.9	1.0	1.05	1.12	1.10	1.30	1.35	2.60	1.40	1.30	.75	1.05	
15.....	.85	1.0	1.1	1.15	1.10	1.30	1.32	2.55	1.45	1.30	.80	1.10	
16.....	.85	1.0	1.05	1.10	1.15	1.35	1.35	2.45	1.35	1.45	.85	1.10	
17.....	.9	1.0	1.1	1.10	1.12	1.32	1.40	2.45	1.30	1.25	1.56	1.00	
18.....	.85	1.0	1.1	1.10	1.12	1.30	1.42	2.40	1.40	1.15	1.10	1.00	
19.....	.9	1.0	1.1	1.10	1.12	1.35	1.40	2.35	1.35	1.25	1.00	1.00	
20.....	.9	1.0	1.05	1.10	1.12	1.38	1.32	2.30	1.30	1.30	.90	1.10	
21.....	.9	1.0	1.1	1.10	1.12	1.40	1.40	2.15	1.35	1.40	.90	1.10	
22.....	.95	1.0	1.05	1.10	1.10	1.42	1.50	2.05	1.30	1.35	1.00	1.10	
23.....	.95	1.0	1.1	1.10	1.15	1.38	1.70	1.90	1.25	1.45	1.20	1.10	
24.....	1.0	1.0	1.1	1.10	1.15	1.35	1.80	1.80	1.20	1.50	1.20	1.05	
25.....	.95	1.0	1.1	1.10	1.10	1.35	1.80	1.85	1.15	1.50	1.20	1.00	
26.....	1.0	1.0	1.05	1.10	1.10	1.32	1.90	1.85	1.05	1.55	1.30	1.00	
27.....	.95	1.0	1.05	1.08	1.10	1.30	1.90	1.90	1.00	1.55	1.30	1.00	
28.....	1.0	1.0	1.05	1.08	1.10	1.30	2.00	1.95	1.00	1.60	1.30	1.00	
29.....	.95	1.0	1.05	1.10	.....	1.40	2.10	1.90	1.00	1.60	1.25	1.35
30.....	1.0	1.0	1.05	1.10	.....	1.45	1.95	1.85	1.05	1.50	1.20	1.90
31.....	1.0	.....	1.1	1.12	.....	1.52	.....	2.00	.....	1.45	1.15	.....
1911-12.													
1.....	1.80	1.50	1.30	1.4	1.35	1.4	1.55	2.55	3.1	1.45	.85	.85	
2.....	1.80	1.60	1.30	1.4	1.4	1.35	1.4	2.75	2.95	1.45	.8	.85	
3.....	1.45	1.60	1.20	1.35	1.4	.....	1.5	2.9	2.85	1.35	.85	.85
4.....	1.50	1.50	1.20	1.3	1.4	1.3	1.65	2.8	2.8	1.35	.8	.85	
5.....	2.76	1.60	1.20	1.3	1.45	1.4	1.8	2.55	2.85	1.25	.8	.85	
6.....	3.10	1.60	1.25	1.3	1.4	1.4	1.9	2.6	2.75	1.25	.85	.95	
7.....	2.70	1.55	1.35	1.3	1.4	1.4	1.8	2.6	2.7	1.15	.85	.95	
8.....	2.35	1.60	1.30	1.35	1.4	1.35	1.9	2.7	2.7	1.1	.85	.95	
9.....	2.15	1.50	1.30	1.4	1.4	1.3	1.85	2.75	2.55	1.0	.8	.9	
10.....	2.00	1.50	1.35	1.4	1.3	1.55	1.95	2.65	2.55	.95	.8	.85	
11.....	1.95	1.50	1.40	1.35	1.35	1.5	1.9	2.7	2.5	.95	.85	.85	
12.....	1.85	1.45	1.45	1.35	1.35	1.4	2.0	2.7	2.45	.9	.85	.85	
13.....	1.80	1.40	1.45	1.4	1.35	1.4	1.9	2.7	2.35	.85	.85	.85	
14.....	1.80	1.45	1.35	1.4	1.35	1.35	1.8	2.7	2.3	.7	.85	.85	
15.....	1.75	1.40	1.30	1.3	1.35	1.3	1.8	2.6	2.2	.95	.9	.85	

Daily gage height, in feet, of Rio Taos at Los Cordovas, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
16.....	1.65	1.40	1.40	1.3	1.35	1.3	1.85	2.55	2.1	1.3	0.85	0.85
17.....	1.60	1.40	1.35	1.3	1.3	1.3	1.85	2.65	2.05	1.0	.85	.85
18.....	1.60	1.40	1.35	1.3	1.3	1.3	1.8	2.8	1.95	.9	.85	.95
19.....	1.55	1.40	1.30	1.3	1.35	1.35	1.8	3.1	1.75	.85	.85	.95
20.....	1.50	1.40	1.39	1.3	1.3	1.95	1.7	3.2	1.65	.85	.85	.95
21.....	1.50	1.40	1.30	1.2	1.3	1.7	1.7	3.4	1.6	.85	.95	.95
22.....	1.40	1.45	1.30	1.35	1.3	1.7	1.75	3.6	1.6	.8	.9	.95
23.....	1.40	1.50	1.30	1.4	1.3	1.7	1.75	3.45	1.8	.85	.9	.95
24.....	1.40	1.45	1.50	1.4	1.3	1.5	1.9	3.4	1.85	.85	.95	.95
25.....	1.40	1.40	.....	1.35	1.3	1.4	2.0	3.4	1.8	.85	.85	.95
26.....	1.40	1.35	1.60	1.3	1.4	1.55	2.05	3.3	1.7	1.0	.85	.95
27.....	1.65	1.30	1.60	1.4	1.4	1.65	2.0	3.4	1.65	.85	.85	.95
28.....	1.70	1.20	1.50	1.3	1.4	1.6	2.0	3.25	1.6	.....	.85	.95
29.....	1.65	1.30	1.50	1.3	1.4	1.55	2.1	3.15	1.55	.85	.85	.95
30.....	1.60	1.35	1.49	1.3	.....	1.5	2.2	3.15	1.5	.85	.9	1.05
31.....	1.55	.....	1.40	1.3	.....	1.5	.....	3.15	.....	.85	.85	.....
1912-13.												
1.....	1.0	1.1	1.1	1.1	.....	1.0	1.25	1.55	1.1	.65	.6	.65
2.....	1.0	1.1	1.05	.....	1.0	1.2	1.25	1.55	1.05	.65	.6	.6
3.....	1.0	1.1	1.1	.....	1.0	1.15	1.3	1.6	1.0	.65	.6	.65
4.....	.95	1.1	1.0	.....	1.0	1.15	1.25	1.5	1.0	.7	.6	.65
5.....	1.1	1.1	1.0	.....	1.0	1.1	1.2	1.5	.95	.6	.6	.65
6.....	1.0	1.1	1.05	.....	1.1	1.15	1.4	1.4	.85	.6	.7	.7
7.....	1.05	1.1	1.3	.....	1.1	1.15	1.45	1.4	.8	.6	.65	.6
8.....	1.0	1.1	1.1	.....	1.0	.....	1.5	1.45	1.2	.6	.6	.7
9.....	1.0	1.1	1.05	.....	.9	1.2	1.4	1.5	1.0	.6	.6	.7
10.....	1.0	1.1	1.05	.....	.9	1.15	1.2	1.4	1.05	.65	.6	.75
11.....	1.0	1.1	1.1	.....	.9	1.2	1.25	1.5	1.7	.65	.65	.75
12.....	1.0	1.1	1.1	.....	.9	1.1	1.2	1.5	1.95	.65	1.2	.7
13.....	1.0	1.1	1.2	.....	1.0	1.15	1.3	1.45	1.85	.6	.95	.7
14.....	1.0	1.1	.....	.....	1.0	1.1	1.35	1.4	1.7	.65	.7	.7
15.....	1.0	1.1	.....	.....	.9	1.2	1.45	1.45	1.5	.65	.65	.65
16.....	1.0	1.1	1.05	.....	1.0	1.2	1.6	1.4	1.4	.65	.7	.65
17.....	1.0	1.1	1.1	.....	1.0	1.15	1.65	1.4	1.25	.65	.6	.65
18.....	1.0	1.05	1.3	.....	1.05	1.15	1.6	1.4	1.2	.7	.65	.65
19.....	1.0	1.1	1.15	.....	1.1	1.15	1.6	1.35	1.15	.7	.65	.65
20.....	1.1	1.05	1.15	.....	1.1	1.1	1.6	1.3	1.05	1.0	.7	.7
21.....	1.0	1.05	1.3	.....	1.1	1.15	1.6	1.3	1.1	.75	.7	.6
22.....	1.0	1.05	1.1	.....	1.1	1.1	1.6	1.25	1.0	.7	.75	.8
23.....	1.05	1.0	1.05	.....	.....	1.2	1.6	1.2	1.05	.75	.7	1.2
24.....	1.05	1.1	1.1	.....	1.1	1.15	1.6	1.2	1.05	.75	.7	1.05
25.....	1.05	1.05	.....	.....	1.1	1.15	1.5	1.2	1.0	.65	.7	1.0
26.....	1.1	1.05	1.15	.....	1.1	1.2	1.4	1.2	.9	.7	.7	1.0
27.....	1.0	1.05	1.1	.....	1.1	1.2	1.5	1.2	.8	.7	.7	1.0
28.....	1.1	.....	1.05	.....	1.1	1.15	1.35	1.2	.9	.65	.65	1.0
29.....	1.1	1.0	.....	.....	.....	1.2	1.5	1.15	.8	.65	.65	1.0
30.....	1.1	.9	1.1	.....	.....	1.2	1.5	1.1	.75	.65	.7	1.0
31.....	1.1	.....	1.1	.....	.....	1.2	.....	1.2	.....	.6	.6	.....

NOTE.—Gage height affected by ice Dec. 18-31, 1910; Jan. 1-12, Feb. 22-24, and about Nov. 29 to Dec. 31, 1911; Jan. 1 to Feb. 19, Nov. 28-30, Dec. 7, 8, 13, and 18-21, 1912; and Jan. 1 to Feb. 18, 1913.

Daily discharge, in second-feet, of Rio Taos at Los Cordovas, N. Mex., for 1910-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1910.							1910.						
1.....	.....	300	59	1.5	3.0	4.5	16.....	120	181	4.5	1.5	4.5	4.5
2.....	.....	270	45	1.5	1.5	4.5	17.....	129	170	4.5	1.5	4.5	4.5
3.....	.....	242	45	1.5	1.5	4.5	18.....	139	149	3.0	1.5	4.5	4.5
4.....	.....	242	33	1.5	4.5	4.5	19.....	149	129	3.0	1.5	4.5	4.5
5.....	.....	229	33	1.5	4.5	4.5	20.....	170	110	1.5	1.5	4.5	4.5
6.....	67	216	23	1.5	4.5	4.5	21.....	192	101	1.5	1.5	4.5	4.5
7.....	75	216	19	1.5	4.5	4.5	22.....	204	110	1.5	1.5	4.5	4.5
8.....	84	204	12	1.5	4.5	4.5	23.....	192	92	1.5	1.5	4.5	4.5
9.....	75	229	9	1.5	1.5	4.5	24.....	192	75	1.5	1.5	4.5	4.5
10.....	75	192	9	4.5	1.5	4.5	25.....	204	59	1.5	1.5	4.5	4.5
11.....	75	192	4.5	4.5	3.0	4.5	26.....	242	39	4.5	1.5	4.5	4.5
12.....	75	192	4.5	3.0	4.5	3.0	27.....	242	33	4.5	1.5	4.5	4.5
13.....	129	192	4.5	4.5	4.5	1.5	28.....	270	28	1.5	1.5	4.5	4.5
14.....	149	192	4.5	4.5	4.5	4.5	29.....	300	33	1.5	1.5	4.5	4.5
15.....	129	216	4.5	1.5	1.5	4.5	30.....	315	39	1.5	6.8	4.5	4.5
.....	.....	.....	.....	.....	.....	.....	31.....	.....	52	.....	4.5	4.5	.....

Daily discharge, in second-feet, of Rio Taos at Los Cordovas, N. Mex., for 1910-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	4.5	15	15	-----	23	23	78	149	204	28	57	23
2.....	4.5	15	15	-----	23	28	92	139	216	52	48	23
3.....	9	15	15	-----	23	33	101	149	192	67	38	23
4.....	9	15	15	-----	23	39	92	160	181	59	28	23
5.....	6.8	15	23	-----	31	48	78	160	170	52	19	19
6.....	4.5	15	23	-----	25	72	75	192	139	59	9	15
7.....	6.8	15	23	-----	23	45	72	242	129	52	4.5	15
8.....	4.5	15	19	-----	21	35	59	285	129	39	4.5	15
9.....	6.8	15	23	-----	21	43	59	330	129	45	3.0	23
10.....	6.8	15	19	-----	21	56	52	345	129	33	3.0	15
11.....	9	15	23	-----	21	101	48	285	110	28	4.5	15
12.....	6.8	15	19	-----	21	52	48	285	101	75	3.0	19
13.....	6.8	15	19	43	25	62	52	270	84	59	4.5	19
14.....	9	15	19	25	23	45	52	330	59	45	3.0	19
15.....	6.8	15	23	28	23	45	48	315	67	45	4.5	23
16.....	6.8	15	19	23	28	52	52	285	52	67	6.8	23
17.....	9	15	-----	23	25	48	59	285	45	39	85	15
18.....	6.8	15	-----	23	25	45	62	270	59	28	23	15
19.....	9	15	-----	23	25	52	59	256	52	39	15	15
20.....	9	15	-----	23	25	56	48	242	45	45	9	23
21.....	9	15	-----	23	25	59	59	204	52	59	9	23
22.....	12	15	-----	23	23	62	75	181	45	52	15	23
23.....	12	15	-----	23	20	56	110	149	39	67	33	23
24.....	15	15	-----	23	20	52	129	129	33	75	33	19
25.....	12	15	-----	23	23	52	129	139	28	75	33	15
26.....	15	15	-----	23	23	48	149	139	19	84	45	15
27.....	12	15	-----	21	23	45	149	149	15	84	45	15
28.....	15	15	-----	21	23	45	170	160	15	92	45	15
29.....	12	15	-----	-----	-----	59	192	149	15	92	39	52
30.....	15	15	-----	23	-----	67	160	139	19	75	33	149
31.....	15	-----	-----	25	-----	78	-----	170	-----	67	28	-----
1911-12.												
1.....	129	75	-----	30	30	59	83	315	492	71	8	8
2.....	129	92	-----	30	30	52	59	376	441	71	6	8
3.....	67	92	-----	30	30	49	75	424	408	57	8	8
4.....	75	75	-----	23	30	46	100	392	392	57	6	8
5.....	378	92	-----	23	30	59	128	315	408	44	6	8
6.....	495	92	-----	23	30	59	148	330	376	44	8	14
7.....	360	84	-----	23	30	59	128	330	360	32	8	14
8.....	256	92	-----	30	30	52	148	360	360	27	8	14
9.....	204	75	-----	30	30	46	138	376	315	18	6	11
10.....	170	75	-----	30	23	83	159	345	315	14	6	8
11.....	160	75	-----	30	30	75	148	360	300	14	8	8
12.....	139	67	-----	30	30	59	170	360	285	11	8	8
13.....	129	59	-----	30	30	59	148	360	256	8	8	8
14.....	129	67	-----	30	30	52	128	360	242	3	8	8
15.....	120	59	-----	23	30	46	128	330	218	14	11	8
16.....	101	59	-----	23	30	46	138	315	195	50	8	8
17.....	92	59	-----	23	30	46	138	345	184	18	8	8
18.....	92	59	-----	23	35	46	128	392	163	11	8	14
19.....	84	59	-----	23	40	52	128	492	120	8	8	14
20.....	75	59	-----	23	46	159	108	526	102	8	8	14
21.....	75	59	-----	16	46	108	108	596	94	8	14	14
22.....	59	67	-----	30	46	108	118	670	94	6	11	14
23.....	59	75	-----	30	46	108	118	614	129	8	11	14
24.....	59	67	-----	30	46	75	148	596	140	8	14	14
25.....	59	59	-----	30	46	59	170	596	129	8	8	15
26.....	59	52	-----	23	59	83	181	560	110	18	8	15
27.....	101	45	-----	30	59	100	170	596	102	8	8	16
28.....	110	33	-----	23	59	91	170	543	94	8	8	18
29.....	101	30	-----	23	59	83	192	509	86	8	8	16
30.....	92	30	-----	23	-----	75	216	509	78	8	11	25
31.....	84	-----	-----	23	-----	75	-----	509	-----	8	8	-----

Daily discharge, in second-feet, of Rio Taos at Los Cordovas, N. Mex., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	21	31	38	.....	25	25	54	104	35	6.1	5.0	6.1
2.....	22	31	29	.....	25	47	54	104	30	6.1	5.0	5.0
3.....	22	31	38	.....	25	41	61	113	25	6.1	5.0	6.1
4.....	18	31	28	.....	25	41	54	95	25	7.2	5.0	6.1
5.....	31	31	28	.....	25	35	47	95	21	5.0	5.0	6.1
6.....	22	32	33	.....	35	41	77	77	14	5.0	7.2	7.2
7.....	26	32	33	.....	35	41	86	77	11	5.0	6.1	5.0
8.....	22	32	33	.....	25	44	95	86	47	5.0	5.0	7.2
9.....	22	32	33	.....	17	47	77	95	25	5.0	5.0	7.2
10.....	22	33	31	.....	17	41	47	77	30	6.1	5.0	9.1
11.....	22	33	40	.....	17	47	54	95	131	6.1	6.1	9.1
12.....	22	34	40	.....	17	35	47	95	176	6.1	47	7.2
13.....	22	34	46	.....	25	41	61	86	158	5.0	21	7.2
14.....	22	34	42	.....	25	35	69	77	131	6.1	7.2	7.2
15.....	22	34	38	.....	17	47	86	86	95	6.1	6.1	6.1
16.....	22	34	34	.....	25	47	113	77	77	6.1	7.2	6.1
17.....	22	35	40	.....	25	41	122	77	54	6.1	5.0	6.1
18.....	22	30	40	.....	30	41	113	77	47	7.2	6.1	6.1
19.....	22	35	40	.....	35	41	113	69	41	7.2	6.1	6.1
20.....	31	30	40	.....	35	35	113	61	30	25	7.2	7.2
21.....	22	30	40	.....	35	41	113	61	35	9.1	7.2	5.0
22.....	22	31	40	.....	35	35	113	54	25	7.2	9.1	11
23.....	26	26	34	.....	35	47	113	47	30	9.1	7.2	43
24.....	26	36	40	.....	35	41	113	47	30	9.1	7.2	27
25.....	26	31	43	.....	35	41	95	47	25	6.1	7.2	23
26.....	31	32	46	.....	35	47	77	47	17	7.2	7.2	23
27.....	22	32	40	.....	35	47	95	47	11	7.2	7.2	23
28.....	31	30	34	.....	35	41	69	47	17	6.1	6.1	23
29.....	31	27	37	.....	.....	47	95	41	11	6.1	6.1	23
30.....	31	19	40	.....	.....	47	95	35	9.1	6.1	7.2	23
31.....	31	.....	40	.....	.....	47	.....	47	.....	5.0	5.0	.....

NOTE.—Daily discharge determined from short-period rating curves and by indirect method for shifting channels. Discharge estimated because of ice on Feb. 23-24, Nov. 29-30, 1911; Jan. 1 to Feb. 19, Nov. 28-30, Dec. 7, 8, 13, 18-21, 1912; Feb. 1-18, 1913.

Monthly discharge of Rio Taos at Los Cordovas, N. Mex., for 1910-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910.					
April 6-30.....	315	67	160	7,930	B.
May.....	300	28	152	9,350	B.
June.....	59	1.5	11.6	690	C.
July.....	6.8	1.5	2.2	135	D.
August.....	4.5	1.5	3.9	241	D.
September.....	4.5	1.5	4.4	259	D.
The period.....	.....			18,600	
1910-11.					
October.....	15	4.5	9.2	568	D.
November.....	15	15	15.0	893	D.
December.....	.....	.....	18.8	1,160	C.
January.....	.....	.....	20.7	1,270	C.
February.....	31	20	23.4	1,300	C.
March.....	101	23	51.7	3,180	B.
April.....	192	48	86.9	5,170	B.
May.....	345	129	216	13,300	B.
June.....	216	15	85.7	5,100	B.
July.....	92	28	57.4	3,530	B.
August.....	85	3	23.6	1,450	B.
September.....	149	15	24.3	1,450	B.
The year.....	345	.....	52.7	38,400	

Monthly discharge of Rio Taos at Los Cordovas, N. Mex., for 1910-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October.....	495	59	137	8,420	B.
November.....	92	30	66.1	3,930	B.
December.....			20.0	1,230	D.
January.....	30	16	26.2	1,610	D.
February.....	59	23	37.6	2,160	D.
March.....	159	46	70.0	4,300	C.
April.....	216	59	137	8,150	C.
May.....	670	315	442	27,200	C.
June.....	492	78	233	13,900	C.
July.....	71	3	21.8	1,340	C.
August.....	14	6	8.5	523	B.
September.....	25	8	11.9	708	B.
The year.....	670		101	73,500	
1912-13.					
October.....	31	18	24.4	1,500	B.
November.....	35	19	31.4	1,870	B.
December.....	46	28	37.5	2,310	C.
January.....			^a 25.0	1,540	C.
February.....	35	17	28.0	1,560	B.
March.....	47	25	41.4	2,560	A.
April.....	122	47	84.0	5,000	A.
May.....	113	35	72.4	4,450	A.
June.....	176	9.1	47.1	2,800	A.
July.....	25	5.0	6.96	428	A.
August.....	47	5.0	8.03	494	A.
September.....	43	5.0	11.9	708	A.
The year.....	176		34.9	25,200	

^a Estimated.

NOTE.—Dec. 17-31, 1910, estimated 18 second-feet; Jan. 1-12, 1911, estimated 15 second-feet; Dec. 1-31, 1911, estimated 20 second-feet.

RIO LUCERO NEAR TAOS, N. MEX.

Location.—Just above the headgate of the Seco ditch, at the mouth of the canyon, 9 miles above Taos, in sec. 11, T. 26 N., R. 13 E. No important tributaries near the station.

Records available.—December 17, 1910, to September 30, 1913, and fragmentary records from March to October, 1910.

Drainage area.—17 square miles.

Gage.—Automatic recording. Installed by the United States Indian Service December 17, 1910, and referred to the datum of vertical staff gage originally installed.

Channel.—Somewhat shifting.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater at gage during the winter months.

Diversions.—No diversions above the Station. Records represent the natural run-off. Below the station water is diverted for irrigation.

Accuracy.—Although the channel is somewhat shifting, estimates may be considered fair.

Cooperation.—Station maintained in cooperation with the United States Forest Service, United States Indian Service, and State engineer.

Discharge measurements of Rio Lucero near Taos, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Fect.</i>	<i>Sec.-ft.</i>	1912.		<i>Fect.</i>	<i>Sec.-ft.</i>
Mar. 12	S. S. Carroll.....		11.4	Oct. 5	Gray and Powers.....	0.91	13.8
Apr. 7	J. B. Stewart.....	1.05	21.2	31	J. E. Powers.....	.80	8.2
July 12	do.....	.95	14.7	Dec. 12 ^a	do.....	.83	7.7
Sept. 15	C. D. Miller.....	.82	10	1913.			
Oct. 15	J. B. Stewart.....	.80	8.4	Jan. 19 ^a	J. E. Powers.....	.65	7.4
Dec. 17 ^a	Russell and Digby.....	1.19	10.7	Feb. 16 ^a	do.....	.63	7.6
1911.				Mar. 27 ^a	do.....	.63	6.1
Jan. 28 ^a	G. H. Russell.....	0.75	8.0	Apr. 27	do.....	.98	19.1
Mar. 11	do.....	.85	12.5	May 29	do.....	1.54	68.5
Apr. 21	do.....	1.18	29.7	June 28	do.....	1.23	31.0
June 8	R. L. Cooper.....	1.75	88.4	Aug. 22	Gray and Powers.....	1.03	17.4

^a Ice present.

Daily gage height, in feet, of Rio Lucero near Taos, N. Mex., for 1910-1913.

Day.	May.	June.	July.	Aug.	Day.	May.	June.	July.	Aug.
1910.					16.	1.55			
1.					17.			0.9	
2.		1.5			18.				
3.			1.05		19.				
4.					20.				
5.	1.5			1.0	21.				
6.					22.				
7.					23.				
8.					24.				
9.					25.				
10.					26.				
11.					27.				
12.					28.				
13.		1.35			29.	1.45			
14.			1.0		30.				
15.					31.				

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.				0.7	0.7	0.7	1.25	1.2	1.85	1.55	1.5	1.3
2.				.65	.7	.7	1.2	1.2	1.8	1.55	1.5	1.25
3.				.65	.7	.7	1.15	1.2	1.8	1.55	1.5	1.2
4.				.75	.7	.75	1.1	1.3	1.75	1.55	1.4	1.15
5.				.9	.7	.75	1.0	1.45	1.7	1.55	1.35	1.15
6.				1.05	.7	.75	.95	1.5	1.7	1.55	1.3	1.15
7.				1.0	.7	.75	.95	1.5	1.75	1.5	1.25	1.15
8.				.75	.7	.75	.9	1.6	1.75	1.45	1.25	1.15
9.				.65	.7	.8		1.6	1.8	1.35	1.25	1.15
10.				.65	.75	.85		1.65	1.8	1.35	1.25	1.15
11.				.65	.75	.85		1.65	1.75	1.35	1.25	1.1
12.				.7	.75	.8		1.7	1.7	1.35	1.25	1.15
13.				.7	.75	.8	.95	1.65	1.7	1.35	1.25	1.1
14.				.7	.7	.8	1.0	1.65	1.7	1.35	1.2	1.1
15.				.7	.7	.8	1.0	1.65	1.7	1.35	1.2	1.15
16.				.65	.7	.85	1.05	1.7	1.7	1.35	1.15	1.1
17.				.65	.7	.85	1.15	1.7	1.7	1.35	1.2	
18.			1.1	.65	.75	.85	1.1	1.7	1.65	1.35	1.2	
19.			.9	.65	.75	.85	1.1	1.75	1.6	1.4	1.15	
20.			.7	.65	.7	.85	1.15	1.7	1.6	1.5	1.1	
21.			.7	.7	.75	.85	1.2	1.6	1.6	1.55	1.05	
22.			.7	.7	.8	.9	1.2	1.6	1.6	1.55	1.2	
23.			.7	.7	.9	.85	1.2	1.6	1.6	1.55	1.35	1.05
24.			.7	.7	.85	.85	1.2	1.65	1.6	1.5	1.35	1.05
25.			.7	.7	.8	.85	1.2	1.65	1.6	1.55	1.4	1.05
26.			.7	.75	.7	.8	1.2	1.75	1.55	1.6	1.4	1.0
27.			.7	.75	.7	.8	1.2	1.8	1.55	1.6	1.35	1.05
28.			.7	.75	.7	.8	1.25	1.8	1.55	1.6	1.35	1.15
29.			.7	.7		.9	1.3	1.7	1.55	1.55	1.3	1.1
30.			.7	.7		1.05	1.2	1.7	1.55	1.5	1.3	1.4
31.			.7	.7		1.2		1.75		1.5	1.25	

Daily gage height, in feet, of Rio Lucero near Taos, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1.45	1.05	1.2	.....	.....	.....	0.80	1.35	2.10	1.60	1.10	0.95
2.....	1.4	1.05	1.0	.....	.....	.....	.85	1.50	2.10	1.55	1.10	.95
3.....	1.35	1.05	1.0	.....	.....	.....	.95	1.50	2.10	1.55	1.05	.95
4.....	1.35	1.1	1.0	.....	.....	.....	1.05	1.30	2.20	1.50	1.07	.95
5.....	1.95	1.1	1.0	.....	.....	.....	1.10	1.20	2.20	1.50	1.05	.95
6.....	2.3	1.05	1.0	.....	.....	.....	1.05	1.20	2.20	1.50	1.05	.95
7.....	1.8	1.1	1.0	.....	.....	.....	1.00	1.30	2.20	.....	1.03	.93
8.....	1.6	1.1	1.0	.....	.....	0.74	1.05	1.40	2.10	.....	1.00	.95
9.....	1.65	1.1	1.0	.....	.....	.73	1.05	1.45	2.10	.....	1.05	.95
10.....	1.5	1.1	1.0	.....	.....	.72	1.10	1.40	1.90	.....	1.03	.90
11.....	1.4	1.05	1.0	.....	.....	.69	1.15	1.35	.....	.....	1.00	.90
12.....	1.4	1.15	1.0	.....	.....	.69	1.15	1.30	.....	.....	1.00	.95
13.....	1.35	1.2	.....	.....	.....	.69	1.10	1.30	.....	.....	1.00	.95
14.....	1.3	1.15	.....	.....	.....	.72	.95	1.25	.....	1.25	1.00	.95
15.....	1.3	1.1	.....	.....	.....	.84	.90	1.20	.....	1.20	1.00	.90
16.....	1.2	1.1	.....	.....	.....	.75	.90	1.30	.....	1.25	1.00	.90
17.....	1.1	1.15	.....	.....	.....	.71	.90	1.40	.....	1.20	1.00	.90
18.....	1.1	1.15	.....	.....	.....	.71	.90	1.65	1.60	1.20	.95	.90
19.....	1.1	1.1	.....	.....	.....	.80	.95	1.75	1.50	1.20	.93	.90
20.....	1.1	1.1	.....	.....	.....	.91	.95	1.80	1.50	1.20	.90	.90
21.....	1.15	1.05	.....	.....	.....	.87	.85	1.95	1.50	1.20	.97	.90
22.....	1.1	1.05	.....	.....	.....	.87	.85	1.95	1.55	1.20	1.00	.85
23.....	1.05	1.05	.....	.....	.....	.90	.80	1.95	1.60	1.20	.97	.85
24.....	1.05	1.1	.....	.....	.....	.90	.95	1.95	1.55	1.20	.95	.85
25.....	1.0	1.4	.....	.....	.....	.85	.85	2.00	1.55	1.20	.95	.90
26.....	1.05	1.35	.....	.....	.....	.90	1.05	2.10	1.60	1.20	.90	.85
27.....	1.05	1.25	.....	.....	.....	.85	1.05	2.10	1.60	1.15	.90	.85
28.....	1.05	1.95	.....	.....	.....	.90	1.05	2.10	1.65	1.10	.95	.85
29.....	1.0	2.6	.....	.....	.....	.85	1.15	2.15	1.70	1.10	.97	.90
30.....	1.0	2.2	.....	.....	.....	.85	1.25	2.20	1.65	1.10	1.03	.90
31.....	.....	.....	.....	.....	.....	.85	.....	2.15	.....	1.10	1.02	.....
1912-13.												
1.....	.90	.75	.....	.....	0.65	.65	.83	1.05	1.48	.....	1.05	.95
2.....	.90	.70	.....	1.00	.65	.65	.82	1.05	1.42	.....	1.01	.93
3.....	.90	.70	.....	1.05	.60	.64	.82	1.00	.....	.....	.....	.96
4.....	.90	.70	.85	1.05	.60	.64	.80	1.10	.....	.....	.....	.96
5.....	.90	.70	.85	1.00	.63	.64	.85	1.15	.....	1.15	.....	.91
6.....	.85	.70	.90	.98	.64	.65	.92	1.20	.....	1.15	.....	.95
7.....	.85	.70	.85	.95	.65	.65	.88	1.25	1.35	1.10	.....	.95
8.....	.85	.75	.90	.90	.65	.64	.85	1.20	1.35	1.10	.....	.84
9.....	.85	.75	.90	.80	.63	.60	.80	1.25	1.34	1.08	.....	.98
10.....	.80	.75	.85	.80	.60	.59	.78	1.30	1.34	1.10	.95	1.02
11.....	.80	.72	.85	.70	.58	.60	.80	1.35	1.36	1.10	.....	.96
12.....	.80	.72	.85	.70	.57	.60	.90	1.35	1.36	1.05	.....	.98
13.....	.75	.70	.90	.70	.59	.60	1.00	1.40	1.38	1.05	.....	.94
14.....	.75	.70	.90	.70	.65	.60	1.10	1.35	1.38	1.05	.....	.96
15.....	.75	.70	.95	.65	.63	.67	1.12	1.35	1.33	1.05	.....	.98
16.....	.75	.75	.90	.70	.63	.65	1.20	1.35	1.32	1.05	.93	1.00
17.....	.75	.70	.90	.70	.60	.62	1.18	1.38	1.33	1.05	.....	1.04
18.....	.75	.70	1.00	.70	.62	.65	1.16	1.38	1.32	1.05	.....	1.02
19.....	.75	.75	.95	.70	.63	.65	1.22	1.40	1.34	1.05	.....	1.00
20.....	.75	.....	1.00	.70	.63	.65	1.20	1.40	1.36	1.07	.....	.94
21.....	.75	.....	.95	.70	.64	.65	1.18	1.35	1.34	1.08	.....	.75
22.....	.75	.....	.95	.70	.64	.65	1.12	1.35	1.30	1.05	1.02	.80
23.....	.75	.....	.95	.70	.65	.62	1.03	1.42	1.30	1.05	1.00	.95
24.....	.80	.....	.95	.70	.64	.62	1.00	1.42	1.29	1.05	.99	1.00
25.....	.80	.....	1.00	.70	.64	.62	.98	1.40	1.27	1.05	1.01	1.00
26.....	.80	.....	.95	.70	.65	.62	.99	1.41	1.25	1.05	.99	.90
27.....	.75	.....	1.00	.70	.65	.63	1.00	1.46	1.30	1.05	.98	.85
28.....	.75	.....	1.00	.70	.66	.64	1.10	1.55	1.35	1.00	1.00	.90
29.....	.70	.....	1.00	.70	.....	.65	1.15	1.56	.....	1.00	1.02	.90
30.....	.70	.....	.95	.70	.....	.70	1.12	1.56	.....	1.00	.98	.90
31.....	.70	.....	1.00	.70	.....	.78	.....	1.55	.....	1.04	.96	.....

NOTE.—Gage heights affected by ice Dec. 17, 1910, to Jan. 7, 1911; Jan. 26-28, Nov. 25-30, Dec. 13-31, 1911; Dec. 4, 1912, to Apr. 12, 1913.

Daily discharge, in second-feet, of Rio Luccro near Taos, N. Mex., for 1911-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.												
1				6	6	6	36	31	100	66	60	40
2				5	6	6	31	31	94	66	60	36
3				5	6	6	28	31	94	66	60	31
4				5	6	8	24	40	88	66	50	28
5				5	6	8	18	55	82	66	45	28
6				5	6	8	16	60	82	66	40	28
7				5	6	8	16	60	88	60	36	28
8				8	6	8	13	71	88	55	36	28
9				5	6	9	14	71	94	45	36	28
10				5	8	11	14	76	94	45	36	28
11				5	8	11	15	76	88	45	36	24
12				6	8	9	15	82	82	45	36	28
13				6	8	9	16	76	82	45	36	24
14				6	6	9	18	76	82	45	31	24
15				6	6	9	18	76	82	45	31	28
16				5	6	11	21	82	82	45	28	24
17				6	6	11	28	82	82	45	31	23
18				5	8	11	24	82	76	45	31	23
19				5	6	11	24	88	71	50	28	23
20				6	8	11	28	82	71	60	24	22
21				6	8	11	31	71	71	66	21	22
22				6	9	13	31	71	71	66	31	22
23				6	13	11	31	71	71	66	45	21
24				6	11	11	31	76	71	60	45	21
25				6	9	11	31	76	71	66	50	21
26				8	6	9	31	88	66	71	50	18
27				8	6	9	31	94	66	71	45	21
28				8	6	9	36	94	66	71	45	28
29				6	13	13	40	82	66	66	40	24
30				6	21	21	31	82	66	60	40	50
31				6	31	31	31	88	60	60	36	36
1911-12.												
1	55	21	31				9	44	132	72	24	14
2	50	21	18				10	60	132	66	24	14
3	45	21	18				14	60	132	66	20	14
4	45	24	18				20	40	144	60	22	14
5	112	24	18				24	31	144	60	20	14
6	158	21	18				20	31	144	60	20	14
7	91	24	18				17	40	144	57	19	14
8	71	24	18			7.8	20	49	132	54	17	14
9	76	24	18			7.6	20	51	132	51	20	14
10	60	24	18			7.4	24	49	108	48	19	12
11	50	21	18			6.8	28	44	104	45	17	12
12	50	28	18			6.8	28	40	100	42	17	14
13	45	31	18			6.8	24	40	96	39	17	14
14	40	28	18			7.4	14	36	92	36	17	14
15	40	24	18			10	12	31	86	31	17	12
16	31	24	18			8	12	40	82	36	17	12
17	24	28	18			7.2	12	49	77	31	17	12
18	24	28	18			7.2	12	78	72	31	14	12
19	24	24	18			9	14	90	60	31	14	12
20	24	24	18			12	14	96	60	31	12	12
21	28	21	18			11	10	114	60	31	16	12
22	24	21	18			11	10	114	66	31	17	10
23	21	21	18			12	9	114	72	31	16	10
24	21	20	18			12	14	114	66	31	14	10
25	18	20	18			10	10	120	66	31	14	12
26	21	20	18			12	20	132	72	31	12	10
27	21	20	18			10	20	132	72	28	12	10
28	21	20	18			12	20	132	78	24	14	10
29	18	20	18			10	28	138	84	24	16	12
30	18	20	18			10	36	144	78	24	19	12
31	20	20	18			10	31	138	78	24	18	12
1912-13.												
1	12	8	7				10	24	62	35	19	14
2	12	7	7				11	24	55	32	17	13
3	12	7	6.5				11	20	53	30	17	14
4	12	7	6				11	27	51	28	16	14
5	12	7	6				12	31	49	26	16	12
6	10	7	5.5				12	35	48	26	15	14
7	10	7	5				12	40	47	22	15	14
8	10	8	5				12	35	46	22	15	9
9	10	8	6				11	40	45	21	14	15
10	9	8	7				10	44	45	22	14	17

Daily discharge, in second-feet, of Rio Lucero near Taos, N. Mex., for 1911-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
11.....	9	7.4	8	.....	.....	.....	11	48	46	22	14	14
12.....	9	7.4	8	.....	.....	.....	15	48	46	19	14	15
13.....	8	7	8	.....	.....	.....	20	53	47	19	14	13
14.....	8	7	8	.....	.....	.....	27	48	46	19	13	14
15.....	8	7	8	.....	.....	.....	29	48	41	19	13	15
16.....	8	8	8	.....	.....	.....	35	48	40	19	13	16
17.....	8	7	8	.....	.....	.....	33	51	40	19	13	18
18.....	8	7	8	.....	.....	.....	32	51	40	19	14	17
19.....	8	8	8	.....	.....	.....	37	53	40	19	15	16
20.....	8	8	8	.....	.....	.....	35	53	42	20	16	13
21.....	8	8	8	.....	.....	.....	33	48	41	21	17	6
22.....	8	8	8	.....	.....	.....	29	48	37	19	17	7
23.....	8	8	7	.....	.....	.....	22	55	37	19	16	14
24.....	9	8	6	.....	.....	.....	20	55	36	19	16	16
25.....	9	8	7	.....	.....	.....	19	53	35	19	17	16
26.....	9	8	8	.....	.....	.....	20	54	33	19	16	11
27.....	8	8	8	.....	.....	.....	20	60	37	19	15	9
28.....	8	8	8	.....	.....	.....	27	70	42	16	16	11
29.....	7	8	8	.....	.....	.....	31	71	40	16	17	11
30.....	7	8	8	.....	.....	.....	29	71	38	16	15	11
31.....	7	.....	8	.....	.....	.....	.....	70	.....	18	14	.....

NOTE.—Daily discharge determined from rating curves covering short periods of time and by the indirect method for shifting channels. Discharge estimated Jan. 4-7, Nov. 24-30, 1911; Nov. 20 to Dec. 31, 1912; and Apr. 1-12, 1913, on account of ice. Discharge also estimated Aug. 3-9, 11-15, and 17-21, 1913, and interpolated on other days of missing gage heights.

Monthly discharge of Rio Lucero near Taos, N. Mex., for 1911-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
January.....	8	5	5.8	357	C.
February.....	13	6	7.1	394	C.
March.....	31	6	10.6	652	B.
April.....	40	13	24.7	1,470	B.
May.....	94	31	71.6	4,400	B.
June.....	100	66	79.6	4,740	B.
July.....	71	45	57.9	3,560	B.
August.....	60	21	39.3	2,420	B.
September.....	50	18	26.5	1,580	B.
The period.....	.....	.....	.....	19,600	.....
1911-12.					
October.....	158	18	43.5	2,670	B.
November.....	31	20	23.0	1,370	C.
December.....	.....	.....	α 15.0	922	D.
March 8-31.....	12	6.8	9.3	444	B.
April.....	36	9	17.5	1,040	B.
May.....	144	31	77.2	4,750	B.
June.....	144	60	96.2	5,720	B.
July.....	72	24	40.5	2,490	B.
August.....	24	12	17.2	1,060	B.
September.....	14	10	12.4	738	A.
1912-13.					
October.....	12	7	9.0	553	A.
November.....	8	7	7.6	452	B.
December.....	8	5	7.3	446	C.
January.....	.....	.....	α 7.0	430	B.
February.....	.....	.....	α 7.5	417	B.
March.....	.....	.....	α 6.5	400	B.
April.....	37	10	21.2	1,260	A.
May.....	71	20	47.6	2,930	B.
June.....	62	33	43.5	2,590	B.
July.....	35	16	21.3	1,310	A.
August.....	19	13	15.3	941	B.
September.....	18	6	13.3	791	A.
The year.....	71	.....	17.3	12,500	.....

α Estimated.

RIO FERNANDO DE TAOS NEAR TAOS, N. MEX.

Location.—Two miles southeast of Taos, 200 yards upstream from the headgate of B. G. Randall's intake ditch, at the mouth of the canyon, in sec. 21, T. 25 N., R. 13 E.

Records available.—Fragmentary records from April 6, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff. Datum has remained unchanged since the date of establishment.

Channel.—Permanent at low stages, but subject to a shift during high water.

Discharge measurements.—Made by wading.

Winter flow.—No ice effect during the winter months. Springs just above the section keep it open.

Diversions.—No water of consequence diverted above the station. The flow at this point represents the natural run-off.

Accuracy.—The estimates of discharge made in 1912 and 1913 can be considered good.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Rio Fernando de Taos near Taos, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 6	J. B. Stewart.....	1.05	17.8	Oct. 4	Gray and Powers.....	1.11	3.5
July 12	.....do.....	.70	2.2	31	J. E. Powers.....	1.10	2.7
Sept. 15	C. D. Miller.....	.70	.8	Dec. 13	.....do.....	1.02	1.6
Oct. 15	J. B. Stewart.....	.75	1.0				
Dec. 16	Russell and Digby.....	.68	.5	1913.			
1911.				Jan. 20	J. E. Powers.....	.70	a.5
Jan. 28	G. H. Russell.....	.78	2.1	Feb. 16	.....do.....	.80	a.8
Mar. 12	.....do.....	1.95	5.1	Mar. 28	.....do.....	1.10	3.6
Apr. 22	.....do.....	1.17	13.7	Apr. 28	.....do.....	1.40	18.6
June 9	R. L. Cooper.....	1.00	5.2	May 30	.....do.....	1.20	7.5
				June 29	.....do.....	1.20	7.4
				Aug. 22	Gray and Powers.....	1.20	6.9
				Sept. 30	J. E. Powers.....	.93	1.7

a Estimated.

Daily gage height, in feet, of Rio Fernando de Taos near Taos, N. Mex., for 1910, 1912-13.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1910.							1910.						
1.....		1.4	0.85	0.7	0.8	0.75	16.....	1.1	1.0	0.8	0.7	0.75	.....
2.....		1.4	.85	.7	.8	.75	17.....	1.2	1.0	.8	.7	.75	.....
3.....		1.4	.85	.7	.8	.75	18.....	1.2	1.0	.75	.7	.75	.....
4.....		1.4	.8	.65	.8	.....	19.....	1.3	.95	.75	.65	.8	.....
5.....		1.3	.95	.65	.8	.8	20.....	1.5	.95	.75	.65	.8	.....
6.....	1.05	1.3	.9	.65	.8	.75	21.....	1.5	.95	.75	.7	.8	.....
7.....		1.3	.85	.65	.8	.75	22.....	1.3	.9	.75	.65	.75	.....
8.....	1.0	1.3	.85	.6	.8	.75	23.....	1.3	.9	.75	.7	.75	.....
9.....	1.05	1.3	.85	.6	.8	.75	24.....	1.4	.9	.7	.7	.75	.....
10.....	1.3	1.2	.8	.6	.8	.75	25.....	1.4	.9	.75	.75	.75	.....
11.....	1.3	1.15	.8	.7	.8	.75	26.....	1.5	.9	.75	.75	.75	.....
12.....	1.3	1.15	.8	.7	.8	.....	27.....	1.5	.9	.7	.85	.75	.....
13.....	1.5	1.05	.8	.85	.8	.....	28.....	1.5	.9	.75	.85	.75	.....
14.....	1.5	1.05	.8	.75	.75	.....	29.....	1.5	.85	.7	.8	.75	.....
15.....	1.3	1.05	.8	.7	.75	.....	30.....	1.6	.85	.7	1.5	.75	.....
							31.....	.....	.85	.....	.9	.75	.....

Daily gage height, in feet, of Rio Fernando de Taos near Taos, N. Mex., for 1910, 1912-13—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.		1.10	1.08	1.00	0.75	0.98	1.65	1.38	1.20	1.22	1.20	0.86
2.		1.10	1.08	1.00	.75	.99	1.62	1.38	1.20	1.20	1.15	.86
3.		1.09	1.08	1.00	.75	1.01	1.50	1.40	1.20	1.12	1.10	.86
4.	1.10	1.08	1.08	1.00	.75	1.02	1.40	1.42	1.20	1.11	1.10	.86
5.	1.60	1.07	1.07	.80	.75	1.05	1.55	1.48	1.20	1.10	.90	.85
6.	1.20	1.06	1.07	.70	.75	1.06	1.70	1.38	1.20	1.10	.90	.83
7.	1.20	1.05	1.06	.....	.75	1.07	1.52	1.38	1.25	1.10	1.30	.81
8.	1.15	1.05	1.05	.....	.75	1.08	1.40	1.45	1.20	1.10	1.16	.81
9.	1.15	1.05	1.05	.....	.75	1.09	1.30	1.50	1.20	1.10	1.06	.81
10.	1.10	1.05	1.05	.....	.75	1.10	1.38	1.48	1.20	1.10	.86	.86
11.	1.10	1.05	1.05	.65	.76	1.10	1.50	1.47	1.50	1.20	.76	.96
12.	1.10	1.05	1.03	.65	.78	1.10	1.40	1.45	1.40	1.15	.76	.91
13.	1.10	1.04	1.02	.67	.79	1.09	1.50	1.40	1.40	1.10	.76	.86
14.	1.10	1.04	1.02	.68	.80	1.09	1.50	1.40	1.40	1.10	.78	.86
15.	1.10	1.04	1.01	.69	.80	1.09	1.55	1.35	1.40	1.10	.81	.86
16.	1.10	1.04	1.01	.70	.80	1.10	1.45	1.35	1.30	1.05	.82	.82
17.	1.10	1.10	1.00	.70	.80	1.10	1.38	1.30	1.30	1.05	.86	.80
18.	1.10	1.10	1.00	.70	.81	1.10	1.42	1.30	1.30	1.10	.86	.80
19.	1.10	1.09	1.00	.70	.81	1.12	1.42	1.30	1.30	1.10	.86	.80
20.	1.10	1.08	1.00	.70	.82	1.14	1.42	1.30	1.30	1.10	.80	.80
21.	1.10	1.07	1.00	.70	.84	1.14	1.35	1.30	1.34	.94	.81	.81
22.	1.10	1.06	1.00	.70	.86	1.13	1.42	1.25	1.30	.94	1.16	.81
23.	1.10	1.06	1.00	.70	.89	1.12	1.48	1.27	1.30	.94	.96	1.26
24.	1.10	1.05	1.00	.76	.91	1.12	1.38	1.20	1.30	.95	.96	1.16
25.	1.10	1.04	1.00	.75	.93	1.10	1.38	1.20	1.30	.95	.86	1.11
26.	1.10	1.03	1.00	.75	.95	1.10	1.32	1.20	1.25	.95	.76	1.10
27.	1.10	1.02	1.00	.75	.96	1.10	1.32	1.20	1.20	.95	.....	1.10
28.	1.10	1.01	1.00	.75	.97	1.12	1.40	1.30	1.15	.95	.....	1.06
29.	1.10	1.00	1.00	.75	.....	1.15	1.35	1.20	1.25	.95	.....	.96
30.	1.10	1.00	1.00	.75	.....	1.15	1.35	1.20	1.25	.95	.....	.96
31.	1.10	.....	1.00	.75	.....	1.45	.....	1.20	.....	.....	.86	.....

Daily discharge, in second-feet, of Rio Fernando de Taos near Taos, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.	3.5	2.7	2.4	1.4	0.6	2.0	40	18	7.0	8.0	7.0	1.1
2.	3.5	2.7	2.4	1.4	.6	2.1	37	18	7.0	7.0	5.4	1.1
3.	3.5	2.5	2.4	1.4	.6	2.4	26	19	7.0	4.4	3.8	1.1
4.	3.4	2.4	2.4	1.4	.6	2.5	19	20	7.0	4.1	3.8	1.1
5.	15	2.2	2.2	1.0	.6	3.0	30	25	7.0	3.8	1.3	1.0
6.	4.7	2.1	2.2	.8	.6	3.2	44	18	7.0	3.8	1.3	.9
7.	4.5	1.9	2.1	.8	.6	3.3	28	18	9.5	3.8	12	.8
8.	3.6	1.9	1.9	.6	.6	3.4	19	22	7.0	3.8	5.7	.8
9.	3.6	1.9	1.9	.6	.6	3.6	12	26	7.0	3.8	3.2	.8
10.	2.7	1.9	1.9	.4	.6	3.8	18	25	7.0	3.8	1.1	1.1
11.	2.7	1.9	1.9	.4	.6	3.8	26	24	26	7.0	.6	1.8
12.	2.7	1.9	1.7	.4	.6	3.8	19	22	19	5.4	.6	1.4
13.	2.7	1.8	1.6	.4	.7	3.6	26	19	19	3.8	.6	1.1
14.	2.7	1.8	1.6	.5	.7	3.6	26	19	19	3.8	.6	1.1
15.	2.7	1.8	1.5	.5	.7	3.6	30	16	19	3.8	.8	1.1
16.	2.7	1.8	1.5	.5	.7	3.8	22	16	12	3.0	.8	.8
17.	2.7	2.7	1.4	.5	.7	3.8	18	12	12	3.2	1.1	.7
18.	2.7	2.7	1.4	.5	.8	3.8	20	12	12	3.8	1.1	.7
19.	2.7	2.5	1.4	.5	.8	4.4	20	12	12	3.8	1.1	.7
20.	2.7	2.4	1.4	.5	.8	5.0	20	12	12	3.8	.7	.7
21.	2.7	2.2	1.4	.5	.9	5.0	16	12	15	1.7	.8	.8
22.	2.7	2.1	1.4	.5	1.1	4.8	20	9.5	12	1.7	5.7	.8
23.	2.7	2.1	1.4	.5	1.2	4.4	25	10	12	1.7	1.8	10
24.	2.7	1.9	1.4	.6	1.4	4.4	18	7.0	12	1.8	1.8	5.7
25.	2.7	1.8	1.4	.6	1.6	3.8	18	7.0	12	1.8	1.1	4.1
26.	2.7	1.7	1.4	.6	1.8	3.8	13	7.0	9.5	1.8	.6	3.8
27.	2.7	1.6	1.4	.6	1.8	3.8	13	7.0	7.6	1.8	.6	3.8
28.	2.7	1.5	1.4	.6	1.9	4.4	19	12	5.4	1.8	.5	3.2
29.	2.7	1.4	1.4	.6	.....	5.4	16	7.0	9.5	1.8	.4	1.8
30.	2.7	1.4	1.4	.6	.....	5.4	16	7.0	9.5	1.8	.2	1.8
31.	2.7	.....	1.4	.6	.....	22	.....	7.0	.....	4.4	1.1	.....

NOTE.—Daily discharge determined from a well-defined curve and by the indirect method for shifting channels. Discharge estimated Oct. 1-3, 1912, and Jan. 1-23, 1912.

Monthly discharge of Rio Fernando de Taos near Taos, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October.....	15	2.7	3.38	208	B.
November.....	2.7	1.4	2.04	121	B.
December.....	2.4	1.4	1.70	105	B.
January.....	1.4	.4	.68	42	B.
February.....	1.9	.6	.89	49	A.
March.....	22	2.0	4.38	269	A.
April.....	44	12	22.5	1,340	B.
May.....	26	7.0	15.0	922	B.
June.....	26	5.4	11.3	672	A.
July.....	8.0	1.7	3.54	218	A.
August.....	12	.2	2.16	133	A.
September.....	10	.7	1.86	111	A.
The year.....	44	.2	5.79	4,190	

CHAMA RIVER BASIN.

GENERAL FEATURES.

Chama River rises on the western slope of the Conejos Mountains, a few miles north of the Colorado-New Mexico line, at an approximate elevation of 12,000 feet above sea level, flows in a general southerly course which finally becomes southeasterly, and enters the Rio Grande at Chamita, about 30 miles north of Santa Fe, in the Espanola Valley. It has a number of short tributaries, the most important being the Brazos, Horn, Gallinas, Cebolla, Puerco, and Caliente.

The drainage area is bounded on the east by that of the Conejos River, which merges with the Black Mesa, and on the west by the Continental Divide. It consists chiefly of high plateaus and mountain ranges. The upper portion of the river above the mouth of the Brazos is in a canyon, but between the Brazos and the Nutritus the river flows through a low fertile mesa. Below this point it again flows through an almost continuous canyon to Abiquiu, where it enters the Chama Valley which continues to the mouth.

From its mouth as far up as Gallinas Creek the Chama itself and all its tributaries are muddy, but above the Gallinas the water is somewhat clearer, especially that of the Brazos.

All the tributaries that enter below the Cebolla, except the Puerco, have broad sandy channels near their mouths, and in this part of their courses lose much of their water by seepage and evaporation. The loss in the Caliente, Oso, El Rito, Lower Canyones, and Horn rivers is especially large.¹

The chief source of the perennial flow of the streams is the snow that falls on the western slope of the Conejos Range. At Cumbres (elevation 10,015) on the eastern slope the annual precipitation is upward of 25 inches, and as the prevailing winds are from the west

¹ For seepage in the Chama itself see p. 690.

it is probable that on the western slope the precipitation is even more. The only record in the upper Chama Basin is at Chama (elevation 7,848) where the mean precipitation is 23 inches. South from the source the precipitation decreases, being about 15 inches at the mouth of the Gallinas, 13 inches at Abiquiu, and 12 inches at the mouth. Much of the precipitation of the lower portion of the basin comes in the form of violent rains which subject the river to sudden floods.

Irrigation is carried on extensively in the valleys bordering the Chama and some of its tributaries. Follett, in his report on the "Distribution of the waters of the Rio Grande," states that prior to 1896 there were ditches having a total capacity of 1,141 second-feet diverting water from the Chama and its tributaries, of which 352 second-feet was the total capacity of ditches diverting water from the Chama itself.

GAGING STATION RECORDS.

CHAMA RIVER AT CHAMA, N. MEX.

Location.—At the Denver & Rio Grande Railroad bridge, about half a mile northeast of Chama, 2 miles above the mouth of Little Chama River, in sec. 13, T. 31 N., R. 3 E.

Records available.—September 23, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Permanent at low stages, but subject to a shift during flood stages.

Discharge measurements.—Wading at low stages and from a bridge during flood stages.

Winter flow.—Ice effect during the winter months.

Diversions.—Very little water is taken out for irrigation above this point; consequently the discharge at this point approximates the natural run-off.

Accuracy.—The estimates can be considered good.

Cooperation.—Maintained in cooperation with the Tierra Amarilla Land Grant Co., Chama, N. Mex., and the State engineer.

Discharge measurements of Chama River at Chama, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 23	Gray and O'Brien.....	1.17	18.6	Feb. 19 ^a	Frank O'Brien.....	1.27	11.2
Oct. 9	Frank O'Brien.....	1.32	29.7	Mar. 15 ^a	do.....	1.21	17.4
9	do.....	1.32	30.5	Apr. 7	do.....	2.00	160
19	do.....	1.29	25.2	24	do.....	2.13	159
29	do.....	1.44	39.8	May 17	do.....	3.03	430
Nov. 14	do.....	1.26	25.7	June 12	do.....	2.60	198
Dec. 18 ^a	do.....	1.38	15.8	July 7	do.....	1.98	47.9
				Aug. 4	do.....	1.84	25.3
1913.				29	Gray and O'Brien.....	1.86	25.2
Jan. 25 ^a	C. J. Emerson.....	1.60	12.6	Sept. 30	Frank O'Brien.....	2.00	33.8

^a Ice present.

Daily gage height, in feet, of Chama River at Chama, N. Mex., for 1912-13.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.		1.20	1.28	1.10	1.40	1.50	1.20	1.58	2.97	2.95	2.15	1.90	1.83
2.		1.25	1.34	1.08	1.50	1.53	1.20	1.90	2.76	2.95	2.10	1.88	1.82
3.		1.27	1.30	1.16	1.35	1.48	1.20	1.85	2.63	2.95	2.05	1.86	1.80
4.		1.20	1.38	1.08	1.35	1.39	1.19	1.67	2.66	2.90	2.00	1.84	1.80
5.		1.41	1.30	1.10	1.35	1.37	1.25	1.68	2.94	2.85	2.00	1.82	1.89
6.		1.39	1.32	1.13	1.42	1.48	1.25	1.90	3.13	2.85		1.82	1.82
7.		1.39	1.33	1.26	1.80	1.40	1.25	2.05	2.95	2.90	1.98	1.82	1.81
8.		1.41	1.39	1.20	1.80	1.35	1.26	1.81	2.90	2.85		1.80	1.80
9.		1.36	1.40	1.28	1.42	1.40	1.27	1.68	3.00	2.75	2.10	1.80	1.87
10.		1.35	1.35	1.29	1.40	1.42	1.30	1.69	3.11	2.85	2.28	1.79	1.80
11.		1.31	1.31	1.26	1.40	1.31	1.31	1.75	3.24	2.75	2.02	1.80	1.86
12.		1.31	1.35	1.26	1.41	1.32	1.31	2.08	3.30	2.65	1.96	1.95	1.91
13.		1.30	1.30	1.26	1.40	1.30	1.90	2.28	3.20	2.60	1.92	2.06	1.88
14.		1.30	1.22	1.28	1.50	1.20	1.25	2.50	2.97	2.50	1.90	2.04	1.89
15.		1.29	1.28	1.28	1.52	1.30	1.22	2.58	2.93	2.50	1.90	1.90	1.78
16.		1.28	1.25	1.29	1.49	1.23	1.20	2.74	3.08	2.50	1.93	1.86	1.78
17.		1.28	1.30	1.30	1.31	1.31	1.21	2.75	3.04	2.50	1.91	1.84	1.76
18.		1.28	1.20	1.36	1.35	1.40	1.20	2.68	2.99	2.55	1.90	1.94	1.74
19.		1.28	1.30	1.38	1.36	1.28	1.19	2.70	2.98	2.35	1.96	1.96	1.72
20.		1.27	1.28	1.36	1.40		1.40	2.83	2.95	2.35	2.02	1.90	1.72
21.		1.28	1.28	1.35	1.38	1.21	1.16	2.78	2.88	2.30	1.97	1.90	1.71
22.		1.28	1.23	1.35	1.40	1.20	1.10	2.65	2.90	2.25	1.98	1.96	1.76
23.	1.18	1.28	1.24	1.55	1.40	1.19	1.05	2.38	2.93	2.35	2.22	1.91	2.10
24.	1.18	1.28	1.23	1.50	1.42	1.25	1.07	2.32	2.98	2.35	2.17	1.88	1.96
25.	1.17	1.27	1.19	1.40	1.41	1.20	1.15	2.19	3.00	2.30	2.06	1.86	1.92
26.	1.18	1.25	1.16	1.37	1.40	1.10	1.16	2.45	2.98	2.30	1.99	1.82	1.90
27.	1.18	1.24	1.12	1.35	1.50	1.25	1.20	2.72	3.06	2.25	1.98	1.80	1.90
28.	1.18	1.70	1.08	1.33	1.40	1.25	1.29	2.85	3.04	2.25	1.92	1.79	1.93
29.	1.18	1.38	1.09	1.35	1.49		1.30	2.97	3.01	2.20	1.90	1.87	1.94
30.	1.18	1.36	1.06	1.40	1.48		1.33	3.10	2.99	2.20	1.89	1.82	1.90
31.		1.22		1.55	1.51		1.43		2.91		1.88	1.80	

NOTE.—Gage heights affected by ice Dec. 1, 1912, to Mar. 29, 1913.

Daily discharge, in second-feet, of Chama River at Chama, N. Mex., for 1912-13.

Day.	Sept.	Oct.	Nov.	Dec.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.		
1.			21	27	13	11	58	410	396	78	31	23	
2.			24	31	12	11	114	340	388	71	30	22	
3.			26	28	14	11	108	301	382	62	27	21	
4.			21	34	12	11	80	310	359	54	26	21	
5.			37	28	12	14	85	399	337	53	24	27	
6.			35	30	13	17	132	466	328	50	24	22	
7.			35	30	13	17	173	402	336	48	23	22	
8.			37	35	13	17	116	385	310	57	22	21	
9.			33	36	15	17	90	420	271	64	21	26	
10.			32	32	15	18	92	458	292	90	20	21	
11.			29	29	14	18	101	504	253	52	21	25	
12.			29	32	14	18	175	525	214	44	32	29	
13.			28	28	14	17	229	490	199	40	42	27	
14.			28	22	15	17	292	410	170	37	40	27	
15.			27	27	15	17	313	396	170	37	28	20	
16.			27	24	15	17	359	448	168	39	25	20	
17.			27	28	15	17	359	434	168	37	24	19	
18.			27	21	16	17	334	416	178	35	31	17	
19.			27	28	16	17	337	413	129	41	33	16	
20.			27	27	16	22	375	402	127	46	28	16	
21.			27	27	16	18	355	378	116	41	28	16	
22.			27	23	16	14	313	385	104	41	33	19	
23.			20	27	24	16	11	229	396	125	71	29	43
24.			20	27	23	16	12	208	413	123	64	27	30
25.			19	26	20	15	18	173	420	112	48	25	27
26.			20	24	18	15	18	247	413	110	41	22	26
27.			20	24	15	15	21	328	441	101	40	21	26
28.			20	64	13	15	27	368	434	99	34	20	28
29.			20	34	13	15	28	410	424	90	32	26	29
30.			20	33	12	15	30	455	416	88	31	22	26
31.				22		15	39		388		30	21	

NOTE.—Daily discharge determined from 3 fairly well-defined curves and by the indirect method for shifting channels. Discharge estimated Dec. 1-31, 1912, and Mar. 1-29, 1913, on account of ice. Discharge interpolated July 6 and 8, 1913.

Monthly discharge of Chama River at Chama, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October.....	64	21	29.4	1,810	A.
November.....	36	12	25.5	1,520	A.
December.....	16	12	14.6	898	C.
January.....			^a 12.5	769	C.
February.....			^a 11.5	639	C.
March.....	39	11	18.0	1,110	B.
April.....	455	58	234	13,900	B.
May.....	525	301	414	25,500	B.
June.....	396	88	208	12,400	B.
July.....	90	30	48.6	2,990	A.
August.....	42	20	26.6	1,640	A.
September.....	43	16	23.7	1,410	A.
The year.....	525		88.9	64,600	

^a Estimated.

CHAMA RIVER AT PARK VIEW, N. MEX.

Location.—At the wagon-road bridge, half a mile northwest of Park View, about 800 feet below the confluence of Brazos and Chama rivers, in sec. 7, T. 29 N., R. 4 E.

Records available.—November 25, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Shifting.

Discharge measurements.—Wading at low stages and from wagon bridge at high stages.

Winter flow.—Backwater from ice during the winter months.

Diversions.—Some water diverted for irrigation above this point.

Accuracy.—Estimates of discharge can be considered good.

Cooperation.—Maintained in cooperation with the Tierra Amarilla Land Grant Co., Chama, N. Mex., and the State engineer.

Discharge measurements of Chama River at Park View, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 25 ^a	Frank O'Brien.....	0.50	25.6	Apr. 23	Frank O'Brien.....	2.98	1,070
Dec. 19 ^a	.....do.....	.70	36.2	May 19	.....do.....	2.95	1,240
				June 13	.....do.....	2.20	479
1913.				July 8	.....do.....	.91	55.9
Jan. 26 ^a	C. J. Emerson.....	1.55	38.7	Aug. 5	.....do.....	.68	26.0
Feb. 20 ^a	Frank O'Brien.....	1.80	52.2	28	Gray and O'Brien.....	.63	23.9
Mar. 16 ^a	.....do.....	1.45	55.6	Sept. 19	Frank O'Brien.....	.64	19.6
Apr. 6	.....do.....	1.62	257				

^a Ice present.

Daily gage height, in feet, of Chama River at Park View, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.			0.56	0.85	1.80	2.22	1.80	3.48	2.70		0.73	0.72
2.			.48	.90			2.00	3.35	2.64		.75	.79
3.			.54	.95				3.02	2.64		.72	.69
4.			.52	1.00			1.70	3.08	2.49		.70	.67
5.				1.00	1.70		1.78	3.50	2.44		.67	.78
6.							1.82	3.73	2.33		.67	.78
7.							2.00	3.70	2.28	0.96	.66	.76
8.			.52		1.60	1.80		3.47		.91	.64	.74
9.			.58				1.70	3.53		.98	.62	.81
10.			.60				1.75	3.80		1.31	.64	.76
11.			.59	1.70			1.65	3.92		1.10	.65	.71
12.			.59		1.50		1.95	3.92		.96	.98	.79
13.			.62				2.55	3.79	2.20	.90	1.06	.75
14.			.62				1.90	2.84	3.54	.87	.85	
15.			.59		1.50	1.70	2.90	3.42		.86	.75	
16.			.58				2.93	3.43		.88	.65	
17.			.58				2.90	3.38		.85	.66	
18.			.57	1.30	2.05		2.95	3.26		.81	.69	
19.			.57			1.50	3.29	3.16		.79	.87	.63
20.			.57		1.80		3.35	2.95		.96	.76	.62
21.			.60				3.50	2.86		.97	.78	.61
22.			.65		1.59	1.30	3.38	2.83		1.13	.88	.68
23.			.65				2.98	2.88		1.29	.91	1.10
24.			.70				2.48	2.89	1.65	1.25	.80	1.06
25.		0.50	.70				2.37	2.85	1.53	1.01	.78	1.02
26.		.50	.70	1.55		1.35	2.48	2.85	1.46	.95	.71	.97
27.		.52	.70				3.08	2.92	1.86	.86	.67	.96
28.		.52	.70				3.58	3.00	1.42	.83	.63	.96
29.		.53				1.00	3.63	2.82		.80	.75	.95
30.		.55					3.53	2.76		.75	.71	1.08
31.						1.80		2.65		.72	.68	

NOTE.—Gage height affected by ice Dec. 9, 1912, to Mar. 29, 1913.

Daily discharge, in second-feet, of Chama River at Park View, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.			33			48	342	1,500	898	140	31	31
2.			24			48	444	1,410	844	127	34	39
3.			32			50	370	1,180	831	114	31	28
4.			28			50	297	1,230	734	102	29	26
5.			28			50	333	1,550	688	89	26	38
6.			28			52	352	1,740	609	76	26	38
7.			26			52	444	1,730	569	63	25	36
8.			28			52	370	1,550	554	55	24	33
9.			31			52	297	1,610	539	67	22	41
10.			30			52	320	1,830	522	148	24	36
11.			29			54	276	1,940	507	91	24	30
12.			29			54	418	1,940	493	63	67	39
13.			32			54	772	1,850	478	53	83	34
14.			33			56	968	1,660	459	49	46	32
15.			34			56	1,010	1,570	438	48	34	30
16.			35			56	1,030	1,580	417	50	24	27
17.			33			56	1,010	1,550	396	46	25	24
18.			34			56	1,040	1,460	375	41	28	22
19.			36			56	1,280	1,390	354	39	49	20
20.			36			60	1,320	1,240	332	63	36	19
21.			34			60	1,440	1,160	311	65	38	18
22.			34			60	1,350	1,130	290	98	50	24
23.			34			60	1,070	1,150	269	142	55	84
24.			34			60	727	1,140	248	130	40	76
25.			33			60	657	1,100	204	72	38	68
26.		26	32			60	727	1,090	178	62	30	59
27.		28	33			60	1,150	1,120	148	48	26	58
28.		28	34			70	1,540	1,160	168	44	23	58
29.		30	32			70	1,590	1,020	160	40	34	56
30.		33	33			206	1,530	968	153	34	30	80
31.			33			342		877		31	27	

NOTE.—Daily discharge determined from two well-defined curves and by the indirect method for shifting channels. Discharge estimated Dec. 5-31, 1912, and Mar. 1-16, 1913, on account of ice. Discharge estimated on days of missing gage heights by comparison with other stations in the same drainage.

Monthly discharge of Chama River at Park View, N. Mex., for 1912-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
November 25-30.....	33	26	28.5	339	B.
December.....	36	24	31.8	1,960	C.
January.....			a 30.	1,840	C.
February.....			a 45.	2,500	C.
March.....	342	48	70.1	4,310	C.
April.....	1,590	276	816	48,600	B.
May.....	1,940	877	1,400	86,100	B.
June.....	898	148	439	26,100	C.
July.....	148	31	73.9	6,540	B.
August.....	83	22	34.8	2,140	A.
September.....	84	18	40.1	2,390	A.
The period.....				181,000	

^a Estimated on account of ice.

CHAMA RIVER AT ABIQUIU, N. MEX.

Location.—About 200 yards above Abiquiu. There is no important tributary near Abiquiu.

Records available.—June 21, 1895, to April 7, 1897.

Drainage area.—Not measured.

Gage.—Inclined staff. Datum was changed August 18, 1895, but amount of change is unknown.

Channel.—Shifting.

Discharge measurements.—Made from car and cable.

Accuracy.—Owing to the shifting channel and meager data, no estimates of discharge have been made.

Discharge measurements of Chama River at Abiquiu, N. Mex., for 1889, 1895-1897.

[By P. E. Harroun.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1889.	<i>Feet.</i>	<i>Sec.-ft.</i>	1896.	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 9 ^a	945		Jan. 19.....	1.50	129
26.....	750		Sept. 5.....	2.20	47
1895.			Oct. 28.....	2.30	51
June 21.....	2.50	404	Nov. 19 ^b	2.27	65
July 25.....	2.90	206	Dec. 12.....	2.30	76
Aug. 18.....	1.30	209	1897.		
Oct. 29.....	1.10	72	Feb. 26.....	2.20	66
Nov. 26.....	1.80	77	Mar. 18.....	3.00	318

^a Measurement made near Abiquiu. Exact location unknown.

^b Measurement made by C. C. Babb.

Daily gage height, in feet, of Chama River at Abiquiu, N. Mex., for 1895-1897.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1895.					1895.				
1.		2.5	3.35	1.45	16.		2.55		1.1
2.		2.1	3.85	1.45	17.		2.7		.85
3.		3.0	2.95	1.35	18.		2.8	1.3	.8
4.		2.7	3.05	1.2	19.		2.45	1.2	.9
5.		2.45	3.15	1.25	20.		2.45	1.15	.95
6.		1.9	3.1	1.05	21.		3.25	1.2	1.55
7.		1.55	4.15	.9	22.		4.35	1.55	.95
8.		1.2		.9	23.	2.67	4.9	1.8	.85
9.		3.35		.95	24.	2.35	4.8	1.85	.95
10.		3.6		1.4	25.	2.3	2.85	2.05	.8
11.		5.95		1.4	26.	2.1	2.65	1.35	.95
12.		5.4		1.1	27.	2.5	2.7	1.6	.85
13.		3.0		.95	28.	2.1	2.7	2.0	.9
14.		2.85		.9	29.	1.95	2.75	1.35	.85
15.		2.8		.85	30.	2.95	3.1	1.45	1.05
					31.		4.15	1.65	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
1.	1.7	1.05	1.35	1.9	1.05		1.9	3.05	1.9	1.7	2.25	2.45
2.	1.25	1.05	1.25	1.8	.95		2.45	3.35	1.9	1.5	2.1	2.85
3.	1.05	1.15	1.2	1.8	1.15		1.8	2.85	1.85	1.5	2.05	2.75
4.	1.4	1.45	.95	1.85	1.2		1.95	2.65	1.05	1.5	1.95	2.85
5.	2.4	1.2	1.15	1.75	1.15		2.95	2.65	1.1	1.35	1.8	2.75
6.	1.9	1.2	1.3	1.7	1.0		2.85	2.5	1.05	1.3	1.7	2.2
7.	1.4	1.1	1.1	1.75	1.1		3.25	2.9	1.45	1.3	1.65	2.65
8.	1.2	1.05	.95	1.7	1.55		4.13	2.85	1.35	1.35	1.5	3.35
9.	1.05	1.1	1.3	1.65	1.55		3.6	2.75	1.45	1.8	1.6	3.4
10.	1.05	1.1	1.25	1.55	1.2		2.85	2.75	1.75	1.5	1.55	4.4
11.	1.05	1.05	1.1	1.7	1.1	1.6	2.7	2.65	1.45	1.55	1.55	4.4
12.	1.15	1.2	1.3	1.75	1.3	1.75	2.8	2.5	1.55	1.45	1.6	3.65
13.	1.1	1.15	1.5	1.8	1.45	1.9	2.35	2.45	1.35	1.45	1.5	3.45
14.	1.1	1.1	1.15	1.75	1.55	1.7	3.65	2.55	1.3	3.75	1.5	2.9
15.	1.0	1.15	1.15	1.7	1.1	1.95	3.05	2.35	1.6	2.75	1.45	2.75
16.	.95	1.25	1.1	1.8	.95	1.5	3.35	2.15	1.45	3.15	1.5	2.55
17.	1.1	1.25	1.1	1.75	.95	1.5	3.3	2.55	1.35	3.55	1.55	3.15
18.	1.15	1.3	1.4	1.75	1.0	1.55	3.4	2.25	1.3	3.0	1.45	3.15
19.	1.0	1.25	1.3	1.65	1.45	1.3	2.55	2.35	1.4	3.25	1.5	3.45
20.	1.15	1.3	1.15	1.45	1.4	1.3	3.4	2.15	1.1	3.35	1.35	3.05
21.	1.05	1.25	1.3	1.7	1.2	1.35	3.85	1.95	1.1	2.85	1.45	2.8
22.	1.15	1.25	.9	1.35	1.1	1.35	4.1	1.85	1.1	3.6	1.5	2.6
23.	.95	1.45	1.2	1.65	1.5	1.45	3.85	2.05	1.25	2.7	1.85	2.55
24.	.9	1.7	1.15	1.7	1.75	1.55	2.95	2.15	1.3	3.5	1.85	2.55
25.	.95	1.45	1.1	1.55	1.55	1.5	3.7	2.1	1.4	2.95	1.8	2.5
26.	1.1	1.7	1.0	1.55	1.35	1.7	3.85	2.15	1.25	2.85	1.9	2.3
27.	1.15	1.45	1.0	1.55	1.6	2.55	3.85	1.55	1.5	2.75	1.35	2.25
28.	.95	1.35	.95	1.65	2.05	2.25	3.55	1.85	1.7	2.75	1.35	2.35
29.	1.1	1.85	1.05	1.35	2.15	1.85	3.35	2.1	1.65	2.95	1.45	2.3
30.	1.0	1.75	.9	.9		1.95	3.25	1.85	1.7	2.85	1.45	2.2
31.	1.05		.95	1.1		1.7		1.55		2.75	1.15	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1896-97.								1896-97.							
1.	2.25	2.25	2.15	3.4	2.1	2.35	4.15	16.	2.7	2.15	2.1	3.0	2.0	2.9	
2.	2.35	2.45	1.9	2.55	2.1	2.35	3.95	17.	2.65	2.25	1.95	2.45	2.0	3.15	
3.	2.25	2.25	2.05	2.4	2.05	2.5	4.2	18.	2.6	2.25	2.0	2.3	2.25	3.25	
4.	2.85	2.25	2.2	2.25	2.05	3.55	5.1	19.	2.75	2.1	1.95	2.2	2.4	3.15	
5.	2.7	2.4	2.1	2.2	2.0	3.55	4.85	20.	2.7	2.15	2.05	2.05	2.15	2.95	
6.	2.85	2.3	2.0	2.05	2.15	3.2	5.75	21.	2.75	2.25	2.15	2.0	2.05	3.05	
7.	3.3	2.25	1.9	1.9	2.05	2.9	4.85	22.	2.65	2.1	2.15	2.15	2.05	3.25	
8.	3.4	2.3	2.05	2.05	2.15	3.05		23.	2.75	2.1	2.05	1.95	2.0	3.7	
9.	3.15	2.25	2.0	2.1	1.95	2.95		24.	2.85	2.0	1.95	2.0	1.95	4.05	
10.	2.9	2.05	2.0	2.05	2.0	2.8		25.	2.85	2.35	1.85	2.05	2.1	3.7	
11.	2.8	2.1	1.95	2.1	2.1	3.85		26.	2.85	2.35	2.0	2.15	2.05	3.7	
12.	2.75	2.25	2.1	1.95	2.15	3.15		27.	2.85	2.3		2.15	2.15	4.1	
13.	2.65	2.15	1.9	1.9	2.0	3.0		28.	2.55	2.35		2.05	2.25	4.05	
14.	2.7	2.3	2.05	3.45	2.0	3.05		29.	2.65	2.15		2.1		4.1	
15.	2.75	2.25	2.05	3.25	2.0	2.9		30.	2.75	2.2		2.1		3.95	
								31.	2.6			1.95		3.85	

NOTE.—Gage washed out by a flood Aug. 8, 1895. New gage installed at different datum Aug. 18, 1895.

CHAMA RIVER NEAR CHAMITA, N. MEX.

Location.—At the Denver & Rio Grande Railroad bridge, 1 mile south of Chamita,

4 miles above Espanola, half a mile above the mouth, in sec. 15, T. 21 N., R. 8 E.

Records available.—October 10, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Shifting.

Discharge measurements.—Wading at low stages and from a bridge at high stages.

Winter flow.—Severe ice effect during a portion of the winter months.

Diversions.—Considerable water diverted for irrigation above this station.

Accuracy.—Daily estimates of the discharge are considered good.

Cooperation.—Maintained in cooperation with the Tierra Amarilla Land Grant Co., Chama, N. Mex., and the State engineer.

Discharge measurements of Chama River near Chamita, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 10	J. E. Powers		102	Mar. 24	J. E. Powers	0.88	141
Nov. 6	do.	0.85	103	Apr. 1	do.	1.20	406
Dec. 9	do.	1.00	98.6	24	do.	2.08	1,360
1913.				May 27	do.	1.70	916
Jan. 24	do.		a 0	June 25	do.	1.30	311
Feb. 19 ^b	do.	0.81	146	Aug. 18	do.	.80	71.2

^a Stream frozen solid.

^b Ice present.

Daily gage height, in feet, of Chama River near Chamita, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1			0.91	1.00	1.85	0.85	1.22	2.92	1.65	1.10	0.95	0.52
2			.92	1.10	1.85	.90	1.24	2.88	1.66	1.05	.82	.49
3			.91	1.20	1.85	.90	1.34	2.65	1.63	.99	.71	.39
4			.94	1.30	1.90	.90	1.32		1.58	.94	.69	.39
5		0.82	.92	1.40	1.95	.90	1.26		1.58	.85	.56	.43
6		.85	.91		2.00	.92	1.40		1.59	.70	.36	.54
7		.88	.91		2.05	.95	1.87		1.60	.65		.50
8		.90	.91		2.10	1.00	1.46		1.60	.57		.55
9		.91	.96		2.10	1.00	1.40	2.46	1.64	.66		.79
10		.91	.97		2.00	.97	1.40	2.60	1.84	1.33		.80
11		.90	.93		1.90	.95	1.40	2.90	3.07	1.25		.75
12		.88	.94	2.10	1.80	.95	1.40	2.92	2.19	1.11	.41	.71
13		.90	.96	2.10	1.60	.90	1.48	2.92	1.70	1.07	.53	.73
14		.91	.95	2.10	1.40	.90	1.80	2.70	1.68	1.02	.61	.70
15		.92	.92	2.10	1.20	.90	2.14	2.46	1.74	.95	.81	.65
16		.90	.93	2.10	1.05	.90	2.34	2.43	1.75	.98	.70	.60
17		.90	.92	2.10	1.05	.90	2.52	2.36	1.74	.98	.64	.55
18		.90	.96	2.10	.95	.90	2.42	2.32	1.72	.87	.71	.56
19		.90	.96	2.10	.80	.92	2.53	2.27	1.31	.88	.83	.57
20		.88	.96	2.10	.80	.90	2.78	2.17	1.31	1.10	1.41	.58
21		.86	.95	2.10	.95	.90	2.72	1.95	1.29	1.09	1.09	.58
22		.83	.96	2.10	1.05	.88	2.76	1.87	1.30	1.03	.75	.68
23		.82	.96	2.10	.95	.85	2.58	1.82	1.35	1.01	.86	1.37
24		.84	.95	2.00	.90	.87	2.30	1.80	1.35	1.00	.84	1.41
25		.87	.97	2.00	.90	.85	1.78	1.75	1.27	.99	.87	1.47
26		.88	1.03	2.05	.90	.82	1.66	1.78	1.24	.97	.84	1.73
27		.89	.98	2.10	.85	.80	1.92	1.78	1.17	.95	.71	1.54
28		.89	.98	2.05	.85	.81	2.50	1.82	1.13	.78	.62	1.42
29		.96	.98	2.00		.82	2.75	1.79	1.12	.62	.58	1.37
30		.95	.98	1.95		.83	2.85	1.68	1.15	.45	.56	1.32
31			.96	1.90		.95		1.62		.33	.54	

NOTE.—Gage heights affected by ice Dec. 18, 1912, to Mar. 9, 1913.

Daily discharge, in second-feet, of Chama River near Chamita, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....			60			140	428	2,360	865	150	188	15
2.....			64			140	446	2,320	876	120	102	11
3.....			52			140	540	2,040	843	88	53	2.7
4.....			72			140	520	2,000	789	68	48	2.7
5.....		95	52			140	464	1,960	789	40	19	5.7
6.....		103	40			140	600	1,920	800	11	1.2	19
7.....		134	36			150	1,110	1,880	810	6.6	.0	12
8.....		142	32			190	663	1,850	810	1.8	.0	20
9.....		146	66			200	600	1,810	854	7.5	.0	92
10.....		130	72			212	600	1,980	1,070	530	.0	96
11.....		130	48			196	600	2,340	2,540	455	.0	76
12.....		114	54			196	600	2,360	1,490	329	2.4	60
13.....		122	66			156	684	2,360	898	295	12	68
14.....		126	60			156	1,030	2,100	854	253	26	56
15.....		130	42			156	1,430	1,810	898	196	84	42
16.....		110	48			156	1,670	1,780	887	220	45	29
17.....		106	42			156	1,880	1,690	854	220	29	20
18.....		102	35			156	1,760	1,640	810	138	48	22
19.....		98	35			172	1,900	1,580	383	144	92	24
20.....		84	30			156	2,200	1,460	365	320	610	26
21.....		68	30			156	2,120	1,200	338	312	312	26
22.....		46	25			144	2,170	1,110	338	261	76	50
23.....		36	25			126	1,960	1,050	374	244	132	540
24.....		44	25			138	1,620	1,030	365	236	120	550
25.....		58	25			126	1,010	975	286	228	138	580
26.....		60	25			108	876	1,010	261	212	120	821
27.....		62	25			96	1,160	1,010	204	196	60	590
28.....		58	25			102	1,860	1,050	172	84	34	446
29.....		108	25			108	2,160	1,020	164	32	26	374
30.....		86	25			114	2,280	898	188	6.6	22	303
31.....			25			196		832		.6	19	

NOTE.—Daily discharge determined from fairly well-defined curves and by the indirect method for shifting channels. Discharge estimated Dec. 18-31, 1912, and Mar. 1-9, 1913, on account of ice. Discharge interpolated May 4-8, 1913.

Monthly discharge of Chama River near Chamita, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
November 5-30.....	146	36	96.1	4,960	B.
December.....	72	25	41.5	2,550	C.
January.....			a 45.0	2,770	C.
February.....			a 70.0	3,890	C.
March.....	212	96	150	9,220	B.
April.....	2,280	428	1,230	73,200	B.
May.....	2,360	832	1,630	100,000	B.
June.....	2,540	164	706	42,000	B.
July.....	530	.6	174	10,700	B.
August.....	610	.0	78.0	4,800	B.
September.....	821	2.7	166	9,880	B.
The period.....				264,000	

a Estimated on account of ice.

BRAZOS RIVER AT BRAZOS, N. MEX.

Location.—Three-fourths of a mile southeast of Brazos, 1 mile above the confluence of Brazos and Chama rivers, in sec. 5, T. 29 N., R. 4 E. No tributaries below the station. Small tributary from the north about 4 miles above the station.

Records available.—November 24, 1912, to September 6, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording, which was replaced by a chain gage May 19, 1913.

Chain gage read 0.11 foot lower than automatic gage.

Channel.—Shifts slightly.

Discharge measurements.—Wading at low stages and from bridge at high stages.

Winter flow.—Backwater effect from ice during the winter months.

Diversions.—Water taken from stream above and below this station for irrigation.

Accuracy.—Estimates of discharge may be considered fair.

Cooperation.—Maintained in cooperation with the Tierra Amarilla Land Grant Co.,

Chama, N. Mex., and the State engineer.

Discharge measurements of Brazos River at Brazos, N. Mex., in 1912-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Fect.</i>	<i>Sec.-ft.</i>	1913.		<i>Fect.</i>	<i>Sec.-ft.</i>
Nov. 25	Frank O'Brien.....	1.00	18.7	Apr. 6	Frank O'Brien.....	1.46	63.4
Dec. 19 ^a	.....do.....	.85	10.6	23	.....do.....	3.05	532
				May 19	.....do.....	2.90	554
1913.				June 13	.....do.....	2.05	208
Jan. 26 ^a	C. J. Emerson.....	1.08	10.8	13	.....do.....	2.05	207
Feb. 20 ^a	Frank O'Brien.....	.96	10.3	July 8	.....do.....	.52	3.9
Mar. 16 ^a	.....do.....	1.27	21.1	Aug. 5	.....do.....	.44	3.3

^a Ice present.

NOTE.—Water is diverted for irrigation just above the station. The amount diverted at the time of the above measurements is as follows: Nov. 25, 1912; 3.8 second-feet; Dec. 19, 1912; 3.1 second-feet; Jan. 26, 1913, 7.9 second-feet; Feb. 20, 7.3 second-feet; Mar. 16, 6.3 second-feet; Apr. 6, 10.0 second-feet; Apr. 23, 20.9 second-feet; May 19, 12.6 second-feet; June 13, 8.6 second-feet; July 8, 0.5 second-feet; and Aug. 5, 0.7 second-feet.

Daily gage height, in feet, of Brazos River at Brazos, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....			0.87	1.22	1.05	1.00	1.37	4.10	2.38	0.97	0.45	.....
2.....			.87	1.22	.....	1.05	.....	3.65	.....	.88	.....	0.54
3.....			.86	1.22	.....	1.10	.....	2.92	.....	.88	.....	.....
4.....			.84	1.40	.....	1.10	.....	3.08	.....	.....	.....	.....
5.....			.83	.....	.....	1.10	1.40	3.78	.....	.68	.44	.....
6.....			.82	.....	1.04	1.10	1.53	4.22	.....	.....	.....	.64
7.....			.80	.....	.....	1.10	1.47	4.41	.....	.57	.....	.....
8.....			.85	.....	1.00	1.10	1.36	4.04	.....	.52	.....	.....
9.....			.84	.....	.....	.....	1.30	4.26	.....	.51	.40	.....
10.....			.83	.....	.....	.....	1.27	4.13	.....	.....	.....	.....
11.....			.83	1.25	.....	.....	1.28	.....	.....	.....	.....	.....
12.....			.84	.....	1.00	.....	1.40	.....	.....	.64	.60	.....
13.....			.92	.....	.....	.....	1.60	.....	1.91	.....	.....	.....
14.....			.86	.....	.....	.....	1.78	.....	.....	.....	.....	.....
15.....			.96	.....	1.00	.....	1.90	.....	.....	.50	.....	.....
16.....			.95	.....	.....	1.30	2.03	.....	.....	.....	.50	.....
17.....			.95	.....	.....	.....	2.20	.....	.....	.47	.....	.....
18.....			.95	1.10	1.05	.....	2.53	.....	.....	.....	.....	.....
19.....			.95	.....	1.05	.....	2.92	2.90	.....	.43	.51	.....
20.....			.95	.....	1.00	.....	3.20	2.91	.....	.....	.....	.....
21.....			.95	.....	1.00	.....	3.35	2.70	.....	.....	.....	.....
22.....			.97	.....	.98	1.05	3.25	2.65	.....	.64	.....	.....
23.....			.98	.....	.98	1.02	2.97	2.63	.....	.....	.70	.....
24.....			0.85	1.10	.98	1.02	2.79	2.60	.....	.....	.....	.....
25.....			.85	1.20	1.08	.98	1.02	2.70	1.43	.....	.....	.....
26.....			.86	1.20	1.08	1.00	1.02	2.70	2.70	.....	.65	.54
27.....			.87	1.20	.....	1.00	1.02	3.18	2.85	1.15	.....	.....
28.....			.90	1.20	.....	1.00	1.02	3.88	2.78	1.10	.....	.....
29.....			.93	.....	.....	.....	1.05	4.18	2.58	.....	.50	.48
30.....			.95	.....	.....	.....	1.15	4.15	2.35	1.14	.....	.....
31.....			1.30	.....	2.38	.....	.....	.....	.....

NOTE.—Gage heights affected by ice Dec. 6, 1912, to Mar. 16, 1913.

Daily discharge, in second-feet, of Brazos River at Brazos, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1			12			10	53	1,150	318	30	3.0	5.2
2			12			12	54	880	303	23	3.0	5.2
3			12			15	54	470	288	23	2.9	6.0
4			10			15	55	550	274	16	2.8	7.0
5			10			15	56	958	262	10	2.8	8.0
6			9			15	71	1,220	248	8.0	2.6	8.6
7			9			15	64	1,340	235	6.1	2.4	
8			9			15	52	1,110	223	4.6	2.2	
9			10			15	45	1,250	211	4.3	2.0	
10			9			15	42	1,170	203	5.7	3.5	
11			9			18	43	1,090	192	7.1	5.5	
12			9			20	56	1,010	182	8.6	7.0	
13			11			18	80	934	172	7.1	6.2	
14			11			15	109	850	160	5.5	5.5	
15			12			20	129	766	151	4.0	4.6	
16			12			22	156	682	140	3.7	4.0	
17			10			22	198	604	132	3.4	4.1	
18			10			22	306	530	124	3.0	4.2	
19			12			22	470	550	117	2.6	4.3	
20			12			22	615	556	110	4.6	6.0	
21			10			22	700	455	102	6.6	7.7	
22			10			22	642	432	95	8.6	9.4	
23			10			20	495	424	89	8.7	11	
24			10			20	410	410	84	8.8	9.0	
25		10	10			20	370	430	82	8.9	7.5	
26		11	9			20	370	455	65	9.0	5.2	
27		12	10			20	604	525	48	7.3	4.7	
28		13	11			20	1,020	491	43	5.6	4.1	
29		15	9			22	1,200	401	45	4.0	3.6	
30		16	10			30	1,180	306	47	3.7	4.1	
31			10			45		318		3.3	4.7	

NOTE.—Daily discharge determined from two curves well defined between 2 second-feet and 700 second-feet. Discharge estimated Dec. 6-31, 1912, and Mar. 1-16, 1913, on account of ice. Discharge interpolated on days of missing gage heights except May 10-18, June 2-12, and June 14-24, 1913, which periods were estimated from information furnished by the gage reader and hydrographer.

Monthly discharge of Brazos River at Brazos, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
November 24-30	16	10	12.4	172	B.
December	12	9	10.3	633	C.
January			^a 10.0	615	D.
February			^a 10.0	555	D.
March	45	10	19.5	1,200	C.
April	1,200	42	323	19,200	B.
May	1,340	306	720	44,300	B.
June	318	43	158	9,400	B.
July	30	2.6	8.22	505	B.
August	11	2.0	4.83	297	B.
September 1-6	8.6	5.2	6.67	79	B.
The period				77,000	

^a Estimated on account of ice.

HORN RIVER¹ NEAR CANJILON, N. MEX.

Location.—In the Carson National Forest, at Canjilon ranger station, in sec. 2, T.

26 N., R. 5 E., 5 miles northeast of Canjilon. No important tributaries near by.

Records available.—June 19, 1911, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff; datum unchanged.

Channel.—Shifting.

Discharge measurements.—Made by wading.

Diversions.—No water diverted above the station. The records represent the natural run-off.

Accuracy.—Low-water estimates good; estimates for other stages can be considered only fair, owing to insufficient data.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Horn River near Canjilon, N. Mex., in 1911-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. June 19	H. B. Waha.....	<i>Feet.</i> 1.79	<i>Sec.-ft.</i> 5.6	1913. Apr. 22	Frank O'Brien.....	<i>Feet.</i> 2.79	<i>Sec.-ft.</i> 46.1
1912. Nov. 24	Frank O'Brien.....	2.26	2.4	May 20	.....do.....	2.57	17.1
Dec. 19	.....do.....		^a 1.5	June 13	.....do.....	2.25	7.6
1913. Apr. 4 ^b	.....do.....	4.02	13.6	July 9	.....do.....	1.85	1.2

^a Estimated. Stream almost entirely frozen.

^b Ice present.

Daily gage height, in feet, of Horn River near Canjilon, N. Mex., for 1911-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1911.							1912.						
1.....				1.68	.....	1.41	1.....	.....	2.30	.....	1.60	.....	1.31
2.....				1.74	.....	1.37	2.....	.....	2.30	2.30	1.60	.....	1.30
3.....				1.77	.....	1.46	3.....	.....	3.40	.....	1.59	.....	1.30
4.....				1.72	1.46	1.45	4.....	.....	3.38	.....	.....	.....	1.29
5.....				1.62	1.46	1.44	5.....	.....	3.30	2.28	1.58	1.40	.....
6.....				1.82	1.45	1.43	6.....	.....	2.21	2.25	1.55	1.38	1.29
7.....				1.84	1.43	1.41	7.....	.....	2.25	2.22	1.52	1.38	1.29
8.....				1.68	1.42	.....	8.....	2.28	.....	2.20	1.50	.....	1.29
9.....				1.64	1.41	1.40	9.....	.....	.....	2.10	.....	.....	1.29
10.....				1.60	1.39	.....	10.....	.....	.....	2.10	1.47	.....	1.29
11.....				1.59	1.38	1.39	11.....	2.22	2.25	1.98	1.45	.....	.....
12.....				1.60	1.38	.....	12.....	2.21	3.40	1.92	1.43	.....	1.42
13.....				1.75	1.48	1.39	13.....	2.21	.....	1.85	1.90	.....	1.33
14.....				1.68	1.47	1.38	14.....	2.20	2.25	1.80	1.60	.....	1.27
15.....				1.65	.....	.....	15.....	2.21	3.35	.....	1.65	.....	.....
16.....				1.70	1.42	1.40	16.....	2.28	3.30	1.92	1.55	1.35	.....
17.....				1.66	1.42	.....	17.....	2.28	3.35	1.88	1.43	1.25	.....
18.....				2.12	.....	1.41	18.....	2.29	3.35	1.85	1.92	1.25	1.28
19.....				1.76	2.05	1.43	19.....	1.79	3.40	1.85	.....	1.24	1.27
20.....				1.74	1.82	1.44	20.....	1.78	.....	1.80	1.53	1.24	.....
21.....				1.76	1.80	.....	21.....	1.78	3.40	1.79	1.65	1.24	.....
22.....				1.73	1.75	2.15	22.....	.....	.....	2.10	1.55	1.25	1.27
23.....				1.72	1.72	1.40	23.....	.....	.....	1.80	1.60	1.24	1.27
24.....				1.59	1.68	1.67	24.....	2.10	.....	1.75	1.92	.....	1.27
25.....				1.58	1.78	1.67	25.....	2.20	.....	1.74	1.57	1.25	1.27
26.....				1.57	.....	1.66	26.....	2.26	.....	.....	1.60	.....	1.28
27.....				1.60	1.92	1.65	27.....	2.30	.....	1.65	1.55	1.26	1.28
28.....				1.58	1.78	1.49	28.....	2.28	.....	1.60	.....	.....	1.28
29.....				1.69	1.68	1.48	29.....	.....	.....	1.59	.....	.....	.....
30.....				1.68	1.62	2.05	30.....	.....	2.51	1.58	.....	1.35	.....
31.....				1.52	1.43	.....	31.....	.....	2.52	.....	.....	.....	.....

¹ Rio Canjilon.

Daily gage height, in feet, of Horn River near Canjilon, N. Mex., 1911-1913—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1913.									
1						2.25		1.78	
2						2.24	1.89	1.70	1.63
3						2.22	1.87		
4			2.20	4.00	2.59	2.18		1.70	
5						2.15	1.84	1.65	1.62
6						2.20	1.84		1.62
7							1.78		1.63
8					2.79	2.18	1.84	1.65	1.64
9						2.25	1.85	1.65	1.65
10						2.85	1.84		1.65
11			2.22	4.10	3.59	2.60	1.83	1.75	1.65
12								1.70	
13		2.10		4.40		2.25		1.71	
14					3.39	2.12	1.84	1.71	
15						2.15	1.88	1.69	1.61
16							1.85		1.60
17					3.29	2.35	1.85		
18		2.20	2.30		3.09	2.30		1.70	1.61
19					2.56		1.83	2.00	1.61
20					2.57	1.98	1.90	1.75	1.61
21	1.70					1.93		1.75	
22				2.79	2.40	1.92	1.78	1.75	
23						1.92	1.76	1.74	2.19
24				2.59					1.90
25			2.50		2.40	1.90	1.75		1.98
26					2.40	1.89	1.73	1.68	1.90
27				2.69		1.89	1.70	1.60	1.92
28					2.55	1.89	1.70	1.60	
29				3.57		2.42	1.90	1.69	
30					2.35	1.91			
31			2.40		2.25		2.85		

NOTE.—Gage heights affected by ice Jan. 1 to Apr. 20, 1913.

Daily discharge, in second-feet, of Horn River near Canjilon, N. Mex., for 1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1	14	120	5.6	1.1	0.7	0.2	16	10	130	6.4	1.0	0.3	0.1
2	14	90	5.4	1.1	.4	.2	17	10	124	8.5	1.0	.4	.1
3	14	60	5.0	1.0	.4	.2	18	10	92	6.6	.9	.4	.1
4	14	19	4.3	1.0	.4	.2	19	10	17	4.2	.9	2.0	.1
5	14	26	3.8	.9	.2	.2	20	20	17	1.8	1.1	.6	.1
6	14	34	4.6	.9	.2	.2	21	35	13	1.4	.9	.6	.1
7	13	40	4.4	.7	.2	.2	22	46	9.3	1.3	.7	.6	2.0
8	12	46	4.2	.9	.2	.2	23	32	9.3	1.3	.6	.6	4.4
9	11	50	6.0	1.0	.2	.2	24	19	9.3	1.2	.6	.5	1.1
10	10	100	60	.9	.4	.2	25	23	9.3	1.1	.6	.4	1.8
11	10	172	27	.9	.6	.2	26	27	9.3	1.1	.5	.3	1.1
12	10	160	10	.9	.4	.2	27	31	12	1.1	.4	.1	1.3
13	10	150	7.6	.9	.4	.2	28	160	16	1.1	.4	.1	1.2
14	10	140	4.3	.9	.4	.1	29	168	10	1.1	.3	.1	1.2
15	10	135	4.4	1.0	.3	.1	30	150	8.0	1.2	.3	.1	1.1
							31		5.6		54	.1	

NOTE.—Daily discharge determined from a curve well defined between zero and 100 second-feet, and by the indirect method for shifting channels. Discharge estimated Apr. 1-20 on account of ice. Discharge interpolated on other days of missing gage heights.

Monthly discharge of Horn River near Canjilon, N. Mex., for 1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....			a 1.00	61	D.
February.....			a 1.00	56	D.
March.....			a 5.00	307	C.
April.....	168	10	29.0	1,730	B.
May.....	172	5.6	59.1	3,630	C.
June.....	60	1.1	6.53	389	B.
July.....	54	.3	2.53	156	B.
August.....	2.0	.1	.41	25	B.
September.....	4.4	.1	.62	37	B.
The period.....				6,390	

a Estimated.

RIO VALLECITOS AT VALLECITOS, N. MEX.

Location.—At Vallecitos, in sec. 17, T. 26 N., R. 8 E., in the Carson National Forest.

Records available.—June 17, 1911, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Practically permanent.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—Water is diverted in small amounts for a distance of 6 miles above the station.

Accuracy.—Except as noted, estimates of discharge may be considered good.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Rio Vallecitos at Vallecitos, N. Mex., in 1911-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 17	H. B. Waha.....	1.63	27.7	Mar. 31	J. E. Powers.....	1.70	31.2
1912.				May 2	.....do.....	2.72	250
Dec. 16 ^a	J. E. Powers.....	1.10	6.4	June 2	.....do.....	1.50	25.8

a Ice present.

Daily gage height, in feet, of Rio Vallecitos at Vallecitos, N. Mex., for 1911-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1911.					1911.				
1.....		1.17	1.32	1.20	16.....	1.63	1.82	0.94	1.25
2.....		1.55	1.28	1.04	17.....	1.61	1.50	.98	1.13
3.....		1.46	1.24	1.06	18.....	1.61	1.55	.92	1.08
4.....		1.35	1.35	1.06	19.....	1.56	1.58	1.06	1.08
5.....		1.27	1.14	1.06	20.....	1.48	1.73	1.07	1.42
6.....		3.30	1.13	1.26	21.....	1.46	1.57	.96	1.20
7.....		1.50	1.08	1.14	22.....	1.44	1.56	1.38	1.14
8.....		1.41	1.06	1.10	23.....	1.40	1.48	1.45	1.12
9.....		1.32	.92	1.07	24.....	1.37	1.83	1.29	1.16
10.....		1.26	.93	1.07	25.....	1.25	1.63	1.26	1.17
11.....		1.20	.95	1.07	26.....	1.17	2.20	1.18	1.14
12.....		1.27	1.12	1.08	27.....	1.16	1.56	1.13	1.25
13.....		1.26	1.03	1.28	28.....	1.16	1.65	1.21	1.18
14.....		1.64	.92	1.16	29.....	1.16	.....	1.18	1.22
15.....		1.45	.90	1.26	30.....	1.22	.....	1.09	1.28
					31.....	.....	.....	1.10	.....

Daily gage height, in feet, of Río Vallecitos at Vallecitos, N. Mex., for 1911-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.		1.54	1.50					3.10	2.63	1.41	1.21	
2.	1.40		1.57								1.12	0.92
3.	1.23	1.45	1.56				1.88			1.23	.97	.91
4.	1.20	1.46	1.56					3.30	2.24			
5.			1.55				2.02		2.32		1.10	
6.	2.33	1.41						3.40	2.16		1.12	.91
7.	2.26	1.40						3.47			.97	.90
8.	2.11	1.52							2.00	.87	.91	
9.	1.96	1.52						3.30		.87		.91
10.	1.82	1.53						3.31	2.20	.87		.90
11.	1.74									.87		
12.	1.68								1.88	.87	.87	.89
13.	1.62								1.69		.97	.89
14.	1.58										.98	.90
15.	1.53						2.00		1.65	1.97		
16.	1.50									1.76	.97	.91
17.							1.16	3.80		1.52	.92	.90
18.	1.63						2.05					
19.									2.43	1.33	.92	
20.	1.51	1.59					2.00	4.40	2.36	1.64		.90
21.	1.42	1.56						4.65	1.99			
22.	1.46	1.56					2.00		1.87	1.25	.89	
23.	1.44	1.54					2.30					
24.		1.52					2.31	3.63	1.84	1.12		.90
25.	1.38	1.50					2.29		1.90	1.11		.90
26.							2.50				.88	.88
27.	1.47	1.60						3.33	1.67	.91	.89	
28.	1.45	1.60					2.37				.88	.88
29.								3.26	1.49	.91	.89	
30.	1.64	1.58					3.70			.91		.89
31.	1.59							2.66				
1912-13.												
1.		.99		1.52				3.77		.98	.86	
2.		.98						3.69	1.50	.98	.84	1.10
3.		.99							1.59	.96	.84	
4.		1.00					1.57	2.90	1.55		.80	1.20
5.		.98					1.65	2.79	1.49		.81	1.10
6.		.97		1.69		1.45			1.47		.82	.97
7.					2.41			2.60	1.45	.94	.80	
8.							1.67	2.60		.94	.80	.98
9.									1.44	.94	.79	
10.				1.80				2.71	2.20	.93		.97
11.							1.72		1.99	.92	.77	.99
12.							1.73	2.43	1.97	.90	.78	
13.		.88			2.10	1.40		2.40	1.91	.88	.79	.97
14.		.88					2.00		1.84	.88	.77	
15.		.87					2.02			.87	.76	.97
16.		.87	1.10					2.22	1.76	.86	.77	.98
17.				2.30					1.71	.86		.97
18.		.88					2.34	2.21		.86	1.12	.98
19.	1.11	.92			1.90			1.99	1.58	.85	1.26	.98
20.						1.51		1.98			1.30	.98
21.	1.06	.86						1.99	1.45	1.28	1.44	.97
22.	1.03			2.14						1.26		.97
23.	1.01								1.37		1.47	.97
24.	1.00							1.97	1.34	1.19		1.23
25.		.89				1.23			1.29	1.15	1.62	
26.		.94						1.97	1.24	1.13	1.58	1.00
27.		.96		2.00				1.97	1.22	1.10	1.56	1.17
28.	.97				1.94	1.13	3.90	1.89	1.18	1.00	1.54	
29.	.99	.90				1.39	4.05	1.84		.99	1.49	1.14
30.	.98						3.95	1.82	.99	.98		1.18
31.	.98					1.70		1.82		.89	1.42	

NOTE.—Stream probably frozen solid January to March, 1912. Gage heights affected by ice during December, 1912, and Jan. 1 to Mar. 24, 1913.

Daily discharge, in second-feet, of Rio Vallecitos at Vallecitos, N. Mex., for 1911-1913.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.			
1911.					1911.							
1.....		8.4	13	9.0	16.....		45	4.4	10			
2.....		23	11	5.8	17.....	28	20	4.8	7.6			
3.....		18	10	6.2	18.....	27	23	4.2	6.6			
4.....		14	14	6.2	19.....	24	25	6.2	6.6			
5.....		11	7.8	6.2	20.....	19	36	6.4	17			
6.....		442	7.6	11	21.....	18	24	4.6	9.0			
7.....		20	6.6	7.8	22.....	18	24	15	7.8			
8.....		16	6.2	7.0	23.....	16	19	18	7.4			
9.....		13	4.2	6.7	24.....	15	46	12	8.2			
10.....		11	4.3	6.4	25.....	10	28	11	8.4			
11.....	9.0		4.5	6.4	26.....	8.4	102	8.6	7.8			
12.....		11	7.4	6.6	27.....	8.2	24	7.6	10			
13.....		11	5.6	11	28.....	8.2	30	9.3	8.6			
14.....		29	4.2	8.2	29.....	8.2	26	8.6	9.6			
15.....		18	4.0	11	30.....	9.6	22	6.8	11			
					31.....		18	7.0				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	14	22	20					374	222	16	9.3	
2.....	16	20	24								7.4	4.2
3.....	9.9	18	24				51			9.9	4.7	4.1
4.....	9.0	18	24					442	113			
5.....	73	17	23				68		135		7.0	
6.....	137	16						476	94		7.4	4.1
7.....	118	16						500			4.7	4.0
8.....	83	21							65	3.7	4.1	
9.....	60	21						442		3.7		4.1
10.....	45	22						445	102	3.7		4.0
11.....	37	22								3.7		
12.....	32	22							51	3.7	3.7	3.9
13.....	27	23							32		4.7	3.9
14.....	25	23									4.8	4.0
15.....	22	23					65		30	61		
16.....	20	24								39	4.7	4.1
17.....	24	24					8.2	630		21	4.2	4.0
18.....	28	24					73					
19.....	24	25						165	13		4.2	
20.....	21	25					65	870	146	29		4.0
21.....	17	24						970	64			
22.....	18	24						65	50	10	3.9	
23.....	18	22						129				
24.....	16	21						132	562	47	7.4	4.0
25.....	15	20						126		53	7.2	4.0
26.....	17	23						185				3.8
27.....	19	26							452	31	4.1	3.9
28.....	18	26						149			3.8	3.8
29.....	24	26							428	20	4.1	3.9
30.....	29	25						590		4.1		3.9
31.....	25								232			
1912-13.												
1.....		4.9				8.0	31	612	35	5.8	4.7	12
2.....		4.8				8.0	29	583	26	5.8	4.5	7.0
3.....		4.9				8.0	26	445	26	5.6	4.5	7.8
4.....		5.0				8.0	24	307	24	5.6	4.2	8.5
5.....		4.8				8.0	30	274	20	5.5	4.3	7.0
6.....						8.0	30	245	20	5.4	4.4	5.7
7.....		4.7				8.0	31	217	18	5.4	4.2	5.8
8.....						8.0	31	217	18	5.4	4.2	5.8
9.....						8.0	32	233	18	5.4	4.1	5.7
10.....						7.0	34	250	102	5.3	4.0	5.7
11.....						7.0	35	208	65	5.2	4.0	5.9
12.....						6.0	36	166	62	5.0	4.1	5.8
13.....		3.8				6.0	51	157	54	4.8	4.1	5.7
14.....		3.8				6.0	66	140	46	4.8	4.0	5.7
15.....		3.7				6.0	69	122	42	4.8	4.0	5.7

Daily discharge, in second-feet, of Rio Vallecitos at Vallecitos, N. Mex., for 1911-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
16.....		3.7	7.0			6.0	92	107	38	4.7	4.0	5.8
17.....						7.0	115	105	34	4.7	5.6	5.7
18.....		3.8				8.0	139	104	30	4.7	7.3	5.8
19.....	7.2	4.2				8.0	191	65	25	4.6	10	5.8
20.....						9.0	243	63	22	7.3	11	5.8
21.....	6.2	3.6				9.0	295	65	18	10	18	5.7
22.....	5.6					9.0	347	64	16	10	19	5.7
23.....	5.2					9.0	399	63	14	9.2	20	5.7
24.....	5.0					9.0	451	62	13	8.4	24	9.2
25.....		3.9				9.2	503	62	10	7.8	27	7.6
26.....		4.4				8.6	555	62	9.5	7.4	25	6.0
27.....		4.6				8.0	607	62	9.0	7.0	24	8.0
28.....	4.7					7.4	657	52	8.2	6.0	23	7.8
29.....	4.9	4.0				16	710	46	7.0	5.9	20	7.6
30.....	4.8					25	674	44	5.9	5.8	19	8.2
31.....	4.8					33		44		4.9	17	

NOTE.—Daily discharge determined from a well-defined curve. Discharge estimated on account of ice Mar. 1-24, 1913. Discharge interpolated for other days for which gage heights are missing.

Monthly discharge of Rio Vallecitos at Vallecitos, N. Mex., for 1911-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
June 17-30.....	28	8.2	15.5	430	B.
July.....	442	8.4	37.6	2,310	B.
August.....	18	4.0	7.90	486	B.
September.....	17	5.8	8.37	498	B.
1911-12.					
October.....	137	9.0	33.6	2,070	B.
November.....	26	16	22.1	1,320	B.
December 1-5.....	24	20	23.0	228	B.
April.....	590	8.2	106	6,310	C.
May.....	970	232	535	32,900	C.
June.....	222	18	82.4	4,900	B.
July.....	61	3.7	11.4	701	B.
August.....	9.3	3.7	4.65	286	B.
September.....	4.2	3.8	4.00	238	B.
1912-13.					
October.....	7.2	4.0	5.32	327	C.
November.....	5.0	3.6	4.14	246	C.
December.....			^a 5.00	307	C.
March.....	33	6.0	9.39	577	B.
April.....	710	24	218	13,000	B.
May.....	612	44	169	10,400	B.
June.....	102	5.9	27.9	1,660	B.
July.....	10	4.6	6.07	373	B.
August.....	27	4.0	10.9	670	B.
September.....	12	5.7	6.67	397	B.

^a Estimated.

SANTA FE CREEK BASIN.

GENERAL FEATURES.

Santa Fe Creek rises near the crest of the Taos Mountains, near Lake Peak, 13 miles northeast of Santa Fe, at an elevation of 11,500 feet. In its upper course it occupies a very narrow valley, but on leaving the foothills, 4 miles east of Santa Fe, it flows in a shallow channel through a level plain for 15 miles; it then enters a canyon through which it flows for about 6 miles and in which it falls 500 feet. Below the canyon, which ends at La Bajada, its course is again across a fairly level valley in which its channel is shallow. It enters the Rio Grande about 2 miles north of Pena Blanca. The creek receives no important tributaries.

Above Santa Fe the drainage area comprises the western slope of the Taos Mountains where the elevations range between 7,000 and 12,000 feet. The lower portion of the basin consists of a fairly level plain sloping gently toward the Rio Grande.

The lines of equal precipitation for the Taos Mountains (Pl. III) show that the upper portion of the drainage has about 14 inches precipitation at Santa Fe, which increases probably to 24 inches or more at the source—much of this latter precipitation is in the form of snow, which remains during the winter months. Below Santa Fe the mean annual precipitation is about 13 inches, which occurs chiefly during the summer months.

In 1896 W. W. Follett, in his report on the "Distribution of the waters of the Rio Grande," stated that—

For a great many years the full flow of Santa Fe Creek has been utilized for irrigation (below Santa Fe) and the scanty amount of water available has been husbanded with great care and made to serve as much land as possible. The water is alternated among the different ditches and the amount carried annually by each ditch on the main stream is said to be equal, in ordinary years, to the full capacity of the ditch flowing 40 days.

The total capacity of the ditches diverting from Santa Fe Creek and its tributaries is given in the same report as 117 second-feet.

The flow of Santa Fe Creek is equalized to a certain extent by a reservoir of 4,000 acre-feet capacity located above Santa Fe. This enables much of the flood water to be utilized for irrigation which would otherwise flow to the Rio Grande. Largely on account of the reservoir and of the extensive irrigation only flood water now reaches the Rio Grande.

GAGING STATION RECORDS.

SANTA FE CREEK AT MONUMENT ROCK, NEAR SANTA FE, N. MEX.

Location.—At Monument rock, a large conspicuous boulder, 7 miles above Santa Fe, in sec. 30, T. 17 N., R. 11 E. No tributaries within several miles of the station.

From June 1, 1907, to July 16, 1910, and March 8 to November 12, 1911, a station was maintained at Santa Fe. Between the two stations there are no important tributaries, but the Santa Fe Water & Light Co. diverts water.

Records available.—August 29, 1910, to August 7, 1911.

Drainage area.—Not measured

Gage.—Vertical staff.

Channel.—Somewhat shifting.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—Little or no water is diverted above the station, and therefore the records represent closely the natural run-off.

Accuracy.—Owing to the meager data no estimates of discharge are made for 1911. Estimates for 1910 fair.

Discharge measurements of Santa Fe Creek at Monument Rock, near Santa Fe, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 29	C. H. Neel.....	0.72	1.6	Nov. 28	T. E. Neel.....	0.75	1.56
30	do.....	.71	1.3	Dec. 1	do.....	.65	.69
Oct. 7	do.....	.69	1.1	6	do.....	.72	1.2
10	do.....	.69	1.1	9	do.....	.70	1.08
21	do.....	.73	1.6	14	do.....	.71	1.16
26	do.....	.72	1.3	22	do.....	.71	1.16
29	do.....	.71	1.3	23	do.....	.70	1.11
Nov. 1	do.....	.71	1.47				
9	do.....	.70	1.2	1911.			
11	do.....	.71	1.49	Mar. 8 ^a	Cooper and Meier.....		7.1
19	do.....	.73	1.74	Aug. 7	W. B. Freeman.....		b 7.0
22	do.....	.71	1.4				

^a Measurement made 1 mile above Santa Fe Water & Light Co.'s reservoir in Santa Fe Canyon.
^b Estimated.

Daily gage height, in feet, of Santa Fe Creek at Monument Rock, near Santa Fe, N. Mex., for 1910.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		0.80	0.71	0.71	0.71	16.....		0.74	0.69	0.73	0.69
2.....		.80	.70	.71	.70	17.....		.74	.75	.71	.71
3.....		.78	.71	.71	.72	18.....		.75	.71	.72	.71
4.....		.76	.70	.71	.72	19.....		.82	.75	.75	.71
5.....		.76	.70	.75	.65	20.....		.76	.74	.72	.71
6.....		.75	.70	.72	.71	21.....		.75	.69	.72	.70
7.....		.74	.70	.72	.72	22.....		.75	.73	.72	.72
8.....		.74	.69	.72	.71	23.....		.74	.72	.71	.71
9.....		.73	.69	.71	.70	24.....		.72	.72	.71	.72
10.....		.73	.69	.71	.70	25.....		.72	.72	.71	.72
11.....		.73	.70	.71	.71	26.....		.72	.72	.71	.71
12.....		.72	.70	.71	.70	27.....		.71	.72	.70	.70
13.....		.72	.70	.71	.70	28.....		.72	.71	.72	.72
14.....		.79	.69	.72	.71	29.....	0.86	.72	.71	.70	.70
15.....		.77	.69	.71	.71	30.....		.82	.71	.71	.71
						31.....		.85	.71		

NOTE.—The record of gage heights from Feb. 5-25, 1911, showed an average stage of 0.8 foot.

Daily discharge, in second-feet, of Santa Fe Creek at Monument Rock, near Santa Fe, N. Mex., for 1910.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		2.9	1.3	1.3	1.2	16.....		1.8	1.1	1.6	1.0
2.....		2.9	1.2	1.3	1.1	17.....		1.8	2.0	1.3	1.2
3.....		2.5	1.3	1.3	1.3	18.....		2.0	1.3	1.4	1.2
4.....		2.1	1.2	1.3	1.3	19.....		3.3	2.0	2.0	1.2
5.....		2.1	1.2	2.0	.7	20.....		2.1	1.8	1.4	1.2
6.....		2.0	1.2	1.4	1.2	21.....		2.0	1.1	1.4	1.1
7.....		1.8	1.2	1.4	1.3	22.....		2.0	1.6	1.4	1.3
8.....		1.8	1.1	1.4	1.2	23.....		1.8	1.4	1.3	1.2
9.....		1.6	1.1	1.3	1.1	24.....		1.4	1.4	1.3	1.3
10.....		1.6	1.1	1.3	1.1	25.....		1.4	1.4	1.3	1.3
11.....		1.6	1.2	1.3	1.2	26.....		1.4	1.4	1.2	1.2
12.....		1.4	1.2	1.3	1.1	27.....		1.3	1.4	1.1	1.1
13.....		1.4	1.2	1.3	1.1	28.....		1.4	1.3	1.3	1.3
14.....		2.7	1.1	1.4	1.2	29.....		4.3	1.4	1.3	1.1
15.....		2.3	1.1	1.3	1.2	30.....		3.3	1.3	1.3	1.2
						31.....		4.1	1.3	.....	1.1

NOTE.—Daily discharge from two poorly defined rating curves based on discharge measurements made during the period.

Monthly discharge of Santa Fe Creek at Monument Rock, near Santa Fe, N. Mex., for 1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
September.....	3.3	1.3	1.90	113	C.
October.....	2.0	1.1	1.32	81.2	C.
November.....	2.0	1.1	1.36	80.9	C.
December.....	1.3	.7	1.17	71.9	C.

SANTA FE CREEK ABOVE RESERVOIR NEAR SANTA FE, N. MEX.

Location.—Five miles east of Santa Fe, $1\frac{1}{2}$ miles above reservoir, one-fourth mile above Santa Fe Water & Light Co.'s diversion for water supply, in sec. 22, T. 17 N., R. 10 E.

Records available.—April 24, 1913, to September 30, 1913. From May 12, 1910, to February 23, 1913, fragmentary readings were taken from a staff gage 1 mile below the present site and below the diversion of the Santa Fe Water & Light Co. From February 24 to April 23, 1913, an automatic gage was used at the old site.

Drainage area.— $22\frac{1}{2}$ square miles (measured from topographic map).

Gage.—Automatic recording.

Channel.—Shifting.

Winter flow.—Backwater from ice during winter months.

Diversions.—No diversions above the station. Records show natural run-off.

Accuracy.—Estimates of discharge can be considered good. Estimates from January 1 to April 24, 1913, have been corrected to represent the flow at the present station.

Cooperation.—Maintained in cooperation with the State engineer of New Mexico.

Discharge measurements of Santa Fe Creek above reservoir near Santa Fe, N. Mex., in 1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 24	Gray and Emerson.....	1.08	19.0	July 9	Gray and Redding.....	0.93	11.8
May 7	Gray and Dean.....	1.01	14.7	Aug. 13	Emerson and Powers..	.73	6.0
21	Emerson and Dean.....	1.01	14.9	Sept. 9	Gray and Emerson.....	.70	5.5
23	Emerson and Powers..	1.06	15.7	22	Emerson and Carroll...	.60	2.8
30	Gray and Kirkpatrick..	1.03	12.4	23	Emerson and King.....	.75	5.3
June 11	Gray and Dean.....	1.87	83.3				

Daily gage height, in feet, of Santa Fe Creek above reservoir near Santa Fe, N. Mex., for 1913.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.					1.08	1.05	1.25	0.81	0.81
2.					1.07	1.05	1.17	.76	.75
3.					1.06	1.05	1.12	.75	.75
4.					1.03	1.05	1.11	.71	.75
5.					1.01	1.05	1.03	.70	.73
6.					1.02	1.05	1.01	.71	.70
7.					1.03	1.05	.97	.68	.70
8.					1.02	1.05	.95	.67	.74
9.					1.03	1.05	.93	.65	.72
10.					1.05	1.05	.90	.64	.70
11.					1.08	1.60	.88	.68	.69
12.					1.10	1.70	.86	.79	.72
13.					1.12	1.56	.82	.76	.70
14.					1.09	1.45	.80	.71	.68
15.					1.06	1.37	.77	.69	.67
16.					1.05	1.30	.75	.69	.69
17.					1.08	1.23	.76	.68	.67
18.					1.08	1.18	.78	.67	.66
19.					1.08	1.15	.78	.72	.65
20.					1.05	1.11	.83	.72	.64
21.					1.02	1.10	.84	.76	.64
22.					1.02	1.09	.82	.72	.69
23.					1.06	1.16	.79	.79	.80
24.				1.00	1.07	1.13	.78	.81	.78
25.				1.03	1.07	1.09	.74	.89	.75
26.				1.05	1.07	1.08	.72	.85	.74
27.				1.08	1.06	1.07	.70	.85	.72
28.				1.10	1.08	1.10	.68	.84	.71
29.				1.09	1.05	1.39	.71	.83	.70
30.				1.09	1.05	1.31	.72	.82	.70
31.				1.09	1.05	.....	.71	.82	.....

Daily discharge, in second-feet, of Santa Fe Creek above reservoir near Santa Fe, N. Mex., for 1913.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.			1.5	5.0	18	13	27	8.5	8.5
2.			1.5	5.0	18	13	22	7.3	7.1
3.			1.5	5.0	17	13	20	7.1	7.1
4.			2.0	5.0	16	13	20	6.2	7.1
5.			2.0	5.0	15	13	16	6.0	6.7
6.			2.5	5.0	16	13	15	6.2	5.8
7.			2.5	6.5	16	13	14	5.8	5.8
8.			2.7	6.5	16	13	13	5.4	6.4
9.			3.3	5.0	16	13	12	5.0	6.0
10.			4.8	5.5	17	13	11	4.8	5.4
11.			3.3	5.0	18	54	10	5.8	5.2
12.			2.7	5.0	19	64	9.9	8.0	5.8
13.			2.6	5.0	20	50	8.8	7.3	5.2
14.			2.5	5.6	19	41	8.2	6.2	4.6
15.			2.4	6.5	17	35	7.5	5.8	4.4
16.			2.3	6.5	17	30	7.1	5.8	4.6
17.			2.2	8.8	18	26	7.3	5.8	4.2
18.			2.1	8.8	18	23	7.8	5.4	3.7
19.			2.0	10	18	22	7.8	6.4	3.6
20.			1.9	10	17	20	9.0	6.4	3.2
21.			1.8	10	16	19	9.3	6.0	3.2
22.			1.7	16	15	19	8.8	6.4	3.9
23.			1.7	16	16	22	8.0	8.0	5.8
24.			1.0	15	17	20	7.8	8.5	5.4
25.			2.0	16	16	19	6.9	11	4.9
26.			1.0	17	16	18	6.4	9.6	4.7
27.			1.0	18	15	18	6.0	9.6	4.4
28.			1.4	19	15	19	5.8	9.3	4.2
29.			1.0	19	14	36	6.2	9.0	4.0
30.			1.2	19	13	31	6.4	8.8	4.0
31.			1.3	.....	13	.....	6.2	8.8	.....

NOTE.—Mar. 1 to Apr. 23 estimated from discharge measurements and data obtained at the station below the Santa Fe Water & Light Co.'s ditch and the amount diverted by the ditch. Apr. 24 to Sept. 30 determined from a well-defined curve and by the indirect method for shifting channels.

Monthly discharge of Santa Fe Creek above reservoir near Santa Fe, N. Mex., for 1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....			a 1.00	61	C.
February.....			a 1.50	83	C.
March.....	4.8	1.0	2.05	126	B.
April.....	19	5.0	9.66	575	B.
May.....	20	13	16.5	1,010	B.
June.....	64	13	23.9	1,420	B.
July.....	27	5.8	10.7	658	B.
August.....	11	4.8	7.10	437	A.
September.....	8.5	3.2	5.16	307	A.
The period.....				4,680	

a Estimated.

Discharge measurements of Santa Fe Creek above reservoir below Santa Fe Water & Light Co.'s ditch, near Santa Fe, N. Mex., in 1910 and 1913.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 12	J. B. Stewart.....	1.0	16.3	Mar. 24 ^b	Gray and Emerson.....	0.25	a 1.0
July 17	C. D. Miller.....	.3	a .15	Apr. 11	Emerson and Dean.....	.67	a 5.0
Aug. 21	J. B. Stewart.....	.35	a .4	11	do.....	.32	a 1.5
Sept. 24	C. D. Miller.....	.39	1.1	13	G. A. Gray.....	.32	a 1.0
				19	Gray and Emerson.....	.53	3.7
1913.				22	do.....	.90	15.6
Feb. 25 ^b	C. J. Emerson.....	.25	1.3				
Mar. 8 ^b	J. E. Powers.....	.35	1.8				

a Estimated.

b Ice present.

NOTE.—On April 19 the Santa Fe Water & Light Co.'s ditch diverted 6.8 second-feet; during the second measurement on April 11, 3.5 second-feet, and on April 13, 4 second-feet.

Daily gage height, in feet, of Santa Fe Creek above reservoir below Santa Fe Water & Light Co.'s ditch, near Santa Fe, N. Mex., for 1910 and 1913.

Day.	May.	June.	July.	Day.	May.	June.	July.	Day.	May.	June.	July.
1910.				1910.				1910.			
1.....	0.70	0.34		11.....		0.40	0.52	21.....		0.34	
2.....	.67	.34		12.....	1.00	.40	.52	22.....	0.75	.34	
3.....	.65	.34		13.....	1.10	.40	.52	23.....	.70	.34	
4.....	.62	.34		14.....	1.05	.40	.54	24.....	.69	.34	
5.....	.58	.34		15.....	1.00	.35	.43	25.....	.68	.50	
6.....	.55	.43		16.....	.90	.34	.34	26.....	.67	.34	
7.....	.49	.52		17.....	.90	.34		27.....	.67	.34	
8.....	.48	.52		18.....	.90	.34		28.....	.67	.34	
9.....	.45	.52		19.....	.85	.34		29.....	.67	.34	
10.....	.40	.52		20.....	.80	.34		30.....	.75	.34	
								31.....	.70		

Daily gage height, in feet, of Santa Fe Creek above reservoir below Santa Fe Water & Light Co.'s ditch, near Santa Fe, N. Mex., for 1910 and 1913—Continued.

Day.	Mar.	Apr.	Day.	Mar.	Apr.	Day.	Mar.	Apr.
1913.			1913.			1913.		
1.....		0.35	11.....	0.50	0.35	21.....	0.65	0.68
2.....		.32	12.....	.45	.33	22.....	.55	.75
3.....		.33	13.....	.75	.32	23.....	.35	
4.....		.32	14.....	.78	.34	24.....	.25	
5.....		.31	15.....	.78	.45	25.....	.38	
6.....		.31	16.....	.78	.48	26.....	.26	
7.....		.40	17.....	.78	.56	27.....	.25	
8.....	0.45	.42	18.....	.78	.54	28.....	.31	
9.....	.50	.36	19.....	.75	.58	29.....	.26	
10.....	.60	.38	20.....	.70	.61	30.....	.28	
						31.....	.30	

NOTE.—Gage heights affected by ice Mar. 13-22, 1913.

Daily discharge, in second-feet, of Santa Fe Creek above reservoir near Santa Fe., N. Mex., for 1910.

Day.	May.	June.	July.	Day.	May.	June.	July.	Day.	May.	June.	July.
1.....		6.0	0.4	11.....		1.2	3.0	21.....	8	0.4	
2.....		5.4	.4	12.....		1.2	3.0	22.....	7.2	.4	
3.....		5.0	.4	13.....		2.2	3.0	23.....	6.	.4	
4.....		4.4	.4	14.....		1.9	3.7	24.....	5.8	.4	
5.....		3.7	.4	15.....		1.6	.4	25.....	5.6	2.4	
6.....		3.2	1.9	16.....		1.2	.4	26.....	5.4	.4	
7.....		2.3	3.0	17.....		1.2	.4	27.....	5.4	.4	
8.....		2.2	3.0	18.....		1.2	.4	28.....	5.4	.4	
9.....		1.8	3.0	19.....		1.0	.4	29.....	5.4	.4	
10.....		1.2	3.0	20.....		8	.4	30.....	7.2	.4	
								31.....	6.0		

Monthly discharge of Santa Fe Creek above reservoir near Santa Fe, N. Mex., for 1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
May 12-31.....	22	5.4	9.3	387	B.
June.....	6.0	.4	1.6	96	B.
July 1-16.....	3.7	.4	1.9	61	B.

SANTA FE CREEK AT SANTA FE, N. MEX.

Location.—At the Don Gaspar Avenue Bridge in Santa Fe, in sec. 24, T. 17 N., R. 9 E. No tributaries within several miles of the station.

Records available.—Fragmentary records from May 31, 1907, to November 12, 1911.

Drainage area.—About 40 square miles.

Gage.—The datum of the original staff gage was changed August 13, 1908, and again August 22, 1908, but it remained permanent after that time.

Channel.—Shifting.

Discharge measurements.—Made from bridge and by wading.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—Water is diverted for the Santa Fe waterworks above the station and several small irrigation ditches divert just above.

Accuracy.—Owing to the lack of gage heights in 1911, no estimates of daily discharge have been made. Estimates for 1907 to 1910 can only be considered approximate on account of shifting conditions.

Discharge measurements of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 31	V. L. Sullivan	0.50	19.5	Mar. 8	W. B. Freeman		<i>a</i> 10.0
June 25	do	.17	2.7	19	do	0.30	6.0
1908.				June 1	do	.72	18.9
May 23	C. D. Miller	.48	11.8	July 23	do		<i>a</i> 6.0
July 18	Cooper and Miller	.55	34.6	24	do		<i>a</i> 6.0
18	do	.50	24.5	25	do		<i>a</i> 6.0
Aug. 17	R. L. Cooper	.20	95	26	do		<i>a</i> 4.0
19	do	—	33	27	do		<i>a</i> 4.0
19	do	.05	38	29	do		<i>a</i> 8.0
20	do	.00	52	30	do		<i>a</i> 8.0
21	do	—	30	31	do		<i>a</i> 3.0
Nov. 24	W. B. Freeman	—	.4	Aug. 1	do		<i>a</i> 25
1909.				2	do		<i>a</i> 10
May 8	J. B. Stewart	.05	5.2	3	do		<i>a</i> .05
Aug. 25	Sullivan and Stewart	.55	169	4	do		<i>a</i> .10
25	J. B. Stewart	.30	69	5	do		<i>a</i> .05
Oct. 5	W. B. Freeman	—	<i>a</i> 2	6	do		<i>a</i> .05
1911.				8	do		<i>a</i> .05
Mar. 4	W. B. Freeman		0	Sept. 23	do		0
5	do		0	Oct. 27	do	.10	<i>a</i> 7.0
6	do		0	28	do	.20	<i>a</i> 9.0
7	do		0	30	do	.50	<i>a</i> 8.0
8	do	.60	9.7	Nov. 3	do	.10	<i>a</i> 7.0
				11	do		<i>a</i> 10.0
				12	do		<i>a</i> 9.0
				12	do	.40	<i>a</i> 12.0

a Estimated.

Daily gage height, in feet, of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1911.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1907.					1907.				
1	0.49	0.00	0.00	0.60	16	0.44	0.00	0.00	0.10
2	.50	.00	.00	.50	17	.44	.00	.00	.00
3	.50	.00	.20	.55	18	.39	.00	.00	.05
4	.50	.00	.10	.50	19	.45	.00	.05	.00
5	.50	.00	.15	.40	20	.50	.00	.10	.05
6	.50	.00	.00	.50	21	.40	.00	.00	.02
7	.52	.00	.00	.40	22	.40	.00	.00	.02
8	.52	.00	.00	.45	23	.35	.00	.00	.00
9	.50	.05	.00	.42	24	.35	.00	.00	.00
10	.50	.00	.00	.40	25	.28	.00	.00	.00
11	.48	.05	.00	.30	26	.20	.00	.00	.00
12	.48	.00	.00	.10	27	.15	.00	.00	.00
13	.45	.00	.00	.00	28	.15	.05	.00	.00
14	.45	.00	.00	.00	29	.10	.05	.00	.00
15	.40	.00	.00	.00	30	.05	.00	.80	.00
					31		.00	.60	

Daily gage height, in feet, of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	0.00	0.05	0.2	0.3	0.1	0.1	.....	0.05	0.4	0.0	0.4	-0.2
2.	.00	.05	.3	.35	.1	.2	.....	.0	.6	.0	.7	-.3
3.	.00	.05	.1	.3	.15	.15	.....	.1	.3	.0	.5	-.1
4.	.00	.05	.08	.25	.1	.15	.....	.25	.2	.0	.4	-.1
5.	.00	.05	.1	.3	.1	.2	.....	.0	.25	.0	.3	-.4
6.	.00	.08	.15	.3	.3	.3	.....	.0	.2	.0	.25	-.4
7.	.00	.08	.2	.3	.3	.2	.....	.2	.15	.0	.3	-.4
8.	.00	.08	.2	.3	.25	.05	.....	.0	.15	.0	.4	-.5
9.	.00	.08	.2	.3	.2	.25	.....	.0	.15	.0	.2	.....
10.	.00	.06	.25	.25	.2	.05	.....	.0	.0	.0	.2	.....
11.	.00	.06	.2	.25	.2	.25	.....	.0	.4	.0	.25	.....
12.	.00	.05	.2	.25	.2	.1	.....	.1	.3	.0	.25	.....
13.	.00	.05	.3	.2	.2	.2	.....	.2	.25	.0	1.5	.....
14.	.00	.05	.3	.25	.2	.15	.....	.15	.0	.0	1.5	.....
15.	.00	.08	.35	.25	.25	.0	.....	.0	.0	1.0	.95	.....
16.	.00	.05	.3	.2	.25	.05	.....	.0	.3	.3	.....	.....
17.	.00	.05	.3	.2	.1	.1	.....	.15	.25	.3	.5	.....
18.	.00	.05	.3	.25	.2	.05	.....	.15	.0	2.0	.2	.....
19.	.00	.06	.35	.25	.2	.0	.....	.1	.0	.3	.1	.....
20.	.00	.06	.35	.2	.15	.0	.....	.0	.0	.3	.0	.....
21.	.05	.05	.3	.2	.2	.0	.....	.0	.0	.4	.35	.....
22.	.00	.05	.25	.2	.25	.0	0.05	.35	.0	.2	.3	.....
23.	.00	.10	.3	.25	.2	.0	.05	.55	.0	.3	.38	.....
24.	.00	.15	.25	.2	.2	.0	.05	.4	.0	.25	.38	.....
25.	.00	.15	.25	.2	.25	.0	.05	.3	.0	.3	.3	.....
26.	.00	.15	.25	.1	.2	.0	.1	.15	.0	.2	.1	.....
27.	.00	.18	.2	.1	.3	.0	.15	.1	.1	.2	.0	.....
28.	.00	.18	.2	.2	.2	.0	.2	.15	.0	.2	.0	.....
29.	.02	.20	.25	.2	.25	.0	.0	.15	.0	.1	.2	.....
30.	.02	.20	.2	.2	.....	.0	.0	.0	.0	.2	.1	.....
31.	.02	.....	.25	.2	.....	.0	.....	.0	.....	.35	.1	.....
1908-9.												
1.	-.4	-.4	-.2	-.3	-.25	-.4	-.3	-.1	-.4	-.5	-.6	-.4
2.	-.4	-.4	-.2	-.3	-.2	-.3	-.3	-.3	-.4	-.5	-.6	-.45
3.	-.4	-.5	-.2	-.5	-.2	-.3	-.3	-.3	-.3	-.5	-.5	-.3
4.	-.4	-.4	-.4	-.3	-.35	-.4	-.4	-.3	-.3	-.5	-.35	-.45
5.	-.4	-.4	-.4	-.4	-.25	-.4	-.4	-.2	-.2	-.4	-.4	+ .25
6.	-.4	-.4	-.4	-.3	-.2	-.4	-.4	-.2	.0	-.5	-.4	+ .1
7.	-.4	-.4	-.5	-.3	-.3	-.3	-.4	-.1	.0	-.5	-.6	.4
8.	-.4	-.5	-.5	-.3	-.4	-.3	-.4	-.1	-.2	-.5	-.6	.4
9.	-.4	-.4	-.5	-.3	-.4	-.3	-.4	-.05	-.2	-.5	-.5	.3
10.	-.4	-.4	-.5	-.3	-.3	-.4	-.4	-.05	-.25	-.5	-.4	.35
11.	-.4	-.4	-.5	-.25	-.3	-.35	-.4	-.05	-.1	-.5	-.5	.3
12.	-.4	-.4	-.5	.3	-.4	-.3	-.4	-.05	-.2	-.5	-.6	.3
13.	-.4	-.4	-.5	-.25	-.4	-.3	-.4	-.05	-.2	-.2	-.4	.4
14.	-.4	-.4	-.5	-.25	-.4	-.2	-.4	-.05	-.25	-.5	-.4	.0
15.	-.4	-.4	-.5	-.3	-.45	-.2	-.4	-.05	-.3	-.5	-.15	.15
16.	-.4	-.4	-.5	-.2	-.45	-.2	-.45	-.1	-.3	-.5	-.4	.2
17.	-.4	-.4	-.5	-.2	-.45	-.3	-.45	-.1	-.4	-.5	.....	.1
18.	-.4	-.4	-.5	-.3	-.45	-.35	-.45	-.1	-.4	-.5	.....	.15
19.	-.4	-.4	-.4	-.3	-.45	-.35	-.4	-.25	-.15	-.5	.....	.15
20.	-.4	-.4	-.4	-.25	-.4	-.4	-.5	+ .1	-.15	-.5	.....	.1
21.	-.3	-.4	-.3	-.2	-.4	-.45	-.5	+ .2	-.25	-.5	.....	+ .05
22.	.0	-.4	-.3	-.2	-.3	-.45	-.4	-.1	-.4	-.5	.....	.0
23.	-.1	-.4	-.3	-.15	-.3	-.45	-.3	-.1	-.35	-.5	.....	.0
24.	-.3	-.3	-.4	-.3	-.2	-.45	-.2	-.05	-.5	-.5	-.1	.0
25.	-.3	-.3	-.4	-.2	-.3	-.3	-.45	-.05	-.5	+ .1	-.1	.0
26.	-.2	-.3	-.4	-.15	-.45	-.3	-.45	-.1	-.5	.0	.0	-.1
27.	-.2	-.3	-.4	-.2	-.5	-.35	-.4	-.3	-.4	-.3	.....	-.1
28.	-.3	-.2	-.6	-.2	-.5	-.3	-.3	-.4	-.5	-.4	.....	-.1
29.	-.2	-.2	-.5	-.25	.....	-.3	-.15	-.4	-.3	-.4	.....	-.1
30.	-.3	-.2	-.5	-.3	.....	-.3	-.4	-.4	-.5	-.4	.....	-.1
31.	-.35	.....	-.3	-.2	.....	-.3	.....	-.4	.....	-.4	.....	.....

Daily gage height, in feet, of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.								0.05		
1.....	-0.1	-0.15	-0.1	-0.1	-0.1	-0.1				
2.....	- .1	- .15	- .1	- .1	- .15	- .1				
3.....	- .1	- .15	- .1	- .05	- .1	- .1				
4.....	- .1	- .15	- .1	.1	- .1	- .1				
5.....	- .1	- .15	- .1	.1	- .1	- .1				
6.....	.0	- .15	- .1	.1	- .1	- .1				
7.....	+ .05	- .15	- .1	.1	- .1	- .1				
8.....	.0	- .15	- .1	.1	- .1	- .1				
9.....	.0	- .15	- .1	.1	- .1	- .1				
10.....	.0	- .15	- .1	.1	- .1	- .1				
11.....	+ .1	- .1	- .1	.3	- .1	- .1				
12.....	.1	- .1	- .1	.3	- .1	- .1				
13.....	.1	- .1	- .1	.3	- .1	- .1				
14.....	+ .1	- .1	- .1	- .1	- .1	- .1				
15.....	- .1	- .1	- .1	- .05	- .1	- .1				
16.....	- .1	- .1	- .1	- .1	- .1	- .1				
17.....	- .1	- .1	- .1	- .1	- .1	- .1				
18.....	- .1	- .1	- .1	- .1	- .1	- .1				
19.....	- .1	- .1	- .1	.0	- .1	- .1				
20.....	- .1	- .1	- .1	.0	- .1	- .1				
21.....	- .1	- .1	- .1	- .1	- .1	- .1	0.0			
22.....	- .1	- .1	- .1	- .1	- .1	- .1	.05			
23.....	- .1	- .1	- .1	- .1	- .1	- .1				
24.....	- .1	- .1	- .1	- .1	- .1	- .1				
25.....	- .1	- .1	- .1	- .1	- .1	- .1				
26.....	- .1	- .1	- .1	- .1	- .1	- .1				
27.....	- .1	+ .2	.0	- .1	- .1	- .1				
28.....	- .1	+ .2	.0	- .1	- .1	- .1				
29.....	- .1	.0	.0	- .1	- .1	- .1				
30.....	- .1	.0	.0	- .1	- .1	- .1				
31.....	- .1	.0	.0	- .1	- .1	- .1				

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1911.									
1.....					0.70				
2.....					.50				
3.....					.40				0.10
4.....									
5.....					.40				
6.....					.20				
7.....									
8.....	0.60								
9.....									
10.....									
11.....									
12.....									.40
13.....									
14.....									
15.....				0.10					
16.....				.30					
17.....				.40					
18.....				.50					
19.....	.30								
20.....				.80					
21.....				.50					
22.....									
23.....									
24.....									
25.....				.58					
26.....				.55					
27.....				.42					
28.....				.80				0.10	
29.....				.55				.20	
30.....				.45	1.90			.50	
31.....				.68					

NOTE.—Gage heights beginning Aug. 13, 1908, refer to a new gage. On Aug. 21, 1908, old gage read 0.3 foot. Gage heights affected by ice during January and February, 1909.

Daily discharge, in second-feet, of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1910.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1907.					1907.				
1.....	19	0.5	0.5	34	16.....	14	0.5	0.5	1.5
2.....	20	.5	.5	20	17.....	14	.5	.5	.5
3.....	20	.5	3.5	27	18.....	11	.5	1.0	1.0
4.....	20	.5	1.5	20	19.....	15	.5	1.0	.5
5.....	20	.5	2.5	11	20.....	20	.5	1.0	1.0
6.....	20	.5	.5	20	21.....	11	.5	.5	.7
7.....	22	.5	.5	11	22.....	11	.5	.5	.7
8.....	22	.5	.5	15	23.....	8.6	.5	.5	.5
9.....	20	1.0	.5	13	24.....	8.6	.5	.5	.5
10.....	20	.5	.5	11	25.....	5.7	.5	.5	.5
11.....	18	1.0	.5	6.3	26.....	3.5	.5	.5	.5
12.....	18	.5	.5	1.5	27.....	2.5	.5	.5	.5
13.....	15	.5	.5	.5	28.....	2.5	1.0	.5	.5
14.....	15	.5	.5	.5	29.....	1.5	1.0	.5	.5
15.....	11	.5	.5	.5	30.....	1.0	.5	85	.5
					31.....		.5	31	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.5	1.0	3.5	6.2	1.0	0.9	0.0	0.5	8.5	0.0	14	2.0
2.....	.5	1.0	6.3	8.2	1.0	2.4	.0	.0	26	.0	90	1.1
3.....	.5	1.0	1.5	6.2	1.8	1.6	.0	.8	5.2	.0	111	.4
4.....	.5	1.0	1.3	4.5	1.0	1.6	.0	3.2	2.8	.0	111	.4
5.....	.5	1.0	1.5	6.2	1.0	2.4	.0	.0	3.8	.0	111	.4
6.....	.5	1.3	2.5	6.0	5.2	4.7	.0	.0	2.8	.0	111	.4
7.....	.5	1.3	3.5	6.0	5.2	2.4	.0	2.3	1.9	.0	111	.4
8.....	.5	1.3	3.5	6.0	3.8	.6	.0	.0	2.0	.0	111	.1
9.....	.5	1.3	3.5	6.0	2.6	3.4	.0	0	2.0	.0	111	.1
10.....	.5	1.1	4.9	4.4	2.6	.6	.0	.0	.5	.0	111	.1
11.....	.5	1.1	3.5	4.4	2.6	3.4	.0	.0	9.8	.0	111	.1
12.....	.5	1.0	3.5	4.4	2.6	.8	.0	.8	5.8	.0	111	.1
13.....	.5	1.0	6.3	3.2	2.6	2.3	.0	2.1	4.4	.0		.1
14.....	.5	1.0	6.3	4.2	2.6	1.6	.0	1.3	.5	.0		.1
15.....	.5	1.3	8.6	4.2	3.7	.3	.0	.0	.5			.1
16.....	.5	1.0	6.3	3.2	3.7	.5	.0	.0	6.0	8.0		.1
17.....	.5	1.0	6.3	3.2	.9	.8	.0	1.3	4.6	8.0	186	.1
18.....	.5	1.0	6.3	4.0	2.5	.4	.0	1.3	.5		95	.1
19.....	.5	1.1	8.6	4.0	2.5	.2	.0	.7	.5		8.0	.1
20.....	.5	1.1	8.6	3.0	1.6	.2	.0	.0	.5	8.0	50	.1
21.....	1.0	1.0	6.3	3.0	2.5	.2	.0	.0	.4	14	22	.1
22.....	.5	1.0	4.9	2.9	3.5	.2	.5	6.0	.4	4.5	22	.1
23.....	.5	1.5	6.3	3.9	2.5	.2	.5	18	.4	8.0	32	.1
24.....	.5	2.5	4.9	2.8	2.5	.2	.5	8.0	.4	6.0	32	.1
25.....	.5	2.5	4.9	2.7	3.5	.2	.5	4.5	.4	8.0	22	.1
26.....	.5	2.5	4.9	1.0	2.5	.1	.8	1.3	.4	4.5	9.0	.1
27.....	.5	3.1	3.5	1.0	4.8	.1	1.5	.8	1.5	4.5	5.5	.1
28.....	.5	3.1	3.5	2.6	2.5	.1	2.2	1.5	.3	4.5	5.5	.1
29.....	.7	3.5	4.9	2.6	3.5	.1	.0	1.5	.3	2.0	2.0	.1
30.....	.7	3.5	3.5	2.6		.1	.0	.4	.0	4.5	3.3	.1
31.....	.7		4.9	2.6		.1		.4		10	3.3	
1908-9.												
1.....	.4	.4	2.0	1.1	1.6	.4	1.1	3.3	.4	.0	.0	.0
2.....	.4	.4	2.0	1.1	2.0	1.1	1.1	1.1	.4	.0	.0	.0
3.....	.4	.4	2.0	.1	2.0	1.1	1.1	1.1	1.1	.0	.0	.0
4.....	.4	.4	.4	1.1	.8	.4	.4	1.1	1.1	.0	.2	.0
5.....	.4	.4	.4	.4	1.6	.4	.4	2.0	2.0	.2	.2	47
6.....	.4	.4	.4	1.1	2.0	.4	.4	2.0	5.5	.0	.2	31
7.....	.4	.4	.1	1.1	1.1	1.1	.4	3.3	5.5	.0	.0	72
8.....	.4	.1	.1	1.1	.4	1.1	.4	3.3	2.0	.0	.0	72
9.....	.4	.4	.1	1.1	.4	1.1	.4	4.4	2.0	.0	.0	53
10.....	.4	.4	.1	1.1	1.1	.4	.4	4.4	1.6	.0	.2	62
11.....	.4	.4	.1	1.6	1.1	.8	.4	4.4	3.3	.0	.0	53
12.....	.4	.4	.1	1.1	.4	1.1	.4	4.4	2.0	.0	.0	53
13.....	.4	.4	.1	1.6	.4	1.1	.4	4.4	2.0	6.0	.2	72
14.....	.4	.4	.1	1.6	.4	2.0	.4	4.4	1.6	.0	.2	3.0
15.....	.4	.4	.1	1.1	.2	2.0	.4	4.4	1.1	.0	2.0	14

Daily discharge, in second-feet, of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
16.....	0.4	0.4	0.1	2.0	0.2	2.0	0.2	3.3	1.1	0.0	0.2	20
17.....	.4	.4	.1	2.0	.2	1.1	.2	3.3	.4	.0	2.0	9.0
18.....	.4	.4	.1	1.1	.2	.8	.2	3.3	.4	.0	5.0	14
19.....	.4	.4	.4	1.1	.2	.8	.4	1.6	2.6	.0	10	14
20.....	.4	.4	1.1	1.6	.4	.4	.1	9.0	2.6	.0	3.0	9.0
21.....	1.1	.4	1.1	2.0	.4	.2	.1	14	11.6	.0	5.0	5.0
22.....	5.5	.4	1.1	2.0	1.1	.2	.4	3.3	.4	.0	5.0	3.0
23.....	3.3	.4	1.1	2.6	1.1	.2	1.1	3.3	.8	.0	2.0	3.0
24.....	1.1	1.1	.4	1.1	2.0	.2	2.0	4.4	.1	.0	4.0	3.0
25.....	1.1	1.1	.4	2.0	1.1	1.1	.2	4.4	.1	2.0	4.0	3.0
26.....	2.0	1.1	.4	2.6	.2	1.1	.2	3.3	.1	1.0	15	.2
27.....	2.0	1.1	.4	2.0	.1	.8	.4	1.1	.4	.4	12	.2
28.....	1.1	2.0	.0	2.0	.1	1.1	1.1	.4	.1	.2	10	.2
29.....	2.0	2.0	.1	1.6		1.1	2.6	.4	1.1	.2	10	.2
30.....	1.1	2.0	.1	1.1		1.1	.4	.1	.1	.2	10	.2
31.....	.8		1.1	2.0		1.1		.4		.2	.0	
1909-10.												
1.....	.2	.2	.2	.2	.2	.2		.8				
2.....	.2	.2	.2	.2	.2	.2						
3.....	.2	.2	.2	.2	.2	.2						
4.....	.2	.2	.2	.2	.2	.2						
5.....	.2	.2	.2	.2	.2	.2						
6.....	2.0	.2	.2	.2	.2	.2						
7.....	2.0	.2	.2	.2	.2	.2						
8.....	2.0	.2	.2	.2	.2	.2						
9.....	2.0	.2	.2	.2	.2	.2						
10.....	2.0	.2	.2	.2	.2	.2						
11.....	2.0	.2	.2	.2	.2	.2						
12.....	2.0	.2	.2	.2	.2	.2						
13.....	2.0	.2	.2	.2	.2	.2						
14.....	2.0	.2	.2	.2	.2	.2						
15.....	.2	.2	.2	.3	.2	.2						
16.....	.2	.2	.2	.2	.2	.2						
17.....	.2	.2	.2	.2	.2	.2						
18.....	.2	.2	.2	.2	.2	.2						
19.....	.2	.2	.2	.4	.2	.2	.8					
20.....	.2	.2	.2	.4	.2	.2	1.5					
21.....	.2	.2	.2	.2	.2	.2	1.5					
22.....	.2	.2	.2	.2	.2	.2	2					
23.....	.2	.2	.2	.2	.2	.2	1					
24.....	.2	.2	.2	.2	.2	.2	1					
25.....	.2	.2	.2	.2	.2	.2	2					
26.....	.2	.2	.2	.2	.2	.2	2					
27.....	.2	4.0	.2	.2	.2	.2	2					
28.....	.2	4.0	.2	.2	.2	.2	2					
29.....	.2	2.0	.2	.2	.2	.2	2					
30.....	.2	2.0	.2	.2	.2	.2	2					
31.....	.2		.2	.2	.2	.2						

Monthly discharge of Santa Fe Creek at Santa Fe, N. Mex., for 1907-1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907.					
June.....	22	1.0	13.7	815	D.
July.....	1.0	.5	.6	34	D.
August.....	85	.5	4.5	279	D.
September.....	34	.5	6.7	399	D.
The period.....				1,530	
1907-8.					
October.....	1.0	.5	.5	33	D.
November.....	3.5	1.0	1.5	92	D.
December.....	8.6	1.3	4.8	295	D.
January.....	8.2	1.0	4.0	248	D.
February.....	5.2	.9	2.7	155	D.
March.....	4.7	.1	1.0	65	D.
April.....	2.2	.0	.2	13	D.
May.....	18	.0	1.6	101	D.
June.....	26	.0	3.1	184	D.
July.....	14	.0	3.5	203	D.
August.....	186	2.0	64	3,940	D.
September.....	2.0	.1	.2	15	D.
The year.....	186	.0	7.3	5,340	
1908-9.					
October.....	5.5	.4	.9	58	D.
November.....	2.0	.1	.6	38	D.
December.....	2.0	.0	.5	32	D.
January.....	2.6	.1	1.4	89	D.
February.....	2.0	.1	.8	45	D.
March.....	2.0	.2	.9	55	D.
April.....	2.6	.1	.6	35	D.
May.....	14	.4	3.4	207	D.
June.....	5.5	.1	1.4	86	D.
July.....	6.0	.0	.3	21	D.
August.....	15	.0	3.2	199	D.
September.....	72	.0	20	1,220	D.
The year.....	72	.0	2.8	2,080	
1909-10.					
October.....	2.0	.2	.7	44	D.
November.....	4.0	.2	.6	34	D.
December.....	.2	.2	.2	12	D.
January.....			.2	14	C.
February.....			.2	11	C.
March.....			.2	12	C.
April.....			.7	39	C.
The period.....				166	

ARROYO HONDO NEAR SANTA FE, N. MEX.

Location.—Six miles southeast of Santa Fe, 2,000 feet upstream from the point where the Santa Fe trail crosses the Arroyo Hondo, 1 mile above the confluence of the two branches of the Arroyo Hondo, in NE. $\frac{1}{4}$ sec. 17, T. 16 N., R. 10 E.

Records available.—February 21, 1913, to September 30, 1913.

Drainage area.—13.5 square miles. (Measured from topographic map.)

Gage.—Automatic recording.

Channel.—Shifting.

Winter flow.—Ice causes backwater during the winter months.

Diversions.—No water is diverted above this point, consequently the flow at this point represents the natural run-off.

Accuracy.—Estimates of discharge can be considered only fair.

Cooperation.—Maintained in cooperation with the State engineer of New Mexico.

Discharge measurements of Arroyo Hondo near Santa Fe, N. Mex., in 1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 21	C. J. Emerson.....	0.52	a 0.2	June 6	Dean and Powers.....	0.65	a 0.02
Mar. 6	J. E. Powers.....	.80	a .6	11	Gray and Dean.....	.75	a .7
24	Gray and Emerson.....	.83	a 1.0	July 9	Gray and Redding.....	.61	a .25
Apr. 5	Emerson and Dean.....	.92	a 2.0	20	A. S. Kirkpatrick.....	.70	1.1
19	Dean and Powers.....	.72	a .6	Aug. 13	Emerson and Powers.....	.70	.0
22	Gray and Emerson.....	.90	1.3	Sept. 9	Gray and Emerson.....	.75	.0
May 2	G. A. Gray.....	.75	a .3	29	Hoyt and Gray.....	.70	.6
23	C. J. Emerson.....	.70	a .2				

a Estimated.

Daily gage height, in feet, of Arroyo Hondo near Santa Fe, N. Mex., for 1913.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1				1.03		0.66	0.70	0.71	
2				1.03		.67	.68		
3				1.01	0.76	.67	.68		
4				.95	.75	.67	.67		
5				.90	.75	.67	.66		
6				.95	.72	.67	.63		
7				.95	.72	.69	.62		
8				.95	.73	.75	.61		
9				.90	.71	.69	.61		
10				.87	.71	.69	.73		
11				.84	.70	.85	.71		
12				.82	.70	.75	.69		
13				.80	.70	.70	.68		
14				.79	.70	.70	.68		
15				.77	.70	.68	.69		
16				.76	.70	.69	.69		
17				.76	.70	.69	.71	.78	
18				.75	.70	.71	.72		
19				.72	.70	.70	.73		
20				.78	.70	.70	.71	.83	
21				.79	.70	.70	.70	.86	
22				.95	.70	.70	.70	.81	0.74
23				.94	.70	.73	.70	.76	.83
24				.95	.70	.70	.69	.77	
25				.95	.69	.67	.68	.77	
26				.81	.92	.68	.65		
27				.83		.68	.65		
28				.81		.68	1.10	.66	
29				.90		.67	1.05	.66	
30				.98		.66	.72	.63	
31				1.05		.67		.70	

Daily discharge, in second-feet, of Arroyo Hondo near Santa Fe, N. Mex., for 1913.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1				2.6	0.5	0.2	0.5	0.1	0.0
2				2.6	.3	.2	.5	.0	.0
3				2.5	.3	.2	.5	.0	.0
4				2.3	.3	.2	.4	.0	.0
5				2.0	.3	.2	.4	.0	.0
6				2.3	.3	.2	.3	.0	.0
7				2.2	.3	.4	.2	.0	.0
8				2.2	.3	.7	.2	.0	.0
9				1.9	.2	.7	.2	.0	.0
10				1.1	.2	.8	1.2	.0	.0
11				1.0	.2	1.1	1.1	.0	.0
12				1.0	.2	.7	1.1	.0	.0
13				.9	.2	.5	1.0	.0	.0
14				.9	.2	.5	1.0	.0	.0
15				.8	.2	.5	1.1	.0	.0

Daily discharge, in second-feet, of Arroyo Hondo near Santa Fe, N. Mex., for 1913—
Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
16				0.7	0.2	0.5	1.1	0.0	0.0
17				.7	.2	.5	1.1	.8	.0
18				.7	.2	.5	1.2	.0	.0
19				.6	.2	.5	1.2	.0	.0
20				.8	.2	.5	1.1	1.0	.0
21				.9	.2	.5	1.1	1.1	.0
22				1.5	.2	.5	1.0	.9	.7
23				1.5	.2	.6	1.0	.7	1.0
24				1.5	.2	.5	.9	.8	.0
25				1.5	.2	.4	.8	.8	.0
26			0.9	1.4	.2	.4	.7	.0	.0
27			1.0	1.2	.2	.5	.6	.0	.0
28			.9	1.1	.2	3.2	.5	.0	.0
29			1.3	1.0	.2	2.8	.4	.0	.0
30			2.0	.8	.2	.6	.3	.0	.0
31			2.8		.2		.2	.0	

NOTE.—Daily discharge determined by the indirect method for shifting channels. Discharge estimated Apr. 27 to May 2.

Monthly discharge of Arroyo Hondo near Santa Fe, N. Mex., for 1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
March	2.8	0.2	^a 0.78	48	C.
April	2.6	.6	1.41	84	C.
May	.5	.2	.23	14	C.
June	3.2	.2	.65	39	C.
July	1.2	.2	.74	46	C.
August	1.1	.0	.20	12	C.
September	1.0	.0	.06	4	C.
The period				247	

^a Estimated.

RIO PUERCO BASIN.

GENERAL FEATURES.

The area drained by the Rio Puerco lies west of the Rio Grande between the basin of the Jemez on the north and the Salado on the south. Rio Puerco rises on the western slope of the Jemez Mountains in the northern part of Sandoval County and flows in a general southerly direction to its junction with the Rio Grande at La Joya in the Belen Valley. Aside from the violent storms which furnish the waters for the sudden floods to which the river is subject, almost the entire water supply is received from the Jemez Mountains. The only tributary of importance is San Jose River, known in its upper portion as Bluewater Creek, which during the spring has considerable flow. The soil over which the Puerco flows is so porous that except at times of violent storms there is no flow at the mouth, and therefore the Rio Puerco is only a flood-water tributary of the Rio Grande. During flood a great amount of silt is carried in the river. Follett,

in his report on the Rio Grande, states that this may reach as high as 15 per cent.

The surface of the basin is much broken and comprises in the northwestern half the barren Chama Mesa which ends at the San Mateo Mountains on the south. The general elevation of this mesa is approximately 7,000 feet. South of the San Mateo Mountains is the valley of the San Jose or Bluewater Creek. This stream rises in the Zuni Mountains on the Continental Divide, leaves them near Bluewater, and flows through a valley having a rich alluvial soil washed down from the mountains. The valley of the Puerco itself is also alluvial and has been formed in the same way. At the mouth of of the Puerco the elevation is about 4,700 feet, indicating a comparatively heavy fall throughout the course of the river.

The lines of equal precipitation on the map (Pl. III) indicate that for the portion of New Mexico adjacent to the Puerco drainage the mean precipitation is about 14 inches for the northern and western edges of this area, except on the crest of the Jemez Mountains, which rise some 2,000 feet or more above the general mesa level. Although no records are available, it is probable that precipitation is somewhat greater at the higher altitudes than on the mesa, and it decreases to approximately 10 inches at the mouth of the river. Little of this precipitation is in the form of snow; it occurs chiefly as violent storms which may produce severe floods. Within the boundaries of the basin there are many areas of considerable size which do not send surface streams to the Puerco or its tributaries owing to their broken topography and porous soil. These areas are too small and indefinite to be shown on the map with the large nonproducing areas.

The alluvial valleys of the Puerco, San Jose, and their tributaries are irrigated as extensively as the small water supply will permit. In his Rio Grande report Follett states that prior to 1896 there were ditches having a combined capacity of 580 second-feet diverting water from the Puerco and its tributaries.

A storage reservoir with a capacity of 20,000 acre-feet, which can be increased to 70,000, has been built on Bluewater Creek in T. 12 N., R. 12 W., for irrigation, but the water supply at this point is so small that the effect of the reservoir on the flow of the Bluewater is small.

GAGING STATION RECORDS.

RIO PUERCO AT RIO PUERCO, N. MEX.

Location.—At the Atchison, Topeka & Santa Fe Railway bridge between Dalies and Rio Puerco, in sec. 31, T. 7 N., R. 1 W. Nearest tributary a small stream entering from the west just below. San Jose River enters about 8 miles above.

Records available.—Fragmentary records September 7, 1910, to October 2, 1911, and August 19, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Staff gage. Previous to 1913 an automatic recording gage was used, referred to the same datum.

Channel.—Shifting.

Discharge measurements.—Made by wading during low stages and from car and cable during flood stages.

Diversions.—No data.

Accuracy.—Owing to meager data, no estimates of discharge have been made prior to 1913, and those can only be considered fair.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Rio Puerco at Rio Puerco, N. Mex., in 1909-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1909.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 2	.....		^a 0.8	Aug. 6	G. H. Russell.....		0
				Sept. 2	.....do.....		0
1910.				1912.			
Sept. 5	J. B. Stewart.....		^a .5	Aug. 19	R. L. Cooper.....	0.18	68.6
7	.....do.....		^a 1.0	Oct. 4	.....do.....	-.16	^a 15.0
11	J. A. Nicolay.....		^a .5	31	Emerson and Broome.....	-.08	6.2
18	.....do.....		.5	Nov. 28	C. J. Emerson.....	.15	^a 3.0
21	J. B. Stewart.....		^a .2	Dec. 22	J. E. Powers.....		0
25	J. A. Nicolay.....		24.3	1913.			
Oct. 2	.....do.....		.64	Mar. 14	C. J. Emerson.....	.22	1.4
9	.....do.....		.44	Apr. 3	.....do.....	-.40	.0
16	.....do.....		.44	27	.....do.....		Dry.
30	.....do.....		8.7	May 10	.....do.....		Dry.
Nov. 6	.....do.....		3.33	30	.....do.....		Dry.
12	J. B. Stewart.....		^a 5.0	July 6	.....do.....		Dry.
13	J. A. Nicolay.....	0.5	4.28	Aug. 8	.....do.....		^a 3.0
20	.....do.....	.4	4.84	15	Gray and Emerson.....	.00	75.2
27	.....do.....	.4	5.0	Sept. 15	C. J. Emerson.....	-.22	35.9
Dec. 4	.....do.....	.2	1.34	15	.....do.....	+ .18	97.8
11	.....do.....	.3	1.54				

^a Estimated.

Daily gage height, in feet, of Rio Puerco at Rio Puerco, N. Mex., for 1910-1913.

Day.	Nov.	Dec.	Day.	Nov.	Dec.	Day.	Nov.	Dec.
1910.			1910.			1910.		
1		0.2	11		0.3	21	0.4	
2		.2	12			22	.4	
3		.2	13	0.5		23	.35	
4		.2	14	.5		24	.3	
5		.1	15	.5		25	.3	
6		.1	16	.45		26	.3	
7		.25	17	.45		27	.4	
8		.35	18	.45		28	.25	
9		.2	19	.4		29	.2	
10		.3	20	.4		30	.2	
						31		

Daily gage height, in feet, of Rio Puerco at Rio Puerco, N. Mex., for 1910-1913—Contd.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.						1911.					
1.....			2.05			16.....					
2.....			1.85			17.....					
3.....						18.....					
4.....						19.....	2.45				
5.....		1.1				20.....	2.0				
6.....		1.1				21.....	1.65				
7.....						22.....	1.45				
8.....						23.....					
9.....						24.....	3.3				
10.....						25.....	2.4				
11.....						26.....	1.6				
12.....						27.....	1.2				
13.....						28.....	.9				
14.....						29.....	.8				
15.....						30.....	.7	a 2.3			
						31.....	.65				

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.						1912.					
1.....				-0.08	0.15	16.....			-1.00	0.00	0.30
2.....				-.08	.15	17.....			-1.00	.00	.30
3.....				.00	.75	18.....			-1.00	.00	.25
4.....			-0.16	.00	.40	19.....	0.10		-1.00	.00	.30
5.....				.00	.40	20.....	.10		-1.00	.00	.20
6.....				.00	.25	21.....	.10		-.90	.00	
7.....				.00	.10	22.....	.10		-.80	.00	.20
8.....				.00	.40	23.....	.10		-.70	.00	
9.....				.00	.35	24.....	.10		-.60	.00	
10.....				.00	.50	25.....	.10		-.50	.00	
11.....				.00	.40	26.....	.10		-.40	.05	
12.....				.00	.20	27.....	.10		-.30	.10	
13.....			-1.00	.00	.10	28.....	.10		-.30	.15	
14.....			-1.00	.00	.10	29.....	.10		-.30	.15	
15.....			-1.00	.00	.30	30.....			-.30	.15	
						31.....			-.08		

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1913.								1913.							
1.....							-0.58	16.....	0.24	0.08				-0.17	-0.25
2.....							-.58	17.....	.15				0.45	-.33	-.45
3.....							-.58	18.....	.15				.40	-.33	-.55
4.....		1.18						19.....	.44				.08	-.33	-.70
5.....		1.30						20.....	.40			0.20	.60	-.17	-.70
6.....		1.08						21.....	.72			.30	.00	-.33	-.80
7.....		1.22						22.....	.20			2.75	1.45	-.33	-.82
8.....		1.30						23.....	.05			2.00	.70	-.33	-.80
9.....		1.10		0.25				24.....				1.68	.45	-.33	2.70
10.....		.90		2.45				25.....					.15	-.17	2.50
11.....		.75		3.95				26.....					.00	-.08	1.55
12.....		.55		2.95				27.....					.15	1.80	.55
13.....		.40		1.75		2.65		28.....					.15	.08	.00
14.....	0.19	.20		.42		2.25		29.....					.15	-.23	-.30
15.....	.20	.08				.62	-.20	30.....						-.58	-.60
								31.....						-.58	

a Estimated.

Daily discharge, in second-feet, of Rio Puerco at Rio Puerco, N. Mex., for 1913.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....			0.0	0		0.0	0.0	1.0	8.0
2.....			.0	0		.0	.0	1.0	8.0
3.....			.0	0		.0	.0	1.0	8.0
4.....			.0	72		.0	.0	1.0	6.0
5.....			.0	92		.0	.0	1.0	4.0
6.....			.0	57		.0	.0	1.0	2.0
7.....			.0	78		.0	.0	1.0	1.0
8.....			.0	92		.0	.0	3.0	1.0
9.....			.0	60		1.5	.0	1.0	1.0
10.....			.0	33		299	.0	1.0	1.0
11.....			.0	17		569	.0	1.0	1.0
12.....			.0	6.0		389	.0	1.0	1.0
13.....			.0	3.0		173	.0	551	1.0
14.....			1.2	1.2		3.2	.0	479	1.0
15.....			1.3	.6		.0	.0	186	38
16.....			1.4	.6		.0	.0	50	33
17.....			1.0	.0		.0	3.5	30	14
18.....			1.0	.0		.0	3.0	30	8.0
19.....			3.4	.0		.0	.6	30	3.5
20.....			3.0	.0		1.3	8.0	50	3.5
21.....			15	.0		2.0	.2	30	2.5
22.....			1.3	.0		353	119	30	2.3
23.....			.5	.0		218	14	30	2.5
24.....			.0	.0		160	3.5	30	551
25.....			.0	.0		.0	1.0	50	515
26.....			.0	.0		.0	.2	63	344
27.....			.0	.0		.0	1.0	398	164
28.....			.0	.0		.0	1.0	87	67
29.....			.0	.0		.0	1.0	40	27
30.....			.0	.0		.0	1.0	8.0	6.0
31.....			.0	.0			1.0	8.0	

NOTE.—Daily discharge determined from a fairly well defined curve and by the indirect method for shifting channels. Discharge estimated July 30 to Aug. 12 and Sept. 4-14, 1913. There was no flow from Dec. 22, 1912, to Mar. 13, 1913. There was a flow of 2 second-feet Sept. 19, 1912.

Monthly discharge of Rio Puerco at Rio Puerco, N. Mex., for 1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....	0.0	0.0	0.0	0	
February.....	.0	.0	.0	0	
March.....	15	.0	.94	58	C.
April.....	92	.0	17.1	1,020	C.
May.....	.0	.0	.0	0	
June.....	569	.0	72.3	4,300	C.
July.....	119	.0	5.10	314	C.
August.....	551	1.0	70.8	4,350	C.
September.....	551	1.0	60.8	3,620	C.
The period.....				13,700	

RIO PUERCO NEAR LA JOYA, N. MEX.

Location.—At the Atchison, Topeka & Santa Fe Railway bridge, 2 miles north of the La Joya railway station, in sec. 20, T. 2 N., R. 1 E., one-fourth of a mile above the mouth of the river, below all tributaries; no important tributaries for several miles above.

Records available.—Fragmentary records September 10, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Very shifting.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater during the winter months.

Accuracy.—Owing to the extreme changes in conditions and the few discharge measurements, estimates of discharge have not been made.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Rio Puerco near La Joya, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 10	J. B. Stewart.....	.....	a 0.5	Aug. 20	R. L. Cooper.....	3.15	48.0
21	.....do.....	.....	a .2	Oct. 5	.....do.....	1.96	a 12.5
Nov. 13	.....do.....	.....	a 1.0	31	Emerson and Broome.....	.....	.0
1911.				Nov. 22	C. J. Emerson.....	1.50	a.2
Feb. 14	C. B. Digby.....	.....	a .25	Dec. 23	J. E. Powers.....	.....	.0
Mar. 22	G. H. Russell.....	3.10	89.8	1913.			
Aug. 6	.....do.....	4.40	a 2.0	Mar. 15	C. J. Emerson.....	.....	.0
Nov. 1	W. B. Freeman.....	4.75	34.8				

a Discharge estimated.

NOTE.—Low-water stages were not recorded on automatic register. With the exception of slight rises on Sept. 22 and Oct. 18, the stream carried less than 1 second-foot during the latter part of 1910.

Daily gage height, in feet, of Rio Puerco near La Joya, N. Mex., for 1911-1913.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1911.									
1						6.0	4.7	6.8	4.75
2					5.8	5.9	4.7	6.8	4.7
3					a 6.7	5.8	4.6	6.8	4.65
4					6.0	5.7	4.6	6.8	4.6
5					5.0	4.9	4.5	6.0	4.55
6						4.8	4.5	5.5	4.5
7						4.8	4.4	5.5	4.45
8	2.7					4.7	4.4	4.8	4.4
9	3.2		5.1		5.1	4.7	4.4	4.7	4.35
10	3.25		5.1		5.0	4.6	4.7	.....	.....
11	3.2		5.1			4.4	4.7	.....	.....
12	3.35		5.1			4.3	4.6	.....	.....
13	3.4		5.0			4.1	4.6	.....	.....
14	3.45		5.0		6.45	4.0	4.5	.....	.....
15	3.5		4.9		b 8.0	3.8	4.5	.....	.....
16	3.45		5.2		6.2	3.6	4.5	.....	.....
17	3.2		5.3		6.6	3.3	4.5	.....	.....
18	3.0		5.2		5.4	6.3	4.6	.....	.....
19	2.95	5.3	5.1		5.6	5.9	4.6	.....	.....
20	3.0	5.1	5.1		6.8	5.8	4.7	.....	.....
21	3.05	5.0			7.4	5.2	4.7	.....	.....
22	3.1				7.95	5.1	4.7	.....	.....
23	3.0				6.1	6.8	4.7	.....	.....
24	3.0				6.1	7.4	4.6	.....	.....
25	2.5				6.4	7.2	4.6	.....	.....
26	2.9				7.4	6.8	4.6	.....	.....
27	2.8				6.8	6.2	4.6	.....	.....
28	2.8				6.1	5.5	4.5	.....	.....
29	2.7			5.1	6.0	5.0	4.5	.....	.....
30	2.6				5.9	4.9	5.6	.....	.....
31					6.1	4.8	.....	.....	.....

a Maximum gage height, 8.0 feet.

b Maximum gage height, 10.0 feet.

Daily gage height, in feet, of Rio Puerco near La Joya, N. Mex., for 1911-1913—Contd.

Day.	May.	June.	July.	Aug.	Oct.	Day.	May.	June.	July.	Aug.	Oct.
1912.						1912.					
1.....		5.53		5.60		16.....			^a 6.21	5.55	
2.....				5.60		17.....			6.05	5.55	
3.....				5.60		18.....			5.90		
4.....						19.....			5.80		
5.....					2.00	20.....				3.15	
6.....					2.60	21.....					
7.....					2.40	22.....	5.55		5.55		
8.....					2.35	23.....	5.60	^b 5.62	^c 6.00		
9.....					2.25	24.....	5.63	5.78	5.90		
10.....		5.55			2.20	25.....	5.70	5.68	5.75		
11.....		5.65			2.15	26.....	5.70	5.65	5.80		
12.....		5.85				27.....	5.74	5.65	5.60		
13.....		5.60				28.....	5.72	5.65	5.60		
14.....						29.....	5.68	5.65	5.60		
15.....				5.60		30.....	5.60		5.60		
						31.....	5.55		5.60		

Day.	Apr.	June.	Aug.	Sept.	Day.	Apr.	June.	Aug.	Sept.
1913.					1913.				
1.....					16.....		2.20		
2.....					17.....				
3.....					18.....				
4.....					19.....				
5.....					20.....				
6.....					21.....				
7.....					22.....				
8.....		2.49			23.....				
9.....	2.70	2.19			24.....				2.30
10.....	2.88	2.30			25.....				3.90
11.....	2.68	2.90			26.....				3.45
12.....		^c 5.99			27.....				3.21
13.....		2.50	2.12		28.....				2.90
14.....		2.40	2.20		29.....		2.10		2.86
15.....		2.35			30.....				2.85
					31.....				

^a Maximum gage height, 9.0 feet.^b Maximum gage height, 7.3 feet.^c Maximum gage height, 8.2 feet.

NOTE.—There was no flow on days for which gage heights are not given except Oct. 29-31, 1911, Mar. 2-9, June 2 and 3, Aug. 4-6, and 18-31, Sept. 1-21, and Nov. 18-31, 1912, when there was a small discharge.

BLUEWATER CREEK NEAR BLUEWATER, N. MEX.

Location.—About 2½ miles northwest of Bluewater post office, a quarter of a mile from the mouth of Bluewater Creek box canyon, 8 miles below dam site of Bluewater Development Co., near sec. 8, T. 12 N., R. 11 W.

Records available.—May 29, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Not liable to shift.

Discharge measurements.—By wading.

Winter flow.—Ice affects the gage heights during the winter months.

Accuracy.—Estimates of discharge may be considered fair.

Cooperation.—Maintained in cooperation with W. S. Post, Los Angeles, Cal., and the State engineer.

Discharge measurements of Bluewater Creek near Bluewater, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 29	S. S. Carroll.....	1.09	3.8	Mar. 13 ^c	C. J. Emerson.....	1.68	5.5
Aug. 17	R. L. Cooper.....	1.20	2.2	Apr. 25	do.....	1.65	18.1
Oct. 2	do.....	1.08	a.5	May 29	do.....	1.15	1.1
30	C. J. Emerson.....	1.10	a 2.0	July 6	do.....	.80	a.1
Nov. 26	do.....	1.15	a 1.5	Aug. 15	Gray and Emerson.....	1.04	a 1.0
Dec. 21	J. E. Powers.....		b.0	Sept. 13	C. J. Emerson.....	1.52	11.5

^a Estimated.

^b Frozen solid.

^c Ice present.

Daily gage height, in feet, of Bluewater Creek near Bluewater, N. Mex., for 1912-13.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1912				1912				1912			
1.....		1.32	1.53	11.....		1.10		21.....	4.65	1.12	
2.....		1.20	1.32	12.....		1.10		22.....	5.30	1.35	
3.....		1.10	1.28	13.....	0.93	1.15		23.....	3.80	1.18	
4.....		1.10	1.17	14.....	.98	1.50		24.....	1.65	1.14	
5.....		1.20	1.13	15.....	1.02	1.50		25.....	1.52	1.13	
6.....		1.25	1.10	16.....	1.02	1.30		26.....	1.45	1.24	
7.....		1.15	1.10	17.....	1.12	1.20		27.....	1.55	1.71	
8.....		1.15	1.08	18.....	1.03	1.12		28.....	1.35	1.15	
9.....		1.15		19.....	1.02	1.12		29.....	1.65	1.25	
10.....		1.05		20.....	4.00	1.12		30.....	1.48	2.24	
								31.....	1.40	2.08	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	1.08	1.13	1.03				4.35	1.40	1.07	0.93	1.00	0.87
2.....	1.08	1.08	1.05				4.82	1.30	1.00	.88	1.00	.84
3.....	1.08	1.05	1.07				4.55	1.10	1.00	.86	1.00	.93
4.....	1.09	1.07	1.05				3.80	1.10	1.00	.83	1.00	1.05
5.....	1.41	1.05	1.06				3.83	1.05	1.02	.80	.98	1.43
6.....	1.35	1.02	1.05				4.18	1.05	1.02	.80	.98	2.09
7.....	1.25	1.02	1.08				3.64	1.05	1.02	.79	.97	1.85
8.....	1.19	1.02	1.10				2.70	1.00	1.04	.78	.97	1.57
9.....	1.10	1.08	1.10			1.50	2.25	1.00	1.13	.78	1.00	1.47
10.....	1.06	1.06	1.10			1.28	2.05	1.00	1.18	1.13	1.00	1.55
11.....	1.09	1.05	1.10			1.33	1.95		1.10	1.02	1.00	1.54
12.....	1.10	1.04	1.10			1.74	1.95		1.06	1.00	1.00	1.49
13.....	1.10	1.01	1.10			1.58	1.96		1.01	1.02	1.00	1.45
14.....	1.10	1.01	1.10			1.54	1.90		1.01	1.06	1.00	1.19
15.....	1.10	.99				1.58	1.95		.98	1.19	1.02	1.11
16.....	1.10	1.05					2.00		.98		1.00	1.15
17.....	1.10	1.08					2.05		1.11		.98	1.10
18.....	1.10	1.05					2.12		1.20		1.08	1.02
19.....	1.10	1.04					2.10		1.15	1.25	1.06	1.00
20.....	1.08	1.04					2.20		1.09	1.21	1.05	.99
21.....	1.08	1.03					2.23		1.10	1.07	1.09	.98
22.....	1.05	1.02				2.20	2.06		1.06	1.16	1.34	.98
23.....	1.05	1.02				2.30	2.15		1.09	1.08	1.29	1.50
24.....	1.08	.97				1.73	1.84	1.10	1.05	1.10	1.12	1.93
25.....	1.08	1.01				1.56	1.73	1.10	1.01	1.00	1.08	1.26
26.....	1.08	1.02				1.67	1.62	1.10	.97	1.00	1.06	1.21
27.....	1.12	1.03				1.72	1.55	1.05	.93	1.00	1.02	1.11
28.....	1.15	1.03				1.42	1.49	1.05	.91	1.00	.99	1.10
29.....	1.10	1.03				1.40	1.43	1.10	.91	1.00	.93	1.09
30.....	1.12	1.00				2.10	1.41	1.10	.91	1.00	.91	1.05
31.....	1.13					3.12		1.03		1.00	.90	

NOTE.—There was no flow Dec. 15, 1912, to Mar. 8, 1913. Gage heights affected by ice Dec. 7-14, 1912, and Mar. 9-27, 1913.

Daily discharge, in second-feet, of Bluewater Creek near Bluewater, N. Mex., for 1912-13.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1912.				1912.				1912.			
1.....		5.0	11.0	11.....		1.1	0.4	21.....	315	1.4	0.4
2.....		2.4	5.0	12.....		1.1	.4	22.....	406	5.8	.4
3.....		1.1	4.0	13.....		0.3	1.8	23.....	199	2.1	.4
4.....		1.1	2.0	14.....		.4	10	24.....	15	1.6	.4
5.....		2.4	1.5	15.....		.5	10	25.....	11	1.5	.4
6.....		3.4	1.1	16.....		.6	4.4	26.....	8.6	3.2	.4
7.....		1.8	1.1	17.....		1.4	2.4	27.....	12	17	.4
8.....		1.8	1.0	18.....		.6	1.4	28.....	5.8	1.8	.4
9.....		1.8	.6	19.....		.5	1.4	29.....	15	3.4	.4
10.....		.8	.4	20.....	225	1.4	.4	30.....	9.4	43	.6
								31.....	7.2	34	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	1.0	1.5	0.6	0.0	0.0	0.0	273	7.2	0.9	0.3	0.4	0.2
2.....	1.0	1.0	.8	.0	.0	.0	339	4.4	.4	.2	.4	.1
3.....	1.0	.8	.9	.0	.0	.0	301	1.1	.4	.2	.4	.3
4.....	1.0	.9	.8	.0	.0	.0	199	1.1	.4	.1	.4	.8
5.....	7.5	.8	.8	.0	.0	.0	203	.8	.5	.1	.4	8.0
6.....	5.8	.5	.8	.0	.0	.0	249	.8	.5	.1	.4	34
7.....	3.4	.5	.7	.0	.0	.0	179	.8	.5	.1	.3	23
8.....	2.3	.5	.6	.0	.0	.0	77	.4	.7	.1	.3	12
9.....	1.1	1.0	.5	.0	.0	3.0	44	.4	1.5	.1	.4	9.2
10.....	.8	.8	.4	.0	.0	3.3	32	.4	2.1	1.5	.4	12
11.....	1.0	.8	.3	.0	.0	4.4	28	.5	1.1	.5	.4	11
12.....	1.1	.7	.2	.0	.0	6.0	28	.5	.8	.4	.4	9.7
13.....	1.1	.5	.1	.0	.0	5.5	28	.6	.5	.5	.4	8.6
14.....	1.1	.5	.1	.0	.0	4.0	25	.6	.5	.8	.4	2.3
15.....	1.1	.4	.0	.0	.0	2.0	28	.7	.4	2.3	.5	1.2
16.....	1.1	.8	.0	.0	.0	2.0	30	.7	.4	2.5	.4	1.8
17.....	1.1	1.0	.0	.0	.0	2.5	32	.8	1.2	2.8	.4	1.1
18.....	1.1	.8	.0	.0	.0	2.5	36	.8	2.4	3.1	1.0	.5
19.....	1.1	.7	.0	.0	.0	3.0	35	.9	1.8	3.4	.8	.4
20.....	1.0	.7	.0	.0	.0	3.5	41	.9	1.0	2.6	.8	.4
21.....	1.0	.6	.0	.0	.0	4.0	43	1.0	1.1	.9	1.0	.4
22.....	.8	.5	.0	.0	.0	7.0	33	1.0	.8	1.9	5.5	.4
23.....	.8	.5	.0	.0	.0	10	38	1.0	1.0	1.0	4.2	10
24.....	1.0	.3	.0	.0	.0	8.0	23	1.1	.8	1.1	1.4	26
25.....	1.0	.5	.0	.0	.0	6.0	18	1.1	.5	.4	1.0	3.6
26.....	1.0	.5	.0	.0	.0	7.0	14	1.1	.3	.4	.8	2.6
27.....	1.4	.6	.0	.0	.0	7.0	12	.8	.3	.4	.5	1.2
28.....	1.8	.6	.0	.0	.0	7.8	9.7	.8	.2	.4	.4	1.1
29.....	1.1	.6	.0	.0	.....	7.2	8.0	1.1	.2	.4	.3	1.0
30.....	1.4	.4	.0	.0	.....	35	7.5	1.1	.2	.4	.2	.8
31.....	1.5	.....	.0	.0	.....	118	.....	.6	.....	.4	.2	.....

NOTE.—Daily discharge determined as follows: July 13 to Dec. 6, 1912, and Mar. 28 to Sept. 30, 1913, from a curve well-defined between 71 and 200 second-feet; Dec. 7-14, 1912, and Mar. 9-27, 1913 estimated on account of ice. Discharge interpolated on days of missing gage heights.

Monthly discharge of Bluewater Creek near Bluewater, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
July 13-31.....	406	0.3	64.9	2,450	A.
August.....	43	.8	5.53	340	B.
September.....	11	.4	1.20	71	D.
1912-13.					
October.....	7.5	.8	1.56	96	C.
November.....	1.5	.3	.68	40	C.
December.....	.9	.0	.25	15	D.
January.....	.0	.0	.00	0	
February.....	.0	.0	.00	0	
March.....	118	.0	8.35	513	C.
April.....	339	7.5	80.4	4,780	A.
May.....	7.2	.4	1.13	69	C.
June.....	2.4	.2	.78	46	D.
July.....	3.4	.1	.95	58	D.
August.....	5.5	.2	.80	49	D.
September.....	34	.1	6.14	365	B.
The year.....	339	.0	8.42	6,030	

BLUEWATER CREEK AT GRANTS, N. MEX.

Location.—At wagon bridge opposite Atchison, Topeka & Santa Fe Railway depot at Grants, in sec. 25, T. 11 N., R. 10 W.

Records available.—October 30, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—Wading at low stages and from bridge at high stages.

Winter flow.—Slight effect from ice during the winter months.

Accuracy.—High-water estimates of discharge approximate; estimates for other stages good.

Cooperation.—Maintained in cooperation with W. S. Post, Los Angeles, Cal., and the State engineer.

Discharge measurements of Bluewater Creek at Grants, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 30	C. J. Emerson.....	0.92	^a 0.5	Apr. 27	C. J. Emerson.....	0.80	^b 0.0
				Aug. 15	Gray and Emerson.....	.30	.0
1913.				Sept. 13	C. J. Emerson.....	.30	.0
Mar. 13	C. J. Emerson.....	.90	^a .2				

^a Estimated.

^b Water in pools.

Daily gage height, in feet, of Bluewater Creek at Grants, N. Mex., for 1912-13.

Day.	Dec.	Mar.	Apr.	July.	Sept.	Day.	Dec.	Mar.	Apr.	July.	Sept.
1912-13.						1912-13.					
1.....			2.55			16.....			0.9		
2.....			3.3			17.....			.9		
3.....			3.65			18.....			.9	0.95	
4.....			3.7			19.....			.9		
5.....			3.9			20.....			.9		
6.....			4.3			21.....			.9		
7.....			4.1			22.....			.9		
8.....			3.2		1.0	23.....			.9		
9.....			3.0			24.....			.9		
10.....			1.7			25.....			.9		
11.....			1.0			26.....			.85		
12.....			.9			27.....					
13.....		0.9	.9			28.....					
14.....			.9			29.....					
15.....			.9			30.....	0.95				
						31.....	1.05	1.65			

Daily discharge, in second-feet, of Bluewater Creek at Grants, N. Mex., for 1913.

Day.	Mar.	Apr.	July.	Sept.	Day.	Mar.	Apr.	July.	Sept.
1.....		58			16.....	.2	.5		
2.....		95			17.....	.2	.5		
3.....		112			18.....	.2	.5	9.5	
4.....		155			19.....	.2	.5		
5.....		125			20.....	.2	.5		
6.....		145			21.....	.2	.5		
7.....	0.2	135			22.....	.2	.5		
8.....	.2	90		11	23.....	.2	.5		
9.....	.2	80			24.....	.2	.5		
0.....	.2	18			25.....	.2	.5		
11.....	.2	1.2			26.....	.2	.2		
12.....	.2	.5			27.....	.2			
13.....	.2	.5			28.....	.2			
14.....	.2	.5			29.....	.2			
15.....	.2	.5			30.....	.2			
					31.....	16			

NOTE.—Stream dry on days for which no discharge is given. Discharge determined from two poorly defined curves. Discharge estimated Mar. 7-30.

Monthly discharge of Bluewater Creek at Grants, N. Mex., for 1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....	0.0	0.0	0.00	0	
February.....	.0	.0	.00	0	
March.....	16	.0	.67	41	B.
April.....	145	.0	32.7	1,950	D.
May.....	.0	.0	.00	0	
June.....	.0	.0	.00	0	
July.....	9.5	.0	.31	19	B.
August.....	.0	.0	.00	0	
September.....	11	.0	.37	22	B.
The period.....				2,030	

SAN JOSE RIVER NEAR SUWANEE, N. MEX.

Location.—Two miles below the railroad station at Suwanee, near sec. 29, T. 8 N., R. 2 W., about 6 miles above the mouth of the river, and 3 miles below the Rio Lucero.

Records available.—Fragmentary records August 30, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Shifting.

Discharge measurements.—Made by wading or from cable.

Accuracy.—Owing to the shifting character of the stream and the lack of discharge measurements, no estimates of discharge were made in 1911. Estimates for other years may be considered good.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of San Jose River near Suwanee, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 30	J. B. Stewart.....	2.30	99.5	Aug. 10	G. H. Russell.....	0.52	a 1.5
31	do.....	2.80	164	Sept. 2	do.....	.50	a 1.5
Sept. 6	do.....	.48	2.1	Nov. 2	W. B. Freeman.....	1.20	18.5
11	H. W. Ordeman.....	.50	2.4	1912.			
18	do.....	.50	1.9	Aug. 18	R. L. Cooper.....	1.40	27.1
25	do.....	.70	3.9	Oct. 3	do.....	1.80	33.7
Oct. 2	do.....	.50	.81	31	C. J. Emerson.....	.80	6.9
9	do.....	.50	.67	Nov. 27	do.....	.65	4.6
16	do.....	.80	6.09	Dec. 22	J. E. Powers.....		b 0
23	do.....	.50	3.9	1913.			
30	do.....	.80	6.28	Jan. 13	C. J. Emerson.....	.50	a .4
Nov. 6	do.....	.62	4.4	Mar. 10	do.....	.85	7.6
12	J. B. Stewart.....	.70	5.4	Apr. 27	do.....	.50	3.3
13	H. W. Ordeman.....	.70	4.8	May 11	do.....	.47	3.0
20	do.....	.50	2.15	29	do.....	.40	a 2.0
27	do.....	.40	.61	July 7	do.....	.45	3.3
Dec. 4	do.....	.70	4.78	Aug. 8	do.....	.42	a 3.0
11	do.....			16	Gray and Emerson.....	.52	3.2
				Sept. 14	C. J. Emerson.....	.68	4.1

a Estimated.

b Frozen solid.

Daily gage height, in feet, of San Jose River near Suwanee, N. Mex., for 1910-1913.

Day.	Sept.	Day.	Sept.	Day.	Sept.
1910.		1910.		1910.	
1.....		11.....	0.5	21.....	1.8
2.....		12.....	.5	22.....	4.2
3.....		13.....	.5	23.....	4.0
4.....		14.....	.5	24.....	3.3
5.....		15.....	.5	25.....	.7
6.....		16.....	.5	26.....	.7
7.....		17.....	.5	27.....	.7
8.....	0.5	18.....	.5	28.....	.7
9.....	.5	19.....	.7	29.....	.7
10.....	.5	20.....	1.0	30.....	.7

Daily gage height, in feet, of San Jose River near Suwanee, N. Mex., for 1910-1913—Con.

Day.	Oct.	Nov.	Dec.	Aug.	Sept.	Day.	Oct.	Nov.	Dec.	Aug.	Sept.	
1910-11.						1910-11.						
1.....	0.7	0.55	0.45	.....	0.8	16.....	0.65	0.7	.....	0.65	1.0	
2.....	.6	.55	.5	.....	.5	17.....	2.05	.7	.....	3.1	.85	
3.....	.5	.55	.5	.....	.5	18.....	1.1	.7	.....	4.0	.8	
4.....	.5	.6	.45	.....	1.5	19.....	.65	.7	.....	2.4	1.0	
5.....	.5	.65	.45	.....	1.1	20.....	.65	.7	.....	1.8	2.5	
6.....	.5	.8	.45	.....	.8	21.....	.6	.75	.....	2.1	1.3	
7.....	.5	.75	.55	.....	.5	22.....	.95	.75	.....	2.9	1.1	
8.....	.5	.7	.55	.....	.5	23.....	.85	.75	.....	3.2	1.0	
9.....	.5	.65	.6	.....	.5	24.....	.7	.75	.....	3.7	.8	
10.....	.5	.6	.65	0.5	.6	25.....	.65	.75	.....	3.6	.8	
11.....	.5	.6	.7	.5	.8	26.....	.65	.65	.....	2.3	.8	
12.....	.5	.65	.....	.5	1.1	27.....	.65	.5	.....	1.8	1.0	
13.....	.5	.7	.....	.5	1.2	28.....	.6	.5	.....	1.4	1.3	
14.....	.5	.7	.....	.7	1.8	29.....	.55	.5	.....	1.3	1.3	
15.....	.5	.7	.....	.5	1.3	30.....	.55	.5	.....	1.25	3.0	
						31.....	.55	.....	.....	1.1	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1.80	.....	0.98	0.38	.....	.....	.....	.....	.....	0.80	.....	.....
2.....	1.20	1.30	.....	.32	.....	.....	.....	.....	.....	.65	.....	.....
3.....	.....	1.22	.....	.48	0.35	.....	.....	.....	.....	.60	.....	.....
4.....	.....	1.22	.....	.55	.45	.....	.....	.....	.....	.60	.....	.....
5.....	.....	1.40	.....	.55	.43	.....	.....	.....	.....	.60	.....	.....
6.....	.....	1.50	.....	.65	.45	.....	.....	.....	.....	.60	.....	.....
7.....	.....	1.20	.....	.62	.48	.....	.....	.....	.....	.60	.....	.....
8.....	.....	1.15	.....	.65	.48	.....	.....	.....	.....	.60	.....	.....
9.....	.....	1.10	.....	.68	.48	.....	.....	.....	.....	.60	.....	.....
10.....	.....	1.05	.....	.80	.48	0.94	.....	.....	.....	.60	.....	.....
11.....	.....	1.05	.....	.90	.43	1.09	.....	.....	.....	.60	.....	.....
12.....	.....	1.05	.....	.95	.40	.95	.....	.....	.....	.60	.....	.....
13.....	.....	1.05	.....	1.10	.35	.95	.....	.....	.....	.60	.....	.....
14.....	.....	1.05	.....	1.10	.35	.92	.....	.....	.....	.60	.....	.....
15.....	.....	1.05	.50	1.18	.40	.92	.....	.....	.....	.70	.....	.....
16.....	.....	1.10	.48	1.15	.55	.95	.....	.....	0.30	.60	.....	.....
17.....	.....	1.10	.48	1.20	.48	.98	.....	.....	.30	.60	.....	.....
18.....	.....	1.10	.50	1.32	.40	.98	.....	.....	.30	.60	1.40	.....
19.....	.....	1.10	.50	1.02	.40	.92	.....	.....	.30	.60	1.30	.....
20.....	.....	1.10	.48	1.30	.42	1.32	.....	.....	.30	.60	1.25	0.80
21.....	.....	1.05	.25	1.25	.40	1.19	.....	.....	.30	.....	1.37	.80
22.....	.....	1.05	.22	.85	.35	1.06	.....	.....	.30	.....	1.12	.80
23.....	.....	1.05	.20	.70	.50	2.01	.....	.....	.30	.....	1.05	.80
24.....	.....	1.02	.21	.50	.45	1.65	.....	.....	.70	.....	1.05	.80
25.....	.....	1.00	.28	.43	.42	1.50	.....	.....	.60	.....	1.05	.80
26.....	.....	1.00	.23	.48	.40	1.28	.....	.....	1.50	.....	1.00	.80
27.....	.....	1.00	.33	.35	.35	1.40	.....	.....	.75	.....	1.00	.80
28.....	.....	1.00	.35	.36	.35	1.69	.....	.....	.68	.....	1.00	.80
29.....	.....	.98	.32	.38	.....	1.42	.....	.....	.70	.....	.....	.80
30.....	.....	.98	.38	.....	.....	1.29	.....	.....	.70	.....	.....	.80
31.....	.....	.....	.38	.....	.....	1.16	.....	.....	.....	.....	.....	.....
1912-13.												
1.....	0.80	.80	0.74	.....	.....	.....	0.90	.....	.60	1.11	.....	0.50
2.....	2.73	.80	.72	.....	.....	.....	.90	.....	.60	.90	.....	.50
3.....	1.95	.80	.....	.....	.....	.....	1.92	.....	.60	.85	.....	.50
4.....	1.79	.80	.....	.....	.....	.....	3.02	.....	.60	.79	.....	.50
5.....	2.80	.80	.....	.....	.....	.....	2.68	.....	.60	.65	.....	.50
6.....	1.72	.80	.....	.....	.....	.....	2.63	.....	.60	.53	.....	.50
7.....	1.13	.80	.....	.....	.....	.....	3.00	.....	.60	.48	0.40	.50
8.....	1.05	.80	.....	.....	.....	.....	2.13	.....	.61	.46	.40	2.01
9.....	.95	.80	.....	.....	.....	.....	2.78	.....	1.60	.46	.40	2.66
10.....	.95	.80	.....	.....	.....	0.90	2.24	.....	3.25	.46	.42	1.05
11.....	.95	.80	.70	.....	.....	.88	1.80	0.47	1.29	.46	.42	.72
12.....	.95	.....	.70	.....	.....	.89	.....	.50	1.05	.46	1.75	.63
13.....	.95	.....	.....	0.50	.....	.90	.....	.50	1.05	.46	.53	.80
14.....	.95	.....	.....	.....	.....	.90	.....	.51	1.06	.45	.50	.68
15.....	.93	.....	.....	.....	.....	.88	1.00	.52	1.08	.45	.50	.70

Daily gage height, in feet, of San Jose River near Suwanee, N. Mex., for 1910-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
16.....	0.93					0.88	0.95	0.54	1.07	0.45	0.52	0.69
17.....	.91					.88	.85	.56	1.04	.45	.80	.69
18.....	.91					.88	.80	.58	1.03	.45	1.00	.69
19.....	.90					.88	.75	.59	1.04	.45	.95	.69
20.....				0.70	0.80	.88	.70	.58	1.02	.45	.85	.69
21.....		0.72				.88	.65	.60	2.30	.45	1.05	.68
22.....		.72				.90	.60	.64	3.14	.45	1.40	.69
23.....		.72				.90	.55	.66	2.06	.45	1.45	.69
24.....		.70				.90	.50	.64	1.42	.54	.90	.69
25.....		.70						.60	1.28	.76	1.10	.70
26.....		.70						.60	1.22	.79	1.65	.69
27.....		.60					.50	.56	1.21	.62	1.04	.69
28.....		.73						.50	1.14	.45	.95	.70
29.....		.72						.42	3.23		.70	.71
30.....		.75						.48	1.24		.55	2.31
31.....	.80					.90		.54			.50	

Daily discharge, in second-feet, of San Jose River near Suwanee, N. Mex., for 1910, 1912-13.

Day.	Sept.	Oct.	Nov.	Dec.	Day.	Sept.	Oct.	Nov.	Dec.
1910.					1910.				
1.....		5.0	2.2	0.9	16.....	1.9	4	5	
2.....		3	2.2	1.4	17.....	1.9	75	5	
3.....		1.4	2.2	1.4	18.....	1.9	17	5	
4.....		1.4	3	.9	19.....	5	4	5	
5.....		1.4	4	.9	20.....	13	4	5	
6.....		1.2	7	.9	21.....	55	3	6	
7.....	2.4	1.2	6	2.2	22.....	422	12	6	
8.....	2.4	1.2	5	2.2	23.....	380	8	6	
9.....	2.4	1	4	3	24.....	245	5	6	
10.....	2.4	1	3	4	25.....	5.5	4	6	
11.....	2.4	1	3	5	26.....	5.5	4	4	
12.....	2.2	1	4		27.....	5	4	1.4	
13.....	2.2	1	5		28.....	5	3	1.4	
14.....	2.0	1	5		29.....	5	2.2	1.4	
15.....	2.0	1	5		30.....	5	2.2	1.4	
					31.....		2.2		

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912.												
1.....				2.5	2.4	0.0				6.8		
2.....				2.2	2.4	.0				4.5		
3.....				3.1	2.4	.0				4.0		
4.....				3.6	2.9	.0				4.0		
5.....				3.6	2.8	.0				4.0		
6.....				4.5	2.9	.0				4.0		
7.....				4.2	3.1	.0				4.0		
8.....				4.5	3.1	.0				4.0		
9.....				4.8	3.1	.0				4.0		
10.....				6.8	3.1	9.7				4.0		
11.....				8.8	2.8	15				4.0		
12.....				9.9	2.6	9.9				4.0		
13.....				15	2.4	9.9				4.0		
14.....				15	2.4	9.2				4.0		
15.....				18	2.6	9.2				5.0		
16.....				17	3.6	9.9			2.1	4.0		
17.....				19	3.1	11			2.1	4.0		
18.....				24	2.6	11			2.1	4.0	27	
19.....				12	2.6	9.2			2.1	4.0	23	
20.....				23	2.7	24			2.1	4.0	21	6.8
21.....				21	2.6	19			2.1		26	6.8
22.....				7.8	2.4	13			2.1		16	6.8
23.....				5.0	3.2	60			2.1		13	6.8
24.....				3.2	2.9	40			5.0		13	6.8
25.....				2.8	2.7	32			4.0		13	6.8
26.....				3.1	2.6	22			32		11	6.8
27.....				2.4	2.4	27			5.9		11	6.8
28.....				2.4	2.4	42			4.8		11	6.8
29.....				2.5	2.4	28			5.0			6.8
30.....				2.5		23			5.0			6.8
31.....				2.5		17						

Daily discharge, in second-feet, of San Jose River near Suwanee, N. Mex., for 1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	6.8	6.8	5.7	-----	-----	5.0	9.0	3.2	4.1	15	3.0	3.2
2.....	103	6.8	5.4	-----	-----	5.0	9.0	3.2	4.1	9.0	2.9	3.2
3.....	42	6.8	5.4	-----	-----	5.0	54	3.2	4.1	7.9	2.9	3.2
4.....	31	6.8	5.3	-----	-----	6.0	120	3.2	4.1	6.6	2.9	3.2
5.....	112	6.8	5.3	-----	-----	6.0	100	3.2	4.1	4.6	2.8	3.2
6.....	43	6.8	5.2	-----	-----	6.0	97	3.2	4.1	3.5	2.8	3.2
7.....	17	6.8	5.2	-----	-----	7.0	119	3.2	4.1	3.2	2.8	3.2
8.....	13	6.8	5.1	-----	-----	7.0	67	3.2	4.2	3.1	2.8	58
9.....	9.9	6.8	5.1	-----	-----	8.0	106	3.2	37	3.1	2.8	97
10.....	9.9	6.8	5.0	-----	-----	9.0	73	3.2	134	3.1	2.9	13
11.....	9.9	6.8	5.0	-----	-----	8.6	47	3.2	22	3.1	2.9	5.3
12.....	9.9	6.7	5.0	-----	-----	8.8	39	3.3	14	3.1	44	4.3
13.....	9.9	6.6	4.0	-----	-----	9.0	30	3.3	14	3.1	3.4	6.5
14.....	9.9	6.5	3.0	-----	-----	9.0	21	3.4	14	3.0	3.2	4.8
15.....	9.5	6.4	2.0	-----	-----	8.6	12	3.5	14	3.0	3.2	5.0
16.....	9.5	6.3	1.0	-----	-----	8.6	10	3.6	14	3.0	3.3	4.9
17.....	9.0	6.2	.0	-----	-----	8.6	7.9	3.8	13	3.0	6.5	4.9
18.....	9.0	6.0	.0	-----	-----	8.6	6.8	3.9	13	3.0	11	4.9
19.....	8.8	5.8	.0	-----	-----	8.6	6.0	4.0	13	3.0	9.9	4.9
20.....	8.6	5.6	.0	-----	-----	8.6	5.2	3.9	13	3.0	7.5	4.9
21.....	8.4	5.4	0	-----	-----	8.6	4.6	4.1	77	3.0	13	4.8
22.....	8.2	5.4	0	-----	-----	9.0	4.1	4.5	127	3.0	26	4.9
23.....	8.0	5.4	0	-----	-----	9.0	3.7	4.8	63	3.0	29	4.9
24.....	7.8	5.0	.0	-----	-----	9.0	3.3	4.5	28	3.6	8.5	4.9
25.....	7.6	5.0	.0	-----	-----	9.0	3.3	4.1	21	6.2	14	5.0
26.....	7.4	5.0	.0	-----	-----	9.0	3.3	4.1	19	6.6	38	4.9
27.....	7.2	4.0	.0	-----	-----	9.0	3.3	3.8	18	4.3	13	4.9
28.....	7.1	5.5	.0	-----	-----	9.0	3.3	3.3	16	3.0	9.9	5.0
29.....	7.0	5.4	.0	-----	-----	9.0	3.3	2.9	133	3.0	5.0	5.2
30.....	6.9	5.9	.0	-----	-----	9.0	3.3	3.2	19	3.0	3.5	73
31.....	6.8	-----	.0	-----	-----	9.0	-----	3.6	-----	3.0	3.2	-----

NOTE.—Daily discharge determined from several well-defined curves and by the indirect method of shifting channels. Discharge interpolated or estimated on days for which gage heights are missing.

Monthly discharge of San Jose River near Suwanee, N. Mex., for 1910, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910.					
September 7-30.....	422	1.9	47.0	2,240	B.
October.....	75	1.0	5.69	350	C.
November.....	7.0	1.4	4.17	248	C.
December 1-11.....	5.0	.9	2.07	45	C.
1912.					
January.....	24	2.2	8.28	509	B.
February.....	3.6	2.4	2.73	157	B.
March.....	60	.0	14.5	892	B.
June 16-30.....	32	2.1	5.23	156	B.
July 1-20.....	6.8	4.0	4.22	167	B.
August 18-28.....	27	11	16.8	367	B.
September 20-30.....	6.8	6.8	6.80	148	B.
1912-13.					
October.....	112	6.8	18.2	1,120	B.
November.....	6.8	4.0	6.10	363	B.
December.....	5.7	.0	2.35	144	B.
January.....	-----	-----	^a 3.00	184	C.
February.....	-----	-----	^a 4.50	250	C.
March.....	9.0	5.0	8.05	495	B.
April.....	120	3.3	32.5	1,930	B.
May.....	4.8	2.9	3.57	220	A.
June.....	134	4.1	29.4	1,750	B.
July.....	15	3.0	4.23	260	A.
August.....	44	2.8	9.24	568	A.
September.....	97	3.2	11.9	708	A.
The year.....	134	.0	11.1	7,900	

^a Estimated.

PECOS RIVER BASIN.

GENERAL FEATURES.

Pecos River, one of the most important tributaries of the lower Rio Grande, drains an area comprising approximately 32,000 square miles and extending from the Taos Mountains in northern New Mexico to the southern edge of the western panhandle region in Texas. Its source is on the eastern slope of the Santa Fe Range in the extreme western corner of Mora County, at an elevation of 11,000 feet, and its course is southward nearly to Punta Pajarita, thence southeastward to the southeast corner of Guadalupe County, thence southward again to Carlsbad, and then once more southeastward to its junction with the Rio Grande at Moorhead, Valverde County, Tex. Except for some of the upper tributaries the branches of the Pecos are intermittent, though at times they carry large floods. The chief tributaries are Rio de la Vaca, Rio Tecolote, Gallinas River, Canyon Blanco, Pentado Canyon, Alamo Gordo Creek, Salt Creek, Felix, Penasco, Seven Rivers, Delaware, Toyah, and Comanche creeks. Below Fort Sumner there are no important tributaries from the east, as the boundary of effective surface drainage of the Pecos parallels the river at a distance of 50 miles. The few streams in this section rise in the edge of the high plains but lose their waters in the porous soil within a few miles. Many of the streams in the western portion of the basin sink before reaching the Pecos, and it is probable that the streams actually reaching the Pecos lose much water by seepage after leaving the mountains.

The upper Pecos flows through narrow valleys and deeply cut gorges nearly down to Fort Sumner, and in this portion of the basin the elevations range from 4,500 feet to 11,000 feet above sea level. Below Fort Sumner the canyon-like walls of the Pecos are replaced by low rolling hills and at Roswell the gradation from the flood plains to the rolling prairie of the lower part of the drainage basin is imperceptible. Arroyos and gulches are rare, and canyons are practically unknown. Elevations in the lower section of the basin range from 1,000 feet at the mouth to 4,500 feet near the foothills.

The distribution of precipitation throughout the Pecos basin is somewhat peculiar. Near the source of the river there is a very small area in which the mean annual precipitation is 20 inches or more, but, as shown on the map (Pl. III), the rate drops to 15 inches at Anton Chico and less than 13 inches at Santa Rosa. From this point to Carlsbad there is a narrow strip coinciding practically with the immediate valley of the Pecos where the precipitation is between 12 and 13 inches, and east and west of this narrow area it increases to 15 inches or more. Below Carlsbad the increase is fairly uniform to 19 inches at the mouth. Except on the mountains in the upper section of the

basin, where much of it occurs as snow, by far the greater part of the precipitation is the rain of the summer storms.

The Carlsbad project of the United States Reclamation Service irrigates about 20,000 acres in the vicinity of Carlsbad. The irrigation plan provides for the storage of water in Lake McMillan on the Pecos near Lakewood, and in a storage and distributing reservoir on the same river near Carlsbad, controlled by the Avalon dam, and the diversion of water from the Avalon reservoir into a canal system watering lands on both sides in the vicinity of Carlsbad. The two reservoirs have a combined capacity of 72,000 acre-feet, thus exerting a marked effect on the flow of the Pecos below Carlsbad.

Irrigation is also extensively carried on in other sections of the Pecos Valley, especially in the vicinity of Pecos, Tex.

THE PECOS FLOOD OF 1904.¹

Late in September, 1904—chiefly on the 28th and 29th—a remarkably heavy rainfall occurred in the northern part of the eastern half of New Mexico and in an area about 125 miles long and 50 miles wide lying just west of Roswell. Arabella and Hot Springs, N. Mex., seemed to be the two centers of the greatest precipitation in the Pecos Valley basin. An observer near the headwaters of Pecos River says:

Between the 26th and 30th of September, 1904, very heavy steady rains fell over nearly the entire Territory. The greatest damage occurred on Thursday morning, September 29, over the eastern slopes of the mountains and along the valleys and lowlands of the northern portion, but the floods were nearly as destructive over the eastern slope of the several mountain ranges in the southwest portion and over the Hondo in the southeast. In an area 500 by 300 miles reports show that a rainfall of 3 to 7 inches fell within the space of 24 to 48 hours.

The flood waters reached Roswell, N. Mex., on September 29, and in the evening of that day the water broke over the banks of the Hondo at 8 p. m., and in 15 minutes the main street of that city was under water and the dike erected for the protection of the city swept away, likewise the railroad bridge north of the city. The flood at this place lasted only four days, but lines of communications were so damaged that no mail was delivered until October 10. The opera house and about 15 dwellings were destroyed.

The crest of the flood reached Carlsbad, N. Mex., at 3 a. m. October 2. The irrigation works were badly damaged, the cotton gin and all bridges on Pecos River were swept away, and the railway track for miles up and down the river was submerged.

On October 3 the water reached a height of 9 feet on the United States Geological Survey gage 6 miles above Pecos, N. Mex., and it continued to rise slowly for about 48 hours. This rise was so gradual that it could scarcely be noted from hour to hour. At 10 p. m. on October 4 it began to rise on the gage at the rate of about 1 foot an

¹ Abstracted from United States Geol. Survey Water-Supply Paper 132, pp. 111-116, 1905.

hour, and about this time four leaks occurred in the levees of the Barstow Irrigation Co., $3\frac{1}{2}$ miles above the flume, on the west side of the river, which were built to protect the West Valley [system from flood waters. This water soon entered the canals, and by 3 a. m. October 5 the canals were filled and soon overflowed so rapidly that many breaks were made in the West Valley canals. Daybreak of October 5 showed a sluggish flood of murky red and gray spread from half a mile to $2\frac{1}{2}$ miles in width on either side of the river. The current in the main channel of the river did not seem as boisterous as on the previous days, but at many points along the river currents were running out over the banks into and through the surrounding flats, covering the whole country to the foothills from 2 to 4 feet deep. At 8 a. m., with 19 feet by gage, the flume gave two little snaps, its center bowed downstream, the ends tore loose, the flume slowly rose, emptied its water, broke in two, and the two hulks floated downstream. These two parts, each about 100 feet in length, finally grounded, one about $1\frac{1}{4}$ miles below the flume and the other at a point about 5 miles below where it had caught on the banks of the river and formed a perfect bridge across the river channel. This section of the flume held this position till the gage read 10.50, but on the night of October 12 a small rise raised the water on the gage to 14, and in the meantime drift had caught above this part of the flume, and the added force carried the broken flume on down the river to the highway bridge east of Pecos City, where it passed under in some almost miraculous manner and caught against the railroad bridge a few hundred feet below. It was soon wrecked sufficiently to allow it to pass under this bridge. It may be remarked here that these two bridges (about 1 mile east of Pecos City) were the only structures that remained across Pecos River during the flood. This was due to the fact that at high water a large portion of the flood waters (perhaps half) flow out on the east side of the river channel and through a quarter-mile trestlework on the Texas & Pacific Railway.

On October 15 the gage at the flume read 9 feet, thus showing that the flood that swept through Roswell, N. Mex., in about three days had spread out enough to make some 10 days of extremely high water near Pecos. About October 20 most of the outlying water had drained back and it had left a deposit of reddish clay and fine sand where the water was sluggish and coarse sand where the water was swift. The depth of this deposit varied from 0.20 to 0.40 feet, except at certain isolated points where a deposit of over 1 foot was left.

Above the main canal of the Barstow Irrigation Co., on the east side of the river, the water reached a depth of 4 feet, and it required a period of two weeks to drain this water off.

After the flume went out on October 5 the water level dropped about 0.30 foot, showing that the flume had little effect on holding

the water back. On the west side of the river two-thirds of the alfalfa was killed by the flood and about 50 per cent of the cotton was lost. Out of 900 acres 700 were flooded. On the east side some thousand acres were heavily flooded and as much more lightly flooded. The sorghum was injured very slightly, but from 25 to 50 per cent of the cotton heavily flooded was lost. Very few of the plants were killed, but the bolls were so soaked that they soured and were ruined.

This flood did its greatest damage at its beginning in New Mexico, and the damage became less as it approached the Rio Grande. The flood was caused by concentrated floods in two localities in New Mexico. Below Carlsbad the rainfall was moderate, and it decreased in intensity to the south.

GAGING STATION RECORDS.

PECOS RIVER NEAR COWLES, N. MEX.

Location.—At highway bridge about sec. 28, T. 18 N., R. 12 E., three-fourths of a mile below the old Cowles post office, 5 miles below the present Cowles post office, which is at Windsor, midway between the Espiritu Santo and Mora Creeks, about half a mile below the mouth of Willow Creek.

Records available.—March 9, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording. A gage of the Bristol type was installed June 5, 1912, in place of a Friez automatic gage. On April 9, 1913, the Bristol gage was removed and on April 18, 1913, a Friez gage was reinstalled. These gages were all referred to the same datum.

Channel.—Fairly permanent except during high water, when it may shift slightly.

Discharge measurements.—Made from bridge during high water and by wading at ordinary stages.

Winter flow.—Ice causes back water during a portion of the winter months.

Accuracy.—Conditions are favorable for accurate results and the record should be reliable. The estimates can be considered good, but on account of doubtful gage heights estimates were not made from August to December, 1912.

Cooperation.—Maintained in cooperation with Mr. E. H. Fisher, Albuquerque, N. Mex., and the State engineer.

Discharge measurements of Pecos River near Cowles, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 7	Stewart and Fisher.....		79	Mar. 30	R. H. Fletcher.....	1.28	52.5
8	do.....		80	June 5	S. S. Carroll.....	3.60	832
9	do.....	1.30	72	Aug. 14	R. L. Cooper.....	1.68	85.1
Apr. 23	J. B. Stewart.....	1.23	64	Oct. 7	do.....	1.40	40.9
23	do.....	1.82	173	Nov. 3	A. S. Kirkpatrick.....	1.15	26.5
June 9	do.....	1.82	181	Dec. 14 ^a	C. J. Emerson.....	2.45	26.7
Aug. 20	Stewart and Mills.....	1.18	52	1913.			
Sept. 7	W. W. Mills.....	1.05	36	Jan. 20 ^a	A. S. Kirkpatrick.....	1.00	17.7
Oct. 31	J. B. Stewart.....	.98	25	Apr. 4	Emerson and Dean.....	1.44	54.2
1911.				19	J. E. Powers.....	1.85	125
Jan. 5 ^a	C. B. Digby.....	2.10	21.1	May 4	A. S. Kirkpatrick.....	2.00	159
Mar. 31	R. L. Cooper.....	1.30	66.1	June 12	H. J. Dean.....	3.30	666
May 25	do.....	2.25	256	July 27	A. S. Kirkpatrick.....	1.79	112
June 9	Jones and Jones.....	1.74	157	Sept. 7	do.....	1.60	60.5
16	G. H. Russell.....	1.65	124				
Aug. 7	W. B. Freeman.....	1.70	134				
Oct. 31	do.....	1.47	75.2				

^a Ice present.

Daily gage height of Pecos River near Cowles, N. Mex., for 1910-1913.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910								1910							
1.....		1.3	2.5	1.8	1.2	1.25	1.05	16....	1.25	1.4	2.4	1.55	1.2	1.25
2.....		1.25	2.45	1.75	1.2	1.25	1.0	17....	1.25	1.4	2.3	1.5	1.2	1.25	1.0
3.....		1.3	2.4	1.75	1.2	1.25	1.05	18....	1.25	1.5	2.25	1.45	1.25	1.2	1.0
4.....		1.3	2.4	1.7	1.2	1.45	1.05	19....	1.3	1.6	2.1	1.4	1.2	1.2	1.05
5.....		1.3	2.45	1.6	1.2	1.4	1.05	20....	1.3	2.0	2.0	1.35	1.2	1.2	1.0
6.....		1.3	2.4	1.6	1.2	1.3	1.05	21....	1.3	1.75	2.0	1.35	1.2	1.15	1.05
7.....		1.25	2.4	1.55	1.2	1.2	1.05	22....	1.35	1.7	1.95	1.3	1.2	1.15	1.05
8.....		1.25	2.35	1.5	1.15	1.2	1.0	23....	1.45	1.85	1.9	1.3	1.2	1.1	1.0
9.....	1.3	1.25	2.35	1.45	1.2	1.3	1.0	24....	1.5	2.0	1.3	1.2	1.05	1.0
10....	1.25	1.25	1.4	1.2	1.35	1.0	25....	1.5	2.15	1.35	1.35	1.05	1.0
11....	1.25	1.4	1.5	1.2	1.4	1.0	26....	1.5	2.25	1.35	1.3	1.0	1.0
12....	1.25	1.4	1.6	1.25	1.55	1.0	27....	1.45	2.3	1.4	1.25	1.0	1.0
13....	1.25	1.45	1.7	1.3	1.35	1.0	28....	1.45	2.4	1.8	1.3	1.2	1.0	1.0
14....	1.3	1.45	2.5	1.6	1.3	1.3	1.05	29....	1.4	2.55	1.3	1.25	1.0	1.0
15....	1.3	1.4	2.5	1.6	1.2	1.25	30....	1.35	2.4	1.8	1.25	1.3	1.05	1.0
								31....	1.35	1.8	1.3	1.1
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1910-11.															
1.....	1.05	1.0	0.95	.....	0.9	1.25	1.35	1.7	2.7	1.65	.....	.....	
2.....	1.05	1.0	.95	.....	.9	1.2	1.3	1.75	2.55	2.1	.....	1.2
3.....	1.05	1.0	.9	.....	.9	1.2	1.3	1.8	2.4	1.85	.....	.....	
4.....	1.05	1.0	.9	.....	.9	1.05	1.25	2.05	2.3	1.6	.....	.....	
5.....	1.05	1.0	.85	2.1	.9	.95	1.15	2.25	2.25	1.7	1.8	.....		
6.....	1.0	.9	1.0	2.1	.9	1.0	1.15	2.55	2.2	1.9	.....	.....	
7.....	1.0	.95	1.0	2.1	.95	1.0	1.1	2.8	2.1	1.9	1.7	.....		
8.....	1.0	.9	1.0	2.1	.9	1.0	1.1	2.95	2.0	1.8	.....	1.2		
9.....	1.0	.9	1.0	2.0	.9	1.0	1.1	3.05	2.1	1.85	.....	1.2		
10....	1.0	.9	1.0	2.1	.95	1.1	1.15	2.9	1.95	1.75	.....	.....	
11....	1.0	.95	1.0	2.2	.9	1.1	1.2	2.75	1.9	1.9	.....	.....	
12....	1.0	.95	1.0	2.1	.8	1.0	1.2	2.65	1.8	1.95	1.5	.....		
13....	1.0	1.0	.9	1.6	.8	.95	1.2	2.6	1.75	2.25	.....	.....	
14....	1.0	1.0	.85	1.1	.8	.9	1.2	2.75	1.7	2.45	.....	.....	
15....	1.0	1.0	.85	.85	.8	.95	1.3	2.85	1.7	2.75	.....	.....	
16....	1.05	1.05	1.0	.8	.8	1.0	1.35	2.75	1.65	3.2	.....	1.2		
17....	1.05	1.0	1.2	.8	.8	1.0	1.4	2.7	1.6	2.85	.....	.....	
18....	1.1	1.05	1.35	.85	.8	1.0	1.35	2.7	1.6	2.6	.....	.....	
19....	1.05	1.0	1.5	.85	.78	1.0	1.4	2.6	1.6	2.6	1.5	.....		
20....	1.05	.97	1.55	.9	.78	1.0	1.5	2.45	1.6	2.55	.....	.....	
21....	1.05	1.0	1.55	.9	.77	1.0	1.55	2.35	1.65	2.5	1.3	.....		
22....	1.0	1.0	1.55	.9	.9	1.0	1.7	2.25	1.6	2.45	.....	.....	
23....	1.0	.99	1.6	.9	1.15	1.0	1.7	2.2	1.55	2.35	.....	1.2		
24....	1.0	.99	1.6	.95	1.3	1.0	1.6	2.25	1.5	3.0	.....	.....	
25....	1.0	.98	1.6	.95	1.3	1.0	1.6	2.3	1.5	2.8	.....	.....	
26....	1.0	1.0	1.6	.9	1.3	1.0	1.6	2.3	1.45	2.6	1.35	.....		
27....	1.0	.9	1.6	.95	1.25	1.0	1.7	2.3	1.45	2.5	.....	1.3		
28....	.95	.9	1.6	.9	1.25	1.05	1.8	2.3	1.4	.....	.....	.....
29....	.95	.9	1.6	.9	.....	1.15	1.75	2.4	1.4	2.7	.....	.....	
30....	.95	.9	1.6	.95	.....	1.25	1.65	2.35	1.4	.....	.....	1.4
31....	.95	.....	1.6	.9	.....	1.35	.....	2.7	.....	.....	.....	.....
1911-12.															
1.....	.....	1.5	1.6	.....	.....	1.07	1.10	.....	4.60	1.85	.....	.....	
2.....	.....	1.45	1.6	.....	.....	1.05	1.10	.....	3.60	1.70	.....	.....	
3.....	.....	1.55	1.6	.....	.....	1.03	1.15	.....	3.60	1.85	.....	.....	
4.....	.....	1.5	1.6	.....	.....	1.03	1.25	2.60	3.60	1.75	.....	.....	
5.....	.....	1.5	1.6	.....	.....	1.06	1.40	.....	3.60	1.55	.....	.....	
6.....	.....	1.5	1.6	.....	.....	1.09	1.45	.....	3.50	1.65	.....	.....	
7.....	2.4	1.5	1.6	.....	.....	1.08	1.45	.....	3.65	1.80	.....	.....	
8.....	.....	1.45	1.55	.....	.....	1.08	1.45	.....	4.00	2.05	.....	.....	
9.....	.....	1.45	1.35	.....	.....	1.07	1.40	.....	3.75	2.00	.....	.....	
10....	.....	1.45	1.35	.....	.....	1.04	1.55	.....	3.75	1.80	.....	.....	
11....	.....	1.35	1.35	.....	.....	1.02	1.60	2.50	3.50	1.90	.....	.....	
12....	.....	1.4	1.35	.....	.....	1.06	1.70	.....	3.50	1.85	.....	.....	
13....	.....	1.45	1.35	.....	.....	1.05	1.65	.....	3.80	2.00	.....	.....	
14....	1.4	1.45	1.35	.....	.....	1.04	1.55	.....	4.20	1.85	.....	.....	
15....	.....	1.45	1.35	.....	.....	1.05	1.45	.....	3.40	1.40	.....	.....	

Daily gage height of Pecos River near Cowles, N. Mex., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
16		1.45				1.10	1.45		2.50	1.30		
17		1.6				1.10	1.40		2.30	1.30		
18		1.6			1.1	1.15	1.35	3.00	1.80	1.30		
19		1.6			1.1	1.25	1.35		1.80	1.55		
20		1.6			1.1	1.35	1.60	3.70	2.05	1.65		
21	1.75	1.6			1.08	1.25		3.90	2.35	1.75		
22		1.6			1.08	1.25		4.00	2.30	1.95		
23		1.55			1.04	1.20		4.10	2.10	1.90		
24		1.6			1.04	1.15		4.20	2.00	1.85		
25		1.65			1.04	1.25		5.05	1.75	1.80		
26		1.6			1.05	1.20		4.30	2.00	1.65		
27		1.6			1.05	1.20	2.00	5.30	2.20	1.60		
28	1.7	1.6			1.05	1.15		5.10	2.20	1.60		
29		1.6			1.07	1.15		5.20	2.30	1.70		
30		1.6				1.15		5.00	2.30	1.65		
31	1.5					1.15		4.80		1.75		
1912-13.												
1									2.03	1.95	1.75	1.66
2					1.10	1.40			2.00	1.90	1.72	1.61
3								2.15	1.98	1.88	1.67	1.60
4							1.44	2.06	1.98	1.91	1.62	1.61
5				2.00			1.37	2.06	1.94	2.00	1.61	1.63
6								2.10	1.92	1.94	1.62	1.62
7								2.20	1.91	1.93	1.61	1.61
8							1.50	2.17	1.96	1.89	1.62	1.71
9					1.00	1.20		2.20	1.98	1.95	1.60	1.63
10								2.30	2.24	1.88	1.60	1.62
11								2.40	3.18	1.85	1.66	1.88
12				1.50				2.47	3.40	1.76	1.78	1.55
13								2.41	3.00	1.70	1.67	1.53
14								1.45	2.31	2.60	1.70	1.64
15						1.10	1.40	2.22	2.50	1.70	1.64	
16					.30			2.18	2.52	1.68	1.57	
17								2.15	2.45	1.72	1.57	
18								2.12	2.45	1.72	1.63	
19				2.00			2.00	2.15	2.39	1.75	1.66	
20				1.00			2.00	2.12	2.34	1.82	1.67	1.60
21								1.91	2.11	2.30	1.77	1.73
22						1.45		1.92	2.10	2.25	1.90	2.20
23					1.10			1.88	2.12	2.20	1.95	2.04
24								1.76	2.10	2.10	1.99	1.99
25								1.70	2.10	2.05	1.88	1.90
26				1.40				1.70	2.12	2.00	1.82	1.80
27									2.16	1.98	1.77	1.74
28									2.15	2.00	1.75	1.70
29							2.00		2.12	2.20	1.74	1.70
30									2.07	2.01	1.71	1.69
31									2.05		1.72	1.68

NOTE.—Gage heights affected by ice Dec. 16-31, 1910, Jan. 5-14, 1911, Dec. 16, 1911, to Feb. 17, 1912, and Jan. 1 to Mar. 22, 1913. Gage heights read from a staff gage July 29 to Oct. 28, 1911, Apr. 20 to June 4, 1912, and Jan. 1 to Apr. 19, 1913.

Daily discharge, in second-feet, of Pecos River near Cowles, N. Mex., for 1910-1913.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.															
1		70	370	172	55	62	36	16	88	340	117	55	62	30	
2		62	355	160	55	62	30	17	62	310	107	55	62	30	
3		70	340	160	55	62	36	18	62	295	98	62	55	30	
4		70	340	148	55	98	36	19	70	127	251	88	55	36	
5		70	355	127	55	88	36	20	70	223	223	79	55	30	
6		70	340	127	55	70	36	21	70	160	223	79	55	48	
7		62	340	117	55	55	36	22	79	148	210	70	55	48	
8		62	325	107	48	55	36	23	98	184	197	70	55	42	
9	70	62	325	98	55	70	30	24	107	223	197	70	55	36	
10	62	62	325	88	55	79	30	25	107	266	197	79	79	36	
11	62	88	340	107	55	88	30	26	107	295	184	79	70	30	
12	62	88	340	127	62	117	30	27	98	310	184	88	62	30	
13	62	98	355	148	70	79	30	28	98	310	172	70	55	30	
14	70	98	370	127	70	70	36	29	88	381	172	70	62	30	
15	70	88	370	127	55	62	36	30	79	340	172	62	70	36	
								31	79		172		70	42	

Daily discharge, in second-feet, of Pecos River near Cowles, N. Mex., for 1910-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	36	30	25	.....	20	62	79	149	433	122	338	45
2.....	36	30	25	.....	20	55	70	160	384	227	308	45
3.....	36	30	20	.....	20	55	70	172	337	166	253	45
4.....	36	30	17	.....	20	36	62	236	307	112	202	45
5.....	36	30	17	.....	20	25	48	292	292	133	155	45
6.....	30	20	30	.....	20	30	48	384	278	178	144	45
7.....	30	20	25	.....	25	30	42	467	250	178	133	45
8.....	30	20	20	.....	20	30	42	520	250	155	122	45
9.....	30	20	20	.....	20	30	42	491	223	166	112	45
10.....	30	20	20	.....	25	42	48	443	210	144	102	45
11.....	30	25	20	.....	20	42	55	397	197	178	102	45
12.....	30	25	20	.....	13	30	55	367	172	190	93	45
13.....	30	30	20	.....	13	25	55	352	144	266	93	45
14.....	30	30	17	.....	13	20	55	397	133	323	93	45
15.....	30	30	17	16	13	25	70	428	133	416	93	45
16.....	36	36	.....	13	13	30	79	397	122	560	93	45
17.....	36	30	.....	13	13	30	88	382	112	448	93	45
18.....	42	36	.....	16	13	30	79	382	112	369	93	45
19.....	36	30	.....	16	12	30	88	352	112	369	93	45
20.....	36	27	.....	20	12	30	107	309	112	354	75	45
21.....	36	30	.....	20	11	30	117	281	122	338	59	45
22.....	30	30	.....	20	20	30	149	254	112	323	59	45
23.....	30	29	.....	20	48	30	149	240	102	294	59	45
24.....	30	29	.....	25	70	30	127	254	93	496	59	45
25.....	30	28	.....	25	70	30	127	267	93	432	59	45
26.....	30	30	.....	20	70	30	127	267	84	369	67	52
27.....	30	20	.....	25	62	30	149	267	84	338	59	59
28.....	25	20	.....	20	62	36	172	267	75	369	52	59
29.....	25	20	.....	20	48	48	160	295	75	400	45	67
30.....	25	20	.....	25	.....	62	138	281	75	400	45	75
31.....	25	.....	.....	20	.....	79	.....	382	.....	369	45	.....
1911-12.												
1.....	93	80	99	.....	.....	26	29	299	1,380	119	.....	.....
2.....	112	72	99	.....	.....	24	29	326	827	88	.....	.....
3.....	122	90	99	.....	.....	23	34	353	827	119	.....	.....
4.....	144	80	99	.....	.....	23	46	380	827	98	.....	.....
5.....	202	80	99	.....	.....	25	67	375	827	62	.....	.....
6.....	523	80	99	.....	.....	28	76	370	775	79	.....	.....
7.....	295	80	99	.....	.....	27	76	364	853	108	.....	.....
8.....	189	72	99	.....	.....	27	76	358	1,040	168	.....	.....
9.....	131	72	56	.....	.....	26	67	352	906	155	.....	.....
10.....	110	72	56	.....	.....	24	95	347	906	108	.....	.....
11.....	90	56	56	.....	.....	22	105	342	775	130	.....	.....
12.....	80	63	56	.....	.....	25	125	370	775	119	.....	.....
13.....	72	72	56	.....	.....	24	115	398	932	155	.....	.....
14.....	63	72	56	.....	.....	24	95	427	1,150	119	.....	.....
15.....	63	72	56	.....	.....	24	76	457	720	42	.....	.....
16.....	63	72	.....	.....	.....	29	76	486	300	30	.....	.....
17.....	63	99	.....	.....	.....	29	67	514	238	30	.....	.....
18.....	63	99	.....	.....	29	34	60	542	108	30	.....	.....
19.....	63	99	.....	.....	29	46	60	710	108	62	.....	.....
20.....	80	99	.....	.....	29	60	105	879	168	79	.....	.....
21.....	131	99	.....	.....	27	46	117	986	252	98	.....	.....
22.....	120	99	.....	.....	27	46	129	1,040	238	142	.....	.....
23.....	120	90	.....	.....	24	40	141	1,100	182	130	.....	.....
24.....	120	99	.....	.....	24	34	154	1,150	155	119	.....	.....
25.....	120	110	.....	.....	24	46	166	1,650	98	108	.....	.....
26.....	120	99	.....	.....	24	40	178	1,200	155	79	.....	.....
27.....	120	99	.....	.....	24	40	190	1,800	209	70	.....	.....
28.....	120	99	.....	.....	24	34	217	1,680	209	70	.....	.....
29.....	110	99	.....	.....	26	34	244	1,740	238	88	.....	.....
30.....	99	99	.....	.....	.....	34	271	1,620	238	79	.....	.....
31.....	80	.....	.....	.....	.....	34	.....	1,500	.....	98	.....	.....

Daily discharge, in second-feet, of Pecos River near Cowles, N. Mex., for 1910-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1913.												
1.....							50	170	168	148	104	82
2.....							50	185	160	136	98	71
3.....							50	200	155	132	89	68
4.....							52	176	155	138	80	68
5.....							44	176	146	160	78	70
6.....							49	186	141	146	80	66
7.....							54	214	138	143	78	62
8.....							60	206	150	134	80	82
9.....							59	214	155	148	76	71
10.....							58	244	226	132	76	73
11.....							52	276	612	125	87	68
12.....							56	300	724	106	110	65
13.....							55	279	520	94	89	63
14.....							54	247	346	94	83	60
15.....							47	220	310	94	83	64
16.....							77	208	317	91	71	67
17.....							104	200	293	98	71	69
18.....							132	192	293	98	81	72
19.....							160	200	273	104	87	74
20.....							160	192	257	118	89	76
21.....							138	189	244	108	100	75
22.....							141	186	229	136	214	81
23.....							132	192	214	148	170	136
24.....							106	186	186	158	158	114
25.....							94	186	173	132	136	94
26.....							94	192	160	118	114	83
27.....							110	203	155	108	102	85
28.....							125	200	160	104	94	90
29.....							140	192	214	102	94	92
30.....							155	178	163	96	91	96
31.....							173	.....	.....	98	87	.....

NOTE.—Daily discharge determined from several rating curves and by the indirect method for shifting channels. Discharge estimated or interpolated on days for which gage heights are missing.

Monthly discharge of Pecos River near Cowles, N. Mex., for 1910-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910.					
March 9-31.....	107	62	78.0	3,560	A.
April.....	384	62	147	8,750	B.
May.....	370	172	280	17,200	B.
June.....	172	62	106	6,310	A.
July.....	79	55	58.9	3,620	A.
August.....	117	30	58.5	3,600	A.
September.....	36	30	32.2	1,920	A.
The period.....	.....	.....	.....	45,000	.....
1910-11.					
October.....	42	25	31.7	1,950	A.
November.....	36	20	26.8	1,590	A.
December.....	30	.....	20.5	1,260	C.
January.....	25	.....	19.5	1,200	C.
February.....	70	11	27.1	1,510	C.
March.....	79	20	36.2	2,230	C.
April.....	172	42	89.9	5,350	B.
May.....	520	149	327	20,100	B.
June.....	433	75	174	10,400	B.
July.....	560	112	296	18,200	B.
August.....	338	45	110	6,760	C.
September.....	75	45	47.9	2,850	C.
The year.....	560	.....	100	73,400	.....

Monthly discharge of Pecos River near Cowles, N. Mex., for 1910-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October.....	523	63	125	7,600	C.
November.....	110	56	85.8	5,110	B.
December.....	99		58.5	3,600	C.
January.....			^a 20.0	1,230	D.
February.....			^a 25.0	1,440	D.
March.....	60	22	32.2	1,980	B.
April.....	271	29	110	6,550	C.
May.....	1,800	299	778	47,800	C.
June.....	1,380	98	547	32,500	B.
July.....	168	30	96.2	5,920	B.
The period.....				114,000	
1913.					
January.....			^a 25.0	1,540	D.
February.....			^a 20.0	1,110	D.
March.....			^a 40.0	2,460	D.
April.....	160	44	89.1	5,300	B.
May.....	300	170	205	12,600	A.
June.....	724	138	248	14,800	A.
July.....	160	91	121	7,440	A.
August.....	214	71	98.4	6,050	A.
September.....	136	60	77.9	4,640	A.
The period.....				55,900	

^a Estimated.

NOTE.—Mean discharge Dec. 16-31, 1910, estimated at 20 second-feet, Jan. 1-14, 1911, at 19 second-feet, and Dec. 16-31, 1911, at 40 second-feet, on account of ice.

PECOS RIVER NEAR ANTON CHICO, N. MEX.

Location.—About 1 mile below the settlement of Tecolotito, near sec. 31, T. 12 N., R. 17 E., about 3 miles northwest of Anton Chico, $1\frac{1}{4}$ miles below the mouth of Tecolote Creek.

Records available.—April 28, 1910, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording gage, which was moved three-fourths of a mile downstream on May 15, 1911, and referred to a new datum.

Channel.—Shifting.

Discharge measurements.—Made from car and cable during high water and by wading at ordinary stages.

Winter flow.—Ice causes backwater at times during the winter months.

Accuracy.—Estimates of discharges were not made in 1911; records for remaining period range from approximate to good.

Cooperation.—Maintained in cooperation with V. K. Jones, Las Vegas, N. Mex., and the State engineer.

Discharge measurements of Pecos River near Anton Chico, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1910.				1912.			
Apr. 28	J. B. Stewart.....	2.05	280	May 19	V. K. Jones.....	2.67	856
30	.....do.....	2.25	363	19	.....do.....	2.71	859
June 11	.....do.....	.40	59	20	.....do.....	2.81	946
Aug. 10	.....do.....	1.00	123	21	.....do.....	2.97	1,110
Sept. 3	W. W. Mills.....	.00	26	21	.....do.....	2.97	1,190
Oct. 18	G. H. Russell.....	.00	22	21	.....do.....	3.10	1,210
20	.....do.....	.15	30.5	Aug. 11	.....do.....	1.20	24.4
1911.				Oct. 15	J. E. Powers.....	1.20	31.4
Jan. 9	C. B. Digby.....	^b -0.20	17.6	20	C. J. Emerson.....	1.30	25.4
Mar. 29	R. L. Cooper.....	b.12	41.0	Nov. 29	J. E. Powers.....	1.30	12.0
May 13	G. H. Russell.....	^b 3.60	2,380	1913.			
13 ^a	.....do.....	3.20	2,380	Jan. 1 ^c	.....do.....	1.40	19.8
17	.....do.....	^b 2.20	378	28 ^c	.....do.....	1.40	31.7
17	.....do.....	2.43	378	Mar. 12 ^c	.....do.....	1.40	22.8
June 2	Jones and Jones.....	2.60	520	Apr. 9	.....do.....	1.54	85.9
July 28	G. H. Russell.....	2.54	545	May 14	.....do.....	2.07	216
Sept. 16	V. K. Jones.....	1.44	30.6	June 11	.....do.....	3.50	1,840
Oct. 28	.....do.....	1.70	148	July 10	.....do.....	1.70	120
1912.				23	.....do.....	1.60	96.2
May 18	V. K. Jones.....	2.40	601	Sept. 8	.....do.....	1.55	61.9
19	.....do.....	2.56	770				

^a Float measurement. ^b Gage height refers to datum of original gage. ^c Ice present.

Daily gage height, in feet, of Pecos River near Anton Chico, N. Mex., for 1910-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1910.						1910.							
1			1.1		0.5		16		2.1			0.4	0.2
2		2.2	1.1				17	2.0				.3	.15
3			1.0				18	2.0					.0
4			1.0			0.0	19	2.0					.15
5			1.0			-.05	20	2.0	0.5				.2
6			1.0			-.05	21		1.9				.2
7						.0	22	1.8			1.1		.2
8					.6	.0	23	1.6				.8	.2
9	1.95				.15	.0	24	1.4				.4	.05
10					2.25	-.1	25	2.0	1.2			.1	.0
11			.4		1.6	-.1	26	2.0	1.1			.0	.0
12			.4		.65	-.1	27	2.0	1.0	.5		-.1	-.05
13		.5			.65	.1	28	2.0	.95	.35		-.1	-.05
14		.3			.65	.2	29	2.0	.95	.2			-.05
15					.5	.2	30	2.0	.95				.0
							31		1.1				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1910-11.													
1	0.05	-0.1	0.0	-0.15	-0.20	-0.10	0.70	1.60	2.50	1.80	2.20	1.50	
2	.0	-.1	.0	-.15	-.20	-.10	.90	1.55	2.35	2.90	2.15	1.50	
3	.0	-.1	.0	-.15	-.20	-.10	1.00	1.60	2.30	2.90	2.10	1.50	
4	.0	-.1	-.05	-.15	-.20	-.10	1.15	1.65	2.30	2.60	2.05	1.65	
5	.0	.0	-.1	-.15	-.20	-.15	1.10	1.90	2.25	2.30	1.90	1.60	
6	.0	.0	-.1	-.15	-.20	.00	.95	1.95	2.20	2.20	1.85	1.55	
7	.0	.0	-.1	-.15	-.20	.15	.85	2.00	2.20	2.20	1.80	1.55	
8	.05	.1	-.1	-.20	-.20	.35	.95	2.00	2.20	2.20	1.75	1.55	
9	.05	.1	-.2	-.20	-.20	.37	1.05	2.10	2.15	2.20	1.70	2.05	
10	.1	.0	-.15	-.05	-.20	.37	1.00	2.10	2.10	2.20	1.70	1.70	
11	.1	.0	-.15	.10	-.20	.50	.90	2.20	2.10	2.20	1.70	1.55	
12	.1	.0	-.15	.08	-.20	.85	.85	2.40	2.10	2.30	1.65	1.55	
13	.1	.0	-.15	.10	-.20	.80	.85	3.00	2.10	2.30	1.65	1.55	
14	.1	-.05	-.15	.10	-.20	.62	.90	2.70	2.05	2.40	1.65	1.55	
15	.05	.0	-.15	.05	-.20	.42	.85	2.60	2.00	2.40	1.60	1.55	

Daily gage height, in feet, of Pecos River near Anton Chico, N. Mex., for 1910-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	0.0	0.0	-0.1	0.00	-0.15	0.30	0.80	2.50	2.00	2.40	1.65	1.50
17.....	.15	.0	.1	-.05	-.10	.32	.80	2.45	2.00	2.55	1.75	1.50
18.....	.1	.0	-.05	-.10	.00	.35	.85	2.40	2.00	2.55	1.85	1.50
19.....	.1	.0	-.1	-.10	.00	.40	.85	2.40	2.20	2.45	1.80	1.45
20.....	.2	.0	-.1	-.15	-.10	.40	.75	2.35	2.00	3.30	1.70	1.55
21.....	.2	.0	-.1	-.20	-.20	.40	.85	2.30	2.20	2.80	1.65	1.50
22.....	.1	.0	-.1	-.20	-.20	.40	.95	2.30	2.10	2.30	1.60	1.50
23.....	.1	.0	-.1	-.20	-.20	.40	1.15	2.20	2.00	2.35	1.65	1.50
24.....	.1	.0	-.15	-.20	-.20	.40	1.45	2.20	1.90	2.50	1.75	1.50
25.....	.1	.0	-.1	-.20	-.15	.35	1.45	2.20	1.80	2.45	1.70	1.50
26.....	.1	.0	-.1	-.20	-.05	.30	1.45	2.20	1.80	2.35	1.60	1.50
27.....	.1	.0	-.1	-.20	-.15	.25	1.40	2.20	1.80	2.25	1.55	1.50
28.....	.1	.0	-.08	-.20	-.10	.25	1.40	2.70	1.95	2.40	1.55	1.50
29.....	.0	.0	-.1	-.20	.....	.25	1.55	2.95	1.80	2.40	1.90	1.50
30.....	.0	.0	-.08	-.20	.....	.30	1.65	2.30	1.75	2.40	1.65	1.60
31.....	.1	.....	-.05	-.20	.....	.45	.....	2.20	.....	2.30	1.60	.....
1911-12.												
1.....	1.65	1.75	1.80	1.90	1.30	1.15	1.85	2.16	2.90	1.95	1.48	1.15
2.....	1.75	1.75	1.80	1.90	1.30	1.18	1.82	2.30	2.85	1.92	1.48	1.16
3.....	1.70	1.75	1.80	1.90	1.30	1.18	1.78	2.48	2.82	1.90	1.48	1.12
4.....	1.65	1.75	1.80	1.90	1.30	1.18	1.80	2.60	2.80	1.87	.....	1.08
5.....	2.45	1.80	1.80	1.90	1.30	1.18	1.90	2.50	2.78	1.82	.....	1.07
6.....	3.65	1.85	1.80	1.90	1.30	1.20	2.05	2.34	2.78	1.83	.....	1.05
7.....	2.90	1.80	1.80	1.90	1.30	1.20	2.10	2.21	2.90	1.83	.....	1.06
8.....	2.45	1.80	1.80	1.90	1.30	1.20	2.05	2.20	.....	1.80	.....	1.05
9.....	2.25	1.85	1.75	1.90	1.25	1.30	2.05	2.22	.....	1.78	.....	1.10
10.....	2.15	1.80	1.75	1.90	1.20	1.32	1.98	2.28	2.80	1.77	.....	1.06
11.....	2.05	1.85	1.75	1.90	1.12	1.42	2.08	2.28	2.80	1.78	.....	1.10
12.....	2.00	1.85	1.95	1.90	1.15	1.42	2.12	2.20	2.80	1.79	.90	1.16
13.....	1.95	1.85	2.00	1.90	1.15	1.36	2.18	2.15	2.65	1.70	.95	1.35
14.....	1.90	1.95	2.00	1.90	1.10	1.35	2.13	2.25	2.58	1.58	1.10	1.20
15.....	1.85	1.90	2.00	1.90	1.10	1.34	.....	2.33	2.52	1.58	.....	1.16
16.....	1.80	1.85	2.00	1.90	1.12	1.32	.....	2.33	2.50	1.77	1.56	1.16
17.....	1.80	1.85	2.00	1.90	1.10	1.37	.....	2.32	2.50	1.69	1.38	1.15
18.....	1.80	1.80	2.00	1.90	1.10	1.38	.....	2.32	2.52	1.74	1.27	1.13
19.....	1.75	1.80	2.00	1.90	1.10	1.45	.....	2.45	2.50	1.62	1.22	1.10
20.....	1.75	1.80	2.00	1.90	1.10	1.65	1.70	2.62	2.41	1.60	1.69	1.14
21.....	1.75	1.80	2.00	1.90	1.16	2.05	1.70	2.72	2.33	1.67	1.66	1.15
22.....	1.70	1.80	2.00	1.90	1.12	2.05	1.68	2.88	2.18	1.60	1.58	1.16
23.....	1.70	1.80	2.00	1.90	1.15	1.95	1.68	3.00	2.31	1.59	1.57	1.18
24.....	1.70	1.80	2.00	1.90	1.10	1.92	1.70	3.00	2.44	1.60	1.46	1.19
25.....	1.70	1.75	1.95	1.90	1.15	1.84	1.88	2.98	2.31	1.52	1.43	1.19
26.....	1.70	1.75	1.90	1.70	1.15	1.83	2.03	2.95	2.30	1.49	1.37	1.18
27.....	1.90	1.80	1.85	1.55	1.15	1.86	2.03	2.98	2.13	1.54	1.27	1.19
28.....	1.80	1.80	1.85	1.30	1.15	1.85	2.05	3.02	2.09	1.48	1.22	1.18
29.....	1.85	1.80	1.80	1.30	1.15	1.82	2.08	3.02	2.03	1.48	1.18	1.16
30.....	1.80	1.80	1.85	1.30	.....	1.80	2.12	3.02	2.00	1.48	1.26	1.17
31.....	1.80	.....	1.90	1.30	.....	1.80	.....	3.00	.....	1.48	1.17	.....
1912-13.												
1.....	1.18	1.28	1.20	1.40	1.40	1.40	1.44	1.97	1.76	2.01	1.42	1.66
2.....	1.19	1.30	1.25	.....	.....	.....	1.62	1.97	1.75	1.71	1.43	1.62
3.....	1.20	1.25	1.25	.....	.....	.....	1.69	1.97	1.70	1.66	1.41	1.58
4.....	1.21	1.22	.....	.....	.....	.....	1.71	1.94	1.70	1.66	1.41	1.53
5.....	1.28	1.25	.....	.....	.....	.....	1.57	1.86	1.76	1.66	1.37	1.58
6.....	1.35	1.25	.....	.....	.....	.....	1.47	1.82	1.68	1.82	1.33	1.53
7.....	1.30	1.25	1.50	.....	.....	.....	1.42	1.83	1.66	1.65	1.33	1.55
8.....	1.30	1.25	1.50	.....	.....	.....	1.55	1.88	1.91	1.61	1.34	1.57
9.....	1.29	1.20	1.50	.....	.....	.....	1.50	1.88	2.28	1.60	1.30	1.60
10.....	1.27	1.20	1.50	.....	.....	.....	1.46	1.90	2.25	1.66	1.29	1.61
11.....	1.25	1.17	1.50	1.40	.....	.....	1.40	1.99	2.58	1.65	1.29	1.95
12.....	1.20	1.17	1.50	.....	.....	1.40	.....	2.02	2.47	1.60	1.50	1.69
13.....	1.20	1.22	1.50	.....	.....	.....	.....	1.99	3.00	1.60	1.57	1.62
14.....	1.20	1.17	1.50	.....	.....	.....	.....	2.05	2.68	.....	1.54	1.58
15.....	1.20	1.16	1.40	.....	.....	.....	.....	1.99	2.48	.....	1.51	1.54
16.....	1.20	1.20	1.30	.....	.....	.....	.....	1.97	2.54	.....	1.51	1.50
17.....	1.20	1.20	1.30	.....	.....	1.38	.....	1.97	2.41	.....	1.48	1.45
18.....	1.20	1.20	1.30	1.20	.....	1.36	.....	1.96	2.36	.....	1.52	1.46
19.....	1.20	1.20	1.30	.....	.....	1.32	1.72	1.95	2.42	1.50	1.60	1.42
20.....	1.30	1.20	1.30	.....	.....	1.31	1.80	1.94	2.48	1.60	1.85	1.38

Daily gage height, in feet, of Pecos River near Anton Chico, N. Mex., for 1910-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
21.....	1.30	1.18	1.20	.....	.....	1.38	1.94	1.92	2.37	1.70	1.90	1.35
22.....	1.30	1.25	1.20	.....	.....	1.38	1.96	1.90	2.26	1.57	1.93	1.33
23.....	1.32	1.40	1.20	.....	.....	1.29	2.00	1.87	2.25	1.65	2.08	1.33
24.....	1.32	1.35	1.20	.....	.....	1.30	1.97	1.81	2.11	1.78	1.97	1.45
25.....	1.33	1.35	1.20	1.20	.....	1.31	1.91	1.80	2.06	1.74	1.80	1.80
26.....	1.30	1.35	1.20	.....	.....	1.34	1.80	1.79	2.06	1.71	1.98	1.68
27.....	1.25	1.30	1.20	.....	.....	1.34	1.77	1.78	2.02	1.65	1.86	1.58
28.....	1.22	1.30	1.30	1.40	1.40	1.20	1.82	1.79	2.21	1.60	1.78	1.56
29.....	1.22	1.30	1.35	.....	.....	1.15	1.89	1.80	4.71	1.54	1.74	1.53
30.....	1.28	1.30	1.40	.....	.....	1.13	1.95	1.77	2.67	1.50	1.70	1.52
31.....	1.28	.....	1.40	1.40	.....	1.23	.....	1.77	.....	1.46	1.68	.....

NOTE.—Gage heights affected by ice Jan. 10-14, 1911; Dec. 12, 1911, to Feb. 11, 1912; and Nov. 22, 1912, to Mar. 16, 1913. Gage heights after May 14, 1911, refer to a new gage three-fourths mile downstream and referred to a new datum.

Daily discharge, in second-feet, of Pecos River near Anton Chico, N. Mex., for 1910, 1912-13.

Day.	Apr.	May.	June.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.								
1.....	310	138	61	22	26	20	23
2.....	332	138	60	24	23	20	23
3.....	330	123	60	26	23	20	23
4.....	330	123	50	23	23	20	21.5
5.....	310	123	50	21.5	23	23	20
6.....	310	123	60	21.5	23	23	20
7.....	300	100	60	23	23	23	20
8.....	290	80	71	23	26	28	20
9.....	282	60	32	23	26	28	17.5
10.....	280	50	342	20	28	23	18.5
11.....	290	52	219	20	28	23	18.5
12.....	290	52	76	20	28	23	18.5
13.....	300	61	76	28	28	23	18.5
14.....	300	43	76	35	28	21.5	18.5
15.....	310	40	61	35	26	23	18.5
16.....	312	40	52	35	23	23	20
17.....	292	50	43	32	32	23	20
18.....	292	50	40	23	28	23	21.5
19.....	292	60	40	32	28	23	20
20.....	292	61	50	35	35	23	20
21.....	273	60	50	35	35	23	20
22.....	255	60	138	35	28	23	20
23.....	219	60	94	35	28	23	20
24.....	185	60	52	26	28	23	18.5
25.....	292	153	60	28	28	23	20
26.....	292	138	60	23	23	23	20
27.....	292	123	61	20	21.5	28	20
28.....	292	116	48	20	21.5	28	20.5
29.....	292	116	35	20	21.5	23	20
30.....	292	116	20	20	23	23	20.5
31.....	138	.....	.....	20	.....	20	21.5

NOTE.—These discharges are based on a rating curve which is well defined below 350 second-feet. The record for July is of no value. The river was very low; probably dry during part of the month.

Daily discharge, in second-feet, of Pecos River near Anton Chico, N. Mex., for 1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912.												
1.					15	16	238	452	1,040	305	68	16
2.					15	19	218	550	995	284	68	17
3.					15	19	104	684	968	270	68	14
4.					15	19	205	780	950	250	61	11
5.					15	19	270	700	932	218	54	10
6.					15	21	375	578	932	224	47	9
7.					15	21	410	487	1,040	224	39	10
8.					15	21	375	480	1,010	205	31	9
9.					15	33	375	494	980	194	23	12
10.					15	38	326	536	950	188	16	10
11.					15	54	396	536	950	194	9	12
12.					16	54	424	480	950	200	2	17
13.					16	43	466	445	820	150	4	42
14.					12	42	431	515	764	98	12	21
15.					12	40	384	571	716	98	238	17
16.					14	36	337	571	700	188	91	17
17.					12	45	290	564	700	145	47	16
18.					12	47	244	564	716	172	29	15
19.					12	61	197	660	700	113	23	12
20.					12	127	150	796	628	104	145	16
21.					17	375	150	878	571	136	132	16
22.					14	375	141	1,020	466	104	98	17
23.					16	305	141	1,130	557	101	94	19
24.					12	284	150	1,130	652	104	63	20
25.					16	231	257	1,110	557	78	37	20
26.					16	224	361	1,080	550	70	45	19
27.					16	244	361	1,110	431	85	29	20
28.					16	238	375	1,150	403	68	23	19
29.					16	218	396	1,150	361	68	19	17
30.						205	424	1,150	340	68	29	18
31.						205		1,130		68	18	
1912-13.												
1.	19	31				22	31	167	89	307	54	107
2.	20	33				22	63	167	86	140	57	92
3.	21	27				22	86	167	72	122	52	80
4.	22	23				22	97	154	72	122	52	65
5.	31	27				22	65	122	89	122	46	75
6.	42	27				22	48	107	68	191	40	61
7.	33	27				22	44	111	63	118	40	63
8.	33	27				22	75	129	162	104	42	65
9.	32	21				22	72	129	416	100	36	75
10.	29	21				22	54	136	430	122	35	78
11.	27	18				22	41	176	748	118	35	213
12.	21	18				22	45	191	656	100	72	100
13.	21	23				22	50	176	1,170	100	92	80
14.	21	18				22	55	208	841	95	85	70
15.	21	17				22	60	176	664	90	75	61
16.	21	21				22	65	167	714	85	75	52
17.	21	21				24	70	167	608	80	68	44
18.	21	21				23	75	162	568	75	78	46
19.	21	21				21	78	158	616	72	100	40
20.	33	21				20	100	154	664	100	208	35
21.	33	19				24	154	145	576	136	235	33
22.	33	19				24	162	136	488	92	255	31
23.	36	19				20	180	125	480	118	356	31
24.	36	19				20	167	104	377	171	280	46
25.	38	19				20	140	100	342	154	176	145
26.	33	19				22	100	97	342	140	280	100
27.	27	19				22	92	94	314	118	208	72
28.	23	19				15	107	97	448	100	162	68
29.	23	19				13	132	100	3,980	85	145	61
30.	31	19				12	158	92	832	72	125	59
31.	31					16		92		63	118	

NOTE.—Daily discharge determined from a well-defined curve and by the indirect method for shifting channels. Discharge estimated on account of ice, Feb. 1-11, 1912; Nov. 22-30, 1912; and Mar. 1-16, 1913. Discharge interpolated on other days of missing gage heights.

Monthly discharge of Pecos River near Anton Chico, N. Mex., for 1910, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910.					
April 25-30.....	292	292	292	3,480	B.
May.....	332	116	254	15,600	C.
June.....	138	20	69.7	4,150	D.
August.....	342	20	66.6	4,100	D.
September.....	35	20	28.2	1,560	C.
October.....	35	20	28.6	1,640	B.
November.....	28	20	22.9	1,360	B.
December.....	23	17.5	20.0	1,230	B.
1912.					
January.....			^a 25.0	1,540	D.
February.....	17	12	14.6	840	C.
March.....	375	16	119	7,320	B.
April.....	466	141	302	18,000	B.
May.....	1,150	445	757	46,500	B.
June.....	1,040	340	744	44,300	B.
July.....	305	68	154	9,470	B.
August.....	238	2	54.3	3,340	B.
September.....	42	9	16.3	970	B.
The period.....				132,000	
1912-13.					
October.....	42	19	27.5	1,690	B.
November.....	33	17	21.8	1,300	C.
December.....			^a 19.0	1,170	D.
January.....			^a 25.0	1,540	C.
February.....			^a 20.0	1,110	D.
March.....	24	12	20.9	1,290	C.
April.....	180	31	88.9	5,290	C.
May.....	208	92	139	8,550	B.
June.....	3,980	63	566	33,700	B.
July.....	307	63	117	7,190	B.
August.....	356	35	119	7,320	B.
September.....	213	31	71.6	4,260	B.
The year.....	3,980		103	74,400	

^a Estimated.

PECOS RIVER AT SANTA ROSA, N. MEX.

Location.—Originally established at the Chicago, Rock Island & Pacific Railway bridge at Santa Rosa. When the station was reestablished in 1910 it was moved about 400 feet downstream to the highway bridge, 1 mile above the mouth of Rio Agua Negra Chiquita, in sec. 11, T. 8 N., R. 21 E.

Records available.—May 5, 1903, to December 31, 1906; February 1, 1910, to July 31, 1911; September 21, 1912, to September 30, 1913.

Drainage area.—2,780 miles (measured from Land Office map).

Gage.—The original gage was a staff bolted to the bridge pier. A chain gage is used at the present station.

Channel.—Very shifting.

Discharge measurements.—At the original station, made from car and cable and by wading; at the present one, from the bridge and by wading.

Winter flow.—Practically no ice at this station.

Flood stage.—During the period covered by the records there was but one serious flood, which occurred September 29 and 30, 1904, when the river reached a recorded stage of 23.0 feet.

Accuracy.—Owing to the shifting character of the stream and insufficient measurements, no estimates of discharge were made prior to 1906. Since that date estimates are available which are considered reliable.

Cooperation.—The United States Reclamation Service maintained the station from 1904 to 1906, but since 1910 it has been maintained in cooperation with the State engineer.

Discharge measurements of Pecos River at Santa Rosa, N. Mex., in 1903-1906, 1910-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 7	H. C. Hurd.....	1.32	139	Aug. 13	J. M. Giles.....	1.30	88
Aug. 17	Earl Marsh.....	1.78	64	Oct. 27	W. A. Lamb.....	1.02	23
1904.				1910.			
Apr. 2	W. G. Russell.....	1.50	9	Feb. 1	Russell and Stewart....	1.35	12.7
Aug. 7	Russell and Shely.....	2.50	240	3	do.....	1.38	12.8
9	do.....	2.10	105	Mar. 13	G. H. Russell.....	1.46	10.7
23	L. M. Shely.....	2.10	137	May 8	J. B. Stewart.....	2.37	206
Oct. 30	do.....	2.10	77	June 19	do.....	1.47	36
1905.				Aug. 6	do.....	2.00	173
May 2	J. M. Giles.....	2.50	1,320	19	W. B. Freeman.....	2.95	1,550
June 2	E. Patterson.....	2.10	1,040	20	do.....	2.00	570
5	do.....	2.30	1,140	23	do.....	1.48	315
July 3	do.....	1.10	55	Oct. 23	W. W. Mills.....	.87	42
7	do.....	.80	14.5	Oct. 16	G. H. Russell.....	.70	13.7
Aug. 21	Giles and Patterson.....	.72	14.8	1911.			
23	E. Patterson.....	.71	13.9	Jan. 12	C. B. Digby.....	.60	12.0
Oct. 8	do.....	.81	12	Apr. 4	Russell and Waha.....	.44	7.2
24	J. M. Giles.....	.80	15	May 18	G. H. Russell.....	1.79	314
Nov. 17	E. Patterson.....	.87	12	1912.			
1906.				Sept. 21	C. J. Emerson.....	1.78	14.9
Mar. 8	E. Patterson.....	.55	12	Oct. 16	Gray and Emerson.....	1.92	14.8
Apr. 12	do.....	1.70	288	Nov. 17	C. J. Emerson.....	2.02	14.6
12	do.....	1.85	349	1913.			
13	do.....	1.82	333	Jan. 12 ^a	C. J. Emerson.....	2.48	15.0
30	J. M. Giles.....	2.00	498	Feb. 3	do.....	2.06	15.6
30	do.....	2.00	490	Mar. 5	do.....	2.01	12.4
May 30	E. Patterson.....	2.00	423	29	do.....	1.97	9.5
30	do.....	1.95	392	Apr. 30	do.....	2.13	56.7
June 29	do.....	.95	18	June 6	do.....	2.16	130
July 22	J. M. Giles.....	1.45	240	26	do.....	2.04	162
22	do.....	1.35	183	26	do.....	1.35	13.2
23	do.....	1.30	125	July 19	do.....	1.40	14.8
23	do.....	2.35	832	Aug. 1	do.....	1.86	59.5
23	do.....	2.15	676	29	do.....	1.89	49.0
24	do.....	1.70	348	Sept. 30	do.....		

^a Ice present.

Daily gage height, in feet, of Pecos River at Santa Rosa, N. Mex., for 1903-1906, 1910-11, 1912-13.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1903.						1903.					
1.....		0.95	2.0	2.0	1.7	16.....	1.45	6.0	1.6	2.0	1.7
2.....		.95	2.0	2.0	1.7	17.....	1.45	3.8	1.7	1.7	1.7
3.....		.95	1.9	2.0	1.7	18.....	1.5	3.5	1.7	1.9	1.7
4.....		.95	1.8	2.0	1.7	19.....	1.45	2.8	1.7	2.2	1.7
5.....	1.45	1.25	1.5	2.0	1.7	20.....	1.4	2.8	1.7	2.0	1.7
6.....	1.38	1.2	2.2	1.7	1.7	21.....	1.35	2.8	2.4	1.7	1.7
7.....	1.35	1.6	2.2	1.4	1.7	22.....	1.35	2.5	2.0	1.7	1.7
8.....	1.3	1.5	2.2	1.4	1.7	23.....	1.35	2.5	2.0	1.7	1.8
9.....	1.3	6.0	2.2	1.4	1.7	24.....	1.3	2.6	2.0	1.7	1.7
10.....	1.25	6.5	1.8	1.4	1.7	25.....	1.2	2.3	2.0	1.7	1.7
11.....	1.3	3.0	1.8	1.5	1.7	26.....	1.2	2.2	2.0	1.7	1.7
12.....	1.3	1.5	1.6	2.0	1.7	27.....	1.15	2.2	2.0	1.7	1.7
13.....	1.35	2.8	1.9	2.0	1.7	28.....	1.1	2.2	2.0	1.7	1.7
14.....	1.4	2.6	1.7	1.9	1.7	29.....	1.1	2.0	2.0	1.7	1.7
15.....	1.4	2.8	1.7	2.0	1.7	30.....	.95	2.0	2.0	1.7	1.7
						31.....	.95		2.0	1.7	

Daily gage height, in feet, of Pecos River at Santa Rosa, N. Mex., for 1903-1906, 1910-11, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.6	1.65	1.65	0.65	1.65	1.6	1.6	1.4	1.4	3.5	1.3	1.6
2.....	1.6	1.65	1.65	.65	1.65	1.6	1.7	1.4	1.4	2.5	3.5	1.6
3.....	1.6	1.65	1.65	.65	1.65	1.6	1.7	1.4	1.4	2.5	4.0	1.6
4.....	1.6	1.65	1.65	.65	1.65	1.6	1.5	1.4	1.4	2.0	3.0	2.0
5.....	1.6	1.65	1.65	.65	1.65	1.65	1.5	1.4	1.4	2.5	2.4	1.6
6.....	1.6	1.65	.65	.65	1.7	1.65	1.5	1.4	1.4	1.5	2.4	1.6
7.....	1.6	1.6	.65	.65	1.7	1.65	1.45	1.4	1.4	1.4	2.5	1.6
8.....	1.6	1.6	.65	.65	1.7	1.65	1.45	1.4	1.4	1.4	2.2	1.6
9.....	1.6	1.6	.65	.65	1.7	1.65	1.45	1.4	1.4	1.2	2.2	1.6
10.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	1.4	1.1	4.0	1.6
11.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	1.4	1.1	2.0	1.4
12.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	1.9	1.1	2.0	1.4
13.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	1.4	1.1	2.0	1.4
14.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	3.0	1.1	2.0	1.4
15.....	1.6	1.4	.65	1.65	1.7	1.65	1.4	1.4	2.0	1.1	1.2	1.4
16.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	2.0	1.1	1.8	1.4
17.....	1.6	1.6	.65	1.65	1.7	1.65	1.4	1.4	2.0	3.5	1.8	1.4
18.....	1.6	1.7	.65	1.65	1.7	1.65	1.4	1.4	1.3	2.0	1.5	1.4
19.....	1.6	1.65	.65	1.65	1.7	1.65	1.4	1.4	3.0	3.0	1.5	1.4
20.....	1.6	1.65	.65	1.65	1.7	1.65	1.4	1.4	2.0	2.0	1.7	1.4
21.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	1.7	2.5	1.9	1.4
22.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	4.0	2.5	1.8	1.4
23.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	1.9	2.0	1.2	1.4
24.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	1.4	2.0	1.6	1.4
25.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	1.4	2.0	1.8	1.4
26.....	1.6	1.65	.65	1.65	1.6	1.6	1.4	1.4	1.3	1.5	1.6	1.4
27.....	1.65	1.65	.65	1.65	1.6	1.55	1.4	1.4	1.2	1.2	1.6	1.4
28.....	1.65	1.65	.65	1.65	1.6	1.55	1.4	1.4	1.2	1.2	1.6	4.0
29.....	1.65	1.65	.65	1.65	1.6	1.55	1.4	1.4	1.1	1.2	1.6	13.0
30.....	1.65	1.65	.65	1.65	.....	1.55	1.4	1.4	1.4	1.3	1.6	23.0
31.....	1.65	.....	.65	1.65	.....	1.55	.....	1.4	.....	1.3	1.6	.....
1904-5.												
1.....	6.0	.7	.5	.5	.5	1.5	1.0	1.5	2.6	1.5	1.2	.7
2.....	3.0	.7	.5	.5	.5	1.6	1.0	2.5	2.1	1.5	3.0	.7
3.....	3.0	.7	.5	.5	.5	2.0	1.0	2.5	2.0	1.5	2.5	.7
4.....	2.0	.7	.5	.5	.5	2.0	1.0	2.5	3.05	1.0	2.5	1.5
5.....	2.0	.7	.5	.5	.5	2.5	1.0	2.5	2.2	.9	2.0	1.5
6.....	2.0	.6	.5	.5	.5	3.0	1.0	2.5	2.1	.8	2.0	1.0
7.....	2.0	.6	.5	.5	.5	3.0	1.0	3.0	1.9	.8	1.5	.9
8.....	2.0	.6	.5	.5	.6	2.0	1.5	2.5	2.0	.8	1.5	.9
9.....	2.0	.6	.5	.5	.6	2.0	1.5	2.5	3.0	.8	1.5	.9
10.....	2.0	.6	.5	.5	.6	2.0	1.5	2.5	2.3	.8	1.5	.9
11.....	2.0	.6	.5	.5	.6	2.0	2.5	2.5	2.0	.7	1.5	.9
12.....	2.0	.6	.5	.5	.6	1.5	2.5	2.5	2.5	.7	2.5	1.3
13.....	2.0	.6	.5	.5	.6	1.5	1.5	2.5	2.5	.7	2.0	1.0
14.....	2.0	.6	.5	.5	.6	1.5	1.5	3.0	2.0	.7	1.5	1.0
15.....	2.0	.6	.5	.4	.6	1.4	1.5	2.5	1.7	.7	1.5	1.0
16.....	2.0	.6	.5	.4	.6	1.4	1.5	2.5	1.7	.7	1.5	1.0
17.....	2.0	.6	.5	.4	.6	1.4	1.5	2.5	1.0	.7	1.0	.8
18.....	1.5	.6	.5	.4	.6	1.4	1.5	2.5	1.0	.7	.9	.8
19.....	1.5	.6	.5	.4	.6	1.4	1.5	2.5	1.0	.7	.8	.8
20.....	1.5	.6	.5	.4	.8	1.4	1.5	2.5	1.0	.7	.7	.7
21.....	1.4	.6	.5	.4	.8	1.4	1.5	2.5	1.0	.9	.7	.7
22.....	1.4	.6	.5	.4	1.0	1.4	1.5	2.5	1.0	2.5	.7	.7
23.....	1.3	.6	.5	.4	1.5	1.4	3.5	2.5	1.0	1.5	.7	.7
24.....	1.0	.6	.5	.4	1.5	1.4	3.0	2.8	1.0	1.5	.7	.7
25.....	.9	.6	.5	.4	3.0	1.4	3.0	3.0	1.0	1.5	.7	.7
26.....	.9	.5	.5	.4	1.5	1.4	2.5	2.5	1.5	1.0	.7	.7
27.....	.9	.5	.5	.4	1.5	1.4	2.5	2.5	1.5	1.0	.7	.7
28.....	.9	.5	.5	.4	1.5	1.4	2.5	2.5	1.5	1.0	.7	.7
29.....	.8	.5	.5	.5	.....	1.4	2.5	2.5	1.5	1.0	.7	.7
30.....	.8	.5	.5	.5	.....	1.4	3.0	2.5	1.5	1.0	.7	.7
31.....	.7	.....	.5	.5	.....	1.4	.....	2.0	.....	1.0	.7	.....

Daily gage height, in feet, of Pecos River at Santa Rosa, N. Mex., for 1903-1906, 1910-11, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	0.7	0.8	1.5	0.6	0.6	0.6	1.6	1.9	2.0	0.8	1.7	0.9
2.....	.7	.8	1.0	.6	.6	.5	1.6	1.9	2.0	.8	1.4	.95
3.....	.7	.8	1.0	.6	.6	.5	1.6	1.9	2.0	2.5	2.3	.95
4.....	.7	.8	1.0	.6	.6	.6	1.6	2.0	2.0	1.5	1.4	.95
5.....	.7	.8	.8	.6	.6	.5	1.7	2.0	2.0	1.3	1.6	.85
6.....	.7	.8	.8	.6	.6	.5	1.7	2.0	2.0	.8	1.7	1.3
7.....	.7	.9	.8	.6	.6	.5	1.7	2.0	1.9	1.5	1.9	1.1
8.....	.7	.8	.8	.6	.5	.5	1.7	2.0	1.9	1.5	1.6	.95
9.....	.8	1.0	.8	.6	.5	.5	1.7	2.0	2.0	1.5	3.6	.85
10.....	.8	1.1	.8	.6	.5	.5	1.6	2.3	2.0	2.0	1.6	.85
11.....	.8	.9	.8	.6	.6	.5	1.7	2.5	2.0	3.0	1.7	.85
12.....	.8	.9	.8	.6	.6	.5	1.8	2.5	2.0	2.0	1.4	.85
13.....	.8	.9	.8	.6	.6	.5	1.9	2.5	4.5	2.0	1.4	.85
14.....	.8	.9	.9	.6	.6	.5	1.8	2.3	2.0	1.3	1.3	.85
15.....	.8	.9	.8	.6	.6	.5	1.8	2.2	2.0	1.3	1.2	.9
16.....	.8	.9	.6	.6	.6	.5	1.7	2.2	2.0	1.3	1.0	.85
17.....	.8	.9	.6	.6	.6	.5	1.8	2.3	2.0	2.0	.95	.85
18.....	.8	.9	.6	.6	.6	.5	1.8	2.2	2.0	3.0	.9	.9
19.....	.8	.9	.5	.6	.6	.5	1.8	2.2	1.8	2.0	.9	.9
20.....	.8	.9	.5	.6	.6	.5	1.9	2.2	1.8	2.0	.85	.85
21.....	.8	.9	.5	.6	.6	.5	2.1	2.2	1.6	1.7	.85	.85
22.....	.8	.9	.5	.6	.6	.5	2.0	2.2	1.6	1.4	.85	.85
23.....	.8	4.0	.5	.6	.6	.5	2.0	2.2	1.2	2.5	.9	.85
24.....	.8	2.5	.5	.6	.6	.5	2.0	2.0	1.2	1.5	.9	.85
25.....	.8	1.5	.6	.6	.5	.5	2.2	2.0	1.0	1.5	.9	.85
26.....	.8	1.5	.6	.6	.5	.5	2.2	2.0	1.2	1.2	.95	.95
27.....	.8	3.0	.6	.6	.6	.5	2.0	2.0	1.0	1.1	.95	1.1
28.....	.8	1.0	.6	.6	.6	.5	2.0	2.0	.8	1.3	.95	1.0
29.....	.8	2.0	.6	.6	.....	.5	2.0	2.0	.6	1.2	.95	1.3
30.....	.8	1.6	.6	.6	.....	1.1	2.0	2.0	.6	1.2	.95	1.2
31.....	.8	.....	.6	.6	.....	1.1	.....	2.0	.....	2.0	.9	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1906.											
1.....	1.3	1.1	1.5	11.....	1.2	1.2	1.7	21.....	0.9	1.2	0.85
2.....	1.1	1.2	1.4	12.....	1.2	1.2	1.5	22.....	.85	1.2	.85
3.....	1.0	1.2	1.5	13.....	1.1	1.2	1.5	23.....	.85	1.2	1.0
4.....	1.0	1.2	1.4	14.....	1.1	1.1	1.4	24.....	.85	1.2	.9
5.....	1.0	1.2	1.4	15.....	1.1	1.1	1.4	25.....	1.1	1.2	.9
6.....	1.4	1.3	2.5	16.....	1.0	1.1	1.4	26.....	1.1	1.1	.9
7.....	1.5	1.3	2.1	17.....	1.1	1.1	1.3	27.....	.9	1.2	.85
8.....	1.4	1.2	1.9	18.....	1.1	1.1	.9	28.....	.85	1.3	.85
9.....	1.3	1.2	1.7	19.....	1.1	.85	.85	29.....	1.0	1.2	.85
10.....	1.2	1.2	1.6	20.....	1.0	.85	.85	30.....	1.1	1.3	.85
								31.....	1.1	.....	.85

Daily gage height, in feet, of Pecos River at Santa Rosa, N. Mex., for 1903-1906, 1910-11, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.....					1.35	1.4	1.65	2.3	1.9	1.6	1.65	0.9
2.....						1.45	1.7	2.3	1.9	1.45	1.75	1.35
3.....					1.4	1.45	1.6	2.3	1.95	1.35	1.65	.8
4.....					1.5	1.45	1.55	2.25	2.2	1.4	1.7	.75
5.....					1.5	1.45	1.45	2.25	2.2	1.3	1.95	.....
6.....					1.4	1.45	1.45	2.25	2.1	1.35	2.45	.....
7.....					1.4	1.45	1.45	2.2	2.0	1.35	2.05	.5
8.....					1.4	1.45	1.45	2.35	1.9	1.4	1.8	.55
9.....					1.5	1.5	1.5	2.35	1.9	1.35	3.1	.5
10.....					1.5	1.45	1.45	2.45	1.85	1.3	5.15	.7
11.....					1.45	1.5	1.45	2.3	1.8	1.35	4.15	.6
12.....					1.45	1.45	1.55	2.35	1.8	1.5	3.0	.65
13.....					1.4	1.5	1.55	2.4	1.8	1.35	3.6	.6
14.....					1.5	1.45	1.55	2.45	1.8	1.35	3.3	1.15
15.....					1.4	1.45	1.65	2.4	3.1	1.7	3.35	1.35
16.....					1.4	1.5	1.85	2.45	2.2	1.55	1.8	1.10
17.....					1.45	1.5	1.90	2.4	1.95	1.45	1.5	.75
18.....					1.5	1.6	1.85	2.5	1.75	1.5	4.85	.65
19.....					1.5	1.6	1.8	2.35	1.6	1.45	2.85	.5
20.....					1.5	1.6	1.85	2.35	1.45	1.5	1.6	.65
21.....					1.45	1.55	1.95	2.2	1.4	1.4	1.25	.6
22.....					1.45	1.55	2.05	2.25	1.4	1.4	1.0	.65
23.....					1.4	1.55	2.1	2.2	1.3	1.55	1.3	.6
24.....					1.45	1.6	1.95	2.25	1.35	1.4	1.75	.65
25.....					1.45	1.6	2.05	2.15	1.3	1.85	1.55	.6
26.....					1.5	1.6	2.15	2.15	1.3	1.6	1.1	.7
27.....					1.45	1.75	2.15	2.05	1.3	1.4	.8	.5
28.....					1.45	1.80	2.05	2.0	1.3	1.5	.65	.65
29.....						1.75	2.15	2.0	1.95	1.55	.65	1.0
30.....						1.75	2.25	1.95	2.2	1.6	.65	1.35
31.....						1.7	.....	1.9	.....	1.5	.85	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	
1910-11.											
1.....			0.65	0.65	0.65	0.56	0.66	0.56	1.34	2.40	1.45
2.....			.65	.6	.78	.54	.72	.60	1.50	2.90	1.40
3.....			.55	.55	.80	.54	.69	.58	1.46	2.00	2.50
4.....			.6	.6	.65	.54	.62	.61	1.38	1.75	2.25
5.....			.7	.65	.62	.56	.59	.54	1.19	1.70	2.10
6.....			.7	.65	.65	.49	.64	.76	1.26	1.80	2.25
7.....			.7	.65	.72	.54	.64	.84	1.60	1.70	2.35
8.....			.7	.7	.72	.54	.54	.76	1.56	1.65	3.15
9.....			.6	.65	.62	.52	.55	.82	1.71	1.55	2.05
10.....	0.65	.65	.65	.62	.54	.64	.83	1.75	1.70	3.20	
11.....	.7	.6	.65	.70	.54	.55	.97	1.75	1.55	2.60	
12.....	.7	.65	.65	.60	.56	.64	.90	2.15	1.55	2.55	
13.....	.65	.6	.7	.62	.56	.59	.82	2.90	1.50	2.40	
14.....	.65	.6	.75	.66	.52	.58	.83	3.50	1.40	2.25	
15.....	.65	.7	.7	.62	.58	.62	.69	2.55	1.40	2.10	
16.....	.6	.75	.6	.64	.64	.64	.76	1.85	1.40	2.40	
17.....	.55	.7	.65	.64	.63	.62	.78	1.85	1.15	2.40	
18.....	.55	.7	.65	.68	.62	.54	.72	1.80	1.10	2.70	
19.....	.7	.7	.7	.62	.74	.56	.69	1.70	1.10	2.45	
20.....	.75	.55	.65	.66	.76	.64	.70	1.60	3.40	2.65	
21.....	.55	.6	.6	.64	.74	.56	.90	1.95	1.85	6.80	
22.....	.55	.55	.65	.65	.70	.62	.82	1.90	2.65	2.40	
23.....	.6	.6	.6	.65	.73	.68	.92	1.80	2.15	2.35	
24.....	.55	.65	.65	.62	.62	.69	.90	1.60	1.65	2.34	
25.....	.6	.65	.65	.65	.74	.65	1.40	1.40	1.65	2.09	
26.....	.5	.6	.65	.63	.66	.66	1.30	1.40	1.45	1.99	
27.....	.6	.65	.65	.66	.66	.60	1.12	1.35	1.45	2.69	
28.....	.6	.6	.7	.65	.69	.56	1.13	1.55	1.30	1.79	
29.....	.5	.7	.7	.65	.....	.56	1.15	2.95	1.45	2.14
30.....	.65	.6	.7	.58	.....	.64	1.10	3.20	1.80	2.14
31.....	.6	.....	.6	.59	.....	.60	.....	2.20	.....	2.04

Daily gage height, in feet, of Pecos River at Santa Rosa, N. Mex., for 1903-1906, 1910-11, 1912-13—Continued.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1.....		1.85	1.98	1.95	2.00	2.02	1.98	2.00	2.45	2.25	2.26	1.40	1.55
2.....		1.75	1.95	1.99	2.00	2.00	1.93	2.00	2.49	2.25	2.07	1.40	1.54
3.....		1.90	1.98	1.95	2.00	2.00	1.93	2.01	2.48	2.27	1.95	1.45	1.44
4.....		1.85	2.00	1.95	2.08	2.01	2.02	2.00	2.55	2.22	1.95	1.38	1.52
5.....		1.90	1.95	1.96	1.98	2.12	1.98	1.94	2.55	2.85	1.87	1.31	1.49
6.....		1.85	1.92	2.00	2.05	2.00	2.03	1.96	2.45	2.18	1.77	1.31	1.48
7.....		1.80	1.92	1.98	2.20	2.02	2.00	1.93	2.48	2.15	1.96	1.58	1.40
8.....		1.80	1.98	2.00	2.20	2.03	2.08	1.95	2.45	2.20	1.92	1.38	1.50
9.....		1.80	2.00	2.05	2.20	2.18	2.03	1.90	2.55	2.80	1.72	1.34	1.48
10.....		1.80	2.00	2.05	2.20	2.08	2.03	1.94	2.48	3.85	1.66	1.40	1.52
11.....		1.80	1.95	1.99	2.05	2.08	2.06	1.98	2.50	3.20	1.69	1.36	1.50
12.....		1.90	1.98	2.00	2.40	1.97	2.03	2.00	2.44	5.95	1.93	1.38	2.05
13.....		1.90	2.00	1.99	2.15	2.05	2.13	1.95	2.50	3.65	1.73	1.35	2.00
14.....		1.95	1.95	1.90	2.05	1.95	2.02	1.94	2.55	3.00	1.48	1.36	1.72
15.....		1.95	1.98	1.90	2.02	2.07	2.00	1.96	2.48	2.70	1.41	1.35	1.59
16.....		1.86	1.95	2.00	2.01	2.06	2.02	1.94	2.50	2.60	1.41	1.40	1.52
17.....		1.89	1.95	1.98	2.00	2.06	2.00	1.92	2.50	2.48	1.34	1.38	1.60
18.....		1.94	1.92	2.00	2.10	2.04	2.08	1.95	2.50	2.28	1.32	1.38	1.50
19.....		1.82	2.00	1.98	2.05	2.01	2.01	1.94	2.38	3.43	1.32	1.42	1.52
20.....		1.82	1.94	1.98	1.85	1.95	2.08	2.16	2.43	3.83	1.37	1.38	1.52
21.....	1.80	1.84	1.98	1.95	2.05	1.95	2.01	2.22	2.37	2.83	2.24	1.38	1.55
22.....	1.70	1.95	1.98	1.90	2.00	1.95	2.02	2.58	2.30	2.42	1.93	1.62	1.52
23.....	1.70	1.95	2.00	2.10	2.00	2.05	1.95	2.45	2.28	2.52	1.71	2.10	1.50
24.....	1.75	1.85	2.00	2.10	2.05	2.02	1.96	2.39	2.28	2.29	1.66	2.20	1.62
25.....	1.75	1.85	2.00	1.95	2.08	2.02	1.95	2.69	2.28	2.12	1.91	2.28	1.70
26.....	1.70	1.95	1.98	2.05	2.05	1.99	2.02	2.36	2.23	2.05	2.03	2.05	1.65
27.....	1.75	1.92	2.02	2.00	1.95	2.04	2.04	2.53	2.23	1.94	1.85	2.00	2.05
28.....	1.75	1.92	2.00	2.00	2.04	1.98	2.02	2.27	2.25	2.16	1.75	2.00	1.82
29.....	1.80	1.95	2.05	2.00	1.98	.....	1.94	2.25	2.19	6.06	1.56	1.85	1.85
30.....	1.90	1.90	1.94	2.00	2.00	.....	1.99	2.23	2.19	2.71	1.46	1.68	1.88
31.....	1.92	1.92	.....	2.00	1.98	.....	1.96	.....	2.29	.....	1.30	1.65	.....

NOTE.—Gage heights affected by ice Jan. 1-13 1913.

Daily discharge, in second-feet, of Pecos River at Santa Rosa, N. Mex., for 1906, 1910-11, 1912-13.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906.												
1.....	14	14	14	250	425	423	12	320	15	88	36	160
2.....	14	14	10	250	425	423	12	160	18	36	58	120
3.....	14	14	10	250	425	423	950	740	18	22	58	160
4.....	14	14	14	250	480	460	245	165	18	22	58	120
5.....	14	14	10	288	480	460	145	260	13	22	58	120
6.....	14	14	10	288	480	460	12	300	88	120	88	810
7.....	14	14	10	288	480	395	245	425	36	160	88	520
8.....	14	10	10	288	480	395	245	240	18	120	58	380
9.....	14	10	10	288	480	460	245	1,750	13	88	58	260
10.....	14	10	10	250	700	460	570	240	13	58	58	205
11.....	14	14	10	288	830	490	1,370	280	13	58	58	260
12.....	14	14	10	325	830	490	570	128	13	58	58	160
13.....	14	14	10	370	830	2,470	570	128	13	36	58	160
14.....	14	14	10	325	680	490	145	88	13	36	36	120
15.....	14	14	10	325	603	490	145	58	15	36	36	120
16.....	14	14	10	275	603	490	145	22	13	22	36	120
17.....	14	14	10	335	680	490	570	18	13	36	36	88
18.....	14	14	10	335	603	530	1,370	15	15	36	36	15
19.....	14	14	10	335	585	390	570	15	15	36	13	13
20.....	14	14	10	410	585	390	570	13	13	22	13	13
21.....	14	14	10	550	585	270	365	13	13	15	58	13
22.....	14	14	10	475	585	270	195	13	13	13	58	13
23.....	14	14	10	475	585	80	950	15	13	13	58	22
24.....	14	14	10	485	440	80	245	15	13	13	58	15
25.....	14	10	10	620	440	32	245	15	13	36	58	15
26.....	14	10	10	620	440	100	100	18	18	36	36	15
27.....	14	14	10	485	423	32	50	18	36	15	58	13
28.....	14	14	10	495	423	12	125	18	22	13	88	13
29.....	14	.....	10	495	423	6	85	18	88	22	58	13
30.....	14	.....	85	495	423	6	85	18	58	36	88	13
31.....	14	.....	85	.....	423	.....	535	15	.....	36	.....	13

Daily discharge, in second-feet, of Pecos River at Santa Rosa, N. Mex., for 1906, 1910-11, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.					13	10	30	180	100	58	60	48
2.					13	15	35	180	105	30	85	192
3.					13	15	20	180	125	15	60	30
4.					30	15	13	205	245	22	70	23
5.					30	15	5	205	250	10	150	16
6.					15	13	5	205	200	15	440	10
7.					15	13	5	175	160	15	200	6
8.					15	13	5	200	125	20	100	9
9.					30	18	9	210	125	15	1,730	6
10.					30	10	9	270	110	10	1,790	16
11.					20	18	9	295	100	13	3,300	10
12.					20	10	13	225	100	35	1,610	13
13.					15	18	12	255	110	12	2,500	10
14.					28	10	12	290	110	12	1,970	112
15.					13	10	25	265	1,010	75	2,040	192
16.					13	15	60	300	300	43	465	95
17.					20	15	70	280	170	25	270	23
18.					25	30	60	340	100	35	4,300	13
19.					25	28	50	260	65	25	1,440	6
20.					25	28	60	265	30	35	330	13
21.					20	20	80	240	25	20	150	10
22.					20	20	100	220	25	20	70	13
23.					10	20	120	195	10	43	170	10
24.					18	25	75	225	15	20	430	13
25.					18	25	100	175	10	120	300	10
26.					23	25	125	180	10	55	95	16
27.					18	50	125	140	10	20	30	6
28.					18	60	90	125	10	35	13	13
29.						48	125	130	170	43	13	70
30.						48	160	110	300	52	13	192
31.						40		100		35	39	
1910-11.												
1.	13	13	13	15	11	16	11	155	780	146		
2.	13	13	10	27	10	20	12	230	1,260	127		
3.	13	8	8	29	10	17	11	210	460	870		
4.	13	10	10	15	10	13	13	175	290	655		
5.	13	16	13	13	11	12	10	62	260	535		
6.	13	16	13	15	8.8	14	25	110	320	655		
7.	13	16	13	20	10	14	36	250	260	738		
8.	13	16	16	20	10	10	25	230	235	1,540		
9.	13	10	13	13	9.6	10	32	320	188	498		
10.	13	13	13	12	10	14	34	315	260	1,600		
11.	16	10	13	18	10	10	63	315	188	965		
12.	16	13	13	12	11	14	46	600	188	918		
13.	13	10	16	13	11	12	32	1,300	165	780		
14.	13	10	23	16	9.6	11	34	1,960	127	655		
15.	13	16	16	13	11	13	17	918	127	535		
16.	10	16	10	14	14	14	25	352	127	780		
17.	8	16	13	14	14	13	27	352	57	780		
18.	8	16	13	17	13	10	20	320	46	1,060		
19.	16	16	16	13	22	11	17	260	46	825		
20.	23	8	13	16	25	14	18	210	1,840	1,010		
21.	8	10	10	14	22	11	46	422	352	6,080		
22.	8	8	13	15	18	13	32	385	1,010	780		
23.	10	10	10	15	21	17	51	320	575	738		
24.	8	10	13	13	13	17	46	210	235	729		
25.	10	13	13	15	22	15	200	127	235	528		
26.	6	10	13	14	16	16	155	127	146	452		
27.	10	13	13	16	16	12	95	111	146	1,050		
28.	10	10	16	15	17	11	97	188	95	314		
29.	6	16	16	15		11	105	1,320	146	567		
30.	13	10	16	11		14	75	1,600	320	567		
31.	10		10	12		12		615		490		

Daily discharge, in second-feet, of Pecos River at Santa Rosa, N. Mex., for 1906, 1910-11, 1912-13—Continued.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1.....		16	15	14	14	13	11	9.4	132	160	270	15	25
2.....		15	15	14	14	12	9.0	9.4	152	160	170	15	24
3.....		16	15	14	14	12	9.0	9.8	156	167	123	18	17
4.....		15	15	14	14	12	13	9.4	192	148	120	14	23
5.....		16	15	14	14	18	11	7.1	201	525	97	10	20
6.....		15	14	14	14	12	14	7.7	167	135	73	10	20
7.....		14	14	14	14	13	12	6.8	187	126	115	27	15
8.....		14	15	14	14	14	16	7.4	183	141	102	14	21
9.....		14	15	14	14	23	14	5.9	241	532	57	12	20
10.....		14	15	14	14	16	14	7.1	215	1,310	48	15	23
11.....		14	15	14	14	16	15	8.6	235	889	50	13	21
12.....		15	15	14	14	11	14	9.4	215	2,850	92	14	98
13.....		15	15	14	14	14	19	7.4	258	1,240	53	12	86
14.....		15	14	13	14	9.8	13	7.1	301	790	25	13	41
15.....		15	14	13	13	16	12	7.7	269	580	20	12	28
16.....		15	14	14	12	15	13	7.1	280	510	19	15	23
17.....		15	14	14	12	15	12	6.5	280	426	14	14	29
18.....		15	14	14	17	14	16	7.4	280	288	12	14	20
19.....		14	15	14	14	12	12	7.1	215	1,090	10	16	22
20.....		14	14	14	6.2	9.8	16	20	241	1,370	14	14	21
21.....	15	14	15	13	14	9.8	12	28	210	671	156	14	23
22.....	14	15	15	12	12	9.8	13	87	178	384	72	31	20
23.....	14	15	15	14	12	14	9.8	71	171	454	40	111	18
24.....	14	15	15	14	14	13	10	69	171	294	35	141	26
25.....	14	15	15	13	16	13	9.8	162	171	200	68	171	32
26.....	14	15	15	14	14	12	13	82	152	170	94	98	27
27.....	14	15	15	14	14	14	14	142	152	130	58	86	74
28.....	14	15	15	14	14	11	12	84	160	220	45	86	54
29.....	15	15	15	14	11	.....	7.1	91	138	2,930	26	58	44
30.....	16	15	14	14	12	.....	9.0	95	138	587	18	37	47
31.....	15	.....	.....	14	11	.....	7.7	.....	174	.....	10	34	.....

NOTE.—Daily discharges were determined by the indirect method for shifting channels, and from rating curves covering short periods of time. Discharge estimated on account of ice Jan. 1-13, 1913.

Monthly discharge of Pecos River at Santa Rosa, N. Mex., for 1906, 1910-11, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....	14	14	14.0	861	D.
February.....	14	10	13.3	739	D.
March.....	85	10	15.1	928	D.
April.....	620	250	374	22,300	C.
May.....	830	423	544	33,400	C.
June.....	2,470	6	399	23,700	C.
July.....	1,370	12	377	23,200	C.
August.....	1,750	13	179	11,000	D.
September.....	88	13	22.4	1,330	D.
October.....	160	13	43.9	2,700	D.
November.....	88	13	53.9	3,210	D.
December.....	810	13	132	8,120	D.
The year.....	2,470	6	181	131,000	
1910.					
February.....	30	13	19.8	1,100	B.
March.....	60	10	22.6	1,390	B.
April.....	160	5	53.6	3,190	B.
May.....	340	100	214	1,320	B.
June.....	1,010	10	141	8,390	B.
July.....	120	10	31.7	1,950	C.
August.....	4,300	13	782	48,100	D.
September.....	192	6	39.8	2,370	B.
The period.....	.....	.....	.....	67,800	

Monthly discharge of Pecos River at Santa Rosa, N. Mex., for 1906, 1910-11, 1912-13—Con.

Month.	Discharge in second-feet.			Run-off total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
1910-11.					
October.....	23	6	11.8	726	D.
November.....	16	8	12.4	738	B.
December.....	23	8	13.3	818	B.
January.....	29	11	15.5	953	B.
February.....	25	8.8	13.8	766	B.
March.....	20	10	13.3	818	B.
April.....	200	10	47.0	2,800	B.
May.....	1,960	62	454	27,900	B.
June.....	1,840	46	349	20,800	B.
July.....	6,080	127	902	55,500	B.
The period.....				112,000	
1912-13.					
October.....	16	14	11.8	910	C.
November.....	15	14	14.7	875	C.
December.....	14	13	13.8	848	C.
January.....	17	6.2	13.2	812	C.
February.....	23	9.8	13.4	744	B.
March.....	19	7.1	12.3	756	B.
April.....	162	5.9	36.0	2,140	C.
May.....	301	132	200	12,300	B.
June.....	2,930	126	649	38,600	B.
July.....	270	10	67.9	4,180	C.
August.....	171	10	37.2	2,290	B.
September.....	98	15	32.1	1,910	B.
The year.....	2,930	6.2	92.0	66,400	

PECOS RIVER NEAR GUADALUPE, N. MEX.

Location.—17 miles northwest of Fort Sumner, 8 miles above Guadalupe post office, 4 miles west of Fort Sumner-Santa Rosa road, 500 feet below the mouth of Alamo Gordo Creek, half a mile above the Alamo dam site, in sec. 34, T. 5 N., R. 24 E.

Records available.—October 11, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Shifting.

Discharge measurements.—Wading during low water and from a cable during high stages.

Winter flow.—Slight ice effect during the winter months.

Diversions.—Large portion of the water is diverted for irrigation above the station.

Accuracy.—The daily estimates of discharge made in 1912 can only be considered fair, but those of 1913 may be considered good.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Pecos River near Guadalupe, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 11	Gray and Emerson.....	0.70	75.8	June 14	C. J. Emerson.....	2.89	1,520
Nov. 23	C. J. Emerson.....	.78	81.8	30	do.....	2.98	1,660
				30	do.....	2.67	1,400
1913				July 2	do.....	1.56	401
Jan. 10 ^a	C. J. Emerson.....	1.10	78.6	9	do.....	.99	166
Feb. 1	do.....	.68	91.2	15	do.....	.73	86.8
Mar. 2	do.....	.68	68.2	22	do.....	1.47	369
31	do.....	.62	72.6	30	do.....	.83	94.6
Apr. 28	do.....	.97	134	Aug. 18	do.....	.63	70.7
May 31	do.....	.77	101	23	do.....	1.00	137
June 11	do.....	2.74	1,430	27	do.....	1.05	180
13	do.....	3.66	2,660	Sept. 26	do.....	.83	118
13	do.....	4.21	3,960				

^aIce present.

Daily gage height, in feet, of Pecos River near Guadalupe, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1		0.76			0.68		0.63	0.85	0.91	1.92	0.69	0.83
2		.77				0.68	.63	.95	.86	1.56	.67	.77
3		.77					.63	1.03	.81	1.43	.64	.74
4		.77					.69	.61	1.14	.84	1.36	.63
5		.77					.68	.64	1.11	1.32	1.31	.62
6		.78					.69	.66	1.07	1.29	1.25	.62
7		.78					.67	.66	1.00	1.13	1.20	.66
8		.78		1.20			.67	.65	.96	1.99	1.26	.69
9		.78			.70		.67	.65	.97	1.97	1.06	.62
10		.78		1.10			.68	.66	.97	1.85	.88	.89
11	0.69	.80					.68	.63	.99	3.00	.82	.77
12	.70	.80					.70	.65	.99	4.60	.85	.75
13	.70	.80					.71	.63	.97	4.16	.96	1.10
14	.70	.80					.58	.62	1.07	2.83	.78	.94
15	.72	.80			.75		.69	.62	1.12	2.61	.73	.83
16	.72	.80					.69	.62	1.10	2.19	.65	.78
17	.68	.80					.69	.60	1.06	2.04	.54	.76
18	.67	.80		1.60			.65	.61	1.03	2.14	.52	.75
19	.69	.80					.65	.61	.98	2.99	.57	.74
20	.70	.80						.63	.94	3.68	.88	.70
21	.70	.80						1.13	.95		1.18	.66
22	.71	.80			.70		.60	1.48	.91		1.36	1.28
23	.72	.78					.63	1.31	.92		1.10	1.16
24	.73						.58	1.12	.92		1.03	1.05
25	.73			.75			.59	1.11	.85		1.09	1.28
26	.75						.60	1.14	.83		1.07	1.18
27	.76						.63	1.09	.80	1.50	1.06	1.04
28	.76						.62	.97	.80	1.50	1.27	.97
29	.76						.62	.88	.81	2.98	1.51	.98
30	.76						.62	.84	.77	2.91	.85	.90
31	.77						.62		.77		.76	.80

NOTE.—Gage height affected by ice Jan. 1-18, 1913.

Daily discharge, in second-feet, of Pecos River near Guadalupe, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1		80		80	91	68	74	108	135	656	74	114
2		81		80	91	68	74	132	121	402	71	101
3		81		80	91	68	74	156	110	333	67	95
4		81		80	90	70	70	195	117	300	67	92
5		81		79	90	70	74	183	300	279	66	86
6		82		79	89	71	77	173	279	255	66	83
7		82		79	89	68	77	149	207	237	71	78
8		82		79	88	70	75	138	709	269	77	94
9		82		79	88	70	75	141	694	191	67	143
10		82		79	88	71	75	141	606	129	114	112
11	75	84		79	89	73	71	149	1,700	112	99	103
12	76	84		79	89	75	74	149	5,120	117	71	99
13	76	84		79	90	76	71	143	3,810	143	61	203
14	76	84		79	91	62	70	176	1,510	97	57	146
15	77	84		79	92	75	70	195	1,280	86	60	116
16	77	84		90	90	75	70	191	881	74	63	108
17	74	84		90	88	77	66	176	750	61	67	103
18	74	84		90	86	71	67	166	836	59	73	101
19	75	84		90	84	71	67	149	1,690	65	75	99
20	76	84		90	82	70	70	138	2,680	119	77	92
21	76	84		92	80	68	191	143	1,490	219	77	85
22	77	84		92	78	66	362	140	1,060	305	246	81
23	77	82		92	76	71	269	135	942	183	191	78
24	78	80		95	74	65	183	135	942	159	159	90
25	78	80		95	72	66	180	117	634	176	260	106
26	80	80		95	70	68	191	114	540	169	223	116
27	80	80		95	68	73	173	108	379	163	176	114
28	80	80		92	68	71	135	108	379	241	152	149
29	80	80		92		73	112	110	1,680	362	156	121
30	80	80		91		73	103	101	1,600	99	132	116
31	81			91		73		101		85	108	

NOTE.—Discharge determined by the indirect method for shifting channels and from a well defined curve. Discharge estimated or interpolated on days for which gage heights are missing.

Monthly discharge of Pecos River near Guadalupe, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 11-31.....	81	74	77.3	3,220	B.
November.....	84	80	82.1	4,890	C.
December.....	a 80.0			4,920	D.
January.....	95	79	85.8	5,280	C.
February.....	92	68	84.4	4,690	C.
March.....	77	62	68.4	4,210	B.
April.....	362	66	111	6,600	B.
May.....	195	101	144	8,850	B.
June.....	5,120	110	1,110	66,000	B.
July.....	656	59	198	12,200	B.
August.....	290	57	107	6,580	B.
September.....	203	78	107	6,370	B.
The period.....				134,000	

a Estimated.

PECOS RIVER NEAR FORT SUMNER, N. MEX.

Location.—At Arinosa, 4 miles northwest of Fort Sumner and 3½ miles above the Atchison, Topeka & Santa Fe Railway bridge, in sec. 12, T. 3 N., R. 25 E. The nearest tributary is an arroyo entering from the west a short distance below.

Records available.—June 12, 1904, to February 28, 1910; September 16, 1912, to September 30, 1913.

Drainage area.—Approximately 5,300 square miles.

Gage.—Original gage, a vertical staff. On July 5, 1905, an inclined staff was established at the present location, 1 mile downstream. The datum of the latter gage has remained unchanged.

Channel.—Very shifting.

Discharge measurements.—Prior to 1912, flood discharge was measured by floats and estimates from slope measurements, using Kutter's formula. Low-water measurements were made by wading. Since 1912 high-water measurements have been made from car and cable.

Winter flow.—Slush ice sometimes forms at the station and thin ice forms along the edges of the river, but results are not greatly affected by ice.

Accuracy.—Owing to the very shifting channel, the estimates can only be considered approximate except those for 1910, 1912, and 1913, which are fair.

Cooperation.—During 1912 and 1913, station maintained in cooperation with the State engineer.

Discharge measurements of Pecos River near Fort Sumner, N. Mex., in 1904-1910, 1912-13.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 14	E. Patterson.....	3.30	313	July 1 ^a	E. Patterson.....	4.40	2,520
14	do.....	3.20	276	1 ^a	do.....	4.50	2,660
16	do.....	3.10	144	1 ^a	do.....	4.60	3,050
16 ^a	do.....	4.00	1,270	2 ^a	do.....	5.20	5,080
16 ^a	do.....	4.30	2,180	2 ^a	do.....	4.90	3,890
20	do.....	2.85	84	2 ^a	do.....	4.55	2,940
21	do.....	2.80	330	2 ^a	do.....	3.90	1,420
21 ^a	do.....	3.80	1,120	3	do.....	3.35	528
22 ^a	do.....	5.30	4,990	4	do.....	3.30	395
23 ^a	do.....	4.10	1,670	5	do.....	3.05	225
23	do.....	3.10	302	6	do.....	2.80	139
24	do.....	3.00	222	15	do.....	2.40	62
27	do.....	2.50	92	17	do.....	2.40	61
29	do.....	2.40	76	Oct. 15 ^b	do.....	17.95	45,200
July 1	do.....	2.60	106	15	do.....	1.40	761

a Float measurement.

b Computed from slope measurements, using Kutter's formula.

Discharge measurements of Pecos River near Fort Sumner, N. Mex., in 1904-1910, 1912-13—Continued.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 4	E. Patterson	1.40	107	Apr. 20	R. L. Cooper	2.30	287
July 6	do.	1.30	86	Aug. 8	do.	2.70	630
Aug. 22	Giles and Patterson	1.40	85	Nov. 5	do.	2.25	102
Oct. 9	E. Patterson	1.45	92				
Nov. 18	do.	1.50	95	1909.			
(a)	J. M. Giles	2.00	352	Jan. 29	J. B. Stewart	2.20	91
(a)	do.	3.00	1,090	Apr. 14	do.	2.25	70
(a)	do.	4.00	2,070	June 1	do.	2.52	126
				30	do.	2.33	66
1906.				July 20	W. H. Sutton	2.05	89
Mar. 11	E. Patterson	1.68	84	Aug. 25	do.	2.45	389
27	do.	1.60	81	Sept. 5	J. B. Stewart	2.70	400
Apr. 10	do.	1.94	309	Oct. 20	W. B. Freeman	2.46	95
May 9	do.	2.25	628	Dec. 7	G. H. Russell	2.76	50
17	do.	2.13	596				
31	do.	2.05	462	1910.			
June 8	do.	2.04	374	Feb. 4	J. B. Stewart	2.75	130
19	do.	2.00	299	Mar. 11	G. H. Russell	2.60	83
29	do.	1.65	85				
July 6	do.	1.81	209	1912.			
7	J. M. Giles	1.74	182	Sept. 16	C. J. Emerson	2.71	114
9	do.	2.55	2,140	24	do.	2.75	72.8
9	do.	2.65	2,650	Oct. 12	Gray and Emerson	2.84	89.8
9	do.	2.40	1,970	Nov. 25	C. J. Emerson	3.00	82.0
10	do.	2.30	1,480				
25	do.	2.10	320	1913.			
Aug. 11	do.	1.95	335	Jan. 7 ^b	C. J. Emerson	3.05	79.3
12	do.	2.05	400	30	do.	2.98	82.0
Sept. 11	W. A. Lamb	1.89	88	Mar. 1	do.	2.96	88.9
Oct. 23	do.	1.90	106	Apr. 2	do.	2.96	73.4
				29	do.	3.00	120
1907.				June 2	do.	3.18	142
Feb. 15	W. A. Lamb	2.10	93	12	do.	4.18	3,840
Mar. 4	do.	2.03	86	14	do.	3.65	1,530
Apr. 16	do.	2.20	390	July 1	do.	3.12	869
24	do.	2.20	365	10	do.	2.86	157
May 7	do.	2.40	633	23	do.	3.06	263
23	do.	2.35	483	25	do.	2.80	113
June 12	do.	2.45	593	Aug. 22	do.	2.86	86.5
22	do.	2.40	503	25	do.	3.31	336
Sept. 27	V. L. Sullivan	2.20	117	Sept. 27	do.	2.98	105
Dec. 23	do.	2.20	132				

^a Computed from slope measurements, using Kutter's formula.^b Ice present.

Daily gage height, in feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910 1912-13.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1904.					1904.				
1		3.60	3.25	1.70	16	4.00	2.50	1.50	1.60
2		4.70	3.20	1.65	17	3.20	2.40	1.70	1.60
3		3.37	4.25	3.15	18	2.97	2.80	1.90	1.60
4		3.30	3.80	1.70	19	2.92	5.50	1.90	1.60
5		3.07	3.70	1.75	20	2.85	3.60	1.75	1.60
6		2.77	3.70	1.65	21	3.32	3.20	1.65	1.60
7		2.60	3.10	1.60	22	4.90	4.52	2.40	1.70
8		2.50	3.75	1.50	23	3.77	3.10	2.20	1.70
9		2.40	2.70	1.50	24	3.05	3.55	2.15	1.70
10		2.40	3.80	1.50	25	2.62	3.37	1.85	1.90
11		2.40	2.55	1.50	26	2.50	3.27	1.75	1.80
12	3.00	3.20	1.95	1.60	27	2.50	3.70	1.70	1.70
13	3.12	2.55	1.80	1.60	28	2.45	3.30	1.60	2.85
14	3.25	2.40	1.65	2.20	29	2.40	3.07	1.60	1.40
15	3.25	2.40	1.50	1.65	30	2.40	2.90	1.60	4.50
					31	2.40	2.70	1.60	-----

Daily gage height, in feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.	4.2	0.5	0.2	0.4	0.3	2.95	1.3	2.3	2.3	1.4	1.8	1.4
2.	10.0	.5	.2	.4	.3	2.6	1.35	2.4	2.2	1.7	1.5	1.4
3.	2.7	.5	.2	.4	.3	2.25	1.3	2.45	2.25	1.55	2.0	1.4
4.	2.6	.4	.4	.4	.8	2.0	1.3	2.4	1.95	1.45	1.72	1.4
5.	1.65	.4	.4	.4	.8	.85	1.2	2.2	2.8	1.4	2.22	3.2
6.	2.2	.4	.4	.4	.8	.75	1.3	2.15	2.3	1.3	1.87	1.6
7.	1.5	.4	.4	.4	.8	.7	1.3	1.95	2.25	1.4	1.87	1.5
8.	1.3	.4	.4	.4	.9	1.1	1.2	2.05	2.1	1.35	2.15	1.6
9.	2.0	.3	.4	.4	.7	1.0	1.2	2.25	2.4	1.4	1.85	1.6
10.	2.65	.3	.4	.4	.6	1.25	1.2	2.3	2.45	1.4	1.77	1.5
11.	2.2	.3	.....	.4	.6	1.3	1.35	2.3	2.6	1.4	1.7	1.7
12.	1.85	.3	.....	.4	.6	1.2	1.6	2.2	2.35	1.4	1.9	1.5
13.	1.55	.3	.....	.4	.6	1.2	1.7	2.0	2.3	1.4	2.3	1.5
14.	1.7	.3	.....	.4	.6	1.2	1.4	2.05	2.35	1.4	1.77	1.45
15.	10.0	.3	.....	.4	.6	1.2	1.4	2.15	2.2	1.4	1.52	1.45
16.	1.2	.3	.....	.4	.6	1.2	1.5	2.2	2.1	1.35	1.5	1.4
17.	1.15	.3	.....	.4	.6	1.15	1.5	2.35	1.9	1.35	1.47	1.35
18.	1.05	.3	.....	.3	.6	1.1	1.45	2.4	1.8	1.35	1.42	1.3
19.	.9	.3	.....	.3	.6	1.0	1.75	2.55	1.9	1.35	1.42	1.35
20.	.9	.3	.....	.3	.5	.9	1.6	3.1	1.8	1.35	1.4	1.35
21.	.9	.3	.....	.3	.6	.8	1.7	2.95	1.8	1.4	1.4	1.3
22.	.85	.3	.....	.3	.7	1.1	1.7	2.5	1.9	2.1	1.4	1.3
23.	.8	.3	.....	.3	1.3	1.0	2.7	3.3	1.75	2.0	1.4	1.35
24.	.8	.3	.....	.4	1.55	.9	2.95	2.75	1.7	1.7	1.45	1.35
25.	.75	.3	.....	.4	1.2	.8	2.95	2.9	1.7	1.6	1.45	1.35
26.	.6	.3	.....	.4	1.05	.8	2.4	2.25	1.7	1.6	1.4	1.35
27.	.6	.2	.....	.4	.9	.9	2.2	2.25	1.6	1.6	1.4	1.35
28.	.6	.2	.....	.4	.9	.95	2.45	2.5	1.6	1.5	1.4	1.45
29.	.6	.2	.....	.4	.....	1.0	2.45	2.4	1.6	1.5	1.4	1.4
30.	.6	.2	.....	.3	.....	1.1	2.35	2.4	1.5	1.52	1.4	1.5
31.	.6	.....	.....	.3	.....	1.0	.....	2.3	.....	1.45	1.4	.....
1905-6.												
1.	1.4	1.55	1.75	2.40	1.70	1.65	1.80	1.95	2.05	1.70	2.10	1.92
2.	1.4	1.5	1.8	2.45	1.75	1.65	1.85	2.05	2.20	1.62	2.02	1.95
3.	1.4	1.55	1.75	2.50	1.75	1.60	1.80	1.95	2.05	2.25	2.12	1.95
4.	1.4	1.65	1.65	2.30	1.70	1.60	1.95	1.95	2.25	2.58	2.22	2.02
5.	1.4	1.55	1.65	2.20	1.75	1.65	1.95	2.05	2.10	1.92	2.28	2.00
6.	1.4	1.6	1.65	2.30	1.75	1.65	1.95	2.00	2.00	1.88	2.38	2.00
7.	1.4	1.6	1.75	2.35	1.75	1.65	1.95	2.05	2.10	1.72	2.05	1.92
8.	1.4	1.6	1.7	2.20	1.80	1.70	1.90	2.20	2.00	2.85	2.00	2.00
9.	1.45	1.7	1.65	2.05	1.80	1.70	1.90	2.00	2.00	2.62	2.48	1.95
10.	1.5	1.7	1.6	2.20	1.75	1.70	1.90	2.15	2.10	2.22	2.02	2.00
11.	1.5	1.7	1.75	1.85	1.75	1.70	1.95	2.20	2.10	1.92	1.98	1.92
12.	1.45	1.65	1.8	1.80	1.75	1.65	2.00	2.25	2.10	2.28	1.92	1.90
13.	1.45	1.6	1.95	1.70	1.80	1.65	2.05	2.30	2.35	2.18	1.90	1.98
14.	1.45	1.6	1.7	1.70	1.70	1.65	2.10	2.30	2.40	1.78	1.92	2.00
15.	1.45	1.55	1.75	1.70	1.70	1.70	2.10	2.25	2.05	1.92	1.90	2.00
16.	1.4	1.6	1.7	1.70	1.70	1.65	1.95	2.30	2.00	1.92	1.90	1.95
17.	1.45	1.55	1.7	1.70	1.70	1.60	1.95	2.15	2.00	1.68	1.90	1.92
18.	1.45	1.5	1.7	1.65	1.70	1.70	2.05	2.20	2.05	1.90	1.82	1.98
19.	1.4	1.5	1.75	1.60	1.75	1.70	2.00	2.15	2.00	2.02	1.80	1.95
20.	1.4	1.55	1.75	1.70	1.70	1.70	1.95	2.25	2.05	2.02	1.80	2.00
21.	1.4	1.6	1.7	1.70	1.65	1.75	2.00	2.30	2.00	1.92	1.80	2.00
22.	1.4	1.65	1.6	1.65	1.65	1.70	1.95	2.25	1.95	1.92	1.85	2.00
23.	1.45	2.2	1.5	1.75	1.65	1.70	2.05	2.25	1.90	2.02	1.92	2.65
24.	1.45	2.7	2.25	1.75	1.70	1.65	2.10	2.25	1.90	2.22	1.95	1.95
25.	1.5	2.1	1.95	1.75	1.70	1.65	2.05	2.20	1.85	2.10	2.02	1.90
26.	1.5	1.75	1.85	1.70	1.65	1.60	2.20	2.10	1.80	1.98	1.98	1.90
27.	1.5	1.6	1.85	1.70	1.65	1.60	2.10	2.00	1.80	2.00	1.90	2.00
28.	1.5	1.7	1.8	1.75	1.65	1.70	2.05	2.10	1.75	1.98	1.95	1.92
29.	1.5	1.85	1.8	1.75	.....	1.70	2.00	2.00	1.70	2.00	1.95	1.95
30.	1.6	2.1	1.75	1.80	.....	1.75	2.00	2.00	1.70	1.95	1.90	1.90
31.	1.55	.....	2.4	1.75	.....	1.80	.....	2.05	.....	1.90	1.92	.....

Daily gage height, in feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	2.00	1.92	2.10	1.92	2.02	2.10	2.05	2.35	2.32	2.18	2.42	2.38
2.....	2.02	1.95	2.02	1.90	2.02	2.10	2.02	2.40	2.32	2.12	2.15	2.35
3.....	2.05	1.95	2.00	1.90	2.02	2.15	2.05	2.25	2.45	2.10	2.32	2.40
4.....	1.98	1.95	2.02	1.95	2.00	2.05	2.20	2.35	2.35	2.10	2.48	2.35
5.....	2.18	1.92	2.05	2.02	2.05	2.05	1.95	2.30	2.35	2.10	2.22	2.42
6.....	2.02	1.92	2.50	2.00	2.02	2.00	1.98	2.32	2.50	2.10	2.02	2.32
7.....	2.10	1.90	2.32	2.02	2.00	2.00	1.98	2.35	2.42	2.05	2.12	2.30
8.....	2.00	1.95	2.02	2.00	2.00	2.02	2.10	2.40	2.35	2.05	2.12	2.42
9.....	2.02	1.90	2.05	2.05	2.00	2.02	2.10	2.35	2.35	2.08	2.02	2.42
10.....	2.02	1.92	2.12	2.05	2.02	2.05	2.05	2.35	2.35	2.10	2.02	2.42
11.....	2.00	1.92	2.02	2.05	2.00	2.05	2.02	2.48	2.45	2.10	2.00	2.40
12.....	2.00	1.90	2.02	2.00	2.05	2.02	2.05	2.32	2.50	2.25	2.02	2.30
13.....	1.98	1.85	1.98	2.00	2.05	2.02	2.05	2.42	2.35	2.05	1.92	2.18
14.....	1.88	1.82	2.00	2.00	2.05	2.05	2.02	2.42	2.28	2.02	1.90	2.10
15.....	1.70	1.85	2.05	2.05	2.02	2.02	2.08	2.62	2.52	2.22	1.90	2.12
16.....	1.82	1.88	2.10	2.05	2.00	2.00	2.22	2.52	2.72	2.10	1.92	2.08
17.....	1.80	1.80	2.15	1.95	2.02	2.00	2.12	2.52	2.65	1.95	1.92	2.08
18.....	1.82	1.80	2.10	1.92	2.02	2.05	2.20	2.45	2.70	2.42	1.92	2.12
19.....	1.80	1.88	2.15	2.05	2.12	2.00	2.12	2.42	2.58	2.60	1.92	2.22
20.....	1.82	1.88	2.08	2.82	2.12	2.02	2.12	2.50	2.55	2.58	1.92	2.12
21.....	1.88	1.88	2.02	2.02	2.12	2.05	2.05	2.40	2.52	2.10	2.25	2.12
22.....	1.80	1.88	1.98	2.00	2.12	2.10	2.22	2.48	2.42	2.75	2.80	2.08
23.....	1.80	1.85	1.95	2.00	2.15	2.22	2.20	2.50	2.40	2.35	2.28	2.02
24.....	1.80	1.80	2.00	2.02	2.10	2.20	2.25	2.42	2.45	2.20	2.18	2.02
25.....	1.80	1.82	1.95	2.00	2.10	2.20	2.22	2.32	2.38	2.22	2.18	2.00
26.....	1.85	1.88	1.92	2.02	2.15	2.15	2.25	2.42	2.32	2.52	2.18	2.00
27.....	1.92	1.95	1.90	2.02	2.10	2.22	2.32	2.42	2.30	2.10	2.45	2.12
28.....	1.90	1.95	1.90	2.02	2.05	2.22	2.18	2.40	2.28	2.18	2.22	2.22
29.....	1.90	1.95	1.95	1.95	2.05	2.05	2.28	2.32	2.22	3.92	2.22	2.22
30.....	1.92	2.00	1.92	1.95	2.00	2.00	2.32	2.35	2.20	2.45	2.22	2.10
31.....	1.90	.....	1.95	2.00	.....	2.00	.....	2.52	.....	1.95	2.35	.....
1907-8.												
1.....	2.00	2.05	2.20	2.3	1.9	2.05	2.1	2.3	2.15	2.3	2.5	2.3
2.....	2.00	2.02	2.20	2.3	1.95	2.0	2.1	2.3	2.2	2.2	2.85	2.2
3.....	2.02	2.12	2.22	2.3	2.05	2.1	2.15	2.2	2.25	2.55	2.9	2.3
4.....	2.05	2.02	2.22	2.3	2.15	2.1	2.1	2.2	2.2	2.2	2.8	2.55
5.....	2.05	2.08	2.25	2.35	2.05	2.1	2.1	2.2	2.15	2.1	2.75	2.3
6.....	2.28	2.10	2.25	2.3	2.0	2.1	2.1	2.3	2.15	2.05	2.7	2.3
7.....	2.30	2.10	2.22	2.3	2.0	2.15	2.1	2.3	2.1	2.0	2.7	2.15
8.....	2.22	2.12	2.25	2.25	2.0	2.15	2.1	2.2	2.15	2.05	3.1	2.1
9.....	2.22	2.10	2.25	2.2	2.0	2.1	2.15	2.2	2.2	2.05	3.0	2.0
10.....	2.22	2.15	2.22	2.2	2.0	2.15	2.15	2.2	2.1	2.05	2.55	2.05
11.....	2.25	2.10	2.20	2.2	2.0	2.1	2.1	2.15	2.1	2.1	2.4	2.0
12.....	2.22	2.15	2.20	2.2	2.05	2.1	2.1	2.15	2.15	2.1	2.4	2.0
13.....	2.00	2.12	2.22	2.2	2.0	2.1	2.1	2.2	2.05	2.1	2.5	2.0
14.....	2.05	2.08	2.25	2.1	2.05	2.15	2.05	2.3	2.05	2.1	3.0	2.0
15.....	2.25	2.22	2.22	2.05	2.0	2.15	2.05	2.3	2.05	2.2	3.1	2.0
16.....	2.25	2.25	2.25	2.05	2.0	2.05	2.1	2.25	2.05	2.15	2.65	2.1
17.....	2.22	2.22	2.25	1.95	1.95	2.1	2.1	2.25	2.1	2.3	2.5	2.05
18.....	2.25	2.25	2.25	1.9	1.95	2.05	2.1	2.25	2.1	2.3	2.5	2.1
19.....	2.22	2.35	2.25	1.9	2.05	2.05	2.3	2.25	2.05	2.85	2.5	2.0
20.....	2.25	2.32	2.25	1.9	2.05	2.0	2.3	2.2	2.0	2.3	2.6	2.15
21.....	3.05	2.30	2.25	1.9	2.05	2.05	2.3	2.2	2.0	2.6	4.95	2.1
22.....	2.32	2.22	2.22	1.9	2.0	2.05	2.3	2.25	2.0	2.5	3.2	2.0
23.....	2.12	2.22	2.25	1.9	2.1	2.05	2.3	2.3	2.0	2.4	3.25	2.0
24.....	2.62	2.22	2.20	1.9	2.15	2.15	2.25	2.2	1.95	2.4	2.6	2.1
25.....	2.52	2.20	2.32	1.95	2.15	2.05	2.2	2.25	1.95	2.4	2.0	2.15
26.....	2.08	2.22	2.25	1.9	2.1	2.0	2.3	2.2	2.0	2.4	2.05	2.1
27.....	2.02	2.25	2.20	1.9	2.1	2.0	2.45	2.2	2.0	2.5	2.05	2.1
28.....	2.15	2.25	2.25	1.9	2.0	2.05	2.4	2.3	2.3	2.5	2.4	2.2
29.....	2.12	2.22	2.25	1.9	2.05	2.05	2.3	2.25	2.3	2.4	2.4	2.2
30.....	2.05	2.22	2.25	1.9	.....	2.05	2.3	2.2	2.3	2.75	2.5	2.1
31.....	2.03	.....	2.22	1.9	.....	2.1	.....	2.2	.....	2.6	2.0	.....

Daily gage height, in feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	2.1	2.2	2.4	2.35	2.3	2.25	2.35	2.3	2.5	2.7	2.2	2.7
2.....	2.1	2.25	2.35	2.3	2.35	2.25	2.3	2.3	2.5	2.4	2.3	2.5
3.....	2.1	2.25	2.35	2.35	2.3	2.25	2.3	2.35	2.4	2.4	2.2	2.5
4.....	2.1	2.25	2.3	2.3	2.35	2.3	2.3	2.4	2.45	2.3	2.3	2.55
5.....	2.1	2.2	2.35	2.3	2.3	2.2	2.3	2.4	2.35	2.4	2.3	2.6
6.....	2.1	2.25	2.3	2.3	2.35	2.25	2.35	2.35	2.4	2.4	2.25	3.2
7.....	2.1	2.25	2.25	2.3	2.3	2.25	2.35	2.3	2.4	2.4	2.3	3.3
8.....	2.2	2.2	2.3	2.25	2.3	2.25	2.35	2.3	2.4	2.45	2.55	3.05
9.....	2.2	2.2	2.3	2.25	2.35	2.2	2.35	2.4	2.55	2.6	2.4	2.9
10.....	2.2	2.2	2.35	2.3	2.35	2.35	2.3	2.5	2.5	2.7	2.4	2.75
11.....	2.25	2.2	2.3	2.25	2.35	2.5	2.35	2.5	2.5	2.5	2.3	2.8
12.....	2.2	2.2	2.3	2.35	2.3	2.45	2.3	2.4	2.5	2.4	2.65	2.8
13.....	2.2	2.25	2.35	2.45	2.3	2.4	2.3	2.4	2.7	2.35	3.0	2.8
14.....	2.2	2.25	2.3	2.5	2.35	2.3	2.3	2.4	2.5	2.3	2.5	2.6
15.....	2.2	2.25	2.2	2.4	2.5	2.3	2.2	2.35	2.5	3.25	2.4	2.6
16.....	2.2	2.25	2.2	2.3	2.4	2.3	2.3	2.3	2.55	2.7	2.95	2.5
17.....	2.2	2.25	2.2	2.3	2.3	2.3	2.3	2.4	2.6	2.3	2.8	2.6
18.....	2.2	2.25	2.25	2.2	2.3	2.25	2.35	2.5	2.5	2.25	2.5	2.55
19.....	2.15	2.2	2.2	2.25	2.3	2.25	2.3	2.4	2.5	2.1	2.5	2.6
20.....	2.2	2.2	2.25	2.2	2.3	2.25	2.3	2.5	2.5	2.2	2.5	2.6
21.....	2.2	2.25	2.25	2.25	2.3	2.3	2.5	2.65	2.4	2.1	2.9	2.5
22.....	2.2	2.25	2.2	2.3	2.35	2.3	2.4	2.65	2.4	2.0	3.2	2.5
23.....	2.25	2.25	2.3	2.25	2.3	2.25	2.4	2.7	2.4	2.0	2.6	2.45
24.....	2.25	2.25	2.3	2.35	2.35	2.2	2.4	2.45	2.5	2.8	2.5	2.4
25.....	2.2	2.2	2.3	2.3	2.3	2.3	2.45	2.4	2.4	2.6	2.6	2.4
26.....	2.25	2.25	2.3	2.25	2.3	2.3	2.45	2.5	2.3	2.7	2.6	2.4
27.....	2.2	2.25	2.35	2.25	2.3	2.3	2.45	2.5	2.35	2.3	2.7	2.4
28.....	2.2	2.25	2.3	2.2	2.3	2.3	2.4	2.5	2.35	2.0	2.7	2.4
29.....	2.2	2.25	2.35	2.3	.....	2.35	2.35	2.4	2.4	2.2	2.8	2.3
30.....	2.2	2.3	2.35	2.3	.....	2.3	2.3	2.4	2.35	2.1	2.8	2.3
31.....	2.2	.....	2.35	2.3	.....	2.35	.....	2.45	.....	2.2	2.8	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1909-10.						1909-10.					
1.....	2.3	2.4	2.5	2.5	2.6	16.....	2.4	2.45	2.6	2.4	2.65
2.....	2.3	2.4	2.5	2.5	2.6	17.....	2.4	2.4	2.6	2.6	2.8
3.....	2.3	2.45	2.5	2.4	2.6	18.....	2.4	2.4	2.6	2.6	2.85
4.....	2.35	2.4	2.5	2.6	2.7	19.....	2.4	2.45	2.6	2.6	2.75
5.....	2.35	2.45	2.55	2.6	2.7	20.....	2.45	2.45	2.6	2.6	2.7
6.....	2.3	2.45	2.5	2.6	2.6	21.....	2.5	2.45	2.6	2.6	2.7
7.....	2.4	2.5	2.75	2.5	2.6	22.....	2.45	2.45	2.85	2.7	2.7
8.....	2.5	2.5	2.7	2.8	2.7	23.....	2.4	2.45	2.9	2.6	2.6
9.....	2.4	2.45	2.6	3.3	2.6	24.....	2.4	2.45	2.9	2.7	2.6
10.....	2.5	2.5	2.55	3.4	2.65	25.....	2.45	2.45	2.85	2.6	2.65
11.....	2.5	2.45	2.5	2.75	2.7	26.....	2.4	2.5	2.7	2.6	2.6
12.....	2.4	2.4	2.55	2.6	2.65	27.....	2.4	2.45	2.8	2.6	2.6
13.....	2.4	2.4	2.5	2.5	2.65	28.....	2.4	2.55	2.8	2.6	2.6
14.....	2.45	2.45	2.55	2.6	2.65	29.....	2.4	2.5	2.7	2.6	.....
15.....	2.4	2.45	2.55	2.5	2.7	30.....	2.4	2.5	2.6	2.6	.....
						31.....	2.4	.....	2.3	2.6	.....

Daily gage height, in feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1.....		2.80	2.92	2.95	3.5	3.0	2.95	2.95	3.00	3.05	3.15	2.70	2.92
2.....		2.82	2.90	2.98	3.0	3.0	2.95	2.95	3.00	3.10	3.05	2.75	2.82
3.....		2.80	2.90	3.00	2.9	2.98	2.95	2.95	3.15	3.05	3.00	2.70	2.80
4.....		2.80	2.90	3.00	2.9	3.02	2.95	2.95	3.20	3.00	3.02	2.72	2.80
5.....		2.80	2.90	3.00	3.1	3.05	2.95	2.95	3.20	3.10	2.95	2.70	2.82
6.....		2.85	2.90	3.10	3.05	3.02	3.0	2.95	3.20	3.00	2.90	2.70	2.82
7.....		2.85	2.88	3.08	3.0	3.18	3.0	2.98	3.15	3.15	2.90	2.70	2.80
8.....		2.85	2.85	3.02	3.05	3.08	3.05	2.98	3.12	2.92	2.82	2.80	2.88
9.....		2.80	2.85	3.00		3.0	3.0	2.98	3.18	3.28	2.88	2.78	3.10
10.....		2.80	2.85	3.00		3.02	3.0	2.98	3.12	3.42	2.82	2.72	2.92
11.....		2.80	2.85	3.02		3.05	3.0	2.98	3.20	3.42	2.80	2.85	2.85
12.....		2.80	2.85	3.00		3.0	3.0	3.0	3.20	4.18	2.98	2.72	2.80
13.....		2.85	2.88	3.00		3.0	3.05	3.0	3.18	4.50	3.00	2.70	3.08
14.....		2.85	2.95	3.00		3.0		3.0	3.20	3.68	2.88	2.70	3.20
15.....		2.85	2.90	3.00	3.4	2.95	3.02	3.0	3.25	3.80	2.85	2.70	3.02
16.....	2.71	2.85	2.95	3.00	3.4	2.95	3.0	2.95	3.32	3.38	2.70	2.70	2.92
17.....		2.80	2.95	3.02	3.4	2.95	3.0	2.90	3.32	3.48	2.70	2.70	2.90
18.....		2.80	2.95	3.10	3.0	2.95	2.95	2.92	3.32	3.45	2.70	2.72	2.90
19.....	2.70	2.80	2.88	3.05	2.95	2.95	3.02	2.90	3.20	3.62	2.65	2.70	2.85
20.....	2.75	2.82	2.90	3.02	2.95	2.95	3.0	2.92	3.20	4.05	2.90	2.80	2.90
21.....	2.78	2.85	2.88	3.20	2.95	2.98	3.05	3.25	3.20	3.62	2.75	2.75	2.90
22.....	2.80	2.85	2.90	3.20	2.9	2.95	3.0	3.28	3.10	3.42	3.20	2.85	2.92
23.....	2.80	2.85	2.92	3.05	2.95	2.95	3.0	3.20	3.10	3.55	2.98	2.92	2.90
24.....	2.72	2.85	2.95	3.22	3.0	2.95	2.98	3.12	3.10	3.55	2.90	2.98	2.90
25.....	2.75	2.85	2.95	3.02	2.95	3.0	3.0	3.12	3.10	3.15	2.80	3.12	2.95
26.....	2.75	2.90	2.95	3.32	2.95	3.0	2.95	3.10	3.20	3.08	3.02	3.22	3.00
27.....	2.78	2.90	2.95	3.55	2.98	3.0	2.95	3.00	3.00	2.95	3.00	3.08	3.00
28.....	2.80	2.85	2.98	3.75	3.0	2.95	2.92	3.00	3.00	2.92	2.95	3.02	3.10
29.....	2.80	2.90	3.00	3.75	3.0		2.9	3.00	3.00	4.52	2.85	3.05	3.00
30.....	2.80	2.90	3.00	4.20	2.98		2.9	3.00	3.00	3.05	3.80	2.75	3.00
31.....		2.95		3.70	3.0		2.9		3.05		2.70	2.85	

NOTE.—Gage heights slightly affected by ice Dec. 6-8, 21, 22, 24, 26-31, 1912; Jan. 1 and 9-14, 1913.

Daily discharge, in second-feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13.

Day.	June.	July.	Aug.	Day.	June.	July.	Aug.	Day.	June.	July.	Aug.
1904.											
1.....		760	380	11.....		62	100	21.....	600	345	
2.....	3,340	345		12.....	180	310		22.....	3,940	2,820	
3.....	510	2,050		13.....	220	84		23.....	1,000	285	
4.....	395	1,070		14.....	295	62		24.....	260	695	
5.....	235	910		15.....	250	62		25.....	110	490	
6.....	130	910	16.....	1,280	76			26.....	90	400	
7.....	93	285	17.....	320	61			27.....	90	910	
8.....	76	985	18.....	180	140			28.....	80	420	
9.....	62	132	19.....	140	5,670			29.....	72	270	
10.....	62	1,070	20.....	84	760			30.....	72	193	
								31.....		132	
1905.											
1.....	260	85	11.....	105	210	215	21.....	105	85	85	
2.....	120	85	12.....	105	310	130	22.....	420	85	85	
3.....	360	85	13.....	105	550	130	23.....	360	85	95	
4.....	220	85	14.....	105	245	117	24.....	215	102	95	
5.....	105	490	15.....	105	128	117	25.....	170	102	95	
6.....	85	295	16.....	95	120	105	26.....	170	85	95	
7.....	105	295	17.....	95	110	95	27.....	170	85	97	
8.....	95	450	18.....	95	90	85	28.....	130	85	117	
9.....	105	285	19.....	95	90	85	29.....	130	85	105	
10.....	105	245	20.....	95	85	95	30.....	130	85	130	
							31.....	117	85		

Daily discharge, in second-feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	90	120	225	1,600	130	68	220	240	460	115	425	150
2.....	90	110	260	1,820	165	68	245	350	720	70	320	175
3.....	90	115	225	2,050	165	40	198	240	440	940	450	175
4.....	90	135	180	1,290	130	40	360	240	800	2,100	630	210
5.....	90	110	180	1,980	165	68	360	350	500	325	760	220
6.....	90	120	180	1,290	165	68	340	290	340	280	1,130	220
7.....	90	115	225	1,460	165	68	340	320	480	182	410	150
8.....	90	110	200	980	210	95	280	540	330	3,600	345	170
9.....	95	130	180	610	210	95	265	265	330	2,470	1,470	130
10.....	105	130	140	980	165	95	265	460	455	1,200	430	170
11.....	105	130	210	320	165	95	345	590	455	480	370	110
12.....	95	120	240	270	165	68	385	680	455	1,410	250	100
13.....	95	110	325	170	210	68	460	860	970	890	230	155
14.....	95	110	200	170	130	73	540	860	1,100	230	250	170
15.....	95	100	210	170	130	110	495	800	370	390	230	170
16.....	90	105	200	170	130	73	298	920	305	390	200	130
17.....	95	100	200	170	130	50	298	640	305	100	200	110
18.....	95	95	200	130	130	120	420	740	365	290	135	155
19.....	90	95	210	100	165	120	350	640	300	440	120	130
20.....	90	100	210	170	130	120	298	860	360	440	120	170
21.....	90	105	190	170	95	158	350	1,000	330	225	120	170
22.....	90	115	140	130	95	132	298	860	270	225	160	170
23.....	95	480	95	215	95	132	380	860	220	335	220	1,440
24.....	95	825	500	215	130	98	460	860	240	490	210	130
25.....	105	420	325	215	130	98	380	740	195	320	280	100
26.....	105	230	265	170	95	81	630	540	170	195	240	100
27.....	105	157	265	170	68	81	460	390	170	215	165	170
28.....	105	210	240	215	68	150	380	540	135	235	210	110
29.....	105	280	240	215	.....	150	320	390	115	250	210	130
30.....	160	420	210	210	.....	172	290	390	115	205	165	100
31.....	130	.....	600	165	.....	220	.....	460	.....	160	150	.....
1906-7.												
1.....	170	120	280	45	65	110	215	560	340	250	440	290
2.....	190	140	200	40	65	110	200	630	340	210	200	270
3.....	220	140	180	40	65	135	215	430	590	200	340	310
4.....	155	140	200	50	60	95	345	560	460	200	520	270
5.....	360	120	225	65	75	95	160	500	460	200	220	330
6.....	190	120	1,000	60	65	95	175	520	670	200	110	240
7.....	270	106	590	65	60	95	175	560	540	160	150	230
8.....	170	140	200	60	60	105	265	605	460	160	150	260
9.....	190	106	225	75	60	105	280	540	460	180	110	260
10.....	190	120	300	75	65	115	240	540	460	200	110	260
11.....	170	120	200	75	60	140	220	730	590	200	100	240
12.....	180	106	200	60	75	130	240	500	670	310	110	180
13.....	165	75	165	60	75	130	240	600	460	160	70	120
14.....	95	60	180	60	75	140	220	600	380	150	60	80
15.....	50	75	225	75	65	145	260	940	700	280	60	90
16.....	60	95	280	75	60	135	420	760	1,070	200	70	80
17.....	60	60	340	50	65	135	300	760	930	120	70	80
18.....	60	60	280	45	65	155	370	620	1,030	440	70	90
19.....	60	95	340	1,120	110	145	300	580	800	690	70	130
20.....	60	95	260	880	110	160	300	700	750	660	70	90
21.....	95	95	200	65	115	170	240	550	700	170	240	90
22.....	60	95	165	60	115	200	420	660	540	950	980	80
23.....	60	75	140	60	120	330	370	700	520	360	260	60
24.....	60	60	180	65	100	305	430	540	390	240	160	60
25.....	60	60	140	60	100	305	420	420	500	250	160	60
26.....	80	95	120	65	125	260	430	540	420	560	160	60
27.....	120	140	106	65	105	350	520	540	400	170	360	90
28.....	106	140	106	65	85	350	340	520	380	220	180	130
29.....	106	140	140	50	.....	205	470	420	320	3,800	180	130
30.....	120	180	120	50	.....	170	520	460	300	480	180	80
31.....	106	.....	140	60	.....	170	.....	700	.....	100	270	.....

Daily discharge, in second-feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	60	60	120	195	30	100	135	285	160	245	390	160
2.....	60	60	120	195	45	75	135	285	187	167	920	105
3.....	60	90	130	200	82	125	167	205	225	495	1,029	160
4.....	70	60	130	200	135	125	135	205	187	167	810	385
5.....	70	80	150	240	85	125	135	205	160	110	725	158
6.....	160	80	150	200	65	125	137	282	160	85	630	158
7.....	180	80	130	205	65	150	137	282	127	65	630	84
8.....	130	90	150	170	65	150	137	200	155	85	1,360	68
9.....	130	80	150	145	65	125	172	200	185	85	1,150	42
10.....	130	100	130	145	65	150	172	200	127	85	420	53
11.....	150	80	120	145	65	125	140	167	127	110	265	42
12.....	130	100	120	145	85	125	140	167	155	110	265	42
13.....	60	90	130	145	70	125	140	200	97	105	360	42
14.....	70	80	150	95	90	155	115	282	97	105	1,150	40
15.....	150	130	130	75	70	155	115	282	97	157	1,360	40
16.....	150	150	150	75	70	102	140	240	97	130	545	65
17.....	130	130	150	40	50	127	140	240	125	222	465	51
18.....	150	150	150	25	50	105	140	240	125	222	465	64
19.....	130	210	150	25	90	105	287	240	97	950	465	38
20.....	150	190	150	25	90	80	287	195	75	222	475	78
21.....	1,200	180	150	25	95	105	287	195	75	530	6,500	65
22.....	190	130	130	25	70	105	287	235	75	410	1,600	38
23.....	90	130	150	25	120	105	285	960	75	300	1,750	38
24.....	460	130	120	25	145	160	245	190	52	300	460	65
25.....	350	120	190	40	145	105	205	230	52	300	45	75
26.....	80	130	150	25	120	80	285	190	70	300	60	60
27.....	60	150	120	25	120	80	440	190	70	395	60	93
28.....	100	150	150	25	75	110	385	270	245	395	245	93
29.....	90	130	150	25	100	110	285	227	245	295	245	93
30.....	70	130	150	30	.....	110	285	187	245	735	340	60
31.....	60	.....	130	30	.....	135	.....	187	.....	510	45	.....
1908-9.												
1.....	60	78	185	165	137	95	115	75	116	295	168	485
2.....	60	97	155	130	170	95	95	72	118	92	246	250
3.....	60	97	155	165	137	95	95	87	78	110	168	230
4.....	60	97	125	130	170	120	95	107	95	72	246	245
5.....	58	78	155	130	137	73	92	105	68	130	246	295
6.....	58	97	125	135	170	90	110	83	77	130	204	1,240
7.....	58	97	105	135	135	90	110	69	77	145	246	1,480
8.....	87	78	125	110	135	90	110	67	80	190	514	920
9.....	87	78	125	110	168	73	110	97	148	345	340	660
10.....	87	78	165	137	168	135	90	150	127	500	340	449
11.....	105	80	125	110	168	250	108	150	127	285	246	510
12.....	86	89	125	170	130	205	88	95	127	215	662	500
13.....	86	98	160	250	130	162	88	95	280	183	1,370	495
14.....	86	98	125	310	168	110	87	95	127	175	452	265
15.....	86	98	125	210	290	110	55	75	127	1,620	340	265
16.....	85	100	87	137	205	105	85	60	161	660	1,250	180
17.....	85	100	87	137	135	105	85	90	195	210	934	260
18.....	85	100	107	90	128	84	102	130	127	190	452	200
19.....	65	82	87	112	128	84	85	85	127	108	452	255
20.....	80	82	107	90	125	84	82	127	127	175	452	250
21.....	80	100	107	112	125	103	190	237	85	110	1,140	170
22.....	80	100	87	137	150	103	122	237	85	73	1,860	165
23.....	100	100	130	112	125	80	120	280	85	73	587	133
24.....	100	100	130	170	150	65	117	105	133	934	452	105
25.....	80	83	130	137	120	100	147	85	87	587	587	103
26.....	100	103	130	112	120	100	147	120	65	750	555	103
27.....	80	103	165	112	118	100	143	120	70	246	670	100
28.....	80	103	130	91	118	100	115	120	70	73	635	100
29.....	78	103	165	137	.....	117	92	80	88	168	750	64
30.....	78	125	165	137	.....	95	75	80	72	110	705	64
31.....	78	.....	165	137	.....	117	.....	95	.....	168	670	.....

Daily discharge, in second-feet, of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1909-10.						1909-10.					
1.....	63	48	14	20	66	16.....	77	27	25	15	220
2.....	63	42	14	20	67	17.....	76	19	26	52	380
3.....	60	53	12	11	68	18.....	75	17	27	53	480
4.....	75	37	12	39	105	19.....	75	22	28	55	380
5.....	73	48	15	40	110	20.....	90	20	29	56	345
6.....	55	46	11	41	80	21.....	112	19	30	57	370
7.....	85	58	50	24	85	22.....	85	17	100	85	395
8.....	127	53	37	105	140	23.....	65	16	120	58	300
9.....	85	38	20	600	100	24.....	65	15	120	90	320
10.....	127	48	15	750	135	25.....	75	13	103	60	400
11.....	127	35	12	90	185	26.....	60	20	55	60	380
12.....	80	28	16	46	160	27.....	57	12	88	61	410
13.....	80	25	13	27	175	28.....	55	23	87	62	435
14.....	103	29	17	45	190	29.....	53	16	60	63	.....
15.....	80	27	18	30	245	30.....	50	15	37	64	.....
						31.....	48	.....	7	65	.....

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.													
1.....		80	94	72	80	82	88	73	110	121	900	82	118
2.....		84	90	78	82	82	88	73	137	114	396	78	96
3.....		80	90	80	62	82	88	73	182	102	383	76	90
4.....		80	90	80	62	82	88	73	193	110	357	72	85
5.....		80	90	80	110	96	88	73	182	257	318	70	82
6.....		89	90	70	96	82	99	73	176	275	275	70	80
7.....		89	85	70	82	118	99	78	148	199	266	74	74
8.....		89	78	70	96	114	114	78	136	699	292	82	88
9.....		80	78	80	90	85	99	78	140	719	165	74	129
10.....		80	78	80	90	85	96	78	140	618	121	85	102
11.....		80	78	84	90	99	96	78	148	1,510	104	104	93
12.....		80	78	80	90	88	96	82	148	3,840	110	70	90
13.....		89	82	80	90	88	110	82	140	3,900	121	62	171
14.....		89	90	80	90	88	102	82	182	1,510	99	64	133
15.....		89	82	80	248	76	93	82	188	1,250	90	59	107
16.....	114	89	85	80	292	78	93	72	188	870	74	62	99
17.....	110	80	85	84	292	78	93	62	171	780	66	68	96
18.....	105	80	85	100	82	78	78	66	159	800	62	78	90
19.....	100	80	70	90	72	80	90	62	148	2,000	66	78	88
20.....	105	80	78	84	72	80	90	65	137	2,720	129	78	82
21.....	110	84	68	85	72	93	104	182	137	1,510	222	78	76
22.....	100	84	74	88	62	82	88	305	125	1,130	331	86	74
23.....	100	84	74	90	72	82	88	275	120	908	182	222	70
24.....	72	84	74	87	82	82	88	200	104	908	154	165	80
25.....	75	84	72	84	72	99	88	205	110	638	113	266	96
26.....	75	100	72	80	72	99	74	194	104	510	176	214	104
27.....	78	96	72	80	72	99	74	182	102	383	176	165	102
28.....	80	80	78	80	82	88	73	144	102	383	257	144	133
29.....	80	94	80	80	82	.....	73	120	101	1,750	383	144	137
30.....	80	94	80	80	82	.....	73	110	96	1,750	110	121	104
31.....	100	.....	80	82	.....	.....	73	.....	96	.....	102	102	.....

NOTE.—Daily discharge determined by the indirect method for shifting channels and from rating curves covering short periods. Discharge estimated Dec. 6-8, 21, 22, 24, and 25-31, 1912; and Jan. 1, 9-14, 1913, on account of ice. Discharge interpolated on days of missing gage heights in 1912 and 1913.

Monthly discharge of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904.					
June 12-30.....	3,940	72	487	18,400	
July.....	5,670	61	643	39,500	
August 1-11.....	2,050	100	749	16,300	
1905.					
July 5-31.....	420	85	138	7,390	
August.....	550	85	191	11,700	
September.....	1,250	85	151	8,980	
1905-6.					
October.....	160	90	98.4	6,050	
November.....	825	95	183	10,900	
December.....	600	95	235	14,400	
January.....	2,050	100	548	33,700	
February.....	210	68	140	7,780	
March.....	220	40	99.2	6,100	
April.....	630	198	357	21,200	
May.....	1,000	240	578	35,500	
June.....	1,100	115	393	23,400	
July.....	3,600	70	619	38,100	
August.....	1,470	120	342	21,000	
September.....	1,440	100	194	11,500	
The year.....	3,600	40	316	230,000	
1906-7.					
October.....	360	50	130	7,990	
November.....	180	60	106	6,310	
December.....	1,000	106	240	14,800	
January.....	1,120	40	121	7,440	
February.....	125	60	80.9	4,490	
March.....	350	95	171	10,500	
April.....	520	160	310	18,400	
May.....	940	420	590	36,300	
June.....	1,070	300	561	33,400	
July.....	3,800	100	402	24,700	
August.....	980	60	201	12,400	
September.....	330	60	158	9,400	
The year.....	3,800	40	256	186,000	
1907-8.					
October.....	1,200	60	164	10,100	
November.....	210	60	116	6,900	
December.....	190	120	140	8,610	
January.....	240	25	96.5	5,930	
February.....	145	30	83.5	4,800	
March.....	160	75	121	7,440	
April.....	440	115	203	12,100	
May.....	960	167	247	15,200	
June.....	245	52	132	7,860	
July.....	950	65	271	16,700	
August.....	a 6,500	45	814	50,100	
September.....	385	38	85.2	5,070	
The year.....	a 6,500	25	206	151,000	
1908-9.					
October.....	105	58	79.3	4,880	
November.....	125	78	93.8	5,580	
December.....	185	87	131	8,060	
January.....	310	90	141	8,670	
February.....	290	118	149	8,280	
March.....	250	65	108	6,640	
April.....	190	55	105	6,250	
May.....	280	60	112	6,890	
June.....	280	65	112	6,660	
July.....	1,620	72	294	18,100	
August.....	1,860	168	579	35,600	
September.....	1,480	64	351	20,900	
The year.....	1,860	55	188	137,000	
1909-10.					
October.....	127	48	77.5	4,770	
November.....	58	12	29.5	1,760	
December.....	120	7	39.3	2,420	
January.....	750	11	91.7	5,640	
February.....	480	66	240	13,300	

a Estimated.

Monthly discharge of Pecos River near Fort Sumner, N. Mex., for 1904-1910, 1912-13—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912-13.					
October.....	100	80	85.5	5,260	C.
November.....	94	68	80.7	4,800	C.
December.....	100	70	81.2	4,990	C.
January.....	292	62	100	6,150	C.
February.....	148	76	89.1	4,950	B.
March.....	114	73	89.8	5,520	B.
April.....	305	62	113	6,720	B.
May.....	193	96	140	8,610	B.
June.....	3,900	102	1,080	64,300	B.
July.....	900	62	213	13,100	B.
August.....	266	59	103	6,330	B.
September.....	171	70	98.0	5,830	B.
The year.....	3,900	59	189	137,000	

PECOS RIVER NEAR ROSWELL, N. MEX.

Location.—At highway bridge, 8 miles southeast of Roswell. Hondo River enters 200 feet above.

Records available.—April 23, 1903, to June 30, 1906.

Drainage area.—Not measured.

Gage.—Original gage painted on pier of bridge. Standard chain gage used after September 15, 1905. It is not known whether both gages refer to the same datum.

Channel.—Shifting after each flood.

Discharge measurements.—Made from the bridge. Extreme flood discharge determined from slope, using Kutter's formula.

Accuracy.—Prior to 1906 it was not possible to make estimates of daily discharge, owing to the shifting channel conditions. Estimates were made for 1906, which are considered reliable.

Discharge measurements of Pecos River near Roswell, N. Mex., for 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 23	W. M. Reed.....	2.60	67	July 24	E. Patterson.....	5.80	3,630
May 4	.....do.....	3.45	200	25	.....do.....	6.80	6,820
June 11	W. A. Wilson.....	10.00	16,000	27	.....do.....	4.50	2,760
1904.				Aug. 2	J. M. Giles.....	3.40	721
Mar. 5	H. C. Hurd.....	3.30	48	9	E. Patterson.....	3.80	1,620
29	F. L. Dobson.....	3.20	29	26	.....do.....	1.80	106
May 20	.....do.....	3.20	44	28	.....do.....	1.70	77
June 24	J. M. Roberts.....	5.40	2,320	Sept. 4	.....do.....	1.70	74
July 27	F. L. Dobson.....	4.50	505	6	.....do.....	5.90	6,260
Sept. 1	.....do.....	2.96	50	7	.....do.....	3.50	1,330
16	.....do.....	3.70	291	8	.....do.....	3.60	1,340
Nov. 28	.....do.....	17.40	^a 55,700	9	.....do.....	2.80	472
1905.				11	.....do.....	2.75	409
Feb. 28	E. Patterson.....	2.90	910	Oct. 4	.....do.....	2.45	153
Mar. 28	F. S. Dobson.....	2.00	431	13	.....do.....	2.25	89
Apr. 12	Giles and Mitchell.....	2.55	605	13	J. M. Giles.....	2.25	105
26	E. Patterson.....	4.50	3,300	23	E. Patterson.....	2.30	97
28	.....do.....	3.40	1,300	30	.....do.....	2.30	97
May 23	.....do.....	4.50	3,060	Nov. 5	.....do.....	3.00	333
Jun 14	.....do.....	3.70	1,560	10	.....do.....	3.00	634
July 10	.....do.....	2.30	63	24	J. M. Giles.....	4.10	2,270
18	.....do.....	1.90	32	25	.....do.....	4.00	1,930
				Dec. 11	E. Patterson.....	2.60	398

^a Discharge derived from slope measurements and Kutter's formula.

Discharge measurements of Pecos River near Roswell, N. Mex., for 1903-1906—Contd.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 14	E. Patterson.....	2.70	537	Apr. 7	E. C. Murphy.....	3.14	1,140
29	do.....	2.50	337	8	E. Patterson.....	2.80	575
30	do.....	2.48	314	25	J. M. Giles.....	2.83	483
Feb. 8	J. M. Giles.....	2.42	266	30	E. Patterson.....	3.00	539
14	E. Patterson.....	2.60	310	5	do.....	2.80	398
23	do.....	2.40	254	14	do.....	3.26	686
Mar. 5	do.....	2.25	202	19	do.....	3.12	529
15	do.....	1.90	69	June 11	do.....	2.89	283
29	do.....	2.00	94	16	do.....	3.42	777
Apr. 7	do.....	3.00	782				

Daily gage height, in feet, of Pecos River near Roswell, N. Mex., for 1903-1906.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1903.						1903.					
1.....		3.0	4.0	3.2	3.3	16.....	4.0	7.25	3.0	4.25	3.2
2.....		3.0	4.0	3.2	3.3	17.....	3.0	8.45	3.0	4.2	3.25
3.....		3.0	4.0	3.1	3.25	18.....	3.45	6.0	3.0	4.2	3.25
4.....	3.45	3.0	4.0	3.1	3.25	19.....	3.45	5.45	2.7	4.1	3.25
5.....	3.45	3.0	3.7	3.2	3.2	20.....	3.35	5.45	2.7	4.0	3.25
6.....	3.45	3.3	3.7	3.45	3.2	21.....	3.3	5.0	2.7	3.7	3.25
7.....	3.3	3.35	3.7	3.7	3.2	22.....	3.45	5.0	2.7	3.45	3.5
8.....	3.3	4.15	3.65	3.7	3.2	23.....	3.45	5.0	3.0	3.45	3.6
9.....	3.3	4.0	3.45	3.8	3.25	24.....	3.3	4.45	3.2	3.45	4.2
10.....	3.4	9.25	3.45	3.7	3.2	25.....	3.3	4.45	3.7	3.45	4.0
11.....	3.4	9.75	3.45	3.6	3.25	26.....	3.35	4.45	3.7	3.45	3.8
12.....	4.0	6.0	3.45	3.45	3.2	27.....	3.25	4.45	3.6	3.45	3.8
13.....	3.45	5.0	3.4	5.0	3.2	28.....	3.2	4.45	3.45	3.45	3.75
14.....	3.4	5.0	3.3	4.0	3.2	29.....	3.0	4.0	3.45	3.35	3.8
15.....	3.3	5.45	3.0	4.25	3.2	30.....	3.0	4.0	3.35	3.3	3.8
						31.....	3.0		3.30	3.3	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	3.8	3.7	4.0	4.0	3.85	3.45	3.35	3.2	3.25	4.45	4.0	2.96
2.....	3.6	3.7	4.0	4.0	3.85	3.45	3.35	3.1	3.2	3.8	4.0	2.96
3.....	3.6	3.7	4.0	4.0	3.85	3.45	3.35	3.15	3.2	5.8	4.45	3.8
4.....	3.6	3.7	4.2	4.0	3.85	3.4	3.35	3.2	3.15	4.6	5.0	5.5
5.....	3.55	3.7	4.0	4.0	3.85	3.4	3.35	3.2	3.1	4.4	4.2	4.05
6.....	3.5	3.7	4.0	4.0	3.8	3.35	3.4	3.25	3.1	4.45	5.1	3.9
7.....	3.45	3.7	4.0	4.0	3.8	3.3	3.6	3.25	3.1	3.8	4.8	3.7
8.....	3.45	3.65	4.0	4.0	3.8	3.25	3.5	3.25	3.1	3.65	4.7	3.7
9.....	3.45	3.65	4.0	4.0	3.8	3.25	3.45	3.2	3.1	3.6	5.2	3.5
10.....	3.45	3.8	4.0	4.0	3.8	3.2	3.45	3.2	3.1	3.6	5.0	3.2
11.....	3.4	4.5	4.0	4.0	3.75	3.2	3.45	3.2	3.1	3.55	5.0	3.2
12.....	3.35	4.5	4.0	4.0	3.75	3.2	3.4	3.2	3.1	3.55	5.0	3.2
13.....	3.35	4.5	4.0	4.0	3.75	3.2	3.4	3.2	4.0	3.4	5.0	3.2
14.....	3.3	4.5	4.0	4.0	3.75	3.1	3.35	3.2	4.45	3.35	5.0	3.95
15.....	3.3	4.0	4.0	4.0	3.75	3.1	3.35	3.25	4.45	3.3	4.7	4.45
16.....	3.3	4.0	4.0	4.0	3.75	3.15	3.35	3.25	4.15	3.2	4.6	3.7
17.....	3.3	4.0	4.0	4.0	3.7	3.2	3.45	3.2	4.1	3.2	4.0	3.95
18.....	3.3	4.0	4.0	4.0	3.65	3.2	3.35	3.2	4.2	3.1	4.1	3.45
19.....	3.3	4.0	4.0	4.0	3.65	3.25	3.35	3.2	4.0	3.65	3.88	3.0
20.....	3.35	4.0	4.0	4.0	3.6	3.25	3.35	3.2	4.0	5.45	3.88	2.95
21.....	3.35	4.0	4.0	3.85	3.55	3.25	3.3	3.25	3.75	5.1	3.88	2.45
22.....	3.35	4.0	4.0	5.85	3.5	3.25	3.3	3.35	3.7	5.0	3.63	2.9
23.....	3.35	4.0	4.0	3.85	3.45	3.25	3.3	3.4	5.75	5.45	3.63	3.2
24.....	3.35	4.0	4.0	3.85	3.45	3.3	3.3	3.75	6.0	4.45	3.29	3.45
25.....	3.45	4.0	4.0	3.85	3.45	3.3	3.25	3.6	4.45	4.45	3.13	3.5
26.....	3.45	4.0	4.0	3.85	3.45	3.35	3.5	3.65	4.25	4.5	3.13	3.9
27.....	3.5	4.0	4.0	3.85	3.45	3.25	3.3	3.75	3.8	4.3	2.96	3.5
28.....	3.5	4.0	4.0	3.85	3.45	3.35	3.25	3.65	3.75	4.1	2.96	3.65
29.....	3.7	4.0	4.0	3.8	3.45	3.35	3.25	3.45	3.65	4.1	2.96	5.5
30.....	3.7	4.0	4.0	3.8		3.35	3.25	3.25	3.55	4.0	3.13	16.45
31.....	3.7		4.0	3.0		3.35		3.2		4.0	3.13	

Daily gage height, in feet, of Pecos River near Roswell, N. Mex., for 1903-1906—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Fel.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1	16.45	2.6	.....	1.2	1.2	2.5	2.3	3.3	3.5	2.5	3.3	1.8
2	15.0	2.6	.....	1.2	1.2	2.5	3.0	3.35	3.4	2.5	3.0	1.8
3	.....	2.6	.....	1.2	1.2	2.3	2.45	3.2	3.4	2.5	4.0	1.8
4	.....	2.6	.....	1.2	1.2	2.3	2.3	3.2	3.4	2.5	3.3	1.8
5	4.0	2.6	.....	1.0	1.3	2.9	2.3	3.2	3.4	2.5	3.2	1.8
6	3.9	2.6	.....	1.0	1.3	2.3	2.35	3.2	4.5	2.5	3.2	7.5
7	3.75	2.6	.....	1.0	2.0	2.5	2.45	3.45	5.0	2.4	3.2	3.7
8	.....	2.6	.....	1.0	2.0	4.0	2.45	3.35	4.0	2.4	3.0	3.6
9	6.45	2.6	.....	1.0	2.2	3.0	2.4	3.35	3.5	2.3	3.8	2.9
10	4.45	2.6	.....	1.6	2.2	3.0	2.4	3.2	3.5	2.3	3.4	3.7
11	.....	2.6	.....	2.0	2.0	3.9	2.45	3.1	4.0	2.3	3.4	3.0
12	4.45	2.55	.....	2.0	2.0	3.0	2.5	3.5	4.0	2.3	3.3	2.5
13	4.0	2.55	.....	2.6	2.4	3.0	2.5	3.45	4.4	2.2	3.2	2.45
14	3.35	2.55	.....	2.0	2.4	2.9	2.45	3.35	3.7	2.2	3.2	2.45
15	3.2	2.55	.....	1.1	2.0	2.9	2.45	3.25	3.5	2.2	3.2	2.45
16	4.0	2.4	.....	1.6	2.6	2.8	2.45	3.25	3.5	2.0	2.8	2.4
17	3.0	2.4	.....	1.4	2.8	2.6	2.45	3.3	3.5	2.0	2.6	2.4
18	3.0	2.4	.....	1.0	2.7	2.6	2.45	3.45	3.5	2.0	2.5	2.4
19	2.8	2.35	.....	1.0	2.5	2.3	2.45	3.45	3.5	6.2	2.3	2.3
20	2.7	2.35	.....	1.6	2.3	2.2	2.45	3.5	3.5	3.3	2.3	2.2
21	2.7	2.3	.....	2.0	2.6	2.0	2.45	3.8	3.5	3.0	2.0	2.2
22	2.7	2.3	.....	2.4	2.6	2.0	2.45	4.45	3.5	3.0	2.0	2.2
23	2.65	2.3	.....	2.4	2.0	2.0	5.35	4.45	3.5	10.0	2.0	2.2
24	2.65	2.3	.....	2.4	2.0	2.0	5.0	4.45	3.3	6.0	2.0	2.2
25	2.65	2.2	.....	2.0	2.6	2.0	4.0	4.45	3.3	6.7	1.8	2.1
26	2.65	2.0	.....	2.0	3.6	2.6	4.45	4.45	3.3	5.6	1.8	2.1
27	2.65	.....	.....	1.1	3.0	2.4	3.75	4.45	3.3	4.3	1.8	2.1
28	2.65	.....	.....	1.8	2.5	2.0	3.3	4.0	3.3	3.8	1.8	2.1
29	2.65	.....	.....	1.3	.....	2.0	3.3	3.7	3.3	3.4	1.8	2.1
30	2.8	.....	.....	1.2	.....	2.0	3.3	3.7	3.0	3.4	1.8	2.1
31	2.8	.....	.....	1.2	.....	2.0	.....	3.5	.....	3.4	1.8	.....
1905-6.												
1	2.1	2.5	3.5	2.4	2.5	2.3	2.0	2.9	2.9	.....	.....	.....
2	2.1	2.5	3.2	2.4	2.5	2.3	2.0	2.9	2.9	.....	.....	.....
3	2.2	2.6	3.2	2.4	2.5	2.2	2.0	2.9	3.5	.....	.....	.....
4	2.4	3.0	3.0	2.4	2.5	2.2	2.0	2.7	3.3	.....	.....	.....
5	2.4	3.0	2.8	2.4	2.5	2.2	2.0	2.7	3.1	.....	.....	.....
6	2.3	3.0	2.6	2.4	2.5	2.2	2.2	2.8	3.1	.....	.....	.....
7	2.3	3.0	2.6	2.5	2.4	2.2	3.0	2.8	2.8	.....	.....	.....
8	2.3	3.0	2.6	2.5	2.4	2.2	2.7	2.8	2.7	.....	.....	.....
9	2.2	3.3	2.6	2.5	2.4	2.2	2.6	3.4	2.7	.....	.....	.....
10	2.2	3.0	2.6	2.5	2.4	2.2	2.4	3.2	2.7	.....	.....	.....
11	2.2	3.0	2.7	2.6	2.4	2.2	2.4	3.1	2.0	.....	.....	.....
12	2.2	3.0	2.7	2.6	2.4	2.2	2.4	3.0	2.9	.....	.....	.....
13	2.2	3.0	2.7	2.7	2.4	2.2	2.4	3.0	2.9	.....	.....	.....
14	2.1	2.8	2.7	2.7	2.5	2.0	2.4	3.7	3.0	.....	.....	.....
15	2.1	2.8	2.7	2.7	2.5	2.0	2.4	3.3	3.9	.....	.....	.....
16	2.1	2.8	2.7	2.7	2.5	1.9	2.6	3.2	3.4	.....	.....	.....
17	2.1	2.8	2.7	2.6	2.5	1.9	2.8	3.2	3.2	.....	.....	.....
18	2.1	2.8	2.5	2.6	2.5	1.9	2.8	3.2	3.0	.....	.....	.....
19	2.1	2.6	2.5	2.5	2.5	1.9	3.0	3.3	3.5	.....	.....	.....
20	2.1	2.6	2.5	2.4	2.5	1.9	3.0	3.4	3.2	.....	.....	.....
21	2.1	2.6	2.5	2.4	2.5	1.9	3.0	3.2	2.8	.....	.....	.....
22	2.1	2.6	2.5	2.4	2.4	1.9	2.8	3.3	2.7	.....	.....	.....
23	2.1	2.6	2.5	2.4	2.4	1.9	3.0	3.3	2.6	.....	.....	.....
24	2.1	4.75	2.5	2.4	2.4	2.0	3.0	3.3	2.5	.....	.....	.....
25	2.1	3.85	2.5	2.4	2.3	2.0	2.8	3.3	2.5	.....	.....	.....
26	2.3	3.5	2.5	2.5	2.3	2.0	2.8	3.2	2.5	.....	.....	.....
27	2.3	3.3	2.5	2.5	2.3	2.0	2.8	3.1	2.5	.....	.....	.....
28	2.4	3.0	2.5	2.5	2.3	2.0	3.0	3.1	2.7	.....	.....	.....
29	2.4	2.8	2.4	2.5	.....	2.0	3.0	3.0	2.5	.....	.....	.....
30	2.45	3.5	2.4	2.5	.....	2.0	2.9	3.0	2.5	.....	.....	.....
31	2.45	.....	2.4	2.5	.....	2.0	.....	3.0	.....	.....	.....	.....

Daily discharge, in second-feet, of Pecos River near Roswell, N. Mex., for 1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	275	335	220	94	460	330	16.....	500	335	69	360	620	770
2.....	275	335	220	94	460	330	17.....	415	335	69	520	620	550
3.....	275	335	170	94	470	930	18.....	415	335	69	520	620	380
4.....	275	335	170	94	325	650	19.....	335	335	69	730	720	890
5.....	275	335	170	94	325	460	20.....	275	335	69	680	850	550
6.....	275	335	170	170	400	460	21.....	275	335	69	680	615	250
7.....	335	275	170	830	370	260	22.....	275	275	69	480	720	200
8.....	335	275	170	500	370	200	23.....	275	275	69	680	700	150
9.....	335	275	170	415	960	190	24.....	275	275	94	650	700	110
10.....	335	275	170	275	700	190	25.....	275	220	94	460	700	110
11.....	415	275	170	250	590	300	26.....	335	220	94	460	590	110
12.....	415	275	170	250	470	300	27.....	335	220	94	415	500	110
13.....	500	275	170	250	470	300	28.....	335	220	94	580	500	200
14.....	500	335	94	250	1,350	380	29.....	335	.....	94	580	400	170
15.....	500	335	94	250	740	1,600	30.....	335	.....	94	460	400	110
							31.....	335	.....	94	.....	400	.....

NOTE.—Daily discharges obtained by indirect method for shifting channels.

Monthly discharge of Pecos River near Roswell, N. Mex., for 1906.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	500	275	343	21,100
February.....	335	220	297	16,500
March.....	220	69	123	7,560
April.....	830	94	406	24,200
May.....	1,380	325	585	36,000
June.....	1,600	110	385	22,900
The period.....				128,000

NOTE.—Values are rated as good.

PECOS RIVER NEAR DAYTON, N. MEX.

Location.—Three miles east of Dayton, in T. 18 S., R. 26 E., half a mile above the mouth of Penasco River.

Records available.—March 24, 1905, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff. The original gage, which was located 100 feet below the mouth of the Penasco River, was washed out September 6, 1905, and was relocated September 7, 1905, half a mile upstream. Datum unchanged since then.

Channel.—Shifting during high water.

Discharge measurements.—Made from car and cable.

Winter flow.—Ice has little effect on the relation of gage height to discharge.

Diversions.—The station is about 10 miles above the dam at the outlet of Lake McMillan, one of the reservoirs in the United States Reclamation Service Carlsbad project, which irrigates about 20,000 acres in the vicinity of Carlsbad.

Accuracy.—Owing to the shifting character of the stream, the estimates can not be considered in general better than fair. Those for 1912 and 1913 are, however, good.

Cooperation.—Since 1908 station maintained by the United States Reclamation Service, which furnished the field data.

Discharge measurements of Pecos River near Dayton, N. Mex., in 1905-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1905.				1908.			
Apr. 18	J. M. Giles	2.52	559	June 19	United States Reclamation Service	1.80	46
May 8	E. Patterson	4.60	1,570	July 23	do	4.60	964
15	J. M. Giles	4.18	1,140	Aug. 7	do	4.60	945
28	E. Patterson	5.20	1,960	25	do	5.70	2,630
June 13	do	5.30	2,320	25	do	6.30	3,190
July 1	J. M. Giles	2.60	193	26	do	5.40	1,560
1	do	2.60	187	31	do	3.90	350
11	E. Patterson	1.95	101	Dec. 6	do	3.80	301
15	do	1.90	91	1909.			
23	do	5.60	2,420	June 24	United States Reclamation Service	2.95	80
23	do	5.80	2,620	28	do	2.60	40
23	do	6.00	3,000	29	do	4.40	456
Sept. 1	do	1.50	137	July 8	do	3.80	244
6	J. M. Giles	1.72	196	19	do	4.00	250
9	do	3.40	1,010	27	do	(a)	1,080
9	do	3.15	905	Aug. 3	do	2.60	100
12	do	1.95	419	14	do	2.40	72
12	do	2.05	456	Nov. 3	do	2.75	112
15	E. Patterson	1.50	236	Dec. 11	do	3.70	291
Oct. 4	J. M. Giles	1.65	230	1910.			
4	do	1.67	240	Feb. 11	United States Reclamation Service	3.60	258
15	E. Patterson	1.70	228	Mar. 7	do	2.80	116
21	do	1.67	204	Apr. 1	do	2.50	82.6
Nov. 7	do	2.26	359	May 9	do	3.60	272
23	J. M. Giles	2.40	425	16	do	3.20	162
26	do	2.40	427	23	do	3.40	187
28	do	4.30	1,670	June 8	do	2.60	44.9
28	do	3.00	588	15	do	2.50	41.6
28	do	3.05	612	18	do	4.70	1,080
Dec. 8	E. Patterson	2.60	583	July 13	do	2.45	31.7
28	do	2.30	329	Aug. 17	do	6.10	2,760
1906.				20	do	8.55	3,990
Jan. 11	E. Patterson	2.75	428	Sept. 7	do	3.30	204
16	do	3.10	594	Nov. 9	do	2.90	115
22	J. M. Giles	2.52	329	Dec. 8	do	3.50	234
22	do	2.57	358	1911.			
Feb. 1	E. Patterson	2.85	397	Mar. 2	United States Reclamation Service	3.50	266
13	J. M. Giles	2.80	394	11	do	3.00	163
20	do	2.95	466	Apr. 28	do	3.70	306
27	E. Patterson	2.65	350	June 3	do	4.95	434
Mar. 3	J. M. Giles	2.40	295	July 12	do	5.00	1,090
17	do	2.40	278	Nov. 1	do	3.30	406
20	E. Patterson	1.80	119	Dec. 20	do	3.15	290
20	do	1.77	131	1912.			
24	do	1.85	142	Mar. 15	United States Reclamation Service	2.50	147
29	J. M. Giles	1.80	150	May 20	do	3.70	450
Apr. 5	Murphy and Giles	2.15	201	31	do	4.85	998
20	J. M. Giles	3.62	730	June 13	do	7.20	3,100
May 1	E. Patterson	3.38	544	25	do	3.90	367
4	do	3.08	441	July 11	do	2.70	66
10	J. M. Giles	3.20	499	Sept. 28	do	3.15	88
15	E. Patterson	3.68	713	Oct. 17	do	3.30	143
June 6	do	3.47	429	Nov. 2	do	3.10	121
12	do	2.73	258	Dec. 30	do	3.50	179
15	do	2.66	264	Dec. 17	do	4.00	238
27	J. M. Giles	2.35	174	31	do	3.80	257
July 12	do	4.53	1,510	1913.			
12	do	4.36	1,370	Jan. 25	United States Reclamation Service	3.90	278
13	do	4.05	1,040	Feb. 15	do	4.05	354
28	do	2.80	266	Mar. 3	do	3.20	148
Aug. 8	do	3.50	510	17	do	3.10	143
Sept. 5	do	1.84	95	Apr. 7	do	2.80	92.7
Oct. 30	W. A. Lamb	2.50	197	17	do	2.65	77.6
1907.				May 9	do	3.40	111
Feb. 20	W. A. Lamb	3.10	338	20	do	3.10	81.6
Mar. 27	do	2.05	104	June 2	do	3.00	66.4
Apr. 26	do	3.37	351	Aug. 8	do	1.30	86.6
May 17	do	3.70	479	28	do	1.10	87.0
31	do	3.65	467	Sept. 30	do	1.60	111
June 28	do	3.30	323				
Dec. 30	L. E. Foster	3.40	321				
1908.							
Apr. 15	United States Reclamation Service	2.30	124				
May 18	do	2.20	90				
June 10	do	2.00	70				

a Gage washed out.

NOTE.—Measurements Apr. 18-Sept. 6, 1905, were made below the mouth of the Penasco and referred to the original gage.

Daily gage height, in feet, of Pecos River near Dayton, N. Mex., for 1905-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
1							1.85	5.1	4.6	2.5	3.4	1.5
2							1.85	4.95	4.5	2.5	3.8	1.7
3							2.5	4.9	4.3	2.4	3.9	2.2
4							2.1	4.9	4.5	2.3	4.0	2.5
5							2.65	5.1	4.2	2.3	3.6	2.3
6							2.3	5.2	4.3	2.2	3.6	1.7
7							2.3	5.2	5.6	2.1	3.4	4.5
8							2.25	5.0	4.5	2.1	5.0	3.4
9							2.25	5.4	4.4	2.2	4.8	3.3
10							2.15	4.9	4.4	2.1	4.5	2.8
11							2.15	4.7	4.6	2.1	3.8	2.5
12							2.1	4.3	6.0	2.0	3.5	2.0
13							3.0	4.3	5.4	2.0	3.3	2.2
14							3.3	4.4	4.6	2.0	3.4	2.0
15							3.0	4.2	4.7	2.0	4.0	1.5
16							3.5	4.0	4.5	2.0	3.9	1.7
17							3.55	4.2	4.6	1.9	3.0	1.8
18							3.3	4.2	4.3	1.8	2.8	1.5
19							3.5	4.0	4.2	1.8	2.9	1.3
20							3.3	4.2	4.0	3.8	2.5	3.0
21							3.25	6.5	3.7	3.0	2.3	2.0
22							3.3	4.9	3.7	2.8	2.0	1.5
23							4.1	5.2	3.6	10.9	2.2	1.4
24						2.5	5.6	4.5	3.4		1.8	1.5
25						2.3	6.45	6.2	3.9		1.7	1.5
26						2.25	5.7	5.4	3.2		1.7	1.5
27						1.85	5.85	5.0	3.1	5.9	1.6	1.5
28						1.85	5.2	5.0	3.0	5.5	1.6	1.4
29						2.0	4.95	5.7	3.0	4.9	1.5	1.5
30						2.0	4.7	4.7	2.6	4.2	1.2	1.5
31						1.85		4.7		3.7	1.2	
1905-6.												
1	1.4	1.6	3.5	2.5	2.7	2.4	1.7	3.5	3.0	2.1	2.2	2.4
2	1.5	1.9	3.5	2.9	2.7	2.4	1.7	3.3	3.0	2.1	2.0	2.0
3	1.6	1.5	3.5	2.5	2.7	2.4	1.7	3.3	3.2	2.1	2.5	1.9
4	1.7	2.0	3.4	2.6	2.7	2.4	2.1	3.1	4.0	2.0	2.6	1.9
5	1.7	2.2	3.4	2.7	2.7	2.4	2.1	3.0	3.3	2.0	3.0	1.8
6	1.7	2.2	3.0	2.5	2.7	2.3	3.7	2.9	3.4	3.65	3.4	1.8
7	1.7	2.2	2.9	2.5	2.6	2.3	3.6	2.9	3.6	3.7	3.4	1.8
8	1.7	2.3	2.9	2.6	2.5	2.3	3.6	2.8	3.2	3.3	2.6	1.7
9	1.6	2.4	2.7	2.5	2.5	2.3	3.6	3.0	3.1	3.2	2.9	1.9
10	1.6	3.0	2.7	2.5	2.6	2.3	3.4	3.2	2.7	2.9	3.1	1.8
11	1.6	2.9	2.7	2.8	2.6	2.3	3.1	3.4	3.0	5.0	3.0	1.8
12	1.7	2.9	2.7	3.0	2.7	2.3	2.8	3.5	2.9	4.6	3.9	1.7
13	1.8	2.7	2.7	2.9	2.7	2.2	2.6	3.4	2.9	4.1	3.7	1.7
14	1.5	2.6	3.1	3.4	2.7	2.3	2.7	3.5	2.8	3.7	3.4	1.6
15	1.7	2.5	3.0	2.9	2.7	2.0	2.8	3.6	2.7	4.0	3.0	1.7
16	1.7	2.5	3.0	3.4	2.7	1.9	3.3	3.8	2.7	3.6	3.0	1.7
17	1.7	2.6	2.9	2.9	2.7	1.8	3.5	3.8	2.7	4.6	2.7	1.8
18	1.7	2.9	2.9	3.1	2.7	1.8	3.5	3.7	2.7	5.8	2.6	1.8
19	1.7	2.3	2.9	3.1	2.7	1.8	3.5	3.6	2.7	3.7	2.5	2.2
20	1.7	2.3	2.7	3.1	2.7	1.8	3.5	3.5	2.7	3.8	2.4	2.6
21	1.7	2.3	2.7	2.8	2.6	1.8	3.5	3.5	2.7	3.6	2.2	2.4
22	1.7	2.5	2.7	2.5	2.4	1.8	3.8	3.5	2.7	3.4	2.1	2.2
23	1.7	2.4	2.7	2.7	2.5	1.8	3.6	3.8	2.7	3.1	2.2	2.2
24	1.7	4.5	2.8	2.7	2.5	1.8	3.4	4.0	2.7	2.8	2.0	2.0
25	1.6	5.4	3.2	2.7	2.4	1.9	3.4	4.0	2.7	2.7	2.2	2.1
26	1.7	4.2	2.55	2.7	2.4	1.9	3.4	4.0	2.7	2.0	2.4	2.1
27	1.7	3.6	2.5	2.6	2.5	1.9	3.4	4.0	2.5	3.2	2.5	2.1
28	1.6	3.2	2.5	2.6	2.4	1.8	3.4	3.6	2.4	2.8	2.6	2.4
29	1.6	2.9	2.6	2.6		1.8	3.4	3.6	2.3	2.6	3.0	2.3
30	1.6	3.4	2.4	2.6		1.8	3.5	3.2	2.2	2.0	2.3	2.3
31	1.6		3.0	2.6		1.8		3.0		3.1	2.6	

Daily gage height, in feet, of Pecos River near Dayton, N. Mex., for 1905-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	2.2	2.5	4.0	3.2	3.2	2.5	2.8	3.1	4.0	2.9	4.0	4.0
2.	2.4	2.5	4.7	3.1	3.3	2.6	2.9	3.2	3.8	2.8	3.3	4.3
3.	2.4	2.5	4.5	3.1	3.5	2.6	2.8	3.1	3.7	2.7	3.0	4.0
4.	2.3	3.4	4.3	3.4	3.1	2.5	2.9	3.0	3.8	2.6	2.9	3.9
5.	2.2	2.9	4.0	3.2	3.3	2.4	2.7	3.2	3.8	2.6	3.5	3.9
6.	2.2	2.9	3.8	3.2	3.1	2.4	2.6	3.5	3.8	2.5	3.3	3.3
7.	2.4	2.9	3.5	3.1	3.0	2.4	2.5	3.4	3.7	2.4	3.0	3.4
8.	2.4	2.9	3.4	3.0	3.0	2.5	2.5	3.4	3.6	2.2	3.0	3.5
9.	2.4	2.9	4.3	3.3	3.0	2.4	2.6	3.3	3.9	2.2	3.0	3.5
10.	2.4	2.9	4.3	3.5	3.4	2.3	2.5	3.5	3.9	2.2	2.9	3.4
11.	2.4	2.9	4.0	3.5	3.5	2.4	2.4	3.5	3.9	2.1	2.8	3.3
12.	2.4	2.9	4.0	3.4	3.3	2.2	2.3	3.5	4.0	2.1	2.7	3.1
13.	2.4	2.9	3.9	3.4	3.2	2.0	2.3	3.8	3.7	2.0	2.6	2.9
14.	2.7	2.9	3.7	3.4	3.1	1.9	2.2	3.7	3.8	4.0	2.6	2.9
15.	2.6	2.9	3.4	3.3	3.5	2.1	2.2	3.6	3.7	3.7	2.5	2.7
16.	2.7	2.9	3.4	3.3	3.4	2.3	2.1	3.5	3.6	3.2	2.3	2.7
17.	2.8	2.9	3.6	3.3	3.4	2.3	2.1	3.6	3.5	2.9	2.4	2.7
18.	2.6	2.9	3.8	3.4	3.0	2.5	2.2	3.6	4.2	2.9	2.2	2.6
19.	2.4	3.2	3.5	3.5	3.9	2.2	2.3	3.7	4.4	2.7	2.1	2.5
20.	2.4	3.5	3.5	3.6	3.1	2.2	2.8	3.6	4.7	2.5	2.6	2.5
21.	2.4	3.5	3.4	3.5	3.1	2.2	3.3	3.4	4.2	2.4	2.9	2.6
22.	2.4	3.5	3.2	3.5	3.0	2.2	3.1	3.4	4.2	3.9	3.9	2.6
23.	2.5	3.4	2.9	3.5	3.0	2.2	3.4	3.2	4.0	4.9	3.1	2.7
24.	2.5	3.3	3.4	3.5	2.9	2.2	3.5	3.1	3.9	4.3	4.9	2.7
25.	2.5	3.3	3.0	3.4	3.0	2.2	3.4	3.0	3.5	3.7	4.3	2.7
26.	2.6	3.4	3.0	3.2	2.9	2.1	3.3	3.2	3.4	3.5	3.8	2.6
27.	2.5	3.9	3.0	3.4	2.6	2.0	3.3	3.4	3.4	3.7	3.4	2.6
28.	2.7	4.0	3.4	3.4	2.6	2.0	3.0	3.4	3.2	3.7	3.5	2.5
29.	2.6	3.9	3.1	3.2	-----	2.0	3.0	3.5	3.1	3.6	3.7	2.1
30.	2.5	3.8	3.2	3.2	-----	2.7	3.1	3.6	3.0	7.0	4.0	2.2
31.	2.5	-----	3.3	3.2	-----	3.0	-----	3.6	-----	5.3	3.8	-----
1907-8.												
1.	2.1	3.8	3.7	3.5	3.2	2.7	-----	2.4	2.4	2.2	3.9	4.5
2.	2.1	3.7	3.4	3.6	3.2	2.6	-----	2.6	2.7	2.0	4.7	5.5
3.	2.4	3.5	3.4	3.5	3.3	2.5	-----	2.8	2.3	2.0	6.6	4.9
4.	2.2	3.5	3.4	3.4	3.2	2.5	-----	2.6	2.1	2.7	5.6	4.6
5.	2.4	3.4	3.4	3.6	3.4	2.3	-----	2.7	2.1	4.6	4.7	4.1
6.	2.4	3.3	3.5	3.5	3.3	2.3	-----	2.6	2.3	4.7	4.7	4.3
7.	2.2	3.3	^a 3.5	3.5	3.3	2.3	-----	2.5	2.3	4.5	4.5	4.0
8.	2.2	3.3	3.6	3.5	3.4	2.3	-----	2.4	2.3	4.0	4.5	3.9
9.	2.3	3.3	3.5	3.6	3.5	2.3	-----	2.3	2.2	3.0	3.0	3.7
10.	2.3	3.3	3.4	3.5	3.5	2.3	-----	2.3	2.0	3.0	2.4	3.7
11.	2.3	3.3	3.2	3.8	3.5	2.3	-----	2.2	2.0	2.7	5.5	3.7
12.	2.5	3.2	3.5	3.5	3.4	2.3	-----	2.3	2.0	2.7	5.4	3.5
13.	2.7	3.2	3.2	3.7	3.4	2.3	-----	2.3	2.1	2.5	4.4	3.3
14.	2.4	3.4	3.4	3.6	3.5	2.3	-----	2.2	2.0	2.5	5.7	3.1
15.	2.6	3.2	3.2	3.6	3.5	2.3	2.3	2.2	2.0	2.7	5.0	3.3
16.	2.5	3.3	3.5	3.4	3.5	2.3	-----	2.3	2.0	2.3	4.8	3.2
17.	2.5	3.5	3.5	3.6	3.4	2.2	-----	2.3	2.0	2.3	5.4	3.1
18.	2.5	4.0	3.5	3.7	3.0	2.2	-----	2.2	1.9	2.3	4.8	3.2
19.	2.6	4.0	3.5	3.2	2.9	2.2	-----	2.3	1.8	2.3	4.7	3.0
20.	2.7	4.1	3.5	3.4	2.8	2.2	-----	2.2	2.0	5.6	4.4	2.9
21.	2.7	4.2	3.7	3.3	2.8	2.2	-----	2.0	1.9	3.9	6.0	2.8
22.	3.0	4.1	3.6	3.4	2.8	2.1	-----	2.0	1.9	4.6	4.7	2.8
23.	4.0	3.7	3.5	3.5	2.9	2.1	-----	2.0	1.8	4.6	6.4	2.9
24.	3.8	3.5	3.5	3.4	2.6	2.1	-----	2.0	1.8	4.6	9.0	2.7
25.	4.0	3.6	3.5	3.4	2.8	2.1	-----	2.0	2.5	4.0	^b 5.6	2.7
26.	4.2	3.5	3.6	3.5	2.7	2.1	-----	2.1	2.4	3.6	5.4	2.7
27.	4.4	3.4	3.6	3.3	2.6	2.1	-----	3.0	2.4	3.4	4.7	2.8
28.	5.0	3.3	3.6	3.4	2.6	2.1	-----	2.8	2.0	3.3	4.7	2.7
29.	6.8	3.2	3.2	3.3	2.6	2.1	-----	2.8	1.8	3.0	4.7	3.1
30.	5.0	3.8	3.5	3.1	-----	2.1	-----	2.6	1.7	2.9	4.1	2.7
31.	4.5	-----	3.5	3.3	-----	2.1	-----	2.7	-----	3.8	3.9	-----

^a Dec. 7, 1907, gage height doubtful.

^b August 25, 1908, gage height is mean of observer's reading and two separate readings by hydrographer made during the day.

Daily gage height, in feet, of Pecos River near Dayton, N. Mex., for 1905-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	2.7	3.0	3.8	3.7	3.6	3.0	2.8	2.8	2.8	3.8	-----	3.9
2.....	2.6	3.0	4.6	3.7	3.9	3.0	2.8	2.8	2.7	3.6	-----	3.8
3.....	2.6	3.0	4.2	3.8	3.7	3.0	2.9	2.7	2.6	3.4	2.6	3.5
4.....	2.5	3.0	4.2	3.7	3.6	3.0	2.9	2.7	2.5	3.2	2.6	3.3
5.....	2.5	3.2	4.0	4.0	3.6	2.9	2.8	2.5	2.6	3.2	2.5	3.3
6.....	2.5	3.2	4.0	4.2	3.5	2.9	2.8	2.4	2.6	3.4	2.5	3.2
7.....	2.6	3.2	3.8	4.0	3.5	2.9	2.8	2.4	2.6	3.4	2.4	3.0
8.....	2.7	3.2	3.8	3.9	3.6	2.9	2.9	2.4	2.5	4.0	2.3	2.9
9.....	2.7	3.2	3.8	3.8	3.6	2.9	2.9	2.4	2.5	3.4	2.4	7.4
10.....	2.7	3.2	4.0	3.8	3.6	2.9	2.6	2.4	2.5	3.1	2.3	5.2
11.....	2.7	3.2	4.0	3.8	3.5	2.9	2.6	2.4	2.5	3.0	2.6	4.9
12.....	2.6	3.2	3.8	3.8	3.5	3.0	2.5	2.4	2.5	3.8	2.4	4.6
13.....	2.6	3.2	3.8	3.7	3.5	3.0	2.5	2.3	2.5	3.7	2.3	4.6
14.....	2.5	3.2	4.0	3.8	3.4	3.1	2.5	2.3	3.7	2.6	2.5	4.7
15.....	2.5	3.2	4.0	3.8	3.4	3.2	2.5	2.3	3.2	2.5	2.7	4.7
16.....	2.4	3.2	4.0	3.8	3.4	3.3	2.5	2.3	4.2	3.0	2.8	3.1
17.....	2.6	3.2	4.0	3.9	3.4	3.3	2.4	3.0	4.2	2.9	3.0	4.0
18.....	2.6	3.3	4.0	5.0	3.4	3.7	2.4	3.0	3.9	4.4	3.0	3.7
19.....	2.6	3.3	3.8	4.1	3.4	3.6	2.5	2.7	3.7	4.0	3.0	3.7
20.....	2.5	3.3	3.8	4.0	3.4	3.6	2.5	2.7	3.4	3.6	3.8	3.5
21.....	2.5	3.3	3.7	4.0	3.4	3.4	2.3	2.8	3.2	3.4	3.6	3.3
22.....	3.7	3.6	3.7	4.0	3.4	3.3	2.3	2.8	3.2	3.2	4.2	3.2
23.....	2.7	3.7	3.7	3.8	3.3	3.2	2.4	2.9	3.1	3.0	3.6	3.0
24.....	2.5	3.6	3.8	4.0	3.2	3.2	2.3	2.9	2.95	3.1	3.4	3.0
25.....	2.6	3.6	3.9	3.8	3.2	3.2	2.5	2.9	2.9	5.5	4.0	2.9
26.....	2.6	3.5	4.0	3.8	3.0	3.0	2.4	2.9	2.7	-----	3.7	2.8
27.....	2.5	3.5	4.0	3.9	3.0	2.9	2.4	2.3	2.5	-----	3.5	2.7
28.....	2.5	3.5	3.9	3.9	3.0	2.9	3.2	3.4	2.5	-----	3.4	2.8
29.....	2.5	3.6	3.9	3.6	-----	2.9	3.0	3.2	3.5	-----	3.7	2.8
30.....	3.0	3.8	3.9	3.6	-----	2.9	2.9	3.0	3.9	-----	3.7	2.6
31.....	3.0	-----	3.9	3.6	-----	2.9	-----	2.9	-----	-----	3.9	-----
1909-10.												
1.....	2.6	2.7	3.0	4.0	3.4	3.0	2.5	2.7	2.8	3.3	2.4	3.3
2.....	2.6	2.7	3.0	4.0	3.4	3.0	2.5	2.7	2.7	3.2	2.4	4.5
3.....	2.6	2.7	3.0	3.8	3.4	3.0	2.4	2.6	2.7	3.0	2.4	3.8
4.....	2.5	2.7	2.0	3.7	3.4	2.9	2.4	2.6	2.7	3.0	2.5	3.4
5.....	2.5	2.7	2.0	3.7	3.5	2.8	2.4	2.8	2.6	3.0	2.5	3.3
6.....	2.5	2.7	3.0	3.7	3.6	2.8	2.4	3.4	2.6	3.0	2.5	3.2
7.....	2.6	2.7	3.8	3.7	3.6	2.8	2.4	3.5	2.6	2.8	3.0	3.1
8.....	2.6	2.7	3.7	3.4	3.6	2.8	2.4	3.6	3.0	2.7	3.9	3.0
9.....	2.6	2.7	3.6	3.6	3.6	2.7	2.6	3.6	3.0	2.7	4.1	3.0
10.....	2.5	2.7	3.6	3.6	3.5	2.7	2.6	3.6	3.1	2.6	4.2	2.9
11.....	2.5	2.7	3.6	3.7	3.6	2.7	2.6	3.4	2.9	2.5	4.3	2.8
12.....	2.5	2.7	3.6	3.7	3.6	2.7	2.6	3.4	2.7	2.4	4.0	2.7
13.....	2.5	2.8	3.6	3.7	3.6	2.8	2.6	3.3	2.7	2.45	6.0	2.7
14.....	2.5	2.8	3.6	4.1	3.6	2.8	2.5	3.2	2.7	2.6	8.4	2.8
15.....	3.0	4.0	3.9	4.3	3.6	2.8	2.5	3.2	2.5	2.8	9.8	2.9
16.....	3.0	3.9	3.8	4.1	3.6	2.8	2.5	3.2	2.4	2.5	7.3	2.9
17.....	3.0	3.2	3.9	3.8	3.6	2.8	2.7	3.2	2.4	2.6	5.8	3.1
18.....	3.0	2.8	4.0	3.7	3.6	2.8	2.7	3.2	4.7	2.6	4.7	3.1
19.....	3.0	2.8	4.0	3.7	3.6	2.9	2.6	3.4	4.5	2.5	10.2	3.0
20.....	3.2	2.8	4.0	3.6	3.6	2.8	2.6	3.7	3.9	2.5	8.55	3.1
21.....	3.1	2.8	4.0	3.6	3.5	2.8	2.6	4.0	3.7	2.4	6.3	3.0
22.....	3.0	2.8	4.0	3.8	3.4	2.8	2.5	3.6	3.5	3.4	5.2	3.0
23.....	3.2	2.8	4.4	3.7	3.3	2.8	2.4	3.4	3.2	2.4	4.6	2.8
24.....	3.2	2.8	4.4	3.7	3.3	2.8	2.3	3.2	3.2	2.4	4.0	2.8
25.....	3.2	3.2	5.3	3.4	3.4	2.8	2.4	3.2	3.2	2.4	3.7	2.7
26.....	3.0	3.0	3.9	3.4	3.4	2.8	2.4	3.1	3.0	2.4	3.5	2.5
27.....	2.7	3.0	3.7	3.5	3.3	2.8	2.4	3.2	3.0	2.4	3.4	2.5
28.....	2.7	3.0	3.7	3.5	3.2	2.6	2.4	3.2	3.0	2.4	3.4	2.5
29.....	2.7	3.0	3.6	3.4	-----	2.6	2.4	3.0	3.7	2.4	3.3	2.5
30.....	2.6	3.0	4.4	3.5	-----	2.6	2.4	2.1	3.7	2.4	3.3	2.4
31.....	2.7	-----	4.1	3.5	-----	2.6	-----	2.1	-----	2.4	3.25	-----

Daily gage height, in feet, of Pecos River near Dayton, N. Mex., for 1905-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	2.4	2.8	3.5	3.6	3.6	3.5	2.8	3.9	5.2	3.3	3.9	3.5
2.....	2.5	2.8	3.4	3.6	3.6	3.5	2.8	3.8	5.4	2.7	3.8	3.6
3.....	2.8	2.8	3.4	3.8	3.5	3.5	2.7	3.5	5.0	2.6	3.6	2.7
4.....	2.7	2.7	3.4	3.9	3.4	3.4	2.8	3.4	4.5	2.5	3.5	2.6
5.....	2.6	2.8	3.4	3.9	3.5	3.4	2.7	3.2	5.1	2.4	3.3	2.6
6.....	2.5	2.8	3.5	4.2	3.4	3.4	2.6	3.2	4.4	2.5	3.2	2.6
7.....	2.6	2.95	3.5	3.6	3.4	3.4	2.6	3.1	4.0	3.0	3.0	2.5
8.....	2.6	2.9	3.5	3.5	3.4	3.2	2.7	3.1	3.7	4.0	2.9	2.5
9.....	2.5	2.9	3.5	3.5	3.4	3.1	2.6	3.0	3.6	3.8	2.9	2.4
10.....	2.5	2.9	3.5	3.4	3.4	3.1	2.6	2.9	3.4	3.8	2.8	2.4
11.....	2.5	2.9	3.5	3.6	3.2	3.1	2.7	2.9	3.3	4.8	2.8	2.4
12.....	2.5	2.9	3.5	3.8	3.2	3.0	2.7	2.8	3.4	5.0	2.7	2.7
13.....	2.5	3.0	3.5	3.8	3.1	3.0	2.7	3.0	3.2	4.8	2.7	2.7
14.....	2.5	3.0	3.5	3.6	3.1	3.0	2.7	4.0	3.2	4.7	2.5	2.6
15.....	2.5	3.0	3.5	3.6	3.1	3.0	2.6	6.2	3.1	4.9	2.4	2.5
16.....	2.6	3.1	3.5	3.5	3.1	2.9	2.6	5.6	3.1	5.2	2.3	2.7
17.....	2.6	3.1	3.5	3.5	3.1	2.9	2.6	5.1	3.0	5.3	2.3	2.7
18.....	2.6	3.1	3.6	3.6	3.1	2.9	2.7	4.8	2.9	4.3	2.3	2.6
19.....	2.6	3.1	3.6	3.6	3.7	2.9	2.6	4.3	2.8	4.3	2.2	2.6
20.....	2.6	3.3	3.6	3.5	3.8	2.9	2.7	4.3	2.8	4.2	2.1	2.5
21.....	2.6	3.3	3.6	3.5	3.7	2.9	2.6	4.3	2.8	4.9	2.1	2.4
22.....	2.6	3.3	3.55	3.5	3.7	3.0	2.6	4.0	2.9	5.1	2.1	2.4
23.....	2.7	3.4	3.5	3.5	3.6	3.0	2.6	3.8	3.4	9.2	2.3	2.7
24.....	2.7	3.4	3.5	3.5	3.6	3.0	2.6	3.7	3.9	.....	2.4	2.6
25.....	2.7	3.4	3.6	3.5	3.5	3.0	3.0	3.5	3.5	8.9	2.4	2.5
26.....	2.7	3.2	3.6	3.5	3.5	2.9	3.1	3.5	3.6	4.3	4.1	2.4
27.....	2.7	3.2	3.6	3.5	3.5	2.9	4.0	3.4	3.5	3.7	4.2	2.4
28.....	2.9	3.4	3.6	3.6	3.5	2.9	3.8	3.3	3.5	4.0	4.1	2.4
29.....	2.8	3.5	3.5	3.9	.....	3.0	4.0	3.2	3.2	4.3	3.6	2.4
30.....	2.8	3.4	3.5	3.5	.....	3.0	4.0	3.5	3.0	4.0	3.4	2.4
31.....	2.8	.....	3.5	3.6	.....	2.9	.....	4.0	.....	4.0	3.4	.....
1911-12.												
1.....	2.5	3.4	3.1	2.9	3.0	3.0	2.9	2.2	4.8	4.0	2.9	3.3
2.....	2.5	3.2	3.1	2.8	3.0	3.1	2.8	2.1	5.0	3.7	2.9	3.3
3.....	2.5	3.2	3.2	3.0	3.2	3.2	2.7	2.1	4.8	3.6	2.9	3.1
4.....	2.5	3.2	3.2	3.0	3.1	3.1	2.7	2.4	4.8	3.5	2.8	3.1
5.....	2.5	3.2	3.3	3.0	3.0	3.1	2.7	2.6	4.8	3.4	2.9	3.2
6.....	2.5	3.3	3.2	2.9	3.1	3.0	2.7	2.8	4.5	3.4	3.0	3.2
7.....	2.5	3.2	3.2	2.9	3.0	2.9	2.7	3.45	4.4	3.3	3.6	2.9
8.....	2.5	3.2	3.1	2.9	3.0	2.8	2.6	4.05	4.6	3.1	3.3	2.9
9.....	2.6	3.0	3.1	3.0	3.2	2.7	2.6	3.9	4.6	2.9	3.1	2.9
10.....	4.6	3.0	3.1	3.1	3.2	2.7	2.5	3.8	4.8	2.8	2.9	2.8
11.....	4.3	3.0	3.2	3.1	3.1	2.7	2.5	3.6	5.1	2.6	2.9	2.8
12.....	4.0	3.9	3.2	3.2	3.1	2.7	2.5	3.3	5.3	2.6	2.8	3.3
13.....	3.8	3.7	3.4	3.5	3.2	2.6	2.5	3.3	7.1	2.6	2.7	3.0
14.....	3.6	3.4	3.4	3.3	3.1	2.6	2.5	3.4	6.1	2.5	2.8	4.2
15.....	3.4	3.0	3.4	3.3	3.1	2.5	2.5	3.9	5.4	2.4	2.7	4.6
16.....	3.3	3.0	3.3	3.2	3.1	2.4	2.6	4.0	5.1	2.5	2.8	4.2
17.....	3.1	3.0	3.4	3.2	3.0	2.3	2.6	3.9	4.7	2.5	3.5	4.9
18.....	3.0	3.1	3.4	3.2	2.9	2.4	2.8	4.0	4.4	2.5	3.8	4.5
19.....	3.0	3.1	3.3	3.3	2.9	2.3	2.9	3.9	4.2	2.7	3.7	4.0
20.....	2.9	3.1	3.2	3.4	2.8	2.3	3.0	3.7	4.1	2.8	4.6	3.9
21.....	2.8	3.1	3.2	3.2	2.9	2.2	3.1	3.5	4.1	3.3	4.1	3.7
22.....	2.8	3.2	3.2	3.2	2.8	2.2	3.0	3.7	4.2	3.4	4.45	3.6
23.....	2.9	3.2	3.2	3.3	2.8	2.2	2.8	3.6	4.0	4.1	3.8	3.6
24.....	3.2	3.2	3.2	3.2	2.8	2.3	2.6	4.3	4.2	4.4	3.6	3.5
25.....	3.1	3.2	3.2	3.2	2.8	2.3	2.5	4.4	3.9	4.1	3.4	3.4
26.....	2.9	3.2	3.2	3.1	2.7	2.3	2.4	4.7	3.9	3.9	3.3	3.4
27.....	2.8	3.3	2.8	3.0	2.7	2.3	2.3	4.8	3.8	3.6	3.4	3.3
28.....	2.8	3.1	2.6	3.0	2.9	2.3	2.3	4.7	5.0	3.4	3.4	3.2
29.....	2.8	3.1	2.3	3.1	3.1	2.3	2.2	4.8	4.7	3.2	3.2	3.4
30.....	2.8	3.2	2.0	3.0	.....	3.0	2.2	4.7	4.4	3.1	3.2	3.8
31.....	2.9	.....	2.9	3.0	.....	3.0	.....	4.85	.....	3.0	3.3	.....

Daily gage height, in feet, of Pecos River near Dayton, N. Mex., for 1905-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	3.7	3.1	3.5	3.9	4.0	3.2	2.9	3.6	2.9	2.4	1.5	1.5
2.....	3.7	3.1	3.6	3.8	3.9	3.1	2.9	3.6	2.9	5.4	1.5	1.4
3.....	4.0	3.1	3.6	4.3	3.8	3.2	2.9	3.5	2.9	4.3	1.8	1.3
4.....	3.8	3.1	3.6	4.4	4.1	3.2	2.8	3.5	2.8	3.4	1.7	1.3
5.....	3.7	3.1	3.7	4.1	4.1	3.2	2.8	3.4	2.8	3.1	1.6	1.8
6.....	3.6	3.1	3.7	4.0	3.9	3.2	2.8	3.4	2.8	2.9	1.4	1.6
7.....	3.6	3.1	3.7	3.9	3.8	3.2	2.8	3.4	3.1	2.6	1.3	2.0
8.....	3.5	3.1	3.8	3.8	4.0	3.1	2.8	3.3	3.3	2.4	1.3	1.8
9.....	3.6	3.1	3.9	3.8	4.3	3.2	2.8	3.3	3.1	2.2	1.3	1.6
10.....	3.5	3.1	3.9	4.2	4.3	3.2	2.8	3.5	3.1	2.2	1.2	1.4
11.....	3.4	3.0	3.9	4.4	4.2	3.2	2.8	3.4	5.1	2.1	1.2	1.5
12.....	3.3	3.0	4.1	4.3	4.0	3.7	2.8	3.4	9.3	1.9	1.2	1.6
13.....	3.4	3.1	4.1	4.3	4.2	3.5	2.7	3.4	13.0	1.8	1.1	1.3
14.....	3.4	3.2	4.1	4.1	4.2	3.4	2.7	3.3	8.0	1.8	1.1	1.5
15.....	3.4	3.1	4.0	4.2	4.2	3.3	2.7	3.2	5.8	1.8	1.1	1.4
16.....	3.3	3.1	4.0	4.1	4.1	3.2	2.7	3.1	4.9	1.8	1.1	1.3
17.....	3.3	3.3	4.0	3.9	4.0	3.1	2.7	3.1	4.2	1.7	1.1	1.3
18.....	3.3	3.3	3.9	3.9	4.0	3.0	2.7	3.1	4.0	1.7	1.1	1.2
19.....	3.3	3.3	3.9	3.9	4.0	3.0	2.6	3.1	3.9	1.7	1.0	1.2
20.....	3.3	3.4	3.8	5.1	4.0	3.0	2.6	3.1	3.5	1.6	1.0	1.2
21.....	3.3	3.3	3.8	4.5	3.9	3.0	3.9	3.0	5.5	1.8	1.0	1.4
22.....	3.3	3.4	3.9	4.6	3.6	3.0	3.2	3.1	5.7	2.1	1.1	1.3
23.....	3.3	3.4	3.9	4.4	3.4	3.0	3.5	3.3	4.8	1.6	1.1	1.3
24.....	3.3	3.4	4.0	4.3	3.4	2.9	3.4	3.1	4.4	1.7	1.0	1.3
25.....	3.2	3.4	3.9	4.3	3.4	3.0	5.1	3.1	3.7	1.6	1.0	1.3
26.....	3.1	3.4	3.9	4.3	3.4	2.9	4.8	3.1	3.2	1.6	1.9	1.3
27.....	3.2	3.5	3.9	4.1	3.3	2.9	4.3	3.1	3.1	1.6	1.1	1.4
28.....	3.2	3.4	3.9	4.2	3.3	2.9	4.2	3.0	2.8	1.8	1.1	1.5
29.....	3.2	3.5	4.1	4.1	.....	2.9	3.9	3.0	2.6	1.7	1.1	1.6
30.....	3.2	3.5	3.9	4.1	.....	2.9	3.8	3.0	2.5	1.7	1.2	1.6
31.....	3.1	.....	3.8	3.9	.....	2.9	.....	2.9	.....	1.6	1.1	.....

NOTE.—Gage washed out July 26 and replaced Aug. 3, 1909. Gage height affected by ice Dec. 27-31, 1911. Gage heights prior to Sept. 6, 1905, refer to the original gage, below the mouth of the Penasco.

Daily discharge, in second-feet, of Pecos River near Dayton, N. Mex., for 1905-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
1.....	475	1,920	1,440	170	780	125
2.....	475	1,800	1,340	170	1,000	190
3.....	550	1,720	1,180	155	1,060	325
4.....	500	1,720	1,340	140	1,120	450
5.....	575	1,920	1,170	140	890	370
6.....	550	2,020	1,180	125	890	190
7.....	550	2,020	2,490	110	780	1,540
8.....	535	1,820	1,340	110	1,820	1,020
9.....	520	2,250	1,260	125	1,620	975
10.....	510	1,720	1,260	110	1,340	760
11.....	510	1,530	1,440	110	1,000	640
12.....	500	1,180	3,000	100	830	430
13.....	640	1,180	2,250	100	730	515
14.....	710	1,260	1,440	100	780	430
15.....	640	1,090	1,530	100	1,120	235
16.....	760	920	1,340	100	1,000	320
17.....	730	1,090	1,440	90	600	360
18.....	710	1,060	1,180	85	520	235
19.....	760	920	1,090	85	555	170
20.....	710	1,090	920	765	400	850
21.....	695	3,670	695	320	340	440
22.....	710	1,720	695	245	250	235
23.....	1,010	2,020	630	a7,030	315
24.....	550	2,490	1,340	510	a31,400	210
25.....	540	3,600	3,260	840	a50,300	180
26.....	520	2,620	2,250	405	a33,400	180
27.....	475	2,800	1,820	360	2,870	165
28.....	475	2,020	1,820	320	2,370	165
29.....	490	1,800	2,620	320	1,720	130
30.....	490	1,530	1,530	190	1,090	80
31.....	475	.....	1,530	.....	950	80

a Based on discharge at Lake McMillan.

Daily discharge, in second-feet, of Pecos River near Dayton, N. Mex., for 1905-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	210	180	950	325	365	290	145	640	310	148	150	175
2.....	180	215	950	500	365	280	145	515	310	148	112	112
3.....	210	175	950	325	365	278	145	515	360	148	195	100
4.....	250	250	875	365	365	278	190	440	1,000	141	217	100
5.....	250	340	875	410	365	278	190	420	400	141	324	90
6.....	250	340	600	325	365	250	780	385	425	685	468	90
7.....	250	340	600	325	335	250	730	385	475	725	468	90
8.....	250	380	595	365	315	250	730	350	360	455	217	83
9.....	210	430	590	325	315	250	730	420	330	405	293	100
10.....	210	750	590	325	335	250	630	500	250	295	357	90
11.....	210	690	590	450	335	250	500	575	310	2,030	324	90
12.....	220	690	590	540	365	250	385	625	285	1,600	760	83
13.....	250	575	590	500	365	225	315	575	285	1,090	612	83
14.....	150	530	815	750	365	250	350	625	263	725	470	77
15.....	220	480	750	500	365	160	385	675	260	990	324	83
16.....	220	480	750	750	365	142	585	815	260	645	324	83
17.....	220	530	690	500	365	131	680	815	260	1,600	240	90
18.....	220	690	690	600	365	131	680	740	260	3,000	217	90
19.....	220	380	690	600	365	131	680	675	260	725	195	140
20.....	220	380	570	600	365	131	680	615	260	810	175	217
21.....	220	380	570	450	335	131	680	615	260	645	140	175
22.....	220	480	570	325	295	131	830	615	260	510	125	140
23.....	220	430	570	410	315	131	725	815	260	365	140	140
24.....	220	1,850	630	410	315	131	560	1,000	260	265	112	112
25.....	180	2,720	870	410	295	150	560	1,000	260	240	140	125
26.....	220	1,600	450	410	295	150	560	1,000	260	140	175	125
27.....	220	1,020	420	365	315	150	560	1,000	215	405	195	125
28.....	180	730	420	365	295	150	560	675	190	268	217	175
29.....	180	535	470	365	.....	150	560	675	175	215	324	158
30.....	180	875	370	365	.....	150	640	400	165	240	157	158
31.....	180	.....	720	365	.....	150	.....	310	.....	140	217	.....
1906-7.												
1.....	140	195	760	395	395	165	235	240	680	185	680	680
2.....	175	195	1,230	355	445	185	275	270	540	160	300	910
3.....	175	195	1,080	355	565	185	235	240	480	140	210	680
4.....	157	470	950	505	355	165	275	210	540	125	185	610
5.....	140	295	760	395	445	145	205	270	540	125	380	610
6.....	140	295	650	395	355	145	185	380	540	115	300	300
7.....	175	295	510	355	315	145	165	340	480	105	210	340
8.....	175	295	470	315	315	165	165	340	430	87	210	380
9.....	175	295	950	445	315	145	185	300	610	87	210	380
10.....	175	295	950	565	505	130	165	380	610	87	185	340
11.....	175	295	750	565	565	145	145	380	610	80	160	300
12.....	175	295	760	505	445	120	130	380	680	80	140	240
13.....	175	295	705	505	395	100	130	540	480	73	125	185
14.....	240	295	600	505	355	90	120	480	540	680	125	185
15.....	217	295	480	445	565	110	120	430	480	480	115	140
16.....	240	295	480	445	505	130	110	380	430	270	95	140
17.....	268	295	560	445	505	130	110	430	380	185	105	140
18.....	217	295	650	505	315	130	120	430	830	185	87	125
19.....	175	393	510	565	835	120	130	480	990	140	80	115
20.....	175	510	510	630	355	120	235	430	1,260	115	125	115
21.....	175	510	470	565	355	120	300	340	830	105	185	125
22.....	175	510	395	565	315	120	240	340	830	610	610	125
23.....	195	470	295	565	315	120	340	270	680	1,450	240	140
24.....	195	430	470	565	275	120	350	240	610	910	1,450	140
25.....	195	430	325	505	315	120	340	210	380	480	910	140
26.....	217	470	325	395	275	110	300	270	340	380	540	125
27.....	195	700	325	505	185	100	300	340	340	480	340	125
28.....	240	760	470	505	185	100	210	340	270	480	380	115
29.....	217	700	357	395	.....	100	210	380	240	430	480	80
30.....	195	650	393	395	.....	205	240	430	210	3,700	680	87
31.....	195	.....	430	395	.....	315	.....	430	.....	1,860	540	.....

Daily discharge, in second-feet, of Pecos River near Dayton, N. Mex., for 1905-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	80	540	480	370	275	150	75	135	140	105	460	680
2.....	80	480	340	415	275	130	75	190	220	70	1,040	1,520
3.....	105	380	340	370	315	110	75	250	125	70	2,840	1,000
4.....	87	380	340	330	275	110	75	190	90	240	1,840	750
5.....	105	340	340	420	360	80	80	220	90	1,520	1,030	440
6.....	105	300	380	375	310	80	80	190	125	1,620	1,030	545
7.....	87	300	2,000	375	310	80	85	160	125	1,390	870	390
8.....	87	300	430	375	360	80	85	135	125	930	880	340
9.....	95	300	380	420	410	80	90	115	105	300	140	260
10.....	95	300	340	375	415	80	95	115	70	290	50	260
11.....	95	300	270	530	420	80	100	95	70	175	1,830	260
12.....	115	270	380	375	360	80	110	115	70	165	1,780	200
13.....	140	270	270	485	360	80	115	115	90	110	935	150
14.....	105	340	340	430	425	80	120	95	70	100	2,140	105
15.....	125	270	270	430	425	80	124	95	70	140	1,520	150
16.....	115	300	380	340	430	80	124	110	70	60	1,380	125
17.....	115	380	380	430	375	70	124	110	70	55	1,980	105
18.....	115	680	380	485	220	70	124	90	60	50	1,450	125
19.....	125	680	380	260	190	70	124	110	46	45	1,400	85
20.....	140	750	380	340	170	70	124	90	70	1,950	1,180	70
21.....	140	830	480	300	170	70	124	65	60	515	2,740	55
22.....	210	750	430	340	170	60	124	65	60	1,000	1,520	55
23.....	680	480	380	390	200	60	124	65	46	964	3,300	70
24.....	540	380	380	345	120	60	124	65	46	965	2,300	45
25.....	680	430	380	345	170	60	124	65	175	475	2,490	45
26.....	830	380	430	390	140	65	124	80	150	330	1,560	45
27.....	990	340	430	310	125	65	130	330	150	250	950	55
28.....	1,550	300	430	350	125	65	130	250	70	220	950	45
29.....	3,450	270	270	310	125	65	130	250	46	140	950	105
30.....	1,550	540	380	235	125	65	130	190	40	120	520	45
31.....	1,080	.....	380	310	.....	65	.....	220	.....	410	350	.....
1908-9.												
1.....	45	85	300	260	230	85	60	60	60	236	.....	370
2.....	35	85	750	260	340	85	60	60	48	190	.....	330
3.....	35	85	495	300	260	85	72	48	40	151	90	230
4.....	30	85	495	260	230	85	72	48	36	115	90	186
5.....	30	125	390	385	230	70	60	36	40	115	82	186
6.....	30	125	390	490	200	70	60	32	40	151	82	167
7.....	35	125	301	385	200	70	60	32	40	151	74	135
8.....	45	125	301	340	230	70	72	32	36	290	67	122
9.....	45	125	301	300	230	70	72	32	36	151	74	4,200
10.....	45	125	390	300	230	70	40	32	36	99	67	1,340
11.....	45	125	390	300	200	70	40	32	36	85	90	1,040
12.....	35	125	300	300	230	85	36	32	36	236	74	790
13.....	35	125	300	260	230	85	36	30	36	212	67	790
14.....	30	125	390	300	170	105	36	30	212	40	82	870
15.....	30	125	390	300	170	125	36	30	115	36	100	870
16.....	28	125	390	300	170	145	36	30	360	85	110	150
17.....	35	125	390	340	170	145	32	85	360	72	135	420
18.....	35	150	390	1,080	170	260	32	85	262	450	135	290
19.....	35	150	300	440	170	230	36	48	212	290	135	290
20.....	30	150	300	385	170	230	36	48	151	190	330	230
21.....	30	150	260	385	170	170	30	60	115	151	260	186
22.....	260	230	260	385	170	145	30	60	115	115	530	167
23.....	45	260	260	300	145	125	32	72	99	85	260	135
24.....	30	230	300	385	125	125	30	72	78	99	207	135
25.....	35	230	340	300	125	125	36	72	72	1,290	420	122
26.....	35	200	390	300	85	85	32	72	48	.....	290	110
27.....	30	200	390	340	85	70	32	30	36	.....	230	100
28.....	30	200	340	340	85	70	115	151	36	.....	207	110
29.....	30	230	340	230	.....	70	85	115	170	.....	290	110
30.....	85	300	340	230	.....	70	72	85	262	.....	290	90
31.....	85	.....	340	230	.....	70	.....	72	.....	.....	370	.....

^a Estimated.

Daily discharge, in second-feet, of Pecos River near Dayton, N. Mex., for 1905-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	90	100	135	420	207	135	82	100	74	159	70	130
2.....	90	100	135	420	207	135	82	100	67	139	72	540
3.....	90	100	135	320	207	135	74	91	64	109	74	260
4.....	82	100	135	285	207	122	74	91	61	104	76	175
5.....	82	100	135	285	230	110	74	110	52	99	79	165
6.....	82	100	135	285	255	110	74	207	50	93	82	165
7.....	90	100	330	285	255	110	74	230	48	68	135	150
8.....	90	100	290	207	255	110	74	255	68	62	390	135
9.....	90	100	260	255	255	100	91	255	66	57	500	135
10.....	82	100	260	255	230	100	91	255	71	48	576	122
-11.....	82	100	260	285	255	100	91	207	57	39	654	110
12.....	82	100	260	285	255	100	91	207	45	33	490	100
13.....	82	110	260	285	255	110	91	186	44	32	2,390	100
14.....	82	110	260	475	255	110	82	167	43	35	6,500	110
15.....	135	420	370	590	255	110	82	167	42	46	8,350	122
16.....	135	370	330	475	255	110	82	167	55	37	4,580	122
17.....	135	167	370	320	255	110	100	162	75	40	2,400	150
18.....	135	110	420	285	255	110	100	160	1,080	41	700	150
19.....	135	110	420	285	255	122	91	195	895	39	9,100	135
20.....	167	110	420	255	255	110	91	276	462	40	3,990	150
21.....	150	110	420	255	230	110	91	388	358	49	1,280	135
22.....	135	110	420	320	207	110	82	240	276	50	510	135
23.....	167	110	650	285	186	110	74	187	188	52	292	110
24.....	167	110	650	285	186	110	67	150	185	54	165	110
25.....	167	167	1,440	207	207	110	74	148	182	56	130	100
26.....	135	135	370	207	207	110	74	129	143	58	115	82
27.....	100	135	290	230	186	110	74	138	139	60	110	82
28.....	100	135	290	230	167	91	74	132	136	62	112	82
29.....	100	135	260	207	.....	91	74	103	276	64	110	82
30.....	90	135	650	230	.....	91	74	40	260	66	113	74
31.....	100	.....	470	230	.....	91	.....	38	.....	68	114	.....
1910-11.												
1.....	74	110	230	300	300	270	132	414	680	135	750	510
2.....	82	110	207	300	300	270	132	372	740	75	679	561
3.....	110	110	207	372	270	270	120	270	500	65	561	210
4.....	100	100	207	414	244	244	132	244	280	65	510	188
5.....	91	110	207	414	270	244	120	198	555	55	418	188
6.....	82	110	230	570	244	244	110	198	245	65	376	188
7.....	91	128	230	300	244	244	110	178	155	110	300	170
8.....	91	122	230	270	244	198	120	178	120	380	266	170
9.....	82	122	230	270	244	178	110	160	110	300	266	154
10.....	82	122	230	244	244	178	110	145	95	300	236	154
11.....	82	122	230	300	198	178	120	145	80	895	236	154
12.....	82	122	230	372	198	160	120	132	100	1,050	210	210
13.....	82	135	230	372	178	160	120	160	80	950	210	210
14.....	82	135	230	300	178	160	120	460	80	870	170	188
15.....	82	135	230	300	178	160	110	2,470	75	1,040	154	170
16.....	91	150	230	270	178	145	110	1,730	75	1,300	139	210
17.....	91	150	230	270	178	145	110	1,130	75	1,400	139	210
18.....	91	150	255	300	178	145	120	880	65	585	139	188
19.....	91	150	255	300	334	145	110	480	60	585	125	188
20.....	91	186	255	270	372	145	120	480	60	525	112	170
21.....	91	186	255	270	334	145	110	430	65	1,040	112	154
22.....	91	186	242	270	334	160	110	310	75	1,210	112	154
23.....	100	207	230	270	300	160	110	230	125	8,440	139	210
24.....	100	207	230	270	300	160	110	205	200	11,000	154	188
25.....	100	207	255	270	270	160	160	155	150	7,900	154	170
26.....	100	167	255	270	270	145	178	155	170	1,090	915	154
27.....	100	167	255	270	270	145	460	125	150	617	1,000	154
28.....	122	207	255	300	270	145	372	120	150	830	915	154
29.....	110	230	230	414	.....	160	460	105	110	1,090	561	154
30.....	110	207	230	270	.....	160	460	130	100	830	463	154
31.....	110	.....	230	300	.....	145	.....	190	.....	830	463	.....

Daily discharge, in second-feet, of Pecos River near Dayton, N. Mex., for 1905-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	170	463	284	220	240	240	220	100	960	380	82	135
2.....	170	320	284	200	240	265	200	90	1,080	279	82	135
3.....	170	320	320	240	290	290	180	90	960	248	82	103
4.....	170	320	320	240	265	265	180	126	960	217	73	103
5.....	170	320	358	240	240	265	180	160	960	191	82	118
6.....	170	358	320	220	265	240	180	200	780	185	91	118
7.....	170	320	320	220	240	220	180	360	730	159	200	82
8.....	170	320	284	220	240	200	160	570	840	121	135	82
9.....	188	250	284	240	290	180	160	510	840	94	103	82
10.....	1,370	250	284	265	290	180	143	475	960	79	82	73
11.....	1,090	250	320	265	265	180	143	405	1,150	57	82	73
12.....	830	680	320	290	265	180	143	315	1,290	57	73	135
13.....	679	545	398	375	290	160	143	315	3,000	57	65	91
14.....	561	398	398	315	265	160	143	345	1,960	50	73	390
15.....	463	250	398	315	265	143	143	510	1,320	44	65	540
16.....	418	250	358	290	265	126	160	550	1,100	50	73	330
17.....	337	250	398	290	240	112	160	510	840	50	175	660
18.....	300	284	398	290	220	126	200	550	600	50	255	500
19.....	300	284	358	315	220	112	220	510	555	65	225	320
20.....	266	284	320	345	200	112	240	440	500	73	540	285
21.....	236	284	320	290	220	100	265	375	490	135	355	225
22.....	236	320	320	290	200	100	240	440	525	155	480	200
23.....	266	320	320	315	200	100	200	405	430	355	255	200
24.....	376	320	320	290	200	112	160	680	505	460	200	175
25.....	337	320	320	290	200	112	143	730	370	355	155	155
26.....	266	320	320	265	180	112	126	900	370	285	135	155
27.....	236	358	200	240	180	112	112	960	345	200	155	135
28.....	236	284	180	240	220	112	112	900	780	155	155	118
29.....	236	284	160	265	265	112	100	960	660	118	118	155
30.....	236	320	150	240	.....	240	100	900	530	103	118	255
31.....	266	.....	200	240	.....	240	.....	990	.....	91	135	.....
1912-13.												
1.....	200	103	175	273	297	154	106	150	56	283	110	139
2.....	225	103	200	250	273	136	106	150	56	2,020	110	124
3.....	320	103	200	375	250	154	106	132	56	1,100	154	111
4.....	255	103	200	403	322	154	94	132	47	590	138	111
5.....	225	103	225	322	322	154	94	116	47	482	124	196
6.....	200	103	225	297	273	154	94	116	47	420	97	156
7.....	200	103	225	273	250	154	94	116	77	336	86	238
8.....	175	103	255	250	317	136	94	102	102	283	86	192
9.....	200	103	275	250	422	154	94	102	77	234	86	146
10.....	175	103	265	348	422	154	94	132	77	234	75	118
11.....	155	91	255	403	392	154	94	116	840	211	75	130
12.....	135	91	315	375	338	264	94	116	5,750	171	75	142
13.....	155	103	305	375	392	218	82	116	11,100	154	66	99
14.....	155	118	295	322	392	196	82	102	4,850	154	66	124
15.....	155	103	250	348	392	174	82	89	2,380	154	66	110
16.....	135	103	240	322	364	154	82	77	1,580	154	66	96
17.....	135	135	240	273	338	136	82	77	1,030	138	66	94
18.....	135	135	215	273	338	120	82	77	900	138	66	82
19.....	135	135	215	273	338	120	72	77	840	138	58	82
20.....	135	155	195	637	338	120	72	77	632	124	58	80
21.....	135	135	195	432	312	120	214	66	2,110	154	58	99
22.....	135	155	235	462	240	120	89	77	2,290	211	66	87
23.....	135	155	235	403	196	120	132	102	1,500	124	66	86
24.....	135	155	280	375	196	106	116	77	1,180	138	58	85
25.....	118	155	255	375	196	120	546	77	728	124	58	83
26.....	103	155	265	375	196	106	450	77	516	124	217	82
27.....	118	175	275	322	174	106	308	77	482	124	87	90
28.....	118	155	285	348	174	106	284	66	391	154	87	101
29.....	118	175	355	322	.....	106	214	66	336	138	87	111
30.....	118	175	285	322	.....	106	192	66	309	138	98	111
31.....	103	.....	255	273	.....	106	.....	56	.....	124	87	.....

NOTE.—Daily discharges determined by the indirect method for shifting channels, except the following: Apr. 1 to July 25, 1909, discharges based on a rating curve well defined below 510 second-feet. Aug. 3 to Dec. 31, 1909, based on a rating curve well defined below 400 second-feet; Jan. 1 to June 13, 1912, based on a rating curve well defined between 80 and 3,200 second-feet; July 12 to Dec. 7, 1912, based on a rating curve well defined between 40 and 500 second-feet. The 1910 daily discharges were computed by the United States Reclamation Service. Discharges prior to Sept. 6, 1905, include the flow of the Penasco.

Monthly discharge of Pecos River near Dayton, N. Mex., for 1905-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1905.					
Mar. 24-31.....	550	475	502	7,970	
April.....	3,600	475	1,040	61,900	
May.....	3,670	920	1,740	107,000	
June.....	3,000	190	1,150	68,400	
July.....	50,300	85	4,350	267,000	
August.....	1,820	80	675	41,500	
September.....	1,540	125	421	25,100	
The period.....				579,000	
1905-6.					
October.....	250	150	214	13,200	
November.....	2,720	175	648	38,000	
December.....	950	370	657	40,400	
January.....	750	325	439	27,000	
February.....	365	295	342	19,000	
March.....	290	131	194	11,900	
April.....	830	145	530	31,500	
May.....	1,000	310	626	38,500	
June.....	1,000	165	308	18,300	
July.....	3,000	140	643	39,500	
August.....	760	112	270	16,000	
September.....	217	77	117	6,960	
The year.....	3,000	77	416	301,000	
1906-7.					
October.....	268	140	190	11,700	
November.....	760	195	391	23,300	
December.....	1,230	295	599	36,800	
January.....	630	315	469	28,800	B.
February.....	835	185	395	21,900	B.
March.....	315	90	139	8,500	C.
April.....	380	110	210	12,500	D.
May.....	540	210	352	21,600	B.
June.....	1,260	210	562	33,400	C.
July.....	3,700	73	464	28,500	C.
August.....	1,450	80	335	20,600	C.
September.....	910	80	271	16,100	C.
The year.....	3,700	73	365	264,000	
1907-8.					
October.....	3,450	80	446	27,400	C.
November.....	830	270	419	24,900	C.
December.....	2,000	270	425	26,100	C.
January.....	530	235	373	22,900	C.
February.....	430	120	277	15,900	C.
March.....	150	60	78.7	4,840	C.
April.....	130	75	109	6,490	C.
May.....	330	65	138	8,480	B.
June.....	220	40	91.5	5,440	B.
July.....	1,950	45	478	29,400	C.
August.....	7,300	50	1,560	95,900	C.
September.....	1,520	45	271	16,100	C.
The year.....	7,300	40	389	284,000	
1908-9.					
October.....	260	28	45.4	2,790	C.
November.....	300	85	155	9,220	C.
December.....	750	260	362	22,300	C.
January.....	1,080	230	345	21,200	C.
February.....	340	85	186	10,300	C.
March.....	260	70	109	6,700	C.
April.....	115	30	49.3	2,930	C.
May.....	151	30	55.6	3,420	C.
June.....	360	36	107	6,370	A.
July 1-25.....	1,290	36	203	10,100	A.
August 3-31.....	530	67	181	10,400	A.
September.....	4,200	90	476	28,300	B.

Monthly discharge of Pecos River near Dayton, N. Mex., for 1905-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
October.....	167	82	111	6,820	B.
November.....	420	100	133	7,910	B.
December.....	1,440	135	362	22,300	B.
January.....	590	207	298	18,300	
February.....	255	167	230	12,800	
March.....	135	91	109	6,700	
April.....	100	67	81.6	4,860	
May.....	388	38	170	10,500	
June.....	1,080	42	185	11,000	
July.....	159	32	63.2	3,890	
August.....	9,100	70	1,430	87,900	
September.....	540	74	141	8,390	
The year.....	9,100	32	276	201,000	
1910-11.					
October.....	122	74	93.3	5,740	
November.....	230	100	151	8,950	
December.....	255	207	234	14,400	
January.....	570	244	312	19,200	A.
February.....	372	178	254	14,100	A.
March.....	270	145	180	11,100	A.
April.....	460	110	163	9,700	A.
May.....	2,470	105	406	25,000	C.
June.....	740	60	184	10,900	D.
July.....	^a 11,000	55	1,470	90,400	C.
August.....	1,000	112	354	21,800	C.
September.....	561	154	201	12,000	C.
The year.....	^a 11,000	55	334	243,000	
1911-12.					
October.....	1,370	170	358	22,000	C.
November.....	680	250	328	19,500	C.
December.....	398	150	308	18,900	C.
January.....	375	200	270	16,600	B.
February.....	290	180	240	13,800	A.
March.....	290	100	168	10,300	A.
April.....	265	100	168	10,000	A.
May.....	990	90	496	30,500	A.
June.....	3,000	345	882	52,500	B.
July.....	460	44	159	9,780	B.
August.....	540	65	158	9,720	A.
September.....	660	73	206	12,300	A.
The year.....	3,000	44	312	226,000	
1912-13.					
October.....	320	103	159	9,780	A.
November.....	175	91	126	7,500	A.
December.....	355	175	248	15,200	B.
January.....	637	250	344	21,100	B.
February.....	422	174	302	16,800	B.
March.....	264	106	141	8,670	B.
April.....	546	72	145	8,630	B.
May.....	150	56	96.1	5,910	B.
June.....	11,100	47	1,350	80,300	C.
July.....	2,020	124	293	18,000	B.
August.....	217	58	87.0	5,350	B.
September.....	238	80	117	6,960	B.
The year.....	11,100	47	284	204,000	

^a Estimated.

NOTE.—Discharges prior to Sept., 1905, include the flow of the Penasco.

PECOS RIVER NEAR LAKEWOOD, N. MEX.

Location.—Three miles southeast of Lakewood, half a mile below the McMillan reservoir dam, in sec. 11, T. 20 S., R. 26 E.; no tributary between the station and the reservoir; Seven Rivers enters 3 miles below.

Records available.—January 11, 1906, to December 16, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Inclined staff. The original gage was at the lower side of the dam, but was moved to a point near the lower end of the outlet canal February 8, 1906. On May 8, 1906, it was moved to its final location.

Channel.—Shifting.

Discharge measurements.—Made from car and cable a quarter of a mile above the railway bridge of the Eastern Railway of New Mexico.

Winter flow.—Not affected by ice.

Diversions.—Lake McMillan is the upper reservoir in the Carlsbad project of the United States Reclamation Service. Although the flow from the lake passes the station, the flow over the flood spillways reaches the river below the station and is not recorded.

Accuracy.—Although the channel is shifting, sufficient discharge measurements were made to allow estimates of discharge, having a fair degree of accuracy, to be made from 1906 to 1909. No estimates were made for 1910 and 1911.

Cooperation.—Station maintained by the United States Reclamation Service, which furnished the field data.

Discharge measurements of Pecos River near Lakewood, N. Mex., in 1906-1910.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 11	J. M. Giles.....	a9.50	698	Nov. 30	W. A. Lamb.....	2.95	917
11	do.....	a9.50	645				
25	E. Patterson.....	a8.90	701	1907.			
Feb. 7	J. M. Giles.....	b3.35	477	Feb. 20	W. A. Lamb.....	.19	11.9
7	E. Patterson.....	b3.35	534	May 17	do.....	1.25	236
14	J. M. Giles.....	b3.50	684	June 28	do.....	.90	141
20	E. Patterson.....	b3.30	415				
22	do.....	b3.05	308	1909.			
Mar. 3	J. M. Giles.....	b3.05	290	July 12	U. S. Reclamation Service.	1.00	97
20	E. Patterson.....	b1.50	5.6	12	do.....	1.20	143
Apr. 2	B. S. Drane.....	b1.53	6.5	12	do.....	1.55	209
8	do.....	b1.49	4.0	27	do.....	3.00	625
11	do.....	b1.42	3.0	27	do.....	3.90	1,230
14	do.....	b1.38	2.0	Sept. 23	do.....	1.90	381
21	J. M. Giles.....	b4.30	1,160	23	do.....	.80	89
May 8	do.....	.30	31	23	do.....		
June 5	E. Patterson.....	2.05	459				
July 13	J. M. Giles.....	4.50	1,720	1910.			
Oct. 30	W. A. Lamb.....	b1.56	7.9	Aug. 10	do.....	8.40	3,810

^a Gage at head gates.

^b Gage at lower end of outlet canal.

Daily gage height, in feet, of Pecos River near Lakewood, N. Mex., for 1906-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.												
1					8.9	3.2	1.5	3.65	0.3	0.3	0.2	0.2
2					8.9	3.2	1.53	3.6	.3	.3	.2	.2
3					8.8	3.0	1.53	3.6	.3	.3	.2	.2
4					8.8	3.1	1.51	3.55	.3	.3	.2	.2
5					8.7	3.1	1.51	3.45	2.0	.3	.2	.2
6					8.7	1.5		2.7	2.35	.3	.2	.2
7					9.0	1.5	1.5	2.0	2.7	.3	.2	.2
8					3.4	1.5		.3	2.65	.3	.2	.2
9					3.3	1.5	1.48	.3	3.2	.3	.2	.2
10					3.4	1.5		.3	3.0	.3	.2	.2
11				9.5	3.4	1.5		.3	2.7	2.5	1.8	.2
12				9.5	3.6	1.5	1.42	.3	2.2	4.05	2.65	.2
13				9.4	3.5	1.5	1.41	.3	.65	4.4	2.65	.2
14				9.0	3.6	1.5	1.38	.3	.25	4.3	2.6	.2
15				8.9	3.6	1.5		.3	.25	4.0	2.5	.2
16				9.4	3.6	1.5		.3	.25	3.8	2.4	.2
17				9.5	3.5	1.5	1.35	.3	.3	3.8	2.2	.2
18				9.4	3.5	1.5	1.35	.3	.3	4.2	2.0	.2
19				9.2	3.4	1.5	2.3	2.0	.3	4.7	.2	.2
20				9.1	3.4	1.5	4.3	2.85	.3	4.5	.2	.2
21				9.0	3.4	1.5	4.3	2.85	.3	3.85	.2	.2
22				9.0	3.4	1.5	4.25	2.85	.3	3.0	.2	.2
23				8.9	3.3	1.5	4.2	2.8	.3	.4	.2	.2
24				8.9	3.2	1.5	4.1	3.25	.3	.4	.2	.2
25				9.0	3.2	1.5	4.05	3.2	.3	.15	.2	.2
26				8.9	3.2	1.5	4.0	3.15	.3	.2	.2	.2
27				8.9	3.1	1.5	3.9	3.1	.3	.2	2.8	.2
28				8.9	3.1	1.5	3.8	.3	.3	.2	4.2	.2
29				8.8		1.5	3.75	.3	.3	.2	3.75	.2
30				8.9		1.5	3.7	.3	.3	.2	2.8	.2
31				8.9		1.5		.3		.2	.2	
1906-7.												
1	0.2	0.2	3.9	.1	.2	1.22	.2	.6	.7	.9	3.08	2.55
2	.2	.2	4.6	.1	.2	2.3	.2	.6	1.4	1.15	1.4	1.8
3	.2	.2	4.75	.1	.2	2.28	.2	.6	2.1	1.4	1.3	1.8
4	.2	.2	4.8	.1	.2	.2	.2	.6	2.1	1.4	1.3	1.8
5	.2	.2	4.5	.1	.2	.2	.2	.6	2.1	1.12	1.3	1.8
6	.2	.2	4.1	.1	.2	.2	.2	.2	1.75	.9	1.3	1.8
7	.2	.2	3.5	1.75	.2	.2	.2	.2	1.1	.9	1.3	1.5
8	.2	.2	2.6	2.38	.2	.2	.2	.2	1.1	.8	1.3	1.0
9	.2	.2	2.35	2.98	1.44	.2	.2	.6	1.1	.8	1.3	1.0
10	.2	.2	3.15	3.28	2.8	.2	.2	.6	1.1	.8	1.15	1.0
11	.2	.2	3.0	3.42	2.75	.2	.2	.6	.75	.8	1.0	1.0
12	.2	.2	2.8	3.52	2.68	.2	.2	2.0	.75	.8	1.0	.7
13	.2	.2	2.6	3.45	.2	.2	.2	2.0	.75	.8	1.0	.7
14	.2	.2	2.45	3.75	.2	.2	.2	1.45	.75	.8	1.12	.7
15	.2	.2	2.4	.15	.2	.2	.2	1.2	.75	.8	1.25	.7
16	.2	.2	2.3	.15	.2	.2	.2	1.2	1.42	.8	1.25	.7
17	.2	.2	.1	.15	.2	.2	.2	1.2	2.75	.8	1.25	.7
18	.2	.2	.1	.15	.2	.2	.2	1.6	2.75	.8	1.0	.35
19	.2	.2	.1	.15	.2	.2	.2	.55	2.0	2.7	.8	1.0
20	.2	.2	.1	.15	.2	.2	.2	.55	1.5	4.0	.8	1.0
21	.2	.2	.1	.15	.2	.2	.2	.55	1.5	4.0	.8	1.05
22	.2	.2	.1	.15	.2	.2	.2	.55	1.5	3.95	.8	3.0
23	.2	.2	.1	.15	.2	.2	.2	.4	1.5	2.1	.8	1.2
24	.2	1.6	.1	.15	.2	.2	.4	.9	1.0	.8	1.2	.35
25	.2	1.6	.1	.15	.98	.2	.4	.7	1.65	.75	1.2	.35
26	.2	1.6	.1	3.2	2.12	.2	.2	.7	1.65	.75	1.3	.35
27	.2	1.6	.1	3.4	2.3	.2	.2	.7	1.6	.75	1.3	.35
28	.2	2.4	.1	3.3	2.25	.2	.2	.7	1.25	.75	1.3	.35
29	.2	3.0	.1	1.61		.2	.2	.7	.9	.75	1.3	.35
30	.2	3.8	.1	.1		.2	.2	.7	.9	3.1	1.1	.35
31	.2		.1	.2		.2		.7		4.7	2.65	

Daily gage height, in feet, of Pecos River near Lakewood, N. Mex., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.35	4.7	1.8	1.6	1.5	0.1						
2.....	.35	3.2	1.8	1.6	1.4	.1						
3.....	.35	2.1	1.75	1.6	1.4	.1						
4.....	.35	2.1	1.75	1.6	.8	.1						
5.....	.35	1.35	1.75	1.6	.8	.1						
6.....	.35	1.45	1.7	1.6	.8	.1						
7.....	.35	1.55	1.7	1.6	.8	.1						
8.....	.35	1.55	1.65	1.6	.8	.1						
9.....	.35	1.6	1.65	1.6	.8	.1						
10.....	.35	1.6	1.6	1.6	.8	.1						
11.....	.35	1.6	1.6	1.6	.8	.1						
12.....	.35	1.6	1.6	1.6	.8	.1						
13.....	.35	1.6	1.6	1.6	.8	.1						
14.....	.35	1.6	1.6	1.6	.8	.1						
15.....	.3	1.6	1.6	1.55	.8	.1						
16.....	.3	1.6	1.6	1.55	.2	.1						
17.....	.3	1.6	1.6	1.5	.2	.1						
18.....	.3	1.6	1.6	1.5	.2	.1						
19.....	.3	1.65	1.6	1.5	.2	.1						
20.....	.3	1.7	1.6	1.5	.2	.1						
21.....	.3	1.75	1.6	1.5	.2	.1						
22.....	.3	1.8	1.6	1.5	.2	.1						
23.....	.3	1.9	1.65	1.5	.2	.1						
24.....	1.05	1.9	1.65	1.5	.1	.1						
25.....	1.8	1.9	1.7	1.5	.1	.1						
26.....	1.8	1.85	1.7	1.5	.1	.1						
27.....	2.2	1.85	1.7	1.5	.1	.1						
28.....	4.5	1.85	1.7	1.5	.1	.1						
29.....	5.6	1.8	1.7	1.5	.1	.1						
30.....	5.6	1.8	1.7	1.5		.1						
31.....	5.2		1.7	1.5		.1						
1909.												
1.....						1.4	0.8	0.7	0.6	0.65	0.8	1.5
2.....						1.4	.8	.7	.6	.7	.8	1.5
3.....						1.4	.8	.7	.6	.7	.8	1.5
4.....						1.4	.8	.7	.6	.9	.8	1.5
5.....							.8	1.2	.6	.9	.8	1.5
6.....							.8	1.2	.6	.9	.8	1.5
7.....							.8	1.2	.65	.9	.8	1.5
8.....							.8	1.2	.5	.9	.8	1.5
9.....							.8	1.2	.5	.9	.8	1.5
10.....							.8	1.1	.5	.9	.8	1.5
11.....							.8	.95	.5	1.0	.8	3.15
12.....							.8	.8	.5	.8	.8	4.5
13.....							.8	.8	.5	.8	.8	4.3
14.....							.8	.75	.5	.8	.8	4.2
15.....							.8	.7	.75	1.35	.8	1.95
16.....							.8	.7	1.2	1.4	.8	1.5
17.....							.8	.7	.6	1.3	.8	1.5
18.....							.8	.7	.6	1.35	.8	1.5
19.....							.75	.7	.6	1.3	.8	1.5
20.....						1.4	.7	.7	.6	1.3	.8	1.25
21.....						1.4	.7	.7	.6	1.3	.8	1.0
22.....						1.4	.7	.7	.6	1.25	1.1	1.0
23.....						1.4	.7	.7	.6	1.2	1.4	1.5
24.....					1.4	1.4	.7	.7	.6	1.2	1.4	.8
25.....					1.4	1.4	.7	.7	.6	2.7	1.4	.8
26.....					1.4	1.4	.7	.95	.6	4.4	1.4	.8
27.....					1.4	.8	.7	1.2	.6	3.1	1.4	.8
28.....					1.4	.8	.7	1.2	.6	1.3	1.4	.8
29.....					.8	.7	.7	1.2	.6	.8	1.4	.8
30.....					.8	.7	.7	1.2	.6	.8	1.5	.8
31.....					.8	.8		.8		.8	1.5	

Daily gage height, in feet, of Pecos River near Lakewood, N. Mex., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1	0.8				2.8			1.0	1.2	1.0	0.55	1.0
2	.8				2.1			1.0		1.0	.55	1.0
3	.8				1.2			1.1		.8	.55	1.0
4	.8				1.0			1.2		.8	.55	1.0
5	.8							1.2		.9	.55	1.0
6	.8				1.7			1.2		.9	.75	1.0
7	.8				1.7			1.2		1.0	.7	1.0
8	.8				1.7			1.2		1.0	1.2	1.0
9	.8				1.7			1.2		.8	1.5	1.0
10	.8				1.0			1.2		.8	1.95	1.0
11	.8							1.2		.8	2.0	1.0
12	.8							1.2		.6	2.0	1.0
13	.7							1.2		.6	1.85	1.0
14	.6							1.2		.6	1.75	1.0
15	.6							1.2	1.2	.6	2.15	1.0
16	2.7						1.8	1.2	1.2	.6	4.7	1.0
17	4.0						1.8	1.2	1.2	.6	6.4	1.0
18	.85						1.8	1.2	1.9	.65	7.2	1.0
19	.85						.8	1.2	2.2	.6	8.0	1.0
20							.7	1.2	2.2	.6	8.4	1.0
21							.7	1.2	2.2	.6	7.4	1.0
22							.7	1.2	1.9	.35	7.4	1.0
23							.7	1.2	1.7		7.15	1.0
24							.7	1.2	1.5		4.95	1.0
25							.7	1.2	1.35		1.0	1.0
26							.7	1.2	1.2	.8	1.0	1.0
27				1.2			.7	1.2	1.2	.65	1.0	1.0
28				1.6			.7	1.2	1.2	.5	1.0	1.0
29				2			.85	1.2	1.0	.55	1.0	1.0
30				2.7			1.0	1.2	1.0	.55	1.0	1.0
31				2.8				1.2		.55	1.0	

Day.	Oct.	Nov.	June.	July.	Aug.	Sept.	Day.	Oct.	Nov.	June.	July.	Aug.	Sept.
1910-11.													
1	0.9	1.1			1.5	1.4	16	0.9	1.3		1.2	1.2	0.9
2	.9	1.1	2.5		.85	1.4	17	.9	1.3		2.4	1.2	1.05
3	.9	1.1	2.5		1.2	1.4	18	.9	1.3		2.4	1.0	1.05
4	.9	1.1	2.5		2.2	1.4	19	.9	1.3		2.4	.7	1.0
5	.9	1.2	1.8		2.2	1.35	20	.9	1.3		1.6	.55	.95
6	.9	1.2	.8		2.2	1.3	21	.9	1.3		.8	.55	.9
7	.9	1.2	.5		2.15	1.3	22	.9	1.3		.65	.55	.8
8	.9	1.2	.3		2.0	1.25	23	1.5	1.4		.5	.6	.8
9	.9	1.2			1.75	1.2	24	1.25	1.4		4.45	.7	.8
10	.9	1.2			1.6	1.15	25	.8	1.4		9.3	.9	.8
11	.9	1.2			1.45	.95	26	.8	1.4		9.9	1.2	.8
12	.9	1.2			1.3	.9	27	.8	1.4		9.4	1.5	.8
13	.9	1.2			1.3	1.1	28	.8	1.4		8.0	1.85	.8
14	.9	1.3			1.3	1.1	29	1.0	1.4		5.5	2.2	.8
15	.9	1.3		0.7	1.25	.9	30	1.1			4.25	1.8	.8
							31	1.05			2.85	1.4	

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.											
1	0.8	1.0		11	1.9	1.3		21	0.9		
2	.8	1.15		12	2.85	1.0		22	.9		
3	.8	1.3		13	2.35	1.0	0.55	23	.9		
4	.8	1.3		14	1.6	1.0	.9	24	.9		
5	.8	1.3		15	1.2	.6	.9	25	.9		
6	.8	1.3		16	1.2		.55	26	1.15		
7	.8	1.3		17	1.2			27	1.3		
8	.8	1.3		18	1.15			28	1.3		
9	.8	1.3		19	.95			29	1.3		
10	.8	1.3		20	.9			30	1.15		
								31	1.0		

Daily discharge, in second-feet, of Pecos River near Lakewood, N. Mex., for 1906-1909.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.												
1						400	5.0	652	30	30	20	20
2						400	6.5	620	30	30	20	20
3						313	6.5	620	30	30	20	20
4						353	5.5	590	30	30	20	20
5						355	5.5	532	465	30	20	20
6						5	5.0	210	608	30	20	20
7						5	5.0	58	765	30	20	20
8					505	5	4.8	30	742	30	20	20
9					450	5	4.5	30	1,000	30	20	20
10					505	5	4.5	30	905	30	20	20
11					505	5	3.0	30	765	675	390	20
12					620	5	3.0	30	545	1,400	742	20
13					560	5	2.8	30	85	1,600	742	20
14					620	5	2.3	30	25	1,600	720	20
15					620	5	2.2	30	25	1,430	675	20
16					620	5	2.1	30	25	1,320	630	20
17					560	5	2.0	30	30	1,320	545	20
18					560	5	2.0	30	30	1,540	465	20
19					505	5	110	465	30	1,840	20	20
20					505	5	1,160	832	30	1,720	20	20
21					505	5	1,160	832	30	1,350	20	20
22					505	5	1,120	832	30	905	20	20
23					450	5	1,080	810	30	45	20	20
24					400	5	990	1,030	30	45	20	20
25					400	5	950	1,000	30	15	20	20
26					400	5	910	980	30	20	20	20
27					355	5	830	955	30	20	810	20
28					355	5	755	30	30	20	1,540	20
29						5	720	30	30	20	1,290	20
30						5	685	30	30	20	810	20
31						5		30		20	20	
1906-7.												
1	20	20	1,380	5	14	210	14	76	95	135	945	698
2	20	20	1,780	5	14	585	14	76	260	192	260	390
3	20	20	1,870	5	14	577	14	76	505	260	230	390
4	20	20	1,900	5	14	14	14	76	505	260	230	390
5	20	20	1,720	5	14	14	14	76	505	185	230	390
6	20	20	1,480	5	14	14	14	14	372	135	230	390
7	20	20	1,100	372	14	14	14	14	180	135	230	290
8	20	20	720	621	14	14	14	14	180	115	230	155
9	20	20	608	895	272	14	14	76	180	115	230	155
10	20	20	980	1,040	810	14	14	76	180	115	192	155
11	20	20	905	1,120	788	14	14	76	105	115	155	155
12	20	20	810	1,170	756	14	14	465	105	115	155	95
13	20	20	720	1,130	14	14	14	465	105	115	155	95
14	20	20	652	1,290	14	14	14	275	105	115	185	95
15	20	20	630	10	14	14	14	205	105	115	218	95
16	20	20	585	10	14	14	14	205	266	115	218	95
17	20	20	10	10	14	14	14	205	788	115	218	95
18	20	20	10	10	14	14	14	320	788	115	155	36
19	20	20	10	10	14	14	68	465	765	115	155	36
20	20	20	10	10	14	14	68	290	1,430	115	155	36
21	20	20	10	10	14	14	68	290	1,430	115	168	36
22	20	20	10	10	14	14	68	290	1,400	115	905	36
23	20	20	10	10	14	14	44	290	505	115	205	36
24	20	320	10	10	14	14	44	135	155	115	205	36
25	20	320	10	10	151	14	44	95	338	105	205	36
26	20	320	10	1,000	513	14	14	95	338	105	230	36
27	20	320	10	1,100	585	14	14	95	320	105	230	36
28	20	630	10	1,060	565	14	14	95	218	105	230	36
29	20	905	10	324		14	14	95	135	105	230	36
30	20	1,320	10	5		14	14	95	135	955	180	36
31	20		10	14		14		95		1,840	742	

Daily discharge, in second-feet, of Pecos River near Lakewood, N. Mex., for 1906-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1907-8.						1907-8.							
1.	36	1,840	390	320	290	5	16.	28	320	320	305	14	5
2.	36	1,000	390	320	260	5	17.	28	320	320	290	14	5
3.	36	505	372	320	260	5	18.	28	320	320	290	14	5
4.	36	505	372	320	115	5	19.	28	338	320	290	14	5
5.	36	245	372	320	115	5	20.	28	355	320	290	14	5
6.	36	275	355	320	115	5	21.	28	372	320	290	14	5
7.	36	305	355	320	115	5	22.	28	390	320	290	14	5
8.	36	305	338	320	115	5	23.	28	425	338	290	14	5
9.	36	320	338	320	115	5	24.	168	425	338	290	5	5
10.	36	320	320	320	115	5	25.	390	425	355	290	5	5
11.	36	320	320	320	115	5	26.	390	408	355	290	5	5
12.	36	320	320	320	115	5	27.	545	408	355	290	5	5
13.	36	320	320	320	115	5	28.	1,720	408	355	290	5	5
14.	36	320	320	320	115	5	29.	2,420	390	355	290	5	5
15.	28	320	320	305	115	5	30.	2,420	390	355	290	5	5
							31.	2,160	355	290	290	5	5

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1909.									
1.		178	64	50	36	43	68	292	89
2.		178	64	50	36	50	69	295	89
3.		178	64	50	36	50	70	297	89
4.		178	64	50	36	80	71	300	89
5.		178	64	136	36	80	72	302	89
6.		178	64	136	36	80	74	305	89
7.		178	64	136	43	80	75	307	89
8.		178	64	136	24	80	77	310	89
9.		178	64	136	24	80	80	315	89
10.		178	64	116	24	80	82	318	89
11.		178	64	88	24	97	85	889	89
12.		178	64	64	24	64	87	1,520	89
13.		178	64	64	24	64	91	1,420	71
14.		178	64	57	24	64	94	1,380	54
15.		178	64	50	57	168	96	399	54
16.		178	64	50	136	178	99	250	690
17.		178	64	50	36	157	101	250	1,280
18.		178	64	50	36	168	104	250	98
19.		178	57	50	36	157	106	250	98
20.		178	50	50	36	157	109	184	.....
21.		178	50	50	36	157	111	128	.....
22.		178	50	50	36	146	180	128	.....
23.		178	50	50	36	136	241	250	.....
24.	178	178	50	50	36	136	244	89	.....
25.	178	178	50	50	36	524	247	89	.....
26.	178	178	50	88	36	1,280	250	89	.....
27.	178	64	50	136	36	662	252	89	.....
28.	178	64	50	136	36	157	255	89	.....
29.	64	50	136	36	65	258	89	.....	.....
30.	64	50	136	36	66	287	89	.....	.....
31.	64	.....	64	.....	67	290	.....	.....	.....

NOTE.—Although the observer gives no definite dates, it is probable that the river was dry Jan. 1-Feb. 23 and Oct. 20-Dec. 31, 1909.

Monthly discharge of Pecos River near Lakewood, N. Mex., for 1906-1909.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
February 8-28.....	620	355	500	20,800	B.
March.....	400	5	62.9	3,870	B.
April.....	1,160	2	351.0	20,900	B.
May.....	1,030	30	370	22,800	B.
June.....	1,000	25	216	12,900	B.
July.....	1,840	15	560	34,400	B.
August.....	1,540	20	314	19,300	B.
September.....	20	20	20.0	1,190	D.
The period.....				136,000	
1906-7.					
October.....	20	20	20.0	1,230	D.
November.....	1,320	20	153	9,100	C.
December.....	1,900	10	582	35,800	B.
January.....	1,290	5	364	22,400	A.
February.....	810	14	169	9,390	B.
March.....	577	14	56.9	3,500	B.
April.....	68	14	24.2	1,440	C.
May.....	465	14	168	10,300	B.
June.....	1,430	95	417	24,800	A.
July.....	1,840	105	212	13,000	B.
August.....	945	155	268	16,500	B.
September.....	698	36	153	9,100	B.
The year.....	1,900	5	216	157,000	
1907-8.					
October.....	2,420	36	354	21,800	A.
November.....	1,840	245	430	25,600	A.
December.....	390	320	342	21,000	A.
January.....	320	290	305	18,800	B.
February.....	290	5	80.4	4,620	B.
March.....	5	5	5.0	307	D.
The period.....				92,100	
1909.					
January.....	0	0	.0	0	
February.....	178	0	31.8	1,770	C.
March.....	178	64	160	9,540	C.
April.....	64	50	58.6	3,490	C.
May.....	136	50	81.1	4,990	B.
June.....	136	24	37.5	2,230	C.
July.....	1,280	43	173	10,600	B.
August.....	290	68	140	8,610	B.
September.....	1,520	89	365	21,700	A.
October.....	1,280	0	110	6,760	B.
November.....	0	0	0	0	
December.....	0	0	0	0	
The year.....	1,520	0	96.4	70,000	

PECOS RIVER AT AVALON, N. MEX.

Location.—Half a mile below the Avalon dam, in sec. 11, T. 21 S., R. 26 E., and 6 miles north of Carlsbad.

Records available.—January 6, 1906, to March 16, 1907. From June 18 to October 10, 1891; April 1 to November 30, 1895; January 1, 1899, to December 31, 1903; records of the flow through the headgates and over the spillway of the Avalon dam were compiled by the Pecos Irrigation Co. These records, together with estimates of flow used in irrigation during 1904, were published in the Fourth Annual Report of the United States Reclamation Service, page 271, from which the records herewith have been taken.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Fairly permanent.

Discharge measurements.—Made from boat and cable.

Controlled flow.—In addition to the storage afforded in Lake McMillan (see Pecos at Lakewood), Avalon reservoir, which acted as the distributor for Lake McMillan prior to October, 1904, when its dam was washed out, had additional storage capacity of 6,300 acre-feet when built.

Accuracy.—Conditions were favorable for accurate results for 1906 and 1907 and the records are considered reliable.

Cooperation.—Station maintained in cooperation with the United States Reclamation Service.

Discharge measurements of Pecos River at Avalon, N. Mex., in 1906-7.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 7	E. Patterson.....	1.50	488	Apr. 23	J. M. Giles.....	2.32	1,260
12	J. M. Giles.....	1.72	651	May 7	do.....	.80	148
13	do.....	1.65	575	do	do.....	.76	131
22	E. Patterson.....	1.42	414	June 5	E. Patterson.....	1.62	563
24	do.....	1.42	421	11	do.....	1.98	884
Feb. 20	J. M. Giles.....	1.45	470	July 14	J. M. Giles.....	2.75	1,690
23	do.....	1.35	408	15	do.....	2.60	1,610
26	do.....	1.30	375	Sept. 6	do.....	.70	124
Mar. 2	do.....	1.32	376	Oct. 3	W. A. Lamb.....	.80	163
3	E. Patterson.....	1.25	337	1907.			
21	do.....	.72	136	Feb. 23	W. A. Lamb.....	.96	206
29	J. M. Giles.....	.78	151	Apr. 3	do.....	2.10	77
Apr. 3	E. Patterson.....	.79	157				
6	Lamb and Giles.....	.85	157				

Daily gage height, in feet, of Pecos River at Avalon, N. Mex., for 1906-7.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.									
1.....		1.45	1.3	0.8	1.9	1.0	0.9		1.5
2.....		1.45	1.3	.8	1.8	1.0	.9		1.4
3.....		1.45	1.3	.8	1.8	1.9	.9		1.4
4.....		1.45	1.3	.8	1.7	1.7	.9		1.2
5.....		1.4	1.3	.8	1.6	1.65	.9		1.0
6.....	1.5	1.4	1.3	.8	1.6	1.7	.9		.9
7.....	1.45	1.4	.5	2.0	.85	2.0	.95		.8
8.....	1.5	1.4	.5	.8	.8	2.0	.95		.8
9.....	1.5	1.45	.5	.8	.75	2.7	.95	0.9	.7
10.....	1.6	1.45	.5	.8	.75	2.0	.95	.9	.7
11.....	1.7	1.45	.5	.8	.8	1.9	.95	1.3	.7
12.....	1.7	1.5	.5	.8	.8	1.85	2.5	2.2	.7
13.....	1.7	1.5	.6	.8	.85	.9	2.8	2.0	.6
14.....	1.7	1.5	.6	.8	.85	.9	2.8	2.0	.7
15.....	1.7	1.5	.6	.8	.85	.9	2.75	2.0	1.0
16.....	1.6	1.5	.6	.8	.85	.85	2.7	2.0	
17.....	1.6	1.5	.6	.9	.85	.85	5.6	1.8	
18.....	1.6	1.5	.7	.9	1.6	.85	2.7	1.6	
19.....	1.6	1.5	.7	1.3	1.55	.85	2.7	1.6	
20.....	1.6	1.5	.7	1.5	2.0	.85	2.6	1.0	
21.....	1.5	1.5	.7	1.6	2.0	.85	1.2	1.0	
22.....	1.5	1.5	.7	2.5	2.0	.85	1.15	.9	
23.....	1.45	1.4	.7	2.3	2.0	.9	1.1	.9	
24.....	1.45	1.4	.7	2.3	2.3	.85	1.0	.9	
25.....	1.45	1.3	.7	2.2	2.2	.9	.95	.8	
26.....	1.45	1.3	.7	2.2	2.2	.9	.9	.8	
27.....	1.45	1.3	.8	2.1	2.15	.9	.9	.9	
28.....	1.45	1.3	.8	2.1	2.1	1.0	.9	2.8	
29.....	1.45		.8	1.9	1.1	1.0	.9	2.3	
30.....	1.45		.8	1.9	1.0	.9	.9	2.0	
31.....	1.45		.8		1.0		.9	1.6	

Daily gage height, in feet, of Pecos River at Avalon, N. Mex., for 1906-7—Continued.

Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.
1907.			1907.			1907.			1907.		
1.		0.9	a 1.1	11.	a 2.6	a 2.5	0.9	21.	0.9	0.8	
2.		.9	a 1.9	12.	a 2.5	a 2.5	.9	22.	.9	.9	
3.		.9	a 2.2	13.	a 2.5	1.0	.9	23.	.9	.9	
4.		.8	1.0	14.	a 2.4	.9	.9	24.	.8	.9	
5.		.8	1.0	15.	1.0	.9	.9	25.	.8	a .9	
6.		.9	.9	16.	1.0	.9	.9	26.	a 2.3	2.0	
7.		.9	.9	17.	.9	.9		27.	a 2.4	2.0	
8.		.9	.9	18.	.9	.9		28.	a 2.6	2.0	
9.		.9	.9	19.	.9	.9		29.	a 2.5		
10.		.9	.9	20.	.9	.8		30.	1.0		
								31.	.9		

a Gage height read when the gates at Lake McMillan were open; all others in 1907 were read when the gates were closed.

Daily discharge, in second-feet, of Pecos River at Avalon, N. Mex., for 1906-7.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1906.												
1.		458	365	150	810	215	180		490			
2.		458	365	150	720	215	180		425			
3.		458	365	150	720	810	180		425			
4.		458	365	150	635	635	180		310			
5.		425	365	150	560	598	180		215			
6.	490	425	365	150	560	635	180		180			
7.	458	425	90	905	165	905	198		150			
8.	490	425	90	150	150	905	198		150			
9.	490	458	90	150	138	1,660	198	180	125			
10.	560	458	90	150	138	905	198	180	125			
11.	635	458	90	150	150	810	198	365	125			
12.	635	490	90	150	150	765	1,430	1,100	125			
13.	635	490	105	150	165	180	1,770	905	105			
14.	635	490	105	150	165	180	1,770	905	125			
15.	635	490	105	150	165	180	1,710	905	215			
16.	560	490	105	150	165	165	1,660	905				
17.	560	490	105	180	165	165	5,650	720				
18.	560	490	125	180	560	165	1,660	560				
19.	560	490	125	365	525	165	1,660	560				
20.	560	490	125	490	905	165	1,540	215				
21.	490	490	125	560	905	165	310	215				
22.	490	490	125	1,430	905	165	285	180				
23.	458	425	125	1,210	905	180	260	180				
24.	458	425	125	1,210	1,210	165	215	180				
25.	458	365	125	1,100	1,100	180	198	150				
26.	458	365	125	1,100	1,100	180	180	150				
27.	458	365	150	1,000	1,052	180	180	180				
28.	458	365	150	1,000	1,000	215	180	1,770				
29.	458		150	810	260	215	180	1,210				
30.	458		150	810	215	180	180	905				
31.	458		150		215	180	180	560				

Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.
1907.			1907.			1907.			1907.		
1.		180	260	11.	1,540	1,430	180	21.	180	150	
2.		180	810	12.	1,430	1,430	180	22.	180	180	
3.		180	1,100	13.	1,430	215	180	23.	180	180	
4.		150	215	14.	1,320	180	180	24.	150	180	
5.		150	215	15.	215	180	180	25.	150	180	
6.		180	180	16.	215	180	180	26.	1,210	905	
7.		180	180	17.	180	180		27.	1,320	905	
8.		180	180	18.	180	180		28.	1,540	905	
9.		180	180	19.	180	180		29.	1,430	905	
10.		180	180	20.	180	150		30.	215		
								31.	180		

Monthly discharge of Pecos River at Avalon, N. Mex., for 1906-7.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January 6-31.....	635	458	522	26,900	A.
February.....	490	365	450	25,000	A.
March.....	365	90	165	10,100	B.
April.....	1,430	150	487	29,000	A.
May.....	1,210	138	535	32,900	A.
June.....	1,660	165	408	24,300	A.
July.....	5,650	180	751	46,200	A.
August 9-31.....	1,770	150	573	26,100	A.
September 1-15.....	490	105	219	6,520	B.
1907.					
January 11-31.....	1,540	150	648	27,000	A.
February.....	1,430	150	344	19,100	A.
March 1-16.....	1,100	180	286	9,080	A.

Estimated monthly discharge, in acre-feet, of Pecos River at Avalon dam.

[From U. S. Recl. Service Fourth Ann. Rept., p. 271.]

Date.	1891	1895	1899 ^a	1900	1901	1902	1903	1904
January.....			13,527	15,739	9,636	12,977	^b 17,321	.....
February.....			16,697	9,099	10,955	7,734	15,521	^c 4,762
March.....		^d	8,641	7,993	7,425	11,907	8,424	^c 8,724
April.....		8,985	10,240	10,155	14,161	9,828	4,688	^c 11,310
May.....		9,897	14,777	35,428	15,853	23,766	9,934	^c 9,290
June.....	^e 15,755	20,513	12,323	26,589	17,417	20,823	79,072	^c 5,534
July.....	26,925	141,997	21,908	14,901	38,678	19,171	11,331	16,540
August.....	13,280	89,440	21,829	24,491	8,868	43,449	12,513	^c 14,794
September.....	51,290	23,496	14,064	67,169	10,837	31,387	4,236	.....
October.....	^f 49,100	7,155	4,781	25,725	4,663	14,559	6,118	.....
November.....		9,080	2,338	14,765	5,203	83,967	3,068	.....
December.....			14,952	5,534	9,947	15,212	1,488	.....
	156,350	310,563	151,076	266,588	153,643	294,880	173,714	.....

^a No records of spillage for the years 1896, 1897, and 1898 were kept, except during 1898, when 106,270 acre-feet were spilled at Lake Avalon.

^b Gates closed at McMillan and at Avalon. During month Lake McMillan gained about 8,500 acre-feet.

^c This is water used in irrigation. No record of spillage, if any.

^d There was water either passing through gates or over spillway during March, for reservoir fell steadily, as did Lake McMillan.

^e June 18-30, 13 days.

^f October 1-10, 10 days.

PECOS RIVER AT CARLSBAD, N. MEX.

Location.—At the Green Street Bridge in Carlsbad. No important tributaries within several miles.

Records available.—May 28, 1903, to March 31, 1908.

Drainage area.—Not measured.

Gage.—Inclined staff used prior to October, 1904, when it was destroyed. A vertical staff gage referred to the original datum was later installed.

Channel.—Fairly permanent except during flood stage.

Discharge measurements.—Made from bridge during high water and by wading at other stages.

Artificial control.—For storage on Pecos River, see descriptions of the Lakewood and Avalon stations.

Diversions.—Water for irrigation is diverted extensively above the station, as it is located below all important diversions from the Pecos in New Mexico.

Accuracy.—Conditions were favorable for accurate results and the estimates are considered reliable. Owing to insufficient discharge measurements, no estimates were made for 1907 and 1908.

Discharge measurements of Pecos River at Carlsbad, N. Mex., in 1903-1907.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 28	W. M. Reed	0.72	127	Aug. 5	J. M. Giles	3.43	2,080
Aug. 26	E. G. Marsh .....	.62	112	7	.....do.....	2.70	1,440
1904.				Oct. 10	.....do.....	1.07	203
Mar. 30	F. S. Dobson .....	.55	52	11	.....do.....	1.07	207
May 27	V. L. Sullivan .....	.75	112	Nov. 27	.....do.....	3.05	1,920
Aug. 15	.....do.....	1.10	267	1906.			
1905.				Jan. 26	E. Patterson	1.55	529
Feb. 24	F. S. Dobson	2.39	1,410	Feb. 6	.....do.....	1.49	451
Mar. 13	V. L. Sullivan	4.05	3,000	19	J. M. Giles	1.57	529
May 8	Murphy and Giles	4.10	2,940	Mar. 21	E. Patterson	1.10	198
9	.....do.....	3.95	2,740	Apr. 4	.....do.....	1.15	217
13	J. M. Giles	1.25	334	5	.....do.....	1.14	206
July 5	.....do.....	1.13	261	Oct. 7	V. L. Sullivan .....	.90	b 18
10	.....do.....	1.76	678	1907.			
25 ^a	V. L. Sullivan	15.85	54,900	Feb. 19	W. A. Lamb	1.18	289
4	.....do.....	12.60	38,700	28	.....do.....	1.95	805
27 ^a	.....do.....	9.85	24,400	Mar. 25	.....do.....	.95	113
28	.....do.....	7.00	11,300	May 1	.....do.....	.84	86

^a Made by floats.

^b Estimated.

Daily gage height, in feet, of Pecos River at Carlsbad, N. Mex., for 1903-1908.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1903.						1903.					
1		0.81	1.35	0.75	0.65	16		3.98	0.83	0.71	0.66
2		.78	1.20	.75	.65	17		3.76	.81	.70	.66
3		.80	1.13	.75	.65	18		8.05	.79	.69	.66
4		.79	.98	.75	.65	19		4.60	.81	.68	.66
5		.80	.98	.75	.65	20		4.80	.81	.67	.65
6		.79	.98	.74	.65	21		4.55	.81	.67	.65
7		.80	.98	.74	.66	22		4.25	.82	.66	.65
8		.80	.99	.74	.65	23		3.65	.80	.66	.65
9		.81	.98	.74	.66	24		2.60	.79	.65	.65
10		.81	.97	.73	.65	25		.88	.78	.65	.65
11		.81	1.08	.73	.65	26		1.49	.76	.65	.65
12		2.15	.84	.73	.66	27		2.45	.75	.65	.65
13		4.65	.83	.73	.65	28		2.24	.75	.65	.65
14		4.78	.82	.72	.65	29	0.79	1.95	.75	.65	.65
15		4.28	.82	.72	.66	30		.74	1.73	.75	.65
						31		.78	.75	.65	.....

Daily gage height, in feet, of Pecos River at Carlsbad, N. Mex., for 1903-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	0.65	0.64	0.65	0.64	0.84	0.68	0.68	0.67	0.67	0.70	0.73	0.74
2.....	.65	.64	.65	.64	.74	.68	.68	.67	.67	.70	.73	.74
3.....	.65	.65	.65	.65	.70	.68	.67	.67	.67	.70	.73	.74
4.....	.65	.65	.65	.....	.70	.68	.67	.69	.67	.70	.73	.74
5.....	.65	.65	.....	.65	.70	.68	.67	.75	.....	.70	.73	.74
6.....	.65	.65	.64	.65	.70	.68	.67	.70	.69	.70	1.40	.74
7.....	.65	.65	.64	.65	.70	.30	.67	.68	.69	.70	.74	.74
8.....	.65	.65	.64	.65	.70	.41	.67	.34	.72	.70	.74	.74
9.....	.65	.65	.64	.65	.70	.56	.67	.00	.69	.70	.74	.74
10.....	.65	.65	.64	.65	.69	.68	.67	.67	.69	.70	.74	.74
11.....	.65	.65	.64	.66	.69	.63	.67	.67	.69	.70	.74	.74
12.....	.65	.65	.64	.66	.69	.83	.67	.67	.79	.70	.74	.74
13.....	.65	.65	.64	.66	.....	.....	.67	.67	.69	.70	1.13	.74
14.....	.65	.65	.64	.66	.69	.69	.67	.67	.69	.70	1.13	.98
15.....	.65	.65	.64	.66	.69	.69	.67	.67	.69	.70	1.13	1.00
16.....	.65	.65	.64	.67	.68	.69	.67	.67	.69	.70	.75	1.03
17.....	.65	.64	.64	.67	.68	.69	.67	.67	.69	.70	.74	1.03
18.....	.65	.64	.64	.67	.68	.69	.67	.67	.69	.70	.74	1.03
19.....	.65	.64	.64	.67	.68	.69	.67	.67	.72	.74	.74	1.03
20.....	.65	.65	.64	.67	.68	.69	.67	.67	.69	.73	.74	1.03
21.....	.65	.65	.64	.67	.68	.69	.67	.67	.69	.70	.74	.98
22.....	.65	.65	.64	.67	.68	.69	.67	.67	.62	.70	.74	.98
23.....	.65	.65	.64	.88	.68	.69	.67	.67	.62	.70	.74	.95
24.....	.65	.65	.64	.88	.68	.69	.67	.67	.62	.70	.74	.93
25.....	.64	.65	.64	.86	.68	.69	.67	.67	.62	.70	.74	.93
26.....	.64	.65	.64	.77	.68	.69	.67	.67	.75	.70	.74	.88
27.....	.64	.65	.64	.73	.68	.69	.67	.67	.69	.70	.74	.83
28.....	.64	.65	.64	.75	.68	.59	.67	.67	.69	.72	.74	.83
29.....	.64	.65	.64	.76	.68	.58	.67	.....	.69	.72	.74	.83
30.....	.64	.65	.64	.89	.....	.58	.67	.67	.70	.72	.74	.83
31.....	.64	.....	.64	.88	.....	.58	.....	.67	.....	.72	.74	.....
1904-5.												
1.....	3.45	2.80	1.87	1.23	1.89	2.81	1.30	3.87	1.85	1.20	3.90	1.19
2.....	11.00	2.80	1.87	1.23	1.88	2.80	1.29	3.77	1.40	1.18	4.15	1.20
3.....	.....	2.63	1.87	1.23	1.88	2.79	1.27	1.65	1.10	1.18	4.77	1.55
4.....	.....	2.42	1.86	1.23	1.88	2.40	1.26	1.40	1.12	1.18	3.57	1.24
5.....	.....	2.39	1.86	1.23	1.88	1.40	1.28	1.40	1.70	1.19	3.45	1.48
6.....	.....	2.28	1.85	1.23	1.88	2.12	1.30	1.67	2.80	1.19	3.25	1.49
7.....	.....	2.19	1.84	1.23	1.88	2.50	1.28	4.35	4.05	1.18	2.90	1.84
8.....	.....	2.15	1.83	1.23	1.87	2.80	1.29	4.20	4.20	1.18	2.57	3.00
9.....	.....	2.11	1.82	1.23	1.87	3.13	1.29	3.95	4.05	1.91	2.40	3.00
10.....	.....	1.30	1.81	1.23	1.87	3.18	1.30	1.55	3.78	1.77	2.15	2.58
11.....	7.60	1.18	1.80	1.23	1.87	3.20	1.30	1.65	3.47	1.68	2.51	2.09
12.....	5.90	1.13	1.79	1.23	1.87	4.19	1.31	2.35	1.69	1.55	2.62	1.90
13.....	5.45	1.15	1.20	1.23	1.87	4.06	1.32	1.35	2.68	1.36	2.72	1.62
14.....	4.85	1.10	1.19	1.23	1.85	3.96	1.32	1.29	3.57	1.20	2.27	1.55
15.....	5.05	1.10	1.18	1.23	1.85	3.78	1.32	1.26	3.82	1.17	2.13	1.04
16.....	4.30	1.10	1.18	1.23	1.85	3.55	1.62	1.26	3.70	1.15	2.07	1.03
17.....	4.07	1.10	1.18	1.23	1.85	3.29	1.64	1.27	3.41	1.14	2.12	1.01
18.....	4.00	1.30	1.18	1.24	1.84	2.93	1.90	1.28	3.12	1.10	1.90	.99
19.....	3.75	1.40	1.18	1.24	1.84	2.65	1.91	1.29	2.75	1.00	1.70	.99
20.....	3.55	1.40	1.18	1.24	1.83	2.35	1.96	2.05	2.35	.99	1.65	1.00
21.....	3.33	1.40	1.19	1.24	1.83	1.20	2.00	3.60	2.10	1.48	1.52	1.00
22.....	3.05	1.40	1.20	1.24	1.83	1.18	2.10	3.52	1.23	1.54	1.47	1.04
23.....	2.85	1.40	1.21	1.24	1.83	1.19	2.05	3.60	1.23	2.77	1.45	1.06
24.....	2.66	1.68	1.22	1.24	2.39	1.22	2.50	2.40	1.23	8.67	1.43	1.06
25.....	2.52	1.90	.....	1.24	2.38	1.23	4.30	3.80	1.22	14.39	1.37	1.08
26.....	2.41	1.88	.....	1.30	2.36	1.25	4.38	4.20	1.22	12.42	1.31	1.10
27.....	2.40	1.88	.....	1.60	2.35	1.28	4.28	3.91	1.21	10.00	1.25	1.18
28.....	2.40	1.88	.....	1.90	2.60	1.30	4.15	3.77	1.20	7.00	1.28	1.22
29.....	2.40	1.88	.....	1.90	.....	1.28	4.10	3.60	1.20	5.35	1.25	1.12
30.....	2.41	1.88	.....	1.90	.....	1.28	4.02	3.60	1.20	4.50	1.22	1.12
31.....	2.65	.....	.....	1.89	.....	1.28	.....	3.60	.....	4.15	1.20	.....

a Gage and bridge washed out.

Daily gage height, in feet, of Pecos River at Carlsbad, N. Mex., for 1903-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	1.28	1.42	2.19	1.69	1.55	1.34	1.13	2.02	1.24	1.23	1.18	1.08
2.....	1.58	1.44	2.21	1.68	1.55	1.35	1.14	1.95	1.25	1.23	1.18	1.05
3.....	1.61	1.44	2.26	1.66	1.55	1.35	1.15	1.85	1.26	1.24	1.19	1.05
4.....	1.58	1.48	2.31	1.64	1.54	1.35	1.15	1.79	1.29	1.24	1.20	1.05
5.....	1.55	1.44	2.16	1.61	1.50	1.34	1.16	1.74	2.10	1.24	1.20	1.05
6.....	1.15	1.44	2.09	1.58	1.50	1.33	1.34	1.56	2.22	1.25	1.21	1.05
7.....	1.11	1.27	2.02	1.58	1.54	1.10	1.17	1.05	2.30	1.30	1.22	1.02
8.....	1.08	1.20	1.92	1.58	1.54	1.04	1.17	1.09	2.32	1.25	1.22	1.00
9.....	1.08	1.45	1.86	1.57	1.53	1.00	1.17	1.10	2.35	1.25	1.23	1.03
10.....	1.08	1.47	1.84	1.54	1.52	.98	1.16	1.11	2.33	1.25	1.23	1.03
11.....	1.08	1.77	1.82	1.58	1.53	.96	1.15	1.12	2.28	1.25	1.24	1.03
12.....	1.09	1.98	1.81	1.71	1.54	.96	1.15	1.14	2.12	2.30	1.97	1.02
13.....	1.00	1.98	1.87	1.69	1.58	.97	1.15	1.16	1.54	3.15	2.04	1.03
14.....	1.11	1.96	1.89	1.65	1.60	.97	1.15	1.17	1.24	3.05	2.00	1.04
15.....	1.12	1.75	1.88	1.64	1.60	.98	1.15	1.18	1.22	2.75	1.98	1.03
16.....	1.12	1.75	1.88	1.62	1.60	.98	1.15	1.18	1.18	2.60	1.95	1.03
17.....	1.13	1.75	1.86	1.62	1.60	1.01	1.16	1.19	1.17	5.00	1.92	1.03
18.....	1.13	1.75	1.82	1.60	1.59	1.04	1.15	1.22	1.22	2.75	1.88	1.03
19.....	1.13	1.74	1.80	1.58	1.58	1.06	1.18	1.50	1.23	3.30	1.44	1.03
20.....	1.14	1.73	1.75	1.58	1.58	1.07	1.40	1.80	1.32	3.25	1.09	1.03
21.....	1.14	1.72	1.68	1.56	1.56	1.08	2.69	2.00	1.24	2.95	1.05	1.03
22.....	1.14	1.71	1.62	1.56	1.54	1.09	2.64	2.11	1.25	2.70	1.05	1.03
23.....	1.14	1.70	1.60	1.55	1.52	1.10	2.59	2.17	1.24	2.20	1.05	1.03
24.....	1.15	1.69	1.64	1.55	1.48	1.10	2.55	2.42	1.25	1.28	1.05	1.03
25.....	1.15	1.69	1.68	1.55	1.51	1.11	2.47	2.52	1.25	1.20	1.05	1.03
26.....	1.15	2.61	1.61	1.55	1.46	1.11	2.40	2.35	1.23	1.20	1.05	1.08
27.....	1.16	3.11	1.60	1.55	1.43	1.12	2.33	2.35	1.38	1.20	1.05	1.08
28.....	1.16	2.95	1.58	1.55	1.37	1.12	2.26	1.28	1.23	1.20	2.92	1.08
29.....	1.17	2.67	1.56	1.55	.....	1.12	2.18	1.20	1.25	1.19	2.75	1.08
30.....	1.17	2.45	1.55	1.55	.....	1.13	2.10	1.20	1.23	1.18	2.20	1.08
31.....	1.17	.....	1.54	1.55	.....	1.13	.....	1.21	.....	1.18	1.40	.....
1906-7.												
1.....	1.08	1.10	2.40	1.12	1.20	1.20	1.04	.72	.82	.84	2.98	1.85
2.....	1.08	1.10	2.68	1.13	1.20	1.90	1.05	.71	.93	.82	2.12	1.60
3.....	1.08	1.10	3.20	1.14	1.20	1.90	1.00	.71	1.48	.80	1.55	1.45
4.....	1.08	1.10	3.20	1.14	1.19	1.30	1.00	.71	1.52	.86	1.25	1.45
5.....	1.08	1.11	3.15	1.14	1.18	1.20	1.00	.71	1.53	1.14	1.20	1.51
6.....	1.07	1.11	2.78	1.18	1.18	1.20	.97	.72	1.34	1.17	1.20	1.52
7.....	.00	1.11	2.60	1.58	1.18	1.20	.95	.71	1.14	.96	1.19	1.52
8.....	1.01	1.11	2.32	1.88	1.18	1.20	.98	.71	.90	.98	1.18	1.39
9.....	1.06	1.11	2.55	2.45	1.18	1.22	.98	.71	.70	.98	1.18	1.25
10.....	1.07	1.12	2.28	2.45	2.18	1.20	.96	.70	.60	.96	1.40	1.20
11.....	1.08	1.12	2.20	2.52	2.20	1.19	.86	.70	.63	.94	1.43	1.20
12.....	1.08	1.12	2.18	2.58	2.20	1.18	.80	.85	.23	.92	1.40	1.15
13.....	1.08	1.12	2.00	2.60	1.20	1.18	.80	1.42	.64	.90	1.38	1.25
14.....	1.08	1.13	1.95	2.30	1.20	1.18	.62	1.34	1.33	.90	1.35	1.00
15.....	1.08	1.13	1.90	1.20	1.20	1.18	.67	1.27	1.33	.90	1.18	1.00
16.....	1.08	1.13	1.82	1.20	1.20	1.18	.85	1.18	1.34	.90	.97	1.35
17.....	1.09	1.13	1.04	1.20	1.20	1.18	.72	1.12	1.95	.91	.95	1.25
18.....	1.09	1.13	1.04	1.20	1.20	1.18	.70	1.12	1.96	.91	.95	.96
19.....	1.09	1.13	1.04	1.20	1.20	1.18	.70	1.22	1.99	.91	.90	.98
20.....	1.09	1.13	1.05	1.20	1.20	1.18	.68	1.47	2.22	.94	.88	1.00
21.....	1.10	1.13	1.05	1.20	1.20	1.18	.66	1.56	2.64	.95	.75	1.00
22.....	1.10	1.13	1.06	1.20	1.20	1.18	.68	1.50	2.50	.95	.66	1.00
23.....	1.09	1.19	1.06	1.24	1.20	1.00	.68	1.41	1.85	.95	.62	.98
24.....	1.09	1.50	1.06	1.25	1.20	1.00	.72	1.18	1.28	.95	.66	.88
25.....	1.10	1.50	1.08	2.40	1.20	.80	.70	.90	1.68	.95	.86	.85
26.....	1.10	1.52	1.08	2.44	1.78	.95	.70	.56	1.40	.95	.96	.85
27.....	1.10	1.55	1.09	2.50	1.80	1.10	.70	.88	1.51	.95	.99	.86
28.....	1.10	1.65	1.09	2.45	1.91	1.05	.70	.78	1.37	.95	1.10	.92
29.....	1.10	1.88	1.10	1.95	.....	.89	.70	.96	1.08	.92	1.00	.88
30.....	1.10	2.28	1.10	1.22	.....	.89	.70	.92	.91	.92	1.00	.85
31.....	1.10	.....	1.11	1.20	.....	.92	.....	.89	.....	2.38	1.28	.....

Daily gage height, in feet, of Pecos River at Carlsbad, N. Mex., for 1903-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1907-8.						1907-8.							
1.....	0.85	3.40	1.58	1.50	1.50	1.20	16.....	0.97	1.48	1.48	1.50	1.00	0.80
2.....	.83	2.88	1.58	1.50	1.50	1.20	17.....	.96	1.47	1.48	1.50	1.00	.70
3.....	.65	2.05	1.58	1.50	1.50	1.20	18.....	.92	1.47	1.48	1.50	1.00	.70
4.....	.80	1.82	1.58	1.50	1.50	1.20	19.....	.96	1.51	1.48	1.50	1.10	.70
5.....	.85	1.55	1.58	1.50	1.50	1.10	20.....	.90	1.54	1.48	1.50	1.20	.70
6.....	.83	1.60	1.55	1.50	1.40	1.00	21.....	2.25	1.51	1.48	1.50	1.30	.70
7.....	.64	1.49	1.52	1.50	1.40	1.00	22.....	1.10	1.55	1.48	1.50	1.30	.70
8.....	.85	1.43	1.52	1.50	1.40	1.00	23.....	.86	1.62	1.48	1.48	1.30	.70
9.....	.91	1.46	1.56	1.50	1.35	1.00	24.....	.90	1.64	1.48	1.48	1.30	.70
10.....	.94	1.48	1.62	1.50	1.35	.90	25.....	1.35	1.62	1.48	1.45	1.30	.70
11.....	.95	1.50	1.60	1.50	1.30	.90	26.....	1.54	1.61	1.48	1.48	1.30	.70
12.....	.95	1.46	1.60	1.50	1.25	.90	27.....	1.48	1.63	1.48	1.48	1.30	.70
13.....	.92	1.42	1.59	1.50	1.25	.90	28.....	3.60	1.60	1.48	1.50	1.25	.70
14.....	.92	1.42	1.52	1.50	1.25	.90	29.....	3.52	1.60	1.48	1.50	1.25	.70
15.....	.90	1.50	1.48	1.50	1.20	.80	30.....	3.70	1.60	1.50	1.50	.....	.70
							31.....	3.62	.....	1.50	1.50	.....	.70

Daily discharge, in second-feet, of Pecos River at Carlsbad, N. Mex., for 1903-1906.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1903.						1903.					
1.....		129	390	110	82	16.....		2,870	137	98	85
2.....		119	305	110	82	17.....		2,550	129	95	85
3.....		125	270	110	82	18.....		15,600	122	92	85
4.....		122	201	110	82	19.....		3,940	129	90	85
5.....		125	201	110	82	20.....		4,350	129	88	82
6.....		122	201	107	82	21.....		3,840	129	88	82
7.....		125	201	107	85	22.....		3,300	133	85	82
8.....		125	206	107	82	23.....		2,400	125	85	82
9.....		129	201	107	85	24.....		1,360	122	82	82
10.....		129	196	104	82	25.....		157	119	82	82
11.....		129	246	104	82	26.....		483	113	82	82
12.....		990	141	104	85	27.....		1,230	110	82	82
13.....		4,040	137	104	82	28.....		1,060	110	82	82
14.....		4,310	133	101	82	29.....	122	830	110	82	82
15.....		3,360	133	101	85	30.....	107	658	110	82	82
						31.....	119	.....	110	82	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	82	80	82	80	141	90	90	88	88	95	104	107
2.....	82	80	82	80	107	90	90	88	88	95	104	107
3.....	82	82	82	82	95	90	88	88	88	95	104	107
4.....	82	82	82	82	95	90	88	92	88	95	104	107
5.....	82	82	82	82	95	90	88	110	90	95	104	107
6.....	82	82	80	82	95	90	88	95	92	95	420	107
7.....	82	82	80	82	95	22	88	90	92	95	107	107
8.....	82	82	80	82	95	36	88	27	101	95	107	107
9.....	82	82	80	82	95	62	88	0	92	95	107	107
10.....	82	82	80	82	92	90	88	88	92	95	107	107
11.....	82	82	80	85	92	78	88	88	92	95	107	107
12.....	82	82	80	85	92	137	88	88	122	95	107	107
13.....	82	82	80	85	92	115	88	88	92	95	270	107
14.....	82	82	80	85	92	92	88	88	92	95	270	201
15.....	82	82	80	85	92	92	88	88	92	95	270	210
16.....	82	82	80	88	90	92	88	88	92	95	110	224
17.....	82	80	80	88	90	92	88	88	92	95	107	224
18.....	82	80	80	88	90	92	88	88	92	95	107	224
19.....	82	80	80	88	90	92	88	88	101	107	107	224
20.....	82	82	80	88	90	92	88	88	92	104	107	224
21.....	82	82	80	88	90	92	88	88	92	95	107	201
22.....	82	82	80	88	90	92	88	88	75	95	107	201
23.....	82	82	80	157	90	92	88	88	75	95	107	188
24.....	82	82	80	157	90	92	88	88	75	95	107	178
25.....	80	82	80	149	90	92	88	88	75	95	107	178
26.....	80	82	80	116	90	92	88	88	110	95	107	157
27.....	80	82	80	104	90	92	88	88	92	95	107	137
28.....	80	82	80	110	90	68	88	88	92	101	107	137
29.....	80	82	80	113	90	66	88	88	92	101	107	137
30.....	80	82	80	161	.....	66	88	88	95	101	107	137
31.....	80	.....	80	157	.....	66	.....	88	.....	101	107	.....

Daily discharge, in second-feet, of Pecos River at Carlsbad, N. Mex., for 1903-1906—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1	2,160	1,530	766	322	782	1,540	360	2,710	750	305	2,750	300
2	30,200	1,530	766	322	774	1,530	354	2,570	420	295	3,140	305
3	.....	1,390	766	322	774	1,520	344	598	255	295	4,290	525
4	.....	1,210	758	322	774	1,190	338	420	265	295	2,300	327
5	.....	1,180	758	322	774	420	349	420	635	300	2,160	476
6	.....	1,090	750	322	774	966	360	612	1,620	300	1,940	483
7	.....	1,020	742	322	774	1,280	349	3,480	2,980	295	1,620	742
8	.....	990	734	322	766	1,530	354	3,220	3,220	295	1,330	1,700
9	.....	958	726	322	766	1,820	354	2,820	2,980	798	1,190	1,700
10	.....	360	718	322	766	1,870	360	525	2,580	688	990	1,340
11	13,700	295	710	322	766	1,890	360	598	2,180	620	1,280	942
12	7,280	270	702	322	766	3,200	366	1,150	628	525	1,380	790
13	5,960	280	305	322	766	3,000	372	390	1,430	396	1,460	575
14	4,460	255	300	322	750	2,840	372	354	2,300	305	1,090	525
15	4,920	255	295	322	750	2,580	372	338	2,640	290	974	228
16	3,390	255	295	322	750	2,280	575	338	2,470	280	926	224
17	3,010	255	295	322	750	1,980	590	344	2,110	275	966	214
18	2,900	360	295	327	742	1,640	790	349	1,810	255	790	206
19	2,540	420	295	327	742	1,400	798	354	1,490	210	635	206
20	2,280	420	295	327	734	1,150	838	910	1,150	206	598	210
21	2,020	420	300	327	734	305	870	2,340	950	476	504	210
22	1,740	420	305	327	734	295	950	2,240	322	518	469	228
23	1,570	420	310	327	734	300	910	2,340	322	1,500	455	237
24	1,410	620	316	327	1,180	316	1,280	1,190	322	18,600	441	237
25	1,290	790	.....	327	1,170	322	3,390	2,610	316	47,600	402	246
26	1,200	774	.....	360	1,160	332	3,530	3,220	316	37,500	366	255
27	1,190	774	.....	560	1,150	349	3,360	2,760	310	25,000	332	295
28	1,190	774	.....	790	1,360	360	3,140	2,570	305	11,300	349	316
29	1,190	774	.....	790	.....	349	3,060	2,340	305	5,680	332	265
30	1,200	774	.....	790	.....	349	2,930	2,340	305	3,750	316	265
31	1,400	.....	.....	782	.....	349	.....	2,340	.....	3,140	305	.....
1905-6.												
1	349	434	1,020	602	492	354	244	857	297	292	266	222
2	546	448	1,040	594	492	360	248	810	302	292	266	210
3	568	448	1,080	578	492	360	252	750	308	297	270	210
4	546	476	1,120	562	485	360	252	682	324	297	275	210
5	525	448	998	538	455	354	257	642	935	297	275	210
6	280	448	942	515	455	348	354	500	1,040	302	280	210
7	260	344	886	515	485	230	262	210	1,100	330	286	198
8	246	305	806	515	485	206	262	226	1,120	302	286	190
9	246	455	758	508	478	190	262	230	1,150	302	292	202
10	246	469	742	485	470	183	257	234	1,130	302	292	202
11	246	688	726	515	478	176	252	239	1,090	302	297	202
12	250	854	718	618	485	176	252	248	952	1,100	826	198
13	255	854	766	602	515	180	252	257	485	1,840	884	202
14	260	838	782	570	530	180	252	262	297	1,740	850	206
15	265	672	774	562	530	183	252	266	286	1,490	834	202
16	265	672	774	546	530	183	252	266	266	1,360	810	202
17	270	672	758	546	530	194	257	270	262	4,800	786	202
18	270	672	726	530	522	206	252	286	286	1,490	754	202
19	270	665	710	515	515	214	266	455	292	1,990	416	202
20	275	658	672	515	515	218	390	690	342	1,940	226	202
21	275	650	620	500	500	222	1,440	850	297	1,660	210	202
22	275	642	575	500	485	226	1,390	944	302	1,440	210	202
23	275	635	560	492	470	230	1,350	994	297	1,020	210	202
24	280	628	590	492	442	230	1,320	1,210	302	819	210	202
25	280	628	620	492	462	234	1,250	1,290	302	275	210	210
26	280	1,370	568	492	429	234	1,190	1,150	292	275	210	222
27	285	1,800	560	492	410	239	1,130	1,150	378	275	210	222
28	285	1,660	546	492	372	239	1,070	319	292	275	1,630	222
29	290	1,420	532	492	.....	239	1,000	275	302	270	1,490	222
30	290	1,230	525	492	.....	244	935	275	292	266	1,020	222
31	290	.....	518	492	.....	244	.....	280	.....	266	390	.....

Daily discharge, in second-feet, of Pecos River at Carlsbad, N. Mex., for 1903-1906—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1906.				1906.				1906.			
1.....	222	230	1,190	11.....	222	239	1,020	21.....	230	244	210
2.....	222	230	1,430	12.....	222	239	1,000	22.....	230	244	214
3.....	222	230	1,890	13.....	222	239	850	23.....	226	270	214
4.....	222	230	1,890	14.....	222	244	810	24.....	226	455	214
5.....	222	234	1,840	15.....	222	244	770	25.....	230	455	222
6.....	218	234	1,510	16.....	222	244	706	26.....	230	470	222
7.....	18	234	1,360	17.....	226	244	206	27.....	230	492	226
8.....	194	234	1,120	18.....	226	244	206	28.....	230	570	226
9.....	214	234	1,320	19.....	226	244	206	29.....	230	754	230
10.....	218	239	1,090	20.....	226	244	210	30.....	230	1,090	230
								31.....	230	.....	234

NOTE.—Discharges from 1903 to 1905 determined from a rating curve fairly well defined above 200 second-feet. Below 200 second-feet the table is subject to error as high as 20 per cent.
Discharges for 1906 determined from a well-defined rating curve.

Monthly discharge of Pecos River at Carlsbad, N. Mex., for 1903-1906.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1903.					1904-5.				
June.....	15,600	119	1,960	117,000	February.....	1,360	734	838	46,500
July.....	390	110	164	10,100	March.....	3,200	295	1,270	77,800
August.....	110	82	92.7	5,700	April.....	3,530	338	1,080	64,200
September.....	85	82	82.8	4,930	May.....	3,480	338	1,570	96,800
The period.....				138,000	June.....	3,220	255	1,260	74,700
1903-4.					July.....	47,600	206	5,240	322,000
October.....	82	80	81.5	5,010	August.....	4,290	305	1,160	71,600
November.....	82	80	81.7	4,860	September.....	1,700	206	486	28,900
December.....	82	80	80.3	4,940	1905-6.				
January.....	161	80	99.4	6,110	October.....	568	246	308	18,900
February.....	141	92	94.0	5,410	November.....	1,800	305	739	44,000
March.....	137	22	85.0	5,230	December.....	1,120	518	742	45,600
April.....	90	88	88.1	5,240	January.....	618	485	528	32,500
May.....	110	0	84.3	5,180	February.....	530	372	482	26,800
June.....	122	75	91.4	5,440	March.....	360	176	240	14,800
July.....	107	95	96.5	5,930	April.....	1,440	244	580	34,500
August.....	420	104	132	8,120	May.....	1,290	210	552	33,900
September.....	224	107	152	9,040	June.....	1,150	262	511	30,400
The year.....	420	0	97.2	70,500	July.....	4,800	266	884	54,400
1904-5.					August.....	1,630	210	499	30,700
October (1-2,					September.....	222	190	207	12,300
11-31).....	30,200	1,190	4,270	195,000	The year.....	4,800	176	523	379,000
November.....	1,530	255	695	41,400	1906.				
December 1-24	766	295	521	24,800	October.....	230	18	217	13,300
January.....	790	322	392	24,100	November.....	1,090	230	327	19,500
					December.....	1,890	206	744	45,700

PECOS RIVER NEAR PECOS, TEX.

Location.—At the flume of the Barstow Irrigation Co. (old Margueretta Canal Co.), about 6 miles above Pecos. There is no tributary within several miles.

Records available.—January 1, 1898, to June 30, 1907. The records at this station, together with those for the Margueretta flume, give the total flow of the Pecos above the intake of the Barstow Irrigation Co.'s canal, except for the comparatively small diversions into the West Valley ditch.

Drainage area.—Not measured.

Gage.—Vertical staff whose datum was lowered 1.00 foot March 22, 1906. All 1906 and 1907 gage heights refer to the new datum.

Channel.—Shifting. During extreme floods, such as occurred during October, 1904, and July, 1905, a large amount of water passes down the West Valley, west of the canal. This water spreads over the country from the flume to Pecos and can not be measured with any accuracy.

Discharge measurements.—Made from car and cable 200 yards below the flume.

Extreme flood discharge obtained from slope, using Kutter's formula.

Diversions.—The chief diversions above the station in Texas are those of the Barstow Irrigation Co. and the West Valley ditch.

Accuracy.—Owing to the shifting channel and to insufficient discharge measurements, no estimates have been made for 1898; January 1 to June 30, 1901; March 20 to June 6, June 14 to 17, and June 24 to July 9, 1902; and October 5 to December 31, 1904. For the remainder of the period sufficient discharge measurements were made to allow estimates of a fair degree of accuracy to be made.

Discharge measurements of Pecos River near Pecos, Tex., in 1898–1907, 1910.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1898.		<i>Feet.</i>	<i>Sec.-ft.</i>	1901.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 5	T. U. Taylor.....	2.00	80	Aug. 23	W. H. Denis.....	2.90	181
1899.				Sept. 1	do.....	2.20	108
June 22	T. U. Taylor.....	.70	21	16	do.....	7.90	1,940
Dec. 28	do.....	2.90	345	24	do.....	3.00	184
1900.				Oct. 3	do.....	3.25	109
Feb. 25	W. H. Denis.....	2.60	273	10	do.....	2.40	128
Mar. 3	do.....	1.90	144	16	do.....	2.40	118
6	do.....	1.70	140	24	do.....	3.20	273
9	do.....	1.60	125	Nov. 4	do.....	10.30	3,120
11	do.....	1.50	110	1902.			
13	do.....	1.20	69	Sept. 29	W. H. Denis.....	2.00	119
17	do.....	1.75	143	Oct. 3	do.....	2.00	109
20	do.....	1.00	50	6	do.....	2.40	153
28	do.....	.90	43	10	do.....	2.20	132
Apr. 1	do.....	.80	39	14	do.....	2.00	103
8	do.....	.70	25	18	do.....	2.10	127
16	do.....	.60	23	21	do.....	2.15	120
22	do.....	.60	21	24	do.....	2.00	107
26	do.....	.50	20	27	do.....	2.30	162
30	do.....	.50	21	Nov. 3	do.....	1.90	97
May 9	do.....	3.10	277	Dec. 3	do.....	3.60	390
11	do.....	2.50	126	4	do.....	3.30	306
14	do.....	2.00	69	6	do.....	2.80	221
16	do.....		330	1903.			
18	do.....	2.80	221	Jan. 17	W. H. Denis.....	3.70	438
20	do.....	2.40	153	Apr. 16	do.....	.80	22
22	do.....	2.90	260	June 15	do.....	8.70	2,460
June 4	do.....	2.90	216	17	do.....	8.60	2,340
6	do.....	3.30	258	17	do.....	8.40	2,270
July 1	do.....	2.00	89	18	do.....	8.00	2,160
5	do.....	1.80	70	22	do.....	9.20	2,570
7	do.....	3.15	276	25	do.....	7.50	1,810
13	do.....	1.90	92	25	do.....	7.00	1,710
15	do.....	1.60	59	26	do.....	6.20	1,260
18	do.....	1.52	47	26	do.....	5.10	957
21	do.....	3.30	353	27	do.....	4.00	537
23	do.....	3.50	393	1904.			
25	do.....	2.60	193	July 20	T. U. Taylor.....	.90	5.5
Aug. 1	do.....	3.15	311	Aug. 24	W. H. Denis.....	5.60	773
4	do.....	2.20	125	25	do.....	4.50	463
6	do.....	1.75	70	Sept. 25	do.....	6.30	1,000
10	do.....	3.55	335	26	do.....	5.40	760
13	do.....	2.55	135	1905.			
20	do.....	3.30	333	May 10	Murphy and Giles.....	6.10	2,470
24	do.....	3.40	273	July 11	J. M. Giles.....	1.27	189
Sept. 3	do.....	1.90	58	11	do.....	1.25	177
5	do.....	1.90	62	14	E. Patterson.....	2.20	376
Nov. 20	do.....	2.62	214	Aug. 11	J. M. Giles.....	3.25	1,320
Dec. 1	do.....	2.40	168	12	do.....	3.20	1,300
4	do.....	2.28	148	31	E. Patterson.....	1.20	432
8	do.....	2.20	132	Sept. 13	do.....	2.50	895
11	do.....	2.10	127	14	do.....	2.20	779
15	do.....	2.17	135	Oct. 6	J. M. Giles.....	1.40	459
15	do.....	2.10	127	7	do.....	1.50	513
17	do.....	2.12	136	16	E. Patterson.....	.20	134
19	do.....	2.00	135	20	do.....	.10	115
1901.				Nov. 8	do.....	1.00	334
July 5	W. H. Denis.....	1.20	39	16	Grover and Giles.....	2.22	873
10	do.....	.80	18	17	E. M. Giles.....	2.20	884
15	do.....	1.70	67	Dec. 6	J. M. Giles.....	2.80	1,060
21	do.....	.70	16	(a)	J. M. Giles.....	8.00	6,420
Aug. 6	do.....	5.00	831	(a)	do.....	12.00	12,800
11	do.....	2.10	95	(a)	do.....	18.00	24,800
16	do.....	6.60	1,350				

a Computed from slope measurement, using Kutter's formula.

Discharge measurements of Pecos River near Pecos, Tex., for 1898-1907, 1910-Continued.

Date.	Hydrographer.	Feet. Gage height.	Sec. ft. Dis- charge.	Date.	Hydrographer.	Feet. Gage height.	Sec. ft. Dis- charge.
1906.		Feet.	Sec. ft.	1906.		Feet.	Sec. ft.
Jan. 1	J. M. Giles.....	2.50	593	July 16	J. M. Giles.....	4.40	1,450
Feb. 9	E. Patterson.....	2.45	587	Oct. 6	W. A. Lamb.....	1.20	114
Mar. 2	.....do.....	2.08	442	Dec. 13	.....do.....	3.95	1,120
22	.....do.....	.70	71	1907.			
Apr. 6	.....do.....	.75	78	Jan. 14	W. A. Lamb.....	4.10	1,250
May 2	J. M. Giles.....	2.90	653	22	.....do.....	2.00	301
11	E. Patterson.....	1.30	131	Feb. 21	.....do.....	1.85	282
June 7	J. M. Giles.....	1.30	125	Mar. 29	.....do.....	.65	35
8	.....do.....	1.31	126	Apr. 29	.....do.....	.10	2.9
8	.....do.....	1.38	143	1910.			
13	E. Patterson.....	2.95	640	Mar. 6 ^a	.....do.....		72
14	.....do.....	2.80	578				

^a Made at Pecos.

Daily gage height, in feet, of Pecos River near Pecos, Tex., for 1898-1907.

Day.	Jan.	Mar.	July.	Aug.	Sept.	Day.	Jan.	Mar.	July.	Aug.	Sept.
1898.						1898.					
1.....	1.1	1.0	1.4	4.8	2.4	16.....	1.5	1.0	10.8	4.7	2.0
2.....	1.0	1.0	1.6	4.7	2.3	17.....	1.5	.9	9.0	4.5	2.0
3.....	1.0	1.0	1.5	4.7	2.0	18.....	1.7	.9	7.0	4.0	2.0
4.....	1.0	1.0	2.8	4.5	2.0	19.....	1.8	.8	6.0	3.0	2.0
5.....	1.2	1.0	5.8	4.5	2.0	20.....	2.0	.8	5.5	2.0	2.0
6.....	2.0	1.0	6.0	4.2	2.0	21.....	2.3	.7	7.0	1.5	2.0
7.....	2.7	1.0	6.5	4.2	2.5	22.....	2.2	.7	8.2	2.5	2.0
8.....	3.0	1.0	8.9	6.3	2.2	23.....	2.1	.7	8.0	2.5	2.0
9.....	2.8	1.0	9.9	8.8	2.0	24.....	2.0	.6	7.5	2.3	1.9
10.....	2.8	1.0	10.7	6.5	2.0	25.....	2.0	.6	6.8	2.4	1.9
11.....	2.8	.8	8.0	5.7	2.4	26.....	1.9	.6	5.8	2.7	1.9
12.....	2.7	.7	7.0	5.3	2.3	27.....	1.9	.6	5.0	2.0	1.9
13.....	2.7	.8	6.2	5.0	2.4	28.....	1.9	.6	5.0	2.3	1.9
14.....	2.3	1.0	8.0	4.5	2.3	29.....	1.9	.6	4.9	2.0	1.9
15.....	1.8	1.0	11.2	4.5	2.1	30.....	1.9	.6	4.8	2.0	1.9
						31.....	1.9	.6	4.8	2.0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
1.....	1.8	1.7	1.8	2.8	3.0	2.8	1.0	1.0	0.45	0.75	5.35	1.3
2.....	1.8	1.7	1.7	2.8	3.0	2.7	1.0	1.0	.45	.9	4.8	1.3
3.....	1.8	1.7	1.7	2.6	3.0	2.6	1.0	1.0	.4	.7	3.75	1.3
4.....	1.8	1.7	1.65	2.6	2.95	2.5	1.0	1.0	.4	.8	3.65	1.25
5.....	1.8	1.7	1.6	2.6	2.8	2.5	1.0	1.0	.4	.8	3.45	1.2
6.....	1.8	1.7	1.6	2.55	2.65	2.75	1.0	1.0	.4	.8	2.65	1.2
7.....	1.8	1.65	1.6	2.5	2.45	2.65	1.0	1.0	.4	.8	2.15	1.2
8.....	1.75	1.7	1.65	2.5	2.4	2.55	1.0	1.0	.4	1.5	2.05	1.2
9.....	1.8	1.7	1.65	2.5	2.7	2.35	1.0	1.55	.4	3.75	1.9	1.3
10.....	1.8	1.7	1.65	2.5	3.0	2.1	1.0	1.5	.4	2.2	1.75	1.5
11.....	1.9	1.7	1.5	3.1	3.0	1.8	.95	1.0	1.75	1.6	1.7	2.4
12.....	1.9	1.7	1.6	3.1	2.9	1.45	.9	1.0	1.0	1.35	1.8	1.85
13.....	1.8	1.75	3.1	3.1	2.85	1.35	.9	1.0	.6	1.15	2.2	3.0
14.....	1.8	1.75	3.2	3.0	3.0	1.3	.9	1.0	.6	1.0	2.15	2.4
15.....	1.75	1.75	3.1	3.0	3.0	1.2	1.1	.95	.6	.85	2.05	1.8
16.....	1.7	1.75	3.05	3.0	3.0	1.2	3.5	.9	1.6	1.15	2.0	1.65
17.....	1.8	1.8	3.0	3.0	2.9	1.1	2.75	.7	2.3	.8	2.0	1.35
18.....	1.7	1.8	3.1	3.0	2.8	1.1	1.95	.5	1.15	4.35	1.95	1.3
19.....	1.65	1.8	3.1	3.0	2.7	1.1	1.6	.5	.85	1.95	1.5	1.3
20.....	1.65	1.8	3.15	3.0	2.7	1.1	1.45	.5	.7	3.0	1.4	1.4
21.....	1.7	1.8	3.8	3.0	2.7	1.2	1.35	.5	.7	3.0	1.3	1.6
22.....	1.7	1.8	3.8	3.0	2.7	1.15	1.3	.5	.7	2.65	1.4	2.6
23.....	1.7	1.75	3.7	3.0	2.7	1.1	1.3	.5	.7	3.05	1.4	2.65
24.....	1.7	1.8	3.6	2.95	2.6	1.1	1.15	.5	.7	4.25	1.4	2.45
25.....	1.7	1.8	4.3	2.9	2.5	1.1	1.1	.5	.7	5.0	1.4	2.0
26.....	1.7	1.85	4.6	3.05	2.75	1.3	1.1	.5	.7	5.55	1.4	1.8
27.....	1.7	1.85	4.6	3.0	2.7	1.1	1.1	.5	.7	5.6	1.4	1.5
28.....	1.7	1.85	4.05	3.0	2.7	1.0	1.1	.5	.7	5.5	1.3	1.45
29.....	1.7	1.85	3.75	3.05	.....	1.0	1.0	.5	.7	5.5	1.3	1.4
30.....	1.7	1.85	3.1	3.0	.....	1.0	1.0	.5	.7	5.5	1.3	1.35
31.....	1.7	.....	2.85	3.0	.....	1.0	.....	.5	.....	5.5	1.3	.....

Daily gage height, in feet, of Pecos River near Pecos, Tex., for 1898-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.....	1.25	1.3	3.0	3.0	3.35	2.5	.8	6.05	4.75	2.0	3.2	1.9
2.....	1.2	1.3	3.0	2.9	3.35	2.35	.8	4.7	3.8	1.9	3.0	1.8
3.....	1.2	1.3	2.95	2.9	3.3	1.95	.85	7.15	3.25	2.05	2.6	1.85
4.....	1.85	1.3	2.9	2.9	3.35	1.9	.7	6.6	3.05	2.05	2.25	1.95
5.....	1.6	1.35	2.9	2.95	3.25	1.9	1.5	6.7	3.5	2.5	1.95	4.1
6.....	1.5	1.4	2.9	2.85	3.3	1.75	.8	6.5	3.25	4.1	1.85	6.0
7.....	1.5	1.4	3.0	2.75	3.3	1.7	.7	5.25	3.95	3.25	3.5	5.65
8.....	1.45	1.4	3.05	2.6	3.15	1.6	.7	4.4	4.55	2.65	5.65	6.35
9.....	1.35	1.45	3.0	3.35	3.1	1.6	.7	3.25	4.3	2.9	4.55	7.0
10.....	1.3	1.45	3.1	3.8	3.1	1.55	.65	2.85	4.25	2.6	3.54	7.55
11.....	1.3	1.5	3.0	3.85	3.25	1.5	.6	2.55	4.15	2.05	3.1	7.85
12.....	1.2	1.4	2.9	3.7	3.15	1.5	.6	2.25	3.9	1.95	2.85	7.6
13.....	1.2	1.4	3.0	3.3	3.15	1.25	.6	2.05	5.0	1.85	2.55	7.35
14.....	1.2	1.4	3.0	3.35	3.0	1.2	.6	2.0	4.55	1.65	2.4	7.2
15.....	1.2	1.4	3.0	3.7	3.05	1.2	.6	2.0	4.45	1.55	2.25	6.8
16.....	1.35	1.4	3.0	4.25	2.85	1.3	.6	3.65	3.55	1.5	2.95	5.8
17.....	1.1	1.3	3.0	4.25	2.95	1.75	.6	2.85	3.1	1.5	3.75	5.5
18.....	1.1	1.3	3.1	4.4	2.9	1.75	.6	2.85	2.85	1.5	3.7	5.5
19.....	1.1	2.65	3.1	4.4	2.9	1.8	.6	2.6	2.65	1.5	3.55	5.85
20.....	1.0	4.4	3.1	4.25	2.9	1.35	.6	2.35	2.8	1.9	3.3	5.9
21.....	1.0	3.3	3.2	4.15	3.0	1.0	.6	3.3	3.95	3.45	3.3	5.75
22.....	1.0	2.6	3.3	3.8	2.9	.9	.6	3.05	3.05	3.7	5.15	5.55
23.....	1.1	2.25	3.05	3.6	2.85	.95	.6	3.8	2.95	3.6	3.85	8.35
24.....	1.1	2.05	3.25	3.6	2.9	1.0	.6	3.85	2.55	2.7	3.4	7.55
25.....	1.1	2.0	3.8	3.45	2.6	1.0	.6	5.0	2.4	2.55	3.15	5.9
26.....	1.1	2.0	3.15	3.3	2.5	1.0	.5	6.45	2.45	2.45	2.95	5.35
27.....	1.2	2.0	3.05	3.25	2.5	.95	.5	7.1	2.25	2.95	2.5	5.45
28.....	1.2	2.55	3.0	3.35	2.5	.9	.5	6.9	2.1	2.8	2.1	6.05
29.....	1.2	2.5	2.9	3.2	.....	.9	.5	6.3	2.25	2.1	2.0	6.65
30.....	1.2	2.45	2.9	3.4	.....	.8	.5	6.1	2.1	2.25	2.0	6.95
31.....	1.3	.....	2.95	3.45	.....	.8	.....	5.75	.....	3.2	1.9	.....
1900-1901.												
1.....	6.3	4.15	2.4	2.0	3.0	3.2	1.5	5.05	4.85	1.0	2.65	2.15
2.....	6.1	4.0	2.4	2.0	3.0	3.2	1.5	4.6	4.9	1.0	5.3	2.25
3.....	7.05	4.0	2.4	2.15	3.05	3.2	1.5	2.85	3.3	1.0	5.1	2.3
4.....	7.65	4.0	2.3	2.2	3.0	3.2	1.55	2.3	2.85	1.0	5.1	4.55
5.....	5.65	4.0	2.3	2.35	3.0	3.2	1.5	2.05	2.45	1.2	5.1	7.35
6.....	5.55	4.2	2.2	2.55	3.05	2.95	1.45	1.7	1.95	1.3	5.0	6.35
7.....	5.35	4.2	2.2	2.9	3.15	2.8	1.35	1.45	2.1	1.25	4.65	4.1
8.....	5.05	4.05	2.2	3.35	3.2	2.65	1.3	1.3	2.75	.95	4.2	3.1
9.....	4.9	4.0	2.2	3.3	3.2	2.6	1.25	1.5	2.75	.85	3.25	2.85
10.....	4.9	4.0	2.2	3.2	3.25	2.5	1.2	1.55	2.4	.8	2.55	2.75
11.....	4.85	3.9	2.1	3.15	3.4	2.5	1.2	1.3	2.3	.8	2.1	2.85
12.....	4.65	3.8	2.1	3.65	3.7	2.5	1.15	.95	2.3	.8	3.25	5.35
13.....	4.5	3.8	2.2	3.65	3.75	2.5	1.0	.85	2.25	.8	4.2	6.55
14.....	4.4	3.75	2.2	3.6	3.9	2.25	1.0	1.0	1.7	.8	5.95	7.8
15.....	4.3	3.6	2.15	3.3	3.8	2.15	.95	2.05	1.35	1.75	6.4	8.4
16.....	4.25	3.45	2.2	2.75	3.85	2.0	.75	1.75	1.15	1.15	6.55	7.9
17.....	5.6	3.25	2.15	2.95	3.9	1.95	.7	1.65	1.55	.95	6.7	7.15
18.....	9.5	3.05	2.1	2.7	3.9	1.95	.7	1.3	1.95	.95	6.75	6.25
19.....	7.95	2.8	2.05	2.6	3.95	1.95	.7	.95	1.7	.9	6.65	5.35
20.....	6.15	2.65	2.0	2.6	4.0	1.85	.7	.8	1.45	.9	7.95	4.35
21.....	5.95	2.65	2.0	3.15	4.0	1.8	.7	1.65	1.15	.9	5.35	4.05
22.....	6.05	2.6	2.0	3.2	3.1	1.75	.7	3.0	.85	.9	3.8	3.95
23.....	6.15	2.6	2.0	2.75	3.1	1.7	.7	2.3	.9	.85	3.05	3.7
24.....	6.0	2.45	2.0	2.7	2.9	1.7	.7	1.95	1.35	4.4	2.6	2.95
25.....	5.85	2.5	2.0	2.7	3.3	1.65	.7	1.95	1.4	6.1	2.15	2.75
26.....	5.55	2.4	2.0	2.85	3.5	1.6	.7	1.25	1.35	5.2	2.0	2.65
27.....	5.35	2.4	2.0	3.0	3.5	1.6	.7	1.05	1.1	4.45	2.0	2.55
28.....	5.0	2.4	2.0	3.0	3.5	1.7	.7	1.9	1.05	3.15	3.0	2.15
29.....	4.9	2.4	2.0	3.0	.....	1.75	.65	3.55	1.3	2.95	3.0	2.7
30.....	4.55	2.4	2.0	3.0	.....	1.7	4.0	3.1	1.1	3.05	2.75	2.0
31.....	4.35	.....	2.0	3.0	.....	1.65	.....	4.5	.....	2.15	2.3	.....

Daily gage height, in feet, of Pecos River near Pecos, Tex., for 1898-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	2.95	3.55	4.1	4.9	2.8	2.6	0.9	0.4	0.5	1.1	4.45	2.0
2.....	2.6	5.55	4.0	5.1	2.8	2.7	.9	.4	.5	1.1	3.85	2.0
3.....	2.3	9.35	4.0	5.0	2.7	2.7	.85	.4	.5	1.1	3.65	2.0
4.....	2.15	10.15	4.0	5.0	3.3	2.7	.85	.4	.5	2.0	3.55	2.0
5.....	2.15	10.35	4.0	4.95	3.5	2.65	.85	.4	.5	1.65	3.2	3.15
6.....	2.1	10.6	4.0	5.0	3.5	2.6	.9	.4	.5	1.35	3.05	3.3
7.....	2.9	12.6	4.0	4.9	3.55	2.55	.9	.4	3.65	1.1	4.0	2.9
8.....	2.85	11.75	4.0	4.3	3.55	2.45	.8	.4	3.55	1.1	4.2	2.75
9.....	2.5	10.4	4.0	4.0	3.5	2.4	.65	.4	4.75	1.1	3.55	3.15
10.....	2.4	9.2	3.6	3.95	3.45	2.4	.55	.4	6.5	1.75	4.0	3.35
11.....	2.4	8.45	3.15	3.85	2.95	2.35	.5	.4	5.25	5.3	5.05	3.15
12.....	2.85	7.9	3.1	3.45	3.0	2.3	.5	.4	3.1	9.5	7.65	3.1
13.....	2.8	7.15	2.85	3.15	3.7	2.3	.5	.5	1.95	12.0	5.15	2.9
14.....	3.05	6.5	2.7	3.0	4.05	2.3	.5	.55	1.5	7.7	4.25	2.8
15.....	3.8	6.15	2.7	2.95	4.05	2.25	.5	.65	1.15	6.0	3.75	2.45
16.....	3.5	5.35	2.7	2.9	3.9	2.2	.5	.8	1.05	5.1	3.55	2.1
17.....	3.2	5.3	2.7	2.8	3.9	2.2	.4	.7	1.0	4.55	3.4	2.05
18.....	2.95	4.9	2.7	2.8	3.8	2.05	.4	.7	5.5	3.95	3.35	2.0
19.....	2.75	4.15	3.0	2.8	3.45	1.85	.4	.7	6.55	3.85	3.25	2.05
20.....	2.8	4.15	2.85	2.75	3.1	1.65	.4	.65	3.7	6.45	3.05	2.1
21.....	2.95	4.95	2.7	2.7	3.1	1.5	.4	.5	2.85	8.7	2.9	2.45
22.....	3.0	4.95	2.7	2.7	3.05	1.5	.4	.5	2.5	8.5	2.7	2.5
23.....	3.25	1.9	2.55	2.7	2.95	1.5	.4	.5	1.75	11.7	2.55	2.4
24.....	3.25	4.9	2.5	2.7	2.9	1.55	.4	.5	1.5	13.9	2.5	2.6
25.....	3.35	4.8	2.5	2.7	2.85	1.5	.4	.5	1.3	12.35	2.5	2.7
26.....	3.2	4.7	2.5	2.7	2.8	1.5	.4	.5	1.15	9.4	2.35	2.6
27.....	4.05	4.65	2.5	2.7	2.7	1.5	.4	.5	1.1	7.95	2.3	2.4
28.....	3.55	4.6	2.5	2.7	2.6	1.4	.4	.5	1.1	7.7	2.2	2.15
29.....	3.2	4.55	2.5	2.7	-----	1.3	.4	.5	1.1	7.35	2.15	2.0
30.....	3.15	4.3	2.5	2.7	-----	1.25	.4	.5	1.1	6.85	2.05	2.0
31.....	3.35	-----	3.95	2.7	-----	1.05	-----	.5	-----	5.9	2.0	-----
1902-3.												
1.....	2.0	1.9	2.6	3.05	3.3	3.15	1.0	1.1	.95	4.5	.9	1.2
2.....	2.0	1.95	3.45	3.1	3.3	3.25	.85	1.1	1.0	3.7	.9	1.2
3.....	2.1	2.0	3.65	3.1	3.2	3.3	.8	1.1	1.0	3.25	.9	1.2
4.....	2.1	2.0	3.35	3.1	3.2	3.4	.8	1.0	1.0	3.25	.9	1.2
5.....	2.3	2.0	3.3	3.15	3.1	3.2	.8	1.0	1.0	3.05	1.3	1.2
6.....	2.45	2.0	2.75	3.2	3.1	3.05	.8	1.0	1.0	2.85	1.45	1.2
7.....	2.2	2.0	2.8	3.25	3.1	3.0	.8	1.0	2.45	2.3	1.25	1.2
8.....	2.1	2.0	2.8	3.4	3.1	3.0	.8	.95	2.05	2.15	1.2	1.2
9.....	2.1	2.05	2.75	3.4	3.1	2.9	.8	.9	1.7	1.85	1.2	1.2
10.....	2.15	2.1	2.8	3.45	3.1	2.9	.8	1.05	1.55	1.75	1.2	1.2
11.....	2.15	2.1	2.75	3.5	3.1	2.9	.8	1.0	1.35	1.55	1.2	1.2
12.....	2.1	2.1	2.6	3.5	3.1	2.9	.8	1.0	1.75	1.6	2.8	1.2
13.....	2.1	2.1	2.65	3.45	3.1	2.95	.8	1.0	2.35	1.55	1.55	1.2
14.....	2.05	2.0	2.7	3.45	3.0	2.95	.8	1.0	5.2	1.6	1.5	1.2
15.....	2.1	2.0	2.7	3.6	3.05	2.85	.8	1.0	8.75	1.6	1.5	1.2
16.....	2.1	2.0	2.7	3.65	3.1	2.45	.8	1.0	8.85	1.3	1.35	1.2
17.....	2.1	2.0	2.7	3.7	3.1	2.05	.8	1.0	8.5	1.1	1.3	1.2
18.....	2.1	2.0	2.7	3.7	3.15	2.0	.8	1.0	7.95	1.0	1.25	1.2
19.....	2.25	2.0	2.7	3.7	3.3	1.9	.8	1.0	7.8	.9	1.2	1.2
20.....	2.3	2.0	2.7	3.7	3.35	1.8	.8	1.0	8.65	.9	1.15	1.2
21.....	2.1	2.0	2.6	3.65	3.5	1.65	.8	1.0	8.95	1.05	1.1	1.2
22.....	2.1	2.0	2.6	3.5	3.4	1.5	.8	1.0	9.2	1.0	1.1	1.2
23.....	2.1	2.0	2.6	3.35	3.3	1.6	.8	1.0	9.15	.9	1.1	1.3
24.....	2.0	2.1	2.6	3.3	3.3	1.6	.8	1.0	8.55	.9	1.1	1.2
25.....	2.3	2.15	2.6	3.3	3.3	1.6	.8	1.0	7.4	.9	1.1	1.25
26.....	2.3	2.0	2.6	3.3	3.25	1.3	.75	1.0	5.75	.9	1.1	1.3
27.....	2.3	2.0	2.7	3.3	3.1	1.15	3.75	1.0	4.2	.9	1.1	1.3
28.....	3.3	2.0	2.7	3.3	3.1	1.3	3.2	1.0	3.5	.9	1.1	1.3
29.....	2.15	2.15	2.7	3.2	-----	1.5	1.8	1.0	5.6	.9	1.1	1.3
30.....	2.05	2.4	2.75	3.35	-----	1.4	1.4	1.0	5.0	.9	1.2	1.65
31.....	2.0	-----	3.0	3.3	-----	1.25	-----	1.0	-----	.9	1.2	-----

Daily gage height, in feet, of Pecos River near Pecos, Tex., for 1898-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.4	1.4	1.6	1.7	2.5	1.4	1.2	0.9	0.9	2.2	0.9	1.1
2.....	1.3	1.4	1.6	1.7	2.5	1.4	1.2	.9	.9	1.3	.9	1.1
3.....	1.3	1.4	1.6	1.7	2.5	1.4	1.2	.9	.9	1.0	.9	1.1
4.....	1.3	1.4	1.6	1.7	2.5	1.4	1.2	.9	.9	1.0	.9	6.0
5.....	1.3	1.4	1.6	1.7	2.5	1.3	1.0	.9	.9	1.0	1.0	4.0
6.....	1.3	1.4	1.6	1.5	2.4	1.4	1.0	.9	.9	1.0	1.5	3.2
7.....	1.3	1.4	1.6	1.5	1.8	1.3	1.0	.9	.9	1.0	1.5	3.0
8.....	1.3	1.4	1.6	1.5	1.8	1.3	1.0	.9	.9	1.0	5.5	3.0
9.....	1.3	1.4	1.6	1.5	1.8	1.3	1.0	.9	.9	1.0	4.2	3.0
10.....	1.3	1.4	1.8	1.8	1.8	1.3	1.0	.9	.9	.9	2.0	3.0
11.....	1.3	1.4	1.8	1.9	1.8	1.3	1.0	.9	.9	.9	1.5	2.6
12.....	1.3	1.4	1.8	2.0	1.8	1.3	1.0	.9	.9	.9	1.3	2.4
13.....	1.3	1.4	1.8	2.0	1.8	1.3	1.0	.9	.9	.9	1.3	3.0
14.....	1.3	1.4	1.8	2.0	1.8	1.3	1.0	.9	.9	.9	1.3	3.5
15.....	1.3	1.4	1.8	2.0	1.3	1.3	1.0	.9	.9	.9	1.3	5.0
16.....	1.3	1.4	1.8	2.0	1.3	1.3	1.0	.9	.9	.9	1.3	4.5
17.....	1.3	1.4	1.7	2.0	1.3	1.3	1.0	.9	.9	.9	1.6	4.5
18.....	1.3	1.4	1.7	2.0	1.3	1.3	1.0	.9	.9	.9	1.5	3.0
19.....	1.3	1.4	1.7	1.9	1.3	1.3	1.0	.9	.9	.9	1.4	3.0
20.....	1.3	1.4	1.7	1.9	1.3	1.1	1.0	.9	.9	.9	1.3	2.9
21.....	1.4	1.4	1.7	1.9	1.3	1.1	1.0	1.0	.9	2.1	1.0	2.8
22.....	1.4	1.4	1.7	1.9	1.3	1.1	1.0	1.0	.9	1.5	1.0	2.8
23.....	1.4	1.4	1.7	1.8	1.3	1.1	1.0	6.5	.9	1.3	1.0	3.0
24.....	1.4	1.7	1.7	1.8	1.3	1.1	.9	4.5	.9	1.3	6.0	3.0
25.....	1.4	1.7	1.7	1.8	1.3	1.1	.9	2.4	.9	1.3	3.0	7.0
26.....	1.4	1.4	1.7	1.8	2.5	1.1	.9	2.2	.9	1.1	2.5	5.2
27.....	1.4	1.7	1.7	2.4	1.3	1.2	.9	1.8	4.0	1.1	2.0	4.5
28.....	1.4	1.6	1.7	2.4	1.3	1.2	.9	1.0	4.5	1.1	1.5	4.2
29.....	1.4	1.6	1.7	2.3	1.3	1.2	.9	.9	3.0	1.0	1.5	3.5
30.....	1.4	1.6	1.7	2.3	2.3	1.2	.9	.9	3.0	.9	1.4	3.0
31.....	1.4	.....	1.7	2.3	.....	1.2	.....	.9	.....	.9	1.3	.....
1904-5.												
1.....	3.5	5.9	4.1	2.0	2.5	4.3	2.1	5.0	5.5	2.5	7.6	1.4
2.....	3.5	5.8	4.1	2.0	2.5	4.3	2.0	4.3	5.0	1.5	6.2	.....
3.....	7.0	6.0	4.1	2.1	2.5	4.3	1.9	3.0	3.9	1.5	5.65	.....
4.....	9.0	6.0	5.3	2.1	2.5	4.3	1.9	3.0	2.9	1.5	6.15	.....
5.....	19.0	5.9	5.0	2.1	2.5	4.1	1.9	3.0	2.0	1.5	5.85	.....
6.....	17.0	5.5	5.0	2.1	2.5	4.1	1.9	2.8	1.9	1.5	4.9	.....
7.....	15.5	5.5	5.0	2.1	2.9	4.1	1.6	2.6	3.1	1.4	4.5	.....
8.....	13.0	5.5	4.9	2.1	3.0	4.1	1.6	2.6	4.0	1.4	4.0	.....
9.....	13.0	5.5	4.9	2.1	3.1	4.1	1.5	6.0	6.0	1.4	3.7	1.4
10.....	11.0	5.4	4.9	2.1	3.2	4.1	1.4	6.1	6.2	1.2	3.6	4.5
11.....	10.5	5.4	4.8	2.1	3.2	4.6	1.4	6.0	6.0	2.5	3.5	3.5
12.....	14.0	5.2	4.6	2.1	3.1	4.6	1.4	3.0	5.8	2.3	3.2	3.2
13.....	13.0	4.1	4.4	2.1	3.1	5.9	1.3	2.6	5.9	2.2	3.4	2.6
14.....	12.0	4.1	3.8	2.1	3.1	6.6	1.1	3.6	4.9	1.9	3.6	2.2
15.....	9.0	4.1	3.8	2.1	3.1	6.6	1.1	3.2	3.2	1.5	3.5	2.1
16.....	8.4	4.0	3.8	2.1	3.1	6.5	1.1	2.5	5.0	1.4	3.0	2.1
17.....	8.2	4.0	3.5	2.1	3.1	6.2	1.1	2.0	5.9	1.4	3.0	.....
18.....	8.1	3.9	3.3	2.1	3.1	6.1	1.6	1.9	6.0	1.0	2.9	.....
19.....	7.8	3.9	3.0	2.1	3.1	6.0	1.7	1.5	5.6	.9	2.9	.....
20.....	7.3	4.1	2.8	2.1	3.0	5.0	1.8	1.0	4.9	.9	2.8	.....
21.....	7.0	4.0	2.6	2.1	3.0	5.1	2.0	1.0	4.0	.9	2.8	.....
22.....	7.0	4.0	2.4	2.0	3.0	5.1	2.1	2.0	3.8	.9	2.8	.....
23.....	6.9	4.0	2.1	2.0	3.0	4.2	2.1	4.9	2.9	1.0	2.6	.....
24.....	6.8	3.9	2.1	2.0	3.0	3.9	3.0	5.0	2.8	4.9	2.0	.....
25.....	6.5	3.9	2.0	2.0	3.0	2.1	3.1	5.1	1.8	7.2	1.6	.....
26.....	5.0	3.9	2.0	2.0	4.2	2.1	4.0	4.0	1.6	9.4	1.2	.....
27.....	5.0	4.0	2.0	2.0	4.5	2.1	5.5	5.6	1.5	13.7	1.2	.....
28.....	5.0	4.0	2.0	2.0	4.4	2.1	6.5	6.0	1.5	18.3	1.2	.....
29.....	4.9	4.0	2.0	2.0	.....	2.1	6.6	5.6	1.5	17.2	1.2	.....
30.....	6.0	4.0	2.0	2.0	.....	2.1	6.0	5.5	4.5	13.2	1.2	.....
31.....	6.0	.....	2.0	2.0	.....	2.0	.....	5.5	.....	10.2	1.2	.....

Daily gage height, in feet, of Pecos River near Pecos, Tex., for 1898-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....		0.2	2.8	2.5	2.4	2.1	0.7	3.0	1.4	0.8	1.2	3.3
2.....		.2	2.6	2.6	2.4	2.0	.7	2.9	1.3	.8	1.2	2.2
3.....		.2	2.4	2.6	2.4	2.0	.7	2.8	3.1	.6	1.1	1.9
4.....		.4	2.3	2.6	2.3	2.0	.7	2.7	3.2	.6	1.0	1.4
5.....		.9	2.0	2.6	2.4	2.0	.7	2.6	2.0	.7	2.1	1.3
6.....	1.4	.9	1.9	2.6	2.4	1.9	.8	2.3	1.3	1.4	1.8	1.1
7.....	1.5	1.0	2.0	2.6	2.4	1.7	.8	2.3	1.55	1.4	1.6	1.1
8.....	1.4	1.1	2.3	2.6	2.3	1.7	.9	2.2	2.35	1.3	1.3	1.1
9.....	.9	1.0	2.4	2.6	2.4	1.7	2.0	1.8	2.75	1.4	1.3	1.1
10.....	.3	1.0	2.4	2.6	2.4	1.5	1.4	1.7	2.7	1.5	1.2	1.1
11.....	.3	1.0	2.4	2.6	2.4	1.4	.9	1.2	3.0	1.5	1.5	1.1
12.....	.2	1.1	2.4	2.6	2.4	1.4	.8	1.2	3.2	1.5	1.4	.9
13.....	.2	1.4	2.1	2.7	2.4	1.2	.8	1.2	2.95	1.5	1.2	.9
14.....	.2	2.4	2.0	2.7	2.5	1.2	.8	1.1	2.75	2.9	1.2	.9
15.....	.2	2.3	2.0	2.7	2.5	1.2	.7	1.1	2.35	4.3	2.8	.9
16.....	.2	2.2	2.0	2.7	2.5	1.0	.7	1.1	2.0	4.4	2.8	.9
17.....	.2	2.2	2.0	2.7	2.5	1.0	.7	1.0	1.45	4.3	2.8	.9
18.....	.2	1.8	2.1	2.7	2.5	.9	.8	.9	1.3	5.75	2.8	.9
19.....	.2	1.8	2.1	2.7	2.5	.8	.9	.9	1.3	4.9	2.7	.9
20.....	.1	1.8	2.0	2.8	2.5	.8	1.4	.9	1.15	4.7	2.6	.9
21.....	.1	1.8	2.0	2.8	2.5	.7	2.0	.9	1.05	4.8	2.2	.9
22.....	.1	1.8	1.9	2.8	2.5	.7	1.4	1.2	.9	4.6	1.5	.9
23.....	.2	1.8	1.8	2.7	2.5	.7	3.3	2.5	.9	4.2	1.3	.9
24.....	.3	1.7	1.8	2.6	2.5	.7	3.6	2.75	.9	3.7	1.1	.8
25.....	.3	1.6	1.8	2.6	2.4	.7	3.6	2.8	.9	2.7	1.1	.8
26.....	.3	1.6	1.8	2.5	2.4	.6	3.5	2.8	.8	2.1	1.1	.8
27.....	.3	1.6	1.8	2.4	2.3	.7	3.5	3.5	.6	2.0	1.9	.8
28.....	.2	3.1	1.8	2.4	2.1	.7	3.4	3.4	.6	1.7	1.6	1.4
29.....	.2	3.5	1.8	2.4	.....	.7	3.3	3.3	1.4	1.6	1.1	1.5
30.....	.2	3.4	1.7	2.4	.....	.7	3.1	2.3	.8	1.6	3.2	1.5
31.....	.2	.....	1.7	2.4	.....	.7	.....	1.6	.....	1.5	3.3	.....
1906-7.												
1.....	1.3	1.3	3.6	1.8	2.8	2.7	.5	.1	.3	.....	.....	.....
2.....	1.3	1.3	3.6	1.7	2.2	2.8	.5	.1	.2	.....	.....	.....
3.....	1.3	1.3	4.6	1.7	2.1	2.6	.5	.1	.2	.....	.....	.....
4.....	1.3	1.3	5.0	1.7	2.0	2.4	.6	.1	.2	.....	.....	.....
5.....	1.3	1.3	5.2	1.7	2.0	2.85	.6	.1	.2	.....	.....	.....
6.....	1.2	1.3	5.0	1.7	2.0	2.55	.6	.1	.2	.....	.....	.....
7.....	1.3	1.3	4.7	1.7	2.0	1.9	.5	.1	1.35	.....	.....	.....
8.....	1.3	1.3	4.7	1.7	1.9	1.6	.5	.1	1.6	.....	.....	.....
9.....	1.2	1.4	4.4	1.9	1.9	1.6	.5	.1	1.2	.....	.....	.....
10.....	1.2	1.4	3.8	2.85	1.8	1.5	.4	.1	1.2	.....	.....	.....
11.....	.9	1.4	3.5	3.35	1.8	1.5	.4	.1	.9	.....	.....	.....
12.....	.9	1.5	3.9	3.6	1.8	1.45	.4	.1	.8	.....	.....	.....
13.....	.9	1.5	3.85	3.85	3.2	1.4	.4	.1	.5	.....	.....	.....
14.....	.9	1.5	3.7	4.05	3.3	1.25	.3	.1	.85	.....	.....	.....
15.....	1.5	1.5	3.5	4.05	2.6	1.1	.3	.1	1.0	.....	.....	.....
16.....	1.5	1.5	3.4	3.65	2.3	1.1	.3	.1	.9	.....	.....	.....
17.....	1.4	1.5	3.4	2.7	2.1	1.1	.3	.7	1.0	.....	.....	.....
18.....	1.4	1.5	3.4	2.45	2.0	1.1	.3	.7	1.3	.....	.....	.....
19.....	1.3	1.5	2.7	2.3	1.95	1.1	.2	.7	2.65	.....	.....	.....
20.....	1.4	1.5	2.4	2.1	1.8	1.1	.2	.7	2.8	.....	.....	.....
21.....	1.4	1.5	2.15	2.0	1.8	1.1	.2	.7	2.95	.....	.....	.....
22.....	1.4	1.5	1.95	2.0	1.8	1.0	.2	.8	3.25	.....	.....	.....
23.....	1.4	1.7	1.9	2.0	1.8	.9	.1	1.05	3.55	.....	.....	.....
24.....	1.4	1.9	1.9	2.0	1.8	.8	.1	1.2	3.15	.....	.....	.....
25.....	1.4	1.8	1.8	2.0	1.8	.8	.1	1.2	3.05	.....	.....	.....
26.....	1.4	1.8	1.8	2.0	1.7	.8	.1	1.15	1.4	.....	.....	.....
27.....	1.4	1.9	1.8	1.9	1.7	.65	.1	1.0	1.2	.....	.....	.....
28.....	1.4	2.6	1.8	2.7	1.65	.6	.1	.8	1.75	.....	.....	.....
29.....	1.4	2.6	1.8	3.8	.....	.6	.1	.8	1.55	.....	.....	.....
30.....	1.3	2.6	1.8	3.8	.....	.5	.1	.6	1.5	.....	.....	.....
31.....	1.3	.....	1.8	3.6	.....	.5	.....	.3	.....	.....	.....	.....

Daily discharge, in second-feet, of Pecos River near Pecos, Tex., for 1899-1907.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899.												
1				305	345	305	51	51	5	28	985	82
2				305	345	285	51	51	5	41	810	82
3				265	345	265	51	51	2	23	528	82
4				265	335	245	51	51	2	32	502	76
5				265	305	245	51	51	2	32	452	71
6				255	275	295	51	51	2	32	275	71
7				245	238	275	51	51	2	32	192	71
8				245	230	255	51	51	2	105	178	71
9				245	285	222	51	111	2	528	155	82
10				245	345	185	51	105	2	200	136	105
11				365	345	142	46	51	136	117	129	230
12				365	325	99	41	51	51	88	142	148
13				365	315	88	41	51	15	66	200	345
14				345	345	82	41	51	15	51	192	230
15				345	345	71	61	46	15	36	178	142
16				345	345	71	465	41	117	66	170	123
17				345	325	61	295	23	215	32	170	88
18				345	305	61	162	8	66	678	162	82
19				345	285	61	117	8	36	162	105	82
20				345	285	61	99	8	23	345	93	93
21				345	285	71	88	8	23	345	82	117
22				345	285	66	82	8	23	275	93	265
23				345	285	61	82	8	23	355	93	275
24				335	265	61	66	8	23	652	93	238
25				325	245	61	61	8	23	870	93	170
26				355	295	82	61	8	23	1,050	93	142
27				345	285	61	61	8	23	1,070	93	105
28				345	285	51	61	8	23	1,030	82	99
29				345		51	51	8	23	1,030	82	93
30				345		51	51	8	23	1,030	82	88
31				345		51		8		1,030	82	
1899-1900.												
1	76	82	345	345	427	245	37	1,190	660	95	330	55
2	71	82	345	325	427	227	37	890	365	80	280	48
3	71	82	335	325	415	162	40	1,630	230	102	200	52
4	148	82	325	325	427	155	30	1,410	225	102	132	60
5	117	88	325	335	402	155	105	1,450	285	180	87	505
6	105	93	325	315	415	135	37	1,370	250	555	75	1,170
7	105	93	345	295	415	129	30	880	400	342	405	1,040
8	99	93	355	265	378	117	30	590	575	210	1,030	1,320
9	88	99	345	427	365	117	30	285	495	260	620	1,600
10	82	99	365	540	365	111	27	210	485	200	335	1,810
11	82	105	345	552	402	105	25	150	475	102	250	1,940
12	71	93	325	515	378	105	25	100	390	87	195	1,820
13	71	93	345	415	378	76	25	70	730	75	135	1,730
14	71	93	345	427	345	71	25	65	575	57	120	1,680
15	71	93	345	515	355	71	25	65	545	52	95	1,520
16	88	93	345	652	315	82	25	440	305	50	230	1,130
17	61	82	345	652	335	135	25	210	240	50	445	1,020
18	61	82	365	690	325	135	25	210	195	50	430	1,020
19	61	275	365	690	325	142	25	170	170	50	390	1,140
20	51	690	365	652	325	87	25	150	190	80	335	1,170
21	51	415	390	628	345	53	25	345	420	392	335	1,120
22	51	265	415	540	325	44	25	290	230	455	845	1,040
23	61	208	355	490	315	48	25	470	220	430	390	2,350
24	61	178	402	490	325	53	25	480	165	220	275	1,810
25	61	170	540	452	265	53	25	800	140	190	215	1,170
26	61	170	378	415	245	53	20	1,340	145	170	195	970
27	71	170	355	402	245	48	20	1,600	125	270	130	1,000
28	71	255	345	427	245	44	20	1,520	110	240	80	1,230
29	71	245	325	390		44	20	1,250	125	110	65	1,460
30	71	238	325	440		37	20	1,170	110	132	65	1,580
31	82		335	452		37		1,030		330	55	

Daily discharge, in second-feet, of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.	1,330	542	168	.....	.....	.....	.....	.....	.....	28	155	106
2.	1,250	530	168	.....	.....	.....	.....	.....	.....	28	900	115
3.	1,620	530	168	.....	.....	.....	.....	.....	.....	28	820	120
4.	1,830	530	150	.....	.....	.....	.....	.....	.....	28	820	628
5.	1,080	530	150	.....	.....	.....	.....	.....	.....	38	820	1,710
6.	1,040	585	132	.....	.....	.....	.....	.....	.....	44	785	1,310
7.	970	585	132	.....	.....	.....	.....	.....	.....	41	662	485
8.	865	542	132	.....	.....	.....	.....	.....	.....	26	515	225
9.	815	530	132	.....	.....	.....	.....	.....	.....	20	255	182
10.	815	530	132	.....	.....	.....	.....	.....	.....	18	145	168
11.	800	505	127	.....	.....	.....	.....	.....	.....	18	101	182
12.	730	480	127	.....	.....	.....	.....	.....	.....	18	255	920
13.	680	480	132	.....	.....	.....	.....	.....	.....	18	515	1,390
14.	645	468	132	.....	.....	.....	.....	.....	.....	18	1,160	1,900
15.	615	430	130	.....	.....	.....	.....	.....	.....	74	1,330	2,180
16.	600	392	133	.....	.....	.....	.....	.....	.....	36	1,390	1,950
17.	1,060	342	132	.....	.....	.....	.....	.....	.....	26	1,450	1,630
18.	2,600	292	133	.....	.....	.....	.....	.....	.....	26	1,470	1,270
19.	1,950	240	134	.....	.....	.....	.....	.....	.....	23	1,430	920
20.	1,270	210	135	.....	.....	.....	.....	.....	.....	23	1,970	560
21.	1,190	210	135	.....	.....	.....	.....	.....	.....	23	920	470
22.	1,230	200	135	.....	.....	.....	.....	.....	.....	23	395	440
23.	1,270	200	135	.....	.....	.....	.....	.....	.....	20	215	365
24.	1,210	170	135	.....	.....	.....	.....	.....	.....	575	150	198
25.	1,150	180	135	.....	.....	.....	.....	.....	.....	1,220	106	168
26.	1,040	165	135	.....	.....	.....	.....	.....	.....	860	93	155
27.	970	165	135	.....	.....	.....	.....	.....	.....	592	93	145
28.	850	167	135	.....	.....	.....	.....	.....	.....	235	205	106
29.	810	167	135	.....	.....	.....	.....	.....	.....	198	205	160
30.	700	168	135	.....	.....	.....	.....	.....	.....	215	168	93
31.	630	.....	135	.....	.....	.....	.....	.....	.....	106	120	.....
1901-2.												
1.	198	328	485	784	204	170	.....	.....	.....	.....	623	98
2.	150	1,000	455	862	204	186	.....	.....	.....	.....	439	98
3.	120	2,650	455	822	186	186	.....	.....	.....	.....	385	98
4.	106	3,060	455	822	302	186	.....	.....	.....	.....	360	98
5.	106	3,160	455	803	348	178	.....	.....	.....	.....	280	270
6.	101	3,290	455	822	348	170	.....	.....	.....	.....	250	302
7.	190	4,270	455	784	360	162	.....	.....	385	.....	482	222
8.	182	3,880	455	574	360	147	.....	.....	360	.....	542	195
9.	140	3,180	455	482	348	140	.....	.....	728	.....	360	270
10.	130	2,580	340	468	336	140	.....	.....	1,420	80	482	313
11.	130	2,210	235	439	231	134	.....	.....	922	942	842	270
12.	182	1,950	225	336	240	128	.....	.....	260	2,620	1,880	260
13.	175	1,630	182	270	398	128	.....	.....	94	3,620	882	222
14.	215	1,370	160	240	497	128	.....	.....	.....	1,900	558	204
15.	395	1,230	160	231	497	122	.....	.....	.....	1,220	412	147
16.	315	920	160	222	453	117	.....	.....	.....	862	360	107
17.	245	900	160	204	453	117	.....	.....	.....	657	324	102
18.	198	750	160	204	425	102	.....	.....	1,020	468	313	98
19.	168	500	205	204	336	87	.....	.....	1,460	439	291	102
20.	175	500	182	195	260	.....	.....	.....	398	1,400	250	107
21.	198	768	160	186	230	.....	.....	.....	213	2,300	222	147
22.	205	768	160	186	250	.....	.....	.....	154	2,220	186	154
23.	255	750	145	186	231	.....	.....	.....	80	3,500	162	140
24.	255	750	140	186	222	.....	.....	.....	.....	4,380	154	170
25.	278	715	140	186	213	.....	.....	.....	.....	3,760	154	186
26.	245	680	140	186	204	.....	.....	.....	.....	2,580	134	170
27.	470	662	140	186	186	.....	.....	.....	.....	2,000	128	140
28.	328	645	140	186	170	.....	.....	.....	.....	1,900	117	112
29.	245	628	140	186	.....	.....	.....	.....	.....	1,760	112	98
30.	235	545	140	186	.....	.....	.....	.....	.....	1,560	102	98
31.	278	.....	440	186	.....	.....	.....	.....	.....	1,180	98	.....

Daily discharge, in second-feet, of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	98	90	170	274	328	294	30	36	28	690	26	42
2.....	98	94	336	284	328	316	24	36	30	432	26	42
3.....	107	98	385	284	304	328	22	36	30	316	26	42
4.....	107	98	313	284	304	352	22	30	30	316	26	42
5.....	128	98	302	294	284	304	22	30	30	274	48	42
6.....	147	98	195	304	284	274	22	30	30	234	58	42
7.....	117	98	204	316	284	264	22	30	163	142	45	42
8.....	107	98	204	352	284	264	22	28	111	123	42	42
9.....	107	102	195	352	284	244	22	26	78	91	42	42
10.....	112	107	204	364	284	244	22	33	66	82	42	42
11.....	112	107	195	376	284	244	22	30	51	66	42	42
12.....	107	107	170	376	284	244	22	30	82	70	224	42
13.....	107	107	178	364	284	254	22	30	149	66	66	42
14.....	102	98	186	364	264	254	22	30	960	70	62	42
15.....	107	98	186	404	274	234	22	30	2,460	70	62	42
16.....	107	98	186	418	284	163	22	30	2,510	48	51	42
17.....	107	98	186	432	284	111	22	30	2,360	36	48	42
18.....	107	98	186	432	294	106	22	30	2,100	30	45	42
19.....	122	98	186	432	328	96	22	30	2,040	26	42	42
20.....	128	98	186	432	340	86	22	30	2,420	26	39	42
21.....	107	98	170	418	376	74	22	30	2,560	33	36	42
22.....	107	98	170	376	352	62	22	30	2,670	30	36	42
23.....	107	98	170	340	328	70	22	30	2,640	26	36	48
24.....	98	107	170	328	328	70	22	30	2,380	26	36	42
25.....	128	112	170	328	328	70	22	30	1,860	26	36	45
26.....	128	98	170	328	316	48	20	30	1,180	26	36	48
27.....	128	98	186	328	284	39	446	30	585	26	36	48
28.....	128	98	186	328	284	48	304	30	376	26	36	48
29.....	112	112	186	304	.....	62	86	30	1,120	26	36	48
30.....	102	140	195	340	.....	54	54	30	880	26	42	74
31.....	98	.....	240	328	.....	45	.....	30	.....	26	42	.....
1903-4.												
1.....	54	54	70	42	108	25	16	6	6	79	6	12
2.....	48	54	70	42	108	25	16	6	6	20	6	12
3.....	48	54	70	42	108	25	16	6	6	9	6	12
4.....	48	54	70	42	108	25	16	6	6	9	6	907
5.....	48	54	70	42	108	20	9	6	6	9	9	358
6.....	48	54	70	30	98	25	9	6	6	9	30	201
7.....	48	54	70	30	49	20	9	6	6	9	30	170
8.....	48	54	70	30	49	20	9	6	6	9	748	170
9.....	48	54	70	30	49	20	9	6	6	9	403	170
10.....	48	54	86	49	49	20	9	6	6	6	63	170
11.....	48	54	86	56	49	20	9	6	6	6	30	119
12.....	48	54	86	63	49	20	9	6	6	6	20	98
13.....	48	54	86	63	49	20	9	6	6	6	20	170
14.....	48	54	86	63	49	20	9	6	6	6	20	255
15.....	48	54	86	63	20	20	9	6	6	6	20	604
16.....	48	54	86	63	20	20	9	6	6	6	20	474
17.....	48	54	78	63	20	20	9	6	6	6	36	474
18.....	48	54	78	63	20	20	9	6	6	6	30	170
19.....	48	54	78	56	20	20	9	6	6	6	25	170
20.....	48	54	78	56	20	12	9	6	6	6	20	156
21.....	54	54	78	56	20	12	9	9	6	71	9	143
22.....	54	54	78	56	20	12	9	9	6	30	9	143
23.....	54	54	78	49	20	12	9	1,080	6	20	9	170
24.....	54	78	78	49	20	12	6	474	6	20	907	170
25.....	54	78	78	49	20	12	6	98	6	20	170	1,260
26.....	54	78	78	49	108	12	6	79	6	12	108	660
27.....	54	78	78	98	20	16	6	49	358	12	63	474
28.....	54	70	78	98	20	16	6	9	474	12	30	403
29.....	54	70	78	88	20	16	6	6	170	9	30	255
30.....	54	70	78	88	.....	16	6	6	170	6	25	170
31.....	54	.....	78	88	.....	16	.....	6	.....	6	20	.....

Daily discharge, in second-feet, of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	255	.....	.....	325	465	1,240	350	1,660	2,000	465	5,800	.....
2.....	255	.....	.....	325	465	1,240	325	1,240	1,660	220	4,170	.....
3.....	1,260	.....	.....	350	465	1,240	300	630	1,020	220	3,510	.....
4.....	1,660	.....	.....	350	465	1,240	300	630	595	220	4,110	.....
5.....	.....	.....	.....	350	465	1,140	300	630	325	220	3,750	.....
6.....	.....	.....	.....	350	465	1,140	300	560	300	220	2,680	.....
7.....	.....	.....	.....	350	595	1,140	240	495	670	200	2,300	.....
8.....	.....	.....	.....	350	630	1,140	240	495	1,080	200	1,860	.....
9.....	.....	.....	.....	350	670	1,140	220	2,370	2,370	200	1,640	.....
10.....	.....	.....	.....	350	710	1,140	200	2,470	2,530	170	1,570	.....
11.....	.....	.....	.....	350	710	1,420	200	2,370	2,370	465	1,500	.....
12.....	.....	.....	.....	350	670	1,420	200	630	2,220	400	1,300	.....
13.....	.....	.....	.....	350	670	2,300	185	495	2,300	375	1,430	.....
14.....	.....	.....	.....	350	670	2,850	160	880	1,600	300	1,560	.....
15.....	.....	.....	.....	350	670	2,850	160	710	710	220	1,500	.....
16.....	.....	.....	.....	350	670	2,770	160	465	1,660	200	1,200	.....
17.....	.....	.....	.....	350	670	2,530	160	325	2,300	200	1,200	.....
18.....	.....	.....	.....	350	670	2,470	240	300	2,370	150	1,150	.....
19.....	.....	.....	.....	350	670	2,370	260	220	2,080	140	1,150	.....
20.....	.....	.....	.....	350	630	1,670	280	150	1,600	140	1,100	.....
21.....	.....	.....	.....	350	630	1,730	325	150	1,080	140	1,100	.....
22.....	.....	.....	.....	325	630	1,730	350	325	975	140	1,100	.....
23.....	.....	.....	.....	325	630	1,190	350	1,600	595	150	1,000	.....
24.....	.....	.....	.....	325	630	1,020	630	1,660	560	1,600	730	.....
25.....	.....	.....	.....	325	630	350	670	1,730	280	5,380	570	.....
26.....	.....	.....	.....	325	1,190	350	1,080	1,080	240	8,450	430	.....
27.....	.....	.....	.....	325	1,360	350	2,000	2,080	220	16,100	430	.....
28.....	.....	.....	.....	325	1,300	350	2,770	1,370	220	25,500	430	.....
29.....	.....	.....	.....	325	.....	350	2,850	2,080	220	22,650	430	.....
30.....	.....	.....	.....	325	.....	350	2,370	2,000	1,360	15,200	430	.....
31.....	.....	.....	.....	325	.....	325	.....	2,000	.....	9,750	430	.....
1905-6.												
1.....	.....	130	1,100	600	560	455	70	670	150	40	110	805
2.....	.....	130	1,000	640	560	420	70	630	130	40	110	370
3.....	.....	130	910	640	560	420	70	590	715	10	90	280
4.....	.....	180	865	640	525	420	70	550	760	10	70	150
5.....	.....	325	730	640	560	420	70	510	310	25	340	130
6.....	495	325	680	640	560	385	90	405	130	150	250	90
7.....	530	360	730	640	560	320	90	405	188	150	200	90
8.....	495	390	865	640	525	320	110	370	422	130	130	90
9.....	325	390	910	640	560	320	420	250	570	150	130	90
10.....	160	360	910	640	560	260	235	225	550	175	110	90
11.....	160	360	910	640	560	235	110	110	670	175	175	90
12.....	135	390	910	640	560	235	90	110	760	175	150	55
13.....	135	500	775	680	560	185	90	110	650	175	110	55
14.....	135	910	730	680	600	185	90	90	570	630	110	55
15.....	135	865	730	680	600	185	70	90	422	1,350	590	55
16.....	135	820	730	680	600	135	70	90	310	1,410	590	55
17.....	135	820	730	680	600	135	70	70	162	1,350	590	55
18.....	135	650	775	680	600	110	90	55	130	2,340	590	55
19.....	135	650	775	680	600	90	110	55	130	1,720	550	55
20.....	115	650	730	720	600	90	235	55	100	1,600	510	55
21.....	115	650	730	720	600	70	420	55	80	1,660	370	55
22.....	115	650	680	720	600	70	235	110	55	1,530	175	55
23.....	135	650	650	680	600	70	950	475	55	1,290	130	55
24.....	160	615	650	640	600	70	1,100	570	55	1,000	90	40
25.....	160	570	650	640	560	70	1,100	590	55	550	90	40
26.....	160	570	650	600	560	50	900	590	40	340	90	40
27.....	160	570	650	560	525	70	900	900	10	310	280	40
28.....	135	1,250	650	560	455	70	850	850	10	225	200	150
29.....	135	1,500	650	560	.....	70	805	805	150	200	90	175
30.....	135	1,430	615	560	.....	70	715	405	40	200	760	175
31.....	135	.....	615	560	.....	70	.....	200	.....	175	805	.....

Daily discharge, in second-feet, of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	130	130	950	250	590	550	20	3	10	.....	.....	.....
2.....	130	130	950	225	370	590	20	3	6	.....	.....	.....
3.....	130	130	1,530	225	340	510	20	3	6	.....	.....	.....
4.....	130	130	1,790	225	310	440	30	3	6	.....	.....	.....
5.....	130	130	1,930	225	310	610	30	3	6	.....	.....	.....
6.....	110	130	1,790	225	310	492	30	3	6	.....	.....	.....
7.....	130	130	1,600	225	310	280	20	3	140	.....	.....	.....
8.....	130	130	1,600	225	280	200	20	3	200	.....	.....	.....
9.....	110	150	1,410	280	280	200	20	3	110	.....	.....	.....
10.....	110	150	1,060	610	250	175	15	3	110	.....	.....	.....
11.....	55	150	900	828	250	175	15	3	65	.....	.....	.....
12.....	55	175	1,120	950	250	162	15	3	50	.....	.....	.....
13.....	55	175	1,090	1,090	760	150	15	3	20	.....	.....	.....
14.....	55	175	1,000	1,200	805	120	10	3	58	.....	.....	.....
15.....	175	175	900	1,200	510	95	10	3	80	.....	.....	.....
16.....	175	175	850	978	405	95	10	3	65	.....	.....	.....
17.....	150	175	850	550	340	95	10	40	80	.....	.....	.....
18.....	150	175	850	458	310	95	10	40	130	.....	.....	.....
19.....	130	175	550	405	295	95	6	40	530	.....	.....	.....
20.....	150	175	440	340	250	95	6	40	590	.....	.....	.....
21.....	150	175	355	310	250	95	6	40	650	.....	.....	.....
22.....	150	175	295	310	250	80	6	50	782	.....	.....	.....
23.....	150	225	280	310	250	65	3	88	925	.....	.....	.....
24.....	150	280	280	310	250	50	3	110	738	.....	.....	.....
25.....	150	250	250	310	250	50	3	110	692	.....	.....	.....
26.....	150	250	250	310	225	50	3	102	150	.....	.....	.....
27.....	150	280	250	280	225	35	3	80	110	.....	.....	.....
28.....	150	510	250	550	212	30	3	50	238	.....	.....	.....
29.....	150	510	250	1,060	.....	30	3	50	188	.....	.....	.....
30.....	130	510	250	1,060	.....	20	3	30	175	.....	.....	.....
31.....	130	.....	250	950	.....	20	.....	10	.....	.....	.....	.....

NOTE.—Discharges determined from rating curves covering short periods of time and by the indirect method for shifting channels.

Monthly discharge of Pecos River near Pecos, Tex., in 1899-1907.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean,		
1899.					
January.....	365	245	320	19,700	
February.....	345	230	304	16,900	
March.....	305	51	130	7,990	
April.....	465	41	84.7	5,040	
May.....	111	8	33.9	2,080	
June.....	215	2	31.5	1,870	
July.....	1,070	23	369	22,700	
August.....	985	82	217	13,300	
September.....	345	71	132	7,860	
The period.....	.....	.....	.....	97,400	
1899-1900.					
October.....	148	51	76.2	4,690	
November.....	690	82	164	9,760	
December.....	540	325	357	22,000	
January.....	690	265	464	28,500	
February.....	427	245	351	19,500	
March.....	245	37	99.2	6,100	
April.....	105	20	29.3	1,740	
May.....	1,630	65	698	42,900	
June.....	730	110	319	19,000	
July.....	555	50	184	11,300	
August.....	1,030	55	283	17,400	
September.....	2,350	48	1,190	70,800	
The year.....	2,350	20	351	254,000	

Monthly discharge of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1900-1901.					
October.....	2,600	600	1,080	66,400	
November.....	585	165	369	22,000	
December.....	168	127	138	8,480	
July.....	1,220	18	150	9,220	
August.....	1,970	93	633	38,900	
September.....	2,180	93	675	40,200	
1901-2. ^a					
October.....	470	101	213	13,100	
November.....	4,270	328	1,540	91,600	
December.....	485	140	264	16,200	
January.....	862	186	381	23,400	
February.....	497	170	304	16,900	
March 1-19.....	186	87	144	5,430	
June 7-13, 18-23.....	1,460	80	577	14,900	
July 10-31.....	4,380	80	1,880	82,000	
August.....	1,880	98	883	23,600	
September.....	313	98	167	9,940	
1902-3.					
October.....	147	98	112	6,890	
November.....	140	90	102	6,070	
December.....	385	170	205	12,600	
January.....	432	274	351	21,600	
February.....	376	264	303	16,800	
March.....	352	39	172	10,600	
April.....	446	20	49.0	2,920	
May.....	36	26	30.5	1,880	
June.....	2,670	28	1,070	63,700	
July.....	690	26	113	6,950	
August.....	224	26	47.4	2,910	
September.....	74	42	44.2	2,630	
The year.....	2,670	20	217	156,000	
1903-4.					
October.....	54	48	50.3	3,090	
November.....	78	54	58.8	3,500	
December.....	86	70	77.5	4,770	
January.....	98	30	56.7	3,490	
February.....	108	20	48.9	2,810	
March.....	25	12	18.4	1,130	
April.....	16	6	9.2	547	
May.....	1,080	6	62.7	3,860	
June.....	474	6	44.3	2,640	
July.....	79	6	14.4	885	
August.....	907	6	94.4	5,800	
September.....	1,260	12	291	17,400	
The year.....	1,260	6	69.0	49,900	
1905.					
January.....	350	325	340	20,900	
February.....	1,360	465	682	37,900	
March.....	2,850	325	1,370	84,400	
April.....	2,850	160	596	35,500	
May.....	2,470	150	1,090	67,100	
June.....	2,530	220	1,240	74,000	
July.....	25,500	140	3,550	218,000	
August.....	5,800	430	1,660	102,000	
The period.....				640,000	
1905-6.					
October 6-31.....	530	115	189	9,750	
November.....	1,500	130	592	35,200	
December.....	1,100	615	764	47,000	
January.....	720	560	643	39,500	A
February.....	600	455	568	31,500	A
March.....	455	50	196	12,100	B
April.....	1,100	70	343	20,400	B
May.....	900	55	355	21,800	A
June.....	760	10	279	16,600	A
July.....	2,340	10	622	38,200	A
August.....	805	70	277	17,000	A
September.....	805	40	120	7,140	B
The period.....				296,000	

^aDuring the periods in 1902 for which no discharge is given, the flow was less than 80 second-feet.

Monthly discharge of Pecos River near Pecos, Tex., for 1899-1907—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906-7.					
October.....	175	55	129	7,930	B
November.....	510	130	208	12,400	A
December.....	1,930	250	843	51,800	A
January.....	1,200	225	531	32,600	A
February.....	805	212	337	18,700	A
March.....	610	20	185	11,400	A
April.....	30	3	12.3	732	B
May.....	110	3	29.9	1,840	A
June.....	925	6	231	13,700	A
The period.....				151,000	

NOTE.—The high-water estimates of July, 1905, can only be considered approximate, on account of the overflow, which could not be measured accurately.

MARGUERETTA FLUME NEAR PECOS, TEX.

Location.—At the crossing of the Barstow Irrigation Co.'s canal over Pecos River, about 6 miles above Pecos and 3 miles below the head gates of the canal.

Records available.—January 1 to December 31, 1898; January 1, 1900, to June 30, 1907.

Gage.—Vertical staff located at the east end of the flume, having its zero at the bottom of the flume. The gage was originally located at the west end of the flume, but as water was sometimes wasted into the river just beyond this point, the gage heights did not at all times represent the amount used for irrigation. For that reason the gage was moved to the east end November 17, 1905.

Channel.—Shifting, due to deposits of silt at different times.

Discharge measurements.—Made at the east end of the flume.

Diversions.—About 10 second-feet are diverted into the West Valley ditch above the flume and at times water is wasted from the flume into the Pecos above the station, so the records subsequent to November 17, 1905, do not represent the amount of water actually diverted, but the amount available for irrigation below the crossing. Prior to that date, except for the West Valley ditch, the records represent the amount of water diverted.

Accuracy.—Owing to the shifts of channel the estimates in general can not be considered better than fair.

Discharge measurements of Margueretta flume near Pecos, Tex., in 1898-1904.

[By W. H. Denis.]

Date.	Dis-charge.	Date.	Dis-charge.	Date.	Dis-charge.
1898.	<i>Sec.-ft.</i>	1900.	<i>Sec.-ft.</i>	1901.	<i>Sec.-ft.</i>
Sept. 5.....	114	June 4.....	127	Aug. 23.....	155
		6.....	140	Sept. 1.....	106
1899.		July 1.....	127	16.....	120
June 22.....	85	5.....	148	24.....	108
		7.....	146	Oct. 3.....	107
1900.		13.....	140	10.....	108
Feb. 25.....	29	15.....	129	16.....	106
Mar. 3.....	81	18.....	135	24.....	105
6.....	84	21.....	210	Nov. 4.....	97
9.....	79	23.....	209		
11.....	75	25.....	185	1902.	
13.....	104	Aug. 1.....	131	Oct. 3.....	115
17.....	44	4.....	151	6.....	106
20.....	115	6.....	137	10.....	117
28.....	115	10.....	124	14.....	132
Apr. 1.....	117	13.....	147	18.....	123
8.....	108	20.....	165	21.....	126
16.....	115	24.....	156	27.....	130
22.....	115	Sept. 3.....	160	Nov. 3.....	126
26.....	118			Dec. 3.....	82
30.....	106	1901.		4.....	87
May 9.....	138	July 5.....	155	6.....	99
11.....	127	10.....	122		
14.....	125	15.....	182	1904.	
16.....	162	21.....	127	Aug. 24.....	248
18.....	94	Aug. 6.....	143	25.....	240
20.....	137	11.....	216	Sept. 25.....	95
22.....	155	16.....	216	26.....	95

Discharge measurements of Margueretta flume near Pecos, Tex., in 1905-1907.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 10	Murphy and Giles.....	1.70	257	Feb. 9	E. Patterson.....	.75	27
July 11	J. M. Giles.....	1.10	102	Mar. 2	do.....	1.30	64
11	do.....	1.10	103	22	do.....	1.90	139
14	E. Patterson.....	1.15	115	Apr. 6	do.....	1.90	144
Sept. 14	do.....	1.40	188	May 2	J. M. Giles.....	2.50	237
Oct. 6	J. M. Giles.....	1.60	219	11	E. Patterson.....	2.00	141
7	do.....	1.50	202	June 7	J. M. Giles.....	2.20	152
16	E. Patterson.....	1.30	168	8	do.....	2.20	150
20	do.....	1.25	158	13	E. Patterson.....	2.62	202
Nov. 8	do.....	1.40	194	14	do.....	2.60	198
8 ^a	do.....	1.70	148	July 16	J. M. Giles.....	2.00	124
16	J. M. Giles.....	1.30	132				
16 ^a	do.....	.80	32	1907.			
Dec. 6 ^a	E. Patterson.....	.65	21	Feb. 21	W. A. Lamb.....	.71	14.4
				Mar. 29	do.....	2.55	125
1906.				Apr. 29	do.....	1.90	67
Jan. 1	J. M. Giles.....	.60	20	May 16	do.....	2.12	57

^a At lower end of flume.

NOTE.—All measurements in 1906 and 1907 made at lower end of flume.

Daily gage height, in feet, of *Margueretta flume near Pecos, Tex., for 1898, 1900, 1902-1907.*

Day.	Jan.	Mar.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
1898.												
1	1.5	1.5	1.5	2.3	1.8	1.7	1.95	2.2				
2	1.5	1.5	1.7	2.3	1.8	1.8	1.95	2.2				
3	1.5	1.5	1.7	2.3	1.8	1.7	1.95	2.2				
4	1.5	1.5	1.7	2.3	1.8	1.7	1.95	2.13				
5	1.5	1.5	1.8	2.3	1.8	1.7	1.95	2.1				
6	1.5	1.5	1.5	2.3	1.8	1.7	1.95	2.1				
7	1.5	1.5	1.8	2.3	1.8	1.75	1.95	2.1				
8	1.5	1.5	1.7	2.3	1.8	1.75	2.0	2.1				
9	1.5	1.5	1.7	2.2	1.7	1.7	2.0	2.15				
10	1.5	1.5	1.7	2.0	1.8	1.7	2.0	2.2				
11	1.5	1.5	1.5	2.0	2.1	1.75	2.0	2.1				
12	1.5	1.5	1.5	2.0	2.2	1.8	2.0	2.15				
13	1.5	1.5	1.7	2.0	2.2	1.8	2.1	2.2				
14	1.5	1.5	1.8	2.0	2.2	1.8	2.1	2.2				
15	1.5	1.5	1.9	2.0	2.0	1.8	2.15	2.2				
16	1.5	1.5	1.8	2.0	2.0	1.8	2.2	2.18				
17	1.5	1.5	1.7	2.0	1.8	1.8	2.2	2.15				
18	1.5	1.5	1.8	1.9	1.8	1.85	2.2	2.15				
19	1.5	1.5	1.8	1.9	1.8	1.85	2.2	2.18				
20	1.3	1.5	1.8	1.9	1.8	1.85	2.2	2.15				
21	1.5	1.5	1.9	1.9	1.9	1.85	2.15	2.1				
22	1.5	1.5	2.1	1.8	1.9	1.9	2.1	2.1				
23	1.5	1.5	2.2	1.8	1.6	1.9	2.1	2.1				
24	1.5	1.5	2.2	1.8	1.7	1.9	2.1	2.1				
25	1.5	1.5	2.1	1.5	1.7	1.9	2.2	2.15				
26	1.5	1.5	2.1	1.8	1.7	1.9	2.23	2.2				
27	1.5	1.5	2.2	1.7	1.7	1.9	2.2	2.15				
28	1.5	1.5	2.3	1.9	1.7	1.9	2.2	2.05				
29	1.5	1.5	2.3	1.8	1.7	1.9	2.2	1.95				
30	1.5	1.5	2.3	1.9	1.7	1.9	2.2	1.8				
31	1.5	1.5	2.3	1.8	1.9	1.9	2.2	1.8				
Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1900.												
1	1.80	0.15	0.50	1.80	2.45	2.25	2.50	2.70	2.90	2.25	2.40	2.53
2	1.80	.15	.90	1.75	2.05	2.30	2.50	2.77	2.88	2.40	2.40	2.53
3	1.80	.10	1.35	1.70	2.35	2.25	2.52	2.70	2.87	2.40	2.40	2.53
4	1.80	.10	1.40	1.90	2.35	2.35	2.55	2.80	2.84	2.50	2.40	2.53
5	1.40	.10	1.40	2.25	2.35	2.35	2.60	2.79	2.90	2.38	2.45	2.53
6	.90	.10	1.40	1.95	2.35	2.40	2.68	2.78	2.95	2.38	2.50	2.52
7	.85	.10	1.40	1.85	2.30	2.45	2.68	2.88	2.90	2.40	2.50	2.59
8	.80	1.15	1.40	1.80	2.35	2.40	2.60	2.80	3.05	2.30	2.50	2.60
9	.95	1.00	1.40	1.90	2.10	2.40	2.60	2.80	3.10	2.35	2.50	2.60
10	.80	1.00	1.35	1.80	2.15	3.45	2.58	2.78	2.50	2.35	2.50	2.60
11	.65	1.00	1.30	1.80	2.10	2.40	2.45	2.80	1.95	2.30	2.50	2.60
12	.60	1.00	1.30	1.85	2.15	2.40	2.45	2.80	2.28	2.30	2.50	2.60
13	1.60	1.00	1.55	1.85	2.20	2.40	2.68	2.90	2.52	2.30	2.50	2.62
14	1.50	.90	1.60	1.90	2.10	2.40	2.60	2.88	2.60	2.35	2.51	2.60
15	1.40	.95	1.65	1.90	2.15	2.45	2.60	2.86	2.68	2.35	2.50	2.62
16	1.95	.95	1.45	1.95	2.45	2.30	2.56	2.90	2.55	2.38	2.45	2.62
17	1.80	1.05	.80	1.90	2.20	2.35	2.56	2.85	2.60	2.45	2.40	2.60
18	.35	1.20	.90	1.90	2.00	2.40	2.50	2.86	2.70	2.28	2.45	2.60
19	(a)	1.20	.90	1.90	2.15	2.45	2.50	2.84	1.72	2.30	2.45	2.60
20		.90	1.40	1.85	2.30	2.45	2.58	2.85	2.00	2.38	2.48	2.68
21		.60	1.85	1.90	2.35	2.40	2.75	2.82	2.20	2.38	2.50	2.68
22		.60	1.80	1.80	2.30	2.40	2.80	2.90	2.55	2.38	2.50	2.68
23		.55	1.80	1.90	2.30	2.50	2.72	2.85	2.50	2.40	2.50	2.66
24		.40	1.80	1.90	2.35	2.40	2.60	2.91	2.24	2.35	2.50	2.62
25		.30	1.90	1.90	2.25	2.40	2.70	2.88	2.30	2.38	2.50	2.66
26	.30	.60	1.80	1.90	2.05	2.45	2.32	2.90	2.38	2.35	2.50	2.70
27	.25	.60	1.80	1.90	2.40	2.45	2.55	2.90	2.60	2.38	2.50	2.70
28	.18	.60	1.80	1.90	2.45	2.50	2.80	2.98	2.65	2.30	2.50	2.70
29	.10		1.70	1.80	2.50	2.50	2.65	2.90	2.60	2.30	2.52	2.70
30	.15		1.70	1.75	2.50	2.50	2.62	2.90	2.42	2.45	2.52	
31	.15		1.75		2.45		2.72	2.90		2.40		

a No water in flume.

Daily gage height, in feet, of *Margueretta flume near Pecos, Tex., for 1898, 1900, 1902-1907—*
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902.												
1.				2.95	2.52	2.50	2.00	1.75	1.85	1.90	0.00	2.30
2.				3.00	2.50	2.50	1.95	1.85	1.95	1.75	.00	2.30
3.				3.00	2.50	2.60	1.85	2.00	1.50	1.75	.60	2.30
4.				3.00	2.65	2.60	1.85	1.85	1.45	2.05	1.25	2.15
5.				3.05	2.60	2.60	1.60	1.70	1.62	2.20	1.55	1.60
6.				3.10	2.55	2.60	1.60	1.65	1.65	1.65	1.90	3.00
7.				3.00	2.55	2.60	1.55	1.70	2.50	1.30	2.30	1.85
8.				2.78	2.55	2.58	1.50	1.70	2.50	1.30	2.85	1.10
9.				2.85	1.40	2.55	1.50	1.70	2.55	1.95	.85	1.25
10.				2.85	1.40	2.60	1.40	1.55	1.75	1.80	.95	1.35
11.				2.85	1.25	2.52	1.65	1.50	1.95	1.45	3.00	1.15
12.				2.75	1.35	2.42	2.10	1.60	2.30	1.90		1.50
13.				2.80	1.72	2.50	2.25	1.60	2.32	3.20	3.00	1.40
14.				2.78	2.60	2.45	2.29	1.60	2.32	2.50	3.00	.80
15.				2.78	2.50	2.25	2.00	1.75	1.78	1.10	2.90	1.00
16.				2.80	2.40	2.25	1.75	2.10	1.50	.60	2.80	1.70
17.				2.80	2.40	2.40	1.75	2.05	1.60	.15	2.25	1.70
18.				2.90	2.40	2.40	1.80	2.00	2.25	.00	2.25	1.50
19.				2.85	2.35	2.40	1.80	1.85	2.40	.00	2.15	2.65
20.				2.80	2.20	2.35	1.90	1.60	2.50	1.15	1.65	2.10
21.				2.80	2.20	2.48	1.90	1.50	2.45	2.05	2.35	1.80
22.				2.85	2.20	2.40	1.70	1.60	2.20	3.10	2.15	1.80
23.				2.80	2.20	2.40	1.40	1.60	2.30	3.35	1.60	1.85
24.				2.80	2.10	1.85	1.35	1.75	2.30	3.65	1.50	2.10
25.				2.75	2.30	1.90	1.45	2.00	2.05	3.50	1.50	2.20
26.				2.75	2.40	2.00	1.75	1.95	1.85	3.10	1.50	2.05
27.				2.75	2.50	2.00	1.65	1.70	1.75	2.30	1.60	2.10
28.				2.75	2.40	2.05	1.75	1.65	1.68	2.50	2.05	2.10
29.				2.75	2.10	2.00	1.60	1.60	1.65	2.00	2.20	2.10
30.				2.75	2.10	1.80	1.65	1.45	1.90	.55	2.25	2.05
31.				2.72	2.10	1.90	1.90	1.55	1.90	.00	2.30	2.05
1902-3.												
1.	2.15	2.2	2.15	2.2	2.1	1.4	1.55	2.05	1.85	2.45	2.35	1.5
2.	2.25	2.3	2.15	2.1	2.1	1.0	1.5	1.9	2.1	2.55	2.15	1.3
3.	2.35	2.25	1.95	2.1	2.1	1.5	1.5	1.8	2.1	2.7	2.3	1.6
4.	2.2	2.3	2.05	2.1	2.15	1.5	1.5	1.8	1.2	2.7	2.3	1.85
5.	2.4	2.35	2.15	2.25	2.2	1.85	1.5	1.95	1.3	2.7	2.85	1.7
6.	2.3	2.3	2.1	2.3	2.1	1.95	1.65	2.15	1.7	2.65	2.6	1.8
7.	2.0	2.3	2.05	2.3	2.2	2.1	2.1	2.2	2.45	2.85	2.25	1.4
8.	2.0	2.3	2.1	2.3	2.2	2.15	2.2	2.2	.85	2.9	2.0	1.3
9.	2.1	2.25	2.15	2.3	2.2	2.25	2.2	2.2	1.1	2.9	1.95	1.3
10.	2.1	2.2	2.2	2.1	2.2	2.2	1.9	2.4	1.5	2.75	1.85	1.3
11.	2.05	2.2	2.2	1.4	2.2	2.0	1.8	2.35	2.05	2.85	1.9	1.3
12.	2.05	2.2	2.2	1.8	2.2	2.15	1.8	2.2	2.15	3.0	2.65	1.3
13.	2.1	2.2	2.2	2.2	2.2	1.85	1.8	2.2	2.15	2.9	2.35	1.3
14.	2.1	2.15	2.2	1.7	2.2	1.8	1.75	1.7	1.95	3.0	2.05	1.45
15.	2.1	2.15	2.3	.95	2.2	1.85	1.95	1.6	1.9	2.95	1.95	1.65
16.	2.1	2.1	2.25	.9	2.2	1.8	2.0	1.6	1.8	2.8	1.75	1.6
17.	2.2	2.1	2.2	.9	2.2	1.8	2.0	1.5	1.8	2.65	1.7	1.6
18.	2.2	2.1	2.2	.9	2.25	1.8	2.0	1.45	1.9	2.55	1.7	1.65
19.	2.1	2.1	2.2	.9	1.8	1.55	2.0	1.95	2.3	2.65	1.75	1.25
20.	2.1	2.1	2.2	1.05	1.4	1.6	1.65	2.0	2.35	2.6	1.65	1.2
21.	2.3	2.15	2.2	1.2	1.0	1.55	1.7	2.0	2.3	2.95	1.45	1.2
22.	2.3	2.2	2.3	1.65	1.85	1.6	1.7	1.6	2.0	2.55	1.4	1.2
23.	2.3	2.2	2.3	2.2	1.7	1.4	1.7	1.25	2.4	2.45	1.35	1.65
24.	2.4	2.2	2.3	2.1	1.7	1.3	1.8	1.9	2.05	2.35	1.45	1.7
25.	2.45	2.2	2.3	2.1	1.7	1.3	1.95	1.9	2.05	2.4	1.8	2.0
26.	2.35	2.2	2.2	2.1	1.7	1.3	2.0	1.5	2.25	2.4	1.85	2.2
27.	2.35	2.15	2.3	2.1	1.6	1.5	2.4	1.1	2.25	2.35	1.8	2.15
28.	2.4	2.15	2.3	2.1	2.0	1.35	2.5	1.0	2.25	2.25	1.8	2.2
29.	2.3	2.2	2.3	2.1	.....	1.3	2.4	1.0	2.3	2.4	1.2	2.2
30.	2.3	2.0	2.3	2.1	.....	1.3	2.25	1.3	2.3	2.3	2.2	1.85
31.	2.3	.....	2.3	2.1	.....	1.35	.....	1.2	.....	2.3	1.85	.....

Daily gage height, in feet, of *Margueretta flume* near *Pecos, Tex.*, for 1898, 1900, 1902-1907—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.95	2.0	2.1	2.1	2.0	2.0	1.8	0.9	1.4	2.0	0.6	2.1
2.....	1.8	2.1	2.0	2.1	2.0	2.0	1.8	.9	1.2	1.6	.6	2.0
3.....	1.8	2.1	2.0	2.1	2.0	2.0	1.1	.9	1.0	2.0	.7	2.1
4.....	1.7	2.1	2.0	2.1	2.0	2.0	1.2	.9	1.0	2.0	.7	2.5
5.....	1.8	2.1	2.0	2.1	2.0	2.0	1.5	.9	1.0	2.0	2.1	2.4
6.....	1.7	2.1	2.0	2.0	2.0	1.4	1.4	.9	.9	1.9	2.5	2.4
7.....	1.6	2.1	2.0	2.0	2.1	1.3	1.4	1.0	.8	1.9	2.3	1.4
8.....	1.6	2.1	2.1	2.1	2.1	1.3	1.4	1.0	.7	1.8	3.2	1.4
9.....	1.6	2.1	2.1	2.1	2.1	1.3	1.4	1.4	.7	1.3	3.1	1.4
10.....	1.6	2.1	2.0	2.0	2.1	1.3	1.5	1.4	.7	1.3	3.0	1.0
11.....	1.5	2.1	2.0	1.8	2.1	1.2	1.4	1.5	1.4	1.3	3.0	1.0
12.....	1.6	2.1	2.0	1.8	2.1	1.1	1.4	1.6	1.4	1.3	2.0	1.6
13.....	1.65	2.1	2.0	1.8	2.1	1.2	1.4	1.3	1.4	1.3	1.6	1.0
14.....	1.75	2.1	2.0	1.8	2.1	1.2	1.4	1.0	1.4	1.2	1.6	.4
15.....	1.8	2.1	2.0	1.8	2.3	1.2	1.9	1.0	1.4	1.0	1.6	.4
16.....	1.8	2.1	2.0	1.8	2.3	1.4	2.1	.4	1.3	.9	2.0	.4
17.....	1.9	2.1	2.0	1.8	2.3	1.4	2.1	.4	1.3	1.3	1.9	.6
18.....	1.6	2.1	2.0	1.8	2.3	1.4	2.0	.4	1.0	1.9	1.9	1.3
19.....	2.0	2.1	2.0	1.8	2.3	1.4	1.0	.5	1.4	1.6	1.9	.9
20.....	1.95	2.1	2.1	1.8	2.3	1.4	1.5	.9	1.5	1.5	2.2	.9
21.....	1.8	2.1	2.1	1.8	2.3	1.4	1.6	1.0	1.3	2.6	1.9	1.0
22.....	1.9	2.1	2.1	1.8	2.3	1.4	1.6	1.5	1.3	2.0	1.9	1.0
23.....	1.9	2.1	2.1	2.0	2.3	1.4	1.5	2.2	1.3	2.1	1.9	1.8
24.....	1.9	2.0	2.1	2.0	2.3	1.4	1.0	2.2	1.3	1.9	2.8	1.7
25.....	1.9	2.05	2.1	2.0	2.3	1.4	1.0	2.3	1.1	1.5	3.0	1.9
26.....	1.9	2.1	2.1	2.0	.5	1.4	1.0	2.0	1.5	1.6	2.8	1.7
27.....	2.0	2.1	2.0	2.0	2.2	1.1	1.0	1.9	2.5	1.5	2.7	1.7
28.....	2.0	2.1	2.0	2.0	2.0	1.8	1.0	1.6	3.3	1.5	2.6	1.8
29.....	2.0	2.1	2.0	2.0	2.0	1.8	1.0	1.5	3.3	1.0	2.6	1.8
30.....	2.0	2.1	2.1	1.8	.....	1.8	1.0	1.5	3.3	.9	2.5	1.8
31.....	2.0	.....	2.1	2.0	.....	1.8	.....	1.4	.....	.6	2.4	.....
1904-5.												
1.....	1.8	.....	.....	.....	.....	.....	1.0	1.8	1.8	1.6	.....	.....
2.....	1.7	.....	.....	.....	.....	.....	1.0	1.8	1.8	1.0	.....	.....
3.....	1.8	.....	.....	.....	.....	.....	1.0	1.8	1.6	1.0	.....	.....
4.....	1.8	.....	.....	.....	.....	.....	1.0	1.8	1.6	1.0	.....	.....
5.....	(a)	.....	.....	.....	.....	.....	1.0	1.8	1.8	1.0	.....	.....
6.....	.....	.....	.....	.....	.....	.....	1.0	1.8	1.8	1.0	.....	.....
7.....	.....	.....	.....	.....	.....	.....	.9	1.8	1.9	1.0	.....	.....
8.....	.....	.....	.....	.....	.....	.....	1.0	1.8	1.9	1.0	.....	.....
9.....	.....	.....	.....	.....	.....	.....	1.1	1.8	1.9	1.0	.....	.....
10.....	.....	.....	.....	.....	.....	.....	1.3	1.8	1.9	1.1	.....	1.5
11.....	.....	.....	.....	.....	.....	.....	1.4	1.8	1.9	1.3	.....	1.5
12.....	.....	.....	.....	.....	.....	1.1	1.6	1.9	1.9	1.3	.....	1.5
13.....	.....	.....	.....	.....	.....	1.1	1.8	1.9	1.6	1.05	.....	1.5
14.....	.....	.....	.....	.....	.....	1.1	1.8	1.8	1.6	1.5	.....	1.4
15.....	.....	.....	.....	.....	.....	1.1	1.8	1.8	1.6	1.6	.....	1.4
16.....	.....	.....	.....	.....	.....	1.1	1.9	1.8	1.6	1.6	.....	1.4
17.....	.....	.....	.....	.....	.....	1.1	1.9	1.8	1.6	1.6	.....	.....
18.....	.....	.....	.....	.....	.....	1.1	1.8	1.8	1.6	1.6	.....	.....
19.....	.....	.....	.....	.....	.....	1.1	1.8	1.8	1.6	1.4	.....	.....
20.....	.....	.....	.....	.....	.....	1.2	1.8	1.8	1.8	1.3	.....	.....
21.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.8	1.3	.....	.....
22.....	.....	.....	.....	.....	.....	1.3	1.8	1.9	1.7	1.3	.....	.....
23.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	1.5	.....	.....
24.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	1.6	.....	.....
25.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	1.8	.....	.....
26.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	1.6	.....	.....
27.....	.....	.....	.....	.....	.....	1.3	1.8	1.9	1.7	2.4	.....	.....
28.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	2.65	.....	.....
29.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	1.7	2.35	.....	.....
30.....	.....	.....	.....	.....	.....	1.3	1.8	1.8	2.0	1.25	.....	.....
31.....	.....	.....	.....	.....	.....	1.3	.....	1.8	.....	.6	.....	.....

a Flume destroyed by flood.

Daily gage height, in feet, of *Marguaretta flume near Pecos, Tex., for 1898, 1900, 1902-1907—*
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1		1.3	0.8	0.6	0.7	1.3	1.8	2.4	2.0	2.5	2.4	2.5
2		1.3	.8	.6	.7	1.3	1.9	2.4	2.0	2.5	2.4	2.4
3		1.3	.8	.6	.7	1.3	1.9	2.2	2.25	2.4	2.4	2.3
4		1.3	.8	.6	.7	1.3	1.9	2.2	1.9	2.4	2.4	2.2
5		1.5	.8	.6	.7	1.7	1.9	2.3	1.7	2.4	2.45	2.2
6	1.6	1.5	.8	.6	.7	1.7	1.9	2.4	2.0	2.4	2.5	2.2
7	1.5	1.5	.7	.6	.7	1.7	1.8	2.4	2.15	2.4	2.45	2.2
8	1.4	1.5	.7	.6	.7	1.7	1.9	2.4	2.4	2.4	2.6	2.0
9	1.4	1.5	.7	.6	.7	1.7	2.2	2.3	2.4	2.4	2.6	2.0
10	1.4	1.5	.7	.6	.7	1.7	1.9	2.3	2.4	1.8	2.4	2.0
11	1.3	1.5	.7	.6	.7	1.7	1.9	2.0	2.45	1.8	2.4	2.0
12	1.3	1.5	.7	.6	.7	1.7	1.9	1.9	2.5	1.8	2.4	2.0
13	1.3	1.5	.7	.6	.7	1.7	1.9	1.9	2.5	1.8	2.4	2.0
14	1.3	1.5	.6	.6	.7	1.7	1.9	1.9	2.45	2.0	2.4	2.0
15	1.3	1.3	.6	.6	.7	1.7	1.9	1.9	2.4	2.0	2.5	2.0
16	1.3	1.3	.6	.6	.7	1.7	1.9	1.9	2.4	1.9	2.5	1.9
17	1.3	.8	.6	.6	.7	1.7	2.0	1.9	2.2	1.9	2.5	1.9
18	1.3	.8	.6	.7	.7	1.8	2.0	1.9	2.2	1.95	2.5	1.9
19	1.3	.8	.6	.7	.7	1.8	2.0	2.0	1.95	1.9	2.5	1.9
20	1.3	.8	.6	.7	.7	1.8	2.0	2.1	1.85	1.95	2.6	1.9
21	1.3	.8	.6	.7	.7	1.9	2.0	2.1	1.9	2.0	2.6	1.9
22	1.3	.8	.6	.7	.7	1.9	2.2	2.3	2.0	2.0	2.4	1.9
23	1.3	.8	.6	.7	.7	1.8	2.4	2.3	2.0	2.3	2.4	1.9
24	1.3	.8	.6	.7	.7	1.8	2.4	2.3	2.0	2.2	2.4	2.0
25	1.4	.8	.6	.7	.7	1.8	2.4	2.4	2.0	2.2	2.4	2.0
26	1.3	.8	.6	.7	.7	1.8	2.4	2.4	2.2	2.2	2.4	2.0
27	1.3	.8	.6	.7	.7	1.8	2.4	2.5	2.2	1.7	2.4	2.0
28	1.3	.8	.6	.7	1.3	1.8	2.4	2.5	2.2	2.2	2.35	1.0
29	1.3	.8	.6	.7	-----	1.8	2.4	2.4	2.6	2.2	2.4	1.0
30	1.3	.8	.6	.7	-----	1.8	2.4	2.2	2.5	2.1	2.5	1.0
31	1.3	-----	.6	.7	-----	1.9	-----	2.2	-----	2.4	2.5	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1906-7.										
1		1.9	1.7	0.6	0.4	.04	2.3	2.5	1.9	2.0
2		1.9	1.7	.6	.4	.4	2.3	2.6	1.9	2.2
3		1.9	1.7	.6	.4	.4	2.3	2.6	1.85	2.2
4		1.9	1.7	.6	.4	.4	2.3	2.6	1.8	2.2
5		1.9	1.7	.6	.4	.4	2.3	2.5	1.8	2.2
6		1.9	1.7	.6	.4	.5	2.15	2.4	1.8	2.2
7		1.9	1.7	.6	.4	.5	2.0	2.3	1.7	2.5
8		1.9	1.7	.6	.4	.5	2.2	2.3	1.7	2.7
9		1.8	1.7	.6	.4	.5	2.2	2.2	1.7	2.6
10		1.8	1.7	.6	.4	.5	2.2	2.1	1.4	2.5
11		1.8	1.7	.4	.4	.5	2.2	2.1	1.3	2.4
12		1.8	.6	.4	.4	.5	2.2	2.1	1.4	2.4
13		1.8	.6	.4	.4	.6	2.5	2.1	1.4	2.4
14		1.8	.6	.4	.4	.6	2.6	2.3	1.4	2.55
15		1.8	.6	.4	.4	.6	2.6	2.3	2.0	2.7
16		1.8	.6	.4	.4	.4	2.6	2.3	2.3	2.7
17		1.8	.6	.4	.4	.4	2.7	2.2	2.4	2.7
18		1.8	.6	.4	.4	.6	2.7	2.2	2.4	2.6
19		1.8	.6	.4	.4	.6	2.7	2.1	2.4	2.5
20		1.8	.6	.4	.4	.6	2.7	2.1	2.4	2.5
21		1.5	.6	.4	.4	.7	2.7	2.1	2.5	2.6
22		1.5	.6	.4	.4	.7	2.7	2.1	2.5	2.7
23		1.5	.6	.4	.4	.7	2.7	2.2	2.7	2.8
24		1.5	.6	.4	.4	.7	2.7	2.3	2.5	2.7
25		1.5	.6	.4	.4	.7	2.7	2.4	2.5	2.7
26		1.8	.6	.4	.4	.7	2.6	2.4	2.4	2.7
27		1.8	.6	.4	.4	1.0	2.5	2.4	2.4	2.5
28		1.8	.6	.4	.4	1.8	2.5	2.3	2.1	2.6
29		1.8	.6	.4	.4	-----	2.5	2.1	2.0	2.7
30		1.7	.6	.4	.4	-----	2.5	2.0	2.0	2.65
31		1.7	-----	.4	.4	-----	2.5	-----	2.0	-----

^a Beginning Nov. 17, 1905, gage heights show depth of water at lower end of flume.

Daily discharge, in second-feet, of Margueretta flume near Pecos, Tex., for 1903-1907.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1903.												
1.....	123	111	47	58	105	85	153	141	54			
2.....	111	111	27	54	90	111	167	117	41			
3.....	111	111	54	54	80	111	188	135	62			
4.....	111	117	54	54	80	35	188	135	85			
5.....	129	123	85	54	95	41	188	209	70			
6.....	135	117	95	66	117	70	181	174	80			
7.....	135	123	111	111	123	153	209	129	47			
8.....	135	123	117	123	123	21	216	100	41			
9.....	135	123	129	123	123	31	216	95	41			
10.....	111	123	123	90	147	54	195	85	41			
11.....	47	123	100	80	141	105	209	90	41			
12.....	80	123	117	80	123	117	230	181	41			
13.....	123	123	85	80	123	117	216	141	41			
14.....	70	123	80	75	70	95	230	105	50			
15.....	25	123	85	95	62	90	223	95	66			
16.....	23	123	80	100	62	80	202	75	62			
17.....	23	123	80	100	54	80	181	70	62			
18.....	23	129	80	100	50	90	167	70	66			
19.....	23	80	58	100	95	135	181	75	38			
20.....	29	47	62	66	100	141	174	66	35			
21.....	35	27	58	70	100	135	223	50	35			
22.....	66	85	62	70	62	100	167	47	35			
23.....	123	70	47	70	38	147	153	44	66			
24.....	111	70	41	80	90	105	141	50	70			
25.....	111	70	41	95	90	105	147	80	100			
26.....	111	70	41	100	54	129	147	85	123			
27.....	111	62	54	147	31	129	141	80	117			
28.....	111	100	44	160	27	129	129	80	123			
29.....	111	.....	41	147	27	135	147	35	123			
30.....	111	.....	41	129	41	135	135	123	85			
31.....	111	.....	44	.....	35	.....	135	85	.....		
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	95	100	111	120	107	107	84	23	50	107	13	120
2.....	80	111	100	120	107	107	84	23	37	65	13	107
3.....	80	111	100	120	107	107	32	23	27	107	16	120
4.....	70	111	100	120	107	107	37	23	27	107	16	180
5.....	80	111	100	120	107	107	57	23	27	107	120	164
6.....	70	111	100	107	107	50	50	23	23	95	180	164
7.....	62	111	100	107	120	43	50	27	19	95	149	50
8.....	62	111	111	120	120	43	50	27	16	84	311	50
9.....	62	111	111	120	120	43	50	50	16	43	291	50
10.....	62	111	100	107	120	43	57	50	15	43	271	27
11.....	54	111	100	84	120	37	50	57	50	43	271	27
12.....	62	111	100	84	120	32	50	65	50	43	107	65
13.....	66	111	100	84	120	37	50	43	50	43	65	27
14.....	75	111	100	84	120	37	50	27	50	37	65	7
15.....	80	111	100	84	149	37	95	27	50	27	65	7
16.....	80	111	100	84	149	50	120	7	43	23	107	7
17.....	90	111	100	84	149	50	120	7	43	43	95	13
18.....	62	111	100	84	149	50	107	7	27	95	95	43
19.....	100	111	100	84	149	50	27	10	50	65	95	23
20.....	95	111	111	84	149	50	57	23	57	57	134	23
21.....	80	111	111	84	149	50	65	27	43	197	95	27
22.....	90	111	111	84	149	50	65	57	43	107	95	27
23.....	90	111	111	107	149	50	57	134	43	120	95	84
24.....	90	100	111	107	149	50	27	134	43	95	233	74
25.....	90	105	111	107	149	50	27	149	32	57	271	95
26.....	90	111	111	107	10	50	27	107	57	65	133	74
27.....	100	111	100	107	134	32	27	95	180	57	215	74
28.....	100	111	100	107	107	84	27	65	332	57	197	84
29.....	100	111	100	107	107	84	27	57	332	27	197	84
30.....	100	111	111	84	.....	84	27	57	332	23	180	84
31.....	100	.....	111	107	.....	84	.....	50	.....	13	164	.....

Daily discharge, in second-feet, of Margueretta flume near Pecos, Tex., for 1903-1907—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.	84						80	285	285	231	(a)	
2.	74						80	285	285	80		
3.	84						80	285	231	80		
4.	84						80	285	231	80		
5.	(b)						80	285	285	80		
6.							80	285	285	80		
7.							57	285	312	80		
8.							80	285	312	80		
9.							103	285	312	80		
10.							153	285	312	103		205
11.								179	285	312	153	205
12.							103	312	312	153		205
13.							103	285	312	231	92	205
14.							103	285	285	231	205	179
15.							103	285	285	231		179
16.							103	312	285	231		179
17.							103	312	285	231		
18.							103	285	285	231		
19.							103	285	285	231		
20.							128	285	285	285		
21.								153	285	285	153	
22.								153	285	312	258	153
23.								153	285	285	258	205
24.								153	285	285	258	231
25.								153	285	285	258	285
26.								153	285	285	258	231
27.								153	285	312	258	452
28.								153	285	285	258	522
29.								153	285	285	258	438
30.								153	285	285	340	140
31.								153	285	285	10	
1905-6.												
1.			30	20	25	65	126	220	125	186	173	186
2.			30	20	25	65	141	220	125	186	173	173
3.			30	20	25	65	141	188	154	173	173	160
4.			30	20	25	65	141	188	115	173	173	148
5.			30	20	25	112	141	204	96	173	180	148
6.	231		30	20	25	112	141	220	125	173	186	148
7.	205		25	20	25	112	126	220	142	173	180	148
8.	179		25	20	25	112	141	220	173	173	200	125
9.	179		25	20	25	112	188	204	173	173	200	125
10.	179		25	20	25	112	141	204	173	105	173	125
11.	153		25	20	25	112	141	156	180	105	173	125
12.	153		25	20	25	112	141	141	186	105	173	125
13.	153		25	20	25	112	141	141	186	105	173	125
14.	153		20	20	25	112	141	141	180	125	173	125
15.	153		20	20	25	112	141	141	173	125	186	125
16.	153		20	20	25	112	141	141	173	115	186	115
17.	153	30	20	20	25	112	156	141	148	115	186	115
18.	153	30	20	25	25	126	156	141	148	120	186	115
19.	153	30	20	25	25	126	156	156	120	115	186	115
20.	153	30	20	25	25	126	156	172	110	120	200	115
21.	153	30	20	25	25	141	156	172	115	125	200	115
22.	153	30	20	25	25	141	188	204	125	125	173	115
23.	153	30	20	25	25	126	220	204	125	160	173	115
24.	153	30	20	25	25	126	220	204	125	148	173	125
25.	179	30	20	25	25	126	220	173	125	148	173	125
26.	153	30	20	25	25	126	220	173	148	148	173	125
27.	153	30	20	25	25	126	220	186	148	96	173	125
28.	153	30	20	25	65	126	220	186	148	148	166	41
29.	153	30	20	25		126	220	173	200	148	173	41
30.	153	30	20	25		126	220	148	186	136	186	41
31.	153		20	25		141		148		173	186	

a Flume broken.

b Flume washed out by flood.

Daily discharge, in second-feet, of Margueretta flume near Pecos, Tex., for 1903-1907—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	115	96	20	2	2	102	120	65	49			
2.....	115	96	20	2	2	102	130	64	64			
3.....	115	96	20	2	2	102	130	58	64			
4.....	115	96	20	2	2	102	130	53	64			
5.....	115	96	20	2	2	102	120	51	64			
6.....	115	96	20	2	6	88	111	50	64			
7.....	115	96	20	2	6	75	102	42	89			
8.....	115	96	20	2	6	93	102	41	108			
9.....	105	96	20	2	6	93	93	40	98			
10.....	105	96	20	2	6	93	84	26	89			
11.....	105	96	12	2	6	93	84	22	80			
12.....	105	20	12	2	6	93	84	24	80			
13.....	105	20	12	2	10	120	84	23	80			
14.....	105	20	12	2	10	130	102	23	93			
15.....	105	20	12	2	10	130	102	50	108			
16.....	105	20	12	2	2	130	102	72	108			
17.....	105	20	12	2	2	140	93	80	108			
18.....	105	20	12	2	10	140	93	80	98			
19.....	105	20	12	2	10	140	84	80	89			
20.....	105	20	12	2	10	140	84	80	89			
21.....	78	20	12	2	14	140	84	89	98			
22.....	78	20	12	2	14	140	84	89	108			
23.....	78	20	12	2	14	140	93	108	118			
24.....	78	20	12	2	14	140	102	89	108			
25.....	78	20	12	2	14	140	111	89	108			
26.....	105	20	12	2	14	130	111	80	108			
27.....	105	20	12	2	30	120	111	80	89			
28.....	105	20	12	2	59	120	102	56	98			
29.....	105	20	12	2		120	84	49	108			
30.....	96	20	12	2		120	75	49	103			
31.....	96		12	2		120		49				

NOTE.—Discharge for 1903 determined from a curve not well defined.

Discharge for 1904 determined from a fairly well defined curve.

Discharge for 1905 determined from a rating curve fairly well defined between 100 and 260 second-feet.

Discharge for 1906 determined from two rating curves, one well defined used prior to May 24, and the other well defined between 20 and 180 second-feet. Owing to changing conditions the discharge from May 2 to June 7 may be in error. Discharge for 1907 determined from three rating curves, all of them being approximate only.

Monthly discharge of Margueretta flume near Pecos, Tex., for 1903-1907.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
January.....	135	23	91	5,600	
February.....	129	27	102	5,660	
March.....	129	27	70	4,300	
April.....	160	54	91	5,420	
May.....	147	27	83	5,100	
June.....	153	21	100	5,950	
July.....	230	129	180	11,100	
August.....	209	35	98	6,030	
September.....	123	35	65	3,870	
The period.....				53,000	
1903-4.					
October.....	100	54	81	4,980	
November.....	111	100	110	6,540	
December.....	111	100	104	6,400	
January.....	120	84	100	6,150	
February.....	149	10	124	7,130	
March.....	107	32	60	3,690	
April.....	120	27	55	3,270	
May.....	149	7	48	2,950	
June.....	332	16	72	4,280	
July.....	197	13	69	4,240	
August.....	311	13	144	8,850	
September.....	164	7	66	3,930	
The year.....	332	7	86	62,400	

Monthly discharge of Margueretta flume near Pecos, Tex., for 1903-1907—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904-5.					
October 1-4	84	74	82	649	
March 12-31	153	103	132	5,240	
April	312	57	216	12,800	
May	312	285	288	17,700	
June	340	231	269	16,000	
July	522	10	182	11,200	
September 10-16	205	179	194	2,690	
1905-6.					
October 6-31	231	153	162	8,360	
November 17-30	30	30	30	833	
December	30	20	23.1	1,420	
January	25	20	22.3	1,370	B.
February	65	25	26.4	1,470	B.
March	141	65	114	7,010	B.
April	220	126	167	9,940	A.
May	220	141	178	10,900	B.
June	200	96	148	8,810	A.
July	186	96	142	8,730	A.
August	200	166	180	11,100	A.
September	186	41	122	7,260	A.
1906-7.					
October	115	78	103	6,330	B.
November	96	20	47.9	2,850	B.
December	20	12	14.6	898	B.
January	2	2	2.0	123	D.
February	59	2	10.3	572	D.
March	140	75	117	7,190	C.
April	130	75	99.7	5,930	B.
May	108	22	59.7	3,670	C.
June	118	49	91.1	5,420	D.
The period				33,000	

WEST VALLEY DITCH NEAR PECOS, TEX.

Location.—Near the headgage of the West Valley ditch, which diverts water from the Margueretta canal 6 miles or more above Pecos.

Records available.—Fragmentary records April 22, 1900, to June 7, 1906.

Discharge measurements of West Valley ditch near Pecos, Tex., in 1900-1902, 1904, 1906.

Date.	Dis- charge.	Date.	Dis- charge.	Date.	Dis- charge.
1900.					
Apr. 22	12.0	July 5	19	June 29	14
26	10.0	10	18	July 6	10
30	18.0	15	23	Aug. 24	16
May 9	12.0	21	18	Aug. 31	10
11	12.0	Aug. 6	18	Sept. 7	16
14	12.8	11	19	14	16
16	12.5	16	19	21	14
18	10.4	23	24	28	14
20	13.6	Sept. 1	17	Oct. 3	14
22	15.0	16	11	5	9
June 4	16.0	24	9	6	6
6	17.0	Oct. 3	8	10	9
July 1	11.4	10	7	13	14
5	11.4	16	5	14	13
7	13.7	24	8	18	15
13	13.6	Nov. 4	9	19	12
15	10.6			21	11
18	14.0	1902.			
21	17.4	Mar. 24	10	27	8
23	10.8	Apr. 31	10	Nov. 2	7
25	11.0	Apr. 8	10	3	7
Aug. 1	14.0	Apr. 14	14	1904.	
4	11.8	21	16	Aug. 24	0
6	18.3	28	14	25	0
10	8.0	May 5	16	Sept. 25	0
20	11.8	18	14	26	0
24	16.6	26	16	1906.	
Sept. 3	12.0	June 2	18	June 7	12
5	13.5	9	14		
Nov. 20	12.0	16	16		
Dec. 1	20.3	23	14		
4	14.3				

Daily discharge, in second-feet, of West Valley ditch near Pecos, Tex., for 1904.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Day.	Mar.	Apr.	May.	June.	July.	Aug.
1.....		8	8	8	4	8	16.....	6		4		8	6
2.....					8	4	8	17.....	6		4		10
3.....		8	8	8			18.....	6		4			10
4.....		8	8	8		8	19.....	6		4	6		10
5.....		6		8		8	20.....	6		4	6		10
6.....	4	6		8		8	21.....	6		4	6		10
7.....	4	6		8			22.....	6			6		12
8.....	4	6	8	8			23.....	6			6		12
9.....	4	6	8	8			24.....	6			6		12
10.....	4		8	8	8		25.....	6			6		12
11.....	4		8	8	8		26.....	6			4		12
12.....	4		8		8		27.....	8			4		12
13.....	6		8		8		28.....	8			4		12
14.....	6		8		8		29.....	8		8	4		12
15.....	6		4		8	6	30.....	8		8	4		12
							31.....	8		8		8	

PECOS RIVER NEAR MOORHEAD, TEX.

Location.—Immediately above the high bridge of the Southern Pacific Railroad near Moorhead. No tributary between the station and the mouth.

Records available.—May 1, 1900, to September 30, 1913. (Also gage heights for 1898.)

Drainage area.—Not measured.

Gage.—Vertical staff bolted to bridge pier; read with field glasses from the top of the cliff. Nothing is known regarding the gage used in 1898.

Discharge measurements.—Made from car and cable.

Channel.—Shifting.

Diversions.—The records at this station do not represent the natural run-off, as water is diverted extensively for irrigation.

Floods.—The highest known flood occurred April 6, 1900, and reached a stage of 35.75 feet upon the gage subsequently established. The floods of the lower Pecos are of a very flashy character.

Accuracy.—Owing to the shifting channel conditions very frequent discharge measurements are made, and the estimates of daily discharge based almost entirely on these.

Cooperation.—Station maintained by the United States section of the International Water Commission, by whom the records are furnished.

Discharge measurements of Pecos River near Moorhead, Tex., in 1900–1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Fect.</i>	<i>Sec.-ft.</i>	1900.	<i>Fect.</i>	<i>Sec.-ft.</i>	1900.	<i>Fect.</i>	<i>Sec.-ft.</i>
May 14.....	2.30	930	July 23.....	1.20	314	Oct. 3.....	2.90	1,445
17.....	1.90	655	27.....	1.10	302	9.....	3.10	1,589
23.....	2.00	746	31.....	1.50	443	12.....	2.50	1,298
30.....	1.90	795	Aug. 4.....	1.50	440	20.....	2.00	993
June 2.....	2.90	1,557	10.....	1.60	495	23.....	3.10	1,859
7.....	2.30	1,017	14.....	2.10	835	28.....	2.90	1,764
11.....	1.70	648	18.....	1.50	467	Nov. 1.....	2.80	1,315
16.....	1.90	767	23.....	1.30	374	5.....	2.20	960
19.....	2.10	908	27.....	1.40	424	9.....	2.10	877
28.....	1.45	484	31.....	1.40	404	13.....	2.00	783
July 3.....	1.40	469	Sept. 4.....	1.25	305	19.....	1.90	702
6.....	1.30	463	8.....	1.10	259	27.....	1.70	592
10.....	1.20	362	13.....	2.25	931	Dec. 1.....	1.65	548
13.....	1.50	516	19.....	2.90	1,475	7.....	1.60	532
17.....	9.25	9,265	23.....	4.20	2,478	11.....	1.55	509
18.....	1.70	587	28.....	2.95	1,486	15.....	1.55	535

Discharge measurements of Pecos River near Moorhead, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1902.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1903.	<i>Fcet.</i>	<i>Sec.-ft.</i>
Dec. 19.....	1.50	477	Jan. 23.....	1.6	536	Jan. 14.....	1.7	580
24.....	1.50	440	Feb. 1.....	1.6	499	19.....	1.7	584
30.....	1.50	442	8.....	1.4	502	24.....	1.7	585
			12.....	1.65	636	29.....	1.7	583
1901.			15.....	1.6	612	Feb. 3.....	1.7	579
Jan. 4.....	1.50	438	19.....	1.6	609	7.....	1.6	544
12.....	1.55	454	22.....	1.7	638	17.....	1.6	541
19.....	1.70	572	Mar. 4.....	1.3	487	21.....	1.55	509
24.....	1.55	536	7.....	1.3	487	27.....	1.8	667
29.....	1.55	530	11.....	1.3	457	Mar. 4.....	1.6	525
Feb. 2.....	1.50	499	14.....	1.2	426	9.....	1.6	531
7.....	1.55	541	19.....	1.2	362	14.....	1.55	510
12.....	1.60	570	22.....	1.2	360	19.....	1.5	489
16.....	1.60	563	26.....	1.15	344	27.....	1.25	389
21.....	1.70	611	30.....	1.1	370	31.....	1.15	313
26.....	1.70	602	Apr. 1.....	1.1	378	Apr. 4.....	1.1	299
Mar. 2.....	1.50	485	6.....	1.0	343	10.....	1.0	268
7.....	1.50	489	10.....	.9	298	15.....	.9	244
12.....	1.50	482	13.....	1.85	718	20.....	.8	216
16.....	1.45	450	20.....	.9	311	25.....	.8	208
20.....	1.35	420	25.....	.9	277	30.....	.8	209
27.....	1.25	380	30.....	.9	250	May 5.....	1.25	352
Apr. 18.....	1.00	285	May 3.....	1.4	460	9.....	.9	256
24.....	1.00	280	7.....	1.35	430	13.....	1.4	408
27.....	1.00	287	11.....	.9	249	19.....	1.8	618
May 5.....	1.00	282	17.....	.8	235	23.....	1.15	323
9.....	1.50	454	21.....	1.1	322	29.....	1.1	316
16.....	1.00	291	25.....	.9	255	June 3.....	.9	234
18.....	1.00	287	30.....	.8	231	8.....	.9	237
24.....	1.00	295	June 4.....	.7	231	13.....	2.9	1,482
31.....	1.00	293	8.....	.7	231	19.....	1.5	488
June 5.....	1.00	302	12.....	.7	240	23.....	3.4	1,907
16.....	1.40	372	17.....	1.5	543	29.....	3.6	2,145
22.....	.90	222	20.....	1.1	351	July 3.....	2.15	928
29.....	.90	189	25.....	1.7	642	8.....	1.85	726
July 3.....	.90	183	29.....	1.2	394	13.....	1.5	492
9.....	.85	170	July 4.....	.9	282	17.....	1.3	388
14.....	1.85	658	9.....	.8	253	25.....	1.0	274
20.....	.80	162	13.....	.7	237	30.....	.95	253
22.....	.90	177	17.....	1.7	594	Aug. 5.....	.9	233
25.....	1.30	268	21.....	2.35	1,067	10.....	.85	207
28.....	1.20	288	25.....	2.9	1,531	14.....	.8	200
Aug. 2.....	1.90	730	30.....	3.6	2,036	19.....	.85	214
10.....	1.85	662	Aug. 3.....	4.2	2,763	23.....	.8	202
17.....	1.25	366	7.....	2.45	1,202	27.....	.8	195
23.....	2.50	1,129	12.....	1.8	729	31.....	.75	182
29.....	1.50	528	16.....	1.9	784	Sept. 5.....	.7	254
Sept. 4.....	1.20	354	21.....	2.0	851	9.....	.7	253
14.....		875	25.....	1.6	579	12.....	.7	286
19.....	2.95	1,342	29.....	1.3	465	17.....	1.3	434
23.....	2.80	1,444	Sept. 2.....	1.2	374	20.....	.9	304
29.....	1.70	646	6.....	2.05	885	24.....	.7	279
Oct. 1.....	1.70	656	10.....	1.55	602	30.....	.9	233
6.....	1.60	620	14.....	1.85	742	Oct. 5.....	.8	210
9.....	1.90	849	18.....	1.6	630	8.....	.8	199
16.....	1.40	487	20.....	1.55	565	15.....	.8	186
18.....	1.30	454	25.....	1.35	477	20.....	.75	177
24.....	1.45	545	30.....	1.3	431	24.....	.75	174
29.....	1.50	586	Oct. 4.....	1.45	464	28.....	.8	185
Nov. 3.....	2.20	1,073	8.....	1.3	420	Nov. 2.....	.8	204
9.....	3.25	1,898	12.....	1.3	423	6.....	.85	211
12.....	3.60	2,306	16.....	1.3	429	10.....	.85	213
14.....	3.80	2,536	20.....	1.3	416	14.....	.9	243
15.....	3.80	2,544	24.....	1.25	421	19.....	.9	235
17.....	3.85	2,635	28.....	1.2	404	23.....	.8	213
20.....	2.90	1,547	Nov. 3.....	1.5	521	27.....	.9	232
23.....	2.25	1,134	7.....	1.3	440	Dec. 2.....	.9	226
26.....	2.30	1,209	11.....	1.25	423	6.....	.9	224
29.....	2.30	1,210	15.....	1.3	420	10.....	.9	235
Dec. 1.....	2.30	1,202	20.....	1.25	412	14.....	.9	231
4.....	2.20	1,000	28.....	1.3	392	19.....	1.0	267
9.....	2.00	943	Dec. 3.....	1.3	365	24.....	.9	236
14.....	1.90	927	7.....	1.3	375	30.....	.9	229
19.....	1.70	688	11.....	1.55	507			
			16.....	1.4	398	1904.		
1902.			22.....	1.4	420	Jan. 4.....	.9	234
Jan. 4.....	1.4	608	27.....	1.4	410	8.....	.9	228
8.....	2.1	967				13.....	.85	201
13.....	2.1	943	1903.			19.....	.85	201
16.....	1.9	842	Jan. 2.....	1.45	425	24.....	.8	191
25.....	1.6	581	8.....	1.5	507	29.....	.8	191

Discharge measurements of Pecos River near Moorhead, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1906.	<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 3.....	0.8	190	Feb. 3.....	1.7	694	Jan. 29.....	2.0	695
8.....	.8	178	7.....	1.75	710	Feb. 3.....	2.0	740
13.....	.8	183	11.....	2.0	787	8.....	1.95	648
18.....	.9	225	15.....	2.0	811	14.....	2.0	839
23.....	.9	204	20.....	2.2	861	19.....	2.0	859
28.....	.9	213	23.....	2.1	791	23.....	2.0	836
Mar. 4.....	.8	180	26.....	2.05	896	26.....	2.0	800
9.....	.8	181	Mar. 8.....	3.4	1,817	Mar. 3.....	1.9	661
14.....	.8	174	11.....	2.7	1,180	8.....	1.75	648
19.....	.75	162	16.....	3.2	1,532	13.....	1.65	598
28.....	.65	157	20.....	3.7	2,212	17.....	1.55	517
Apr. 2.....	.6	128	24.....	2.4	1,041	22.....	1.4	475
7.....	.6	126	29.....	2.1	795	25.....	1.35	453
14.....	.6	128	Apr. 4.....	2.5	1,018	29.....	1.3	439
19.....	.55	123	8.....	2.0	805	Apr. 8.....	1.4	546
25.....	.55	130	12.....	1.9	772	12.....	1.2	426
29.....	.55	125	17.....	1.7	709	16.....	1.2	441
May 4.....	.55	121	21.....	1.6	702	20.....	1.5	568
8.....	.75	161	25.....	3.0	1,356	24.....	1.15	414
13.....	.5	112	28.....	2.2	854	28.....	1.4	545
19.....	.5	117	May 3.....	3.5	2,288	May 3.....	2.1	764
26.....	3.6	2,230	8.....	3.4	2,155	7.....	1.9	730
30.....	2.5	1,110	11.....	3.1	1,594	11.....	1.75	627
June 3.....	1.25	335	16.....	3.4	2,040	15.....	1.5	605
8.....	4.8	3,401	20.....	2.2	991	20.....	1.55	761
13.....	2.0	831	24.....	2.8	1,633	24.....	1.2	496
17.....	1.3	355	29.....	2.2	999	29.....	1.5	610
22.....	1.05	254	June 3.....	3.2	1,623	June 4.....	2.2	768
29.....	4.35	3,223	9.....	2.6	1,166	8.....	1.75	720
July 7.....	1.6	639	12.....	1.9	720	12.....	1.6	684
13.....	1.7	675	17.....	3.5	2,324	16.....	1.9	705
16.....	1.0	283	21.....	3.4	2,078	21.....	1.7	679
23.....	1.0	286	24.....	3.3	2,025	25.....	1.6	674
27.....	1.0	289	July 2.....	2.2	1,050	28.....	1.6	667
31.....	1.0	296	7.....	3.1	1,459	July 2.....	1.1	511
Aug. 5.....	.8	235	13.....	2.1	942	10.....	2.4	709
10.....	.8	223	18.....	2.0	734	14.....	2.1	674
15.....	.8	229	23.....	2.0	739	18.....	1.85	581
19.....	.85	285	28.....	1.65	639	22.....	2.75	727
24.....	.75	261	Aug. 6.....	4.3	3,528	25.....	2.9	874
27.....	.75	250	10.....	5.2	4,733	29.....	2.7	767
31.....	.75	238	15.....	3.35	2,459	Aug. 3.....	1.95	700
Sept. 3.....	.7	221	20.....	2.8	1,521	6.....	21.3	28,519
8.....	2.5	1,513	24.....	2.6	1,367	22.....	2.55	769
15.....	1.5	508	30.....	2.4	1,186	29.....	2.05	726
17.....	1.9	609	Sept. 6.....	1.9	753	Sept. 4.....	2.1	613
22.....	2.5	1,379	11.....	1.8	689	8.....	2.4	826
24.....	2.1	1,007	14.....	2.0	728	13.....	2.0	625
29.....	1.9	646	22.....	2.2	870	19.....	1.7	577
Oct. 5.....	1.7	674	25.....	2.0	740	24.....	1.5	543
8.....	2.6	902	28.....	1.9	767	27.....	1.45	535
10.....	3.5	1,986	Oct. 3.....	1.7	628	Oct. 3.....	1.55	506
14.....	3.8	2,116	7.....	1.9	719	8.....	1.5	539
17.....	4.5	3,451	10.....	1.9	733	11.....	1.5	564
23.....	5.4	5,695	15.....	1.75	652	16.....	1.5	539
30.....	4.2	3,138	20.....	1.6	577	19.....	1.5	559
Nov. 3.....	3.2	1,983	24.....	1.5	531	23.....	1.5	557
7.....	2.8	1,521	29.....	1.5	514	25.....	1.5	524
11.....	3.0	1,919	Nov. 3.....	1.4	510	29.....	1.5	527
15.....	2.9	1,667	7.....	1.4	503	Nov. 3.....	1.5	542
18.....	2.7	1,404	10.....	1.4	505	8.....	1.5	529
22.....	2.3	983	14.....	1.7	637	12.....	1.5	518
26.....	2.5	1,215	18.....	1.6	534	16.....	1.5	520
30.....	2.3	1,013	22.....	2.2	886	21.....	1.5	530
Dec. 5.....	2.3	882	25.....	2.2	875	24.....	1.55	499
9.....	2.3	889	Dec. 2.....	2.0	890	28.....	1.6	532
13.....	2.2	797	8.....	2.4	1,267	3.....	2.2	773
17.....	2.2	798	13.....	2.4	1,257	7.....	2.65	775
21.....	2.2	813	22.....	2.3	1,227	11.....	2.4	734
29.....	1.75	674	25.....	2.3	1,138	14.....	2.4	729
			29.....	2.2	1,138	18.....	2.4	729
						30.....	2.2	720
1905.			1906.			1907.		
Jan. 3.....	1.75	758	Jan. 4.....	2.1	933	Jan. 4.....	1.65	555
7.....	1.75	735	8.....	2.0	765	8.....	1.6	533
12.....	1.65	611	13.....	2.1	877	12.....	1.6	524
16.....	1.6	604	17.....	2.1	818	16.....	1.6	543
20.....	1.5	557	20.....	2.1	866	21.....	2.3	603
24.....	1.5	531	24.....	2.1	822			
29.....	1.5	532						

Discharge measurements of Pecos River near Moorhead, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1909.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 25.....	1.75	584	Feb. 8.....	1.6	617	Jan. 19.....	1.1	447
29.....	1.6	518	13.....	1.6	631	24.....	1.0	401
Feb. 8.....	1.7	651	17.....	1.4	520	29.....	1.0	403
12.....	1.55	536	21.....	1.35	497	Feb. 3.....	1.0	384
15.....	1.45	525	26.....	1.3	470	8.....	.95	355
18.....	1.7	604	Mar. 2.....	1.25	463	13.....	.95	342
22.....	1.7	619	6.....	1.2	462	18.....	.8	289
26.....	1.55	521	11.....	1.05	421	22.....	.8	301
Mar. 4.....	1.4	484	16.....	1.1	413	26.....	.75	288
8.....	1.7	524	19.....	1.05	373	Mar. 3.....	.85	306
12.....	1.6	531	23.....	1.0	379	8.....	.85	318
16.....	1.55	498	28.....	.95	346	13.....	.8	293
20.....	1.4	474	Apr. 4.....	.9	316	18.....	.7	242
25.....	1.3	475	9.....	.9	329	23.....	.85	308
29.....	1.2	467	13.....	.95	340	29.....	.7	271
Apr. 3.....	1.1	467	17.....	.95	351	Apr. 4.....	.8	239
8.....	1.0	464	21.....	1.55	665	9.....	.7	231
12.....	.95	430	25.....	1.1	477	14.....	.8	276
16.....	.9	417	28.....	.95	353	19.....	.7	239
19.....	.9	413	May 4.....	.95	375	23.....	.65	224
24.....	.9	407	8.....	.9	343	28.....	.8	293
29.....	.9	434	12.....	.85	339	May 3.....	.6	246
May 3.....	.9	442	16.....	.85	329	7.....	.6	258
8.....	.9	428	20.....	.9	345	11.....	.5	228
13.....	.85	427	25.....	1.2	434	15.....	.55	234
17.....	.8	420	29.....	.85	326	19.....	.7	255
21.....	.8	418	June 3.....	1.35	597	24.....	1.1	431
25.....	.8	400	8.....	1.0	362	29.....	.5	228
29.....	.8	400	12.....	.9	313	June 3.....	.5	229
June 8.....	.8	392	16.....	.75	239	7.....	.4	178
12.....	.8	393	20.....	.75	243	11.....	.4	181
15.....	.65	387	24.....	.65	209	16.....	.8	267
20.....	2.0	718	28.....	1.6	670	20.....	.55	242
23.....	.9	437	July 3.....	1.1	374	24.....	1.7	822
28.....	.8	408	8.....	4.4	2,927	28.....	.5	229
July 5.....	.9	285	13.....	1.6	642	July 3.....	.55	196
12.....	.6	230	17.....	1.3	479	9.....	.5	178
17.....	.6	253	22.....	1.0	374	13.....	.5	184
22.....	.55	250	26.....	1.0	381	17.....	.4	185
26.....	.55	251	30.....	2.6	1,366	21.....	.55	213
Aug. 31.....	.55	271	Aug. 4.....	1.6	666	26.....	2.55	1,313
9.....	.45	246	8.....	1.5	635	29.....	2.65	1,401
13.....	.65	260	12.....	1.4	621	Aug. 4.....	1.8	978
17.....	.45	280	17.....	1.6	697	9.....	.9	371
22.....	.45	270	21.....	1.7	731	13.....	1.0	395
24.....	.4	252	25.....	1.7	727	17.....	.8	359
29.....	.4	257	29.....	1.85	919	22.....	.65	266
Sept. 6.....	.4	250	Sept. 3.....	2.8	1,416	25.....	.6	256
9.....	.4	251	8.....	2.1	1,203	29.....	.7	284
14.....	.6	243	12.....	2.5	1,288	Sept. 3.....	.5	229
28.....	.7	180	16.....	1.7	800	7.....	.5	229
Oct. 3.....	.85	265	20.....	1.1	563	14.....	.5	247
8.....	1.3	516	24.....	1.2	576	18.....	.5	235
12.....	1.5	568	28.....	1.0	391	22.....	2.1	1,094
19.....	1.2	443	Oct. 3.....	1.0	369	28.....	.75	329
24.....	1.1	407	8.....	2.3	905	Oct. 4.....	.8	290
28.....	2.5	1,231	13.....	1.0	350	8.....	.8	295
Nov. 6.....	4.2	2,877	17.....	.9	347	12.....	.7	251
11.....	2.7	1,517	21.....	1.0	382	16.....	.5	229
15.....	2.3	1,108	25.....	1.0	380	21.....	.7	280
19.....	2.1	934	29.....	1.0	378	25.....	.7	292
23.....	2.0	940	Nov. 3.....	.95	389	29.....	.8	293
27.....	2.0	1,001	7.....	.9	394	Nov. 4.....	.7	269
Dec. 2.....	2.15	1,005	11.....	.9	393	8.....	.7	273
12.....	2.1	859	16.....	.9	381	12.....	.8	322
16.....	1.9	802	20.....	.9	373	16.....	.8	311
20.....	1.95	848	24.....	.9	379	21.....	.8	315
28.....	1.9	831	28.....	.9	387	25.....	.9	343
1908.			Dec. 3.....	.95	307	28.....	.9	341
Jan. 6.....	1.9	769	8.....	1.0	308	Dec. 6.....	.9	361
10.....	1.85	800	14.....	1.0	302	10.....	.9	381
14.....	1.8	779	18.....	.95	290	15.....	.9	377
18.....	1.8	784	23.....	1.1	396	20.....	1.0	391
22.....	1.8	771	29.....	1.0	359	26.....	1.0	388
27.....	1.7	691	1909.			31.....	1.05	426
31.....	1.65	683	Jan. 3.....	1.0	417	Jan. 1910.		
Feb. 4.....	1.6	619	8.....	1.0	433	Jan. 3.....	.9	328
			13.....	1.0	427	7.....	.9	291

Discharge measurements of Pecos River near Moorhead, Tex., in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1910.	<i>Fect.</i>	<i>Sec.-ft.</i>	1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1911.	<i>Fect.</i>	<i>Sec.-ft.</i>
Jan. 11.....	0.95	294	Jan. 4.....	0.45	224	Dec. 17.....	0.8	300
15.....	.95	322	9.....	.45	237	21.....	.8	304
20.....	.9	286	13.....	.45	239	26.....	.8	313
25.....	.9	315	17.....	.45	230	29.....	.85	335
29.....	.9	299	21.....	.4	225			
Feb. 3.....	.9	312	25.....	.55	279			
8.....	.7	250	29.....	.5	263	1912.		
12.....	.7	263	Feb. 2.....	.45	214	Jan. 3.....	0.8	319
16.....	.8	313	7.....	.45	218	4.....	.9	339
21.....	.75	309	11.....	.4	207	12.....	.9	331
26.....	.7	305	16.....	.4	189	16.....	.8	308
Mar. 3.....	.7	263	19.....	5.4	3,683	22.....	.7	279
8.....	.7	248	20.....	1.8	814	25.....	.8	307
12.....	.7	270	23.....	1.0	453	29.....	.7	279
16.....	.6	263	26.....	.9	424	Feb. 3.....	.7	296
21.....	.5	251	Mar. 3.....	.7	297	8.....	.7	273
25.....	.5	247	7.....	.7	286	13.....	.7	273
29.....	.5	258	11.....	.7	277	17.....	.7	289
Apr. 4.....	.95	343	16.....	.7	273	22.....	.7	282
8.....	.6	266	21.....	.6	265	27.....	.7	279
12.....	.9	291	25.....	.7	273	Mar. 4.....	.7	285
16.....	.75	279	29.....	.7	274	8.....	.6	296
21.....	.5	231	Apr. 4.....	10.6	13,132	13.....	.6	275
24.....	.5	242	7.....	1.3	596	18.....	.6	254
28.....	.5	248	11.....	.9	428	22.....	.6	257
May 4.....	.5	262	15.....	.7	368	25.....	.6	255
9.....	.4	232	20.....	.7	321	29.....	.65	285
13.....	.4	233	24.....	.7	309	Apr. 3.....	.55	250
17.....	.4	240	28.....	.9	363	8.....	.8	335
21.....	1.1	487	May 4.....	1.0	505	10.....	.7	277
25.....	.45	246	9.....	.9	376	15.....	.6	266
31.....	.45	248	13.....	2.35	1,281	19.....	.5	259
June 4.....	.5	223	16.....	.9	362	23.....	.5	246
7.....	.45	200	19.....	.7	314	28.....	.5	245
11.....	.45	190	23.....	2.25	1,185	May 3.....	.4	201
16.....	.2	210	27.....	1.3	611	8.....	.35	203
21.....	.2	182	31.....	.9	377	13.....	.35	184
24.....	.15	155	June 3.....	.7	321	18.....	.35	185
July 3.....	.15	184	8.....	.6	286	22.....	.25	171
8.....	.2	189	13.....	.55	279	25.....	.25	171
13.....	.15	174	16.....	.55	270	29.....	.2	169
18.....	.1	170	24.....	.4	240	June 3.....	.2	158
22.....	.1	169	28.....	.3	228	7.....	.2	184
29.....	.1	167	July 2.....	.3	193	13.....	.2	157
Aug. 3.....	.1	172	8.....	.3	192	18.....	.2	159
8.....	.1	177	12.....	.3	190	21.....	.2	161
12.....	.1	172	17.....	.9	369	24.....	.7	314
17.....	.1	170	21.....	.85	350	28.....	.6	294
21.....	.1	165	25.....	.4	205	July 3.....	.3	219
25.....	.35	243	29.....	.3	189	9.....	.2	165
29.....	2.5	1,432	Aug. 3.....	3.4	2,117	13.....	.15	161
Sept. 3.....	1.0	366	8.....	2.35	1,295	18.....	.1	132
8.....	1.6	731	12.....	1.3	593	22.....	.2	153
12.....	.2	233	16.....	1.3	594	26.....	.1	135
16.....	.5	274	21.....	.95	371	Aug. 5.....	.1	143
20.....	.05	188	25.....	.7	321	9.....	.1	146
24.....	.0	180	Sept. 2.....	.6	264	13.....	.1	143
28.....	.3	242	7.....	.6	272	17.....	.1	144
Oct. 3.....	1.2	471	12.....	.5	246	21.....	.1	153
7.....	1.0	432	16.....	.4	221	24.....	.1	149
11.....	.5	281	21.....	.4	225	29.....	.1	148
15.....	.6	298	25.....	.5	233	Sept. 3.....	.1	130
20.....	.6	298	28.....	.4	230	6.....	.1	123
24.....	.6	297	Oct. 3.....	.4	225	10.....	.1	130
29.....	.6	303	7.....	.4	225	14.....	.2	155
Nov. 3.....	1.2	464	11.....	.6	259	17.....	.1	137
7.....	1.0	450	16.....	.5	253	20.....	.1	128
11.....	.5	254	19.....	.5	247	24.....	.1	141
15.....	.7	265	24.....	.5	250	28.....	.1	137
19.....	.6	270	Nov. 9.....	.5	248	Oct. 3.....	.15	140
23.....	.5	221	7.....	.7	254	8.....	.15	137
28.....	.45	211	9.....	.9	259	12.....	.3	207
Dec. 3.....	.5	234	13.....	.7	246	16.....	.25	193
8.....	.45	230	17.....	.7	236	21.....	.2	173
12.....	.45	213	22.....	.65	237	25.....	.2	160
16.....	.5	220	29.....	.6	230	29.....	.2	164
20.....	.5	224	Dec. 4.....	.6	224	Nov. 3.....	.15	160
24.....	.5	227	8.....	.6	240	8.....	.2	166
29.....	.5	262	13.....	.9	357	12.....	.2	175

Discharge measurements of Pecos River near Moorhead, Tex., in 1900-1913—Continued.

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
1912.	<i>Fect.</i>	<i>Sec.-ft.</i>	1913.	<i>Fect.</i>	<i>Sec.-ft.</i>	1913.	<i>Fect.</i>	<i>Sec.-ft.</i>
Nov. 16.....	0.25	190	Mar. 3.....	0.5	245	June 17.....	1.4	703
21.....	.4	246	7.....	.5	244	21.....	1.0	551
25.....	.4	243	11.....	.5	240	24.....	3.0	1,819
29.....	.45	250	15.....	.5	246	29.....	2.2	1,197
Dec. 3.....	.5	267	20.....	.4	236	July 3.....	1.9	879
7.....	.55	247	24.....	.4	238	8.....	2.0	971
12.....	.6	260	29.....	.4	240	12.....	1.1	475
17.....	.8	301	Apr. 3.....	.4	231	17.....	.7	356
21.....	.8	319	8.....	.3	169	21.....	.7	358
26.....	.8	327	11.....	.4	188	25.....	.7	371
29.....	.7	291	15.....	.3	178	28.....	1.3	562
			19.....	.3	174	Aug. 4.....	.9	360
			23.....	1.7	864	8.....	.8	333
1913.			24.....	11.5	15,792	14.....	.6	268
Jan. 3.....	0.6	261	28.....	1.0	474	19.....	.5	222
7.....	.5	253	May 2.....	.7	337	23.....	.45	222
11.....	.5	239	4.....	6.75	6,092	28.....	.4	191
16.....	.7	320	8.....	1.4	609	Sept. 3.....	1.95	1,003
21.....	.8	331	12.....	1.0	451	8.....	1.55	650
25.....	1.0	438	16.....	.8	360	12.....	1.95	934
29.....	.8	349	20.....	.7	331	16.....	.8	389
Feb. 3.....	.7	241	24.....	.7	333	20.....	.5	255
7.....	.7	260	30.....	.5	257	25.....	.5	244
11.....	.7	269	June 3.....	.4	227	28.....	.85	383
15.....	.7	275	7.....	.4	247			
20.....	.7	268	12.....	1.0	495			
26.....	.7	250						

NOTE.—Measurements by J. D. Dillard, D. Griggs, W. D. Greet, J. P. Hague, A. L. Wilcox, E. E. Winter, H. F. Collins, D. J. Smith, J. P. Whitis, and W. H. Dodd.

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1898.										
1.....		1.0	0.7	0.5	1.1	2.2	1.9	0.8	0.6	0.6
2.....		1.0	.6	.5	1.0	2.1	1.9	.8	.7	.5
3.....		1.0	.6	.5	1.2	2.8	1.9	.8	.8	.5
4.....		1.0	.6	.5	1.3	2.4	1.8	.7	.8	
5.....		1.0	.6	.5	1.3	2.2	1.8	.7	.8	
6.....		1.0	.6	.6	1.3	1.9	1.7	.6	.8	
7.....		1.0	.6	.7	1.3	2.1	1.7	.7	.8	
8.....		1.0	.6	.7	1.2	2.5	1.6	.7	.8	
9.....		1.0	.6	.9	1.2	2.2	1.5	.8	.7	
10.....		1.0	.8	.9	1.3	1.9	1.5	.8	.7	
11.....		1.1	.7	.9	2.1	2.0	1.5	.7	.8	
12.....		1.0	.7	1.0	2.5	2.4	1.4	.6	.8	
13.....		1.0	.6	1.1	2.9	2.5	1.3	.6	.8	
14.....		.9	.6	1.4	2.9	2.8	1.3	.5	.7	
15.....		1.0	.6	1.7	3.1	3.0	1.3	.5	.7	
16.....	1.0	1.1	.6	1.3	3.1	3.1	1.2	.5	.6	
17.....	1.1	.9	.6	3.9	3.2	2.9	1.2	.5	.6	
18.....	1.1	.9	.7	2.8	3.2	2.8	1.3	.7	.6	
19.....	1.0	.8	.7	1.3	3.4	2.4	1.3	.7	.6	
20.....	1.0	.8	.7	1.3	3.4	2.2	1.3	.6	.6	
21.....	1.0	.7	.7	1.2	3.2	2.1	1.3	.6	.5	
22.....	1.1	.7	.8	1.1	3.0	2.0	1.3	.6	.5	
23.....	1.1	.7	.8	1.0	2.8	1.9	1.2	.6	.5	
24.....	1.0	.7	.7	.9	2.6	1.9	1.1	.6	.6	
25.....	1.0	.7	.7	.9	2.3	1.9	1.0	.5	.6	
26.....	1.0	.7	.6	.9	2.0	2.1	1.0	.5	.7	
27.....	1.0	.7	.6	1.7	1.9	2.4	.9	.4	.7	
28.....	1.0	.8	.6	1.4	1.9	2.1	.9	.4	.7	
29.....	1.0	.8	.6	1.2	1.8	2.0	.8	.4	.6	
30.....	1.1	.8	.6	1.1	1.8	2.0	.8	.6	.6	
31.....	1.0		.5		2.2	1.9		.6		

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	1.65	2.8	1.5	1.5	1.5	16.....	2.0	1.9	1.3	1.95	2.8
2.....	1.9	2.95	1.45	1.5	1.4	17.....	1.9	1.9	5.8	1.65	2.9
3.....	1.65	2.8	1.4	1.5	1.3	18.....	1.85	1.8	1.75	1.5	3.0
4.....	1.5	2.8	1.4	1.5	1.3	19.....	1.75	2.0	1.45	1.5	2.9
5.....	1.5	2.7	1.35	1.5	1.4	20.....	1.6	2.0	1.4	1.45	2.85
6.....	1.4	2.55	1.3	1.5	1.35	21.....	4.7	2.0	1.4	1.4	2.75
7.....	1.4	2.25	1.3	1.55	1.2	22.....	2.25	1.85	1.3	1.3	2.6
8.....	1.5	2.05	1.3	1.8	1.1	23.....	2.05	1.7	1.2	1.25	3.85
9.....	2.1	1.9	1.3	1.85	1.1	24.....	2.0	1.6	1.2	1.25	2.95
10.....	2.85	1.8	1.2	1.6	1.1	25.....	1.9	1.5	1.2	1.4	2.75
11.....	2.75	1.7	1.2	1.55	1.1	26.....	1.85	1.4	1.2	2.15	2.6
12.....	2.55	1.7	1.35	1.5	1.5	27.....	1.8	1.4	1.1	1.4	2.6
13.....	2.35	1.9	1.5	1.4	2.25	28.....	1.7	1.45	1.2	1.4	3.15
14.....	2.2	1.9	1.5	2.1	2.5	29.....	1.8	1.5	1.35	1.4	2.95
15.....	2.1	1.9	1.45	2.05	2.25	30.....	1.95	1.5	1.45	1.4	3.05
						31.....	2.3		1.5	1.4	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3.35	2.85	1.6	1.5	1.5	1.5	1.2	1.0	1.0	0.9	1.8	1.2
2.....	3.0	2.75	1.6	1.5	1.5	1.5	1.2	1.0	1.0	.9	1.85	1.2
3.....	2.9	2.55	1.6	1.5	1.5	1.5	1.2	1.0	1.0	.9	1.65	1.2
4.....	2.9	2.45	1.6	1.5	1.5	1.5	1.2	1.0	1.0	.9	1.5	1.2
5.....	2.9	2.25	1.6	1.5	1.5	1.5	1.1	1.0	1.0	.9	1.4	1.2
6.....	2.8	2.2	1.6	1.5	1.5	1.5	1.1	1.9	1.0	.9	1.4	1.2
7.....	2.7	2.2	1.6	1.5	1.5	1.5	1.1	1.9	1.0	1.2	1.3	1.2
8.....	3.25	2.1	1.6	1.5	1.5	1.5	1.1	1.9	1.5	1.2	1.2	9.2
9.....	3.05	2.1	1.6	1.5	1.5	1.5	1.1	1.5	1.5	.9	1.8	6.0
10.....	2.85	2.1	1.6	1.5	1.6	1.5	1.0	1.4	1.5	.8	1.85	4.0
11.....	2.65	2.0	1.6	1.5	1.6	1.5	1.0	1.4	1.5	.8	1.9	4.0
12.....	2.45	2.2	1.6	1.5	1.6	1.5	1.0	1.4	1.5	.8	1.9	2.75
13.....	2.25	2.0	1.6	1.5	1.6	1.5	1.0	1.3	1.5	1.8	1.9	1.9
14.....	2.2	2.1	1.6	1.6	1.6	1.5	1.0	1.3	1.5	2.8	1.75	1.8
15.....	2.2	2.2	1.6	1.6	1.6	1.5	1.0	1.2	1.5	1.8	1.6	1.8
16.....	2.15	2.1	1.5	1.6	1.6	1.5	1.0	1.0	1.4	1.4	1.6	1.8
17.....	2.1	2.0	1.5	1.6	1.6	1.4	1.0	1.0	1.4	1.4	1.3	1.8
18.....	2.1	1.95	1.5	1.7	1.65	1.4	1.0	1.0	1.4	.9	1.5	1.8
19.....	2.1	1.9	1.5	1.7	1.7	1.4	1.0	1.0	1.5	.9	1.8	2.4
20.....	2.0	1.8	1.5	1.65	1.7	1.35	1.0	1.0	1.5	.85	2.2	2.8
21.....	2.15	1.75	1.5	1.6	1.7	1.3	1.0	1.0	.95	.9	2.45	3.75
22.....	2.8	1.8	1.5	1.6	1.7	1.3	1.0	1.0	.9	.9	2.6	3.0
23.....	3.1	1.9	1.5	1.6	1.7	1.3	1.0	1.0	.9	1.7	2.45	2.8
24.....	3.35	1.8	1.5	1.6	1.7	1.3	1.0	1.0	.9	1.75	2.3	2.6
25.....	3.25	1.8	1.5	1.5	1.7	1.3	1.0	1.0	.9	1.2	2.5	2.0
26.....	3.15	1.8	1.5	1.5	1.7	1.3	1.0	1.0	.9	.85	2.7	1.8
27.....	2.95	1.7	1.5	1.5	1.65	1.25	1.0	1.0	.9	.8	2.15	1.6
28.....	3.1	1.7	1.5	1.5	1.6	1.2	1.0	1.0	.9	1.05	1.87	1.6
29.....	3.8	1.6	1.5	1.5		1.2	1.0	1.0	.9	1.2	1.45	1.7
30.....	3.35	1.6	1.5	1.5		1.2	1.0	1.0	.9	1.7	1.3	1.7
31.....	3.05		1.5	1.5		1.3		1.0		1.85	1.0	

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	1.7	1.4	2.3	1.4	1.6	1.6	1.1	0.9	1.05	1.25	3.85	1.2
2.....	1.7	1.7	2.2	1.4	1.3	1.4	1.1	.9	.9	1.1	3.95	1.25
3.....	1.7	2.15	2.2	1.4	1.3	1.3	1.1	1.2	.8	1.1	4.2	1.8
4.....	1.65	1.8	2.2	1.4	1.3	1.3	1.0	.9	.7	.9	4.3	1.45
5.....	1.6	1.5	2.2	1.3	1.3	1.3	1.0	.9	.7	.9	3.35	4.05
6.....	1.6	1.4	2.2	1.3	1.2	1.3	1.0	1.35	.7	.9	2.7	2.15
7.....	1.6	1.4	2.0	1.3	1.3	1.3	1.0	1.4	.7	.85	2.4	1.85
8.....	1.8	1.5	2.0	1.95	1.4	1.3	1.0	1.15	.7	.8	2.25	1.8
9.....	1.9	2.65	2.0	2.05	1.4	1.3	1.0	1.1	.7	.8	2.05	1.65
10.....	1.75	3.6	1.9	2.0	1.4	1.3	.9	1.0	.7	.8	1.95	1.75
11.....	1.6	3.45	1.9	2.0	1.4	1.3	.9	.9	.7	.75	1.85	1.9
12.....	1.6	3.6	1.9	2.2	1.6	1.3	.9	.9	.7	.7	1.8	2.05
13.....	1.6	3.75	1.9	2.1	1.65	1.3	2.2	.9	.8	.7	1.8	2.05
14.....	1.6	3.7	1.95	2.1	1.6	1.2	3.25	.9	.7	.7	1.9	1.85
15.....	1.6	3.9	1.9	2.1	1.6	1.2	1.6	.9	.6	.75	1.85	1.65
16.....	1.45	3.8	1.9	1.9	1.6	1.2	1.7	.9	.7	.8	2.0	1.6
17.....	1.5	3.85	1.9	1.8	1.6	1.2	1.3	.85	1.5	2.0	2.55	1.7
18.....	1.3	3.1	1.8	1.8	1.6	1.2	1.1	10.4	1.3	2.9	2.5	2.3
19.....	1.3	2.9	1.7	1.8	1.6	1.2	1.1	1.35	1.1	2.9	2.25	1.75
20.....	1.3	2.85	1.7	1.6	1.6	1.2	.9	1.1	1.05	2.5	2.15	1.55
21.....	1.2	2.8	1.7	1.6	1.6	1.2	.9	1.1	1.0	2.3	2.0	1.5
22.....	1.2	2.65	1.6	1.6	1.7	1.2	.9	1.1	.95	2.3	1.9	1.5
23.....	1.2	2.25	1.6	1.6	1.7	1.2	.9	1.0	.8	2.3	1.85	1.4
24.....	1.3	2.3	1.6	1.6	1.7	1.2	.9	.9	1.55	2.5	1.65	1.45
25.....	1.4	2.3	1.5	1.6	1.6	1.2	.9	.9	1.6	3.0	1.55	1.4
26.....	1.4	2.3	1.5	1.6	1.6	1.15	.9	.9	1.35	3.35	1.5	1.35
27.....	1.4	2.3	1.5	1.6	1.6	1.15	.9	.9	1.2	3.5	1.4	1.3
28.....	1.4	2.25	1.4	1.6	1.6	1.15	.9	.9	1.05	3.5	1.35	1.3
29.....	1.35	2.25	1.4	1.6	-----	1.15	.9	.8	1.2	3.55	1.3	1.3
30.....	1.3	2.3	1.4	1.6	-----	1.1	.9	.8	1.05	3.6	1.25	1.3
31.....	1.3	-----	1.4	1.6	-----	1.1	-----	1.2	-----	3.75	1.2	-----
1902-3.												
1.....	1.2	1.2	1.3	1.5	1.7	1.6	1.1	.8	1.05	3.25	1.0	.8
2.....	1.25	1.2	1.3	1.4	1.7	1.6	1.1	.8	1.2	2.6	1.0	.75
3.....	1.85	1.45	1.3	1.4	1.7	1.6	1.1	.8	.95	2.2	1.0	.7
4.....	1.4	1.45	1.3	1.4	1.6	1.6	1.1	.8	.9	2.05	.95	.7
5.....	1.4	1.35	1.3	1.4	1.6	1.6	1.0	1.0	.9	2.0	.9	.7
6.....	1.4	1.3	1.3	1.45	1.6	1.6	1.0	1.55	.9	2.0	.9	.7
7.....	1.3	1.3	1.3	1.5	1.6	1.6	1.0	1.2	.9	1.9	.9	.7
8.....	1.3	1.3	1.3	1.5	1.65	1.6	1.0	1.05	.9	1.9	.9	.7
9.....	1.3	1.35	1.35	1.5	1.6	1.6	1.0	.9	.95	1.85	.9	.7
10.....	1.2	1.4	1.55	1.5	1.6	1.6	1.0	.9	1.0	1.7	.9	.7
11.....	1.2	1.3	1.5	1.5	1.6	1.6	1.0	.9	2.2	1.65	1.0	.7
12.....	1.3	1.3	1.6	1.5	1.6	1.6	1.0	2.7	3.4	1.55	.9	.7
13.....	1.3	1.3	1.5	1.5	1.6	1.6	1.0	1.45	3.4	1.45	.85	.7
14.....	1.3	1.3	1.5	1.65	1.6	1.55	.9	1.3	1.5	1.4	.8	1.75
15.....	1.2	1.3	1.5	1.75	1.6	1.5	.9	1.1	1.4	1.4	.8	1.7
16.....	1.3	1.2	1.4	1.6	1.6	1.5	.9	1.45	1.4	1.4	.8	1.45
17.....	1.3	1.2	1.4	1.6	1.6	1.5	.85	1.35	1.3	1.35	.8	1.25
18.....	1.3	1.2	1.4	1.7	1.6	1.5	.8	1.3	1.3	1.25	.8	1.15
19.....	1.3	1.25	1.4	1.7	1.6	1.55	.8	2.05	1.4	1.2	.8	1.0
20.....	1.3	1.3	1.4	1.7	1.6	1.5	.8	1.7	1.9	1.2	.8	.9
21.....	1.3	1.3	1.4	1.65	1.55	1.5	.8	1.5	3.3	1.2	.8	.9
22.....	1.3	1.4	1.4	1.6	1.5	1.5	.8	1.35	3.3	1.1	.8	.9
23.....	1.3	1.3	1.4	1.65	1.5	1.5	.8	1.15	3.4	1.05	.8	.75
24.....	1.2	1.3	1.4	1.7	1.5	1.45	.75	1.0	3.4	1.0	.8	.7
25.....	1.2	1.3	1.4	1.7	1.5	1.4	.75	.9	3.4	1.15	.8	.7
26.....	1.2	1.3	1.4	1.7	1.5	1.35	.8	.9	3.5	1.1	.8	.7
27.....	1.2	1.3	1.4	1.7	1.8	1.25	.8	.9	3.5	1.0	.8	.75
28.....	1.2	1.3	1.4	1.6	1.8	1.2	.8	.9	3.5	1.0	.8	.8
29.....	1.2	1.3	1.4	1.65	-----	1.2	.8	1.15	3.6	1.0	.8	.85
30.....	1.2	1.3	1.4	1.7	-----	1.2	.8	1.05	3.5	1.0	.8	.85
31.....	1.2	-----	1.4	1.7	-----	1.2	-----	1.0	-----	1.0	.75	-----

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	0.9	0.8	0.9	0.85	0.8	0.9	0.6	0.55	1.6	2.0	0.9	0.7
2.	.8	.8	.9	.85	.8	.85	.6	.55	1.25	2.0	.85	.7
3.	.8	.8	.9	.85	.8	.8	.7	.55	1.25	2.0	.85	.7
4.	.8	.8	.9	.8	.8	.8	.7	.55	1.05	2.0	.8	.7
5.	.8	.8	.9	.9	.8	.8	.7	1.15	1.25	1.9	.8	.9
6.	.85	.8	.9	.9	.8	.8	.65	1.1	4.85	1.85	.8	3.25
7.	.9	.8	.9	.9	.8	.8	.6	.8	9.95	1.8	.8	10.1
8.	.9	.85	.9	.9	.8	.8	.6	.75	3.75	1.8	.8	2.4
9.	.8	.85	.9	.85	.8	.8	.6	.7	2.0	1.75	.8	2.45
10.	.8	.85	.9	.85	.8	.8	.6	.7	1.95	1.65	.9	1.4
11.	.8	.85	.9	.85	.8	.8	.6	.65	2.55	1.5	.8	1.7
12.	.8	.9	.9	.85	.8	.8	.6	.6	2.9	1.55	.8	1.7
13.	.8	.9	.9	.85	.8	.8	.6	.5	1.95	1.55	.8	1.75
14.	.8	.9	.9	.85	.8	.8	.6	.5	1.65	1.1	.75	1.65
15.	.8	.9	.9	.85	.8	.8	.6	.5	1.5	1.05	.8	1.6
16.	.8	.85	.9	.85	.8	.8	.6	.5	1.45	1.0	.8	1.5
17.	.75	.9	.9	.85	.8	.75	.55	.5	1.35	1.0	.8	1.75
18.	.8	.9	.9	.85	.9	.75	.55	.5	1.25	1.05	.8	1.95
19.	.8	.85	1.0	.85	.9	.75	.55	.5	1.2	1.1	.8	1.85
20.	.75	.85	1.15	.85	.9	.7	.55	.6	1.15	1.05	.8	13.6
21.	.7	.8	1.0	.85	.95	.7	.55	.55	1.1	1.0	.8	4.6
22.	.7	.8	.9	.85	1.1	.7	.75	.5	1.05	1.0	.8	3.25
23.	.7	.8	.9	.85	.95	.7	.65	.5	1.0	1.0	.8	2.95
24.	.75	.85	.9	.8	.9	.7	.6	.5	.95	1.1	.75	2.1
25.	.8	.85	.9	.8	.9	.7	.55	.5	.9	1.1	.75	2.0
26.	.8	.9	.9	.8	.9	.7	.55	2.5	.8	1.0	.75	2.0
27.	.8	.9	.9	.8	.9	.65	.55	1.55	11.45	1.0	.75	1.9
28.	.8	.9	.9	.8	.9	.65	.5	1.55	11.4	1.0	.75	1.9
29.	.8	.9	.9	.8	.9	.65	.6	4.0	4.2	1.0	.75	1.9
30.	.8	.9	.9	.8	.	.6	.6	2.6	2.75	1.0	.75	2.35
31.	.8	.	.9	.8	.	.6	.	1.95	.	1.0	.75	.
1904-5.												
1.	2.05	3.35	2.3	1.75	1.6	2.05	6.7	2.6	3.0	2.2	3.5	2.4
2.	2.25	3.25	2.0	1.75	1.65	2.1	3.75	2.6	3.15	2.2	3.55	2.35
3.	1.95	3.2	2.2	1.75	1.7	2.15	3.0	3.45	3.2	2.3	3.8	2.45
4.	1.8	3.05	2.3	1.75	1.7	2.2	2.5	3.5	3.2	2.65	3.9	2.45
5.	1.75	3.0	2.3	1.75	1.7	2.25	2.3	3.55	3.2	2.65	4.1	2.25
6.	1.7	2.95	2.25	1.75	1.75	2.3	2.2	3.6	3.2	2.3	4.15	1.95
7.	1.6	2.85	2.25	1.75	1.75	2.4	2.1	3.55	3.2	3.1	4.55	1.9
8.	2.1	3.75	2.25	1.7	1.8	3.45	2.0	3.4	3.05	4.1	4.85	1.95
9.	2.9	3.7	2.3	1.7	1.85	2.75	2.0	3.35	2.65	4.4	4.9	1.9
10.	3.3	3.45	2.3	1.7	1.9	2.6	2.0	3.2	2.05	3.55	5.1	1.9
11.	3.3	3.0	2.25	1.65	2.0	2.65	2.0	3.15	2.0	2.7	5.5	2.0
12.	3.45	2.9	2.25	1.65	2.0	2.6	1.9	3.1	1.9	2.35	5.6	1.8
13.	3.65	2.9	2.25	1.65	2.0	2.6	1.9	3.1	1.75	2.1	5.4	1.9
14.	3.75	2.9	2.2	1.6	2.0	2.6	1.85	3.2	1.7	2.0	4.9	2.05
15.	4.1	2.85	2.2	1.55	2.0	5.2	1.8	3.2	2.15	2.0	3.6	2.65
16.	4.3	2.8	2.2	1.5	2.0	3.25	1.7	3.4	3.0	2.0	3.5	2.9
17.	4.45	2.75	2.2	1.5	2.1	3.2	1.7	3.3	3.45	2.0	3.25	2.75
18.	4.6	2.6	2.2	1.5	2.15	3.35	1.7	3.15	3.5	2.0	3.0	2.4
19.	4.75	2.45	2.2	1.45	2.2	3.55	1.7	2.8	3.5	2.0	2.8	2.3
20.	4.9	2.4	2.2	1.45	2.2	3.7	1.6	2.25	3.5	2.0	2.8	2.3
21.	5.0	2.3	2.2	1.45	2.2	3.2	1.6	2.35	3.4	2.1	2.8	2.2
22.	5.05	2.3	2.2	1.45	2.1	2.85	1.6	2.75	3.4	2.0	2.7	2.2
23.	5.35	2.2	2.05	1.45	2.1	2.65	8.95	2.7	3.4	1.95	2.6	2.2
24.	5.3	2.1	1.95	1.5	2.1	2.45	3.05	2.8	3.2	1.7	2.6	2.2
25.	5.2	2.2	1.9	1.5	2.05	2.25	2.95	2.85	3.05	1.7	2.6	2.05
26.	5.05	2.5	1.8	1.5	2.05	2.7	2.7	2.55	2.9	1.6	2.5	2.0
27.	4.8	2.5	1.8	1.5	2.05	2.7	2.25	2.4	2.65	1.65	2.5	2.0
28.	4.4	2.4	1.8	1.5	2.0	2.5	2.2	2.4	2.95	1.65	2.5	1.95
29.	4.0	2.35	1.75	1.55	.	2.25	3.2	2.25	6.05	1.75	2.45	1.95
30.	3.9	2.3	1.75	1.55	.	2.05	2.65	2.6	2.25	3.1	2.4	1.9
31.	3.55	.	1.75	1.45	.	2.0	.	2.9	.	3.2	2.4	.

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	1.8	1.4	2.0	2.1	2.0	1.9	1.3	2.15	1.95	1.15	2.1	2.1
2.....	1.7	1.4	2.0	2.1	2.0	1.9	1.3	2.1	2.0	1.1	2.0	2.75
3.....	1.7	1.4	2.2	2.1	2.0	1.9	1.3	2.1	4.95	1.1	1.9	2.3
4.....	1.8	1.4	2.65	2.1	2.0	1.85	1.3	2.1	2.45	1.05	1.7	2.15
5.....	1.8	1.35	2.7	2.0	2.0	1.85	1.3	2.1	2.25	1.3	1.7	2.8
6.....	1.85	1.35	2.6	2.0	2.0	1.85	1.5	2.0	1.85	1.5	14.6	2.9
7.....	1.9	1.4	2.55	2.0	2.0	1.8	1.4	1.9	1.6	3.35	3.9	2.55
8.....	1.9	1.4	2.4	2.0	1.95	1.8	1.4	1.9	1.75	5.0	2.4	2.4
9.....	2.0	1.4	2.4	2.0	1.95	1.75	1.4	1.8	2.05	2.5	2.15	2.35
10.....	1.95	1.4	2.45	2.0	1.95	1.7	1.3	1.75	1.85	2.35	1.95	2.2
11.....	1.8	1.6	2.5	2.1	1.95	1.65	1.25	1.75	1.7	2.3	23.65	1.5
12.....	1.8	1.7	2.45	2.1	1.95	1.65	1.2	1.7	1.6	2.1	20.25	2.0
13.....	1.75	1.7	2.4	2.1	2.0	1.65	1.2	1.7	1.45	2.1	4.0	2.0
14.....	1.75	1.8	2.4	2.1	2.0	1.6	1.2	1.55	1.4	2.1	2.65	1.9
15.....	1.75	1.8	2.4	2.1	2.0	1.6	1.2	1.5	1.7	2.2	2.4	1.85
16.....	1.75	1.8	2.3	2.1	2.0	1.6	1.2	1.45	1.9	1.95	2.05	1.75
17.....	1.7	1.8	2.3	2.1	2.0	1.55	1.4	1.4	1.95	2.0	2.0	1.75
18.....	1.65	1.7	2.3	2.1	2.0	1.55	1.3	1.35	1.95	1.85	2.0	1.7
19.....	1.65	2.0	2.3	2.1	2.0	1.5	1.25	1.85	1.9	2.0	2.15	1.7
20.....	1.6	2.1	2.3	2.1	2.0	1.5	1.4	1.65	1.8	2.45	2.5	1.65
21.....	1.55	2.2	2.3	2.1	2.0	1.45	1.2	1.4	1.75	2.6	2.6	1.6
22.....	1.5	2.2	2.3	2.1	2.0	1.4	1.2	1.4	1.6	2.75	2.55	1.6
23.....	1.5	2.2	2.3	2.1	2.0	1.4	1.15	1.4	1.6	3.0	2.5	1.6
24.....	1.5	2.2	2.3	2.1	2.0	1.4	1.15	1.25	1.55	2.9	2.4	1.5
25.....	1.5	2.2	2.3	2.1	2.0	1.35	1.15	1.3	1.6	2.9	2.35	1.55
26.....	1.5	2.1	2.3	2.1	2.0	1.35	1.2	1.45	1.4	2.9	2.2	1.5
27.....	1.45	2.1	2.3	2.1	2.0	1.35	1.3	1.5	1.45	2.85	8.25	1.45
28.....	1.45	2.1	2.2	2.1	2.0	1.3	1.4	1.4	1.55	2.7	2.5	1.55
29.....	1.5	2.1	2.2	2.0	.....	1.3	1.8	1.45	1.4	2.85	2.05	1.5
30.....	1.45	2.0	2.1	2.0	.....	1.3	2.05	1.55	1.2	2.4	2.1	1.5
31.....	1.45	.....	2.1	2.0	.....	1.3	.....	1.7	.....	2.25	2.05	.....
1906-7.												
1.....	1.5	1.5	1.55	2.05	1.5	1.4	1.15	.9	.8	1.75	.5	.4
2.....	1.55	1.5	1.6	1.85	1.5	1.4	1.1	.9	.8	1.6	.5	.4
3.....	1.55	1.5	1.6	1.7	2.15	1.4	1.1	.9	.8	1.5	.45	.4
4.....	1.55	1.5	1.6	1.65	2.35	1.4	1.1	.9	.8	1.35	.45	.4
5.....	1.5	1.5	1.85	1.6	2.2	1.4	1.0	.9	.8	1.0	.45	.4
6.....	1.5	1.5	2.05	1.6	1.95	1.4	1.0	.9	.8	.9	.45	.4
7.....	1.5	1.5	2.15	1.6	1.8	1.4	1.0	.9	.8	.9	.45	.4
8.....	1.5	1.5	2.45	1.6	1.7	1.7	1.0	.9	.75	1.35	.45	.4
9.....	1.5	1.5	2.3	1.6	1.7	1.8	1.0	.9	.8	.95	.45	.4
10.....	1.5	1.5	2.9	1.6	1.65	1.8	.95	.9	.8	.75	.45	.4
11.....	1.5	1.5	2.65	1.6	1.6	1.7	.95	.9	.8	.6	.85	.4
12.....	1.5	1.5	2.6	1.6	1.55	1.6	.95	.85	.8	2.45	.85	.6
13.....	1.5	1.5	2.45	1.6	1.5	1.6	.95	.85	.75	.9	.75	.6
14.....	1.5	1.5	2.4	1.6	1.5	1.6	.9	.85	.75	.95	.45	.6
15.....	1.5	1.5	2.4	1.6	1.45	1.7	.9	.8	.75	.75	.45	.6
16.....	1.5	1.5	2.35	1.6	1.45	1.55	.9	.8	.7	.6	.45	.6
17.....	1.5	1.5	2.4	2.3	1.45	1.5	.9	.8	.7	.6	.45	.6
18.....	1.5	1.5	2.4	2.4	1.65	1.5	.9	.8	.7	.55	.45	.6
19.....	1.5	1.5	2.4	2.4	1.9	1.45	.9	.8	.8	.55	.45	.6
20.....	1.5	1.5	2.4	2.4	1.85	1.4	.9	.8	2.0	.55	.45	.6
21.....	1.5	1.5	2.35	2.3	1.75	1.4	.9	.8	.95	.55	.45	.6
22.....	1.5	1.5	2.3	2.15	1.7	1.4	.9	.8	.9	.55	.45	.6
23.....	1.5	1.5	2.3	1.95	1.6	1.4	.9	.8	.9	.55	.45	.9
24.....	1.5	1.5	2.3	1.75	1.6	1.3	.9	.8	.75	.55	.4	.9
25.....	1.5	1.55	2.3	1.75	1.55	1.3	.9	.8	.7	.55	.4	.9
26.....	1.5	1.55	2.3	1.7	1.55	1.25	.9	.8	.7	.55	.4	.8
27.....	1.5	1.55	2.3	1.65	1.5	1.2	.9	.8	.8	.55	.4	.8
28.....	1.5	1.55	2.2	1.6	1.5	1.2	.9	.8	.8	.55	.4	.7
29.....	1.5	1.55	2.2	1.6	.....	1.2	.9	.8	1.15	.55	.4	.7
30.....	1.5	1.55	2.2	1.6	.....	1.2	.9	.8	1.6	.55	.4	.7
31.....	1.5	.....	2.2	1.55	.....	1.2	.....	.8	.....	.55	.4	.....

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.8	1.9	2.1	1.9	1.65	1.25	0.9	1.05	0.9	1.2	1.95	2.4
2.....	.75	2.35	2.15	1.9	1.65	1.25	.9	1.05	.85	1.95	1.8	2.65
3.....	.85	3.55	2.15	1.9	1.6	1.2	.9	1.0	1.15	1.15	1.6	2.85
4.....	1.25	3.7	2.1	1.9	1.6	1.2	.9	.95	1.1	.95	1.6	2.75
5.....	1.6	3.9	2.1	1.9	1.6	1.2	.95	.95	1.1	.9	1.55	2.4
6.....	1.6	4.2	2.1	1.9	1.6	1.2	.95	.95	1.05	.9	1.7	2.3
7.....	1.45	4.05	2.1	1.9	1.6	1.2	.9	.95	1.0	10.8	1.5	2.15
8.....	1.3	3.9	2.05	1.9	1.6	1.1	.9	.9	1.0	3.85	1.5	2.1
9.....	1.35	3.6	2.05	1.85	1.55	1.05	.9	.9	1.0	2.7	1.4	2.05
10.....	1.55	2.8	2.05	1.85	1.55	1.05	.95	.9	.95	2.4	1.4	2.2
11.....	1.6	2.8	2.0	1.85	1.55	1.05	.95	.85	.95	2.2	1.3	2.45
12.....	1.55	2.6	2.1	1.85	1.5	1.05	.9	.85	.9	2.0	1.4	2.45
13.....	1.4	2.45	2.0	1.85	1.55	1.1	.95	.85	.9	1.7	1.6	2.15
14.....	1.35	2.4	2.0	1.8	1.5	1.1	.95	.9	.9	1.55	1.65	1.95
15.....	1.25	2.3	1.95	1.8	1.5	1.1	1.0	.9	.85	1.45	1.9	1.95
16.....	1.4	2.25	1.9	1.8	1.4	1.1	.95	.85	.75	1.35	1.9	1.75
17.....	1.4	2.25	1.9	1.8	1.4	1.1	.95	.85	.75	1.3	1.65	1.65
18.....	1.4	2.2	1.9	1.8	1.35	1.1	7.55	.85	.75	1.3	1.4	1.5
19.....	1.25	2.15	1.95	1.8	1.35	1.05	3.5	.9	.75	1.15	1.4	1.3
20.....	1.2	2.1	1.95	1.8	1.35	1.0	2.3	.9	.75	1.15	1.35	1.1
21.....	1.2	2.5	1.95	1.8	1.35	1.0	1.6	.85	.75	1.0	1.7	1.1
22.....	1.2	2.25	1.95	1.8	1.35	1.0	1.5	.85	.7	1.0	1.7	1.0
23.....	1.15	2.0	1.9	1.75	1.35	1.0	1.2	.9	.7	1.0	1.6	1.05
24.....	1.1	1.95	1.85	1.75	1.35	1.0	1.2	1.05	.65	1.0	1.6	1.15
25.....	1.35	1.9	1.85	1.75	1.3	1.0	1.1	1.2	.65	1.0	1.7	1.2
26.....	2.45	1.9	1.8	1.75	1.3	.95	1.05	1.35	.8	1.0	1.7	1.1
27.....	2.45	2.15	1.85	1.75	1.3	.95	1.05	1.1	1.6	.95	1.7	1.1
28.....	2.5	2.2	1.9	1.7	1.25	.95	.95	.9	1.6	.95	1.65	1.0
29.....	2.75	2.15	1.9	1.7	1.25	.95	1.0	.85	1.15	2.25	1.85	1.0
30.....	1.7	2.1	1.9	1.7	.....	.95	1.0	.85	.95	2.55	1.85	1.0
31.....	1.4	.....	1.9	1.7	.....	.95	.....	.85	.....	2.35	1.8	.....
1908-9.												
1.....	1.0	.9	1.0	1.0	1.0	.85	.7	.7	.55	.65	3.4	.7
2.....	1.0	.9	.95	1.0	1.0	.85	.75	.6	.75	.65	3.35	.6
3.....	1.0	.95	.95	1.0	1.0	.85	.8	.6	.5	.55	2.4	.5
4.....	1.0	.95	.95	1.0	1.0	.85	.8	.65	.65	.6	1.85	.5
5.....	1.0	.9	.95	1.0	1.0	.8	.7	.7	.6	.7	1.6	.55
6.....	.95	.9	1.0	1.0	.95	.8	.7	.6	.6	.65	1.4	.55
7.....	1.25	.9	1.0	1.0	.95	.85	.7	.6	.45	.6	1.0	.5
8.....	2.45	.9	1.0	1.0	.95	.85	.7	.6	.55	.55	.95	.5
9.....	1.7	.9	1.0	1.0	.95	.85	.7	.6	.4	.5	.9	.5
10.....	1.45	.9	1.0	1.0	.95	.9	.7	.6	.45	.45	.9	.5
11.....	1.2	.9	1.0	1.0	.95	.9	.7	.5	.4	.4	.95	.5
12.....	1.05	.9	1.0	1.0	.95	.8	.7	.5	.45	.5	1.0	.55
13.....	1.0	.9	1.0	1.0	.95	.8	.7	.55	.45	.5	1.0	.6
14.....	1.0	.9	1.0	1.0	.9	.8	.8	.55	.4	.45	1.1	.5
15.....	1.0	.9	1.0	1.0	.8	.8	.8	.55	1.5	.45	.85	.6
16.....	.95	.9	1.0	1.05	.8	.8	.8	.6	.85	.4	.85	.6
17.....	.9	.9	.95	1.1	.8	.7	.8	.7	.75	.4	.8	.5
18.....	1.0	.9	.95	1.1	.8	.7	.75	.7	.7	.5	.7	.5
19.....	1.0	.9	1.0	1.1	.85	.75	.7	.7	.7	.5	.8	.5
20.....	1.0	.9	1.1	1.1	.9	.8	.7	.65	.55	.5	.7	1.0
21.....	1.0	.9	1.1	1.1	.9	.8	.7	.65	.5	.5	.65	2.75
22.....	1.0	.9	1.1	1.1	.8	.8	.65	.65	.4	.6	.7	2.2
23.....	.95	.9	1.1	1.1	.8	.85	.9	.7	.7	.7	.7	1.8
24.....	1.0	.9	1.4	1.0	.8	.85	.6	1.05	1.5	.7	.7	1.25
25.....	1.0	.9	1.35	1.1	.75	.8	.55	1.65	1.85	2.85	.65	1.0
26.....	1.0	.9	1.15	1.1	.75	.8	.55	1.85	.9	2.6	.65	1.0
27.....	1.0	.9	1.1	1.0	.85	.75	.8	1.35	.65	.75	.7	1.0
28.....	1.0	.9	1.05	1.0	.85	.75	.8	.85	.55	.6	.7	.85
29.....	1.0	1.0	1.0	1.0	.....	.75	.75	.55	.55	2.0	.7	.8
30.....	.95	1.0	1.0	1.0	.....	.7	.6	.5	.5	2.2	.8	.75
31.....	.9	.....	1.0	1.0	.....	.7	.....	.5	.....	3.0	.75	.....

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	0.9	0.85	0.9	1.0	0.95	0.7	0.6	0.5	0.45	0.15	0.1	1.55
2.....	.85	.8	.9	.95	.95	.7	.6	.5	.45	.15	.1	1.2
3.....	.8	.8	.9	.9	.9	.7	.65	.5	.45	.15	.1	1.0
4.....	.8	.7	.85	.95	.9	.65	.95	.5	.5	.15	.1	.9
5.....	.8	.7	.9	.9	.9	.65	.9	.5	.5	.15	.1	.75
6.....	.8	.75	.9	.9	.85	.7	.85	.5	.5	.15	.1	19.6
7.....	.8	.75	.9	.9	.8	.7	.65	.5	.45	.2	.1	2.45
8.....	.8	.7	.9	.9	.75	.7	.6	.5	.45	.2	.1	1.65
9.....	.8	.7	.9	.95	.7	.7	.65	.55	.45	.2	.1	1.4
10.....	.75	.7	.9	.95	.7	.7	.95	.55	.45	.15	.1	.95
11.....	.75	.7	.9	.95	.7	.75	.9	.55	.45	.15	.1	.7
12.....	.7	.75	.9	.95	.7	.7	.9	.55	.35	.15	.1	.25
13.....	.7	.8	.9	.95	.95	.7	.85	.4	.35	.15	.1	.1
14.....	.6	.8	.9	.95	.95	.65	.8	.4	.25	.15	.1	.8
15.....	.55	.8	.9	.95	.9	.6	.8	.4	.2	.15	.1	.65
16.....	.5	.8	.95	.95	.8	.6	.75	.4	.2	.15	.1	.4
17.....	.5	.85	1.0	.95	.8	.6	.7	.4	.2	.1	.1	.1
18.....	.6	.9	1.0	.9	.7	.5	.6	.4	.2	.1	.05	.1
19.....	.6	.9	1.0	.9	.7	.5	.6	.45	.2	.1	.05	.1
20.....	.65	.8	1.0	.9	.7	.5	.5	.65	.2	.1	.1	.05
21.....	.7	.8	1.0	.9	.75	.5	.5	1.0	.2	.1	.1	.05
22.....	.65	.8	1.0	.9	.75	.5	.5	.95	.2	.1	.1	.05
23.....	.65	.85	1.0	.95	.9	.5	.5	.65	.2	.1	.3	.0
24.....	.7	.85	1.0	.95	.8	.5	.5	.5	.15	.1	.6	.0
25.....	.7	.9	1.0	.9	.8	.5	.5	.5	.15	.1	.35	.0
26.....	.7	.95	1.0	.9	.7	.5	.55	.45	.15	.1	1.25	.0
27.....	.75	.9	1.0	.9	.7	.5	.5	.45	.15	.1	2.4	.1
28.....	.8	.9	1.0	.9	.7	.5	.5	.45	.15	.1	2.7	.25
29.....	.8	.95	1.0	.9	.....	.5	.5	.4	.15	.1	2.6	.95
30.....	.8	.95	1.0	.9	.....	.5	.5	.45	.15	.1	2.45	1.5
31.....	.85	.....	1.05	.....	.....	.6	.....	.45	.15	.1	1.85	.....
1910-11.												
1.....	1.3	.65	.45	.4	.4	.7	.7	2.4	.9	.3	2.35	.6
2.....	1.3	.8	.5	.5	.45	.7	.75	2.25	.8	.3	2.9	.6
3.....	1.15	1.1	.5	.5	.45	.7	3.15	1.25	.7	.3	3.35	.55
4.....	3.3	1.15	.5	.45	.45	.7	9.3	1.05	.7	.3	3.55	.55
5.....	1.95	1.0	.5	.45	.45	.7	3.6	.95	.7	.3	3.75	.55
6.....	1.65	1.0	.5	.45	.45	.7	1.5	.9	.7	.3	3.95	.6
7.....	1.0	1.0	.5	.45	.45	.7	1.35	.9	.65	.3	3.7	.6
8.....	1.0	.95	.45	.45	.45	.7	1.1	.9	.6	.3	2.35	.5
9.....	.95	.7	.45	.45	.4	.7	1.05	.9	.6	.3	1.9	.5
10.....	.8	.55	.45	.45	.4	.7	1.0	.9	.6	.3	1.65	.5
11.....	.5	.5	.45	.45	.4	.7	.9	.9	.6	.3	1.5	.5
12.....	.4	.55	.45	.45	.4	.7	.85	.85	.6	.3	1.35	.5
13.....	.5	.65	.5	.45	.45	.7	.7	1.9	.6	.3	1.2	.5
14.....	.55	.7	.5	.45	.5	.7	.7	1.75	.55	.3	1.2	.5
15.....	.6	.7	.5	.45	.4	.7	.7	.95	.55	.3	1.2	.5
16.....	.6	.7	.5	.45	.4	.7	.7	.9	.55	.9	1.3	.4
17.....	.6	.65	.5	.45	.4	.6	.7	.8	.55	.85	1.2	.4
18.....	.6	.6	.5	.45	2.95	.6	.7	.75	.5	.85	1.0	.4
19.....	.6	.6	.5	.45	5.25	.6	.7	.7	.5	.7	1.0	.4
20.....	.6	.6	.5	.4	1.65	.6	.7	.95	.45	.65	1.0	.4
21.....	.6	.6	.5	.4	1.35	.7	.7	.75	.4	.7	.95	.4
22.....	.6	.5	.5	.4	1.05	.7	.7	2.4	.4	.5	.9	.45
23.....	.6	.5	.5	.45	1.0	.7	.7	2.3	.4	.5	.8	.6
24.....	.6	.5	.5	.5	.85	.7	.7	1.7	.4	.5	.8	.5
25.....	.6	.5	.5	.55	.75	.7	.75	1.45	.4	.4	.7	.5
26.....	.6	.45	.5	.55	.7	.7	.85	1.3	.4	.4	.7	.4
27.....	.6	.45	.5	.5	.7	.7	.95	1.25	.35	.3	.7	.4
28.....	.6	.45	.5	.5	.8	.7	.9	1.15	.3	.3	.7	.4
29.....	.6	.45	.5	.5	.....	.7	.9	1.1	.3	.3	.8	.4
30.....	.6	.45	.5	.5	.....	.7	.9	.95	.3	.3	.75	.4
31.....	.6	.....	.5	.5	.....	.7	.....	.9	.....	.8	.7	.....

Daily gage height, in feet, of Pecos River near Moorhead, Tex., for 1898, 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	0.04	0.5	0.6	0.8	0.7	0.7	0.6	0.4	0.65	0.35	0.1	0.1
2.....	.4	.55	.6	.8	.7	.7	.6	.4	.4	.3	.1	.1
3.....	.4	.55	.6	.8	.7	.7	.55	.4	.2	.3	.1	.1
4.....	.4	.7	.6	.75	.7	.7	.55	.4	.25	.3	.1	.1
5.....	.4	.7	.6	.7	.7	.7	.55	.4	.2	.3	.1	.1
6.....	.4	.7	.6	.7	.7	.65	.55	.4	.2	.2	.1	.1
7.....	.4	.75	.6	.7	.7	.65	2.05	.4	.25	.2	.1	.1
8.....	.55	.8	.6	.85	.7	.6	.8	.35	.25	.2	.1	.1
9.....	.8	.9	.6	.9	.7	.6	.7	.35	.2	.2	.1	.1
10.....	.7	.8	.6	.9	.7	.6	.7	.35	.2	.2	.1	.1
11.....	.6	.8	.65	.9	.7	.6	.7	.35	.2	.2	.1	.1
12.....	.55	.7	.85	.9	.7	.6	.65	.35	.2	.2	.1	.1
13.....	.5	.7	.9	.9	.7	.6	.6	.35	.2	.15	.1	.1
14.....	.5	.7	.8	.9	.7	.6	.6	.35	.2	.15	.1	.2
15.....	.5	.7	.8	.85	.7	.6	.6	.35	.2	.15	.1	.1
16.....	.5	.7	.8	.75	.7	.6	.55	.35	.2	.15	.1	.1
17.....	.5	.7	.8	.7	.7	.6	.55	.35	.2	.1	.1	.1
18.....	.5	.7	.8	.7	.7	.6	.5	.35	.2	.1	.1	.1
19.....	.5	.7	.8	.7	.7	.6	.5	.3	.2	.15	.1	.1
20.....	.5	.7	.8	.7	.7	.6	.5	.3	.2	.15	.1	.1
21.....	.5	.7	.8	.75	.7	.6	.5	.3	.2	.2	.1	.55
22.....	.5	.65	.8	.7	.7	.6	.5	.25	.2	.2	.1	.15
23.....	.5	.65	.8	.75	.7	.6	.5	.25	.2	.1	.1	.1
24.....	.5	.6	.8	.75	.75	.6	.5	.25	.95	.1	.1	.1
25.....	.5	.6	.8	.7	.7	.6	.5	.25	.65	.1	.1	.1
26.....	.5	.6	.8	.7	.7	.6	.5	.25	.5	.1	.1	.2
27.....	.5	.6	.8	.7	.7	.6	.5	.2	.55	.1	.1	.1
28.....	.5	.6	.8	.7	.7	.65	.5	.2	.6	.1	.1	.1
29.....	.5	.6	.85	.7	.7	.65	.45	.2	.6	.1	.1	.1
30.....	.5	.6	.8	.7	.....	.65	.4	.2	.5	.1	.1	.1
31.....	.5	.....	.8	.7	.....	.6	.....	.2	.....	.1	.1	.....
1912-13.												
1.....	.1	.15	.45	.7	.7	.6	.4	.7	.5	3.25	.9	1.4
2.....	.15	.15	.5	.7	.7	.55	.4	.7	.4	2.3	.9	1.45
3.....	.15	.15	.5	.6	.7	.5	.4	.7	.4	1.9	.9	2.05
4.....	.1	.15	.55	.6	.65	.5	.4	12.15	.4	1.6	.9	2.0
5.....	.1	.2	.55	.55	.6	.5	.4	11.6	.4	1.5	.85	2.1
6.....	.15	.2	.55	.5	.7	.5	.4	2.95	.4	1.3	.8	2.1
7.....	.15	.2	.55	.5	.7	.5	.4	1.65	.4	1.2	.8	1.7
8.....	.15	.2	.55	.5	.7	.5	.3	1.4	2.0	2.0	.8	1.55
9.....	.15	.2	.6	.5	.7	.5	.3	1.3	.85	1.7	.8	1.5
10.....	.15	.15	.6	.5	.7	.5	.3	1.2	.7	1.4	.7	1.5
11.....	.25	.15	.6	.5	.7	.5	.4	1.1	.7	1.25	.7	2.2
12.....	.3	.2	.6	.5	.7	.5	.4	1.0	1.0	1.1	.7	2.0
13.....	.3	.2	.6	.5	.7	.5	.3	.95	.9	1.0	.7	1.85
14.....	.3	.25	.6	.5	.7	.5	.3	.9	.8	1.0	.6	1.5
15.....	.3	.25	.6	.55	.7	.5	.3	.9	.75	.9	.5	.95
16.....	.25	.25	.65	.7	.7	.5	.3	.85	.7	.8	.5	.85
17.....	.25	.55	.8	.7	.65	.5	.3	.8	1.7	.7	.5	.8
18.....	.25	.4	.8	.7	.65	.5	.3	.7	1.05	.7	.5	.75
19.....	.25	.4	.8	.7	.6	.4	.3	.7	1.05	.7	.5	.7
20.....	.2	.4	.8	.8	.7	.4	.3	.7	1.0	.7	.5	.5
21.....	.2	.4	.8	.8	.7	.35	.3	.8	1.0	.7	.5	.5
22.....	.2	.4	.8	.8	.7	.3	1.25	.8	2.3	.7	.45	.5
23.....	.2	.4	.8	.85	.7	.3	6.6	.75	2.75	.7	.45	.5
24.....	.2	.4	.8	1.0	.7	.4	12.35	.7	3.0	.7	.4	.5
25.....	.2	.4	.8	1.0	.7	.4	2.3	.6	3.35	.7	.4	.5
26.....	.2	.4	.8	.95	.7	.4	1.5	.6	3.2	2.0	.4	6.1
27.....	.2	.45	.75	.85	.65	.4	1.25	.55	2.45	3.4	.4	1.6
28.....	.2	.45	.7	.8	.6	.4	1.05	.5	2.5	1.35	.4	.9
29.....	.2	.45	.7	.8	.....	.4	1.0	.5	2.2	1.15	.4	.75
30.....	.2	.45	.7	.75	.....	.4	.9	.5	4.6	1.0	.4	.7
31.....	.2	.....	.7	.7	.....	.4	.....	.5	.....	1.0	.4	.....

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	570	1,470	520	450	450	16.....	750	770	420	740	1,380
2.....	655	1,600	495	450	420	17.....	660	770	4,600	540	1,460
3.....	510	1,470	470	450	360	18.....	620	710	610	450	1,530
4.....	430	1,470	470	450	360	19.....	570	830	420	450	1,460
5.....	430	1,380	470	450	420	20.....	480	830	400	440	1,420
6.....	370	1,250	460	450	390	21.....	3,300	830	400	420	1,340
7.....	370	990	440	470	310	22.....	900	740	355	360	1,220
8.....	430	860	430	630	260	23.....	770	650	315	340	2,200
9.....	800	770	420	670	260	24.....	760	580	315	340	1,490
10.....	1,430	710	360	490	260	25.....	740	520	315	420	1,340
11.....	1,320	650	360	470	260	26.....	730	470	315	870	1,220
12.....	1,120	650	440	450	450	27.....	710	470	300	420	1,220
13.....	970	770	520	420	930	28.....	670	490	330	420	1,630
14.....	870	770	520	840	1,140	29.....	710	520	380	420	1,490
15.....	810	770	495	810	930	30.....	810	520	420	420	1,560
						31.....	1,020	.....	440	420	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	1,790	1,540	530	440	500	530	380	290	290	180	650	350
2.....	1,530	1,290	530	440	500	490	380	290	290	180	660	350
3.....	1,460	1,170	530	440	500	490	370	290	290	180	590	350
4.....	1,460	1,110	530	440	500	490	360	290	290	180	530	350
5.....	1,460	990	530	440	510	490	330	280	290	180	470	350
6.....	1,380	960	530	440	530	490	330	670	290	180	470	350
7.....	1,300	960	530	440	540	490	330	660	290	290	400	350
8.....	1,710	880	530	450	540	490	330	660	440	290	350	9,200
9.....	1,570	880	530	450	550	480	320	450	440	180	640	4,850
10.....	1,470	880	530	450	560	480	300	400	440	160	660	2,300
11.....	1,370	780	530	450	560	480	300	390	430	160	700	2,300
12.....	1,270	960	530	460	570	480	300	390	430	160	700	1,340
13.....	1,120	780	530	480	570	470	300	360	430	700	700	740
14.....	1,100	880	530	560	570	460	290	360	430	1,270	670	710
15.....	1,100	960	530	560	560	460	290	330	420	700	590	700
16.....	1,070	880	450	560	560	450	290	290	390	470	590	700
17.....	1,050	780	450	560	560	440	290	290	380	470	400	700
18.....	1,050	740	450	570	590	440	290	290	370	180	530	700
19.....	1,050	700	450	570	610	430	280	290	430	180	640	1,030
20.....	990	640	450	570	610	420	280	290	420	170	920	1,260
21.....	1,070	620	450	560	610	410	280	290	240	180	1,100	2,110
22.....	1,660	640	450	560	610	410	280	290	230	180	1,180	1,370
23.....	1,860	700	450	560	610	400	280	300	230	640	1,100	1,260
24.....	2,070	640	450	560	600	400	280	300	230	670	1,020	1,150
25.....	1,990	640	450	550	600	390	280	300	220	290	1,130	810
26.....	1,910	640	450	550	600	390	280	300	220	170	1,220	700
27.....	1,790	590	450	540	580	380	290	300	210	160	890	590
28.....	1,860	590	450	540	560	370	290	290	200	210	730	590
29.....	2,430	530	450	530	.....	360	290	290	190	290	500	650
30.....	2,070	530	450	520	.....	370	290	290	190	650	400	650
31.....	1,840	.....	450	510	.....	390	.....	290	.....	660	200	.....

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1	660	490	1,200	500	500	610	380	250	330	420	2,340	375
2	660	660	1,000	500	450	530	380	250	290	360	2,460	405
3	660	1,000	1,000	500	450	490	380	370	260	360	2,760	735
4	640	770	1,000	500	450	490	345	250	230	280	2,880	525
5	620	570	1,000	450	450	490	345	250	230	280	1,930	2,370
6	620	490	1,000	450	430	490	345	430	230	280	1,400	950
7	620	490	940	450	430	490	345	450	230	270	1,160	770
8	770	570	940	850	500	480	340	360	230	260	1,050	740
9	850	1,410	940	930	500	470	335	320	230	255	910	650
10	730	2,310	900	900	500	460	300	285	230	250	840	700
11	620	2,130	890	900	500	460	300	250	235	245	765	770
12	620	2,310	880	1,000	610	460	300	250	240	240	730	870
13	620	2,480	870	940	640	460	940	250	270	240	730	870
14	620	2,420	900	940	610	430	1,760	250	240	235	785	740
15	620	2,690	870	940	610	420	600	250	210	245	760	620
16	510	2,540	860	900	610	410	640	250	240	260	840	590
17	570	2,640	860	800	610	390	450	240	540	810	1,280	640
18	450	1,720	770	800	610	370	380	11,100	440	1,530	1,240	990
19	450	1,550	690	800	610	360	370	430	350	1,530	1,040	660
20	450	1,510	690	640	610	360	310	320	330	1,190	960	565
21	420	1,470	690	630	610	360	310	320	315	1,030	850	540
22	420	1,380	630	620	640	360	300	320	300	1,030	780	540
23	420	1,130	630	600	640	360	290	290	270	1,030	750	500
24	450	1,210	630	590	640	360	280	260	565	1,190	620	520
25	490	1,210	570	580	610	350	280	255	590	1,600	560	500
26	490	1,210	570	570	610	340	280	255	470	1,860	540	470
27	490	1,210	570	550	610	340	270	250	395	1,970	505	440
28	490	1,130	500	540	610	350	270	250	335	1,970	485	430
29	470	1,130	500	530	.....	360	260	230	395	2,000	465	430
30	450	1,210	500	520	.....	370	250	230	335	2,040	445	430
31	450	.....	500	510	.....	380	.....	370	.....	2,160	425	.....
1902-3.												
1	415	400	375	480	580	530	300	210	290	1,850	275	205
2	420	400	370	400	580	530	300	210	360	1,300	275	215
3	740	500	365	400	580	525	300	210	255	970	275	225
4	450	500	365	400	545	525	300	210	235	860	255	240
5	450	460	370	400	545	525	270	280	235	825	235	255
6	440	440	370	440	545	525	270	485	235	825	235	250
7	420	440	375	490	545	530	270	340	235	760	235	250
8	420	440	375	510	565	530	270	295	235	760	230	250
9	420	455	400	510	545	530	270	255	255	725	230	250
10	410	470	510	500	545	530	270	255	275	625	230	260
11	410	425	485	500	545	530	270	255	910	590	270	270
12	425	425	535	490	545	530	270	1,260	1,910	525	230	285
13	425	425	480	490	545	530	270	435	1,910	465	215	270
14	425	420	470	560	540	510	245	380	400	440	200	660
15	415	420	460	610	540	490	245	320	450	440	200	630
16	430	400	400	530	540	490	245	435	450	440	200	490
17	425	400	400	530	540	490	230	395	410	415	200	420
18	420	400	400	585	540	490	215	380	410	270	200	385
19	415	410	410	585	540	510	215	795	450	350	200	335
20	415	420	410	585	530	490	215	570	730	350	200	305
21	415	420	420	555	510	490	215	480	1,800	350	200	305
22	420	460	420	530	490	490	215	410	1,800	310	200	305
23	425	420	420	555	490	490	210	325	1,910	290	200	285
24	415	410	410	585	490	470	200	280	1,910	275	200	280
25	415	410	410	585	490	450	200	255	1,910	330	200	270
26	410	400	410	585	490	430	210	255	2,030	310	200	255
27	410	400	410	585	665	390	210	260	2,030	275	195	250
28	405	390	410	530	665	360	210	260	2,030	275	195	245
29	405	390	410	555	.....	360	210	330	2,140	275	195	240
30	405	390	400	585	.....	360	210	300	2,030	275	195	230
31	405	.....	400	585	.....	340	.....	285	.....	275	180	.....

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	230	195	225	210	190	215	140	120	565	860	265	220
2.....	210	205	225	210	190	200	a 130	120	335	860	250	220
3.....	210	200	225	210	a 190	185	150	120	a 335	860	250	a 220
4.....	210	200	225	a 235	190	a 180	150	a 120	255	860	230	a 220
5.....	210	200	225	235	185	180	150	300	335	800	a 235	270
6.....	220	200	225	230	185	180	140	285	3,460	770	235	1,980
7.....	230	200	225	230	180	180	a 125	180	a 790	a 740	230	10,600
8.....	230	215	230	a 230	a 180	180	125	a 160	a 2,300	740	230	a 1,410
9.....	200	215	230	210	180	a 180	125	150	830	710	225	1,460
10.....	200	215	235	205	180	180	125	150	800	660	a 255	450
11.....	195	215	235	205	180	180	125	140	1,270	580	225	710
12.....	195	240	230	200	180	175	130	130	1,550	600	225	710
13.....	190	240	230	a 200	a 185	175	130	a 110	a 800	a 600	225	760
14.....	190	245	230	200	185	a 175	a 130	110	595	335	210	600
15.....	185	245	230	200	185	175	130	115	490	310	a 230	a 610
16.....	185	215	230	200	185	170	130	115	455	a 285	230	510
17.....	175	240	230	200	185	160	125	115	a 390	285	235	a 570
18.....	185	240	230	200	a 225	160	125	a 115	335	310	240	650
19.....	185	220	265	a 200	225	a 160	a 125	115	315	335	a 245	590
20.....	175	210	315	200	225	160	125	135	295	310	250	17,500
21.....	170	210	265	200	240	160	125	125	275	285	260	3,180
22.....	170	210	235	200	285	160	150	115	a 255	285	270	a 1,980
23.....	170	215	235	200	a 225	160	140	115	240	a 285	280	1,740
24.....	175	220	235	a 190	205	160	135	115	225	335	a 260	a 1,010
25.....	185	220	235	190	205	160	a 130	115	210	335	260	830
26.....	185	230	235	190	210	160	130	a 1,110	180	285	255	830
27.....	185	230	235	190	210	155	130	530	13,000	a 290	a 290	650
28.....	185	230	230	190	a 215	a 155	120	530	12,900	290	250	650
29.....	185	230	230	a 190	215	155	a 130	a 2,630	a 3,070	290	245	a 650
30.....	185	230	230	190	.....	150	130	a 1,210	1,430	295	240	1,240
31.....	185	.....	230	190	.....	150	.....	795	.....	a 295	a 240	.....
1904-5.												
1.....	980	2,040	985	700	625	805	8,950	1,100	1,700	1,050	2,090	1,190
2.....	1,150	2,000	660	730	660	845	2,070	1,100	1,690	a 1,050	2,180	1,140
3.....	890	a 1,980	830	a 760	a 695	880	1,320	a 2,220	a 1,620	1,095	2,630	1,230
4.....	760	1,810	905	750	695	920	a 1,020	2,290	1,620	1,250	2,810	1,230
5.....	a 715	1,750	a 880	745	695	955	935	2,360	1,620	1,115	3,170	1,060
6.....	675	1,690	830	740	710	990	890	2,430	1,620	1,095	a 3,260	a 800
7.....	590	a 1,580	835	a 735	a 710	1,065	845	2,360	1,620	a 1,460	3,860	750
8.....	a 700	2,700	840	670	725	a 1,855	a 805	a 2,150	1,500	2,460	4,270	780
9.....	1,260	2,680	a 890	670	740	1,225	805	2,060	a 1,200	2,760	4,330	750
10.....	a 1,740	2,420	890	670	755	1,090	805	1,780	810	1,910	a 4,600	750
11.....	1,740	a 1,920	845	610	a 785	a 1,135	805	a 1,680	780	1,250	5,330	a 790
12.....	1,830	1,770	845	a 610	790	1,110	a 770	1,590	a 720	1,070	5,530	690
13.....	2,050	1,740	a 845	610	795	1,110	770	1,590	640	a 940	5,260	710
14.....	a 2,095	1,700	795	605	800	1,110	755	1,740	620	850	4,580	a 760
15.....	2,630	a 1,600	795	580	a 810	5,220	740	1,740	890	820	a 2,810	1,320
16.....	3,010	1,530	800	a 560	810	a 1,560	710	a 2,040	1,740	790	2,710	1,570
17.....	a 3,340	1,470	a 800	560	835	1,530	a 710	1,950	a 2,260	760	2,290	1,420
18.....	3,680	a 1,290	800	560	850	1,735	715	1,820	2,280	a 735	1,860	1,070
19.....	4,040	1,130	805	540	860	2,005	720	1,510	2,240	735	1,520	970
20.....	4,410	1,080	810	a 530	a 860	a 2,210	700	a 1,040	2,210	740	a 1,520	970
21.....	4,660	980	a 815	520	860	1,760	a 700	1,150	a 2,080	800	1,520	870
22.....	4,790	a 980	815	515	790	1,445	700	1,580	2,080	740	1,440	a 870
23.....	a 5,570	880	770	510	a 790	1,265	14,570	1,520	2,080	a 725	1,370	870
24.....	5,460	780	740	a 530	805	a 1,085	1,390	a 1,630	a 1,930	650	a 1,370	870
25.....	5,220	890	720	530	790	915	a 1,320	1,690	1,780	650	1,370	a 770
26.....	4,880	a 1,210	690	530	a 805	1,310	1,170	1,370	1,630	625	1,280	770
27.....	4,360	1,210	690	530	805	1,310	885	1,210	1,380	640	1,280	800
28.....	3,520	1,110	690	530	775	1,130	a 855	1,210	a 1,680	a 640	1,280	a 800
29.....	2,780	1,060	a 675	a 550	.....	a 915	1,480	a 1,050	7,300	670	1,280	800
30.....	a 2,620	a 1,010	675	550	.....	755	1,140	1,420	1,040	1,460	a 1,190	765
31.....	2,130	.....	675	510	.....	715	.....	1,740	.....	1,560	1,190	.....

a Date of measurement.

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	700	470	830	1,000	710	700	440	925	790	525	670	730
2.....	630	490	a 890	980	725	680	450	835	810	a 510	680	800
3.....	a 630	a 510	1,080	955	a 740	a 660	460	a 765	4,340	510	a 690	670
4.....	675	510	1,500	a 935	730	640	470	765	a 1,090	500	650	a 625
5.....	675	490	1,550	840	720	660	480	765	850	540	650	825
6.....	695	490	1,460	815	710	680	600	745	675	580	a 18,470	855
7.....	a 720	a 505	1,410	790	700	660	540	a 730	570	2,060	1,840	835
8.....	730	505	a 1,270	a 765	a 650	a 680	a 545	720	a 720	4,400	790	a 825
9.....	805	505	1,270	775	670	650	545	670	840	730	740	800
10.....	a 785	a 505	1,320	785	690	625	485	640	770	a 705	700	725
11.....	685	590	1,360	855	715	600	455	a 630	720	700	35,570	700
12.....	685	635	1,310	865	740	600	a 425	630	a 685	675	26,940	625
13.....	650	635	a 1,260	a 875	815	a 600	430	650	655	675	1,910	a 625
14.....	650	a 680	1,260	860	a 840	570	430	610	645	a 675	865	610
15.....	a 650	660	1,260	845	845	560	435	a 605	680	695	790	600
16.....	650	645	1,230	830	850	550	a 440	610	a 705	610	710	585
17.....	625	630	1,230	a 820	850	520	525	615	715	630	700	585
18.....	600	a 575	1,230	835	855	520	485	625	715	a 580	700	575
19.....	600	760	1,230	850	a 860	505	465	850	705	605	720	a 575
20.....	a 575	820	1,230	a 865	850	505	a 530	a 800	690	675	765	565
21.....	550	880	1,230	850	845	490	435	670	a 685	700	780	560
22.....	530	a 885	a 1,230	840	840	a 475	435	640	675	a 725	a 770	560
23.....	530	880	1,200	830	a 835	475	415	610	675	855	765	590
24.....	a 530	880	1,170	a 820	825	475	a 415	a 515	670	845	755	a 545
25.....	530	a 875	a 1,140	810	810	a 455	415	530	a 675	a 875	750	550
26.....	525	825	1,160	795	a 800	455	440	590	655	875	735	545
27.....	500	825	1,180	785	800	455	490	610	660	850	8,870	a 535
28.....	495	825	1,120	770	800	440	a 545	570	a 665	770	765	555
29.....	a 515	825	a 1,140	a 695	.....	a 440	785	a 590	605	a 850	a 725	545
30.....	490	775	1,040	695	.....	440	935	630	545	705	730	545
31.....	490	.....	1,020	695	.....	440	.....	690	.....	675	725	.....
1906-7.												
1.....	530	530	500	675	490	485	465	435	395	630	260	250
2.....	525	535	530	615	490	485	465	440	395	570	255	250
3.....	a 505	a 540	a 530	570	735	485	a 465	a 440	395	530	a 245	250
4.....	515	540	530	a 555	810	a 485	465	440	395	470	245	250
5.....	510	540	630	540	775	485	465	440	395	a 325	245	250
6.....	520	535	710	540	705	485	465	435	390	285	250	250
7.....	530	530	a 750	535	670	485	465	430	390	285	250	250
8.....	a 540	a 530	810	a 535	a 650	a 525	a 465	a 430	a 380	365	250	250
9.....	550	530	790	530	635	565	460	435	390	295	a 250	a 250
10.....	560	525	880	530	600	575	440	440	390	260	250	240
11.....	a 565	525	a 775	525	570	555	435	445	395	230	425	230
12.....	560	a 520	765	a 525	a 535	a 530	a 430	425	a 395	a 850	425	260
13.....	555	520	740	530	525	525	430	a 425	385	295	390	250
14.....	550	520	a 735	535	535	520	420	430	385	310	280	a 245
15.....	545	520	725	540	a 525	545	415	420	a 385	275	280	245
16.....	a 540	a 525	720	a 545	525	a 500	a 415	420	375	250	280	240
17.....	545	525	730	705	525	490	415	a 420	375	a 255	a 280	240
18.....	555	525	a 730	730	a 590	490	415	420	375	245	280	235
19.....	a 560	520	735	730	670	480	a 415	420	395	245	275	235
20.....	560	520	740	730	655	a 475	410	a 720	245	275	230	230
21.....	560	a 520	730	a 605	630	480	410	a 420	445	250	270	230
22.....	555	525	720	595	a 620	485	410	415	435	a 250	a 270	230
23.....	a 555	530	720	570	575	490	410	410	a 435	250	265	280
24.....	540	a 540	725	550	565	475	a 410	405	400	250	a 250	270
25.....	a 525	545	725	a 585	535	a 475	415	a 400	390	250	250	260
26.....	525	530	730	560	a 520	470	420	400	390	a 250	255	230
27.....	525	515	730	540	505	470	425	400	410	255	255	220
28.....	525	a 500	710	520	505	465	430	a 400	a 410	260	255	a 180
29.....	a 525	500	715	a 520	.....	a 465	a 435	a 400	480	265	a 255	180
30.....	525	500	a 720	520	.....	465	435	400	570	265	255	180
31.....	530	.....	720	505	.....	465	.....	400	.....	a 270	255	.....

a Date of measurement.

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1	235	980	1,000	830	670	455	325	400	340	490	900	1,240
2	210	1,510	a1,010	820	660	a 465	325	405	325	930	800	1,350
3	a 265	2,330	995	805	630	460	320	390	a 485	a 410	865	a1,440
4	465	2,460	965	795	a 620	460	a 315	a 375	430	315	a 865	1,400
5	640	2,630	955	780	620	460	335	a 370	430	295	650	1,300
6	640	a2,880	945	a 770	620	a 460	335	365	395	295	695	1,270
7	575	2,740	935	780	615	460	325	360	360	11,700	635	1,220
8	a 515	2,600	905	795	a 615	435	330	a 345	a 360	a2,480	a 635	a1,200
9	530	2,330	895	790	600	420	a 330	345	360	1,530	620	1,190
10	580	1,610	885	a 800	605	420	340	350	335	1,300	620	1,220
11	595	a1,610	855	800	605	a 420	340	340	335	1,130	605	1,280
12	a 580	1,420	a 890	800	590	415	330	a 340	a 315	970	a 620	a1,260
13	525	1,260	845	800	a 610	425	a 340	340	315	a 725	710	1,070
14	505	1,210	845	a 780	585	420	345	345	315	615	730	950
15	465	a1,110	825	780	575	415	360	340	290	560	840	950
16	525	1,060	a 800	780	525	a 415	350	a 330	a 240	505	840	a 830
17	525	1,060	810	780	a 520	405	a 350	330	240	a 480	a 720	780
18	525	1,020	815	a 785	495	395	8,020	335	240	480	630	720
19	a 465	a 980	840	780	495	a 375	2,840	345	245	425	630	640
20	445	945	a 845	780	495	375	1,500	a 345	a 245	425	610	a 565
21	445	1,120	845	775	a 495	375	a 720	330	240	375	a 730	555
22	445	1,030	845	a 770	495	380	645	330	225	a 375	730	510
23	425	a 940	830	745	495	a 380	520	345	225	375	700	520
24	a 405	935	815	735	495	375	520	390	a 210	380	700	a 555
25	555	930	815	730	470	370	a 475	a 435	210	380	a 725	550
26	1,200	945	800	720	a 470	355	435	480	280	a 380	725	480
27	1,200	a1,060	815	a 710	470	350	415	405	670	360	725	455
28	a1,230	1,070	a 830	690	450	a 345	a 355	340	a 670	360	710	a 390
29	1,380	1,040	830	690	450	345	375	a 325	445	1,090	a 920	390
30	750	1,010	830	690	.....	345	375	325	345	a1,330	920	390
31	570	.....	830	a 690	.....	345	.....	325	.....	1,170	870	.....
1908-9.												
1	385	345	390	380	395	305	255	270	245	245	1,780	285
2	375	345	340	400	390	305	255	240	305	235	1,750	260
3	a 370	a 390	a 305	a 415	a 385	a 305	255	a 245	a 230	a 195	1,280	a 230
4	370	395	300	420	380	310	a 240	265	305	215	a 1,000	230
5	370	380	295	425	375	295	230	295	280	250	845	245
6	350	385	315	425	360	300	230	270	280	230	710	245
7	470	a 395	310	430	355	315	230	a 260	a 205	215	435	a 230
8	a 970	395	a 310	a 430	a 355	a 320	230	260	225	195	405	230
9	650	395	310	430	355	320	a 230	255	180	a 180	a 370	235
10	540	395	310	430	350	345	235	250	195	165	370	240
11	435	a 390	305	430	350	a 345	240	a 230	a 180	150	385	240
12	370	390	305	425	345	295	245	230	190	185	395	260
13	a 350	390	305	a 425	a 340	a 295	250	235	190	a 185	a 395	275
14	360	385	a 300	425	325	a 275	235	180	175	415	a 245	.....
15	365	385	305	425	290	295	275	a 235	560	185	370	275
16	355	a 380	310	435	290	295	275	240	a 280	180	370	270
17	a 345	380	290	445	290	245	275	255	265	a 185	a 360	240
18	380	380	a 290	445	a 290	a 240	255	255	260	205	320	a 235
19	380	375	320	a 445	310	265	a 240	a 255	260	205	340	235
20	380	a 375	370	445	330	285	240	235	a 245	205	300	505
21	a 380	375	375	440	330	285	240	235	230	a 205	275	1,440
22	380	375	385	435	a 300	285	225	235	200	240	a 280	a1,140
23	365	380	a 395	430	a 310	a 225	345	345	295	275	925	.....
24	380	a 380	515	a 400	300	310	210	410	a 730	295	275	610
25	a 380	380	500	440	290	295	195	620	895	1,480	a 265	470
26	380	380	425	440	a 290	295	195	685	430	a1,340	270	470
27	380	385	405	410	305	285	295	515	310	415	285	470
28	380	a 385	390	410	305	285	a 295	345	a 260	340	285	a 385
29	a 380	420	a 360	a 405	a 405	a 285	280	a 245	235	a1,070	a 285	350
30	360	420	360	405	.....	270	235	230	210	1,180	315	330
31	345	.....	360	405	.....	270	.....	230	.....	1,580	300	.....

a Date of measurement.

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1	375	310	350	395	320	290	280	255	240	160	165	845
2	340	295	350	360	325	275	280	255	230	170	170	540
3	305	295	355	a 330	a 310	a 265	290	260	220	a 185	a 170	a 365
4	a 290	a 270	340	340	310	250	a 345	a 260	a 225	180	175	340
5	290	270	360	310	310	245	330	260	225	175	175	300
6	290	285	a 360	300	295	255	320	260	225	170	175	26,000
7	295	290	365	a 290	280	250	275	260	a 200	190	175	1,410
8	a 295	a 275	370	285	a 265	a 250	a 265	260	200	a 190	a 175	a 770
9	295	275	375	305	255	255	275	a 275	195	190	175	660
10	270	275	a 380	300	255	260	295	275	195	175	175	495
11	270	275	380	a 295	260	276	290	275	a 190	175	175	405
12	a 250	a 300	380	300	a 265	a 270	a 290	275	185	175	a 175	a 245
13	250	320	380	310	345	270	285	a 235	200	a 175	170	220
14	240	315	380	315	350	265	285	235	195	175	170	315
15	235	315	a 375	a 320	340	265	285	235	200	175	170	295
16	a 230	a 310	380	320	a 315	a 265	a 280	240	a 210	175	170	a 255
17	230	325	390	315	315	265	270	a 240	200	170	a 170	200
18	260	340	390	295	295	250	250	240	195	a 170	155	200
19	260	340	390	290	295	250	250	255	190	170	155	200
20	275	315	a 390	285	300	250	230	325	185	170	165	a 190
21	a 290	a 315	390	290	310	a 250	a 230	a 450	a 180	165	a 165	190
22	275	315	390	300	310	250	235	430	175	a 165	165	190
23	275	330	390	325	340	250	240	320	170	165	225	180
24	290	330	390	330	320	250	a 240	265	a 155	165	320	a 180
25	a 290	a 345	390	a 315	325	a 245	245	a 265	155	165	a 245	180
26	285	360	a 390	310	305	250	255	245	155	165	740	180
27	295	345	390	305	305	255	245	245	150	165	1,370	200
28	300	a 340	395	305	305	255	a 250	245	150	165	1,530	a 230
29	a 295	360	400	a 300	.....	a 260	250	230	150	a 165	a 1,480	490
30	295	360	405	300	.....	260	250	245	150	165	1,410	700
31	310	.....	a 425	300	.....	280	.....	a 250	.....	165	1,110	.....
1910-11.												
1	550	320	210	220	200	340	275	1,310	375	200	1,400	270
2	550	360	235	240	a 215	315	290	1,220	350	a 195	1,780	a 265
3	a 430	a 440	a 235	230	215	a 295	2,040	645	a 320	195	a 2,080	260
4	1,790	460	235	a 225	215	290	a 10,770	a 535	320	190	2,230	260
5	995	450	235	225	215	290	2,330	460	320	190	2,390	260
6	815	450	235	230	220	285	750	420	320	190	2,550	270
7	a 430	a 450	235	230	a 220	a 285	a 635	405	305	190	2,350	a 270
8	430	430	a 230	235	220	285	510	390	a 285	a 190	a 1,290	255
9	415	335	225	a 235	205	280	490	a 375	285	190	1,010	255
10	370	275	220	235	205	280	470	375	285	190	840	250
11	a 280	a 255	220	240	a 205	a 275	a 430	375	285	190	730	250
12	265	255	a 215	240	205	275	415	345	285	a 190	a 625	a 245
13	280	265	220	a 240	210	275	370	a 1,000	a 285	190	545	245
14	290	265	220	235	215	275	370	905	280	190	545	240
15	a 300	a 265	220	235	195	275	a 370	395	275	190	345	240
16	300	270	a 220	230	a 190	a 275	360	a 360	a 270	370	595	a 220
17	300	270	220	a 230	190	265	350	340	270	a 350	535	220
18	300	265	220	230	1,720	265	340	325	260	350	425	225
19	300	a 270	225	230	a 3,560	265	330	a 315	260	290	415	225
20	a 300	265	a 225	225	a 745	265	a 320	455	250	270	405	225
21	300	255	225	a 225	610	a 275	320	340	240	a 300	a 370	a 225
22	300	230	225	225	475	275	315	1,270	240	240	360	230
23	295	a 220	225	245	a 455	275	310	a 1,210	240	240	340	250
24	a 295	220	a 225	260	410	275	a 310	855	a 240	240	340	235
25	300	220	235	a 280	380	a 275	325	705	240	a 205	a 320	a 235
26	300	210	240	280	365	275	350	610	240	205	315	230
27	300	210	250	265	365	275	380	a 580	235	190	310	230
28	300	a 210	255	265	a 395	275	a 365	520	a 230	190	305	a 230
29	a 305	210	a 260	a 265	.....	a 275	365	490	220	190	320	230
30	305	210	260	255	.....	275	365	400	210	190	305	230
31	305	.....	260	245	.....	275	.....	a 375	.....	330	290	.....

a Date of measurement.

Daily discharge, in second-feet, of Pecos River near Moorhead, Tex., for 1900-1913—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1	230	250	230	325	285	280	a 275	225	285	230	135	145
2	225	250	230	320	290	280	275	215	220	135	135	
3	a 225	250	225	a 320	a 295	285	a 250	a 200	a 160	a 220	a 140	a 130
4	225	a 255	a 225	310	290	a 285	250	200	175	215	140	130
5	225	255	230	300	285	285	250	205	170	205	a 145	125
6	225	255	230	300	285	275	250	205	175	180	145	a 125
7	a 225	255	235	300	280	275	1,110	205	a 195	175	145	125
8	260	255	a 240	a 330	a 275	a 265	a 335	a 205	190	170	145	125
9	325	a 260	250	335	275	270	275	200	175	a 165	a 145	130
10	290	255	260	335	275	270	a 275	195	170	165	145	a 130
11	a 260	255	285	335	275	270	275	190	165	165	145	130
12	255	245	335	a 330	275	275	270	190	160	165	145	130
13	255	a 245	a 355	330	a 275	a 275	265	a 185	a 155	a 160	a 145	130
14	255	245	325	330	275	270	265	185	160	160	145	a 155
15	255	240	315	320	280	265	a 265	185	160	160	145	135
16	a 255	235	310	a 300	285	265	265	185	160	160	145	135
17	250	a 235	a 300	285	a 290	260	265	185	160	150	a 145	a 135
18	250	235	300	285	290	a 255	260	a 185	a 160	a 150	145	135
19	a 245	240	300	285	285	255	a 260	180	160	150	150	130
20	250	240	305	285	285	255	255	180	160	150	150	a 130
21	250	240	a 305	290	285	255	255	180	160	155	a 155	265
22	250	a 235	305	a 280	a 280	a 255	250	a 170	160	a 155	150	155
23	250	235	310	290	280	260	a 245	170	160	135	150	140
24	a 250	230	310	295	290	260	245	170	a 395	135	a 150	a 140
25	250	230	310	a 285	280	a 260	245	a 170	305	135	150	140
26	250	230	a 315	285	280	260	245	170	275	a 135	150	160
27	250	230	315	285	a 280	265	245	170	285	135	150	140
28	250	230	320	280	280	280	a 245	170	a 295	135	150	a 135
29	a 250	a 230	a 335	a 280	280	a 285	240	a 170	295	135	a 150	135
30	250	230	325	280	285	235	170	270	135	150	150	135
31	250	325	280	285	275	170	135	150	150	150	150	135
1912-13.												
1	135	160	250	290	285	240	235	335	255	2,240	390	710
2	140	160	265	290	265	240	235	335	225	1,280	380	735
3	a 140	a 160	a 265	a 260	a 240	a 245	a 230	335	a 225	a 880	370	a 1,060
4	135	160	270	260	235	245	225	a 17,740	230	730	a 360	1,050
5	135	165	265	255	230	245	215	16,090	235	680	345	1,130
6	140	165	255	255	255	245	205	2,180	240	580	335	1,130
7	140	165	a 245	255	a 260	a 245	200	850	a 245	530	335	785
8	a 135	a 165	245	a 255	260	245	a 170	a 610	905	a 970	a 335	a 650
9	135	165	255	245	265	240	170	570	430	805	335	615
10	135	160	255	245	265	240	170	530	370	640	390	615
11	185	165	260	240	a 270	a 240	a 190	490	370	560	300	1,110
12	a 205	a 175	a 260	a 240	270	240	190	a 450	a 495	a 475	300	a 970
13	205	175	260	240	270	240	180	430	445	445	300	885
14	205	190	260	240	275	245	180	405	390	445	a 270	720
15	205	190	260	260	a 275	a 245	a 180	405	365	415	220	460
16	a 195	a 190	270	a 320	275	245	175	a 385	340	385	220	a 415
17	195	305	a 300	320	265	245	175	360	a 915	a 355	220	390
18	195	245	305	320	260	245	175	330	570	355	220	365
19	195	245	310	320	250	235	a 175	330	570	355	a 220	345
20	175	245	315	330	a 270	a 235	175	a 330	550	360	225	a 255
21	a 175	a 245	a 320	a 330	265	230	175	360	a 550	a 360	230	255
22	170	245	320	330	260	225	610	360	1,370	360	215	250
23	165	245	325	355	260	225	a 4,780	350	1,660	365	a 220	250
24	165	245	325	440	255	a 240	a 18,340	a 335	a 1,820	365	200	245
25	a 160	a 245	325	a 440	255	240	1,260	295	2,090	a 370	200	a 245
26	160	240	a 325	415	a 250	240	780	295	1,970	1,190	195	5,310
27	160	245	310	270	240	240	625	275	1,390	2,450	195	1,090
28	165	245	290	350	230	240	a 505	255	1,430	a 605	a 190	a 430
29	a 165	a 245	a 290	a 350	240	240	475	255	a 1,200	500	190	345
30	165	245	290	330	240	240	435	a 255	3,600	440	190	325
31	165	290	310	240	240	240	255	440	190	190	190	325

a Date of measurement.

Monthly discharge of Pecos River near Moorhead, Tex., for 1900-1913.

Month.	Discharge in second-foot.			Run-off (total in acre-foot).	Month.	Discharge in second-foot.			Run-off (total in acre-foot).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.					1904-5.				
May.....	3,300	370	816	50,140	July.....	760	510	605	37,170
June.....	1,600	470	843	50,130	February.....	860	625	772	42,893
July.....	4,600	300	555	34,120	March.....	5,220	715	1,354	83,226
August.....	840	340	497	30,559	April.....	14,570	700	1,668	99,273
September.....	2,200	260	972	57,840	May.....	2,430	1,040	1,681	103,379
The period.....				223,000	June.....	7,300	620	1,745	103,855
1900-1901.					July.....	2,760	625	1,068	65,643
October.....	2,430	990	1,511	92,908	August.....	5,530	1,190	2,617	160,919
November.....	1,540	530	829	49,329	September.....	1,570	690	938	55,805
December.....	530	450	489	30,067	The year.....	14,570	510	1,460	1,060,000
January.....	570	440	508	31,240	1905-6.				
February.....	610	500	563	31,260	October.....	805	490	616	37,884
March.....	530	360	443	27,213	November.....	885	470	670	39,838
April.....	380	280	306	18,208	December.....	1,550	830	1,220	74,995
May.....	670	280	348	21,421	January.....	1,000	695	830	51,025
June.....	440	190	321	19,121	February.....	860	650	779	43,279
July.....	1,270	160	341	20,945	March.....	700	440	555	34,126
August.....	1,220	200	688	42,307	April.....	935	415	498	29,643
September.....	9,200	350	1,295	77,078	May.....	925	515	672	41,316
The year.....	9,200	160	637	461,000	June.....	4,340	545	829	49,349
1901-2.					July.....	4,400	500	849	52,175
October.....	850	420	561	34,512	August.....	35,570	650	3,610	221,990
November.....	2,690	490	1,435	85,369	September.....	855	535	641	38,152
December.....	1,200	500	790	48,575	The year.....	35,570	415	981	714,000
January.....	1,000	450	675	41,514	1906-7.				
February.....	640	430	559	31,041	October.....	560	510	539	33,144
March.....	610	340	421	25,884	November.....	545	500	525	31,259
April.....	1,760	250	411	24,466	December.....	840	500	710	43,636
May.....	11,100	230	640	39,342	January.....	730	505	574	35,286
June.....	590	210	319	18,952	February.....	810	490	595	33,064
July.....	2,160	235	885	54,387	March.....	575	465	496	30,496
August.....	2,880	425	1,074	66,020	April.....	465	410	434	25,825
September.....	2,370	375	678	40,334	May.....	445	400	421	25,904
The year.....	11,100	210	704	510,000	June.....	570	375	415	24,724
1902-3.					July.....	630	230	324	19,894
October.....	740	405	430	26,420	August.....	425	245	275	16,909
November.....	500	390	425	25,269	September.....	280	180	239	14,202
December.....	535	365	414	25,478	The year.....	880	180	462	334,000
January.....	610	400	524	32,192	1907-8.				
February.....	665	490	545	30,288	October.....	1,380	210	594	36,526
March.....	530	340	483	29,693	November.....	2,880	930	1,461	86,926
April.....	300	200	244	14,539	December.....	1,010	800	869	53,445
May.....	1,260	210	368	22,641	January.....	830	690	767	47,157
June.....	2,140	235	1,011	60,139	February.....	670	450	553	31,815
July.....	1,850	275	552	33,967	March.....	465	345	404	24,833
August.....	2,75	180	218	13,388	April.....	8,020	315	763	45,402
September.....	660	205	304	18,079	May.....	480	325	359	22,066
The year.....	2,140	180	460	332,000	June.....	670	210	337	20,072
1903-4.					July.....	11,700	295	1,053	64,731
October.....	230	170	193	11,881	August.....	920	610	719	44,182
November.....	245	195	219	13,051	September.....	1,440	390	889	52,899
December.....	315	225	235	14,460	The year.....	11,700	210	731	530,000
January.....	235	190	204	12,555	1908-9.				
February.....	285	180	201	11,544	October.....	970	345	409	25,150
March.....	215	150	170	10,463	November.....	420	345	384	22,869
April.....	150	120	132	7,845	December.....	515	290	347	21,332
May.....	2,630	110	332	20,430	January.....	445	380	424	26,083
June.....	13,000	180	1,743	103,706	February.....	395	290	331	18,407
July.....	860	285	486	29,911	March.....	345	240	295	18,149
August.....	280	210	243	14,945	April.....	295	195	245	14,588
September.....	17,500	220	1,769	105,283	May.....	685	230	294	18,069
The year.....	17,500	110	494	356,000	June.....	895	180	297	17,663
1904-5.					July.....	1,580	150	401	24,645
October.....	5,570	590	2,719	167,157	August.....	1,780	265	507	31,150
November.....	2,700	780	1,533	91,220	September.....	1,440	230	393	23,405
December.....	985	660	795	48,873	The year.....	1,780	150	361	262,000

Monthly discharge of Pecos River near Moorhead, Tex., for 1900-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maxi-mum.	Mini-mum.	Mean.			Maxi-mum.	Mini-mum.	Mean.	
1909-10.					1911-12.				
October.....	375	230	282	17,346	October.....	325	225	250	15,342
November.....	360	270	313	18,634	November.....	260	230	242	14,430
December.....	425	340	380	23,395	December.....	355	225	289	17,772
January.....	395	285	311	19,121	January.....	335	280	303	18,624
February.....	350	255	304	16,909	February.....	295	275	282	16,235
March.....	290	245	259	15,917	March.....	285	255	270	16,572
April.....	345	230	270	16,086	April.....	1,110	235	288	17,137
May.....	450	230	270	16,592	May.....	225	170	187	11,474
June.....	240	150	190	11,296	June.....	395	155	204	12,119
July.....	190	160	172	10,572	July.....	230	135	163	9,997
August.....	1,530	155	392	24,129	August.....	155	135	146	8,995
September.....	26,000	180	1,232	73,329	September.....	265	125	140	8,311
The year	26,000	150	365	263,000	The year	1,110	125	230	167,000
1910-11.					1912-13.				
October.....	1,790	265	419	25,775	October.....	205	135	166	10,205
November.....	460	210	294	17,474	November.....	305	160	207	12,288
December.....	260	210	231	14,202	December.....	325	245	253	17,415
January.....	280	220	240	14,777	January.....	440	240	305	18,754
February.....	3,560	190	465	25,825	February.....	285	230	259	14,390
March.....	340	265	280	17,217	March.....	245	225	240	14,767
April.....	10,770	275	854	50,817	April.....	18,340	170	1,061	63,144
May.....	1,310	315	590	36,307	May.....	17,740	255	1,509	92,787
June.....	375	210	274	16,304	June.....	3,600	225	848	50,479
July.....	370	190	226	13,924	July.....	2,450	355	675	41,514
August.....	2,550	290	867	53,296	August.....	390	190	264	16,255
September.....	270	220	243	14,430	September.....	5,310	245	771	45,897
The year	10,770	190	415	300,000	The year	18,340	135	549	398,000

GALLINAS RIVER BASIN.

GENERAL FEATURES.

Gallinas River, one of the most important tributaries of the upper Pecos, rises on the eastern slope of the Santa Fe Mountains, about 20 miles northwest of Las Vegas, flows in a general southeasterly course, and enters Pecos River at La Junta, on the northern edge of Guadalupe County. It receives no important tributaries.

The Gallinas flows through narrow valleys and canyons from its source at 9,000 feet elevation to its mouth, except in a stretch about 10 miles long in its lower course, where it flows across a comparatively open valley. The entire basin is rough, the mountains of the head-water region giving way to mesas deeply cut by drainage lines. Below Las Vegas the Gallinas receives little if any drainage from the region to the north, as this is devoid of drainage lines and has many sinks. From this large noncontributing area and the almost entire absence of tributaries, it is evident that the chief source of the water supply is the Santa Fe Mountains.

The mean annual precipitation at the headwaters of the Gallinas, in the Santa Fe Mountains, is 20 inches or more, and it decreases to

18 inches at Las Vegas and 13 inches at the mouth. Except on the headwaters, the precipitation occurs chiefly as rain during the summer months.

In 1903 the United States Reclamation Service began the investigation of a project to irrigate 10,000 acres in the vicinity of Las Vegas. It was proposed to utilize a reservoir site lying 5 miles north of Las Vegas and 2 miles east of Hot Springs. The reservoir, which would have a capacity of 38,000 acre-feet, was to be supplied with water by diverting the flood run-off from Sapello, Gallinas, San Guijuela, and Arroyo Pecos creeks. Further than making the surveys and maintaining records of flow, nothing has been done by the Reclamation Service.

GAGING STATION RECORDS.

GALLINAS RIVER NEAR LAS VEGAS, N. MEX.

Location.—At Las Vegas Hot Springs, 6 miles northwest of Las Vegas, near sec. 1, T. 16 N., R. 15 E. No tributaries between the station and Las Vegas nor for several miles above.

Records available.—August 13, 1903, to May 31, 1912; December 1, 1912, to September 30, 1913.

Drainage area.—89 square miles (measured from topographic sheets).

Gage.—Vertical staff, 600 feet above the power house footbridge, installed to replace the original gage which was washed out September 29, 1904; datum of new gage 0.71 foot lower than that of the original gage.

Channel.—Somewhat shifting during high water.

Discharge measurements.—Made from the footbridge during high water and by wading at ordinary stages.

Winter flow.—Gage heights unaffected by ice, as channel is kept open by the hot springs.

Diversions.—A short distance above the station is a timber dam which forms a pond from which ice is cut. This dam does not control the flow in any way. A small amount of water is diverted at this point for storage by the Agua Pura Co., which furnishes Las Vegas and the Santa Fe Railway with water. A mile below the station is a dam which diverts the flood flow of the Gallinas to the San Guijuela Basin. The fall of the river is so heavy that the gaging station is above the influence of this dam. During the last of February, 1913, the Agua Pura Co. began diverting water $1\frac{1}{2}$ miles above the station.

Accuracy.—Although the river is somewhat shifting at this station, it is believed that the estimates of discharge are reliable.

Cooperation.—During 1912 and 1913 station maintained in cooperation with the State engineer.

Discharge measurements of Gallinas River near Las Vegas, N. Mex., in 1903-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1903.				1909.			
Aug. 13	E. G. Marsh.....	^a 0.50	2.9	Jan. 20	J. B. Stewart.....	1.75	3.1
				Apr. 5	.....do.....	2.00	18.7
1904.				May 22	.....do.....	2.05	19.7
Oct. 11	G. B. Monk.....	2.30	135	June 24	.....do.....	1.70	1.0
				July 28	W. H. Sutton.....	1.88	14.1
1905.				Aug. 29	.....do.....	2.20	35
Feb. 5	R. I. Meeker.....	1.80	9	Oct. 26	W. B. Freeman.....	1.68	1.7
Apr. 27	.....do.....	3.10	327	Nov. 29	G. H. Russell.....	1.77	4.3
May 27	Meeker and Murphy.....	2.65	163				
July 1	R. I. Meeker.....	1.90	24	1910.			
Aug. 2	.....do.....	2.00	30	Feb. 5	G. H. Russell.....	1.75	3.5
				Mar. 6	.....do.....	1.85	8.4
1906.				Apr. 24	J. B. Stewart.....	2.20	40
Mar. 14	J. M. Giles.....	2.00	22	Aug. 31	W. W. Mills.....	1.70	1.8
Apr. 15	E. Patterson.....	2.30	66	Oct. 22	G. H. Russell.....	1.60	b 25
18	.....do.....	2.45	98	Nov. 29	.....do.....	1.77	4.3
26	J. M. Giles.....	2.57	138	Dec. 1	C. B. Digby.....	1.60	b 25
28	.....do.....	2.50	116				
May 24	E. Patterson.....	2.40	76	1911.			
27	.....do.....	2.28	55	May 10	H. B. Waha.....	2.29	42
July 18	J. M. Giles.....	2.15	42	June 14	G. H. Russell.....	1.82	3.7
20	.....do.....	2.15	41	July 27	.....do.....	2.38	55.7
Aug. 15	.....do.....	1.95	17	28	.....do.....	2.58	110
1907.				1912.			
Mar. 18	W. A. Lamb.....	2.08	26	Dec. 2	J. E. Powers.....	1.60	1.5
Apr. 19	.....do.....	2.25	42	31	.....do.....	1.60	1.3
May 12	.....do.....	2.65	124				
26	.....do.....	2.35	68	1913.			
June 8	.....do.....	2.48	85	Jan. 30	J. E. Powers.....	1.80	5.7
25	.....do.....	2.12	33	Mar. 10	.....do.....	1.60	1.5
Aug. 27	V. L. Sullivan.....	2.00	12.7	Apr. 8	.....do.....	1.74	3.5
Oct. 7	.....do.....	1.70	1.3	May 13	.....do.....	1.91	9.0
				June 9	.....do.....	1.87	7.2
1908.				9	.....do.....	2.08	20.6
Mar. 24	V. L. Sullivan.....	1.85	5.9	10	.....do.....	3.00	179
Apr. 30	R. L. Cooper.....	2.20	41	July 9	.....do.....	1.82	8.6
July 15	.....do.....	1.85	11.7	Sept. 7	.....do.....	1.62	1.4
Aug. 13	.....do.....	2.10	29.3				
Oct. 30	.....do.....	1.60	b 1.0				
Dec. 15	J. B. Stewart.....	1.78	4.2				

^a Gage height refers to original gage datum.^b Estimated.

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1		0.5	11		0.2	21	0.5	0.2
2		.5	12		.2	22	.5	.2
3		.5	13		.2	23	.5	.2
4		.4	14	0.5	.2	24	.5	.2
5		.4	15	.4	.2	25	.5	.1
6		.4	16	.6	.3	26	.5	.1
7		.3	17	.5	.2	27	.5	.2
8		.3	18	.7	.2	28	.45	.2
9		.2	19	.65	.2	29	.4	.2
10		.2	20	.6	.2	30	.4	.2
						31	.5	

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1	0.2	0.2	0.2	0.2	0.35	0.6	0.2	0.2	0.2	0.6	0.65	0.6
2	.2	.2	.2	.2	.2	.5	.2	.2	.2	.3	.8	.5
3	.2	.2	.2	.2	.2	.5	.2	.2	.2	.2	.65	.4
4	.2	.2	.2	.2	.2	.2	.2	.25	.2	.2	.5	.3
5	.2	.2	.2	.1	.2	.2	.2	.2	.2	.2	.85	.3
6	.1	.2	.2	.1	.2	.2	.2	.2	.2	.2	.85	.3
7	.1	.2	.2	.1	.2	.2	.2	.2	.2	.35	1.0	.3
8	.1	.2	.2	.1	.2	.35	.2	.2	.2	.25	.8	.2
9	.1	.2	.2	.1	.2	.4	.2	.2	.2	.2	.5	.2
10	.1	.2	.2	.1	.2	.25	.2	.2	.2	.2	.5	.2
11	.1	.2	.2	.1	.2	.4	.2	.2	.25	.2	.4	.2
12	.1	.2	.2	.1	.2	.4	.2	.2	.25	.2	.4	.2
13	.1	.2	.2	.1	.2	.4	.2	.2	.3	.2	.45	.2
14	.1	.2	.2	.1	.2	.3	.2	.2	.2	.2	.5	.15
15	.1	.2	.2	.1	.2	.3	.2	.2	.3	.2	.5	.1
16	.1	.2	.2	.1	.2	.3	.2	.2	.2	.2	.4	.1
17	.1	.2	.2	.1	.2	.3	.2	.2	.2	.2	.5	.1
18	.1	.2	.2	.1	.2	.3	.2	.2	.2	.55	1.98	.1
19	.1	.2	.2	.15	.2	.3	.2	.2	.2	.2	.75	.1
20	.1	.2	.2	.2	.2	.3	.2	.2	.2	.25	.55	.1
21	.1	.2	.2	.2	.2	.3	.2	.2	.2	.2	.4	.1
22	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.4	.1
23	.1	.2	.2	.2	.2	.2	.2	.2	.2	.75	.45	.1
24	.1	.2	.2	.2	.2	.2	.2	.2	.2	.6	.4	.1
25	.1	.2	.2	.2	.2	.2	.2	.2	.2	.65	.3	.1
26	.2	.2	.2	.2	.5	.2	.2	.2	.2	.65	1.1	.1
27	.2	.2	.2	.2	.4	.2	.2	.2	.3	.75	1.0	.1
28	.2	.2	.2	.2	.4	.2	.2	.2	.25	1.0	.85	1.25
29	.2	.2	.2	.2	.7	.2	.2	.2	.2	.6	.75	-----
30	.2	.2	.2	.2	-----	.2	.2	.2	.2	.5	.7	-----
31	.2	-----	.2	.2	-----	.2	-----	.2	-----	.65	.6	-----
1904-5.												
1	-----	1.9	1.7	1.8	1.8	2.2	2.3	3.1	2.5	1.9	2.05	1.8
2	-----	1.95	1.6	1.8	1.8	2.8	2.3	3.2	2.45	1.9	2.1	1.8
3	-----	1.85	1.6	1.8	1.8	2.6	2.4	3.1	2.4	1.9	1.95	1.8
4	-----	1.75	1.6	1.8	1.8	2.45	2.5	2.95	2.45	1.8	1.9	1.85
5	-----	1.7	1.65	1.8	1.8	2.5	2.5	2.85	2.4	1.8	2.13	1.8
6	-----	1.75	1.7	1.8	1.8	2.6	2.5	2.8	2.3	1.8	2.1	1.8
7	-----	1.8	1.7	1.8	1.8	2.6	2.5	2.75	2.3	1.8	2.3	1.85
8	-----	2.5	1.8	1.6	1.8	1.8	2.5	2.6	2.8	2.65	1.8	2.2
9	-----	2.8	1.8	1.75	1.8	1.8	2.5	2.6	2.95	2.5	1.8	2.1
10	-----	2.6	1.75	1.75	1.8	1.8	2.5	2.6	2.85	2.45	1.8	2.1
11	-----	2.2	1.75	1.8	1.8	1.8	2.4	2.6	2.8	2.4	1.8	2.1
12	-----	2.0	1.8	1.8	1.8	1.8	2.3	2.6	2.75	2.3	1.8	2.1
13	-----	1.9	1.8	1.8	1.8	1.8	2.3	2.55	2.75	2.3	1.8	2.05
14	-----	1.75	1.9	1.8	1.8	1.8	2.3	2.5	2.7	2.25	1.8	2.0
15	-----	1.6	1.8	1.8	1.8	1.85	2.4	2.5	2.7	2.2	1.8	1.9
16	-----	1.6	1.65	1.8	1.8	1.8	2.4	2.5	2.75	2.15	1.8	1.9
17	-----	1.6	1.75	1.85	1.8	1.8	2.4	2.5	2.8	2.1	1.8	1.9
18	-----	1.65	1.8	1.8	1.8	1.8	2.3	2.5	2.9	2.1	1.8	1.9
19	-----	1.65	1.8	1.8	1.8	1.85	2.3	2.5	2.8	2.1	1.8	1.9
20	-----	1.7	1.8	1.8	1.8	1.8	2.3	2.5	2.8	2.0	1.8	1.9
21	-----	1.7	1.8	1.8	1.8	1.85	2.2	2.5	2.8	2.05	1.8	1.8
22	-----	1.7	1.8	1.8	1.8	2.0	2.2	2.5	2.8	2.0	1.8	1.7
23	-----	1.8	1.8	1.8	1.8	2.3	2.2	2.9	2.7	2.0	2.01	1.8
24	-----	1.8	1.75	1.8	1.8	2.7	2.2	3.2	2.05	2.0	1.8	1.7
25	-----	1.8	1.9	1.8	1.8	2.65	2.2	3.15	2.6	1.95	1.9	1.8
26	-----	1.9	1.8	1.8	1.8	2.7	2.25	3.05	2.6	1.9	1.9	1.8
27	-----	1.9	1.85	1.8	1.8	2.7	2.35	3.1	2.6	1.9	1.8	1.8
28	-----	1.9	1.8	1.8	1.8	2.2	2.4	3.2	2.55	1.9	1.8	1.8
29	-----	1.9	1.7	1.8	1.8	-----	2.3	3.1	2.5	1.9	1.8	1.8
30	-----	1.9	2.2	1.85	1.8	-----	2.25	3.0	2.5	1.9	1.8	1.8
31	-----	1.9	-----	1.9	1.8	-----	2.25	-----	2.5	-----	2.3	1.8

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	1.8	1.6	2.0	1.9	1.85	1.9	2.2	2.5	2.3	1.8	2.0	1.9
2.....	1.8	1.6	1.8	1.9	1.8	1.9	2.2	2.5	2.3	1.85	2.0	1.9
3.....	1.8	1.6	1.8	1.9	1.8	1.9	2.2	2.5	2.3	1.9	2.0	1.9
4.....	1.8	1.6	2.0	1.9	1.8	1.9	2.2	2.5	2.3	1.95	2.0	1.9
5.....	1.7	1.6	2.0	1.9	1.8	1.9	2.2	2.5	2.2	2.0	2.0	1.9
6.....	1.6	1.6	1.8	1.9	1.8	2.1	2.2	2.6	2.2	2.25	2.1	1.9
7.....	1.6	1.6	1.8	1.85	1.8	1.9	2.45	2.55	2.2	2.05	2.1	1.9
8.....	1.6	1.6	1.8	1.8	1.8	2.05	2.35	2.5	2.2	2.4	2.15	1.9
9.....	1.65	1.6	1.8	1.8	1.8	1.9	2.3	2.55	2.2	2.25	2.35	1.9
10.....	1.6	1.6	1.8	1.8	1.8	1.9	2.4	2.55	2.1	2.15	2.15	1.9
11.....	1.6	1.6	1.95	1.8	1.8	1.95	2.4	2.5	2.1	2.25	2.05	1.9
12.....	1.6	1.6	2.0	1.8	1.8	2.0	2.4	2.6	2.1	2.2	2.0	1.85
13.....	1.6	1.6	2.0	1.8	1.8	2.0	2.35	2.6	2.3	2.2	2.0	1.8
14.....	1.6	1.6	1.85	1.8	1.8	2.0	2.3	2.6	2.2	2.2	2.0	1.8
15.....	1.6	1.6	1.9	1.8	1.8	2.0	2.3	2.5	2.15	2.2	2.0	1.85
16.....	1.6	1.8	1.9	1.8	1.8	2.1	2.4	2.5	2.05	2.45	2.0	1.8
17.....	1.6	1.75	1.9	1.8	1.8	2.0	2.5	2.45	1.95	2.55	1.9	1.8
18.....	1.6	1.6	1.85	1.8	1.8	2.0	2.5	2.4	1.9	2.2	1.9	1.8
19.....	1.6	1.8	1.85	1.8	1.8	1.95	2.8	2.45	1.9	2.1	1.9	1.8
20.....	1.6	1.8	1.85	1.85	1.8	1.9	2.7	2.5	1.9	2.3	1.9	1.8
21.....	1.6	1.8	1.8	1.8	2.1	2.0	2.65	2.5	1.9	2.1	1.9	1.8
22.....	1.6	2.0	1.8	1.8	1.9	2.0	2.6	2.5	1.9	2.0	1.9	1.8
23.....	1.6	2.35	1.8	1.8	2.05	2.0	2.6	2.5	1.9	2.0	1.9	1.8
24.....	1.6	2.05	1.9	1.8	1.95	2.0	2.6	2.4	1.9	2.0	1.9	1.8
25.....	1.6	2.0	1.9	1.8	1.9	2.1	2.6	2.4	1.9	2.0	1.9	1.8
26.....	1.6	2.0	1.9	1.8	1.9	2.2	2.6	2.4	1.9	2.0	1.9	1.85
27.....	1.6	3.05	1.9	1.8	1.9	2.2	2.6	2.3	1.9	2.0	1.9	2.3
28.....	1.6	2.8	1.9	1.8	1.9	2.2	2.6	2.3	1.85	2.0	1.9	2.15
29.....	1.6	2.35	1.9	1.8	.....	2.4	2.6	2.3	1.8	2.0	1.9	2.1
30.....	1.6	2.2	1.9	1.7	.....	2.2	2.5	2.3	1.8	2.0	1.9	2.0
31.....	1.6	.....	1.9	1.75	.....	2.0	.....	2.3	.....	2.0	1.9	.....
1906-7.												
1.....	2.0	2.0	2.0	1.95	2.0	2.0	2.1	2.5	2.6	2.0	2.3	2.3
2.....	2.0	2.0	2.05	1.9	2.0	2.0	2.1	2.55	2.7	2.0	2.5	2.4
3.....	2.0	2.0	2.2	1.95	2.0	2.0	2.1	2.6	2.7	2.0	2.4	2.35
4.....	1.95	2.0	2.9	2.0	2.0	2.12	2.1	2.6	2.6	2.0	2.3	2.3
5.....	2.05	1.95	2.7	2.0	2.0	2.05	2.1	2.6	2.6	2.1	2.25	2.25
6.....	2.1	1.95	2.5	2.0	2.0	2.05	2.1	2.6	2.6	2.05	2.2	2.2
7.....	2.1	2.0	2.45	1.95	2.9	2.05	2.1	2.55	2.55	2.0	2.15	2.2
8.....	1.95	1.95	2.3	1.95	2.0	2.2	2.2	2.5	2.5	2.0	2.15	2.15
9.....	1.9	1.9	2.3	2.0	2.0	2.1	2.2	2.5	2.5	2.0	2.15	2.1
10.....	1.85	1.9	2.2	2.0	2.05	2.15	2.2	2.55	2.4	2.0	2.05	2.1
11.....	1.9	1.9	2.2	2.0	2.05	2.05	2.25	2.55	2.4	2.0	2.0	2.1
12.....	1.95	1.9	2.2	1.95	2.05	2.0	2.25	2.6	2.4	2.1	2.0	2.05
13.....	1.95	1.9	2.2	2.0	2.0	2.0	2.3	2.6	2.35	2.0	2.0	2.0
14.....	2.0	1.9	2.1	2.0	2.05	2.05	2.25	2.55	2.3	2.0	2.0	2.0
15.....	2.0	1.9	2.1	2.0	2.0	2.15	2.25	2.5	2.3	1.95	2.0	2.0
16.....	2.0	1.9	1.95	2.0	2.0	2.0	2.2	2.5	2.2	1.95	2.0	2.0
17.....	1.85	1.9	1.9	2.0	2.0	2.0	2.2	2.45	2.2	2.16	1.9	2.0
18.....	1.8	1.9	1.95	2.05	2.0	2.05	2.2	2.4	2.2	2.0	1.95	2.0
19.....	1.75	1.9	2.0	2.05	2.0	2.1	2.2	2.4	2.3	2.0	1.95	2.0
20.....	1.65	1.9	2.0	2.0	2.0	2.2	2.1	2.4	2.3	2.15	2.15	2.0
21.....	1.6	1.9	2.0	2.0	2.0	2.2	2.15	2.5	2.25	2.0	2.15	1.95
22.....	1.75	1.9	2.0	2.0	2.0	2.3	2.4	2.5	2.2	2.0	2.1	1.9
23.....	1.8	1.9	2.0	2.0	2.0	2.25	2.3	2.5	2.2	2.1	2.0	1.9
24.....	1.8	1.9	2.0	2.0	2.0	2.25	2.3	2.5	2.2	2.15	2.0	1.9
25.....	1.7	1.9	2.0	2.0	2.0	2.2	2.35	2.4	2.1	2.1	2.0	1.9
26.....	1.75	1.9	2.0	2.0	2.0	2.2	2.3	2.4	2.1	2.15	2.0	1.9
27.....	1.95	1.9	2.0	2.0	2.0	2.2	2.3	2.35	2.1	2.35	2.0	1.9
28.....	2.0	1.9	2.0	2.0	2.0	2.2	2.3	2.3	2.1	2.2	2.0	1.9
29.....	2.0	1.9	2.0	2.0	.....	2.1	2.4	2.4	2.0	2.35	2.0	1.9
30.....	2.1	1.9	2.0	2.0	.....	2.1	2.4	2.4	2.0	2.35	2.15	1.9
31.....	2.1	.....	1.9	2.0	.....	2.1	.....	2.55	.....	2.3	2.2	.....

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	1.9	1.7	1.8	1.8	1.7	2.0	1.9	2.2	2.0	1.75	2.45	2.1
2.	1.8	1.7	1.8	1.8	1.7	1.8	1.9	2.2	2.0	1.7	2.75	2.1
3.	1.8	1.7	1.8	1.8	1.7	1.8	1.8	2.2	2.0	1.7	2.8	2.1
4.	1.8	1.7	1.8	1.8	1.7	1.8	1.8	2.2	1.95	1.75	2.65	2.05
5.	1.8	1.7	1.8	1.8	1.7	1.8	1.8	2.15	1.9	1.85	2.5	2.0
6.	1.7	1.7	1.8	1.8	1.75	1.8	1.8	2.1	1.9	1.75	2.35	2.0
7.	1.7	1.75	1.8	1.8	1.8	a 2.0	1.8	2.1	1.9	1.7	2.3	2.0
8.	1.7	1.8	1.8	1.8	1.8	1.85	1.8	2.1	1.9	1.7	2.55	1.95
9.	1.7	1.8	1.8	1.8	1.8	a 2.05	1.8	2.1	1.9	1.7	2.35	1.9
10.	1.7	1.8	1.8	1.8	1.8	1.9	1.9	2.1	1.8	1.7	2.2	1.9
11.	1.7	1.8	1.8	1.8	1.8	1.85	1.95	2.1	1.8	1.7	2.2	1.9
12.	1.7	1.8	1.8	1.8	1.8	a 2.0	2.0	2.05	1.8	1.7	2.15	1.9
13.	1.7	1.8	1.8	1.8	1.8	a 2.0	2.0	2.0	1.8	1.7	2.25	1.9
14.	1.7	1.8	1.8	1.8	1.8	1.85	2.0	2.0	1.8	1.75	2.4	1.9
15.	1.7	1.8	1.8	1.8	1.8	1.8	2.1	2.05	1.8	1.9	2.3	1.9
16.	1.7	1.8	1.8	1.8	1.8	1.8	2.1	2.1	1.8	1.9	2.35	1.9
17.	1.7	1.8	1.8	1.8	1.8	1.8	2.1	2.1	1.8	1.9	2.15	1.9
18.	1.7	1.8	1.8	1.8	1.8	1.8	2.1	2.1	1.8	2.2	2.1	1.9
19.	1.7	1.8	1.8	1.8	1.8	1.85	2.15	2.05	1.8	2.05	2.2	1.9
20.	1.7	1.8	1.8	1.8	1.8	1.9	2.3	2.0	1.8	2.1	2.4	1.9
21.	1.7	1.8	1.8	1.8	1.8	1.9	2.35	2.0	1.75	2.0	2.2	1.9
22.	1.6	1.8	1.8	1.8	1.8	1.9	2.5	2.0	1.7	1.95	2.6	1.8
23.	1.6	1.8	1.8	1.8	1.8	1.9	2.5	2.1	1.7	1.9	2.3	1.8
24.	1.7	1.8	1.8	1.75	a 2.05	1.9	2.45	2.1	1.7	1.9	2.25	1.8
25.	1.7	1.8	1.8	1.7	1.8	1.9	2.35	2.1	1.7	1.9	2.2	1.8
26.	1.7	1.8	1.8	1.7	1.8	1.9	2.3	2.1	b 2.15	1.9	2.15	1.8
27.	1.7	1.8	1.8	1.7	1.8	1.9	2.25	2.05	1.85	2.0	2.1	1.8
28.	1.7	1.8	1.8	1.7	a 2.10	1.9	2.2	2.0	1.7	1.9	2.35	1.8
29.	1.7	1.8	1.8	1.7	2.20	1.9	2.2	2.0	1.8	1.9	2.35	1.8
30.	1.7	1.8	1.8	1.7	-----	1.9	2.0	2.0	1.8	2.05	2.3	1.8
31.	1.7	-----	1.8	1.7	-----	1.9	-----	2.0	-----	2.65	2.2	-----
1908-9.												
1.	1.8	1.6	1.8	1.8	1.8	1.75	1.9	2.1	2.0	1.7	1.8	2.05
2.	1.7	1.6	1.8	1.8	1.8	1.9	1.8	2.1	2.0	1.7	1.8	2.05
3.	1.7	1.6	1.8	1.8	1.8	1.85	1.85	2.1	1.95	1.7	1.85	2.05
4.	1.7	1.6	1.8	1.8	1.8	1.9	2.1	2.1	1.95	1.75	1.9	2.2
5.	1.7	1.6	1.8	1.8	1.8	1.85	2.05	2.1	1.9	1.85	1.9	2.3
6.	1.7	1.6	1.8	1.8	1.8	1.8	1.95	2.1	1.9	1.8	1.85	3.1
7.	1.7	1.6	1.8	1.8	1.8	1.8	1.9	2.1	1.9	1.9	1.8	2.9
8.	1.7	1.6	1.8	1.8	1.75	1.95	1.9	2.2	1.9	2.2	1.8	2.35
9.	1.7	1.6	1.8	1.8	1.7	1.9	1.95	2.2	1.9	1.9	1.8	2.5
10.	1.6	1.6	1.8	1.8	1.7	1.9	1.9	2.2	1.9	1.8	1.85	2.45
11.	1.6	1.6	1.8	1.8	1.7	1.9	2.0	2.2	1.9	1.8	2.0	2.35
12.	1.5	1.6	1.8	1.8	1.7	1.9	2.0	2.15	1.9	1.7	2.2	2.3
13.	1.5	1.6	1.8	1.7	1.95	2.0	2.0	2.1	1.9	1.7	2.4	2.25
14.	1.5	1.6	1.8	1.7	1.9	2.0	2.0	2.1	1.9	1.9	2.25	2.2
15.	1.5	1.6	1.8	1.7	1.8	2.05	2.0	2.1	1.8	1.8	2.25	2.2
16.	1.5	1.65	1.8	1.7	1.75	2.05	2.0	2.1	1.8	1.7	2.2	2.2
17.	1.5	1.7	1.8	1.7	1.7	1.95	2.1	2.1	1.8	1.9	2.2	2.1
18.	1.5	1.7	1.8	1.7	1.7	1.85	2.2	2.1	1.8	1.8	2.2	2.1
19.	1.5	1.7	1.8	1.8	1.7	2.0	2.2	2.35	1.8	1.75	2.2	2.1
20.	1.5	1.7	1.8	1.8	1.7	1.9	2.2	2.0	1.8	1.7	2.35	1.95
21.	1.5	1.7	1.8	1.8	1.7	1.9	2.15	2.1	1.8	1.7	2.25	1.8
22.	1.6	1.7	1.8	1.8	1.75	1.9	2.1	2.1	1.8	1.7	2.25	1.9
23.	1.6	1.7	1.8	1.8	1.7	1.9	2.15	2.05	1.7	1.7	2.3	1.8
24.	1.6	1.7	1.8	1.8	1.7	1.9	2.15	2.0	1.7	2.1	2.2	1.7
25.	1.6	1.7	1.8	1.8	1.9	1.9	2.1	2.0	1.7	2.1	2.3	1.7
26.	1.6	1.7	1.8	1.8	1.75	1.9	2.1	2.0	1.7	2.1	2.3	1.7
27.	1.6	1.7	1.8	1.8	1.7	1.9	2.1	2.0	1.7	2.0	2.3	1.7
28.	1.6	1.8	1.8	1.8	1.7	1.9	2.1	2.0	1.7	1.9	2.2	1.7
29.	1.6	1.8	1.8	1.8	-----	1.9	2.1	2.0	1.7	1.85	2.2	1.7
30.	1.6	1.8	1.8	1.8	-----	1.9	2.1	2.0	1.7	1.8	2.2	1.6
31.	1.6	-----	1.8	1.8	-----	1.9	-----	2.0	-----	1.8	2.2	-----

a Fluctuations in February and March, 1908, marked (a) due to discharge from Agua Pura Company's dam into river.

b Cloudburst. Gage height 2 a. m.,=3.5 feet.

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1.5	1.6	1.8	1.7	1.8	1.8	1.9	2.2	1.8	1.7	1.8	1.9
2.....	1.5	1.65	1.8	1.8	1.8	1.8	1.9	2.2	1.8	1.7	1.75	1.85
3.....	1.5	1.8	1.8	1.9	1.8	1.8	1.9	2.2	1.75	1.7	1.7	1.75
4.....	1.5	1.8	1.8	1.9	1.8	1.85	1.95	2.2	1.7	1.65	1.7	1.7
5.....	1.5	1.8	1.7	1.75	1.8	1.9	2.0	2.1	1.7	1.65	1.75	1.7
6.....	1.5	1.8	1.7	1.7	1.8	1.9	1.95	2.1	1.7	1.7	1.85	1.7
7.....	1.65	1.8	1.7	1.7	1.8	2.0	1.9	2.1	1.7	1.6	1.75	1.7
8.....	1.8	1.8	1.7	1.8	1.8	2.05	2.0	2.1	1.7	1.65	1.9	1.7
9.....	2.05	1.8	1.8	1.8	1.8	2.05	2.0	2.1	1.7	1.65	1.8	1.6
10.....	1.8	1.8	1.8	1.8	1.8	2.15	2.0	2.1	1.7	1.7	2.1	1.85
11.....	1.85	1.8	1.8	1.8	1.8	2.1	2.0	2.1	1.7	1.65	2.3	1.7
12.....	1.85	1.8	1.8	1.8	1.8	2.25	2.15	2.1	1.7	1.7	2.15	1.6
13.....	1.8	1.8	1.8	1.8	1.8	2.05	2.2	2.1	1.7	2.2	2.15	1.6
14.....	1.85	1.8	1.8	1.8	1.7	2.1	2.2	2.1	1.7	2.0	2.0	1.65
15.....	1.9	1.8	1.8	1.8	1.7	2.3	2.2	2.1	1.85	1.85	2.05	1.8
16.....	1.8	1.8	1.8	1.8	1.7	2.25	2.15	2.1	1.8	1.8	2.0	1.7
17.....	1.8	1.8	1.8	1.8	1.7	2.15	2.1	2.05	1.75	1.8	2.0	1.65
18.....	1.9	1.8	1.8	1.8	1.7	2.1	2.15	2.0	1.7	1.75	2.05	1.6
19.....	1.9	1.8	1.7	1.8	1.7	1.95	2.2	1.95	1.7	1.7	1.95	1.6
20.....	1.9	1.8	1.7	1.8	1.75	2.0	2.2	2.0	1.7	1.75	1.9	1.6
21.....	1.9	1.8	1.7	1.8	1.8	2.0	2.2	1.9	1.7	1.85	1.9	1.7
22.....	1.9	1.8	1.7	1.8	1.8	2.0	2.2	1.9	1.6	1.85	1.85	1.8
23.....	1.9	1.8	1.8	1.8	1.8	2.0	2.2	1.9	1.6	1.7	1.9	1.7
24.....	1.8	1.8	1.8	1.8	1.8	2.0	2.2	1.9	1.6	1.7	1.85	1.7
25.....	1.8	1.8	1.8	1.8	1.8	2.0	2.2	1.9	1.6	1.7	1.8	1.7
26.....	1.7	1.8	1.8	1.8	1.8	2.0	2.2	1.85	1.6	1.7	1.75	1.7
27.....	1.7	1.8	1.8	1.8	1.8	2.0	2.2	1.8	1.6	1.8	1.75	1.7
28.....	1.7	1.8	1.7	1.8	1.8	2.0	2.2	1.8	1.6	1.7	1.7	1.65
29.....	1.95	1.8	1.7	1.8	-----	1.95	2.2	1.8	1.7	1.8	1.7	1.6
30.....	1.8	1.8	1.7	1.8	-----	1.9	2.2	1.8	1.7	1.8	1.7	1.6
31.....	1.7	-----	1.7	1.8	-----	1.9	-----	1.8	-----	1.9	1.7	-----
1910-11.												
1.....	-----	1.6	1.6	1.6	1.6	1.7	2.05	2.2	2.2	2.0	2.35	1.9
2.....	1.6	1.6	1.6	1.6	1.6	1.7	2.05	2.1	2.1	1.95	2.3	1.9
3.....	1.6	1.6	1.6	1.65	1.6	1.7	2.0	2.1	2.05	2.3	2.2	1.8
4.....	1.6	1.6	1.6	1.7	1.6	1.7	2.0	2.1	2.0	2.25	2.15	1.9
5.....	1.6	1.6	1.6	1.7	1.6	1.9	2.1	2.1	2.0	2.26	2.1	1.8
6.....	1.6	1.6	1.6	1.65	1.65	1.8	2.1	2.1	2.0	2.72	2.1	1.8
7.....	1.6	1.6	1.6	1.6	1.7	1.8	2.0	2.2	2.0	2.2	2.05	1.8
8.....	1.6	1.6	1.6	1.6	1.7	1.95	2.05	2.3	1.95	2.25	2.0	1.8
9.....	1.6	1.6	1.6	1.6	1.65	2.25	2.1	2.3	1.9	2.52	2.0	1.8
10.....	1.6	1.6	1.6	1.6	1.6	2.2	2.0	2.3	1.9	3.13	1.9	1.8
11.....	1.6	1.6	1.6	1.6	1.65	1.9	2.0	2.3	1.9	2.35	1.9	1.8
12.....	1.6	1.6	1.6	1.6	1.7	2.0	2.0	2.25	1.9	2.2	1.9	1.8
13.....	1.6	1.6	1.6	1.6	1.6	2.05	2.0	2.2	1.9	2.2	1.8	1.8
14.....	1.6	1.6	1.6	1.6	1.7	1.9	2.0	2.2	1.9	2.4	1.8	1.7
15.....	1.6	1.6	1.6	1.6	1.7	1.95	2.0	2.43	1.9	2.4	1.8	1.7
16.....	1.6	1.6	1.6	1.6	1.7	2.05	2.0	2.4	1.85	2.4	1.8	1.7
17.....	1.6	1.6	1.6	1.6	1.7	2.05	2.0	2.3	1.8	2.4	1.9	1.7
18.....	1.6	1.6	1.6	1.6	1.7	1.9	2.0	2.2	1.8	2.4	1.95	1.7
19.....	1.65	1.6	1.6	1.6	1.7	1.9	2.0	2.2	1.8	2.35	1.9	1.7
20.....	1.65	1.6	1.6	1.6	1.7	1.95	2.0	2.2	1.8	2.95	1.9	1.6
21.....	1.6	1.6	1.6	1.6	1.7	1.9	2.0	2.2	1.8	2.75	1.9	1.6
22.....	1.6	1.6	1.6	1.6	1.7	1.9	2.05	1.15	1.8	2.45	2.0	1.6
23.....	1.6	1.6	1.6	1.6	1.7	1.9	2.1	2.1	1.8	3.1	2.0	1.6
24.....	1.6	1.6	1.6	1.6	1.7	1.9	2.15	2.1	1.8	2.5	2.0	1.6
25.....	1.6	1.6	1.6	1.6	1.7	1.9	2.1	2.05	1.8	2.45	1.95	1.6
26.....	1.6	1.6	1.6	1.6	1.7	1.9	2.1	2.0	1.8	2.35	1.9	1.6
27.....	1.6	1.6	1.6	1.6	1.7	1.9	2.1	2.0	2.03	2.4	1.9	1.7
28.....	1.6	1.6	1.6	1.6	1.7	2.0	2.1	2.05	1.85	2.78	2.44	1.7
29.....	1.6	1.6	1.6	1.6	-----	2.05	2.2	2.63	1.85	3.6	2.05	1.7
30.....	1.6	1.6	1.6	1.6	-----	2.0	2.2	2.15	1.8	2.5	2.0	1.7
31.....	1.6	-----	1.6	1.6	-----	2.0	-----	2.15	-----	2.45	1.9	-----

Daily gage height, in feet, of Gallinas River near Las Vegas, N. Mex., for 1903-1913—
Continued.

Date.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1.7	2.1	1.9	1.7	1.7	1.75	2.2	2.6	.....	.....	.....	.....
2.....	1.7	2.1	1.9	1.7	1.7	1.7	2.2	2.65	.....	.....	.....	.....
3.....	1.7	2.1	1.9	1.7	1.7	1.7	2.2	2.7	.....	.....	.....	.....
4.....	1.8	2.1	1.9	1.7	1.7	1.7	2.2	2.6	.....	.....	.....	.....
5.....	2.95	2.1	1.9	1.7	1.7	1.75	2.3	2.5	.....	.....	.....	.....
6.....	2.95	2.1	1.9	1.7	1.7	1.8	2.4	2.45	.....	.....	.....	.....
7.....	2.6	2.1	1.9	1.7	1.7	1.85	2.3	2.45	.....	.....	.....	.....
8.....	2.3	2.1	1.9	1.7	1.7	1.9	2.3	2.5	.....	.....	.....	.....
9.....	2.05	2.1	1.9	1.7	1.7	1.9	2.3	2.5	.....	.....	.....	.....
10.....	2.3	2.1	1.9	1.7	1.7	1.95	2.4	2.5	.....	.....	.....	.....
11.....	2.2	2.1	1.9	1.7	1.7	2.05	2.4	2.5	.....	.....	.....	.....
12.....	2.0	2.0	1.9	1.7	2.3	2.2	2.5	2.5	.....	.....	.....	.....
13.....	1.9	2.0	1.9	1.7	2.0	2.05	2.4	2.6	.....	.....	.....	.....
14.....	1.8	2.0	1.9	1.7	1.9	2.0	2.4	2.55	.....	.....	.....	.....
15.....	1.7	2.0	1.8	1.7	1.9	1.95	2.3	2.6	.....	.....	.....	.....
16.....	1.85	2.0	1.8	1.7	2.05	2.0	2.3	2.6	.....	.....	.....	.....
17.....	1.9	2.0	1.8	1.7	1.8	1.9	2.3	2.7	.....	.....	.....	.....
18.....	1.9	2.0	1.8	1.7	1.8	1.95	2.2	2.8	.....	.....	.....	.....
19.....	1.9	2.0	1.8	1.7	1.8	2.1	2.2	2.8	.....	.....	.....	.....
20.....	1.9	2.0	1.8	1.7	1.75	2.35	2.2	2.8	.....	.....	.....	.....
21.....	1.9	2.0	1.7	1.7	1.7	2.45	2.2	2.8	.....	.....	.....	.....
22.....	1.85	2.0	1.7	1.7	1.7	2.4	2.2	2.8	.....	.....	.....	.....
23.....	1.8	2.0	1.7	1.7	1.7	2.35	2.2	2.8	.....	.....	.....	.....
24.....	1.8	2.0	1.7	1.7	1.7	2.2	2.25	2.7	.....	.....	.....	.....
25.....	1.8	2.0	1.7	1.7	1.7	2.25	2.3	2.7	.....	.....	.....	.....
26.....	1.8	2.0	1.7	1.7	1.7	2.25	2.35	2.7	.....	.....	.....	.....
27.....	1.9	2.0	1.7	1.7	1.9	2.25	2.4	2.65	.....	.....	.....	.....
28.....	2.05	2.0	1.7	1.7	1.85	2.2	2.4	2.6	.....	.....	.....	.....
29.....	2.1	1.9	1.7	1.7	1.8	2.2	2.45	2.6	.....	.....	.....	.....
30.....	2.2	1.8	1.7	1.7	.....	2.2	2.5	2.5	.....	.....	.....	.....
31.....	2.2	.....	1.7	1.7	.....	2.2	.....	2.5	.....	.....	.....	.....
1912-13.												
1.....	.....	.....	.....	1.60	2.00	1.65	1.72	2.00	1.78	2.20	1.60	1.80
2.....	.....	.....	1.60	1.60	1.70	1.70	1.78	2.00	1.72	2.10	1.60	1.78
3.....	.....	.....	1.60	1.60	1.70	1.65	1.80	1.98	1.75	2.00	1.60	1.72
4.....	.....	.....	1.60	1.60	1.90	1.60	1.72	1.92	1.80	2.00	1.60	1.72
5.....	.....	.....	1.60	1.60	1.75	1.70	1.75	2.00	1.72	2.05	1.60	1.75
6.....	.....	.....	1.60	1.60	1.70	1.70	1.70	1.92	1.70	1.95	1.60	1.70
7.....	.....	.....	1.60	1.60	1.70	1.65	1.78	1.90	1.70	1.90	1.60	1.70
8.....	.....	.....	1.60	1.60	1.65	1.65	1.78	1.90	1.88	1.80	1.60	1.68
9.....	.....	.....	1.60	1.60	1.60	1.65	1.72	1.90	2.30	1.85	1.60	2.00
10.....	.....	.....	1.60	1.60	1.85	1.65	1.70	1.90	2.82	1.90	1.65	2.32
11.....	.....	.....	1.60	1.60	1.65	1.65	1.70	1.90	4.72	1.80	1.75	1.95
12.....	.....	.....	1.62	1.60	1.60	1.65	1.70	1.90	3.30	1.80	1.70	1.90
13.....	.....	.....	1.65	1.60	1.60	1.65	1.70	1.90	2.92	1.70	1.65	1.88
14.....	.....	.....	1.68	1.60	1.70	1.65	1.70	1.90	2.65	1.70	1.65	1.78
15.....	.....	.....	1.70	1.60	1.70	1.65	1.70	1.90	2.45	1.70	1.60	1.72
16.....	.....	.....	1.70	1.85	1.70	1.65	1.68	1.85	2.45	1.72	1.60	1.70
17.....	.....	.....	1.70	1.60	1.95	1.65	1.75	1.82	2.40	1.72	1.72	1.70
18.....	.....	.....	1.68	1.60	1.75	1.65	1.70	1.80	2.45	1.70	1.72	1.68
19.....	.....	.....	1.62	1.60	1.70	1.60	1.72	1.78	2.40	1.85	1.78	1.60
20.....	.....	.....	1.60	1.60	1.70	1.60	1.82	1.70	2.35	1.90	1.95	1.60
21.....	.....	.....	1.60	1.60	1.60	1.60	1.85	1.70	2.30	1.90	1.95	1.60
22.....	.....	.....	1.60	1.60	1.60	1.60	1.92	1.70	2.30	1.85	2.10	1.60
23.....	.....	.....	1.60	1.60	1.65	1.60	2.00	1.65	2.30	1.98	2.15	1.70
24.....	.....	.....	1.60	1.60	1.70	1.60	1.98	1.62	2.20	1.92	2.15	1.70
25.....	.....	.....	1.60	1.60	1.60	1.60	1.92	1.60	2.15	1.90	1.95	1.92
26.....	.....	.....	1.60	1.60	1.60	1.60	1.90	1.62	2.05	1.85	1.90	2.00
27.....	.....	.....	1.60	1.60	1.60	1.60	1.90	1.68	2.00	1.80	1.90	1.92
28.....	.....	.....	1.60	1.70	1.60	1.55	1.92	1.75	2.15	1.75	1.90	1.78
29.....	.....	.....	1.60	1.80	.....	1.60	1.98	1.70	2.40	1.70	1.95	1.70
30.....	.....	.....	1.60	2.05	.....	1.70	2.00	1.70	2.25	1.70	1.82	1.80
31.....	.....	.....	1.60	.....	.....	1.70	.....	1.75	.....	1.68	1.80	.....

Daily discharge, in second-feet, of Gallinas River near Las Vegas, N. Mex., for 1904-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....		20	6	12	12	57	75	330	121	20	36	12
2.....		25	2	12	12	210	75	380	109	20	42	12
3.....		16	2	12	12	148	97	330	97	20	25	12
4.....		9	2	12	12	109	121	275	109	12	20	16
5.....		6	4	12	12	121	121	228	97	12	46	12
6.....		9	6	12	12	148	121	210	75	12	42	12
7.....		12	6	12	12	148	148	194	75	12	75	16
8.....	180	12	2	12	12	121	148	210	163	12	57	12
9.....	255	12	9	12	12	121	148	265	121	12	42	16
10.....	205	9	9	12	12	121	148	238	109	12	42	20
11.....	105	9	12	12	12	97	148	210	97	12	42	12
12.....	55	12	12	12	12	75	148	194	75	12	42	12
13.....	30	12	12	12	12	75	134	194	75	12	36	12
14.....	9	20	12	12	12	75	121	178	66	12	30	12
15.....	2	12	12	12	16	97	121	178	57	12	20	12
16.....	2	4	12	12	12	97	121	194	50	12	20	12
17.....	2	9	16	12	12	97	121	210	42	12	20	12
18.....	4	12	12	12	12	75	121	245	42	12	20	12
19.....	4	12	12	12	16	75	121	210	42	12	20	12
20.....	6	12	12	12	12	75	121	210	30	12	20	12
21.....	6	12	12	12	16	57	121	210	36	12	12	6
22.....	6	12	12	12	30	57	121	210	30	30	12	6
23.....	12	12	12	12	75	57	245	178	30	30	12	6
24.....	12	9	12	12	178	57	380	163	30	30	12	6
25.....	12	20	12	12	163	57	355	148	25	20	12	12
26.....	20	12	12	12	178	66	308	148	20	20	12	57
27.....	20	16	12	12	178	86	330	148	20	12	12	20
28.....	20	12	12	12	57	97	380	134	20	12	12	20
29.....	20	6	12	12		75	330	121	20	12	12	16
30.....	20	57	16	12		66	285	121	20	12	12	12
31.....	20		20	12		66		121		75	12	
1905-6.												
1.....	12	2	30	14	11	14	47	107	64	8	22	14
2.....	12	2	12	14	8	14	47	107	64	11	22	14
3.....	12	2	12	14	8	14	47	107	64	14	22	14
4.....	12	2	30	14	8	14	47	107	64	18	22	14
5.....	6	2	30	14	8	14	47	107	47	22	22	14
6.....	2	2	12	14	8	33	47	134	47	56	33	14
7.....	2	2	12	11	8	14	96	120	47	28	33	14
8.....	2	2	12	8	8	28	74	107	47	84	40	14
9.....	4	2	12	8	8	14	64	120	47	56	74	14
10.....	2	2	12	8	8	14	84	120	33	40	40	14
11.....	2	2	25	8	8	18	84	107	33	56	28	14
12.....	2	2	30	8	8	22	84	134	33	47	22	11
13.....	2	2	30	8	8	22	74	134	64	47	22	8
14.....	2	2	16	8	8	22	64	134	47	47	22	8
15.....	2	2	20	8	8	22	64	107	40	47	22	11
16.....	2	12	20	8	8	33	84	107	28	96	22	8
17.....	2	9	20	8	8	22	107	96	18	120	14	8
18.....	2	2	16	8	8	22	107	84	14	47	14	8
19.....	2	12	16	8	8	18	200	96	14	33	14	8
20.....	2	12	16	11	8	14	165	107	14	64	14	8
21.....	2	12	12	8	33	22	150	107	14	33	14	8
22.....	2	30	12	8	14	22	134	107	14	22	14	8
23.....	2	86	12	8	28	22	134	107	14	22	14	8
24.....	2	36	20	8	18	22	134	84	14	22	14	8
25.....	2	30	20	8	14	33	134	84	14	22	14	8
26.....	2	30	20	8	14	47	134	84	14	22	14	11
27.....	2	308	20	8	14	47	134	64	14	22	14	64
28.....	2	210	20	8	14	47	134	64	11	22	14	40
29.....	2	86	20	8		84	134	64	8	22	14	32
30.....	2	57	20	4		47	107	64	8	22	14	22
31.....	2		20	6		22		64		22	14	22

Daily discharge, in second-feet, of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	22	22	22	19.5	14	14	25	92	113	14	55	55
2.....	22	22	28	7.0	14	14	25	107	135	14	92	73
3.....	22	22	47	10.5	14	14	25	113	135	14	73	64
4.....	18	22	240	14	14	28	25	113	113	14	55	55
5.....	28	18	165	14	14	20	25	113	113	25	47	47
6.....	33	18	107	14	14	20	25	113	113	20	39	39
7.....	33	22	96	10.5	14	20	25	102	102	14	32	39
8.....	18	18	64	10.5	14	39	39	92	92	14	32	32
9.....	14	14	64	14	14	25	39	92	92	14	32	25
10.....	11	14	47	14	20	32	39	102	73	14	20	25
11.....	14	14	47	14	20	20	47	102	73	14	14	25
12.....	18	14	47	10.5	20	14	47	113	73	25	14	20
13.....	18	14	47	14	14	14	55	113	64	14	14	14
14.....	22	14	33	14	20	20	47	102	55	14	14	14
15.....	22	14	33	14	14	32	47	92	55	10.5	14	14
16.....	22	14	18	14	14	14	39	92	39	10.5	14	14
17.....	11	14	14	14	14	14	39	82	39	33	7.0	14
18.....	8.0	14	18	20	14	20	39	73	39	14	10.5	14
19.....	6.0	14	22	20	14	25	39	73	55	14	10.5	14
20.....	3.0	14	22	14	14	39	25	73	55	32	32	14
21.....	2.0	14	22	14	14	39	32	92	47	14	32	10.5
22.....	6.0	14	22	14	14	55	73	92	39	14	25	7.0
23.....	8.0	14	22	14	14	47	55	92	39	25	14	7.0
24.....	8.0	14	22	14	14	47	55	92	39	32	14	7.0
25.....	4.0	14	22	14	14	39	64	73	25	25	14	7.0
26.....	6.0	14	22	14	14	39	55	73	25	32	14	7.0
27.....	18	14	22	14	14	39	55	64	25	64	14	7.0
28.....	22	14	22	14	14	39	55	55	25	39	14	7.0
29.....	22	14	22	14	.....	25	73	73	14	64	14	7.0
30.....	33	14	22	14	.....	25	73	73	14	64	32	7.0
31.....	33	.....	14	14	.....	25	.....	102	.....	55	39	.....
1907-8.												
1.....	7.0	1.3	3.5	3.5	1.3	14	7.0	41	20	6.0	82	29
2.....	3.5	1.3	3.5	3.5	1.3	3.5	7.0	41	20	4.0	146	29
3.....	3.5	1.3	3.5	3.5	1.3	3.5	3.5	41	20	4.0	158	29
4.....	3.5	1.3	3.5	3.5	1.3	3.5	3.5	41	16	6.0	121	24
5.....	3.5	1.3	3.5	3.5	1.3	3.5	3.5	35	13	10.0	92	19
6.....	1.3	1.3	3.5	3.5	2.4	3.5	3.5	29	13	6.0	64	19
7.....	1.3	2.4	3.5	3.5	3.5	14	3.5	29	13	4.0	55	19
8.....	1.3	3.5	3.5	3.5	3.5	5.2	3.5	29	13	4.0	103	15
9.....	1.3	3.5	3.5	3.5	3.5	20	3.5	29	13	4.0	64	10.5
10.....	1.3	3.5	3.5	3.5	3.5	7.0	7.0	29	8.0	4.0	41	10.5
11.....	1.3	3.5	3.5	3.5	3.5	5.2	10	29	8.0	4.0	41	10.5
12.....	1.3	3.5	3.5	3.5	3.5	14	14	24	8.0	4.0	35	10.5
13.....	1.3	3.5	3.5	3.5	3.5	14	14	20	8.0	4.0	48	10.5
14.....	1.3	3.5	3.5	3.5	3.5	5.2	14	20	8.0	6.0	73	10.5
15.....	1.3	3.5	3.5	3.5	3.5	3.5	25	24	8.0	13	55	10.5
16.....	1.3	3.5	3.5	3.5	3.5	3.5	25	29	8.0	13	64	10.5
17.....	1.3	3.5	3.5	3.5	3.5	3.5	25	29	8.0	13	35	10.5
18.....	1.3	3.5	3.5	3.5	3.5	3.5	25	29	8.0	41	29	10.5
19.....	1.3	3.5	3.5	3.5	3.5	5.2	32	24	8.0	24	41	10.5
20.....	1.3	3.5	3.5	3.5	3.5	7.0	55	20	8.0	29	73	10.5
21.....	1.3	3.5	3.5	3.5	3.5	7.0	64	20	6.0	20	41	10.5
22.....	.0	3.5	3.5	3.5	3.5	7.0	92	20	4.0	16	113	5.0
23.....	.0	3.5	3.5	3.5	3.5	7.0	92	29	4.0	13	55	5.0
24.....	1.3	3.5	3.5	2.4	20	7.0	82	29	4.0	13	48	5.0
25.....	1.3	3.5	3.5	1.3	3.5	7.0	64	29	4.0	13	41	5.0
26.....	1.3	3.5	3.5	1.3	3.5	7.0	55	29	35	13	35	5.0
27.....	1.3	3.5	3.5	1.3	3.5	7.0	48	24	10	20	29	5.0
28.....	1.3	3.5	3.5	1.3	25	7.0	41	20	8.0	13	64	5.0
29.....	1.3	3.5	3.5	1.3	39	7.0	41	20	8.0	13	64	5.0
30.....	1.3	3.5	3.5	1.3	.....	7.0	20	20	8.0	24	55	5.0
31.....	1.3	.....	3.5	1.3	.....	7.0	.....	29	.....	121	41	.....

Daily discharge, in second-feet, of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	5.0	0.3	5.0	5.0	5.0	3.4	10.5	27	16	2	8	19
2.....	1.8	.3	5.0	5.0	5.0	10.5	5.0	27	16	2	7	20
3.....	1.8	.3	5.0	5.0	5.0	7.8	7.8	27	13	2	10	20
4.....	1.8	.3	5.0	5.0	5.0	10.5	29	27	13	3	14	37
5.....	1.8	.3	5.0	5.0	5.0	7.8	24	27	9	8	14	51
6.....	1.8	.3	5.0	5.0	5.0	5.0	14.8	27	9	6	10	280
7.....	1.8	.3	5.0	5.0	5.0	5.0	10.5	27	9	12	7	177
8.....	1.8	.3	5.0	5.0	3.4	14.8	10.5	39	9	43	7	61
9.....	1.8	.3	5.0	5.0	1.8	10.5	14.8	39	9	13	7	89
10.....	.3	.3	5.0	5.0	1.8	10.5	10.5	39	9	5	9	79
11.....	.3	.3	5.0	5.0	1.8	10.5	19	38	9	5	21	62
12.....	.0	.3	5.0	5.0	1.8	10.5	19	33	9	3	45	54
13.....	.0	.3	5.0	1.8	14.8	19	19	27	9	3	78	46
14.....	.0	.3	5.0	1.8	10.5	19	19	27	9	13	50	40
15.....	.0	.3	5.0	1.8	5.0	24	19	26	4	5	50	40
16.....	.0	1.0	5.0	1.8	3.4	24	19	26	4	3	43	40
17.....	.0	1.8	5.0	1.8	1.8	14.8	29	26	4	14	43	29
18.....	.0	1.8	5.0	1.8	1.8	7.8	41	25	4	6	40	29
19.....	.0	1.8	5.0	5.0	1.8	19	41	20	4	5	40	29
20.....	.0	1.8	5.0	5.0	1.8	10.5	41	15	5	3	62	14.8
21.....	.0	1.8	5.0	5.0	1.8	10.5	34	25	5	3	47	5.0
22.....	.3	1.8	5.0	5.0	3.4	10.5	28	25	5	3	21	10.5
23.....	.3	1.8	5.0	5.0	1.8	10.5	34	20	2	3	52	5.0
24.....	.3	1.8	5.0	5.0	1.8	10.5	34	15	2	36	38	1.8
25.....	.3	1.8	5.0	5.0	10.5	10.5	28	15	2	36	52	1.8
26.....	.3	1.8	5.0	5.0	3.4	10.5	28	15	2	36	50	1.8
27.....	.3	1.8	5.0	5.0	1.8	10.5	28	15	2	24	49	1.8
28.....	.3	5.0	5.0	5.0	1.8	10.5	28	15	2	16	36	1.8
29.....	.3	5.0	5.0	5.0	-----	10.5	28	16	2	11	35	1.8
30.....	.3	5.0	5.0	5.0	-----	10.5	28	16	2	8	35	.3
31.....	.3	-----	5.0	5.0	-----	10.5	-----	16	-----	8	35	-----
1909-10.												
1.....	.0	.3	5.0	1.8	5.0	5.0	10.5	41	5.0	1.8	5.0	10.5
2.....	.0	1.0	5.0	5.0	5.0	5.0	10.5	41	5.0	1.8	3.4	7.8
3.....	.0	5.0	5.0	10.5	5.0	5.0	10.5	41	3.4	1.8	1.8	3.4
4.....	.0	5.0	5.0	10.5	5.0	7.8	14.8	41	1.8	1.0	1.8	1.8
5.....	.0	5.0	1.8	3.4	5.0	10.5	19	29	1.8	1.0	3.4	1.8
6.....	.0	5.0	1.8	1.8	5.0	10.5	14.8	29	1.8	1.8	7.8	1.8
7.....	1.0	5.0	1.8	1.8	5.0	19	10.5	29	1.8	.3	3.4	1.8
8.....	5.0	5.0	1.8	5.0	5.0	24	19	29	1.8	1.0	10.5	1.8
9.....	24.0	5.0	5.0	5.0	5.0	24	19	29	1.8	1.0	5.0	.3
10.....	5.0	5.0	5.0	5.0	5.0	35	19	29	1.8	1.8	29	7.8
11.....	7.8	5.0	5.0	5.0	5.0	29	19	29	1.8	1.0	55	1.8
12.....	7.8	5.0	5.0	5.0	5.0	48	35	29	1.8	1.8	35	.3
13.....	5.0	5.0	5.0	5.0	5.0	24	41	29	1.8	41	35	.3
14.....	7.8	5.0	5.0	5.0	1.8	29	41	29	1.8	19	19	1.0
15.....	10.5	5.0	5.0	5.0	1.8	55	41	29	7.8	7.8	24	5.0
16.....	5.0	5.0	5.0	5.0	1.8	48	35	29	5.0	5.0	19	1.8
17.....	5.0	5.0	5.0	5.0	1.8	35	29	24	3.4	5.0	19	1.0
18.....	10.5	5.0	5.0	5.0	1.8	29	35	19	1.8	3.4	24	.3
19.....	10.5	5.0	1.8	5.0	1.8	14.8	41	14.8	1.8	1.8	14.8	.3
20.....	10.5	5.0	1.8	5.0	3.4	19	41	19	1.8	3.4	10.5	.3
21.....	10.5	5.0	1.8	5.0	5.0	19	41	10.5	1.8	7.8	10.5	1.8
22.....	10.5	5.0	1.8	5.0	5.0	19	41	10.5	.3	7.8	7.8	5.0
23.....	10.5	5.0	5.0	5.0	5.0	19	41	10.5	.3	1.8	10.5	1.8
24.....	5.0	5.0	5.0	5.0	5.0	19	41	10.5	.3	1.8	7.8	1.8
25.....	5.0	5.0	5.0	5.0	5.0	19	41	10.5	.3	1.8	5.0	1.8
26.....	1.8	5.0	5.0	5.0	5.0	19	41	7.8	.3	1.8	3.4	1.8
27.....	1.8	5.0	5.0	5.0	5.0	19	41	5.0	.3	5.0	3.4	1.8
28.....	1.8	5.0	1.8	5.0	5.0	19	41	5.0	.3	1.8	1.8	1.0
29.....	14.8	5.0	1.8	5.0	-----	14.8	41	5.0	1.8	5.0	1.8	.3
30.....	5.0	5.0	1.8	5.0	-----	10.5	41	5.0	1.8	5.0	1.8	.3
31.....	1.8	-----	1.8	5.0	-----	10.5	-----	5.0	-----	10.5	1.8	-----

Daily discharge, in second-feet, of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	0.3	0.3	0.3	0.3	0.3	1.8	20	31	30	12	52	7.0
2.....	.3	.3	.3	.3	.3	1.8	20	21	19	9.5	43	7.0
3.....	.3	.3	.3	1.0	.3	1.8	15	21	16	43	30	3.0
4.....	.3	.3	.3	1.8	.3	1.8	15	21	12	36	24	7.0
5.....	.3	.3	.3	1.8	.3	10.5	25	21	12	38	19	3.0
6.....	.3	.3	.3	1.0	1.0	5.0	25	21	12	158	19	3.0
7.....	.3	.3	.3	.3	1.8	5.0	15	31	12	30	16	3.0
8.....	.3	.3	.3	.3	1.8	15	18	44	9.5	36	12	3.0
9.....	.3	.3	.3	.3	1.0	44	23	44	7.0	92	12	3.0
10.....	.3	.3	.3	.3	.3	37	14	43	7.0	358	7.0	3.0
11.....	.3	.3	.3	.3	1.0	9.0	14	43	7.0	52	7.0	3.0
12.....	.3	.3	.3	.3	1.8	17	14	36	7.0	30	7.0	3.0
13.....	.3	.3	.3	.3	.3	22	14	30	7.0	30	3.0	3.0
14.....	.3	.3	.3	.3	1.8	9.0	14	30	7.0	61	3.0	1.0
15.....	.3	.3	.3	.3	1.8	13	14	68	7.0	61	3.0	1.0
16.....	.3	.3	.3	.3	1.8	22	14	61	5.0	61	3.0	1.0
17.....	.3	.3	.3	.3	1.8	22	14	43	3.0	61	7.0	1.0
18.....	.3	.3	.3	.3	1.8	9.0	14	30	3.0	61	9.5	1.0
19.....	1.0	.3	.3	.3	1.8	9.0	14	30	3.0	52	7.0	1.0
20.....	1.0	.3	.3	.3	1.8	13	14	30	3.0	260	7.0	.5
21.....	.3	.3	.3	.3	1.8	9.0	14	30	3.0	170	7.0	.5
22.....	.3	.3	.3	.3	1.8	9.0	18	24	3.0	74	12	.5
23.....	.3	.3	.3	.3	1.8	9.0	23	19	3.0	340	12	.5
24.....	.3	.3	.3	.3	1.8	8.0	26	19	3.0	86	12	.5
25.....	.3	.3	.3	.3	1.8	8.0	21	16	3.0	74	9.5	.5
26.....	.3	.3	.3	.3	1.8	8.0	21	12	3.0	52	7.0	.5
27.....	.3	.3	.3	.3	1.8	8.0	21	12	14	61	7.0	1.0
28.....	.3	.3	.3	.3	1.8	15	21	16	5.0	182	71	1.0
29.....	.3	.3	.3	.3		20	31	126	5.0	116	16	1.0
30.....	.3	.3	.3	.3		15	31	24	3.0	86	12	1.0
31.....	.3		.3	.3		15		24		74	7.0	
1911-12.												
1.....	1.0	19	7.0	2.0	2.0	3.6	40	114				
2.....	1.0	19	7.0	2.0	2.0	2.0	40	126				
3.....	1.0	19	7.0	2.0	2.0	2.0	40	139				
4.....	3.0	19	7.0	2.0	2.0	2.0	40	114				
5.....	260	19	7.0	2.0	2.0	3.6	54	91				
6.....	260	19	7.0	2.0	2.0	5.2	71	81				
7.....	116	19	7.0	2.0	2.0	8.0	54	81				
8.....	43	19	7.0	2.0	2.0	10.7	54	91				
9.....	16	19	7.0	2.0	2.0	10.7	54	91				
10.....	43	19	7.0	2.0	2.0	14.4	71	91				
11.....	30	19	7.0	2.0	2.0	23	71	91				
12.....	12	12	7.0	2.0	54	40	91	91				
13.....	7.0	12	7.0	2.0	18	23	71	114				
14.....	3.0	12	7.0	2.0	10.7	18	71	102				
15.....	1.0	12	3.0	2.0	10.7	14.4	54	114				
16.....	5.0	12	3.0	2.0	23	18	54	114				
17.....	7.0	12	3.0	2.0	5.2	10.7	54	139				
18.....	7.0	12	3.0	2.0	5.2	14.4	40	167				
19.....	7.0	12	3.0	2.0	5.2	28	40	167				
20.....	7.0	12	3.0	2.0	3.6	62	40	167				
21.....	7.0	12	1.0	2.0	2.0	81	40	167				
22.....	5.0	12	1.0	2.0	2.0	71	40	167				
23.....	3.0	12	1.0	2.0	2.0	62	40	167				
24.....	3.0	12	1.0	2.0	2.0	40	47	139				
25.....	3.0	12	1.0	2.0	2.0	47	54	139				
26.....	3.0	12	1.0	2.0	2.0	47	62	139				
27.....	7.0	12	1.0	2.0	10.7	47	71	126				
28.....	16	12	1.0	2.0	8.0	40	71	114				
29.....	19	7.0	1.0	2.0	5.2	40	81	114				
30.....	30	3.0	1.0	2.0		40	91	91				
31.....	30		1.0	2.0		40		91				

Daily discharge, in second-feet, of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....			1.4	1.4	16	2.0	3.2	14	4.5	43	2.3	4.9
2.....			1.4	1.4	3.2	2.8	4.5	14	3.2	32	2.2	4.5
3.....			1.4	1.4	3.2	2.0	4.9	13	3.8	21	2.1	3.2
4.....			1.4	1.4	9.7	1.3	3.2	9.7	4.9	21	2.0	3.2
5.....			1.4	1.3	4.3	2.8	3.8	14	3.2	26	1.9	3.8
6.....			1.4	1.3	3.2	2.8	2.8	9.7	2.8	17	1.8	2.8
7.....			1.4	1.3	3.2	2.0	4.5	8.6	2.8	13	1.7	2.8
8.....			1.4	1.3	2.4	2.0	4.5	8.6	7.7	8.0	1.6	2.5
9.....			1.4	1.3	1.6	2.0	3.2	8.6	43	10	1.5	14
10.....			1.4	1.3	7.4	2.0	2.8	8.6	138	13	2.5	46
11.....			1.4	1.3	2.4	2.0	2.8	8.6	598	8.0	3.8	11
12.....			1.8	1.3	1.6	2.0	2.8	8.6	269	8.0	2.8	8.6
13.....			2.3	1.3	1.6	2.0	2.8	8.6	182	4.5	2.0	7.7
14.....			2.8	1.3	3.2	2.0	2.8	8.6	121	4.5	2.0	4.5
15.....			3.2	1.3	3.2	2.0	2.8	8.6	82	4.5	1.3	3.2
16.....			3.2	6.6	3.2	2.0	2.5	6.6	82	5.2	1.3	2.8
17.....			3.2	1.3	12	2.0	3.8	5.6	73	5.2	3.2	2.8
18.....			2.8	1.3	4.3	2.0	2.8	4.9	82	4.5	3.2	2.5
19.....			1.8	1.3	3.0	1.3	3.2	4.5	73	10	4.5	1.3
20.....			1.4	1.3	3.0	1.3	5.6	2.8	65	13	11	1.3
21.....			1.4	1.3	1.3	1.3	6.6	2.8	57	13	11	1.3
22.....			1.4	1.3	1.3	1.3	9.7	2.8	57	10	22	1.3
23.....			1.4	1.3	2.0	1.3	14	2.0	57	19	26	2.8
24.....			1.4	1.3	2.8	1.3	13	1.6	43	15	26	2.8
25.....			1.4	1.3	1.3	1.3	9.7	1.3	38	13	11	9.7
26.....			1.4	1.3	1.3	1.3	8.6	1.6	26	10	8.6	14
27.....			1.4	1.3	1.3	1.3	8.6	2.5	21	8.0	8.6	9.7
28.....			1.4	1.3	1.3	1.0	9.7	3.8	38	6.2	8.6	4.5
29.....			1.4	2.8	.....	1.3	13	2.8	73	4.5	11	2.8
30.....			1.4	5.7	.....	2.8	14	2.8	50	4.5	5.6	4.9
31.....			1.4	19	.....	2.8	.....	3.8	.....	4.1	4.9	.....

NOTE.—Discharge determined from various well-defined rating curves, except during periods of change in channel, when the indirect method for shifting channels was used.

Monthly discharge of Gallinas River near Las Vegas, N. Mex., for 1904-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904-5. <i>a</i>					
October 8-31.....	255	2	42.8	2,040	
November.....	57	4	13.7	815	
December.....	20	2	10.2	627	
January.....	12	12	12.0	738	
February.....	178	12	40.1	2,230	
March.....	210	57	93.3	5,740	
April.....	380	75	177	10,500	
May.....	380	121	206	12,700	
June.....	163	20	63.4	3,770	
July.....	75	12	17.1	1,050	
August.....	75	12	26.7	1,640	
September.....	57	6	14.0	833	
The period.....				42,700	
1905-6.					
October.....	12	2	3.5	215	
November.....	308	2	32.1	1,910	
December.....	30	12	18.7	1,150	
January.....	14	4	9.2	566	
February.....	33	8	11.1	616	C.
March.....	84	14	25.9	1,590	B.
April.....	200	47	98.7	5,870	B.
May.....	134	64	101	6,210	B.
June.....	64	8	31.8	1,890	B.
July.....	120	8	38.5	2,370	B.
August.....	74	14	21.9	1,350	B.
September.....	64	8	14.7	875	C.
The year.....	308	2	33.9	24,600	

a Little flow Aug. 31, 1903, to Sept. 27, 1904. Discharge Sept. 29 to Oct. 7, 1904, was estimated at 16,570 acre-feet, as taken from G. B. Monk's report on floods in northern New Mexico in 1904.

Monthly discharge of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906-7.					
October.....	33	2	17.0	1,050	B.
November.....	22	14	15.7	934	C.
December.....	240	14	45.6	2,800	B.
January.....	20	7	13.6	836	C.
February.....	20	14	14.9	828	C.
March.....	55	14	27.6	1,700	B.
April.....	73	25	43.5	2,590	B.
May.....	113	55	91.3	5,610	A.
June.....	135	14	64.0	3,810	A.
July.....	64	10.5	24.7	1,520	B.
August.....	92	7	27.3	1,680	B.
September.....	73	7	22.8	1,360	B.
The year.....	240	2	34.0	24,700	
1907-8.					
October.....	7.0	.0	1.7	103	D.
November.....	3.5	1.3	3.0	180	D.
December.....	3.5	3.5	3.5	215	D.
January.....	3.5	1.3	3.0	183	D.
February.....	39	1.3	5.6	323	D.
March.....	20	3.5	7.1	435	D.
April.....	92	3.5	29.4	1,750	B.
May.....	41	20	27.5	1,690	B.
June.....	35	4.0	10.7	637	B.
July.....	124	4.0	15.6	959	B.
August.....	159	29	64.8	3,980	A.
September.....	29	5.0	12.2	726	B.
The year.....	159	.0	15.3	11,200	
1908-9.					
October.....	5.0	.0	0.74	46	D.
November.....	5.0	.3	1.34	80	D.
December.....	5.0	5.0	5.00	307	D.
January.....	5.0	1.8	4.38	269	B.
February.....	14.8	1.8	4.03	224	B.
March.....	24	3.4	11.6	713	B.
April.....	41	5.0	23.4	1,390	B.
May.....	39	15	24.6	1,510	C.
June.....	16	2.0	6.60	393	C.
July.....	43	2.0	11.0	676	C.
August.....	78	7.0	32.7	2,010	C.
September.....	280	.3	41.6	2,480	B.
The year.....	280	.0	13.9	10,100	
1909-10.					
October.....	24	.0	5.93	365	B.
November.....	5.0	.3	4.71	280	B.
December.....	5.0	1.8	3.76	231	C.
January.....	10.5	1.8	4.99	307	B.
February.....	5.0	1.8	4.26	237	B.
March.....	55	5.0	21.4	1,320	A.
April.....	41	10.5	30.5	1,810	A.
May.....	41	5.0	21.8	1,340	A.
June.....	7.8	.3	2.07	123	B.
July.....	41	.3	4.92	303	A.
August.....	55	1.8	12.3	756	A.
September.....	10.5	.3	2.28	136	B.
The year.....	55	.0	9.91	7,210	
1910-11.					
October.....	1.0	0.3	0.32	20	D.
November.....	.3	.3	.30	18	D.
December.....	.3	.3	.30	18	D.
January.....	1.8	.3	.44	27	D.
February.....	1.8	.3	1.34	74	D.
March.....	44	1.8	12.7	781	D.
April.....	31	14	18.6	1,110	D.
May.....	126	12	32.9	2,020	B.
June.....	30	3.0	7.78	463	C.
July.....	358	9.5	92.1	5,660	B.
August.....	71	3.0	14.9	916	C.
September.....	7.0	.5	2.15	128	D.
The year.....	358	.3	15.3	11,200	

Monthly discharge of Gallinas River near Las Vegas, N. Mex., for 1904-1913—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October.....	260	1.0	30.8	1,890	C.
November.....	19	3.0	14.1	839	C.
December.....	7.0	1.0	4.10	252	D.
January.....	2.0	2.0	2.00	123	C.
February.....	54	2.0	6.67	384	B.
March.....	81	2.0	28.0	1,720	B.
April.....	91	40	56.7	3,370	B.
May.....	167	81	121	7,440	B.
The period.....				16,000	
1912-13.					
December.....	3.2	1.4	1.72	106	B.
January.....	19	1.3	2.25	138	A.
February.....	16	1.3	3.72	207	B.
March.....	2.8	1.0	1.85	114	A.
April.....	14	2.5	5.87	349	A.
May.....	14	1.3	5.58	405	A.
June.....	598	2.8	76.7	4,560	A.
July.....	43	4.1	12.2	750	A.
August.....	26	1.3	6.39	393	A.
September.....	46	1.3	6.24	371	A.
The period.....				7,390	

SOUTH FORK OF GALLINAS RIVER NEAR EL PORVENIR, N. MEX.

Location.—At the Gallinas planting station of the United States Forest Service, in the Pecos National Forest, near sec. 14, T. 17 N., R. 14 E., 1 mile south of El Porvenir post office, 2½ miles above the junction of the North and South forks. Nearest tributary is a small stream entering from the north a short distance above.

Records available.—May 9, 1911, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Somewhat shifting.

Discharge measurements.—Made by wading.

Winter flow.—Ice present at this station during the winter months.

Diversions.—No diversions above, except an intermittent one of less than one-half second-foot. Just below the station the Forest Service maintains a ditch of 3 second-foot capacity.

Accuracy.—Estimates may be considered good for 1913 and fair for previous years.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of South Fork of Gallinas River near El Porvenir, N. Mex., in 1911-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.				1913.			
May 9	H. B. Waba.....	<i>Fect.</i> 1.98	<i>Sec.-ft.</i> 20	Mar. 10	J. E. Powers.....	<i>Fect.</i> 1.30	<i>Sec.-ft.</i> 2.9
				Apr. 8	.....do.....	1.58	7.6
				May 13	.....do.....	1.69	10.5
Dec. 2	J. E. Powers.....	1.30	2.7	June 9	.....do.....	1.53	6.2
31 ^a	.....do.....	1.45	2.4	12	.....do.....	3.23	114
				July 9	.....do.....	2.00	8.3
1913.				Sept. 7	.....do.....	1.78	3.1
Jan. 30 ^a	.....do.....	1.29	2.0				

^a Ice present.

Daily gage height, in feet, of South Fork of Gallinas River near El Porvenir, N. Mex., for 1911-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1911.						1911.					
1.....		1.63	1.50	1.87	1.30	16.....	2.00	1.30			1.20
2.....		1.56	1.90	1.88	1.28	17.....	1.94	1.30	2.39	1.49	1.20
3.....		1.54	2.05	1.77	1.30	18.....	1.87	1.25	2.33	1.44	1.18
4.....		1.47	1.85	1.68	1.35	19.....	1.79	1.25	2.15	1.46	1.20
5.....		1.46	1.80	1.61	1.28	20.....	1.85	1.28	2.10	1.38	1.24
6.....		1.41	1.78	1.58	1.24	21.....	1.76	1.28	2.55	1.38	1.21
7.....		1.40	1.75	1.53	1.23	22.....	1.68	1.30	2.15	1.40	1.21
8.....		1.38	1.67	1.53	1.23	23.....	1.64	1.23	2.01	1.56	1.19
9.....	1.98	1.38	1.84	1.47	1.24	24.....	1.54	1.20	2.20	1.40	1.18
10.....	2.00	1.34	1.96	1.44	1.26	25.....	1.58	1.16	2.19	1.38	1.16
11.....	1.87	1.31	2.24	1.41	1.25	26.....	1.56	1.15	2.24	1.35	1.20
12.....	1.84	1.31	2.04	1.40	1.24	27.....	1.53	1.17	2.23	1.35	1.20
13.....	1.86	1.30	1.98	1.39	1.24	28.....	1.52	1.19	2.20	1.40	1.20
14.....	2.04	1.30	2.00	1.38	1.21	29.....	1.52	1.15	2.12	1.40	1.26
15.....	2.08	1.30			1.20	30.....	1.50	1.20	1.98	1.38	1.39
						31.....	1.58		1.96	1.35	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1.28		1.66	1.38	1.32	1.36	1.76	2.33	2.28	1.62	1.35	1.38
2.....	1.24	1.78	1.63	1.42	1.30	1.36	1.76	2.47		1.61	1.32	1.35
3.....	1.23	1.67	1.66	1.56	1.31	1.35	1.81	2.49	2.18	1.59	1.32	1.32
4.....	1.67	1.66	1.62	1.51	1.34	1.38	1.92	2.32	2.12	1.55	1.36	1.32
5.....	4.24	1.70	1.59	1.55	1.33	1.40	2.00	2.28	2.12	1.52	1.42	1.30
6.....	4.22	1.70	1.59	1.46	1.30	1.43	2.05	2.20	2.18	1.52	1.37	1.29
7.....	3.16	1.67	1.53	1.39	1.28		1.99	2.24	2.22	1.52	1.32	1.29
8.....	2.37	1.68		1.40	1.30		2.05	2.27	2.26	1.50	1.30	1.28
9.....	1.98	1.70	1.53	1.42	1.30		2.08		2.26	1.46	1.30	1.27
10.....	1.90	1.68	1.54	1.42	1.30	1.53	2.05		2.24	1.44	1.28	1.26
11.....	1.86	1.70	1.48	1.42	1.28	1.60	2.14		2.20	1.42	1.28	1.36
12.....	1.78	1.72	1.48	1.37	1.24	1.64	2.17	2.28	2.20	1.43	1.28	1.38
13.....	1.73	1.77	1.56	1.40	1.29	1.55	2.08	2.29	2.20	1.44	1.30	1.34
14.....	1.70	1.67	1.64	1.38	1.30	1.56	1.91	2.18	2.17	1.42	1.55	1.30
15.....	1.74	1.68	1.63	1.38	1.32	1.62	1.95	2.21	2.12	1.44	1.56	1.29
16.....	1.67	1.68	1.70	1.36	1.30	1.46	1.93	2.32	1.95	1.45	1.42	1.29
17.....	1.57	1.68	1.70	1.35	1.25	1.52	1.88	2.48	1.94	1.46	1.46	1.28
18.....	1.54	1.78		1.42	1.31	1.70	1.84	2.58	1.92	1.44	1.47	1.27
19.....	1.52	1.62		1.44	1.33	1.85	1.81	2.65	1.91	1.44	1.51	1.27
20.....	1.50	1.60	1.69	1.48	1.31	2.30	1.82	2.62	1.88	1.42	1.52	1.24
21.....	1.50	1.62	1.62	1.46	1.33	2.04	1.78	2.65	1.83	1.42	1.76	1.25
22.....	1.54	1.62	1.49	1.35	1.30	1.94	1.82	2.65	1.79	1.42	1.69	1.26
23.....	1.51	1.60	1.44	1.35	1.28	1.88	1.85	2.58	1.71	1.45	1.59	1.25
24.....	1.48	1.45	1.43	1.36	1.24	1.90	2.02	2.58	1.72	1.41	1.56	1.24
25.....	1.49	1.80	1.40	1.34	1.32	1.91	2.12	2.56	1.74	1.38	1.52	1.26
26.....	1.47	1.64	1.40	1.32	1.44	1.98	2.08	2.56	1.74	1.36	1.46	1.26
27.....	1.59	1.61	1.39	1.30	1.37	1.94	2.10	2.52	1.72	1.36	1.42	1.27
28.....	1.65	1.30	1.38	1.33	1.37	1.90	2.12	2.50	1.75	1.36	1.40	1.26
29.....		1.58	1.36	1.32	1.36	1.85	2.16	2.43	1.73	1.48	1.40	1.27
30.....		1.66	1.36	1.35		1.86	2.27	2.39	1.67	1.38	1.42	1.32
31.....			1.40	1.37		1.83		2.36		1.38	1.40	

Daily gage height, in feet, of South Fork of Gallinas River near El Porvenir, N. Mex., for 1911-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	1.30	1.31	1.24	1.46	1.30	1.24	1.68	.....	1.41	2.33	1.78	1.82
2.....	1.30	1.30	1.25	1.46	1.29	1.26	1.61	1.78	1.40	2.30	1.75	1.82
3.....	1.28	1.32	1.22	1.46	1.34	1.28	1.59	1.74	1.37	2.25	1.74	1.71
4.....	1.29	1.35	.....	1.44	1.30	1.30	1.56	1.68	1.35	2.17	1.72	1.75
5.....	1.53	1.34	.....	1.46	1.30	1.32	1.58	1.70	1.33	2.09	1.73	1.82
6.....	1.42	1.33	.....	1.48	1.31	1.31	1.66	1.68	1.31	2.07	1.76	1.77
7.....	1.36	1.34	.....	1.44	1.32	1.30	1.66	1.70	1.37	2.03	1.74	1.79
8.....	1.32	1.34	.....	1.45	1.30	1.32	1.62	1.70	1.57	1.99	1.72	1.82
9.....	1.32	1.29	1.41	1.40	1.31	1.31	1.56	1.69	1.51	2.09	1.70	1.92
10.....	1.30	1.26	1.40	1.38	1.30	1.29	1.47	1.71	2.65	2.08	2.10	1.88
11.....	1.30	1.23	1.40	1.35	1.28	1.30	1.41	1.71	3.89	1.98	2.24	1.87
12.....	1.32	1.18	1.38	1.38	1.25	1.30	1.44	1.71	3.81	1.94	1.91	1.86
13.....	1.31	1.24	1.39	1.34	1.26	1.31	1.45	1.71	2.91	1.90	1.83	1.88
14.....	1.30	1.30	1.41	1.36	1.26	1.31	1.49	1.69	2.69	1.86	1.78	1.85
15.....	1.31	1.28	1.36	1.38	1.27	1.34	1.55	1.67	2.55	1.81	1.82	1.83
16.....	1.32	1.36	1.32	1.36	1.36	1.35	1.59	1.66	2.64	1.80	1.82	1.78
17.....	1.30	1.32	1.30	1.35	1.34	1.34	1.62	1.62	2.71	1.82	1.80	1.77
18.....	1.30	1.28	1.30	1.34	1.32	1.33	1.60	1.57	2.63	1.86	1.80	1.80
19.....	1.30	1.22	1.31	1.33	1.30	1.33	1.63	1.59	2.65	1.86	1.81	1.85
20.....	1.28	1.28	1.28	1.32	1.30	1.34	1.67	1.55	2.68	2.15	1.88	1.86
21.....	1.30	1.29	1.28	1.32	1.34	1.34	1.71	1.52	2.73	2.15	1.90	1.85
22.....	1.30	1.21	1.26	1.30	1.32	1.32	1.96	1.51	2.73	2.15	2.20	1.84
23.....	1.30	1.23	1.28	1.33	1.30	1.36	1.88	1.51	2.58	2.10	2.23	1.86
24.....	1.28	1.21	1.30	1.35	1.30	1.44	1.63	1.48	2.48	2.00	2.14	1.84
25.....	1.30	1.21	1.27	1.32	1.29	1.54	1.72	1.48	2.38	1.96	2.14	1.83
26.....	1.30	1.22	1.24	1.30	1.30	1.58	1.81	1.44	2.33	1.89	1.92	1.94
27.....	1.30	1.23	1.22	1.36	1.29	1.61	1.86	1.42	2.35	1.83	1.90	1.90
28.....	1.30	1.26	1.23	.....	1.26	1.60	1.86	1.40	2.38	1.78	1.88	1.89
29.....	1.31	1.26	1.36	1.34	.....	1.56	1.90	1.40	2.48	1.80	1.86	1.96
30.....	1.31	1.30	1.38	1.31	.....	1.54	1.88	1.42	2.33	1.81	1.82	1.94
31.....	1.32	.....	1.44	1.32	.....	1.59	.....	1.39	.....	1.80	1.84	.....

Daily discharge, in second-feet, of South Fork of Gallinas River near El Porvenir, N. Mex., for 1911-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1911.											
1.....	.....	8.9	5.7	16	2.6	16.....	21	2.6	34	4.8	1.5
2.....	.....	7.1	17	16	2.4	17.....	19	2.6	40	5.5	1.5
3.....	.....	6.6	23	13	2.6	18.....	16	2.0	37	4.6	1.4
4.....	.....	5.2	16	10	3.2	19.....	14	2.0	28	5.0	1.5
5.....	.....	5.0	14	8.3	2.4	20.....	16	2.4	25	3.6	1.9
6.....	.....	4.1	13	7.5	1.9	21.....	13	2.4	52	3.6	1.6
7.....	.....	3.9	12	6.4	1.8	22.....	10	2.6	28	3.9	1.6
8.....	.....	3.6	10	6.4	1.8	23.....	9.2	1.8	21	7.1	1.4
9.....	20	3.6	15	5.2	1.9	24.....	6.6	1.5	30	3.9	1.4
10.....	21	3.1	19	4.6	2.2	25.....	7.5	1.2	30	3.6	1.2
11.....	16	2.7	32	4.1	2.1	26.....	7.1	1.2	32	3.2	1.5
12.....	15	2.7	23	3.9	1.9	27.....	6.4	1.3	32	3.2	1.5
13.....	16	2.6	20	3.8	1.9	28.....	6.2	1.4	30	3.9	1.5
14.....	23	2.6	21	3.6	1.6	29.....	6.2	1.2	26	3.9	2.2
15.....	24	2.6	27	4.2	1.5	30.....	5.7	1.5	20	3.6	3.8
						31.....	7.5	.....	19	3.2	.....

Daily discharge, in second-feet, of South Fork of Gallinas River near El Porvenir, N. Mex. for 1911-1913—(continued).

Day.	Oct.	Nov.	Dec.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.										
1	2.4	13	2.6	2.0	13	37	34	8.6	3.2	3.6
2	1.9	13	2.6	2.0	13	46	32	8.3	2.9	3.2
3	1.8	10	2.6	2.0	14	47	29	7.8	2.9	2.9
4	10	9.8	2.6	2.0	18	36	26	6.8	3.4	2.9
5	226	11	2.6	2.0	21	34	26	6.2	4.3	2.6
6	223	11	2.6	2.0	23	30	29	6.2	3.5	2.5
7	106	10	2.6	3.1	21	32	31	6.2	2.9	2.5
8	39	10	2.6	4.2	23	34	33	5.7	2.6	2.4
9	20	11	2.6	5.3	24	34	33	5.0	2.6	2.3
10	17	10	2.6	6.4	23	34	32	4.6	2.4	2.2
11	16	11	2.4	8.0	27	34	30	4.3	2.4	3.4
12	13	12	2.4	9.2	28	34	30	4.4	2.4	3.6
13	12	13	2.4	6.8	24	34	30	4.6	2.6	3.1
14	11	10	2.4	7.1	17	29	28	4.3	6.8	2.6
15	12	10	2.4	8.6	19	30	26	4.6	7.1	2.5
16	10	10	2.4	5.0	18	36	19	4.8	4.3	2.5
17	7.3	10	2.4	6.2	16	47	19	5.0	5.0	2.4
18	6.6	10	2.2	11	15	54	18	4.6	5.2	2.3
19	6.2	8.6	2.2	16	14	59	17	4.6	5.9	2.3
20	5.7	8.0	2.2	35	15	57	16	4.3	6.2	1.9
21	5.7	8.6	2.2	23	13	59	15	4.3	13	2.0
22	6.6	8.6	2.2	19	15	59	14	4.3	11	2.2
23	5.9	8.0	2.2	16	16	54	11	4.8	7.8	2.0
24	5.3	4.8	2.2	17	22	54	12	4.1	7.1	1.9
25	5.5	10	2.0	17	26	52	12	3.6	6.2	2.2
26	5.2	9.2	2.0	20	24	52	12	3.4	5.0	2.2
27	7.8	8.3	2.0	19	25	49	12	3.4	4.3	2.3
28	9.5	2.6	2.0	17	26	48	12	3.4	3.9	2.2
29	12	2.6	2.0	16	28	43	12	5.3	3.9	2.3
30	20	2.6	2.0	16	34	40	10	3.6	4.3	2.9
31	20	.....	2.0	15	.....	39	.....	3.6	3.9	.....
1912-13.										
1	2.6	2.7	1.9	2.5	10	14	4.1	18	3.6	4.3
2	2.6	2.6	2.0	2.5	8.3	13	3.9	17	3.2	4.3
3	2.4	2.9	1.7	2.5	7.8	12	3.5	16	3.1	2.6
4	2.5	3.2	1.8	2.5	7.1	10	3.2	13	2.8	3.2
5	6.4	3.1	1.9	2.5	7.5	11	3.0	11	2.9	4.3
6	4.3	3.0	2.0	2.5	9.8	10	2.7	10	3.3	3.5
7	3.4	3.1	2.0	2.5	9.8	11	3.5	8.9	3.1	3.8
8	2.9	3.1	2.0	2.5	8.6	11	7.3	7.8	2.8	4.3
9	2.9	2.5	2.0	2.7	7.1	11	5.9	11	2.5	6.2
10	2.6	2.2	2.0	2.6	5.2	11	59	10	11	5.3
11	2.6	1.8	2.0	2.6	4.1	11	185	7.5	15	5.2
12	2.9	1.4	2.0	2.6	4.6	11	176	6.6	5.9	5.0
13	2.7	1.9	2.0	2.7	4.8	11	82	5.7	4.4	5.3
14	2.6	2.6	2.0	2.7	5.5	11	62	5.0	3.6	4.8
15	2.7	2.4	2.0	3.1	6.8	10	52	4.1	4.3	4.4
16	2.9	3.4	2.5	3.2	7.8	9.8	54	3.9	4.3	3.6
17	2.6	2.9	2.5	3.1	8.6	8.6	56	4.3	3.9	3.5
18	2.6	2.4	2.5	3.0	8.0	7.3	47	5.0	3.9	3.9
19	2.6	1.7	2.5	3.0	8.9	7.8	44	7.1	4.1	4.8
20	2.4	2.4	2.5	3.1	10	6.8	43	12	5.3	5.0
21	2.6	2.5	2.5	3.1	11	6.2	43	12	5.7	4.8
22	2.6	1.6	2.5	2.9	19	5.9	40	12	14	4.6
23	2.6	1.8	2.5	3.4	16	5.9	29	11	15	5.0
24	2.4	1.6	2.5	4.6	8.9	5.3	24	8.0	12	4.6
25	2.6	1.6	2.5	6.6	12	5.3	20	7.1	12	4.4
26	2.6	1.7	2.0	7.5	14	4.6	18	5.5	6.2	6.6
27	2.6	1.8	2.0	8.3	16	4.3	19	4.4	5.7	5.7
28	2.6	2.2	2.0	8.0	16	3.9	20	3.6	5.3	5.5
29	2.7	2.2	2.0	7.1	17	3.9	24	3.9	5.0	7.1
30	2.7	2.6	2.0	6.6	16	4.3	18	4.1	4.3	6.6
31	2.9	.....	2.4	7.8	.....	3.8	.....	3.9	4.6	.....

NOTE.—Daily discharge determined from three well-defined curves and by the indirect method for shifting channels. Discharge estimated on account of ice, Nov. 18, 1911; Nov. 24-Dec. 31, 1911; Mar. 1-6, and Dec. 9-31, 1912; and Mar. 1-8, 1913. Discharge interpolated for days for which gage heights are missing.

Monthly discharge of South Fork of Gallinas River near El Porvenir, N. Mex., for 1911-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
May (9-31).....	24	5.7	13.3	607	C.
June.....	8.9	1.2	3.07	183	C.
July.....	52	5.7	24.2	1,490	C.
August.....	16	3.2	5.79	356	C.
September.....	3.8	1.2	1.91	114	C.
1911-12.					
October.....	226	1.8	27.4	1,680	C.
November.....	13	2.6	9.22	549	C.
December.....	2.6	2.0	2.33	143	D.
January.....			a 2.00	123	D.
February.....			a 2.00	115	D.
March.....	35	2.0	10.9	670	C.
April.....	34	13	20.5	1,220	C.
May.....	59	29	42.8	2,630	C.
June.....	34	10	22.0	1,310	C.
July.....	8.6	3.4	4.99	307	C.
August.....	13	2.4	4.81	296	C.
September.....	3.6	1.9	2.53	151	C.
The year.....	226		12.6	9,190	
1912-13.					
October.....	6.4	2.4	2.84	175	C.
November.....	3.4	1.4	2.36	140	C.
December.....	2.5	1.7	2.15	132	D.
January.....			a 2.00	123	D.
February.....			a 2.50	139	D.
March.....	8.3	2.5	3.88	239	B.
April.....	19	4.1	9.87	587	B.
May.....	14	3.8	8.44	519	B.
June.....	185	2.7	38.4	2,280	B.
July.....	18	3.6	8.37	515	B.
August.....	15	2.5	5.90	363	B.
September.....	7.1	2.6	4.74	282	B.
The year.....	185		7.62	5,490	

a Estimated on account of ice.

HONDO RIVER BASIN.

GENERAL FEATURES.

Hondo River, one of the intermittent tributaries of the Pecos, is formed by the junction of the Rio Ruidoso and Bonito Creek in the northern part of T. 11 S., R. 17 E. It flows eastward and enters the Pecos 6 miles southeast of Roswell. The chief tributaries are North Spring and Berrendo rivers from the north, and South Spring River from the south.

The basin comprises the eastern slope of the Sierra Blancas, where elevations reach 12,000 feet above sea level, and the southern slope of the Sierra Capitan, whose altitude is somewhat lower. On the headwaters of tributary streams there are a number of lakes which are fed by springs, and thus insure a perennial flow in the upper part of the Hondo. Farther down the water is diverted to such an extent for irrigation that there is no flow in the lower river except during floods. The river also probably loses much water by seepage through the

porous soil of the Pecos Valley, over which it flows in its lower course. So porous is the soil that a number of streams that should be tributary to the upper stretch of the Hondo lose their waters in the ground before reaching it.

The lines of equal precipitation for the southeastern part of New Mexico (Pl. III) indicate that the mean annual precipitation in the mountains at the upper end of the basin is approximately 23 inches. It rapidly decreases with the altitude, being about 16 inches at Fort Stanton and 12 inches at Roswell, near the mouth. The precipitation occurs chiefly during the summer months, although there is a light snowfall in the mountains.

Irrigation has been carried on extensively in the Hondo basin, especially on the headwater streams, for many years. The United States Reclamation Service has constructed a system, known as the Hondo project, which is designed to store the flood waters in Hondo reservoir, located in T. 11 S., Rs. 22 and 23 E., for use in irrigating 10,000 acres in the vicinity of Roswell. The reservoir has a capacity of 40,000 acre-feet.

GAGING STATION RECORDS.

HONDO RIVER AT HONDO RESERVOIR SITE, NEW MEXICO.

Location.—Just below the diversion dam for the Hondo reservoir, in sec. 34, T. 11 S., R. 22 E., 12 miles southwest of Roswell. No tributaries within several miles.

Records available.—June 7, 1903, to December 31, 1906.

Drainage area.—Not measured.

Gage.—Inclined staff; datum unchanged.

Channel.—Shifting.

Discharge measurements.—Made from near-by footbridge.

Diversions.—The normal flow is diverted for irrigation above the station, leaving only the flood flow available for storage in Hondo reservoir.

Storage.—Hondo reservoir has a capacity of 40,000 acre-feet and is designed to store the flood waters of the river. As it was not completed until 1906, it is possible that prior to that year little, if any, water was stored during the period covered by the records.

Accuracy.—Owing to the shifting channel and insufficient measurements, estimates of daily or monthly discharge for years prior to 1906 have not been made. For that year the estimates can be considered only approximate.

Discharge measurements of Hondo River at Hondo reservoir site, New Mexico, in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 10	W. A. Wilson.....	5.30	561	Apr. 25	H. L. Eames.....	9.80	1,450
10	do.....	5.30	561	29	do.....	8.40	1,160
13	do.....	4.40	489	May 18	J. M. Giles.....	3.22	105
Aug. 21	E. G. Marsh.....	.95	11	July 26	E. Patterson.....	9.70	758
Dec. 10	F. S. Dobson.....	1.10	12	29	do.....	7.80	714
1904.				Aug. 2	do.....	3.60	132
July 4	F. Dobson.....	1.90	37	7	do.....	3.80	188
19	W. A. Wilson.....	7.10	573	10	do.....	5.40	285
19	do.....	7.75	720	29	do.....	3.30	26
Aug. 10	do.....	2.90	137	Sept. 10	do.....	3.40	33
Sept. 3	F. Dobson.....	2.40	50	16	J. M. Giles.....	3.20	19
23	do.....	2.30	61	Oct. 5	E. Patterson.....	3.12	18
Oct. 11	do.....	10.64	^a 6,320	14	do.....	2.95	7
Nov. 11	do.....	1.00	19	14	J. M. Giles.....	2.97	10.6
1905.				24	E. Patterson.....	3.10	11.6
Feb. 24	H. C. Hurd.....	3.25	96	Nov. 29	do.....	8.00	556
26	H. L. Eames.....	4.35	184	Dec. 1	do.....	5.35	232
Mar. 3	do.....	5.70	400	26	do.....	5.00	^b 20
5	do.....	6.58	536	1906.			
8	do.....	6.00	436	Jan. 13	E. Patterson.....	3.00	32
15	do.....	4.85	166	31	do.....	3.05	31
24	do.....	3.38	78	Feb. 9	J. M. Giles.....	3.00	28
25	do.....	3.20	66	13	E. Patterson.....	3.06	30
27	do.....	3.10	63	24	do.....	2.70	^c 9.9
29	do.....	3.20	77	Apr. 6	E. C. Murphy.....	2.98	18
Apr. 1	do.....	2.90	62	8	E. Patterson.....	3.05	23
6	do.....	2.30	33	24	J. M. Giles.....	2.80	28
10	do.....	1.77	12	28	do.....	2.65	20
14	Giles and Eames.....	2.90	71	Aug. 6	do.....	2.30	5.3
				Dec. 20	W. A. Lamb.....	2.10	4.9

^a Computed by Kutter's formula.

^b Estimated.

^c Part of flow of river diverted into Inlet Channel about 2 miles above the station.

Daily gage height, in feet, of Hondo River at Hondo reservoir site, New Mexico, for 1903-1906.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1903.					1903.				
1.....		0.8			16.....	4.5	0.5	1.65	
2.....		.75			17.....	4.95		.7	
3.....		.6			18.....	4.15		.85	
4.....					19.....	3.9		1.55	
5.....					20.....	3.65	2.7	1.15	
6.....					21.....	3.5	1.5	.8	
7.....	2.3				22.....	3.5	.8	.5	
8.....	2.7				23.....	3.2	.75	.5	
9.....	1.9				24.....	2.85	.4		
10.....	5.3				25.....	2.6			1.35
11.....	2.7				26.....	2.5		2.1	1.05
12.....	2.8				27.....	2.0		1.55	.95
13.....	5.7				28.....	1.85		1.15	1.2
14.....	5.9	.6			29.....	1.45		.8	1.3
15.....	7.5	.55	3.6		30.....	1.0		.65	1.25
					31.....			.5	

Daily gage height, in feet, of Hondo River at Hondo reservoir site, New Mexico, for 1903-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	1.1	1.1	1.2	0.8								
2.	.7	1.1	1.1	.7						1.2	2.1	
3.	.75	1.1	1.1	.8						5.1	4.25	5.6
4.		1.1	1.2	.9						1.95	2.9	1.45
5.		1.1	1.1	1.0						1.6	3.6	1.65
6.		1.1	1.0	1.1						1.45	5.05	1.4
7.		1.1	1.1	1.1						.6	2.8	.6
8.		1.1	1.2	1.0							2.5	
9.		1.1	1.2	.8							5.45	
10.		1.1	1.2	.7							4.05	
11.		1.1	1.1	.7							2.6	
12.		1.1	1.2	.6							2.35	
13.		1.1	1.1	.5							1.8	
14.		1.1	.9	.3							1.6	1.2
15.	1.2	1.1	.8	.1							1.6	
16.	1.2	1.1	.8								1.6	
17.	1.2	1.1	.7							1.5	1.55	
18.	1.2	1.0	.8	.5						1.55	1.35	
19.	1.2	1.1	.7	.3						5.7	.6	
20.	1.2	1.2	.7							2.25	1.0	
21.	1.2	1.1	.6						0.3	1.8	1.55	
22.	1.1	1.1	.6						1.1	2.95	.6	
23.	1.2	1.0	.6						1.3	3.2	1.7	
24.	1.2	1.1	.5						.6	2.0	2.9	2.6
25.	1.2	1.1	.6	.2						1.85	2.4	2.6
26.	1.1	1.1	.6							1.65	2.1	1.45
27.	1.1	1.1	.7							1.5	1.45	1.15
28.	1.2	1.1	.7							1.4	.65	5.5
29.	1.1	1.2	.7						.5	1.45		2.3
30.	1.2	1.1	.7							.65	.6	9.6
31.	1.2		.7	.15								
1904-5.												
1.	a10.05	1.2	0.95	0.95		4.6	2.9	7.5	1.45		6.55	2.9
2.	1.8	1.2	.9	.9		5.0	2.8	7.95	2.05	4.3	3.75	2.9
3.	1.15	1.2	.9	.9		5.7	2.65	8.0	1.75	4.0	7.9	2.8
4.	1.0	1.15	.9	.9		6.65	2.6	7.3	1.75	3.9	4.5	3.15
5.	.7	1.1	1.35	.9		6.6	2.4	6.85	2.0	3.8	3.95	3.25
6.	.35	1.1	.9	.85		6.2	2.3	6.35	1.8		3.85	3.7
7.	3.05	1.1	.95	.9		6.05	2.1	5.85	1.85		4.1	3.4
8.	a9.9	1.05	.9	.95		5.9	1.95	5.45	1.7		4.3	3.45
9.	8.05	1.0	.9	.85		5.55	1.8	4.95	7.8		6.75	3.35
10.	7.8	1.0	1.0	.85		5.25	1.9	5.0	7.95		5.6	3.6
11.	5.2	1.0	.95	.9		5.1	2.25	4.55	7.45		5.85	3.95
12.	4.0	1.1	.9	2.3		4.95	2.95	4.05	10.5		7.05	3.5
13.	3.35	1.05	.9	1.9		4.9	2.95	3.75	5.95		3.7	3.3
14.	2.9	1.05	.95	1.65		4.75	2.75	3.6	5.25		4.4	3.2
15.	2.55	.95	1.05	1.55		4.8	2.55	3.55	5.15		5.05	3.2
16.	2.25	1.0	.95	1.55		4.6	2.35	3.25	5.15		5.3	3.15
17.	2.0	1.0	1.05	1.5		4.6	2.4	3.0	5.1		4.65	3.05
18.	1.75	1.0	1.0	1.4		4.5	2.3	3.05	5.1		4.4	3.05
19.	1.55	.95	1.0	1.3		4.35	2.5	3.05	4.9		4.15	2.95
20.	1.5	.95	1.0	1.3	2.65	4.1	2.85	3.15	4.9		4.0	2.9
21.	1.45	.95	1.0	1.7	2.75	3.9	3.05	4.1	4.8		3.95	2.95
22.	1.4	1.0	.95	1.2	2.95	3.75	2.75	3.55	4.7		3.85	2.55
23.	1.35	1.0	.9	1.2	3.05	3.55	3.1	3.1	4.7	6.3	4.2	2.85
24.	1.3	.95	.95		3.25	3.3	3.2	2.9	4.55	8.05	4.2	2.9
25.	1.3	1.0	.9		4.25	3.2	9.1	2.65	4.4	11.4	3.9	2.75
26.	1.3	1.0	.9		4.25	3.1	7.4	2.55	4.35	9.2	3.6	3.65
27.	1.25	.95	b1.7		4.4	3.1	7.95	2.4	4.15	8.55	3.2	3.4
28.	1.2	1.0	b1.35		4.6	3.15	8.8	2.25	3.9	7.0	3.2	3.6
29.	1.15	1.0	b1.5			3.2	8.45	2.15	3.75	6.5	3.15	3.45
30.	1.15	.95	b1.35			3.2	8.25	2.05		4.15	3.15	3.2
31.	1.25		b1.2			2.6		1.75		4.35	3.15	

a River over its banks.

b Ice conditions.

Daily gage height, in feet, of Hondo River at Hondo reservoir site, New Mexico, for 1903-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	3.1	3.1	5.35	4.4	3.0	2.6	2.4					2.55
2.....	3.2	3.05	4.9	4.8	3.1	2.6	2.35				2.35	2.6
3.....	3.25	3.0	4.55	4.75	3.0	2.6	2.65				2.05	2.55
4.....	3.25	3.0	4.4	4.6	3.0	2.6	2.95	2.1			2.15	2.5
5.....	3.1	3.0	4.05	4.3	3.0	2.65	2.9				2.55	2.5
6.....	3.1	3.15	3.85	4.7	3.0	2.65	3.0				2.3	2.3
7.....	3.05	3.35	3.6	4.0	3.0	2.6	3.05					2.2
8.....	3.0	3.3	3.1	2.75	3.05	2.6	3.1					2.2
9.....	3.0	3.45	3.3	2.9	3.0	2.6	3.4					2.15
10.....	3.0	3.8	3.4	2.9	2.95	2.4	3.3					2.1
11.....	3.0	3.85	3.35	3.05	3.0		3.05					2.1
12.....	3.0	3.8	3.4	3.0	3.05		2.95					2.05
13.....	3.0	3.65	3.4	3.05	3.1		2.95					
14.....	3.0	3.65	3.35	3.1	3.05		3.0					
15.....	2.9	3.5	3.2	3.05	2.9		3.0					
16.....	2.9	3.45	3.1	3.05	2.9	2.45	3.05					
17.....	3.0	3.4	3.1	3.1	2.9	2.45	3.15					
18.....	2.9	3.3	3.0	3.2	2.9	2.45	3.05					
19.....	2.95	3.35	3.0	3.15	2.9	2.45	2.9					
20.....	2.95	3.35	2.9	3.2	2.85	2.75	3.0					
21.....	3.0	3.35	2.9	3.25	2.7	2.4	3.0					
22.....	3.0	3.35	3.0	3.3	2.7	2.3	2.95					
23.....	3.05	3.45	3.2	3.25	2.7	2.3	2.9			2.2		
24.....	3.05	3.3	4.0	3.25	2.7	2.15	2.85			2.3		
25.....	3.15	3.3	4.3	3.3	2.7		2.75			2.1		
26.....	3.1	3.3	4.7	3.15	2.7	2.2	2.75					
27.....	3.1	3.25	4.35	3.15	2.6	2.3	2.7					2.2
28.....	3.05	6.7	4.2	3.15	2.6	2.35	2.6					2.3
29.....	3.1	8.7	4.5	3.15		2.35	2.55					2.7
30.....	3.0	6.0	4.5	3.15		2.4	2.35				3.05	3.1
31.....	3.05		4.8	3.05		2.35					2.6	

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1906.			1906.				1906.				
1.....	3.0	2.3	2.3	11.....	2.1	2.2	2.4	21.....	2.1	2.8	2.1
2.....	2.9	2.3	2.2	12.....	2.1	2.2	2.4	22.....	2.1	2.8	2.1
3.....	2.7	2.4	2.4	13.....	2.1	2.2	2.3	23.....	2.0	3.0	2.1
4.....	2.7	2.4	2.3	14.....	2.0	2.2		24.....	2.0	3.1	2.1
5.....	2.7	2.3	2.2	15.....	2.0	2.2		25.....	2.0	3.25	2.1
6.....	2.75	2.25	2.2	16.....	2.1	2.2	2.15	26.....	1.95	2.9	2.1
7.....	2.55	2.2	2.35	17.....	2.1	2.2	2.2	27.....	1.9	2.4	2.1
8.....	2.15	2.2	2.5	18.....	2.1	2.2	2.15	28.....	1.9	2.2	2.1
9.....	2.1	2.2	2.5	19.....	2.1	2.2		29.....	1.95		2.1
10.....	2.1	2.2	2.25	20.....	2.1	2.2	2.1	30.....	2.15	2.4	2.1
								31.....	2.3		2.1

NOTE.—The river was dry on days when the gage was not read, except from Aug. 7 to 29, 1906. The discharge during that period was measured at Scour Gate No. 1.

Daily discharge, in second-feet, of Hondo River at Hondo reservoir site, New Mexico, for 1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	158	28	7	2	0	0	0	0	13	39	8	9
2.....	200	34	7	1	0	0	0	6	15	32	8	6
3.....	195	28	7	7	0	0	0	1	13	21	11	13
4.....	180	28	7	17	3	0	0	2	11	21	11	9
5.....	148	28	8	15	0	0	0	13	11	21	8	6
6.....	190	28	8	19	0	0	0	5	5	24	6	7
7.....	118	28	6	22	0	0	0	.....	3	15	5	12
8.....	19	31	6	25	0	0	0	.....	3	3	5	18
9.....	26	28	6	44	0	0	0	.....	2	2	5	18
10.....	26	25	2	37	0	0	0	.....	2	2	5	9
11.....	35	28	0	27	0	0	0	.....	2	2	5	14
12.....	32	30	0	22	0	0	0	.....	1	2	5	14
13.....	35	32	0	22	0	0	0	.....	0	2	6	10
14.....	38	30	0	24	0	0	0	.....	0	1	6	0
15.....	35	22	0	29	0	0	0	.....	0	1	6	0
16.....	35	21	3	32	0	0	0	.....	0	2	6	6
17.....	38	21	3	38	0	0	0	.....	0	2	6	7
18.....	44	20	3	32	0	0	0	.....	0	2	6	6
19.....	41	20	3	30	0	0	0	.....	0	2	6	0
20.....	44	18	10	36	0	0	0	.....	0	3	6	5
21.....	48	11	2	36	0	0	0	.....	0	3	32	5
22.....	52	11	1	33	0	0	0	.....	0	3	32	5
23.....	44	11	1	34	0	0	3	.....	0	2	46	5
24.....	44	10	0	31	0	0	5	.....	0	2	54	5
25.....	48	10	0	26	0	0	2	.....	0	2	66	5
26.....	37	10	0	25	0	0	0	.....	0	1	39	5
27.....	37	7	1	23	0	0	0	.....	4	1	13	5
28.....	37	7	1	18	0	0	0	.....	6	1	6	5
29.....	37	.....	1	16	0	0	0	.....	21	1	0	5
30.....	37	.....	2	8	0	0	0	.....	39	4	13	5
31.....	31	.....	1	.....	0	.....	0	.....	15	.....	8	5

NOTE.—These discharges were obtained by the indirect method for shifting channels.

Monthly discharge of Hondo River at Hondo reservoir site, New Mexico, for 1906.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	200	19	67.4	4,140
February.....	34	7	21.6	1,200
March.....	10	0	3.10	191
April.....	44	1	24.4	1,450
May.....	3	0	.10	6
June.....	0	0	.00	0
July.....	5	0	.32	20
September.....	45	0	5.23	311
October.....	39	1	7.32	450
November.....	66	0	14.4	857
December.....	18	0	7.23	445

NOTE.—Values are rated as approximate.

INLET CANAL AT HONDO RESERVOIR, NEAR ROSWELL, N. MEX.

Location.—Below the flushing gate at the lower end of the inlet canal from Hondo River to the Hondo reservoir, in sec. 26, T. 11 S., R. 22 E., 12 miles southwest of Roswell.

Records available.—August 6, 1906, to December 31, 1908.

Gage.—Vertical staff established August 25, 1906, and referred to a different datum from that of the original gage, which consisted of notches cut in vertical face of wing wall.

Channel.—Somewhat shifting.

Discharge measurements.—Made by wading.

Artificial control.—The diversion into the inlet canal passing this station represents the flow entering the reservoir.

Accuracy.—Data insufficient for estimates of discharge.

Cooperation.—Station maintained in cooperation with the United States Reclamation Service.

Discharge measurements of inlet canal at Hondo reservoir, near Roswell, N. Mex., in 1906-7.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 6	J. M. Giles.....	2.02	40	Jan. 5	W. A. Lamb.....	0.20	28
7	do.....	2.33	93	23	do.....	.50	177
Dec. 20	W. A. Lamb.....	.22	32	Nov. 20	Freeman & Boscoe....	.10	48

Daily gage height, in feet, of inlet canal at Hondo reservoir, near Roswell, N. Mex., for 1906-1908.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1906.			1906.			1906.		
1.....		0.1	11.....	1.25	0.04	21.....		
2.....		.1	12.....	.3		22.....		
3.....		.1	13.....			23.....		
4.....		.1	14.....		.04	24.....		
5.....		.1	15.....		.02	25.....	0.1	
6.....		.1	16.....			26.....	.6	
7.....	2.25	.05	17.....			27.....	.6	0.3
8.....	1.95	.05	18.....			28.....	.25	.35
9.....	2.25	.04	19.....			29.....	.1	.15
10.....	1.9	.02	20.....			30.....	.05	
						31.....	.1	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....			0.2	0.30	0.35							0.40
2.....			.3	.30	.38							.10
3.....			.4	.32	.30							.10
4.....		0.05	.45	.28	.30						0.05	.05
5.....		.05	.75	.22	.30							.10
6.....		.05	.95	.18	.25							.08
7.....	0.05		.65	.20	.20							.08
8.....	.1		.5	.15	.25							.05
9.....	.1		.4	.18	.20							.05
10.....	.1		.4	.25	.12							
11.....	.1		.35	.30	.12							
12.....	.1		.35	.30	.15							
13.....	.1		.3	.25	.15					0.15		
14.....	.1		.3	.30	.15					.08		
15.....	.15		.25	.25	.10							
16.....	.1		.3	.28	.05							.15
17.....	.1		.3	.80	.05							.15
18.....	.1		.3	1.00	.05							.10
19.....	.1		.25	1.00	.05							.05
20.....	.1		.2	1.00	.05					.10		.10
21.....	.1		.25	.75	.05				0.05	.02	.10	.05
22.....	.1	.1	.2	.58	.05						.10	.08
23.....	.1	.15	.2	.50	.00				.05	.12	.05	.05
24.....	.1	.1	.2	.50	.00				.05	.02	.02	
25.....	.1	.15	.2	.50								
26.....	.1	.2	.2	.45							.15	
27.....	.1	.2	.2	.50						.10	.18	
28.....	.1	.1	.15	.40						.20	.30	
29.....	.1	.2	.15	.38						.15	.50	
30.....	.08	.15	.22	.30						.20	.50	
31.....	.02		.25	.25						.08	.45	

Daily gage height, in feet, of inlet canal at Hondo reservoir, near Roswell, N. Mex., for 1906-1908—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1907-8.						1907-8.					
1.....		0.30	0.05	0.05		16.....		0.05			
2.....		.30	.05	.05		17.....		.05			
3.....		.30	.05	.05		18.....		.05			
4.....		.25	.05	.05		19.....		.08			
5.....		.25	.05	.20		20.....		.08			
6.....		.20	.05	.20		21.....	0.02	.05			
7.....		.20	.05	.05		22.....	.05	.05			
8.....		.20	.05	.05		23.....	.05	.05			
9.....		.05	.05	.05		24.....	.05	.05	0.05		
10.....		.05	.05	.05	0.20	25.....	.05	.05	.05		
11.....		.05		.05	.30	26.....	.10	.05	.05		
12.....		.05		.05		27.....	.10	.05	.05		
13.....		.05				28.....	.10	.05	.05		
14.....		.05				29.....	.40	.05	.05		
15.....		.05				30.....	.30	.05	.05		
						31.....	.30		.05		

NOTE.—Canal was dry on days for which no gage heights are published.

HONDO RIVER AT ROSWELL, N. MEX.

Location.—At the bridge at the intersection of Main and Vegas Streets, Roswell.

Between Roswell and the mouth the Hondo receives North and South Spring rivers, which are fed by springs at their source.

Records available.—June 8, 1903, to February 28, 1906.

Drainage area.—Not measured.

Gage.—Inclined staff. A new gage was set August 8, 1905, and it is not known whether it was referred to the original datum. This gage was lowered 3 feet February 8, 1906, and all gage heights for 1906 were referred to the later datum.

Channel.—Shifting.

Discharge measurements.—Made from bridge.

Diversions.—The normal flow is diverted for irrigation above the station.

Storage.—Hondo reservoir has a capacity of 40,000 acre-feet and is designed to store the flood waters of the river. As it was not completed until 1906 it is possible that prior to that year little if any water was stored during the period covered by the records.

Accuracy.—Owing to insufficient data, estimates of daily and monthly discharge have not been made for periods prior to 1906, and estimates for subsequent periods are only approximate.

Discharge measurements of Hondo River at Roswell, N. Mex., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Fect.</i>	<i>Sec.-ft.</i>	1905.		<i>Fect.</i>	<i>Sec.-ft.</i>
June 11	W. A. Wilson.....	2.50	71.3	Apr. 13	J. M. Giles.....	.10	6
12	.....do.....	2.40	73.5	25	E. Patterson.....	5.20	345
14	.....do.....	3.80	245.0	25	.....do.....	5.60	383
15	.....do.....	4.10	310.0	25	W. A. Wilson.....	6.00	429
20	.....do.....	2.20	96.0	26	E. Patterson.....	4.80	306
				26	.....do.....	4.50	271
1904.				26	.....do.....	4.95	356
May 28	F. Dobson.....	.53	2.8	27	.....do.....	4.20	206
July 3	.....do.....	2.80	167	May 13	.....do.....	1.75	78
Sept. 28	.....do.....	3.60	196	17	J. M. Giles.....	1.10	38
28	.....do.....	2.30	61	July 24	E. Patterson.....	5.00	551
28	.....do.....	2.95	121	24	.....do.....	3.20	311
29	.....do.....	4.50	415	25	.....do.....	5.00	550
Oct. 1	.....do.....	3.85	257	26	.....do.....	5.90	682
10	.....do.....	4.20	336	26	.....do.....	5.60	648
Nov. 2	.....do.....	.90	13.7	27	.....do.....	4.75	495

Discharge measurements of Hondo River at Roswell, N. Mex., in 1903-1906—Contd.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 28	E. Patterson	4.00	409	Nov. 29	E. Patterson	3.95	394
31	do.	2.00	166	Dec. 3	do.	1.35	124
Aug. 2	J. M. Giles	2.50	234	9	do.	.40	51
2	do.	1.85	169	23	do.	.20	36
8	E. Patterson	2.10	192				
15	do.	1.50	116	1906.			
26	do.	— .10	22	Jan. 15	E. Patterson	1.70	6
28	do.	—1.10	1.2	Feb. 3	do.	2.10	18
Sept. 8	do.	— .99	3	12	do.	1.95	4.9
11	do.	— .75	68	19	do.	1.45	.33
Oct. 4	do.	—1.00	1.2	Apr. 6	E. C. Murphy	1.52	a.6
Nov. 10	do.	.80	52				

a Estimated.

Daily gage height, in feet, of Hondo River at Roswell, N. Mex., for 1903-4, 1906.

Day.	June.	Day.	June.	Day.	June.	Day.	June.	Day.	June.
1903.		1903.		1903.		1903.		1903.	
8.	3.8	12.	2.4	16.	3.8	20.	2.2	23.	1.5
9.	1.2	13.	2.7	17.	2.9	21.	1.9	24.	0.6
10.	1.4	14.	4.2	18.	2.9	22.	1.7		
11.	2.5	15.	4.1	19.	2.4				

Day.	May.	July.	Aug.	Sept.	Oct.	Nov.	Day.	May.	July.	Aug.	Sept.	Oct.	Nov.
1904.							1904.						
1					3.9	0.7	16					1.75	0.65
2			0.3		3.25	.6	17					1.75	
3		1.8		1.4	2.55	.6	18		0.15			1.75	
4		.3	1.3		2.4	.6	19		1.5			1.7	
5			1.2		2.2	.6	20		1.05			1.6	
6			1.35		2.15	.65	21		.0			1.6	
7			3.05		2.65	.7	22		1.25			1.6	
8			.5		4.6	.8	23		1.6			1.5	
9			.5		4.8	.9	24					1.5	
10			2.95		4.35	.9	25					1.4	
11				1.25	4.5	.9	26					.9	
12					3.25	.9	27		0.4			.9	
13					2.7	.9	28		.3		2.25	1.0	
14				.85	2.1	.7	29				3.15	1.0	
15					1.9	.7	30				4.3	.9	
							31					.85	

Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.
1906.				1906.				1906.			
1	2.5	2.2	1.4	11	2.3	1.5		21	2.45	1.4	
2	2.5	2.2	1.4	12	2.45	1.75		22	2.6	1.4	
3	2.4	2.2		13	2.35	1.9		23	2.5	1.4	
4	2.3	2.2		14	2.25	1.65		24	2.55	1.4	
5	2.15	2.25		15	2.1	1.65		25	2.6	1.4	
6	2.0	2.0		16	2.0	1.6		26	2.55	1.4	
7	2.3	2.0		17	2.3	1.5		27	2.55	1.4	
8	2.45	1.5		18	2.05	1.55		28	2.55	1.4	
9	2.2	1.5		19	1.8	1.5		29	2.5		
10	2.35	1.5		20	2.2	1.45		30	2.5		
								31	2.35		

NOTE.—The gage was lowered 3.00 feet February 8, 1906; all gage heights for 1906 refer to the new datum. No flow June 25, 1903, to the end of the year, nor for the days in 1904 for which no gage heights are published. The gage heights for 1905 are so uncertain that it has been decided not to publish them.

Daily discharge, in second-feet, of Hondo River at Roswell, N. Mex., for 1906.

Day.	Jan.	Feb.	Day.	Jan.	Feb.	Day.	Jan.	Feb.
1.....	33	21	11.....	25	1.0	21.....	31	0.2
2.....	33	21	12.....	31	2.5	22.....	38	.2
3.....	29	21	13.....	27	4.5	23.....	33	.2
4.....	25	21	14.....	23	1.6	24.....	36	.2
5.....	20	23	15.....	18	1.6	25.....	38	.2
6.....	15	12	16.....	15	1.2	26.....	36	.2
7.....	25	12	17.....	25	.6	27.....	36	.2
8.....	31	2	18.....	16	.9	28.....	36	.2
9.....	21	2	19.....	8	.6	29.....	33	.....
10.....	27	2	20.....	21	.4	30.....	33	.....
						31.....	27	.....

NOTE.—These discharges were obtained by the indirect method for shifting channels.

Monthly discharge of Hondo River at Roswell, N. Mex., for 1906.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....		8	27.3	1,680
February.....	38	0.2	5.5	305

NOTE.—Values rated as approximate.

RIO RUIDOSO NEAR RUIDOSO, N. MEX.

Location.—At Wingfield's ranch, in sec. 21, T. 11 S., R. 13 E., in the Lincoln National Forest, about 3 miles northwest of Ruidoso, 1 mile above the mouth of Carrizo Creek. A small stream enters from the north just above the station.

Records available.—May 30 to July 31, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made by wading.

Accuracy.—Owing to the meagerness of the data no estimates of flow can be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service.

The following discharge measurement was made by H. B. Waha:

May 30, 1911: Gage height, 1.24 feet; discharge, 10.4 second-feet.

Daily gage height, in feet, of Ruidoso River near Ruidoso, N. Mex., for 1911.

Day.	May.	June.	July.	Day.	May.	June.	July.	Day.	May.	June.	July.
1.....		1.22	1.00	11.....		1.04	1.33	21.....		1.23	1.58
2.....		1.22	1.64	12.....		1.12	1.44	22.....		1.16	1.53
3.....		1.18	1.54	13.....		1.13	1.62	23.....		1.11	1.49
4.....		1.14	1.50	14.....		1.12	1.80	24.....		1.10	1.48
5.....		1.13	1.45	15.....		1.12	1.49	25.....		1.08	1.42
6.....		1.13	1.54	16.....		1.08	1.43	26.....		1.07	1.38
7.....		1.12	1.68	17.....		1.05	1.62	27.....		1.04	1.30
8.....		1.12	1.55	18.....		1.02	1.72	28.....		1.03	1.24
9.....		1.12	1.51	19.....		1.00	1.72	29.....		1.04	1.23
10.....		1.07	1.38	20.....		1.32	1.66	30.....	1.23	1.01	1.21
								31.....	1.24	.....	1.20

RIO RUIDOSO NEAR GLENCOE, N. MEX.

Location.—At the forest-ranger station in the Lincoln National Forest, in sec. 33, T. 10 S., R. 15 E., about 2 miles above Glencoe post office, 1½ miles above the mouth of Perry Canyon, and 2½ miles above the mouth of Eagle Creek.

Records available.—August 17, 1910, to November 6, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Inclined staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made by wading.

Winter flow.—Ice exists at this station during the winter months.

Diversions.—Numerous small ditches divert water for irrigation for a distance of 16 miles above the station.

Accuracy.—Owing to lack of discharge measurements no estimates of discharge can be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service.

Discharge measurements of Rio Ruidoso near Glencoe, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 17	W. B. Freeman.....	1.48	7.6
Nov. 26	J. B. Stewart.....	1.50	6.6
1911.			
June 1	H. B. Waha.....	1.75	22.2

Daily gage height, in feet, of Rio Ruidoso near Glencoe, N. Mex., for 1910-11.

Day.	Aug.	Day.	Aug.	Day.	Aug.
1910.		1910.		1910.	
1		11		21	
2		12		22	
3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17	1.5	27	
8		18	1.9	28	
9		19	1.6	29	
10		20	1.55	30	
				31	

Daily gage height, in feet, of Rio Ruidoso near Glencoe, N. Mex., for 1910-11—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1			1.45			1.50	2.15	2.18	1.90	2.50	1.82	
2			1.5		1.45	1.54	2.05	2.08	1.82	2.37	1.72	1.60
3			1.5	2.20		1.56	2.02		1.68	2.15	1.70	
4		1.6	1.5	2.10		1.55	2.00		1.62	2.00	1.65	1.60
5		1.6	1.5		1.40	1.60	1.90		1.60	2.05	1.60	1.60
6		1.6			1.35	1.68	1.78		1.68	2.05	1.52	1.60
7		1.5			1.25	1.68	1.70		1.62	2.08	1.50	
8		1.5	1.5	1.50	1.25				1.62		1.47	
9		1.6	1.5	1.50	1.24				1.65		1.45	
10		1.55	1.5		1.22	1.76	1.90		1.72		1.45	
11		1.5	1.5		1.21	1.80	1.90			2.20	1.40	
12		1.5	1.5		1.21	1.86	1.80		1.68	2.30	1.35	
13		1.5				1.82	1.80		1.60	2.30		
14		1.5	1.5		1.22	1.90			1.52	2.35	1.35	
15		1.55	1.5		1.22	1.80			1.50	2.45	1.34	
16			1.5			1.70	1.80	2.25	1.48	2.25	1.30	
17		1.5	1.5		2.30	1.70	1.80	1.95	1.72	2.45	1.30	
18		1.5	1.5			1.73		1.95		2.57		1.65
19		1.5	1.5	1.50		1.76		1.95	1.62	2.50	1.10	1.65
20	1.45	1.5	1.5	1.50		1.79	1.80	1.82	1.55	2.45	1.05	
21	1.45	1.5	1.5	1.50		1.79	1.80	1.82	1.50		1.08	
22		1.5	1.5	1.50			1.80	1.72	1.55		1.05	
23		1.5		1.50	1.32	1.80	1.80	1.78	1.62		1.05	1.65
24		1.5		1.50	1.41	1.80		1.68	1.90	2.50	1.10	1.60
25	1.45			1.50	1.46	1.85		1.62	1.70		1.15	1.60
26	1.5	1.5		1.50	1.41	1.88	2.10	1.62	1.58		1.50	1.60
27	1.5	1.5	1.5	1.50	1.42		2.10	1.60	1.80	2.40	1.60	1.62
28		1.5	1.5	1.50	1.51		2.10	1.55	1.70	2.15	1.65	1.58
29		1.5	1.5	1.45			2.15	2.60	1.65	2.00	1.60	
30	1.5	1.5	1.6	1.45			2.30	1.75		1.90	1.60	1.65
31	1.5		1.45	1.45			2.15	1.88		1.88		

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1911.			1911.			1911.		
1	1.65		11	1.90		21	1.60	
2	1.65	1.60	12	1.85		22	1.60	
3	1.65		13	1.85		23	1.60	
4	1.65	1.60	14	1.85		24	1.60	
5	1.80	1.60	15			25	1.60	
6	2.50	1.60	16	1.75		26	1.60	
7	2.40		17	1.75		27	1.60	
8	2.40		18			28	1.60	
9	2.15		19	1.65		29	1.75	
10	1.95		20	1.65		30		
						31		

NOTE.—Gage heights affected by ice Jan. 3 to Feb. 6, 1911.

PENASCO RIVER BASIN.

GENERAL FEATURES.

Penasco River, an intermittent tributary of the Pecos, rises high on the eastern slope of the Sacramento Mountains and takes an easterly course to the Pecos, which it enters near Dayton. The tributaries are chiefly confined to the upper portion of the basin, except Bluewater Creek, which enters near the Chaves-Eddy County line. The principal tributaries are Elk and Chiquito creeks.

The topography of the Penasco basin is similar to that of the Hondo, the upper portion including the eastern slope of the Sacra-

mento Mountains and reaching to their crest. Throughout its upper course the Penasco is a perennial stream, but, owing to the porous soil of the Pecos Valley, across which it flows after leaving the foothills of the Sacramento Mountains, the water sinks into the ground, leaving only flood water to reach the Pecos.

The precipitation in the basin of the Penasco decreases from 23 inches and more at the crest of the Sacramento Mountains to 21 inches at Elk and 12 inches at the mouth. Most of the precipitation occurs during the summer months.

GAGING STATION RECORDS.

PENASCO RIVER AT ELK, N. MEX.

Location.—At Elk post office, in sec. 5, T. 16 S., R. 16 E. Nearest tributary, Burned Canyon, which enters a short distance above. Elk Canyon enters $1\frac{1}{2}$ miles below.

Records available.—Fragmentary records from August 15, 1910, to September 30, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Chain gage established on November 25, 1910, which replaced a staff gage established August 15, 1910. Chain-gage datum differs from that of the staff gage.

Channel.—Data too meager to determine.

Discharge measurements.—Made by wading.

Winter flow.—No data.

Diversions.—Many small irrigation ditches divert water for 30 miles above the station.

Accuracy.—Owing to the lack of discharge measurements no estimate of flow can be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Penasco River at Elk, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 15	W. B. Freeman.....	1.62	29.7	Jan. 16	Digby and Benson.....	1.98	19.4
Nov. 25	J. B. Stewart.....	1.85	22.4	May 27	H. B. Waha.....	1.73	5.5

NOTE.—Gage heights of measurements are referred to different datums.

Daily gage height, in feet, of Penasco River at Elk, N. Mex., for 1910-11.

Day.	Aug.	Day.	Aug.	Day.	Aug.
1910.					
1.....		11.....		21.....	2.1
2.....		12.....		22.....	2.1
3.....		13.....		23.....	2.3
4.....		14.....		24.....	2.1
5.....		15.....	1.62	25.....	2.1
6.....		16.....	1.65	26.....	2.05
7.....		17.....	^a 4.3	27.....	2.05
8.....		18.....		28.....	
9.....		19.....	^(b)	29.....	2.05
10.....		20.....	2.2	30.....	2.1
				31.....	^c 3.6

^a Gage washed out at 4.30 p. m.; approximate height, 6.5 feet.

^b Gage replaced by observer at same location; datum unknown.

^c Gage washed out on Sept. 1, 1910.

Daily gage height, in feet, of Penasco River at Elk, N. Mex., for 1910-1911—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.									
1.								1.9	1.5
2.						1.8	1.9		
3.			1.9		1.8		1.95		1.55
4.				1.9	1.8	1.75			1.6
5.				1.9	1.8	1.82			1.5
6.						1.78		1.8	1.5
7.				1.9	1.8				1.45
8.			1.9	1.9	1.8	1.7			
9.				1.9	1.8	1.65	2.0		2.45
10.					1.8		2.05	1.75	
11.			1.8			1.7	2.0	1.7	2.0
12.				1.8		1.8		1.7	1.75
13.							1.95	1.7	1.75
14.						1.9	2.0		
15.	1.9		1.8		1.9	1.9		1.65	1.7
16.	1.85					1.85	1.95		
17.				1.8			1.95	1.5	1.7
18.				1.8	1.9	1.88	1.95		1.75
19.			1.8	1.8	1.8				1.65
20.			1.8					1.45	
21.									1.8
22.			1.8						
23.				1.9			1.9	1.45	
24.				1.9					
25.						1.7			1.9
26.			1.8			1.7	1.9	1.5	1.9
27.					1.73	1.65		1.5	
28.					1.7	1.6	1.95		
29.							2.0		1.85
30.				1.9	1.78	1.7	2.15		1.8
31.			1.8					1.45	

PENASCO RIVER NEAR ELK, N. MEX.

Location.—At Cleve's ranch, about sec. 12, T. 16 S., R. 17 E., 4 miles below Elk post office, below the springs which give rise to the Lower Penasco.

Records available.—January 17 to March 31, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too few to determine.

Discharge measurements.—Made from footbridge.

Diversions.—No water is diverted from the Lower Penasco above this station.

Accuracy.—Owing to the lack of discharge measurements no estimates of discharge can be made.

Cooperation.—Gage heights furnished by Mr. Walter Coleman. Maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Penasco River near Elk, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Discharge.
1910. Mar. 23		Feet.	Sec.-ft. 32
1911. Jan. 17	Digby and Benson.....	2.35	59.

Daily gage height, in feet, of Penasco River near Elk, N. Mex., for 1911.

Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.	Day.	Jan.	Feb.	Mar.
1.....		2.4	2.4	11.....		2.3	2.4	21.....	2.4	2.2	2.2
2.....		2.4	2.3	12.....		2.3	2.4	22.....	2.4	2.2	2.3
3.....		2.3	2.3	13.....		2.3	2.3	23.....	2.4	2.3	2.3
4.....		2.3	2.3	14.....		2.3	2.3	24.....	2.5	2.4	2.3
5.....		2.3	2.4	15.....		2.2	2.3	25.....	2.35	2.5	2.3
6.....		2.3	2.4	16.....		2.2	2.25	26.....	2.2	2.3	2.4
7.....		2.3	2.4	17.....	2.4	2.3	2.2	27.....		2.4	2.4
8.....		2.2	2.2	18.....	2.4	2.4	2.2	28.....	2.3	2.4	2.4
9.....		2.2	2.2	19.....	2.4	2.5	2.2	29.....	2.3		2.4
10.....		2.2	2.2	20.....	2.4	2.2	2.2	30.....	2.4		2.4
								31.....	2.4		2.3

PENASCO RIVER NEAR DAYTON, N. MEX.

Location.—Two miles east and 1 mile north of Dayton. There is no tributary between the station and the mouth of the river, 1 mile below.

Records available.—September 12, 1905, to December 31, 1908.

Drainage area.—Approximately 1,300 square miles.

Gage.—Inclined and vertical sections of staff gage.

Channel.—Shifting.

Discharge measurements.—Made by wading.

Diversions.—No data.

Accuracy.—Owing to shifting channel and insufficient data no estimates have been made except for 1905 and a part of 1906. These estimates are only fair.

Discharge measurements of Penasco River near Dayton, N. Mex., in 1905-1907.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 12	J. M. Giles.....	1.00	7.4	Jan. 11	E. Patterson.....	1.30	32
15	E. Patterson.....	.90	4.4	16	.....do.....	1.38	49
Oct. 4	J. M. Giles.....	.95	4.6	Feb. 1	.....do.....	1.38	48
15	E. Patterson.....	.95	5.4	13	J. M. Giles.....	1.40	53
Nov. 23	J. M. Giles.....	1.80	151	Mar. 24	E. Patterson.....	1.06	10
23	do.....	1.47	71	29	J. M. Giles.....	1.00	8.6
23	do.....	1.37	53	Apr. 20	.....do.....	1.30	38
28	do.....	1.15	20	May 10	.....do.....	.80	.4
Dec. 28	E. Patterson.....	1.27	29	Oct. 30	W. A. Lamb.....	1.05	2
				1907.			
				Feb. 20	W. A. Lamb.....	1.28	25
				Mar. 27	.....do.....	.93	.4

Daily gage height, in feet, of Penasco River near Dayton, N. Mex., for 1905-1907.

Day.	Sept.	Day.	Sept.	Day.	Sept.
1905.					
1.....		11.....		21.....	1.5
2.....		12.....	1.0	22.....	.9
3.....		13.....	.8	23.....	.8
4.....		14.....	.6	24.....	.9
5.....		15.....	.95	25.....	1.0
6.....		16.....	1.0	26.....	.9
7.....		17.....	1.0	27.....	1.0
8.....		18.....	1.0	28.....	.9
9.....		19.....	1.0	29.....	.9
10.....		20.....	1.0	30.....	.9

Daily gage height, in feet, of Penasco River near Dayton, N. Mex., for 1905-1907—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	0.9	1.0	1.6	.....	1.4	1.4	1.0	1.1	0.3	.....	0.7	0.8
2.....	.9	1.0	1.9	.....	1.4	1.3	1.0	1.1	.3	.....	.7	.9
3.....	1.0	1.0	1.5	.....	1.4	1.3	1.0	1.1	.3	.....	.8	1.0
4.....	1.0	1.3	1.6	.....	1.4	1.3	1.2	1.1	.1	.....	.7	.8
5.....	1.0	1.5	1.6	.....	1.4	1.3	1.3	1.0	.....	.....	.9	.7
6.....	1.0	1.0	1.6	.....	1.4	1.3	1.3	1.0	.....	0.7	.8	.6
7.....	.9	1.0	1.5	.....	1.4	1.2	1.3	.8	.....	.8	.7	.7
8.....	1.0	1.0	1.5	.....	1.4	1.2	1.3	.7	.....	.7	.7	.9
9.....	1.0	1.0	1.4	.....	1.4	1.2	1.2	.7	.....	.7	.7	.9
10.....	1.0	1.0	1.4	.....	1.4	1.2	1.2	.8	.....	.7	.7	.8
11.....	1.0	1.0	1.4	.....	1.4	1.2	1.2	.8	.....	.7	.7	.8
12.....	1.0	1.0	1.4	.....	1.5	1.1	1.2	.8	.....	.6	.8	.7
13.....	1.0	1.0	1.4	.....	1.4	1.1	1.2	.7	.....	.5	.7	.7
14.....	1.0	1.0	1.5	.....	1.4	1.1	1.2	.8	.....	.7	.7	.8
15.....	1.0	1.0	1.5	.....	1.4	1.1	1.2	.8	.....	.7	.7	.8
16.....	1.0	1.0	1.5	.....	1.4	1.1	1.3	.9	.....	.7	.7	.7
17.....	1.0	1.0	1.5	.....	1.4	1.1	1.4	.8	.....	.8	.7	.8
18.....	1.0	1.0	1.5	.....	1.4	1.1	1.4	.7	.....	.9	.7	.8
19.....	1.0	1.0	1.5	.....	1.4	1.1	1.3	.7	.....	.8	.7	.8
20.....	1.0	1.0	1.5	.....	1.4	1.1	1.3	.7	.....	.7	.7	.8
21.....	1.0	1.0	1.5	.....	1.4	1.2	1.3	.7	.....	.7	.7	.8
22.....	1.0	1.0	1.5	1.4	1.3	1.2	1.3	.7	.....	.7	.7	.8
23.....	1.0	1.55	1.5	1.3	1.4	1.2	1.3	.7	.....	.7	.7	.8
24.....	1.0	1.3	1.5	1.2	1.4	1.2	1.3	.7	.....	.7	.7	.8
25.....	1.0	1.2	1.3	1.3	1.4	1.1	1.3	.7	.....	.7	.7	.8
26.....	1.0	1.2	1.2	1.4	1.4	1.1	1.2	.6	.....	.7	.7	1.9
27.....	1.0	1.1	1.4	1.4	1.4	1.1	1.2	.6	.....	.7	2.3	1.2
28.....	1.0	1.8	1.4	1.4	1.4	1.1	1.3	.5	.....	.7	1.3	2.8
29.....	1.0	1.7	1.3	1.4	.....	1.0	1.2	.3	.....	.7	.7	.8
30.....	1.0	1.7	1.2	1.4	.....	1.0	1.1	.3	.....	.7	1.0	.8
31.....	1.0	.....	1.8	1.4	.....	1.0	.....	.3	.....	.7	.9	.....
1906-7.												
1.....	.8	1.1	1.7	1.3	1.3	1.0	1.0	.9	.7	.4	.....	.....
2.....	.8	1.1	1.0	1.3	1.3	1.0	1.0	.9	.7	.4	.....	.....
3.....	.8	1.1	1.3	1.3	1.4	1.0	.9	.9	.6	.4	.....	.....
4.....	.9	1.1	1.3	1.3	1.4	1.0	.9	.9	.6	.4	.....	.....
5.....	1.0	1.1	1.3	1.3	1.4	1.0	.9	.8	.6	.4	.....	.....
6.....	1.0	1.1	1.3	1.3	1.4	1.0	.8	.8	.6	.3	.....	.....
7.....	1.0	1.1	1.3	1.3	1.3	1.0	.8	.8	.6	.3	.....	.....
8.....	1.0	1.1	1.3	1.2	1.3	1.0	.8	.8	.6	.8	.....	.....
9.....	1.0	1.1	1.3	1.2	1.3	1.0	.9	.8	.6	.8	.....	.....
10.....	1.0	1.1	1.3	1.3	1.3	1.0	.9	.8	.6	.7	.....	.....
11.....	1.0	1.1	1.3	1.3	1.3	1.0	.9	.8	.6	.6	.....	.....
12.....	1.0	1.1	1.3	1.3	1.2	1.0	.9	.7	.6	.5	.....	.....
13.....	1.0	1.1	1.3	1.3	1.2	.9	.9	.7	.5	.4	.....	.....
14.....	1.0	1.1	1.3	1.3	1.1	.9	.8	.7	.5	.4	.....	.....
15.....	1.2	1.1	1.3	1.3	1.2	1.0	.8	.7	.6	.4	.....	.....
16.....	1.1	1.1	1.3	1.3	1.3	1.0	.8	.9	.6	.4	.....	.....
17.....	1.0	1.1	1.3	1.3	1.3	1.0	.8	.7	.6	.....	.....	.....
18.....	1.0	1.1	1.3	1.4	1.3	1.0	.8	.7	.6	.....	.....	.....
19.....	1.0	.....	1.3	1.4	1.4	1.0	.8	.7	.6	.....	.....	.....
20.....	1.0	1.7	1.3	1.5	1.2	1.0	.8	.7	1.5	.....	.....	.....
21.....	.9	1.7	1.3	1.5	1.3	1.0	.9	.7	1.0	.....	.....	.....
22.....	.8	1.5	1.3	1.5	1.3	1.0	.8	.7	.9	.....	.....	.....
23.....	.9	1.5	1.3	1.5	1.3	1.0	.9	.7	.9	.....	.....	.....
24.....	1.0	1.5	1.4	1.5	1.2	.9	.9	.7	.8	.....	.....	.....
25.....	1.0	1.4	1.4	1.5	1.2	.9	.7	.8	.....	.....	.....	.....
26.....	1.0	1.3	1.4	1.5	1.3	.9	.9	.7	.8	.....	.....	.....
27.....	1.0	1.2	1.3	1.5	1.2	.9	.9	.7	.8	.....	.....	.....
28.....	1.0	1.2	1.3	1.5	1.1	.9	.9	.7	.4	.....	.....	.....
29.....	1.0	1.2	1.3	1.5	.....	.9	.9	.8	.4	.....	.....	.....
30.....	1.0	1.2	1.3	1.4	.....	1.0	.9	.7	.5	.....	.....	.....
31.....	1.1	.....	1.3	1.4	.....	1.0	.....	.7	.....	.....	.....	.....

Daily gage height, in feet, of Penasco River near Dayton, N. Mex., for 1905-1907—Contd.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1907.				1907.				1907.			
1.....		0.7	1.0	11.....		0.4	1.0	21.....		1.0	1.0
2.....		.7	1.0	12.....		1.0	1.0	22.....		1.0	1.0
3.....		.6	1.0	13.....		1.0	1.0	23.....		1.0	1.0
4.....		.5	1.0	14.....		1.0	1.0	24.....		1.0	.8
5.....		.4	1.0	15.....		1.0	1.0	25.....		1.0	.8
6.....		.3	1.0	16.....		1.0	1.0	26.....		1.0	.....
7.....		.3	1.0	17.....		1.0	1.0	27.....		1.0	.....
8.....		.3	1.0	18.....		1.0	1.0	28.....		1.0	.....
9.....		.3	1.0	19.....		1.0	1.0	29.....		2.1	1.0
10.....		.3	1.0	20.....		1.0	1.0	30.....		1.5	1.0
								31.....		.8	.....

NOTE.—River was dry June 5 to July 5, 1906; July 17 to Oct. 27, 1907; and Dec. 26, 1907, to Mar. 31, 1908. The following gage heights in feet were observed in 1908: July 20, 1.8; July 21, 1.6; July 22, 1.1; July 23, 1.6; Aug. 5, 1.4. The stream was practically dry during the entire season of 1908, except for one or two occasional freshets.

Daily discharge, in second-feet, of Penasco River near Dayton, N. Mex., for 1905-6.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1905-6.									
1.....		5	7	99		53	53	7	13
2.....		5	7	180		53	35	7	13
3.....		7	7	77		53	35	7	13
4.....		7	40	99		53	35	23	13
5.....		7	77	99		53	35	35	7
6.....		7	7	99		53	35	35	3
7.....		5	7	77		53	23	35	.4
8.....		7	7	77		53	23	35	.0
9.....		7	7	57		53	23	23	.0
10.....		7	7	57		53	23	23	.4
11.....		7	7	57		53	23	23	.4
12.....		7	7	57		73	13	23	.4
13.....		3	7	57		53	13	23	.0
14.....		1	7	77		53	13	23	.4
15.....		6	7	77		53	13	23	.4
16.....		7	7	77		53	13	35	3
17.....		7	7	77		53	13	53	.4
18.....		7	7	77		53	13	53	.0
19.....		7	7	77		53	13	35	.0
20.....		7	7	77		53	13	35	.0
21.....		77	7	77		53	23	35	.0
22.....		5	7	77	53	35	23	35	.0
23.....		3	7	88	77	35	23	35	.0
24.....		5	7	40	77	23	53	23	.0
25.....		7	7	26	40	35	53	13	.0
26.....		5	7	26	26	53	53	13	23
27.....		7	7	15	57	53	53	13	23
28.....		5	7	150	57	53	53	13	35
29.....		5	7	123	40	53		7	23
30.....		5	7	123	26	53		7	13
31.....			7		150	53		7	.0

Monthly discharge of Penasco River near Dayton, N. Mex., for 1905-6.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
September 12-30.....	77	1	9.3	351
October.....	7	5	6.8	418
November.....	150	7	28.3	1,684
December.....	180	26	75.3	4,630
January 22-31.....	53	23	46.4	920
February.....	73	35	53.1	2,950
March.....	53	7	20.2	1,240
April.....	53	7	28.3	1,680
May.....	13	0	2.2	135
June.....	0	0	.0	0

NOTE.—Discharges have not been computed after June 30, 1906, on account of the lack of measurements; 1906 values are rated as follows: January to April, good; May, approximate.

DELAWARE RIVER BASIN.

GENERAL FEATURES.

Delaware River rises in the northern part of Culberson County, Tex., on the eastern slope of the Guadalupe Mountains, flows north-eastward, and joins the Pecos a few miles above the New Mexico-Texas line. The only important tributaries are the headwater streams forming the Delaware.

The mean annual precipitation, as determined from the lines of equal rainfall (Pl. III) is about 13 inches for the area drained by the Delaware. On the headwaters, which rise at a considerably higher altitude, it is probable that the precipitation is somewhat greater.

GAGING STATION RECORDS.

DELAWARE RIVER NEAR MALAGA, N. MEX.

Location.—About one-fourth mile south of New Mexico-Texas State line, 20 miles southwest of Malaga, N. Mex., 5 miles above the mouth, in sec. 33, T. 26 S., R. 28 E.

Records available.—April 20, 1912, to September 25, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Subject to shift during high water.

Discharge measurements.—By wading.

Winter flow.—Very little backwater from ice during the winter months.

Diversions.—No data.

Accuracy.—Estimates of daily discharge considered good.

Cooperation.—Maintained in cooperation with Mr. W. J. Coad, Omaha, Nebr., and the State engineer.

Discharge measurements of Delaware River near Malaga, N. Mex., in 1912-13.

Date	Hydrographer.	Gage height.	Dis-charge	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Fcet.</i>	<i>Sec.-ft.</i>	1912.		<i>Fcet.</i>	<i>Sec.-ft.</i>
Apr. 23	R. H. Fletcher.....	1.00	2.7	Dec. 10	E. L. Redding.....	1.00	3.4
June 12	S. S. Carroll.....	2.40	125				
Aug. 27	E. L. Redding.....	1.00	3.9	1913.			
Oct. 1	.....do.....	1.01	3.5	May 26	F. L. Redding.....	.85	2.0
30	.....do.....	.92	2.6	July 28	C. J. Emerson.....	1.18	3.3

Daily gage height, in feet, of Delaware River near Malaga, N. Mex., for 1912-13.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1912.							1912.						
1.....		1.05	1.00		1.00	1.05	16.....		1.19	1.00	1.15	2.85	1.20
2.....		1.05	1.00		1.00	1.05	17.....		1.19	1.00	1.00		1.15
3.....		1.05	1.00		1.10	1.10	18.....		1.19	1.00			1.15
4.....		1.05	1.00		1.05	1.10	19.....		1.20	1.00			1.05
5.....		1.08	1.00		1.00	1.15	20.....	1.00	1.20	1.00			1.00
6.....		1.08	1.00		1.00	1.13	21.....	1.00	1.20				1.00
7.....		1.10	1.00		1.00	1.12	22.....	1.00	1.20			1.20	1.05
8.....		1.10	1.10		1.00	1.10	23.....	1.00	1.20		1.00	1.20	1.05
9.....		1.11	1.22		1.00	1.10	24.....		1.00		1.00	1.10	1.05
10.....		1.12	1.35		1.00	1.10	25.....		1.00		1.00	1.10	1.00
11.....		1.12	3.00	1.00	1.00	1.10	26.....	1.00	1.00		1.00	1.10	1.00
12.....		1.14	2.50	1.00	1.00		27.....	1.05	1.00		1.00	1.00	1.00
13.....		1.14		1.50	1.00		28.....	1.05	1.00		1.00	1.00	1.05
14.....		1.16		1.90	1.00	1.40	29.....	1.05	1.00		1.00	1.02	1.05
15.....		1.19	1.00	1.30	1.10	1.20	30.....	1.05	1.00		1.00	1.03	1.05
							31.....		1.00		1.00	1.04	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	1.05	0.97	0.97	1.00	1.00	1.00	0.99	0.96	2.15	1.21	1.22	1.28
2.....	.98	.97	.98	1.00	1.00	1.00	.97	.94	4.07	1.21	1.20	1.30
3.....	.99	.97	.95	1.00	1.00	1.00	.98	.96	1.15	1.20	1.20	1.30
4.....	1.00	.99	.92	.95	1.00	1.00	.98	.95	1.18	1.20	1.20	1.37
5.....	.97	.99	.98	.95	1.00	1.00	.98	.95	1.18	1.20	1.20	1.69
6.....	.98	.97	1.00		1.00	1.00	1.00	.95	1.18	1.20	1.20	1.44
7.....	1.05	.94	1.00		1.00	1.00	1.00	.95	1.18	1.20	1.19	1.33
8.....	2.02	.96	1.00		.95	1.00	1.00	.95	1.94	1.20	1.18	1.30
9.....	1.52	.96	1.00	1.00	1.00	1.00	1.02	.95	1.20	1.19	1.19	1.39
10.....	1.28	.97	1.00	1.00	1.00	1.00	1.00	.94	1.09	1.19	1.19	1.63
11.....	1.18	.96		1.00	1.05	1.00	1.00	.95	2.57	1.19	1.19	1.65
12.....	1.20	.88		1.00	1.05	1.05	1.00	.95	3.39	1.19	1.19	1.48
13.....	1.03	.97		1.00	1.05	1.00	.98	.96	2.01	1.19	1.18	1.18
14.....	.99	.97		1.00	1.00	1.00	.98	.96	1.95	1.19	1.18	1.17
15.....	1.02	.97	1.00		1.00	1.00	.98	.97	1.84	1.18	1.19	1.18
16.....	1.01	1.04	1.00	.95	1.00	1.00	.97	.97	1.59	1.20	1.20	1.19
17.....	1.01	1.10	1.00	.95	1.00	1.00	.97	.97	1.60	1.17	1.20	1.19
18.....	1.01	1.07	1.05	1.00	1.00	.95	1.03	.97	2.12	1.17	1.20	1.24
19.....	1.00	1.00	1.00	1.00	1.00	1.00	1.05	.97	2.31	1.22	1.20	1.20
20.....	.98	.99	1.05	1.00	1.00	1.10	1.00	.98	1.72	1.25	1.20	1.19
21.....	.98	.97	1.00	1.00	1.00	1.05	1.15	.98	1.46	1.24	1.20	1.19
22.....	.99	.97		1.00	1.00	1.00	1.20	.98	1.41	1.20	1.20	1.19
23.....	.98	.97		1.00	.95	.97	1.15	.96	1.42	1.20	1.20	1.18
24.....	.97	.96	1.00	1.00	.95	1.00	1.10	.90	1.42	1.24	1.19	1.29
25.....	.97	.96	1.00	1.00	.95	1.00	1.10	.85	1.40	1.25	1.18	1.60
26.....	.98	.96	1.00	1.00	.95	1.00	1.09	.87	1.40	1.25	1.18	
27.....	.96	.98	1.00	1.00	.95	1.00	1.07	.88	1.34	1.21	1.21	
28.....	.94	.98	1.00	1.00	1.00	1.00	1.08	.90	1.25	1.31	1.25	
29.....	.96	.97	1.00	1.00		1.00	.98	.91	1.25	1.44	1.25	
30.....	.95	.97	1.00	1.00		.99	1.00	2.32	1.25	1.27	1.26	
31.....	.95		1.00	1.00		.99		5.04		1.22	1.26	

^a Maximum gage height, 11.6 feet.

NOTE.—Gage heights affected by ice Dec. 15-31, 1912.

Daily discharge, in second-feet, of Delaware River near Malaga, N. Mex., for 1912-13.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1912.							1912.						
1		3.6	2.8	3.9	3.9	4.5	16		7.3	3.9	6.6	179	8.0
2		3.6	2.8	3.9	3.9	4.5	17		7.3	3.9	3.9	149	6.6
3		3.6	2.8	3.9	5.2	5.2	18		7.3	3.9	3.9	119	6.6
4		3.6	2.8	3.9	4.5	5.2	19		7.5	3.9	3.9	89	4.5
5		4.4	2.8	3.9	3.9	6.6	20	2.7	7.5	3.9	3.9	62	3.9
6		4.4	2.8	3.9	3.9	6.0	21	2.7	7.5	3.9	3.9	35	3.9
7		4.5	2.8	3.9	3.9	5.7	22	2.7	7.5	3.9	3.9	8.0	4.5
8		4.5	4.6	3.9	3.9	5.2	23	2.7	7.5	3.9	3.9	8.0	4.5
9		4.6	8.4	3.9	3.9	5.2	24	2.7	2.8	3.9	3.9	5.2	4.5
10		4.8	17	3.9	3.9	5.2	25	2.7	2.8	3.9	3.9	5.2	3.9
11		4.8	200	3.9	3.9	5.2	26	2.7	2.8	3.9	3.9	5.2	3.9
12		5.6	137	3.9	3.9	10	27	3.6	2.8	3.9	3.9	3.9	3.9
13		5.6	93	28	3.9	15	28	3.6	2.8	3.9	3.9	3.9	4.5
14		6.0	48	65	3.9	21	29	3.6	2.8	3.9	3.9	4.1	4.5
15		7.3	3.9	14	5.2	8.0	30	3.6	2.8	3.9	3.9	4.2	4.5
							31		2.8		3.9	4.3	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1	4.5	3.4	3.4	3.4	3.9	3.9	3.8	3.4	93	4.0	4.2	4.9
2	3.6	3.4	3.6	3.4	3.9	3.9	3.5	3.1	376	4.0	3.9	6.6
3	3.7	3.4	3.1	3.4	3.9	3.9	3.6	3.4	6.6	3.9	3.9	8.0
4	3.9	3.7	2.8	3.2	3.9	3.9	3.6	3.2	7.4	3.9	3.9	15
5	3.5	3.7	3.6	3.2	3.9	3.9	3.6	3.2	7.4	3.9	3.9	44
6	3.6	3.4	3.7	3.4	3.9	3.9	3.9	3.2	7.4	3.9	3.9	24
7	4.5	3.0	3.7	3.6	3.9	3.9	3.9	3.2	7.4	3.9	3.8	16
8	78	3.3	3.6	3.8	3.2	3.9	3.9	3.2	69	3.9	3.6	14
9	29	3.3	3.5	3.9	3.9	3.9	4.2	3.2	8.0	3.8	3.8	20
10	13	3.4	3.4	3.9	3.9	3.9	3.9	3.1	5.1	3.8	3.8	39
11	7.6	3.3	3.4	3.9	4.6	3.9	3.9	3.2	150	3.8	3.8	40
12	8.0	3.6	3.4	3.9	4.6	4.6	3.9	3.2	274	3.8	3.8	27
13	4.2	3.4	3.4	3.9	4.6	3.9	3.6	3.4	76	3.8	3.6	7.4
14	3.7	3.4	3.4	3.9	3.9	3.9	3.6	3.4	70	3.8	3.6	7.1
15	4.1	3.4	3.4	3.6	3.9	3.9	3.6	3.5	59	3.6	3.8	7.4
16	4.0	4.2	3.4	3.2	3.9	3.9	3.5	3.5	35	3.9	3.9	7.7
17	4.0	5.2	3.4	3.2	3.9	3.9	3.5	3.5	36	3.5	3.9	7.7
18	4.0	4.7	3.4	3.9	3.9	3.2	4.3	3.5	89	3.5	3.9	10
19	3.9	3.9	3.4	3.9	3.9	3.9	4.6	3.5	113	4.2	3.9	8.0
20	3.6	3.7	3.4	3.9	3.9	5.2	3.9	3.6	47	4.5	3.9	7.7
21	3.6	3.4	3.4	3.9	3.9	4.6	6.6	3.6	25	4.4	3.9	7.7
22	3.7	3.4	3.4	3.9	3.9	3.9	8.0	3.6	20	3.9	3.9	7.7
23	3.6	3.4	3.4	3.9	3.2	3.5	6.6	3.4	20	3.9	3.9	7.4
24	3.5	3.3	3.4	3.9	3.2	3.9	5.2	2.6	18	4.4	3.8	13
25	3.5	3.3	3.4	3.9	3.2	3.9	5.2	2.2	15	4.5	3.6	36
26	3.6	3.3	3.4	3.9	3.2	3.9	5.1	2.4	14	4.5	3.6	
27	3.3	3.6	3.4	3.9	3.2	3.9	4.8	2.4	9.2	4.0	4.0	
28	3.0	3.6	3.4	3.9	3.9	3.9	4.9	2.6	5.5	5.5	4.5	
29	3.3	3.4	3.4	3.9		3.9	3.6	2.7	5.1	10	4.5	
30	3.1	3.4	3.4	3.9		3.8	3.9	115	4.8	4.8	4.7	
31	3.1		3.4	3.9		3.8		568		4.2	4.7	

NOTE.—Daily discharge determined from a fairly well defined curve and by the indirect method for shifting channels. Discharge estimated on account of ice Dec. 15-31, 1912. Discharge interpolated for days for which gage heights are missing.

Monthly discharge of Delaware River near Malaga, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
April 20-30.....	3.6	2.7	3.03	66	B.
May.....	7.5	2.8	4.84	298	B.
June.....	200	2.8	19.7	1,170	B.
July.....	65	3.9	7.06	434	B.
August.....	179	3.9	24.1	1,480	B.
September.....	21	3.9	6.16	367	B.
The period.....				3,820	
1912-13.					
October.....	78	3.0	7.47	459	B.
November.....	5.2	3.0	3.56	212	B.
December.....	3.7	2.8	3.41	210	B.
January.....	3.9	3.2	3.72	229	B.
February.....	4.6	3.2	3.82	212	B.
March.....	5.2	3.2	3.95	243	B.
April.....	8.0	3.5	4.34	258	B.
May.....	568	2.2	25.0	1,540	B.
June.....	376	4.8	55.8	3,320	C.
July.....	10	3.5	4.24	261	B.
August.....	4.7	3.6	3.93	242	B.
September 1-25.....	44	4.9	15.7	778	C.
The period.....				7,960	

DEVILS RIVER BASIN.

GENERAL FEATURES.

Devils River rises in the western part of Sutton County, Tex., and takes a general southerly course to its junction with the Rio Grande at Devils River, in the southern part of Valverde County. It has no important branches. Except the Pecos, it is the most important tributary of the lower Rio Grande that enters from the Texas side, and in some years, owing to the extensive diversions from the Pecos and the lighter rainfall on the basin of that stream, it contributes more run-off.

The area drained by Devils River lies on the southern extension of the Great Plains region known as the Edwards Plateau—a high mesa or table-land sloping gently upward toward the northwest—unforested except for scattered dense patches of scrub live oak, and covered with a thick growth of grass. The predominant rock of the area is a rough limestone, whose surface is level, as a rule, but is cut deeply by the few streams. Devils River flows in canyon for much of its course. Owing to the general flatness of the surface, drainage lines are few, and much of the run-off collects in shallow sinks so that the effective drainage area of the river is uncertain.

Records of rainfall at points within and adjacent to the basin show the mean annual precipitation to be about 20 inches and to occur chiefly during the summer months.

GAGING STATION RECORDS.

DEVILS RIVER AT DEVILS RIVER, TEX.

Location.—Near the mouth of Devils River and opposite the station of the same name on the Southern Pacific Railroad.

Records available.—May 1, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Rocky and rough, with fissures and faults.

Discharge measurements.—Made from car and cable.

Floods.—The highest recorded flood occurred April 6, 1900, reaching a stage corresponding to 25.4 feet on the gage subsequently established. The next highest stage was 15.25 feet, the discharge being 52,400 second-feet.

Accuracy.—Owing to the uncertain conditions of channel, very frequent discharge measurements are made, on which the estimates of daily discharge are based almost directly.

Cooperation.—Station is maintained and records are furnished by the United States section of the International Water Commission.

Discharge measurements of Devils River at Devils River, Tex. in 1900-1913.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1902.	<i>Feet.</i>	<i>Sec.-ft.</i>
May 20.....	2.80	1,175	Jan. 21.....	2.50	834	Apr. 25.....	1.9	438
24.....	3.35	1,458	30.....	2.45	808	May 5.....	2.3	656
30.....	3.00	1,262	Feb. 4.....	2.45	804	9.....	2.0	446
June 4.....	2.90	1,200	14.....	2.40	747	19.....	4.0	2,479
7.....	2.80	1,060	18.....	2.50	832	23.....	2.4	742
11.....	2.80	1,049	22.....	2.50	842	28.....	2.2	582
15.....	2.80	994	Mar. 4.....	2.45	769	June 2.....	2.2	536
19.....	2.80	1,000	13.....	2.40	724	14.....	2.1	483
23.....	2.70	917	27.....	2.40	752	23.....	2.05	470
27.....	2.70	896	Apr. 18.....	2.30	668	27.....	2.0	448
29.....	8.20	13,493	May 3.....	2.30	656	July 2.....	2.0	425
July 3.....	2.95	1,171	10.....	2.30	656	11.....	2.0	431
6.....	2.80	895	15.....	2.30	670	19.....	2.0	418
10.....	2.70	918	June 2.....	2.30	666	28.....	2.1	466
14.....	2.65	908	14.....	2.20	591	Aug. 5.....	2.0	415
19.....	2.70	948	21.....	2.20	592	14.....	2.0	431
23.....	2.60	858	28.....	2.20	585	20.....	2.0	408
27.....	2.60	891	July 2.....	2.20	583	28.....	2.0	406
31.....	2.60	900	8.....	2.20	579	Sept. 4.....	2.25	513
Aug. 4.....	2.70	997	15.....	2.20	577	12.....	2.2	447
7.....	2.65	944	31.....	2.20	573	16.....	2.2	445
11.....	3.10	1,311	Aug. 8.....	2.20	596	18.....	2.2	428
14.....	2.90	1,084	17.....	2.10	515	26.....	2.15	492
20.....	2.70	955	29.....	2.05	509	Oct. 5.....	2.15	443
23.....	2.65	902	Sept. 30.....	2.10	517	13.....	2.15	435
27.....	2.60	859	Oct. 3.....	2.10	516	21.....	2.1	421
31.....	2.60	841	26.....	2.10	517	29.....	2.1	419
Sept. 6.....	2.70	982	Nov. 5.....	2.10	522	Nov. 5.....	2.15	429
10.....	2.65	864	21.....	2.10	512	13.....	2.15	432
14.....	2.50	781	1902.			22.....	2.15	414
20.....	2.50	747	Jan. 5.....	2.0	497	26.....	2.1	392
24.....	10.25	26,386	11.....	2.1	488	Dec. 2.....	2.25	499
Oct. 3.....	2.90	1,131	18.....	2.0	495	8.....	2.15	428
9.....	2.80	1,063	22.....	2.0	489	13.....	2.1	402
22.....	3.00	1,274	29.....	2.0	472	18.....	2.1	415
Nov. 2.....	3.30	1,592	Feb. 6.....	2.0	490	25.....	2.05	386
6.....	2.80	1,040	9.....	2.0	453	30.....	2.05	389
14.....	2.70	937	16.....	2.0	474			
23.....	2.70	948	23.....	2.0	505	1903.		
Dec. 4.....	2.50	862	Mar. 1.....	2.0	497	Jan. 5.....	2.05	412
7.....	2.60	911	8.....	2.0	503	10.....	2.05	406
13.....	2.60	901	17.....	2.0	493	16.....	2.4	610
18.....	2.60	897	23.....	2.0	490	21.....	2.2	495
29.....	2.50	831	29.....	2.0	486	26.....	2.15	475
1901.			Apr. 4.....	2.0	479	31.....	2.1	428
Jan. 4.....	2.50	847	8.....	2.0	475	Feb. 4.....	2.1	439
10.....	2.50	835	15.....	2.0	487	10.....	2.1	424
						18.....	2.1	442

Discharge measurements of Devils River at Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1904.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1905.	<i>Fcet.</i>	<i>Sec.-ft.</i>
Feb. 23.....	2.1	428	July 5.....	2.3	512	Dec. 10.....	2.45	592
Mar. 1.....	2.25	533	11.....	2.3	451	18.....	2.45	591
5.....	2.2	495	22.....	2.25	412	26.....	2.45	593
10.....	2.2	484	25.....	2.3	488			
15.....	2.15	450	29.....	2.3	482	1906.		
21.....	2.2	483	Aug. 3.....	2.25	489	Jan. 2.....	2.4	502
28.....	2.15	438	12.....	2.25	483	10.....	2.4	445
Apr. 2.....	2.1	414	16.....	2.25	481	18.....	2.4	447
7.....	2.1	423	22.....	2.25	444	26.....	2.4	444
13.....	2.1	417	29.....	2.25	432	30.....	2.4	444
18.....	2.1	420	Sept. 9.....	3.3	1,443	Feb. 6.....	2.4	426
23.....	2.1	414	20.....	2.5	563	10.....	2.4	417
27.....	2.2	471	Oct. 4.....	2.5	609	16.....	2.4	415
May 2.....	2.1	405	6.....	2.4	538	20.....	2.4	425
7.....	2.15	439	24.....	2.5	596	24.....	2.4	417
11.....	2.15	447	Nov. 4.....	2.4	504	27.....	2.4	422
21.....	2.25	540	12.....	2.4	513	Mar. 5.....	2.4	425
27.....	2.2	491	23.....	2.4	499	14.....	2.35	365
June 1.....	2.2	482	Dec. 2.....	2.35	454	19.....	2.35	393
5.....	2.2	490	14.....	2.35	478	26.....	2.35	397
10.....	2.55	732	2.....	2.3	489	30.....	2.35	393
15.....	3.95	2,266	22.....	2.3	446	Apr. 10.....	2.35	417
20.....	2.7	908	30.....	2.3	443	13.....	2.45	536
25.....	2.55	747				21.....	2.25	400
July 1.....	2.5	687	1905.			26.....	2.25	398
7.....	2.45	629	Jan. 9.....	2.3	452	29.....	2.3	401
11.....	2.4	602	17.....	2.3	448	May 4.....	2.3	411
18.....	2.35	577	25.....	2.3	444	9.....	2.25	391
28.....	2.35	570	30.....	2.25	424	16.....	2.25	393
Aug. 3.....	2.35	562	Feb. 8.....	2.3	429	21.....	2.25	404
7.....	2.3	524	16.....	2.3	432	June 5.....	4.3	2,600
15.....	2.3	529	27.....	2.3	437	13.....	2.4	577
21.....	2.3	521	Mar. 13.....	2.35	475	23.....	2.25	418
28.....	2.3	518	17.....	2.6	761	29.....	2.25	412
Sept. 7.....	2.3	531	21.....	2.5	680	July 7.....	2.7	920
10.....	2.3	521	25.....	2.4	544	12.....	3.7	1,939
15.....	2.3	519	30.....	2.4	540	20.....	2.9	1,026
18.....	2.3	518	Apr. 5.....	2.65	682	26.....	2.8	731
22.....	2.35	540	13.....	2.5	600	30.....	2.8	771
27.....	2.3	525	18.....	2.4	533	Aug. 4.....	2.8	806
Oct. 2.....	2.5	702	25.....	4.9	3,168	9.....	3.25	1,525
7.....	2.4	619	30.....	3.5	1,580	Sept. 2.....	2.95	915
13.....	2.4	591	May 4.....	2.8	795	5.....	2.95	934
21.....	2.35	561	12.....	2.7	691	14.....	2.9	891
Nov. 3.....	2.35	587	17.....	2.7	706	21.....	2.85	872
11.....	2.35	574	25.....	2.7	816	29.....	2.85	849
20.....	2.35	576	30.....	2.7	928	Oct. 4.....	2.8	831
28.....	2.35	566	June 5.....	2.8	929	12.....	2.8	811
Dec. 7.....	2.3	560	14.....	2.7	822	20.....	2.8	754
15.....	2.3	550	22.....	2.7	823	30.....	2.7	719
22.....	2.3	547	26.....	2.7	797	Nov. 5.....	2.65	715
28.....	2.3	530	July 6.....	2.7	1,045	13.....	2.7	727
			11.....	2.65	736	22.....	2.7	699
1904.			16.....	2.55	606	30.....	2.7	698
Jan. 6.....	2.3	529	21.....	2.55	582	Dec. 8.....	2.7	711
11.....	2.3	537	27.....	2.5	562	15.....	2.7	688
17.....	2.3	546	30.....	2.5	553	19.....	2.7	679
27.....	2.3	542	Aug. 7.....	2.5	567	31.....	2.65	687
Feb. 5.....	2.3	529	11.....	2.5	565			
15.....	2.3	513	16.....	2.5	541	1907.		
21.....	2.3	517	22.....	2.5	559	Jan. 9.....	2.6	718
26.....	2.3	516	25.....	2.5	574	14.....	2.6	689
Mar. 7.....	2.25	488	30.....	2.5	558	22.....	2.6	684
17.....	2.3	512	Sept. 4.....	3.0	996	30.....	2.6	678
23.....	2.3	511	18.....	2.5	675	Feb. 9.....	2.6	676
30.....	2.25	490	23.....	2.5	670	16.....	2.6	651
Apr. 4.....	2.35	526	26.....	2.5	657	23.....	2.6	638
12.....	2.25	491	Oct. 29.....	2.5	658	28.....	2.6	623
22.....	3.7	1,777	Apr. 4.....	2.5	621	Mar. 10.....	2.6	653
27.....	2.25	445	12.....	2.5	586	18.....	2.65	609
May 6.....	2.25	489	17.....	2.5	566	27.....	2.55	593
11.....	2.25	485	25.....	2.45	486	31.....	2.55	571
16.....	2.4	593	30.....	2.5	511	Apr. 9.....	2.5	567
23.....	2.3	520	Nov. 4.....	2.5	508	13.....	2.5	550
27.....	2.3	509	11.....	2.5	501	20.....	2.5	529
June 1.....	2.25	472	16.....	2.5	505	25.....	2.5	534
6.....	3.25	1,361	24.....	2.5	489	30.....	2.5	533
11.....	2.6	656	30.....	2.5	634	May 9.....	2.5	543
20.....	2.4	532	Dec. 5.....	2.45	573	14.....	2.45	499
27.....	2.3	495				22.....	2.45	483

Discharge measurements of Devils River at Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Fect.</i>	<i>Sec.-ft.</i>	1908.	<i>Fect.</i>	<i>Sec.-ft.</i>	1910.	<i>Fect.</i>	<i>Sec.-ft.</i>
June 9	2.45	523	Dec. 20	2.3	475	Feb. 28	3.6	1,617
16	2.45	507	26	2.3	484	Mar. 5	3.5	1,432
24	2.5	523	30	2.3	479	10	3.5	1,429
30	2.45	496				14	3.45	1,394
July 5	2.5	502	1909.			18	3.6	1,644
11	2.45	555	Jan. 4	2.3	467	23	4.1	2,492
20	2.5	546	9	2.3	489	27	3.9	2,254
29	2.5	550	14	2.3	469	31	4.0	2,327
Aug. 4	2.5	551	20	2.3	473	Apr. 6	4.0	2,306
14	2.4	520	25	2.3	437	10	4.3	2,918
25	2.4	521	30	2.25	401	14	4.0	2,345
30	2.4	523	Feb. 4	2.25	408	19	3.85	2,154
Sept. 7 ^a	2.4	463	9	2.25	396	22	3.8	2,069
12	2.4	509	14	2.3	480	26	3.8	2,043
29	2.4	525	19	2.3	462	30	4.1	2,379
Oct. 4	2.5	606	23	2.25	427	May 6	4.35	3,149
13	2.4	523	27	2.25	406	11	4.65	4,147
22	2.4	593	Mar. 4	2.25	417	15	4.8	4,302
30	2.6	723	9	2.25	412	19	5.0	4,912
Nov. 12	2.4	606	14	2.3	446	23	4.9	4,685
16	2.4	582	19	2.25	411	27	4.9	4,824
25	2.4	631	25	2.25	407	June 3	4.3	3,040
29	2.4	610	30	2.2	391	9	3.9	2,028
Dec. 3	2.4	594	Apr. 5	2.2	438	14	3.65	1,631
10	2.4	568	10	2.2	401	18	3.65	1,633
18	2.35	532	15	2.2	400	23	3.85	2,038
30	2.3	512	19	2.2	382	30	4.85	4,717
			24	2.2	385	July 6	4.7	3,989
1908.			29	2.25	418	10	4.6	3,724
Jan. 3	2.3	491	May 4	2.2	397	15	4.15	2,532
12	2.3	513	12	2.15	380	20	3.85	2,018
21	2.3	502	20	2.2	395	26	3.6	1,606
29	2.3	523	25	2.2	388	31	3.5	1,363
Feb. 2	2.25	494	30	2.2	401	Aug. 5	3.45	1,263
11	2.3	504	June 4	2.2	398	10	3.4	1,266
22	2.25	501	12	2.15	379	15	3.4	1,215
28	2.25	494	17	2.15	391	19	3.4	1,207
Mar. 3	2.3	504	25	2.2	387	23	3.7	1,735
13	2.3	518	29	2.2	397	27	4.35	2,990
20	2.25	492	July 6	2.3	483	31	4.45	3,077
30	2.25	487	14	2.1	336	Sept. 5	4.0	2,165
Apr. 6	2.25	491	23	3.0	1,254	10	4.5	3,654
14	2.3	515	30	2.6	671	14	4.5	3,346
22	2.5	686	Aug. 5	2.5	634	18	4.5	3,328
29	2.4	649	14	2.4	541	22	4.2	2,622
May 6	2.35	534	19	2.3	456	26	5.0	4,766
13	2.35	520	26	2.25	433	30	4.4	3,062
26	2.8	829	30	2.3	457	Oct. 5	4.5	3,292
30	2.6	655	Sept. 4	2.25	423	9	4.0	2,279
June 4	2.5	630	15	2.45	569	13	3.8	1,889
13	2.45	614	23	2.3	452	18	3.7	1,668
21	2.4	597	29	2.25	430	22	3.7	1,580
29	2.35	536	Oct. 5	2.25	421	26	3.7	1,590
July 5	2.4	565	13	2.2	387	31	3.6	1,481
10	3.95	2,209	22	2.2	393	Nov. 5	3.6	1,424
14	2.5	592	26	2.2	391	9	3.6	1,410
23	2.4	579	30	2.2	388	13	3.6	1,421
31	2.55	707	Nov. 5	2.2	395	17	3.6	1,416
Aug. 5	2.5	597	13	2.2	399	22	3.6	1,367
15	2.5	601	22	2.2	411	26	3.6	1,355
18	2.45	554	29	2.25	427	Dec. 3	3.55	1,350
26	2.4	533	Dec. 5	2.25	414	5	3.55	1,365
30	2.4	529	13	2.2	411	10	3.5	1,328
Sept. 9	2.4	530	23	2.25	412	14	3.5	1,332
13	2.4	520	29	2.2	389	18	3.5	1,330
21	2.35	493				22	3.5	1,349
25	2.3	473	1910.			27	3.5	1,291
29	2.3	470	Jan. 5	4.3	2,909	31	3.5	1,287
Oct. 10	2.3	444	9	4.3	2,881			
18	2.35	481	13	4.2	2,640	1911.		
26	2.4	541	18	4.1	2,518	Jan. 5	2.15	376
30	2.35	494	22	4.0	2,411	10	2.15	387
Nov. 4	2.3	472	27	4.0	2,398	18	2.2	391
12	2.3	466	31	3.9	2,219	22	2.15	382
17	2.3	471	Feb. 5	3.8	1,961	30	2.15	379
29	2.45	554	10	3.8	1,924	Feb. 3	2.15	381
Dec. 4	2.3	474	14	3.7	1,776	8	2.1	336
9	2.3	469	17	3.7	1,746	13	2.15	384
15	2.3	472	24	3.65	1,639	18	2.6	729

^a Measurement too small; rejected.

Discharge measurements of Devils River at Devils River, Tex., in 1900-1913—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>
Feb. 27.....	2.3	508	Jan. 17.....	2.2	390	Nov. 30.....	2.1	307
Mar. 8.....	2.3	473	23.....	2.2	387	Dec. 5.....	2.1	306
13.....	2.3	472	26.....	2.2	384	10.....	2.2	364
22.....	2.3	482	31.....	2.2	396	18.....	2.15	338
26.....	2.3	492	Feb. 5.....	2.2	384	23.....	2.15	336
30.....	2.3	500	9.....	2.2	380	30.....	2.15	342
Apr. 5.....	2.6	702	14.....	2.2	386			
12.....	2.4	577	19.....	2.2	383			
17.....	2.5	643	24.....	2.2	387	Jan. 1913.		
27.....	2.4	581	28.....	2.2	385	Jan. 8.....	2.15	335
30.....	2.35	540	Mar. 5.....	2.2	385	13.....	2.15	341
May 5.....	2.3	453	14.....	2.2	376	22.....	2.15	335
14.....	2.3	461	20.....	2.15	361	27.....	2.15	335
20.....	2.25	449	26.....	2.15	362	30.....	2.1	308
24.....	2.2	391	30.....	2.15	359	Feb. 4.....	2.1	301
30.....	2.2	395	Apr. 4.....	2.1	301	8.....	2.1	314
June 5.....	2.2	393	8.....	2.35	462	12.....	2.15	339
9.....	2.2	396	16.....	2.3	405	17.....	2.15	340
17.....	2.15	386	24.....	2.2	384	21.....	2.1	316
25.....	2.15	374	29.....	2.2	381	27.....	2.1	312
30.....	2.15	383	May 5.....	2.2	382	Mar. 4.....	2.1	301
July 9.....	2.2	366	14.....	2.15	367	12.....	2.1	297
13.....	2.15	374	19.....	2.1	337	21.....	2.05	285
18.....	2.15	362	26.....	2.1	292	26.....	2.05	281
22.....	2.2	383	30.....	2.1	305	30.....	2.05	274
30.....	2.15	361	June 10.....	2.1	297	Apr. 9.....	2.05	277
Aug. 4.....	2.15	363	14.....	2.1	312	16.....	2.0	273
9.....	2.1	319	22.....	2.1	333	19.....	2.0	257
17.....	2.1	318	25.....	2.2	353	21.....	2.05	278
22.....	2.1	323	29.....	2.1	312	29.....	2.05	274
30.....	2.1	305	July 5.....	2.1	293	May 5.....	6.9	7,146
Sept. 4.....	2.1	311	10.....	2.05	257	9.....	2.6	611
14.....	2.1	297	19.....	2.1	259	17.....	2.3	436
22.....	2.1	307	27.....	2.05	308	26.....	2.2	370
26.....	2.1	305	30.....	2.05	280	31.....	2.2	365
30.....	2.1	308	Aug. 10.....	2.05	309	June 9.....	2.25	401
Oct. 8.....	2.15	325	14.....	2.0	277	13.....	2.2	364
12.....	2.15	333	22.....	2.05	299	22.....	2.05	674
20.....	2.15	331	26.....	2.1	326	26.....	2.2	366
25.....	2.15	329	30.....	2.05	308	30.....	2.3	441
31.....	2.2	368	Sept. 6.....	2.05	284	July 9.....	2.2	366
Nov. 5.....	2.2	351	11.....	2.05	292	14.....	2.2	369
14.....	2.2	358	18.....	2.2	376	22.....	2.2	364
19.....	2.2	367	25.....	2.3	487	26.....	2.55	619
27.....	2.2	370	29.....	3.7	1,636	30.....	2.4	524
30.....	2.2	361	Oct. 9.....	2.15	343	Aug. 5.....	2.3	490
Dec. 10.....	2.2	424	17.....	2.15	328	11.....	2.25	382
14.....	2.2	422	22.....	2.1	318	20.....	2.2	360
22.....	2.25	462	26.....	2.15	333	25.....	2.2	357
27.....	2.2	420	30.....	2.15	329	29.....	2.2	366
30.....	2.25	437	Nov. 9.....	2.1	319	Sept. 4.....	2.25	354
1912.			18.....	2.15	325	10.....	2.4	447
Jan. 9.....	2.2	392	22.....	2.15	330	18.....	2.3	388
			26.....	2.1	310	26.....	2.25	365
						29.....	2.25	364

NOTE.—Measurements were made by J. D. Dillard, D. Griggs, W. D. Greet, J. P. Hague, A. L. Wilcox, E. E. Winter, D. J. Smith, I. P. Whitis, and W. H. Dodd.

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May..	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	2.95	3.0	3.2	2.65	2.7	16.....	3.1	2.8	2.7	2.85	2.5
2.....	2.8	2.9	3.2	2.7	2.7	17.....	2.9	2.8	2.7	2.8	2.5
3.....	2.8	2.9	2.9	2.8	2.7	18.....	2.9	2.8	2.7	2.8	2.5
4.....	2.8	2.9	2.9	2.75	2.7	19.....	2.9	2.75	2.7	2.8	2.5
5.....	2.8	2.9	2.9	2.65	2.7	20.....	2.9	2.8	2.7	2.75	2.5
6.....	2.8	2.85	2.9	2.6	2.7	21.....	3.75	2.75	2.7	2.75	2.5
7.....	2.85	2.85	2.8	2.6	2.7	22.....	5.35	2.75	2.7	2.7	10.6
8.....	2.8	2.8	2.8	4.6	2.7	23.....	3.45	2.8	2.6	2.7	15.25
9.....	2.8	2.8	2.8	4.35	2.7	24.....	3.35	2.8	2.55	2.7	11.0
10.....	2.8	2.8	2.8	3.45	2.6	25.....	3.2	2.8	2.55	2.7	6.2
11.....	2.75	2.8	2.8	3.15	2.6	26.....	3.1	2.8	2.8	2.7	5.05
12.....	2.75	2.8	2.8	2.95	2.6	27.....	3.05	2.8	2.6	2.6	4.35
13.....	2.8	2.8	2.7	2.9	2.6	28.....	3.0	2.8	2.6	2.6	3.4
14.....	3.25	2.8	2.7	2.9	2.55	29.....	3.0	8.25	2.65	2.6	3.0
15.....	4.0	2.8	2.65	2.9	2.5	30.....	3.0	4.55	2.75	2.6	3.0
						31.....	3.0		2.65	2.6	

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3.0	4.25	2.6	2.5	2.4	2.5	2.4	2.3	2.3	2.2	2.2	2.1
2.....	2.9	3.75	2.6	2.5	2.4	2.5	2.4	2.3	2.3	2.2	2.2	2.1
3.....	2.9	3.3	2.6	2.5	2.4	2.5	2.4	2.3	2.3	2.2	2.2	2.15
4.....	2.9	3.0	2.6	2.5	2.4	2.5	2.4	2.3	2.3	2.2	2.2	2.1
5.....	2.8	2.95	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.05
6.....	2.8	2.8	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1
7.....	2.8	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1
8.....	2.8	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1
9.....	2.8	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.35
10.....	2.9	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2
11.....	3.0	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.1
12.....	3.0	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.4	2.25	2.1
13.....	3.0	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.25	2.1
14.....	3.0	2.7	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.25	2.1
15.....	3.0	2.7	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1
16.....	3.0	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1
17.....	3.0	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1
18.....	3.0	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1
19.....	3.0	2.7	2.5	2.5	2.5	2.3	2.3	2.3	2.2	2.2	2.05	2.1
20.....	3.0	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
21.....	3.0	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
22.....	3.0	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
23.....	3.0	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1
24.....	3.0	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
25.....	3.0	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
26.....	3.0	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
27.....	3.0	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.0	2.1
28.....	3.0	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1
29.....	3.0	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1
30.....	3.0	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1
31.....	3.9	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1
1901-2.												
1.....	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.0	2.0
2.....	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.0	2.0
3.....	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.0	2.0
4.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	3.0	2.2	2.0	2.0	2.25
5.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.4	2.2	2.0	2.0	2.05
6.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.0
7.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	3.8
8.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.25
9.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.2
10.....	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.2
11.....	2.1	2.1	2.0	2.05	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.2
12.....	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
13.....	2.1	2.1	2.05	2.1	2.0	2.0	2.2	2.0	2.1	2.0	2.0	2.1
14.....	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.2
15.....	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
16.....	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
17.....	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
18.....	2.1	2.1	2.1	2.0	2.0	2.0	1.9	5.95	2.1	2.0	2.0	2.2
19.....	2.1	2.1	2.1	2.0	2.0	2.0	1.9	4.05	2.1	2.0	2.0	2.2
20.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.95	2.1	2.0	2.0	2.2
21.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.65	2.1	2.0	2.0	2.2
22.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.45	2.0	2.0	2.0	2.2
23.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.4	2.0	2.0	2.0	2.2
24.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.4	2.0	2.0	2.0	2.2
25.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.25	2.0	2.0	2.0	2.2
26.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.0	2.0	2.15
27.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.6	2.0	2.15
28.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.15	2.0	2.15
29.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.05	2.0	2.15
30.....	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	2.0	2.0	2.15
31.....	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.15

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1	2.1	2.1	2.2	2.1	2.1	2.25	2.1	2.1	2.2	2.5	2.3	2.3
2	2.2	2.4	2.3	2.1	2.1	2.2	2.1	2.1	2.65	2.5	2.3	2.3
3	2.35	2.35	2.2	2.1	2.15	2.2	2.1	2.05	2.35	2.5	2.3	2.3
4	2.25	2.25	2.15	2.05	2.1	2.2	2.1	2.05	2.25	2.45	2.35	2.3
5	2.15	2.15	2.15	2.05	2.1	2.2	2.1	2.1	2.2	2.5	2.35	2.3
6	2.15	2.15	2.15	2.05	2.1	2.2	2.1	2.15	2.2	2.5	2.35	2.3
7	2.15	2.15	2.15	2.05	2.1	2.2	2.1	2.15	2.2	2.5	2.35	2.3
8	2.1	2.15	2.15	2.05	2.1	2.2	2.1	2.15	2.15	2.45	2.35	2.3
9	2.1	2.15	2.15	2.05	2.1	2.2	2.1	2.1	2.6	2.45	2.3	2.3
10	2.1	2.15	2.15	2.05	2.1	2.2	2.15	2.2	2.65	2.4	2.3	2.3
11	2.1	2.15	2.15	2.05	2.1	2.2	2.1	2.2	2.35	2.4	2.3	2.3
12	2.1	2.15	2.1	2.05	2.1	2.15	2.1	2.9	3.4	2.4	2.3	2.3
13	2.1	2.15	2.1	2.1	2.1	2.15	2.1	2.15	7.3	2.4	2.3	2.35
14	2.1	2.15	2.1	2.1	2.1	2.15	2.1	2.1	4.4	2.4	2.3	2.3
15	2.1	2.15	2.1	2.35	2.1	2.15	2.1	2.1	4.05	2.4	2.3	2.3
16	2.1	2.15	2.1	2.3	2.1	2.15	2.1	2.1	3.75	2.4	2.3	2.35
17	2.1	2.15	2.05	2.15	2.1	2.2	2.1	3.1	3.15	2.4	2.3	2.45
18	2.1	2.15	2.1	2.2	2.1	2.15	2.1	2.45	2.85	2.4	2.3	2.35
19	2.1	2.15	2.1	2.2	2.1	2.55	2.1	2.35	2.75	2.4	2.3	2.35
20	2.1	2.15	2.1	2.2	2.1	2.25	2.1	2.25	2.7	2.4	2.3	2.35
21	2.1	2.15	2.1	2.2	2.1	2.2	2.1	2.2	2.7	2.4	2.3	2.35
22	2.1	2.15	2.05	2.15	2.1	2.15	2.1	2.25	2.7	2.4	2.3	2.35
23	2.1	2.15	2.05	2.15	2.1	2.15	2.1	2.5	2.7	2.35	2.3	2.35
24	2.1	2.15	2.05	2.15	2.1	2.15	2.1	2.3	2.6	2.3	2.3	2.35
25	2.1	2.15	2.05	2.15	2.1	2.15	2.1	2.2	2.55	2.3	2.3	2.3
26	2.1	2.1	2.05	2.15	2.2	2.15	2.1	2.2	2.55	2.3	2.3	2.3
27	2.1	2.1	2.05	2.15	2.2	2.15	2.2	2.2	2.55	2.35	2.3	2.3
28	2.1	2.1	2.05	2.15	2.25	2.15	2.1	2.2	2.55	2.35	2.3	3.15
29	2.1	2.1	2.05	2.1	.....	2.1	2.1	2.2	2.5	2.45	2.3	2.8
30	2.1	2.1	2.05	2.1	.....	2.1	2.1	2.2	2.5	2.35	2.3	2.6
31	2.1	.....	2.05	2.1	.....	2.1	.....	2.2	.....	2.3	2.3	.....
1903-4.												
1	2.5	2.35	2.35	2.3	2.3	2.3	2.3	2.3	2.25	2.3	2.25	2.25
2	2.5	2.35	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.3	2.25	2.25
3	2.45	2.35	2.35	2.3	2.3	2.25	2.35	2.3	2.25	2.3	2.25	2.25
4	2.45	2.35	2.35	2.3	2.3	2.25	2.35	2.3	2.25	2.3	2.25	2.3
5	2.45	2.35	2.35	2.3	2.3	2.25	2.35	2.25	2.8	2.3	2.25	2.3
6	2.45	2.35	2.3	2.3	2.3	2.25	2.3	2.25	3.2	2.3	2.25	2.35
7	2.4	2.35	2.3	2.3	2.3	2.25	2.3	2.25	2.6	2.3	2.25	2.5
8	2.4	2.35	2.3	2.3	2.3	2.25	2.3	2.25	2.45	2.3	2.25	2.85
9	2.4	2.35	2.3	2.3	2.3	2.25	2.3	2.25	2.45	2.3	2.25	3.0
10	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.45	2.3	2.25	2.8
11	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.7	2.3	2.25	2.5
12	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.7	2.3	2.25	2.55
13	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.6	2.3	2.25	2.35
14	2.3	2.35	2.3	2.3	2.3	2.3	2.25	2.5	2.5	2.3	2.25	2.3
15	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.5	2.5	2.3	2.25	2.3
16	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.45	2.4	2.3	2.25	2.3
17	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.4	2.4	2.25	2.25	2.3
18	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.3	2.4	2.25	2.25	2.5
19	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.3	2.4	2.25	2.25	2.5
20	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.3	2.4	2.25	2.25	2.5
21	2.4	2.35	2.3	2.3	2.3	2.3	2.25	2.3	2.4	2.25	2.25	2.5
22	2.4	2.35	2.3	2.3	2.3	2.3	3.4	2.3	2.4	2.25	2.25	2.75
23	2.4	2.35	2.3	2.3	2.3	2.3	2.35	2.3	2.35	2.25	2.25	2.95
24	2.35	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.35	3.2	2.25	2.5
25	2.35	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.35	2.3	2.25	2.5
26	2.35	2.35	2.3	2.3	2.3	2.3	2.25	2.25	2.3	2.25	2.25	2.5
27	2.35	2.35	2.3	2.3	2.3	2.25	2.25	2.3	2.3	2.25	2.25	2.5
28	2.35	2.35	2.3	2.3	2.3	2.25	2.25	2.3	2.3	2.25	2.25	2.5
29	2.35	2.35	2.3	2.3	2.3	2.25	2.25	2.35	2.3	2.25	2.25	2.5
30	2.35	2.35	2.3	2.3	.....	2.25	2.25	2.35	2.3	2.25	2.25	2.5
31	2.35	.....	2.3	2.3	.....	2.25	.....	2.3	.....	2.25	2.25	.....

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1	2.5	2.4	2.35	2.3	2.3	2.3	6.0	4.1	2.85	2.95	2.5	2.5
2	2.5	2.4	2.35	2.3	2.3	2.3	3.65	3.5	2.8	2.8	2.5	2.5
3	2.5	2.4	2.35	2.3	2.3	2.3	2.9	3.0	2.85	2.8	2.5	3.2
4	2.5	2.4	2.3	2.3	2.3	2.3	2.8	2.85	2.95	2.7	2.5	3.1
5	2.5	2.4	2.3	2.3	2.3	2.3	2.7	2.8	2.8	2.7	2.5	2.7
6	2.45	2.4	2.3	2.3	2.3	2.3	2.7	2.8	2.8	2.7	2.5	2.6
7	2.5	2.4	2.3	2.3	2.3	2.35	2.6	2.7	2.7	2.7	2.5	2.5
8	2.5	2.4	2.3	2.3	2.3	2.35	2.6	2.7	2.65	2.7	2.5	2.5
9	2.5	2.4	2.3	2.3	2.3	2.35	2.55	2.7	2.6	2.6	2.5	2.5
10	2.5	2.4	2.3	2.3	2.3	2.35	2.55	2.7	2.6	2.6	2.5	2.5
11	2.5	2.4	2.3	2.3	2.3	2.35	2.55	2.7	2.6	2.65	2.5	2.5
12	2.5	2.4	2.3	2.3	2.3	2.35	2.5	2.7	2.6	2.6	2.5	2.5
13	2.5	2.4	2.3	2.3	2.3	2.35	2.45	2.7	2.65	2.6	2.5	2.5
14	2.5	2.4	2.3	2.3	2.3	2.35	2.5	2.85	2.7	2.55	2.5	2.5
15	2.5	2.4	2.3	2.3	2.3	2.35	2.5	2.75	2.7	2.5	2.5	2.5
16	2.45	2.4	2.3	2.3	2.3	2.7	2.5	2.7	2.7	2.55	2.5	2.5
17	2.4	2.4	2.3	2.3	2.3	2.6	2.45	2.65	2.7	2.55	2.5	2.5
18	2.4	2.4	2.3	2.3	2.3	2.6	2.4	2.5	2.7	2.55	2.5	2.55
19	2.4	2.4	2.3	2.3	2.3	2.6	2.4	2.5	2.7	2.55	2.5	3.8
20	2.4	2.4	2.3	2.3	2.3	2.6	2.4	2.5	2.7	2.55	2.5	2.75
21	2.4	2.4	2.3	2.3	2.3	2.5	2.4	2.5	2.9	2.55	2.5	2.5
22	2.4	2.4	2.3	2.3	2.3	2.5	2.4	2.5	2.7	2.55	2.5	2.5
23	2.5	2.4	2.3	2.3	2.3	2.5	2.55	2.5	2.7	2.55	2.5	2.5
24	2.5	2.35	2.3	2.3	2.3	2.5	3.1	2.75	2.7	2.55	2.5	2.5
25	2.4	2.35	2.3	2.3	2.3	2.4	4.9	2.7	2.7	2.55	2.5	2.5
26	2.4	2.35	2.3	2.3	2.3	2.4	4.9	2.8	2.7	2.55	2.5	2.5
27	2.4	2.35	2.3	2.3	2.3	2.4	2.9	2.9	2.7	2.5	2.5	2.5
28	2.4	2.35	2.3	2.3	2.3	2.4	2.7	2.85	2.8	2.5	2.5	2.5
29	2.4	2.35	2.3	2.3	2.3	2.4	2.6	2.7	5.0	2.5	2.5	2.5
30	2.4	2.35	2.3	2.25	2.25	2.4	4.2	2.7	3.25	2.5	2.5	2.5
31	2.4	2.3	2.3	2.25	2.25	2.4	3.25	3.25	2.5	2.5	2.5	2.5
1905-6.												
1	2.7	2.5	2.45	2.4	2.4	2.4	2.3	2.3	2.25	2.25	3.0	2.9
2	3.1	2.5	2.45	2.4	2.4	2.4	2.3	2.3	2.25	2.25	3.05	2.95
3	2.85	2.5	2.45	2.4	2.4	2.4	2.3	2.3	3.8	2.4	2.85	3.0
4	2.55	2.5	2.45	2.4	2.4	2.4	2.3	2.3	4.9	2.5	2.8	3.2
5	2.5	2.5	2.45	2.4	2.4	2.4	2.3	2.3	4.7	2.4	2.8	3.0
6	2.5	2.5	2.45	2.4	2.4	2.4	2.3	2.3	3.4	2.45	2.8	2.95
7	2.5	2.5	2.45	2.4	2.4	2.35	2.3	2.3	2.7	2.7	2.9	2.9
8	2.5	2.5	2.45	2.4	2.4	2.35	2.3	2.25	2.6	4.8	3.65	2.9
9	2.5	2.5	2.45	2.4	2.4	2.35	2.3	2.25	2.4	6.1	3.35	2.9
10	2.5	2.5	2.45	2.4	2.4	2.35	2.35	2.25	2.4	5.5	3.0	2.9
11	2.5	2.5	2.45	2.4	2.4	2.35	2.35	2.25	2.4	4.25	4.8	2.9
12	2.5	2.5	2.45	2.4	2.4	2.35	2.45	2.25	2.4	3.85	14.3	2.9
13	2.5	2.5	2.45	2.4	2.4	2.35	2.45	2.25	2.35	3.25	9.25	2.9
14	2.5	2.5	2.45	2.4	2.4	2.35	2.45	2.25	2.3	3.0	6.05	2.9
15	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.9	3.9	2.9
16	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.85	3.55	2.85
17	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	3.1	3.4	2.85
18	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.35	2.95	3.35	3.0
19	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.35	2.35	2.95	3.2	3.6
20	2.8	2.5	2.45	2.4	2.4	2.35	2.25	2.3	2.3	2.9	3.2	2.95
21	2.5	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.8	3.2	2.85
22	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.8	3.15	2.85
23	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.25	2.8	3.1	2.85
24	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.25	2.8	3.0	2.85
25	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.8	3.0	2.85
26	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.8	3.0	2.85
27	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.3	2.8	3.0	2.85
28	2.45	2.5	2.45	2.4	2.4	2.35	2.25	2.25	2.25	2.75	3.0	2.85
29	2.45	2.5	2.45	2.4	2.4	2.35	2.3	2.25	2.25	2.75	3.0	2.85
30	2.5	2.5	2.4	2.4	2.4	2.35	2.3	2.25	2.25	2.8	3.0	2.8
31	2.5	2.4	2.4	2.4	2.4	2.35	2.25	2.25	2.75	2.95	2.95	2.85

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	2.8	2.7	2.7	2.65	2.6	2.55	2.5	2.45	2.5	2.4	2.45	2.4
2.....	2.8	2.7	2.7	2.65	2.6	2.55	2.5	2.45	2.5	2.6	2.45	2.4
3.....	2.8	2.7	2.7	2.65	2.6	2.6	2.5	2.45	2.45	2.5	2.45	2.4
4.....	2.8	2.7	2.7	2.65	2.6	2.6	2.5	2.45	2.45	2.5	2.45	2.4
5.....	2.8	2.65	2.7	2.65	2.6	2.6	2.5	2.45	2.45	2.45	2.45	2.4
6.....	2.8	2.65	2.7	2.6	2.6	2.6	2.5	2.45	2.45	2.4	2.45	2.4
7.....	2.8	2.65	2.7	2.6	2.6	2.6	2.5	2.45	2.45	2.4	2.45	2.4
8.....	2.8	2.65	2.7	2.6	2.6	2.6	2.5	2.6	2.45	2.65	2.45	2.4
9.....	2.8	2.65	2.7	2.6	2.6	2.6	2.5	2.6	2.45	2.5	2.45	2.4
10.....	2.8	2.65	2.7	2.6	2.6	2.6	2.5	2.5	2.45	2.45	2.45	2.4
11.....	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.45	2.4	2.4	2.4
12.....	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.45	2.55	2.4	2.4
13.....	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.45	2.6	2.4	2.4
14.....	2.95	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.7	2.4	2.4
15.....	2.9	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.7	2.4	2.4
16.....	2.85	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.7	2.4	2.4
17.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.65	2.4	2.4
18.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.5	2.4	2.4
19.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.5	2.4	2.4
20.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.55	2.5	2.4	2.4
21.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.65	2.5	2.4	2.4
22.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.5	2.5	2.4	2.4
23.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.5	2.5	2.4	2.4
24.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.5	2.5	2.4	2.4
25.....	2.8	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.5	2.4	2.4	2.4
26.....	2.75	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.4	2.4	2.4
27.....	2.7	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.4	2.4	2.4
28.....	2.7	2.7	2.7	2.6	2.6	2.55	2.5	2.45	2.45	2.45	2.4	2.4
29.....	2.7	2.7	2.7	2.6	.....	2.55	2.5	2.45	2.45	2.5	2.4	2.4
30.....	2.7	2.7	2.65	2.6	.....	2.55	2.5	2.65	2.45	2.45	2.4	2.4
31.....	2.7	.....	2.65	2.6	.....	2.55	.....	2.5	.....	2.45	2.4	.....
1907-8.												
1.....	2.4	3.0	2.4	2.3	2.3	2.3	2.25	2.4	2.7	2.35	2.5	2.4
2.....	2.4	2.75	2.4	2.3	2.25	2.3	2.25	2.4	2.6	2.35	2.45	2.35
3.....	2.4	2.9	2.4	2.3	2.25	2.3	2.25	2.4	2.5	2.35	2.4	2.35
4.....	2.55	2.75	2.4	2.3	2.25	2.3	2.25	2.4	2.5	2.35	2.4	2.35
5.....	3.3	2.6	2.4	2.3	2.3	2.3	2.25	2.4	2.5	2.4	2.5	2.35
6.....	2.4	2.6	2.4	2.3	2.3	2.3	2.25	2.4	2.5	2.4	2.7	2.35
7.....	2.4	2.6	2.4	2.3	2.25	2.3	2.25	2.35	2.5	2.4	4.0	2.4
8.....	2.4	2.55	2.4	2.3	2.25	2.3	2.25	2.35	2.5	2.45	2.75	2.4
9.....	2.4	2.55	2.4	2.3	2.3	2.3	2.25	2.35	2.5	3.5	2.6	2.4
10.....	2.4	2.4	2.4	2.3	2.3	2.3	2.25	2.35	2.5	3.9	2.55	2.4
11.....	2.4	2.4	2.4	2.3	2.3	2.3	2.25	2.35	2.5	3.0	2.5	2.4
12.....	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.35	2.45	2.65	2.5	2.4
13.....	2.4	2.4	2.4	2.3	2.3	2.3	2.35	2.35	2.45	2.5	2.5	2.4
14.....	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.35	2.45	2.5	2.5	2.4
15.....	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.35	2.45	2.5	2.5	2.4
16.....	2.5	2.4	2.4	2.3	2.3	2.25	2.3	2.35	2.4	2.45	2.5	2.4
17.....	2.5	2.4	2.4	2.3	2.3	2.25	2.3	2.35	2.4	2.45	2.45	2.4
18.....	2.5	2.4	2.35	2.3	2.3	2.25	2.35	2.35	2.4	2.45	2.45	2.4
19.....	2.5	2.4	2.35	2.3	2.3	2.25	2.4	2.35	2.4	2.45	2.45	2.4
20.....	2.4	2.4	2.35	2.3	2.25	2.25	2.75	2.35	2.4	2.5	2.5	2.4
21.....	2.4	2.4	2.35	2.3	2.25	2.25	2.65	2.35	2.4	2.5	2.55	2.35
22.....	2.4	2.4	2.35	2.3	2.25	2.25	2.5	2.35	2.4	2.5	2.5	2.35
23.....	2.4	2.4	2.35	2.3	2.3	2.25	2.5	2.35	2.4	2.45	2.45	2.35
24.....	2.4	2.4	2.35	2.3	2.3	2.25	2.5	4.2	2.4	2.4	2.4	2.3
25.....	2.4	2.4	2.35	2.3	2.3	2.25	2.5	3.4	2.4	2.4	2.4	2.3
26.....	2.4	2.4	2.3	2.3	2.3	2.25	2.5	2.8	2.4	2.4	2.4	2.3
27.....	2.4	2.55	2.3	2.3	2.3	2.25	2.45	2.7	2.4	2.4	2.4	2.3
28.....	2.4	2.6	2.3	2.3	2.25	2.25	2.4	2.7	2.35	2.4	2.4	2.3
29.....	2.5	2.45	2.3	2.3	2.25	2.25	2.4	2.7	2.35	2.45	2.4	2.3
30.....	2.4	2.4	2.3	2.3	.....	2.25	2.4	2.65	2.35	2.5	2.4	2.3
31.....	2.4	.....	2.3	2.3	.....	2.25	.....	2.7	.....	2.55	2.4	.....

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	2.3	2.3	2.4	2.3	2.25	2.3	2.2	2.2	2.2	2.2	2.55	2.25
2.....	2.3	2.3	2.3	2.3	2.25	2.3	2.2	2.2	2.2	2.2	2.5	2.25
3.....	2.3	2.3	2.3	2.3	2.25	2.3	2.2	2.2	2.2	2.2	2.5	2.25
4.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.2	2.2	2.5	2.25
5.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.2	2.2	2.5	2.2
6.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.2	2.25	2.5	2.2
7.....	2.45	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.15	2.25	2.5	2.2
8.....	2.4	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.15	2.25	2.5	2.2
9.....	2.3	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.15	2.2	2.5	2.2
10.....	2.3	2.3	2.3	2.3	2.3	2.25	2.2	2.15	2.15	2.2	2.45	2.2
11.....	2.3	2.3	2.3	2.3	2.3	2.25	2.2	2.15	2.15	2.2	2.45	2.2
12.....	2.3	2.3	2.3	2.3	2.3	2.35	2.2	2.15	2.15	2.15	2.45	2.2
13.....	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.15	2.2	2.15	2.45	2.2
14.....	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.15	2.2	2.1	2.4	3.35
15.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.15	2.15	2.1	2.4	2.5
16.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.15	2.15	2.1	2.4	2.3
17.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.1	2.35	2.3
18.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.1	2.3	2.3
19.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.15	2.3	2.3
20.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.15	2.3	2.3
21.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.15	2.3	2.3
22.....	2.35	2.3	2.3	2.3	2.3	2.25	2.2	2.2	2.15	2.15	2.3	2.3
23.....	2.35	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.3	3.05	2.3	2.3
24.....	2.3	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.2	4.6	2.25	2.3
25.....	2.3	2.3	2.3	2.3	2.25	2.25	2.2	2.2	2.2	3.1	2.25	2.3
26.....	2.4	2.3	2.3	2.3	2.25	2.25	2.6	2.2	2.2	2.75	2.25	2.3
27.....	2.35	2.3	2.3	2.3	2.25	2.25	2.6	2.2	2.2	2.6	2.25	2.3
28.....	2.35	2.4	2.3	2.3	2.3	2.25	2.3	2.2	2.2	2.6	2.25	2.25
29.....	2.35	2.45	2.3	2.25	.....	2.25	2.25	2.2	2.2	2.6	2.3	2.25
30.....	2.35	2.4	2.3	2.25	.....	2.2	2.25	2.2	2.2	2.6	2.3	2.25
31.....	2.35	.....	2.3	2.25	.....	2.2	.....	2.2	.....	2.6	2.25	.....
1909-10.												
1.....	2.25	2.2	2.25	2.2	2.15	2.15	2.35	2.3	2.3	2.25	2.2	2.2
2.....	2.25	2.2	2.25	2.2	2.15	2.15	2.2	2.25	2.3	2.25	2.2	2.2
3.....	2.25	2.2	2.25	2.2	2.15	2.15	2.2	2.25	2.3	2.25	2.2	2.2
4.....	2.25	2.2	2.25	2.2	2.15	2.15	2.2	2.25	2.3	2.25	2.2	2.2
5.....	2.25	2.2	2.25	2.2	2.15	2.15	2.2	2.25	2.3	2.25	2.15	2.2
6.....	2.25	2.2	2.2	2.2	2.15	2.15	2.2	2.15	2.3	2.25	2.15	2.2
7.....	2.25	2.2	2.2	2.2	2.15	2.15	2.2	2.15	2.3	2.2	2.2	6.3
8.....	2.25	2.2	2.2	2.2	2.15	2.15	2.2	2.15	2.3	2.2	2.2	4.25
9.....	2.25	2.2	2.2	2.2	2.15	2.15	4.75	2.15	2.3	2.2	2.2	2.85
10.....	2.2	2.2	2.2	2.2	2.15	2.15	2.35	2.15	2.25	2.2	2.2	2.65
11.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.55
12.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.5
13.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.45
14.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.4
15.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.4
16.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.15	2.25	2.2	2.2	2.4
17.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.2	2.2	2.2	2.2	2.4
18.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.3	2.2	2.2	2.2	2.4
19.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	4.8	2.2	2.2	2.2	2.35
20.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	7.95	2.2	2.2	2.2	2.35
21.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	3.95	2.2	2.2	2.2	2.3
22.....	2.2	2.2	2.2	2.2	2.15	2.15	2.3	2.8	2.2	2.2	2.2	2.3
23.....	2.2	2.2	2.25	2.2	2.15	2.15	2.3	2.5	2.2	2.2	2.2	2.3
24.....	2.2	2.2	2.25	2.2	2.15	2.15	2.25	2.5	2.2	2.2	2.2	2.3
25.....	2.2	2.2	2.25	2.2	2.15	2.15	2.25	2.45	2.2	2.2	2.2	2.3
26.....	2.2	2.2	2.25	2.2	2.15	2.15	2.25	2.4	2.35	2.2	2.3	2.3
27.....	2.2	2.2	2.2	2.2	2.15	2.15	2.25	2.4	2.3	2.2	2.25	2.3
28.....	2.2	2.2	2.2	2.2	2.15	2.1	2.25	2.35	2.3	2.2	2.3	2.3
29.....	2.2	2.25	2.2	2.2	.....	2.1	2.25	2.3	2.25	2.2	2.25	2.3
30.....	2.2	2.25	2.2	2.2	.....	2.1	2.25	2.3	2.25	2.2	2.2	2.3
31.....	2.2	.....	2.2	2.2	.....	2.3	.....	2.3	.....	2.2	2.2	.....

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	2.3	2.2	2.15	2.15	2.15	2.25	2.25	2.3	2.2	2.15	2.2	2.15
2.....	2.3	2.2	2.15	2.15	2.15	2.25	4.45	2.35	2.2	2.2	2.2	2.15
3.....	2.45	2.2	2.15	2.15	2.15	2.25	2.9	2.35	2.2	2.2	2.15	2.1
4.....	2.4	2.2	2.15	2.15	2.15	2.25	2.85	2.3	2.2	2.2	2.15	2.1
5.....	2.65	2.2	2.15	2.15	2.15	2.3	2.65	2.3	2.2	2.2	2.15	2.1
6.....	2.55	2.2	2.15	2.15	2.1	2.3	2.6	2.3	2.2	2.2	2.15	2.1
7.....	2.45	2.2	2.15	2.15	2.1	2.3	2.5	2.3	2.2	2.2	2.15	2.1
8.....	2.4	2.2	2.15	2.15	2.1	2.3	2.45	2.3	2.2	2.2	2.1	2.1
9.....	2.4	2.2	2.15	2.15	2.1	2.3	2.4	2.3	2.2	2.2	2.1	2.1
10.....	2.4	2.2	2.15	2.15	2.15	2.3	2.4	2.3	2.2	2.2	2.1	2.1
11.....	2.4	2.2	2.15	2.15	2.15	2.3	2.4	2.35	2.2	2.15	2.15	2.1
12.....	2.4	2.2	2.15	2.15	2.15	2.3	2.4	2.35	2.2	2.15	2.15	2.1
13.....	2.4	2.2	2.15	2.15	2.15	2.3	2.4	2.35	2.2	2.15	2.1	2.1
14.....	2.4	2.2	2.2	2.15	2.15	2.3	2.35	2.3	2.2	2.15	2.15	2.1
15.....	2.4	2.2	2.2	2.15	2.2	2.3	2.35	2.3	2.15	2.2	2.15	2.1
16.....	2.35	2.2	2.2	2.15	2.2	2.3	2.8	2.25	2.15	2.2	2.15	2.1
17.....	2.3	2.15	2.2	2.15	2.4	2.3	2.55	2.25	2.15	2.2	2.1	2.1
18.....	2.3	2.15	2.2	2.2	2.6	2.3	2.35	2.25	2.15	2.15	2.1	2.1
19.....	2.3	2.15	2.2	2.2	2.5	2.65	2.3	2.25	2.15	2.15	2.1	2.1
20.....	2.3	2.15	2.2	2.15	2.35	2.35	2.3	2.25	2.15	2.15	2.1	2.1
21.....	2.3	2.15	2.2	2.15	2.3	2.3	2.4	2.25	2.15	2.2	2.1	2.1
22.....	2.3	2.15	2.2	2.15	2.3	2.3	2.4	2.25	2.15	2.2	2.1	2.1
23.....	2.3	2.15	2.2	2.15	2.3	2.3	2.4	2.25	2.15	2.2	2.1	2.1
24.....	2.3	2.15	2.2	2.15	2.3	2.3	2.35	2.2	2.15	2.3	2.1	2.1
25.....	2.3	2.15	2.2	2.15	2.3	2.3	2.4	2.2	2.15	2.3	2.1	2.1
26.....	2.3	2.15	2.2	2.15	2.3	2.3	2.4	2.2	2.15	2.2	2.1	2.1
27.....	2.25	2.15	2.2	2.15	2.3	2.3	2.4	2.2	2.15	2.2	2.1	2.1
28.....	2.25	2.15	2.2	2.15	2.3	2.3	2.4	2.2	2.15	2.2	2.1	2.1
29.....	2.2	2.15	2.2	2.15	.....	2.3	2.35	2.2	2.15	2.15	2.1	2.1
30.....	2.2	2.15	2.2	2.15	.....	2.3	2.35	2.2	2.15	2.15	2.1	2.1
31.....	2.2	.....	2.2	2.15	.....	2.3	.....	2.2	.....	2.15	2.1	.....
1911-12.												
1.....	2.1	2.2	2.2	2.25	2.2	2.25	2.15	2.2	2.4	2.1	2.05	2.05
2.....	2.1	2.25	2.2	2.25	2.2	2.2	2.15	2.2	2.2	2.1	2.05	2.05
3.....	2.1	2.25	2.2	2.25	2.2	2.2	2.1	2.2	2.2	2.1	2.05	2.05
4.....	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.15	2.1	2.05	2.05
5.....	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.05	2.05
6.....	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.05	2.05
7.....	2.1	2.4	2.2	2.2	2.2	2.2	2.65	2.2	2.2	2.1	2.05	2.05
8.....	2.15	2.35	2.2	2.2	2.2	2.2	2.35	2.2	2.0	2.1	2.05	2.05
9.....	2.15	2.2	2.25	2.2	2.2	2.2	2.35	2.2	2.1	2.1	2.05	2.05
10.....	2.15	2.2	2.2	2.2	2.2	2.2	2.35	2.2	2.1	2.05	2.05	2.05
11.....	2.15	2.2	2.2	2.2	2.2	2.2	2.4	2.1	2.1	2.1	2.05	2.05
12.....	2.15	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.05	2.05
13.....	2.15	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.05	2.05
14.....	2.15	2.2	2.2	2.2	2.2	2.2	2.3	2.15	2.1	2.1	2.0	2.2
15.....	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.15	2.1	2.1	2.0	2.15
16.....	2.15	2.2	2.2	2.2	2.2	2.2	2.3	2.15	2.1	2.1	2.0	2.15
17.....	2.15	2.2	2.2	2.2	2.2	2.2	2.3	2.15	2.1	2.1	2.0	2.2
18.....	2.15	2.2	2.2	2.2	2.2	2.2	2.25	2.1	2.7	2.1	2.05	2.2
19.....	2.15	2.2	2.3	2.2	2.2	2.15	2.2	2.1	2.25	2.1	2.05	2.2
20.....	2.15	2.2	2.25	2.2	2.2	2.15	2.2	2.1	2.2	2.1	2.05	2.1
21.....	2.15	2.2	2.25	2.2	2.2	2.15	2.2	2.1	2.15	2.1	2.05	2.1
22.....	2.15	2.2	2.25	2.2	2.2	2.15	2.2	2.1	2.1	2.1	2.05	2.1
23.....	2.15	2.2	2.25	2.2	2.2	2.2	2.2	2.1	2.15	2.1	2.05	2.1
24.....	2.15	2.2	2.25	2.15	2.2	2.2	2.2	2.1	2.3	2.1	2.1	2.15
25.....	2.15	2.2	2.25	2.2	2.2	2.2	2.2	2.1	2.2	2.05	2.1	2.25
26.....	2.15	2.2	2.2	2.2	2.2	2.15	2.2	2.1	2.2	2.05	2.1	2.25
27.....	2.15	2.2	2.2	2.2	2.2	2.15	2.25	2.1	2.15	2.05	2.1	2.1
28.....	2.2	2.2	2.2	2.2	2.2	2.15	2.2	2.1	2.15	2.05	2.1	2.1
29.....	2.2	2.2	2.25	2.2	2.2	2.15	2.2	2.1	2.1	2.05	2.1	3.1
30.....	2.2	2.2	2.25	2.2	.....	2.15	2.2	2.1	2.1	2.05	2.05	2.8
31.....	2.2	.....	2.25	2.2	.....	2.15	.....	2.1	.....	2.05	2.05	.....

Daily gage height, in feet, of Devils River at Devils River, Tex., for 1900-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	2.35	2.1	2.1	2.15	2.1	2.1	2.05	2.05	2.2	2.3	2.3	2.2
2.....	2.3	2.1	2.1	2.15	2.1	2.1	2.05	2.05	2.2	2.25	2.3	2.2
3.....	2.25	2.1	2.1	2.15	2.1	2.1	2.05	2.05	2.2	2.2	2.4	2.25
4.....	2.2	2.1	2.1	2.15	2.1	2.1	2.05	7.3	2.2	2.2	2.3	2.25
5.....	2.2	2.1	2.1	2.15	2.1	2.1	2.05	5.6	2.2	2.2	2.3	2.25
6.....	2.25	2.1	2.1	2.15	2.1	2.1	2.05	6.05	2.2	2.2	2.3	2.25
7.....	2.2	2.1	2.1	2.15	2.1	2.1	2.05	3.8	2.2	2.2	2.3	2.25
8.....	2.2	2.1	2.1	2.15	2.1	2.1	2.05	2.95	2.25	2.2	2.25	2.25
9.....	2.15	2.1	2.1	2.15	2.1	2.1	2.05	2.65	2.2	2.2	2.25	2.25
10.....	2.15	2.1	2.2	2.15	2.1	2.1	2.05	2.45	2.2	2.2	2.25	2.35
11.....	2.15	2.1	2.2	2.15	2.15	2.1	2.05	2.4	2.2	2.2	2.25	2.45
12.....	2.15	2.1	2.2	2.15	2.15	2.1	2.05	2.3	2.2	2.2	2.25	2.45
13.....	2.2	2.1	2.2	2.15	2.15	2.1	2.05	2.3	2.2	2.2	2.25	2.3
14.....	2.15	2.1	2.2	2.15	2.15	2.1	2.05	2.3	2.2	2.2	2.2	2.3
15.....	2.15	2.1	2.15	2.1	2.15	2.1	2.0	2.3	2.2	2.2	2.2	2.3
16.....	2.25	2.1	2.15	2.1	2.15	2.1	2.0	2.3	2.2	2.2	2.2	2.3
17.....	2.15	2.15	2.15	2.1	2.15	2.1	2.0	2.3	2.25	2.2	2.2	2.3
18.....	2.15	2.15	2.15	2.15	2.15	2.1	2.0	2.25	2.2	2.2	2.2	2.3
19.....	2.15	2.1	2.15	2.15	2.15	2.1	2.0	2.25	2.35	2.2	2.2	2.3
20.....	2.15	2.15	2.15	2.15	2.1	2.05	2.0	2.25	2.3	2.2	2.2	2.3
21.....	2.15	2.2	2.15	2.15	2.1	2.05	2.05	2.25	2.2	2.2	2.2	2.25
22.....	2.1	2.15	2.15	2.15	2.15	2.05	2.05	2.25	2.45	2.2	2.2	2.25
23.....	2.1	2.1	2.15	2.15	2.15	2.05	2.2	2.25	2.4	2.2	2.2	2.25
24.....	2.1	2.1	2.15	2.15	2.15	2.05	2.2	2.25	2.2	2.2	2.2	2.25
25.....	2.1	2.15	2.15	2.15	2.1	2.05	2.05	2.2	2.2	2.2	2.2	2.25
26.....	2.1	2.1	2.15	2.15	2.1	2.05	2.05	2.2	2.2	2.4	2.2	2.25
27.....	2.15	2.1	2.15	2.15	2.1	2.1	2.05	2.2	2.2	2.45	2.2	2.25
28.....	2.15	2.1	2.15	2.15	2.1	2.1	2.05	2.2	2.2	2.35	2.2	2.25
29.....	2.15	2.15	2.15	2.1	.....	2.05	2.05	2.2	2.2	2.25	2.2	2.25
30.....	2.15	2.1	2.15	2.1	.....	2.05	2.05	2.2	2.3	2.4	2.2	2.25
31.....	2.15	.....	2.15	2.1	.....	2.05	.....	2.2	.....	2.3	2.2	.....

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1900.						1900.					
1.....	1,230	1,240	1,380	900	950	16.....	1,320	1,000	930	1,090	760
3.....	1,120	1,230	1,380	950	950	17.....	1,230	1,000	940	1,040	760
3.....	1,110	1,210	1,120	1,040	950	18.....	1,220	1,000	940	1,040	760
4.....	1,100	1,200	1,080	1,000	950	19.....	1,210	970	940	1,040	760
5.....	1,090	1,190	1,030	900	950	20.....	1,200	1,000	930	1,000	760
6.....	1,080	1,130	980	860	950	21.....	1,680	960	920	1,000	760
7.....	1,130	1,110	900	860	950	22.....	3,800	960	910	950	21,670
8.....	1,080	1,060	920	3,030	950	23.....	1,510	990	860	950	52,420
9.....	1,070	1,060	950	2,690	950	24.....	1,460	990	840	950	30,470
10.....	1,060	1,050	970	1,650	860	25.....	1,370	980	840	950	5,890
11.....	980	1,050	980	1,370	860	26.....	1,320	980	980	950	3,700
12.....	980	1,040	980	1,180	860	27.....	1,290	970	890	860	2,690
13.....	1,040	1,060	930	1,140	860	28.....	1,270	970	890	860	1,600
14.....	1,400	1,020	930	1,140	810	29.....	1,260	13,700	920	890	1,230
15.....	1,820	1,000	910	1,140	760	30.....	1,260	2,400	970	860	1,230
						31.....	1,250	.....	920	860	.....

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	1,230	2,410	900	840	810	830	750	670	670	580	570	520
2.....	1,140	1,940	900	840	810	810	750	660	660	580	570	520
3.....	1,140	1,520	900	840	800	790	750	660	650	580	580	550
4.....	1,140	1,230	900	840	800	770	750	660	650	580	580	520
5.....	1,040	1,180	900	840	790	770	740	660	650	580	590	510
6.....	1,040	1,040	900	840	780	760	730	660	640	580	590	520
7.....	1,040	1,040	900	840	770	760	670	660	600	580	600	520
8.....	1,040	1,040	900	840	760	750	670	660	600	580	600	520
9.....	1,040	1,040	900	830	750	750	670	670	600	580	600	700
10.....	1,140	1,040	900	830	750	740	670	670	600	580	600	590
11.....	1,230	1,040	900	830	750	740	670	670	600	580	670	520
12.....	1,230	1,040	900	830	750	730	670	670	590	750	630	520
13.....	1,230	1,040	900	830	750	720	670	670	590	580	630	520
14.....	1,230	940	900	830	760	720	670	670	590	580	620	520
15.....	1,230	940	900	830	770	720	670	670	590	580	590	520
16.....	1,230	900	900	830	800	720	670	670	590	580	580	520
17.....	1,230	900	900	830	820	730	670	660	590	580	520	520
18.....	1,230	940	900	830	830	730	670	660	590	580	520	520
19.....	1,230	940	850	830	830	730	670	660	590	580	510	520
20.....	1,230	940	850	830	830	730	670	660	590	580	500	520
21.....	1,230	940	850	830	840	740	670	660	590	580	500	520
22.....	1,230	940	850	830	840	740	670	660	590	580	500	520
23.....	1,230	940	850	830	840	740	670	660	590	580	520	520
24.....	1,230	940	850	830	840	740	670	670	590	570	500	520
25.....	1,230	900	850	830	840	740	670	670	590	570	500	520
26.....	1,230	900	850	830	840	750	670	670	590	570	500	520
27.....	1,230	900	850	830	840	750	670	670	590	570	500	520
28.....	1,230	900	850	820	840	750	670	670	590	570	520	520
29.....	1,230	900	850	820	840	750	670	670	580	570	520	520
30.....	1,230	900	850	810	840	750	670	670	580	570	520	520
31.....	2,110	.....	850	810	840	750	670	670	570	570	520	.....
1901-2.												
1.....	520	520	510	480	470	500	485	440	560	430	425	405
2.....	520	520	510	480	470	500	485	440	540	425	420	405
3.....	520	520	510	490	480	500	480	440	535	425	420	405
4.....	520	520	480	490	480	500	480	1,210	535	425	415	545
5.....	520	520	480	490	490	500	480	730	530	425	415	440
6.....	520	520	480	490	490	500	480	590	530	425	415	420
7.....	520	520	480	490	480	500	475	520	525	430	415	2,200
8.....	520	520	480	490	460	500	475	450	515	430	415	540
9.....	520	520	480	490	450	500	475	450	520	430	415	490
10.....	520	520	480	490	460	500	475	450	515	430	415	470
11.....	520	520	480	490	470	500	470	450	510	430	415	450
12.....	520	520	480	500	470	500	470	450	490	430	420	445
13.....	520	520	490	500	470	490	590	450	485	430	425	420
14.....	520	520	510	500	470	490	530	450	485	425	430	445
15.....	520	520	510	500	470	490	490	450	485	425	425	445
16.....	520	520	510	500	470	490	490	450	480	425	420	445
17.....	520	510	510	500	470	490	480	450	480	420	420	440
18.....	520	510	510	490	470	490	450	5,380	480	420	415	430
19.....	520	510	510	490	480	490	450	2,530	475	420	410	430
20.....	520	510	480	490	480	490	450	1,180	475	420	410	430
21.....	520	510	480	490	490	490	445	940	475	420	410	440
22.....	520	510	480	490	490	490	445	780	470	420	410	440
23.....	520	510	480	490	500	490	440	740	470	420	410	450
24.....	520	510	480	480	500	490	440	740	465	420	410	460
25.....	520	510	480	480	500	490	440	620	460	420	405	470
26.....	520	510	480	480	500	490	440	580	455	420	405	490
27.....	520	510	480	480	500	490	440	580	450	880	405	480
28.....	520	510	480	470	500	490	440	580	445	490	405	470
29.....	520	510	480	470	500	490	440	580	440	450	405	460
30.....	520	510	480	470	500	490	440	580	435	430	405	450
31.....	520	510	480	470	500	490	440	580	430	405	405	.....

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	430	420	465	430	430	535	415	410	480	690	530	525
2.....	470	660	535	430	440	500	415	405	830	690	530	525
3.....	530	610	465	430	470	500	415	380	600	680	530	525
4.....	490	520	430	410	440	495	415	380	530	630	560	525
5.....	445	430	430	410	440	495	420	405	490	680	560	530
6.....	445	430	430	410	435	495	420	440	490	680	560	530
7.....	440	430	430	410	435	490	425	440	480	680	560	530
8.....	430	430	430	410	430	490	425	440	440	630	560	530
9.....	430	430	430	405	430	485	420	410	780	630	525	525
10.....	430	430	430	405	425	485	445	480	830	600	525	520
11.....	430	430	430	405	425	485	420	480	600	600	525	520
12.....	430	430	400	405	430	450	420	1,060	1,640	600	525	520
13.....	430	430	400	430	430	450	415	450	10,400	600	525	550
14.....	430	430	400	430	435	450	415	420	3,200	600	530	520
15.....	425	430	400	580	435	450	420	420	2,380	600	530	520
16.....	425	425	400	550	440	450	420	420	2,050	600	530	550
17.....	425	425	380	475	440	480	420	1,240	1,380	600	525	590
18.....	425	420	415	500	440	450	420	660	1,060	600	525	540
19.....	420	420	415	500	440	760	420	600	960	600	525	540
20.....	420	420	415	500	435	520	420	540	910	600	525	540
21.....	420	415	415	495	435	485	420	500	910	600	520	540
22.....	420	415	390	475	430	450	415	540	910	600	520	540
23.....	420	415	390	475	430	450	415	700	900	570	520	540
24.....	420	410	390	475	430	445	415	560	800	540	520	540
25.....	420	410	390	475	430	445	415	490	750	540	520	525
26.....	420	390	390	475	500	440	415	490	750	540	520	525
27.....	420	390	390	470	500	440	470	490	750	570	520	525
28.....	420	390	385	465	535	440	425	490	750	570	520	1,370
29.....	420	390	385	440	.....	420	425	490	700	630	520	1,000
30.....	420	390	385	430	.....	420	420	490	700	570	520	790
31.....	420	.....	385	430	.....	420	.....	490	.....	540	520	.....
1903-4.												
1.....	700	580	570	530	535	515	510	470	α 470	500	450	430
2.....	700	580	570	530	535	510	510	460	470	500	470	430
3.....	660	585	570	530	530	490	525	490	470	510	α 490	430
4.....	660	585	570	530	530	490	α 525	500	470	510	490	480
5.....	660	585	570	530	α 530	490	525	480	800	α 510	490	480
6.....	660	580	560	α 530	530	490	510	α 490	α 1,300	500	490	505
7.....	620	580	560	530	525	α 490	510	490	655	490	490	620
8.....	620	580	560	535	525	490	510	490	560	480	485	970
9.....	600	575	560	535	525	490	510	485	560	470	485	α 1,120
10.....	600	575	555	535	520	510	490	485	560	460	485	910
11.....	600	575	555	α 535	520	510	490	α 485	α 730	α 450	485	600
12.....	590	575	555	535	520	510	α 490	485	730	450	α 485	650
13.....	590	575	550	535	515	510	490	485	655	450	480	480
14.....	590	575	550	540	515	510	490	680	590	450	480	440
15.....	590	575	550	540	α 515	510	490	680	590	450	480	440
16.....	590	575	550	545	515	515	490	α 630	530	450	α 480	440
17.....	590	575	550	α 545	515	α 515	490	595	530	410	470	440
18.....	590	575	550	545	515	515	490	530	530	410	465	560
19.....	590	575	550	545	515	515	490	520	530	410	460	560
20.....	590	575	550	545	515	510	490	520	α 530	410	455	α 565
21.....	590	575	545	545	α 515	510	490	520	530	410	450	570
22.....	590	575	545	545	515	510	α 1,580	520	530	α 410	α 445	770
23.....	590	570	545	545	515	α 510	490	α 520	510	410	445	930
24.....	560	570	540	545	515	510	445	480	510	1,200	440	580
25.....	560	570	540	545	515	510	445	480	510	α 490	440	580
26.....	560	565	535	540	α 515	510	445	480	495	450	440	580
27.....	570	565	535	α 540	515	490	α 445	α 510	α 495	450	435	580
28.....	570	565	530	540	515	490	445	510	495	440	435	580
29.....	570	565	530	540	515	490	445	560	495	α 440	α 430	580
30.....	570	565	530	540	.....	α 490	445	560	495	440	430	580
31.....	570	.....	530	540	.....	490	.....	510	.....	440	430	.....

α Date of measurement.

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	590	520	470	445	440	435	6,470	2,260	990	1,090	555	570
2.....	600	515	<i>a</i> 480	445	440	440	1,750	1,590	930	940	560	580
3.....	610	510	480	445	435	440	840	1,020	990	930	560	1,200
4.....	<i>a</i> 610	<i>a</i> 505	440	450	435	440	770	<i>a</i> 850	1,110	830	560	<i>a</i> 1,100
5.....	610	505	445	450	435	445	<i>a</i> 710	795	<i>a</i> 930	<i>a</i> 830	565	750
6.....	<i>a</i> 575	505	450	450	430	445	710	795	930	825	565	680
7.....	610	510	455	450	430	470	655	690	820	820	<i>a</i> 565	620
8.....	610	510	460	450	<i>a</i> 430	470	655	690	770	810	565	620
9.....	610	510	465	<i>a</i> 450	430	470	630	690	720	705	565	630
10.....	610	510	470	450	430	470	630	690	720	700	565	630
11.....	600	510	475	450	430	475	630	690	720	<i>a</i> 735	<i>a</i> 565	640
12.....	600	<i>a</i> 510	480	450	430	475	600	<i>a</i> 690	720	680	565	640
13.....	600	510	485	450	430	<i>a</i> 475	<i>a</i> 565	690	770	675	560	650
14.....	600	510	<i>a</i> 490	450	430	475	600	850	<i>a</i> 820	620	555	650
15.....	600	510	480	450	430	475	600	750	820	570	550	660
16.....	570	505	475	450	<i>a</i> 430	840	600	700	820	<i>a</i> 605	<i>a</i> 540	660
17.....	530	505	470	<i>a</i> 450	430	<i>a</i> 760	565	<i>a</i> 655	820	600	545	670
18.....	530	505	465	450	430	760	<i>a</i> 535	510	820	595	550	<i>a</i> 720
19.....	530	505	460	450	430	760	535	525	820	590	555	1,920
20.....	530	500	455	445	435	760	335	540	820	585	555	890
21.....	530	500	450	445	435	<i>a</i> 680	535	555	1,040	<i>a</i> 580	560	670
22.....	530	500	<i>a</i> 445	445	435	665	535	570	<i>a</i> 820	580	<i>a</i> 560	670
23.....	535	<i>a</i> 500	445	445	435	650	630	585	820	580	565	<i>a</i> 670
24.....	<i>a</i> 595	460	445	445	435	635	1,010	850	810	580	570	660
25.....	530	460	445	<i>a</i> 445	435	<i>a</i> 545	<i>a</i> 545	<i>a</i> 815	810	580	<i>a</i> 575	660
26.....	530	460	445	445	435	545	3,170	940	<i>a</i> 800	580	575	<i>a</i> 655
27.....	530	<i>a</i> 455	445	445	<i>a</i> 435	545	840	1,060	800	<i>a</i> 560	570	655
28.....	530	455	445	445	435	540	710	1,030	920	560	565	655
29.....	530	450	445	445	-----	540	650	910	3,280	555	560	<i>a</i> 660
30.....	530	460	<i>a</i> 445	<i>a</i> 425	-----	<i>a</i> 540	<i>a</i> 2,370	<i>a</i> 930	<i>a</i> 1,400	<i>a</i> 555	<i>a</i> 560	660
31.....	530	-----	445	425	-----	540	-----	1,480	-----	555	500	-----
1905-6.												
1.....	770	510	575	505	440	425	350	400	400	410	1,030	865
2.....	1,100	510	575	<i>a</i> 500	435	425	350	405	400	410	1,100	<i>a</i> 915
3.....	870	510	575	490	435	425	355	410	2,070	580	870	970
4.....	<i>a</i> 650	<i>a</i> 510	575	485	430	425	355	<i>a</i> 410	3,260	690	<i>a</i> 805	1,175
5.....	615	510	<i>a</i> 575	480	430	<i>a</i> 425	360	410	<i>a</i> 3,040	580	805	<i>a</i> 980
6.....	610	510	580	470	<i>a</i> 425	425	360	410	1,650	640	805	935
7.....	605	505	585	465	425	390	365	410	900	<i>a</i> 920	960	890
8.....	600	505	585	460	420	390	365	390	800	3,080	2,160	890
9.....	595	505	590	450	420	385	370	<i>a</i> 390	585	6,770	<i>a</i> 1,680	890
10.....	590	500	<i>a</i> 590	<i>a</i> 445	<i>a</i> 415	385	<i>a</i> 415	390	580	4,970	1,120	890
11.....	585	<i>a</i> 500	590	445	415	380	425	390	580	2,510	3,050	890
12.....	<i>a</i> 585	500	590	445	415	375	525	390	<i>a</i> 575	<i>a</i> 2,100	30,000	890
13.....	580	500	590	445	415	370	<i>a</i> 535	390	520	1,430	14,850	890
14.....	575	505	590	445	415	<i>a</i> 365	535	390	470	1,140	5,580	<i>a</i> 890
15.....	570	505	590	445	415	375	400	395	470	1,030	2,140	890
16.....	565	<i>a</i> 505	590	445	415	380	400	<i>a</i> 395	470	970	1,650	850
17.....	<i>a</i> 565	505	590	445	415	385	400	395	470	1,250	1,450	850
18.....	555	505	<i>a</i> 590	<i>a</i> 445	420	390	400	400	520	1,080	1,390	1,000
19.....	550	505	590	445	420	<i>a</i> 395	400	400	520	1,080	1,210	1,720
20.....	820	500	590	445	<i>a</i> 425	395	400	430	470	<i>a</i> 1,030	1,210	970
21.....	530	500	590	450	425	395	<i>a</i> 400	<i>a</i> 405	470	895	1,210	<i>a</i> 870
22.....	505	495	590	450	420	395	400	405	470	860	1,150	870
23.....	500	495	590	450	420	395	400	405	<i>a</i> 420	830	1,090	865
24.....	490	<i>a</i> 490	590	450	<i>a</i> 415	395	400	405	420	800	970	865
25.....	<i>a</i> 485	500	590	450	415	395	400	400	465	765	970	860
26.....	485	520	<i>a</i> 595	<i>a</i> 450	420	<i>a</i> 395	<i>a</i> 400	400	465	<i>a</i> 730	970	855
27.....	485	540	590	450	<i>a</i> 420	395	390	400	465	740	970	855
28.....	485	570	585	450	420	395	380	400	415	700	970	850
29.....	485	600	580	445	-----	395	<i>a</i> 400	400	<i>a</i> 410	710	970	<i>a</i> 850
30.....	<i>a</i> 510	<i>a</i> 630	515	<i>a</i> 445	-----	<i>a</i> 395	400	400	410	770	970	810
31.....	510	-----	510	445	-----	395	400	400	<i>a</i> 720	915	-----	-----

a Date of measurement.

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	815	725	700	695	675	605	570	520	545	465	525	520
2.....	820	725	700	700	675	605	570	520	545	560	530	520
3.....	825	730	700	705	675	635	570	520	525	510	535	520
4.....	^a 830	730	705	710	675	635	570	520	525	505	^a 535	520
5.....	830	^a 715	705	715	675	640	570	520	525	^a 475	535	520
6.....	825	715	705	700	675	645	570	520	525	465	535	515
7.....	825	715	710	705	675	645	570	520	525	480	535	^a 515
8.....	820	715	^a 710	710	675	650	565	630	525	620	535	515
9.....	820	715	710	^a 715	^a 675	650	^a 565	^a 630	^a 525	555	535	515
10.....	815	715	705	710	675	^a 655	565	540	525	545	535	510
11.....	815	725	700	705	675	650	560	540	520	^a 530	520	510
12.....	^a 810	725	695	700	670	650	555	540	520	600	520	^a 510
13.....	810	^a 725	690	695	665	645	^a 550	540	515	620	520	510
14.....	960	725	690	^a 690	660	620	550	^a 500	515	665	^a 520	510
15.....	900	725	^a 690	690	655	615	545	500	510	660	520	510
16.....	840	720	685	690	^a 650	615	545	495	^a 505	660	520	510
17.....	780	715	685	690	650	610	540	495	505	630	520	515
18.....	770	710	680	685	650	^a 610	535	490	505	550	520	515
19.....	760	710	^a 680	685	645	605	530	490	505	545	520	515
20.....	^a 755	705	680	685	645	605	^a 530	485	545	^a 545	520	515
21.....	755	700	685	685	640	605	530	485	585	545	520	520
22.....	760	^a 700	685	^a 685	640	600	530	^a 485	525	545	520	520
23.....	765	700	690	685	^a 640	600	530	485	525	545	520	520
24.....	770	700	695	685	635	600	535	480	^a 525	550	520	520
25.....	780	700	700	685	635	600	^a 535	480	525	500	^a 520	520
26.....	740	700	705	680	630	595	535	480	500	500	520	520
27.....	720	700	710	680	625	^a 595	535	475	500	500	520	525
28.....	720	700	715	680	^a 625	590	535	475	495	525	520	525
29.....	720	700	720	680	.....	585	535	475	495	^a 550	525	^a 525
30.....	^a 720	^a 700	680	^a 675	.....	575	^a 535	670	^a 495	525	^a 525	525
31.....	720	.....	685	675	.....	^a 570	.....	545	.....	525	525	.....
1907-8.												
1.....	525	1,050	600	510	525	500	485	635	740	535	645	530
2.....	525	855	600	500	^a 495	500	485	620	685	535	585	510
3.....	525	980	^a 595	^a 490	490	^a 505	485	605	630	535	520	510
4.....	^a 645	865	590	495	490	505	490	590	^a 630	535	510	510
5.....	1,250	745	585	495	520	505	490	575	630	^a 565	^a 595	510
6.....	560	750	580	495	515	510	490	^a 560	630	565	800	510
7.....	555	755	580	500	480	510	^a 490	535	630	565	2,260	530
8.....	560	715	575	500	475	510	490	530	630	620	850	530
9.....	545	715	570	505	510	515	490	530	630	1,730	700	^a 530
10.....	540	600	^a 570	505	505	515	490	525	630	^a 2,160	650	530
11.....	535	605	570	510	^a 505	515	490	525	630	1,150	600	525
12.....	530	^a 605	570	^a 515	505	520	565	520	615	760	600	525
13.....	^a 525	600	570	510	510	^a 520	540	^a 520	^a 615	590	^a 600	^a 520
14.....	530	595	570	510	515	520	^a 515	520	615	^a 590	600	520
15.....	620	590	565	510	515	515	515	515	615	590	600	520
16.....	625	^a 585	565	510	520	495	515	515	595	585	600	520
17.....	635	585	565	510	520	495	515	510	595	585	555	520
18.....	645	590	^a 530	505	525	495	545	510	595	585	^a 555	520
19.....	650	595	535	505	530	495	575	505	595	585	555	520
20.....	580	600	535	505	495	^a 490	785	505	595	590	600	520
21.....	585	605	535	^a 500	500	490	745	500	^a 595	590	650	^a 495
22.....	^a 595	610	535	505	^a 500	490	^a 685	500	590	590	600	495
23.....	590	615	535	510	535	490	685	500	585	^a 585	555	495
24.....	585	620	540	510	535	490	685	2,550	580	580	535	475
25.....	580	^a 630	540	515	535	490	685	1,570	575	580	535	^a 475
26.....	575	625	505	515	530	490	685	^a 830	565	580	^a 535	475
27.....	570	740	505	520	530	485	665	740	560	580	535	475
28.....	565	775	505	525	^a 495	485	650	740	540	580	535	470
29.....	645	^a 650	510	^a 525	495	485	^a 650	740	^a 535	620	530	^a 470
30.....	845	605	^a 510	525	.....	^a 485	650	^a 695	535	665	^a 530	470
31.....	565	.....	510	525	.....	485	.....	740	.....	^a 705	630	.....

^a Date of measurement.

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	465	470	520	475	400	440	400	395	400	405	650	430
2.....	465	470	480	470	405	440	410	395	400	415	635	430
3.....	460	470	480	470	405	440	420	390	400	420	635	425
4.....	480	a 470	a 475	a 465	a 405	a 415	430	a 395	a 400	430	635	a 425
5.....	475	470	475	470	405	415	a 440	395	400	435	a 635	410
6.....	470	470	475	475	405	415	430	395	400	a 460	630	410
7.....	510	470	470	480	400	415	420	395	380	455	620	405
8.....	485	470	470	485	400	410	410	395	380	445	615	405
9.....	445	470	a 470	a 490	a 395	a 410	405	395	380	420	610	400
10.....	a 445	470	470	485	440	410	a 400	380	380	410	585	400
11.....	445	465	470	480	450	410	400	380	380	405	580	400
12.....	450	a 465	470	475	460	475	400	a 380	a 380	375	570	400
13.....	450	465	470	470	470	445	400	380	400	365	565	400
14.....	450	465	470	a 470	a 480	a 445	400	380	405	a 335	a 540	1,560
15.....	475	470	a 470	470	430	440	a 400	380	385	335	530	a 625
16.....	475	470	470	470	430	430	395	380	385	340	525	480
17.....	480	a 470	475	470	460	425	390	395	a 390	340	495	475
18.....	a 480	470	475	470	460	420	385	395	390	340	465	470
19.....	485	470	475	475	a 460	a 410	a 380	395	385	360	a 455	465
20.....	a 490	470	a 475	a 475	460	410	380	a 395	380	360	455	460
21.....	495	470	475	470	455	410	385	395	380	360	455	455
22.....	500	470	475	460	450	410	385	390	375	360	455	455
23.....	505	470	480	455	a 425	410	385	390	455	a 1,330	455	a 450
24.....	490	470	480	445	420	405	a 385	390	390	3,590	435	450
25.....	495	470	485	a 435	415	a 405	385	a 390	a 385	1,400	435	450
26.....	a 540	470	a 485	435	410	410	650	390	390	890	a 435	450
27.....	515	470	485	430	a 405	415	650	395	390	670	435	450
28.....	505	525	485	430	440	420	450	395	395	670	435	430
29.....	500	a 555	480	400	.....	420	a 420	400	a 395	670	455	a 430
30.....	a 495	525	a 480	a 400	.....	a 390	420	a 400	a 400	a 670	a 455	430
31.....	495	.....	480	400	.....	390	.....	400	.....	670	435	.....
1909-10.												
1.....	430	390	420	405	395	385	470	470	480	475	395	405
2.....	425	390	415	410	400	385	400	435	450	470	395	400
3.....	425	390	a 415	420	405	385	400	435	a 420	465	400	400
4.....	420	395	415	a 425	a 410	385	400	430	425	460	a 400	a 400
5.....	a 420	a 395	415	425	410	385	a 400	a 430	425	455	380	400
6.....	420	395	410	425	410	385	400	405	430	445	375	400
7.....	420	395	410	425	410	385	400	405	430	400	395	6,550
8.....	415	395	410	425	410	380	400	405	a 435	400	390	3,280
9.....	415	395	410	425	415	a 380	3,820	405	435	a 400	a 390	a 1,040
10.....	390	400	410	425	415	380	540	a 405	420	405	390	770
11.....	390	400	410	425	415	385	495	405	420	405	390	715
12.....	390	400	410	a 425	415	385	495	405	415	410	390	680
13.....	a 385	a 400	a 410	425	415	a 390	a 495	405	a 415	410	390	650
14.....	385	400	410	425	a 415	390	500	405	420	a 415	a 390	620
15.....	390	400	410	420	405	390	500	405	420	415	395	610
16.....	390	405	410	415	400	390	500	405	420	420	400	605
17.....	390	405	410	410	a 390	385	505	435	410	420	400	a 600
18.....	390	405	405	410	390	385	a 505	460	410	425	405	590
19.....	390	405	405	405	390	385	505	3,900	415	a 425	405	560
20.....	390	410	405	400	390	385	500	11,000	415	420	410	550
21.....	395	410	400	a 395	390	385	500	2,690	420	410	415	520
22.....	a 395	a 410	400	395	390	a 385	500	a 1,060	a 420	405	415	515
23.....	395	410	a 410	400	a 390	385	500	670	425	400	420	505
24.....	390	410	410	405	390	385	460	670	430	a 395	420	500
25.....	390	410	410	410	385	380	a 460	680	435	395	425	a 495
26.....	a 390	410	410	a 410	385	a 380	460	590	580	395	a 460	500
27.....	390	410	390	405	385	380	460	590	505	395	435	505
28.....	390	410	390	400	a 385	375	455	555	510	395	445	505
29.....	390	a 425	a 390	395	.....	375	a 455	a 515	a 485	395	425	510
30.....	a 390	425	390	a 390	.....	a 375	455	515	485	a 395	a 405	510
31.....	390	.....	395	390	.....	440	.....	515	.....	395	405	.....

c Date of measurement.

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	515	400	380	375	380	470	470	500	395	380	380	325
2.....	525	400	380	375	380	460	3,370	520	395	400	380	325
3.....	620	405	375	375	a 380	455	1,130	505	395	395	370	310
4.....	a 600	a 405	a 375	375	380	455	1,060	465	395	390	a 365	a 310
5.....	745	405	375	a 375	375	495	a 770	a 455	a 395	385	360	310
6.....	685	405	375	380	340	490	700	455	395	380	355	310
7.....	620	405	375	380	340	480	640	455	395	375	350	310
8.....	555	405	375	380	a 335	a 475	610	455	395	370	325	305
9.....	585	410	375	385	335	475	580	455	a 395	a 365	a 320	305
10.....	580	410	375	a 385	370	475	580	460	395	370	320	305
11.....	580	410	375	385	375	480	575	490	395	350	340	305
12.....	a 575	a 410	375	385	380	480	a 575	490	395	360	340	300
13.....	575	405	a 375	385	a 385	a 480	575	490	395	a 375	320	300
14.....	570	405	390	380	385	480	545	a 460	395	370	340	a 295
15.....	570	405	390	380	420	480	545	465	385	390	340	300
16.....	545	a 400	395	380	420	480	980	440	385	380	340	300
17.....	a 515	390	395	380	575	480	a 700	410	a 385	380	a 320	300
18.....	510	390	a 395	a 390	a 730	480	550	445	385	a 360	320	300
19.....	310	390	395	390	660	725	520	415	385	360	320	300
20.....	510	390	395	380	555	515	520	a 450	380	360	320	305
21.....	505	385	395	380	520	480	580	440	380	380	320	305
22.....	505	385	390	a 380	520	a 480	580	455	380	a 380	a 325	a 305
23.....	500	385	390	380	515	485	580	425	375	380	320	305
24.....	495	385	390	380	515	485	550	a 390	375	420	320	305
25.....	a 495	a 385	390	380	515	490	580	390	a 375	420	315	305
26.....	490	385	a 390	380	510	a 490	580	390	375	380	315	a 305
27.....	450	385	385	380	a 510	495	a 580	395	375	380	315	305
28.....	445	385	385	380	510	495	570	395	380	380	310	305
29.....	405	a 385	380	380	.....	500	540	395	380	360	310	310
30.....	a 400	385	a 380	a 380	.....	a 500	a 540	a 395	a 385	a 360	a 305	a 310
31.....	400	.....	380	380	.....	500	.....	395	.....	360	305	.....
1911-12.												
1.....	310	365	365	435	395	400	350	380	455	305	285	305
2.....	310	390	375	435	390	385	345	380	350	305	285	300
3.....	310	390	380	430	390	385	310	380	350	300	290	300
4.....	310	355	385	405	390	385	a 300	380	320	300	290	295
5.....	310	a 350	390	400	a 385	a 385	300	a 380	295	a 295	295	290
6.....	310	350	395	400	385	385	300	380	295	290	300	a 285
7.....	310	475	405	395	380	385	750	380	350	285	300	285
8.....	a 325	445	410	395	380	380	a 460	380	245	280	305	285
9.....	325	355	440	a 390	a 380	380	460	380	295	275	305	285
10.....	330	355	a 425	390	380	380	455	380	a 295	a 255	a 310	290
11.....	330	355	425	390	380	380	475	350	300	270	305	a 290
12.....	a 335	360	420	390	385	380	420	350	305	270	300	290
13.....	335	360	420	390	385	375	415	350	310	265	295	290
14.....	335	a 360	a 420	390	a 385	a 375	415	a 365	a 310	265	a 275	375
15.....	355	360	425	390	385	375	410	365	315	265	275	350
16.....	335	360	425	390	385	375	a 405	360	315	265	275	350
17.....	335	365	430	a 390	385	375	405	360	315	260	275	375
18.....	330	365	430	390	385	375	395	340	620	260	300	a 375
19.....	330	a 365	480	390	a 385	360	385	a 335	400	a 200	300	375
20.....	a 330	365	460	390	385	a 360	385	380	375	265	300	325
21.....	330	365	460	385	385	360	385	325	355	275	300	325
22.....	330	365	a 460	385	385	360	385	315	a 335	285	a 300	325
23.....	330	365	460	a 385	385	375	385	310	345	290	300	325
24.....	330	370	455	360	a 385	375	a 385	305	375	300	325	365
25.....	a 330	370	455	385	385	375	385	300	a 355	290	325	a 445
26.....	330	370	425	a 385	385	a 360	380	a 290	355	300	a 325	445
27.....	335	a 370	a 420	385	385	360	390	295	330	a 310	325	325
28.....	360	365	420	390	a 385	360	380	300	330	300	325	325
29.....	360	365	435	390	385	360	a 380	300	a 310	290	325	a 1,140
30.....	365	a 360	a 435	395	.....	a 360	380	a 305	310	a 280	a 310	915
31.....	a 370	.....	435	a 395	.....	360	.....	305	.....	280	310	.....

a Date of measurement.

Daily discharge, in second-feet, of Devils River at Devils River, Tex., for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	520	320	305	340	305	310	275	275	365	440	470	355
2.....	475	320	305	340	305	305	275	275	365	405	475	345
3.....	430	320	305	340	300	305	275	275	365	365	540	365
4.....	385	320	305	340	a 300	a 300	a 275	10,550	365	365	485	a 355
5.....	385	320	a 305	340	305	300	275	a4,910	365	365	a 490	355
6.....	430	320	310	335	305	300	275	5,680	365	365	475	355
7.....	385	320	320	335	310	300	275	1,800	365	365	465	355
8.....	385	320	325	a 335	a 315	300	275	940	400	365	420	355
9.....	a 345	a 320	330	335	315	300	a 275	a 655	a 365	a 365	410	355
10.....	340	320	a 1365	335	315	295	275	525	365	365	395	a 415
11.....	340	320	365	340	340	295	275	495	365	365	a 380	475
12.....	335	320	360	340	a 340	a 295	275	435	365	365	380	475
13.....	375	315	360	a 340	340	295	275	435	a 365	370	380	390
14.....	335	315	360	340	340	295	275	435	365	a 370	360	390
15.....	330	315	345	315	340	295	255	435	365	370	360	390
16.....	410	315	340	315	340	300	a 255	435	365	370	360	390
17.....	a 330	325	340	315	a 340	300	255	a 435	400	370	360	390
18.....	330	a 325	a 340	335	340	300	255	415	365	370	a 390	390
19.....	330	315	340	335	340	300	260	410	470	365	360	390
20.....	330	325	340	335	315	285	260	405	435	365	a 360	390
21.....	330	340	335	335	a 315	a 285	a 280	405	365	365	360	365
22.....	a 320	a 330	335	a 335	340	285	280	400	a 535	a 365	360	365
23.....	320	310	a 335	335	340	285	370	400	500	365	360	365
24.....	320	310	335	335	340	285	370	395	365	365	355	365
25.....	320	320	333	335	315	280	280	375	365	365	a 355	365
26.....	320	a 310	335	335	310	a 280	280	a 370	a 365	a 525	360	a 365
27.....	330	310	340	a 335	a 310	295	280	370	365	555	360	365
28.....	330	310	340	335	310	295	275	370	365	495	365	365
29.....	330	315	340	310	.....	275	a 275	370	400	430	a 365	a 365
30.....	a 330	a 305	a 340	a 310	.....	a 275	275	365	440	a 525	365	365
31.....	330	.....	340	310	.....	275	.....	a 365	.....	460	365	.....

a Date of measurement.

Monthly discharge of Devils River at Devils River, Tex., for 1900-1913.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1900.					1901-2.				
May.....	3,800	930	1,321	81,180	January.....	500	470	488	29,990
June.....	13,700	960	1,516	90,210	February.....	500	450	480	26,638
July.....	1,380	840	970	59,610	March.....	500	490	494	30,367
August.....	3,030	860	1,113	69,665	April.....	590	440	469	27,907
September.....	52,420	760	4,634	275,740	May.....	5,380	440	815	50,102
The period.....	.....	.....	.....	576,000	June.....	560	435	491	29,207
1900-1901.					July.....	880	420	443	27,213
October.....	2,110	1,040	1,216	74,769	August.....	430	405	414	25,458
November.....	2,410	900	1,075	63,967	September.....	2,200	405	510	30,367
December.....	900	850	879	54,050	The year.....	5,380	405	511	370,000
January.....	840	810	831	51,074	1902-3.				
February.....	840	750	801	44,489	October.....	530	420	433	26,618
March.....	830	720	748	46,017	November.....	660	390	436	29,514
April.....	750	670	685	40,760	December.....	535	380	414	25,438
May.....	670	660	665	40,919	January.....	580	405	453	27,828
June.....	670	580	604	35,921	February.....	535	425	443	24,625
July.....	750	570	583	35,841	March.....	760	420	476	29,296
August.....	670	500	556	34,215	April.....	470	415	421	25,071
September.....	700	510	529	31,478	May.....	1,240	380	523	32,152
The year.....	2,410	500	764	554,000	June.....	10,400	440	1,282	76,264
1901-2.					July.....	690	540	608	37,408
October.....	520	520	520	31,974	August.....	560	520	530	32,579
November.....	520	510	515	30,664	September.....	1,370	520	585	34,810
December.....	510	480	489	30,069	The year.....	10,400	380	550	402,000

Monthly discharge of Devils River at Devils River, Tex., for 1900-1913—Continued.

Month.	Discharge in second-foot.			Run-off (total in acre-feet).	Month.	Discharge in second-foot.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.			Maximum.	Minimum.	Mean.	
1903-4.					1908-9.				
October.....	700	560	603	37,071	October.....	540	445	481	29,583
November.....	585	565	575	34,195	November.....	555	465	476	28,314
December.....	570	530	550	33,838	December.....	520	470	477	29,345
January.....	545	530	538	33,104	January.....	490	400	460	28,264
February.....	535	515	520	29,911	February.....	480	395	430	28,881
March.....	515	490	503	30,932	March.....	475	390	420	25,795
April.....	1,580	445	523	31,140	April.....	650	380	420	25,012
May.....	680	460	519	31,934	May.....	400	380	391	24,059
June.....	1,300	470	578	34,361	June.....	435	375	391	25,276
July.....	1,200	410	479	29,455	July.....	3,590	385	617	37,944
August.....	490	430	464	28,532	August.....	650	435	526	32,360
September.....	1,120	430	596	35,464	September.....	1,560	400	478	28,413
The year..	1,580	410	537	399,000	The year..	3,590	335	464	336,000
1904-5.					1909-10.				
October.....	610	530	570	35,078	October.....	430	385	399	24,545
November.....	520	450	495	29,474	November.....	425	390	403	24,000
December.....	490	440	460	28,264	December.....	420	390	407	25,012
January.....	450	425	446	27,441	January.....	425	390	412	25,319
February.....	440	430	433	24,040	February.....	415	385	400	22,225
March.....	840	435	555	34,126	March.....	440	375	385	23,702
April.....	6,470	535	1,107	65,861	April.....	3,820	400	578	34,383
May.....	2,260	510	851	52,354	May.....	11,000	405	1,015	62,380
June.....	3,280	720	945	56,251	June.....	530	410	438	26,093
July.....	1,090	555	677	41,653	July.....	475	395	417	25,617
August.....	575	540	561	34,483	August.....	460	375	405	24,902
September.....	1,920	570	736	43,825	September.....	6,550	400	843	50,162
The year..	6,470	425	653	473,000	The year..	11,000	375	508	368,000
1905-6.					1910-11.				
October.....	1,100	485	594	36,545	October.....	745	400	536	32,945
November.....	630	490	515	30,635	November.....	410	385	396	23,593
December.....	595	510	582	35,763	December.....	395	375	384	23,594
January.....	505	445	456	28,036	January.....	390	375	381	23,405
February.....	440	415	421	23,405	February.....	730	335	451	25,022
March.....	425	365	395	24,307	March.....	725	455	491	30,169
April.....	535	350	401	23,871	April.....	3,370	470	722	42,992
May.....	460	390	403	24,754	May.....	520	390	445	27,342
June.....	3,260	400	772	45,937	June.....	395	375	387	23,038
July.....	6,770	410	1,329	81,699	July.....	420	350	377	23,197
August.....	30,000	805	2,743	168,634	August.....	380	305	332	20,400
September.....	1,720	810	926	55,121	September.....	325	295	306	18,208
The year..	30,000	350	795	579,000	The year..	3,370	295	434	314,000
1906-7.					1911-12.				
October.....	960	720	793	48,783	October.....	370	310	331	20,370
November.....	730	700	713	42,417	November.....	475	350	370	22,036
December.....	720	680	697	42,833	December.....	480	365	425	26,112
January.....	715	675	693	42,595	January.....	435	360	394	24,228
February.....	675	625	657	36,466	February.....	395	380	385	22,145
March.....	655	570	616	37,894	March.....	400	360	374	22,979
April.....	570	530	549	32,648	April.....	750	300	399	23,752
May.....	670	475	518	31,835	May.....	380	290	344	21,134
June.....	585	495	520	30,952	June.....	620	245	341	20,261
July.....	665	465	548	33,709	July.....	310	255	282	17,326
August.....	535	520	525	32,271	August.....	325	275	301	18,516
September.....	525	510	517	30,774	September.....	1,140	285	375	22,314
The year..	960	465	612	443,000	The year..	1,140	245	360	261,000
1907-8.					1912-13.				
October.....	1,250	525	606	37,279	October.....	520	320	358	22,026
November.....	1,050	585	682	40,572	November.....	340	305	318	18,942
December.....	600	505	553	34,017	December.....	365	305	335	20,579
January.....	525	490	508	31,259	January.....	340	310	322	20,420
February.....	535	475	510	29,355	February.....	340	300	332	17,911
March.....	520	485	500	30,744	March.....	310	275	293	18,030
April.....	785	485	574	34,175	April.....	370	255	288	16,572
May.....	2,550	500	676	41,564	May.....	10,550	275	1,110	68,241
June.....	740	535	606	36,079	June.....	535	365	387	23,028
July.....	2,160	535	697	42,863	July.....	555	365	395	24,317
August.....	2,260	519	647	39,769	August.....	540	355	395	24,307
September.....	530	470	507	30,159	September.....	475	345	378	22,473
The year..	2,550	470	589	428,000	The year..	10,550	255	408	297,000

MEXICAN TRIBUTARIES.

RIO SALADO NEAR GUERRERO, TAMAULIPAS, MEXICO.

Location.—Two miles above Guerrero and 6 miles above the mouth.

Records available.—April 24, 1900, to July 14, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff.

Channel.—Shifting.

Discharge measurements.—At low water, made by wading among the rocks below the station, and from car and cable at high stages.

Floods.—Rio Salado is subject to severe floods. The highest recorded stage, 19.3 feet, occurred July 4, 1909.

Accuracy.—Although frequent discharge measurements have been made, no estimates of daily discharge have been prepared by the commission.

Cooperation.—Station maintained by the Mexican section of the International Water Commission, by whom the base data are furnished.

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913.

[By Trevino, Lassaulx, and Garcia.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Dec. 1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	June 1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	Dec. 1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
27.....	2.45	382	20.....	1.0	149	22.....	1.8	163
30.....	2.5	393	24.....	.7	113	26.....	1.8	163
			29.....	6.35	5,160	30.....	1.7	150
1901.			July 3.....	2.2	293			
Jan. 2.....	2.4	268	7.....	.8	120	1902.		
6.....	2.3	287	11.....	1.0	162	Jan. 3.....	1.5	132
10.....	2.2	280	15.....	.1	94	7.....	1.5	127
14.....	2.1	226	19.....	-.2	55	11.....	1.4	117
18.....	2.15	242	23.....	-.4	42	15.....	1.4	111
21.....	2.0	211	27.....	-.6	37	19.....	1.3	85
24.....	1.9	202	Aug. 3.....	-.8	31	23.....	1.2	73
27.....	1.8	171	7.....	-1.0	25	27.....	1.1	^a 167
Feb. 1.....	1.7	180	11.....	-1.1	24	31.....	1.1	62
5.....	1.75	185	15.....	-1.1	24	Feb. 4.....	1.0	65
9.....	1.5	173	19.....	-1.2	0	8.....	1.1	82
13.....	1.45	158	23.....	-1.4	0	12.....	1.1	85
17.....	1.3	141	27.....	-1.5	0	16.....	1.0	61
21.....	1.2	117	Sept. 3.....	3.6	1,824	20.....	1.0	73
25.....	1.1	112	7.....	2.3	325	24.....	.9	58
Mar. 1.....	1.0	99	11.....	2.8	499	28.....	.8	103
5.....	.9	94	14.....	.5	88	Mar. 4.....	.6	51
9.....	1.1	101	17.....	.4	83	8.....	.4	46
13.....	.6	88	21.....	-.1	48	12.....	.3	42
17.....	.55	87	25.....	-.4	55	17.....	.0	29
21.....	.45	75	29.....	2.3	273	21.....	-.2	26
25.....	.2	63	Oct. 3.....	1.5	136	26.....	-.2	27
28.....	.15	56	7.....	2.1	239	30.....	-.3	23
Apr. 1.....	.1	54	10.....	2.0	205	Apr. 3.....	-.5	21
5.....	.05	48	13.....	5.7	3,042	7.....	-.6	10
9.....	-.1	47	18.....	1.6	162	11.....	-.8	0
13.....	-.2	41	21.....	1.5	142	15.....	4.75	^b 2,222
17.....	-.3	33	23.....	4.0	1,445	20.....	1.9	212
21.....	-.5	30	25.....	4.8	2,068	25.....	1.2	115
25.....	-.6	35	28.....	4.5	1,587	29.....	.8	74
28.....	-.75	41	Nov. 1.....	4.2	1,191	May 3.....	.5	48
May 1.....	-.7	36	4.....	4.1	1,220	7.....	3.9	1,360
9.....	9.22	11,526	8.....	3.7	988	10.....	3.3	697
13.....	3.15	861	12.....	3.4	792	14.....	2.2	259
17.....	2.85	600	16.....	3.2	643	19.....	1.1	70
21.....	3.85	1,118	20.....	3.0	521	24.....	1.5	136
25.....	4.72	1,936	23.....	2.9	466	28.....	.8	73
29.....	3.32	802	27.....	2.7	391	June 2.....	-.2	35
June 1.....	2.55	560	29.....	4.85	2,371	5.....	-.2	32
4.....	3.52	1,322	Dec. 2.....	2.6	354	9.....	-.4	20
8.....	1.85	525	6.....	2.3	264	13.....	-.6	10
12.....	1.7	373	10.....	2.1	239	17.....	-.8	0
16.....	1.3	182	14.....	2.0	167	21.....	-.9	0
			18.....	1.9	153	23.....	2.0	200

^a Measurement, ejected.

^b Measurement, made by floats.

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1902.	<i>Fect.</i>	<i>Sec.-ft.</i>	1903.	<i>Fect.</i>	<i>Sec.-ft.</i>	1904.	<i>Fect.</i>	<i>Sec.-ft.</i>
June 25.....	1.1	78	June 15.....	14.25	20,220	Apr. 27.....	— .4	13
29.....	.0	30	23.....	5.6	2,792	May 1.....	— .4	13
July 8.....	— .7	8	27.....	5.0	2,297	4.....	8.05	7,964
11.....	— .8	0	30.....	5.0	2,172	8.....	1.0	111
15.....	—1.0	0	July 4.....	4.3	1,391	12.....	1.2	142
19.....	—1.1	0	6.....	6.1	4,634	16.....	8.55	8,752
23.....	—1.2	0	11.....	7.05	6,065	20.....	3.4	776
26.....	—1.3	0	15.....	4.0	1,224	24.....	1.9	255
28.....	4.9	127	19.....	3.7	906	28.....	1.3	201
29.....	1.2	747	23.....	3.3	575	June 1.....	1.60	234
Aug. 2.....	1.1	59	27.....	3.0	473	6.....	9.45	11,249
6.....	.1	24	31.....	5.05	2,455	10.....	3.50	809
11.....	— .4	18	Aug. 2.....	7.4	6,841	14.....	1.70	200
15.....	— .6	12	7.....	9.75	11,242	18.....	.90	70
19.....	— .8	0	11.....	2.7	424	22.....	.30	43
23.....	—1.0	0	15.....	4.7	1,876	27.....	.20	41
28.....	—1.1	0	17.....	2.0	259	July 1.....	— .1	16
Sept. 1.....	—1.2	0	19.....	4.2	1,483	5.....	.0	21
5.....	—1.3	0	24.....	2.95	463	9.....	.0	21
8.....	2.05	271	28.....	2.1	278	13.....	— .3	15
9.....	3.3	792	Sept. 2.....	1.4	a 319	29.....	.8	85
14.....	1.7	165	6.....	1.3	153	Aug. 2.....	.0	19
19.....	.6	86	12.....	1.1	142	6.....	— .3	16
20.....	7.75	7,198	16.....	2.3	343	14.....	1.6	206
24.....	2.5	352	19.....	1.3	156	18.....	1.0	124
28.....	1.4	164	24.....	4.5	1,719	22.....	.2	40
30.....	3.4	917	29.....	2.3	346	25.....	.3	45
Oct. 2.....	6.7	4,884	Oct. 2.....	1.5	315	29.....	.0	19
6.....	3.0	716	7.....	3.85	1,164	Sept. 2.....	— .3	15
11.....	1.7	154	10.....	3.0	636	7.....	7.0	6,148
15.....	7.6	6,955	14.....	2.5	412	11.....	8.1	8,142
16.....	11.1	14,257	18.....	2.1	296	20.....	7.9	6,111
19.....	3.0	585	22.....	1.9	231	24.....	9.0	8,089
23.....	1.5	168	26.....	1.6	179	28.....	7.2	5,123
27.....	.9	70	30.....	2.2	345	Oct. 2.....	6.6	4,848
Nov. 1.....	.5	61	Nov. 3.....	1.5	178	6.....	6.4	4,392
5.....	.4	55	7.....	1.4	162	10.....	6.1	3,890
6.....	2.1	254	11.....	1.1	136	14.....	5.9	3,591
9.....	1.4	148	15.....	1.0	123	18.....	5.7	3,236
14.....	.6	69	19.....	.8	66	23.....	5.6	2,955
18.....	.2	41	23.....	.9	128	28.....	5.6	2,986
22.....	.0	27	Dec. 7.....	.5	14	Nov. 2.....	5.8	3,287
Dec. 2.....	2.85	513	11.....	.5	14	6.....	5.2	2,442
4.....	5.35	2,942	15.....	.5	14	10.....	5.0	2,174
6.....	3.1	596	19.....	.5	14	14.....	4.9	2,038
10.....	1.8	188	23.....	.6	16	18.....	4.7	1,974
15.....	1.1	81	27.....	.5	15	22.....	4.5	1,660
20.....	.6	58	Jan. 1904.			27.....	5.1	2,320
24.....	.4	55	Jan. 1.....	0.9	67	Dec. 1.....	4.7	1,811
28.....	.2	34	5.....	.7	65	6.....	4.4	1,578
1903.			9.....	.7	64	10.....	4.2	1,442
Jan. 2.....	.0	25	13.....	.6	56	15.....	4.1	1,385
6.....	— .1	8	21.....	.5	16	19.....	3.9	1,174
10.....	— .2	6	25.....	.4	15	28.....	3.7	1,159
16.....	2.0	207	Feb. 1.....	.4	45			967
21.....	.4	60	5.....	.4	44	1905.		
25.....	.0	25	9.....	.5	47	Jan. 3.....	3.6	916
29.....	— .1	9	13.....	.7	60	7.....	3.5	871
Feb. 2.....	— .2	7	17.....	.5	49	11.....	3.4	795
6.....	— .3	6	22.....	.3	44	15.....	3.3	727
10.....	— .3	6	26.....	.3	43	19.....	3.2	638
14.....	— .4	6	Mar. 1.....	.1	33	23.....	3.1	609
18.....	— .4	5	5.....	.0	21	28.....	3.0	560
22.....	— .4	5	9.....	— .1	15	Feb. 1.....	2.9	485
28.....	— .4	5	13.....	— .2	15	5.....	2.8	431
May 8.....	1.3	143	17.....	— .3	13	9.....	2.7	404
20.....	.5	187	21.....	— .3	13	13.....	2.6	405
23.....	.2	132	25.....	— .4	11	17.....	2.5	397
24.....	2.95	559	29.....	— .4	11	21.....	2.5	395
26.....	1.9	211	Apr. 3.....	1.0	121	25.....	2.4	369
29.....	1.1	145	6.....	2.4	338	Mar. 1.....	2.3	352
June 1.....	1.1	100	10.....	1.0	122	5.....	2.7	419
3.....	3.1	682	14.....	.3	43	7.....	4.8	2,067
7.....	1.6	137	18.....	.1	34	11.....	4.0	1,441
11.....	2.7	483	23.....	— .3	14	18.....	3.3	683
13.....	8.6	10,005				24.....	3.0	539

a Strong wind up stream; measurement rejected.

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.	<i>Fect.</i>	<i>Sec.-ft.</i>	1906.	<i>Fect.</i>	<i>Sec.-ft.</i>	1907.	<i>Fect.</i>	<i>Sec.-ft.</i>
Mar. 28.....	2.8	435	Feb. 21.....	2.2	271	Jan. 2.....	3.9	816
Apr. 1.....	2.7	428	25.....	2.2	287	6.....	3.8	742
5.....	2.6	415	Mar. 1.....	2.1	245	10.....	3.7	740
10.....	2.4	401	6.....	1.9	209	14.....	3.7	748
14.....	2.3	366	11.....	1.8	181	18.....	3.6	675
18.....	2.2	350	16.....	1.7	165	22.....	3.6	671
22.....	2.1	265	20.....	1.6	146	26.....	3.5	604
26.....	2.0	249	24.....	1.5	143	29.....	3.5	594
May 2.....	2.9	518	28.....	1.4	138	Feb. 2.....	3.5	666
6.....	2.1	268	Apr. 2.....	1.3	125	6.....	3.4	601
10.....	1.7	219	6.....	1.2	123	10.....	3.3	584
12.....	3.3	656	10.....	1.2	120	14.....	3.3	571
17.....	2.1	266	14.....	1.1	110	18.....	3.2	544
21.....	1.9	239	18.....	1.1	110	22.....	3.1	511
26.....	6.75	5,479	22.....	2.3	331	26.....	3.0	489
30.....	7.2	6,194	26.....	1.7	181	Mar. 2.....	2.9	439
June 3.....	4.0	1,506	1.....	1.2	127	6.....	2.8	429
7.....	3.4	773	6.....	1.1	114	10.....	2.7	407
11.....	3.0	624	10.....	1.4	136	14.....	2.6	386
15.....	2.7	423	14.....	1.0	113	18.....	2.5	353
20.....	2.3	337	19.....	1.3	131	22.....	2.4	423
24.....	2.8	436	21.....	3.3	685	26.....	2.3	425
28.....	6.0	3,861	24.....	3.3	676	29.....	2.2	341
July 3.....	8.2	7,218	28.....	1.2	125	Apr. 2.....	2.1	307
7.....	5.2	2,523	June 1.....	1.0	114	6.....	2.0	284
12.....	4.9	2,282	5.....	.6	45	10.....	2.0	282
16.....	4.7	2,095	9.....	.3	33	15.....	1.9	267
20.....	5.0	2,275	13.....	—	20	19.....	1.9	267
23.....	5.1	2,984	18.....	—	15	23.....	2.2	388
27.....	5.1	2,423	23.....	.1	27	27.....	1.8	254
Aug. 1.....	4.9	1,992	28.....	—	4	May 2.....	1.8	259
5.....	4.6	1,718	July 3.....	—	4	6.....	2.8	442
9.....	4.4	1,530	7.....	3.8	1,042	10.....	3.9	865
13.....	4.3	1,382	8.....	12.0	14,792	13.....	4.3	1,216
18.....	4.0	1,238	19.....	6.2	3,037	17.....	2.3	394
23.....	3.8	1,082	21.....	6.4	3,336	21.....	2.0	283
28.....	3.7	1,007	25.....	6.5	3,725	25.....	2.0	289
Sept. 2.....	3.6	933	29.....	5.9	2,700	27.....	6.0	2,847
7.....	3.5	870	Aug. 2.....	6.2	3,114	29.....	3.3	556
15.....	3.4	783	6.....	6.1	2,913	June 2.....	1.8	260
20.....	6.4	4,798	10.....	5.7	2,570	6.....	1.4	213
22.....	9.3	10,003	14.....	6.0	2,875	11.....	1.1	194
25.....	3.8	1,182	18.....	5.5	2,334	15.....	1.0	178
29.....	3.5	883	22.....	5.6	2,706	19.....	2.0	289
Oct. 4.....	7.0	5,291	26.....	5.7	2,779	24.....	3.6	662
8.....	3.8	1,069	29.....	7.2	4,856	27.....	3.1	333
12.....	3.6	935	Sept. 2.....	6.2	3,134	July 2.....	2.8	352
16.....	3.3	791	6.....	6.6	3,990	4.....	7.5	5,834
21.....	6.4	4,261	10.....	6.6	3,981	6.....	4.1	839
26.....	3.1	660	14.....	6.6	3,913	10.....	3.2	573
29.....	3.0	616	18.....	6.1	2,922	14.....	2.5	357
Nov. 2.....	4.0	1,361	22.....	6.1	2,958	18.....	2.6	390
6.....	3.0	559	23.....	7.3	5,060	22.....	2.4	400
10.....	2.9	509	26.....	6.2	3,192	26.....	2.3	371
14.....	2.8	478	29.....	5.9	2,772	29.....	2.2	335
18.....	2.8	476	Oct. 3.....	5.6	2,566	Aug. 2.....	2.1	297
22.....	3.2	611	7.....	5.5	2,415	6.....	1.9	258
27.....	2.8	464	11.....	5.2	2,008	10.....	1.8	235
Dec. 1.....	2.7	445	15.....	5.1	1,956	14.....	1.7	216
6.....	2.9	505	19.....	5.0	1,928	18.....	1.5	185
10.....	2.6	422	23.....	5.0	1,951	22.....	1.3	184
15.....	2.6	422	26.....	4.9	1,867	26.....	1.1	164
19.....	2.9	505	29.....	4.8	1,784	29.....	1.0	160
23.....	2.7	435	Nov. 2.....	4.8	1,793	Sept. 2.....	.8	20
28.....	2.6	418	6.....	4.7	1,686	6.....	.7	13
			10.....	4.6	1,670	10.....	.5	9
			14.....	4.5	1,479	14.....	.4	9
Jan. 1.....	2.5	358	18.....	4.4	1,287	18.....	.3	8
5.....	2.4	334	22.....	4.4	1,320	22.....	.3	7
9.....	2.3	308	26.....	4.3	1,204	25.....	2.8	383
14.....	2.2	295	29.....	4.3	1,216	27.....	2.1	350
18.....	2.2	296	3.....	4.3	1,226	Oct. 2.....	1.5	196
22.....	2.1	244	7.....	4.2	1,014	6.....	1.3	185
27.....	1.9	203	11.....	4.1	1,026	7.....	9.45	9,607
Feb. 1.....	1.9	210	15.....	4.1	1,008	8.....	10.8	13,159
5.....	3.0	528	19.....	4.1	1,005	10.....	4.4	884
9.....	2.3	313	23.....	4.1	991	14.....	3.4	582
13.....	2.3	299	26.....	4.0	903	18.....	3.1	504
17.....	2.2	268	29.....	3.9	832	22.....	3.6	644

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Fect.</i>	<i>Sec.-ft.</i>	1908.	<i>Fect.</i>	<i>Sec.-ft.</i>	1909.	<i>Fect.</i>	<i>Sec.-ft.</i>
Oct. 26.....	4.6	907	Aug. 27.....	4.5	1,146	June 15.....	1.7	86
29.....	4.2	768	Sept. 2.....	4.2	927	19.....	1.7	90
Nov. 2.....	4.6	1,686	6.....	4.0	816	23.....	2.4	155
6.....	5.4	2,135	10.....	3.8	665	28.....	1.4	73
10.....	5.2	1,897	15.....	5.2	1,910	July 2.....	10.6	13,622
15.....	4.9	1,795	18.....	4.8	1,707	3.....	16.0	21,399
19.....	4.7	1,782	22.....	3.6	501	5.....	19.0	29,565
25.....	4.5	1,295	27.....	3.4	439	7.....	14.0	16,928
27.....	4.4	1,232	Oct. 2.....	3.3	334	11.....	6.5	3,736
Dec. 2.....	4.5	1,204	6.....	3.3	347	15.....	5.0	3,132
6.....	4.5	1,209	8.....	7.3	5,931	19.....	4.2	1,364
10.....	4.4	1,104	10.....	4.4	1,141	20.....	6.0	3,178
14.....	4.3	1,033	14.....	3.2	257	23.....	4.4	1,411
19.....	4.2	959	18.....	3.2	256	28.....	3.3	663
23.....	4.2	969	22.....	3.0	179	Aug. 3.....	2.9	418
28.....	4.1	900	23.....	6.2	3,442	7.....	3.2	570
1908.			26.....	3.3	289	11.....	3.5	609
Jan. 2.....	4.0	834	29.....	2.9	153	13.....	6.1	3,339
6.....	3.9	783	Nov. 3.....	2.9	153	15.....	4.0	1,120
12.....	3.7	732	7.....	2.9	146	19.....	3.4	652
16.....	3.6	625	11.....	2.7	133	23.....	2.9	438
20.....	3.5	581	15.....	2.9	143	28.....	9.2	8,504
24.....	3.4	544	19.....	2.7	135	29.....	15.2	20,985
28.....	3.3	515	23.....	2.7	136	Sept. 30.....	17.2	26,706
Feb. 2.....	3.1	391	27.....	2.7	133	Oct. 3.....	11.5	12,465
6.....	3.0	362	Dec. 2.....	2.6	125	7.....	7.0	4,067
10.....	3.0	356	6.....	2.6	124	11.....	5.4	1,769
15.....	2.8	318	10.....	2.6	123	15.....	5.1	1,621
19.....	2.7	292	14.....	2.6	128	19.....	5.0	1,538
23.....	2.6	268	18.....	2.5	119	23.....	4.6	1,348
27.....	2.5	249	22.....	2.5	118	28.....	4.3	1,256
Mar. 2.....	2.4	243	26.....	2.5	120	Oct. 3.....	4.0	1,171
6.....	2.3	234	30.....	2.5	119	7.....	3.8	941
10.....	2.3	232	1909.			11.....	3.6	825
14.....	2.2	219	Jan. 3.....	2.5	119	15.....	3.5	801
18.....	2.0	200	7 a.....	2.3	130	19.....	3.5	801
22.....	2.0	201	11.....	2.2	117	23.....	3.4	777
24.....	3.2	442	15.....	2.1	115	28.....	3.2	747
28.....	2.4	258	19.....	2.1	112	Nov. 3.....	3.2	744
Apr. 2.....	1.9	194	23.....	2.1	116	7.....	3.1	723
6.....	1.8	182	27.....	2.0	102	11.....	3.1	727
11.....	5.8	2,746	30.....	2.0	96	15.....	3.0	673
15.....	4.6	1,717	Feb. 3.....	1.9	81	19.....	3.0	679
19.....	3.5	575	7.....	1.9	79	23.....	3.0	672
23.....	4.2	883	11.....	1.8	74	27.....	2.9	610
27.....	3.1	494	15.....	1.7	70	Dec. 3.....	3.0	667
May 2.....	2.6	273	19.....	1.6	64	7.....	3.0	675
6.....	2.2	237	23.....	1.5	60	11.....	2.9	601
10.....	1.9	217	27.....	1.4	59	15.....	2.9	595
15.....	5.6	2,586	Mar. 3.....	1.3	51	19.....	2.9	593
19.....	3.0	468	7.....	1.2	46	23.....	3.0	643
23.....	2.1	221	11.....	1.1	42	28.....	3.0	643
28.....	1.3	173	15.....	1.0	14	1910.		
June 2.....	3.7	566	20.....	1.0	15	Jan. 3.....	2.9	593
6.....	2.2	203	24.....	1.0	15	7.....	2.9	590
10.....	1.6	178	28.....	.9	14	11.....	2.8	550
14.....	1.2	164	Apr. 1.....	1.9	92	15.....	2.8	551
18.....	1.0	156	3.....	1.8	81	19.....	2.9	609
23.....	.7	16	7.....	1.2	43	23.....	2.8	546
July 2.....	2.4	259	8.....	4.5	1,138	28.....	2.7	495
5.....	2.2	179	11.....	2.4	137	Feb. 3.....	2.6	454
7.....	4.95	1,627	15.....	1.3	48	7.....	2.4	144
10.....	2.1	168	19.....	.9	40	11.....	2.4	145
14.....	4.6	1,438	23.....	.8	34	15.....	2.4	149
18.....	2.0	156	28.....	.7	29	19.....	2.3	136
22.....	1.4	59	May 3.....	.5	23	23.....	2.3	139
26.....	1.7	75	7.....	.3	15	27.....	2.3	135
30.....	2.1	124	11.....	.1	12	Mar. 3.....	2.2	121
Aug. 3.....	4.4	1,130	15.....	.0	10	7.....	2.2	123
7.....	3.7	596	19.....	—	8	11.....	2.1	116
8.....	6.0	2,792	23.....	—	8	15.....	2.1	102
11.....	5.8	3,203	27.....	7.5	7,024	19.....	2.5	177
15.....	5.0	1,774	28.....	8.7	8,551	22.....	4.8	1,512
19.....	4.9	1,519	June 3.....	3.0	185	26.....	3.5	849
23.....	5.3	1,953	7.....	2.3	140	30.....	2.6	470
			11.....	1.8	103	Apr. 3.....	2.4	146

a Rejected; too large.

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1910.	<i>Fect.</i>	<i>Sec.-ft.</i>	1911.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>
Apr. 7	2.3	123	Mar. 15	2.1	222	Jan. 28	0.9	92
11	2.1	103	19	2.1	232	Feb. 3	.9	93
15	2.8	556	23	1.8	186	7	.8	72
19	2.5	162	28	3.9	986	11	.8	72
23	1.9	117	Apr. 3	2.5	285	15	.6	64
28	1.4	95	7	2.5	279	19	.6	67
May 3	1.3	90	11	2.4	255	23	.5	58
7	1.3	89	15	2.3	239	28	.5	60
11	1.2	78	19	2.2	223	Mar. 3	.4	55
13	1.2	76	23	2.2	226	7	.4	53
19	1.9	112	28	2.7	474	11	.3	49
23	1.5	99	May 3	2.5	276	15	.3	49
24	2.7	527	7	2.5	275	19	.2	39
28	1.6	103	11	2.3	244	23	.2	37
June 3	1.1	72	15	2.3	247	28	.1	29
7	8.7	8,907	19	2.0	199	Apr. 3	.1	27
11	3.0	576	23	2.1	228	7	.1	27
15	1.9	158	28	2.3	254	11	.4	58
19	1.5	123	June 3	1.8	182	15	.3	48
23	1.9	162	7	1.8	184	19	.3	47
28	1.1	95	11	1.2	121	23	.2	38
July 3	.6	65	15	.9	89	28	.2	38
7	.5	54	19	.8	84	May 3	.1	27
11	.4	50	23	.7	75	7	.1	27
15	.3	48	28	.6	66	8	3.3	731
19	.1	35	July 3	.6	67	11	2.8	525
23	.1	35	7	.5	59	15	2.3	265
28	.0	29	11	.5	51	19	2.1	230
Aug. 3	-.2	19	15	.2	43	23	1.9	190
7	-.3	16	19	.1	29	28	1.5	148
Sept. 1	5.2	1,995	23	.0	21	June 3	1.2	105
2	10.0	10,994	26	-.7	473	5	3.2	700
6	2.9	583	28	4.3	1,131	7	1.5	147
10	2.8	541	Aug. 3	1.7	179	11	1.3	118
13	10.2	12,199	7	1.0	110	15	1.6	175
18	15.6	26,407	11	.8	83	19	10.5	11,924
22	6.7	4,058	15	.6	72	23	6.0	3,721
27	5.5	1,993	19	.4	56	24	8.7	8,518
Oct. 3	4.8	1,412	23	.3	46	28	2.9	561
7	4.9	1,452	28	.2	40	July 3	2.3	265
11	4.0	1,099	31	2.7	468	7	2.2	244
15	3.9	1,037	Sept. 1	6.3	3,926	11	1.8	171
19	3.7	979	5	2.0	215	15	1.4	123
23	3.5	878	9	1.8	190	19	1.2	95
28	3.4	792	13	1.6	156	23	1.0	76
Nov. 3	3.2	731	17	1.2	102	28	.5	61
7	3.2	725	21	.8	86	Aug. 3	.3	55
11	3.0	674	25	.5	62	7	.2	46
15	2.9	637	29	.2	45	11	.1	44
19	2.9	625	Oct. 3	.0	37	15	.1	42
23	2.8	579	7	.0	34	19	.0	27
28	2.8	578	8	9.7	9,250	23	-.1	0
Dec. 3	2.7	534	11	1.9	195	28	-.3	0
7	2.7	532	15	4.2	1,071	Oct. 1	8.9	8,866
11	2.7	523	19	3.2	742	3	3.9	1,006
15	2.6	457	23	2.2	244	7	2.1	229
19	2.8	566	28	1.5	125	11	1.5	138
23	2.7	506	Nov. 3	4.0	1,057	15	1.3	119
28	2.7	500	7	3.1	694	17	3.6	855
1911.			11	2.5	277	19	4.4	1,147
Jan. 3	2.7	494	15	2.2	241	23	6.1	3,590
7	2.7	491	19	1.7	173	28	2.4	276
11	2.7	487	23	1.3	128	Nov. 3	2.2	247
15	2.6	454	28	1.0	106	7	2.0	214
19	2.6	454	Dec. 3	.7	80	11	1.7	157
23	2.4	276	7	.5	67	15	1.5	131
28	2.3	251	11	.4	56	19	1.9	191
Feb. 3	2.2	235	15	.3	50	23	1.5	129
7	2.0	221	19	.2	45	28	2.1	223
11	2.0	222	23	.2	47	Dec. 3	1.8	178
15	1.9	201	28	.2	45	7	1.6	149
19	1.9	203	Jan. 1912.			11	1.5	125
23	1.8	184	Jan. 3	0.7	81	15	1.4	109
28	2.4	279	7	.6	72	19	1.5	131
Mar. 3	2.3	257	11	.6	68	23	1.6	159
7	2.1	219	15	.4	59	28	1.7	171
11	2.0	206	19	1.0	111	Jan. 1913.		
			22	1.0	115	Jan. 3	1.4	112

Discharge measurements of Rio Salado near Guerrero, Tamaulipas, Mexico, in 1900-1913—
Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
Jan. 1913.	<i>Fect.</i>	<i>Sec.-ft.</i>	Feb. 1913.	<i>Fect.</i>	<i>Sec.-ft.</i>	June 1913.	<i>Fect.</i>	<i>Sec.-ft.</i>
Jan. 7.....	1.4	104	Feb. 19.....	1.0	68	June 9.....	6.3	3,803
11.....	1.2	93	23.....	.9	57	11.....	4.5	1,164
15.....	1.2	91	27.....	.8	51	15.....	3.3	709
19.....	1.2	90	Mar. 3.....	.8	51	19.....	4.3	1,022
23.....	1.3	115	7.....	.7	41	23.....	3.6	779
28.....	1.4	124	11.....	.7	41	28.....	5.0	1,503
Feb. 3.....	1.2	91	15.....	.9	60	29.....	8.0	7,579
7.....	1.1	78	19.....	.7	42	July 3.....	3.2	620
11.....	1.0	68	23.....	.6	37	7.....	2.5	274
15.....	1.0	69	28.....	.4	15	11.....	2.3	219

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1900.							1900.						
1.....	6.35	5.4	2.35	4.6	3.9	3.9	16.....	3.8	2.25	9.3	4.55	3.5	3.5
2.....	5.4	4.1	5.35	3.7	4.55	4.55	17.....	7.25	2.2	8.2	4.7	3.45	3.45
3.....	4.3	4.3	5.6	3.15	4.25	4.25	18.....	8.2	2.1	4.4	4.6	3.4	3.4
4.....	3.9	4.25	4.1	3.2	4.15	4.15	19.....	5.35	2.05	3.05	4.5	3.35	3.35
5.....	2.9	6.85	3.05	2.55	5.6	5.6	20.....	4.7	1.95	2.95	4.4	3.3	3.3
6.....	2.6	7.7	2.7	3.3	5.3	5.3	21.....	4.3	5.9	2.55	4.3	3.3	3.3
7.....	2.4	3.95	2.95	3.4	4.65	4.65	22.....	4.55	4.75	2.4	4.2	3.3	3.3
8.....	2.3	3.6	2.55	4.45	3.95	3.95	23.....	4.55	3.9	2.3	4.4	3.3	3.3
9.....	2.15	3.25	2.35	5.2	3.8	3.8	24.....	2.85	4.8	2.75	2.2	4.3	3.2
10.....	1.95	2.95	2.15	6.55	3.75	3.75	25.....	2.65	4.05	2.4	2.15	4.3	3.2
11.....	1.85	2.8	2.0	7.65	3.7	3.7	26.....	2.55	3.55	2.55	2.1	4.2	4.6
12.....	1.75	2.65	1.85	7.75	3.6	3.6	27.....	2.45	3.45	2.2	2.05	4.15	4.25
13.....	1.7	2.55	1.75	6.85	3.55	3.55	28.....	2.35	3.35	1.95	2.45	4.1	4.15
14.....	1.55	2.45	3.25	5.35	3.5	3.5	29.....	2.35	3.25	1.85	2.25	4.0	4.05
15.....	1.85	2.4	4.9	4.75	3.5	3.5	30.....	3.6	3.15	1.7	4.55	4.0	4.0
							31.....		3.05		4.9	3.9	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1900-1901.													
1.....	3.9			2.4	1.7	1.0	0.1	-0.7	2.52	2.7	-0.7	1.55	
2.....	3.8			2.4	1.7	1.0	.1	7.65	2.42	2.1	-.8	1.6	
3.....	3.75			2.4	1.65	1.0	.1	4.7	2.32	2.1	-.8	4.0	
4.....	3.7			2.4	1.6	1.0	.1	3.4	4.18	1.6	-.8	4.7	
5.....	3.65			2.3	1.75	.9	.05	2.85	3.05	1.22	-.9	5.35	
6.....	3.6			2.3	1.6	1.1	.0	3.15	2.15	.95	-.9	2.7	
7.....	3.55			2.3	1.5	1.1	-.1	3.45	1.95	.75	-.95	2.3	
8.....	3.5			2.3	1.5	1.1	-.1	4.9	1.82	.6	-.9	2.15	
9.....	3.5			2.3	1.5	1.05	-.1	9.05	1.95	.8	-1.0	1.75	
10.....	3.5			2.2	1.5	.95	-.2	5.85	2.0	1.2	-1.0	1.55	
11.....	3.5			2.2	1.5	.75	-.2	4.6	1.82	1.0	-1.1	2.35	
12.....	3.5			2.2	1.45	.6	-.2	3.7	1.65	.65	-1.1	1.2	
13.....	3.45			2.2	1.4	.6	-.25	3.15	1.52	.35	-1.1	.85	
14.....	3.4			2.15	1.4	.6	-.3	3.0	1.48	.2	-1.1	.5	
15.....	3.4			2.2	1.4	.6	-.3	2.9	1.38	.1	-1.1	.6	
16.....	3.4		2.8	2.1	1.4	.6	-.3	2.88	1.28	.0	-1.1	.4	
17.....	3.35		2.8	2.1	1.3	.55	-.32	2.82	1.2	.35	-1.1	.4	
18.....	3.3		2.8	2.1	1.3	.5	-.38	2.72	1.12	.05	-1.2	.45	
19.....	3.35		2.7	2.1	1.3	.45	-.4	3.30	1.02	-.2	-1.2	.25	
20.....	3.4		2.7	2.0	1.2	.4	-.4	4.5	.95	-.3	-1.2	.05	
21.....	3.5		2.65	1.95	1.2	.4	-.5	3.7	.82	-.35	-1.25	.10	
22.....	3.65		2.6	1.9	1.2	.3	-.5	3.1	.72	-.4	-1.3	.25	
23.....	3.7		2.6	1.9	1.1	.25	-.62	2.85	.7	-.45	-1.4	.30	
24.....	3.7		2.6	1.9	1.1	.2	-.6	2.72	.7	-.5	-1.4	.35	
25.....	3.75		2.5	1.9	1.1	.2	-.6	3.95	.65	-.5	-1.4	.4	
26.....	3.85		2.5	1.88	1.1	.2	-.6	4.7	.6	-.55	-1.4	2.6	
27.....	4.05		2.5	1.8	1.0	.2	-.75	3.95	.65	-.6	-1.5	3.65	
28.....	3.8		2.5	1.8	1.0	.15	-.72	4.05	2.45	-.6	-1.5	3.0	
29.....	3.75		2.5	1.8		.15	-.7	3.18	6.25	-.6	-1.5	2.3	
30.....	3.7		2.5	1.75		.15	-.7	2.85	4.12	-.7	-1.5	1.85	
31.....	3.7		2.45	1.7		.12		3.15		-.7	-1.5		

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	1.65	4.2	2.6	1.55	1.1	.8	-.4	.6	.25	-.3	1.2	-1.2
2.....	1.5	4.1	2.55	1.5	1.1	.75	-.5	.55	.15	-.35	1.1	-1.2
3.....	1.7	4.1	2.45	1.5	1.1	.65	-.5	.45	.05	-.4	.8	-1.3
4.....	2.25	4.05	2.4	1.5	1.05	.6	-.5	.4	-.1	-.5	.45	-1.3
5.....	2.3	4.0	2.3	1.5	1.1	.5	-.55	.3	-.2	-.55	.25	-1.3
6.....	2.2	3.9	2.25	1.5	1.1	.5	-.6	4.15	-.25	-.6	.05	-1.4
7.....	2.15	3.8	2.2	1.5	1.1	.4	-.6	3.8	-.3	-.7	-.05	-1.4
8.....	2.1	3.7	2.2	1.5	1.1	.4	-.7	2.95	-.35	-.7	-.1	2.15
9.....	2.05	3.6	2.1	1.45	1.1	.3	-.7	3.6	-.4	-.7	-.2	3.1
10.....	2.0	3.5	2.1	1.4	1.1	.3	-.7	3.1	-.45	-.8	-.3	2.6
11.....	2.0	3.4	2.05	1.4	1.1	.3	-.8	2.55	-.5	-.8	-.4	2.1
12.....	2.0	3.35	2.0	1.4	1.1	.3	-.8	2.1	-.55	-.8	-.5	2.0
13.....	4.45	3.3	2.0	1.4	1.0	.2	-.8	1.95	-.6	-.9	-.5	2.0
14.....	3.1	3.25	1.95	1.4	1.0	.2	3.65	2.05	-.65	-.9	-.55	1.6
15.....	2.2	3.2	1.9	1.4	1.0	.1	4.85	1.65	-.7	-1.0	-.6	1.45
16.....	1.85	3.2	1.9	1.4	1.0	.0	4.05	1.4	-.75	-1.0	-.7	1.05
17.....	1.75	3.1	1.9	1.3	1.0	.0	3.1	1.2	-.8	-1.0	-.7	.9
18.....	1.6	3.1	1.9	1.3	1.0	-.1	2.5	1.25	-.85	-1.1	-.8	.75
19.....	1.6	3.05	1.85	1.3	1.0	-.1	2.2	1.05	-.9	-1.1	-.8	.55
20.....	1.6	3.0	1.8	1.3	1.0	-.1	1.9	.8	-.9	-1.1	-.9	7.25
21.....	1.5	3.0	1.8	1.2	.9	-.2	1.95	.55	-.9	-1.2	-.9	4.7
22.....	3.05	2.9	1.8	1.2	.9	-.2	1.75	.35	-1.0	-1.2	-1.0	4.1
23.....	3.65	2.9	1.8	1.2	.9	-.2	1.55	.75	1.8	-1.2	-1.0	2.95
24.....	4.5	2.8	1.8	1.2	.9	-.2	1.35	1.5	1.25	-1.3	-1.0	2.4
25.....	4.8	2.75	1.8	1.2	.9	-.2	1.2	1.35	1.05	-1.3	-1.0	2.05
26.....	4.65	2.7	1.8	1.15	.85	-.2	1.05	1.15	-.7	-1.3	-1.0	1.85
27.....	4.55	2.7	1.7	1.1	.8	-.25	.95	.95	.35	-1.3	-1.1	1.55
28.....	4.45	4.15	1.7	1.1	.8	-.3	.85	.75	.15	2.05	-1.1	1.35
29.....	4.35	4.3	1.7	1.1	.....	-.3	.8	.55	-.05	4.4	-1.1	1.2
30.....	4.3	3.0	1.65	1.1	.....	-.35	.7	.45	-.2	2.05	-1.1	4.4
31.....	4.2	.....	1.6	1.1	.....	-.4	.....	.3	.....	1.55	-1.2	.....
1902-3.												
1.....	2.05	.45	4.1	.0	-.2	.....	.....	2.2	.95	4.9	9.55	1.35
2.....	6.65	.4	2.85	.0	-.2	.....	.....	1.85	3.3	4.55	9.4	1.25
3.....	6.2	.9	3.1	-.05	-.2	.....	.....	1.55	2.95	4.35	5.8	1.05
4.....	5.0	.55	5.15	-.1	-.25	.....	.....	1.35	2.35	4.25	4.15	1.0
5.....	4.1	.95	3.7	-.1	-.3	.....	.....	1.15	2.2	5.75	3.35	.9
6.....	2.95	2.0	3.0	-.1	-.3	.....	.....	1.0	1.9	6.6	3.0	1.2
7.....	3.5	1.65	2.8	-.1	-.3	.....	.....	.9	1.5	6.75	2.65	1.1
8.....	2.35	1.4	3.5	-.15	-.3	.....	.....	2.05	1.3	5.4	2.45	1.0
9.....	2.2	1.35	2.05	-.2	-.3	.....	.....	2.8	1.25	4.5	2.3	.9
10.....	1.95	1.25	1.7	-.2	-.3	.....	.....	2.1	1.5	4.15	2.2	.85
11.....	1.65	1.05	1.5	-.2	-.3	.....	.....	3.45	2.7	3.95	4.65	2.05
12.....	1.45	.85	1.5	-.2	-.3	.....	.....	4.3	2.8	3.85	3.4	2.15
13.....	1.25	.75	1.4	-.2	-.3	.....	.....	3.2	8.85	3.75	2.8	1.45
14.....	2.1	.6	1.25	-.05	-.4	.....	-.6	2.45	11.8	3.7	2.2	1.05
15.....	8.0	.5	1.1	-.1	-.4	.....	-.6	1.9	14.85	3.65	2.3	1.15
16.....	10.6	.4	1.0	1.75	-.4	.....	-.6	1.4	17.5	3.55	4.05	1.3
17.....	6.1	.3	.9	1.6	-.4	.....	-.7	1.05	14.2	3.5	4.15	1.15
18.....	3.95	-.2	.8	1.0	-.4	.....	-.7	.85	9.15	3.4	3.65	3.25
19.....	2.9	-.2	.7	.7	-.4	.....	-.7	.65	7.05	3.3	2.9	4.45
20.....	2.6	-.1	.6	.45	-.4	.....	-.7	.45	6.45	3.2	3.75	3.5
21.....	2.05	.1	.55	.35	-.4	.....	-.8	.35	6.05	3.15	2.95	3.35
22.....	1.75	.0	.5	-.2	-.4	.....	-.8	.25	5.75	3.1	2.4	2.8
23.....	1.45	1.65	.4	.15	-.4	.....	-.8	1.95	5.55	3.0	2.2	2.45
24.....	1.25	1.45	.4	.1	-.4	.....	-.9	2.85	5.35	2.95	2.1	2.25
25.....	1.05	1.6	.3	.0	-.4	.....	-.9	2.25	5.25	2.85	2.0	2.05
26.....	1.0	2.1	.25	.0	-.4	.....	-.9	1.85	5.3	2.8	1.65	1.9
27.....	.9	1.7	.2	-.05	-.4	.....	-.9	1.55	5.0	3.2	1.45	1.75
28.....	.8	1.45	.2	-.1	-.4	.....	2.45	1.3	4.85	4.75	1.35	1.65
29.....	.7	1.25	.15	-.1	.....	.....	4.0	1.05	5.5	4.2	1.25	1.5
30.....	.6	1.25	.1	-.1	.....	.....	2.8	.95	5.15	3.45	1.2	1.5
31.....	.5	.....	.05	-.2	.....	.....	.....	1.7	.....	7.35	1.1	.....

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	2.6	1.6	.6	.9	.4	.1	-.5	-.4	1.5	-.1	.1	-.3
2.	3.8	1.6	.5	.8	.4	.1	.17	-.5	1.25	-.1	.0	-.4
3.	3.3	1.55	.5	.8	.4	.1	1.1	-.5	1.15	-.2	-.1	-.4
4.	3.0	1.65	.5	.8	.4	.0	.85	6.6	.95	-.1	-.2	.5
5.	3.0	1.5	.5	.7	.4	.0	1.0	3.2	1.25	.0	-.3	-.5
6.	3.0	1.45	.5	.7	.4	.0	2.35	2.1	8.45	.0	-.35	-.5
7.	3.3	1.35	.5	.7	.4	.0	2.05	1.4	8.45	-.1	-.4	4.35
8.	3.15	1.3	.5	.7	.5	-.1	1.7	1.1	6.3	.0	-.4	7.9
9.	5.35	1.2	.5	.7	.55	-.1	1.3	4.0	4.25	.0	-.45	6.55
10.	2.95	1.15	.5	.65	.65	-.1	.95	1.9	3.35	-.1	-.5	7.8
11.	2.75	1.1	.5	.7	.7	-.1	.75	1.2	2.55	-.2	-.5	7.95
12.	2.6	1.1	.5	.65	.7	-.1	.55	.9	2.0	-.2	-.5	8.85
13.	2.5	1.0	.5	.6	.7	-.2	.4	.65	1.8	-.3	-.5	8.6
14.	2.45	1.0	.5	.6	.6	-.2	.3	3.4	1.65	-.3	1.75	11.0
15.	2.4	1.0	.5	.6	.6	-.3	.2	4.55	1.45	-.4	1.75	14.5
16.	2.45	.95	.5	.6	.5	-.3	.1	8.6	1.25	-.4	1.45	13.05
17.	2.2	.9	.5	.6	.5	-.3	.0	8.05	1.05	-.5	1.15	12.5
18.	2.1	.8	.55	.6	.4	-.3	-.1	6.1	.9	-.5	.95	12.45
19.	2.0	.75	.5	.6	.4	-.3	-.15	4.3	.8	-.5	.75	10.2
20.	1.9	.7	.5	.6	.35	-.3	-.2	3.35	.65	-.6	.55	7.95
21.	1.9	.7	.5	.5	.3	-.3	-.25	2.7	.45	-.6	.4	8.2
22.	1.85	.7	.6	.5	.3	-.3	-.3	2.35	.3	-.6	.3	8.7
23.	1.8	.9	.6	.5	.3	-.3	-.3	2.05	.35	-.7	.2	8.95
24.	1.75	.7	.6	.5	.3	-.4	-.4	1.85	.45	-.7	.1	9.2
25.	1.7	.65	.5	.4	.3	-.4	-.4	1.65	.3	-.7	.35	10.4
26.	1.6	.6	.5	.4	.25	-.4	-.4	1.5	.3	-.8	.45	8.6
27.	1.55	.6	.5	.4	.2	-.4	-.4	1.4	.2	-.8	.25	7.5
28.	2.0	.6	.5	.4	.2	-.4	-.4	1.85	.15	.85	.05	7.15
29.	1.95	.6	.55	.4	.2	-.45	-.4	2.4	.1	.7	.05	6.95
30.	2.1	.6	.6	.4	.2	-.5	-.4	2.35	.0	.3	-.15	6.65
31.	1.85		.7	.4		-.5		1.9		.25	-.25	
1904-5.												
1.	6.6	5.65	4.7	3.6	2.9	2.3	2.7	2.7	4.8	3.95	4.85	3.55
2.	6.6	5.8	4.6	3.6	2.9	2.3	2.7	2.85	4.7	6.9	4.8	3.55
3.	6.6	5.7	4.5	3.6	2.9	2.3	2.6	2.45	5.2	8.35	4.75	3.5
4.	6.55	5.4	4.45	3.5	2.8	2.45	2.6	2.25	5.4	9.4	4.7	3.5
5.	6.5	5.3	4.4	3.5	2.8	2.7	2.6	2.15	4.1	5.9	4.6	3.55
6.	6.4	5.2	4.35	3.5	2.8	4.55	2.6	2.05	3.7	5.45	4.6	3.6
7.	6.25	5.2	4.3	3.5	2.7	4.75	2.5	2.0	4.0	5.2	4.5	3.5
8.	6.2	5.1	4.3	3.5	2.7	4.1	2.5	2.1	4.0	5.15	4.5	3.5
9.	6.1	5.1	4.3	3.5	2.7	3.2	2.5	1.8	3.4	5.15	4.5	3.5
10.	6.0	5.0	4.2	3.5	2.7	3.8	2.4	2.5	3.5	5.05	4.4	3.4
11.	6.0	5.0	4.2	3.4	2.7	3.85	2.4	3.4	3.0	5.0	4.45	3.4
12.	5.95	4.95	4.2	3.4	2.7	3.25	2.4	3.15	3.0	4.9	4.3	3.4
13.	5.9	4.9	4.1	3.4	2.6	3.0	2.4	2.8	2.9	4.9	4.3	3.4
14.	5.85	4.8	4.1	3.3	2.6	3.0	2.3	3.0	2.8	4.8	4.2	3.4
15.	6.15	4.8	4.1	3.3	2.6	2.9	2.3	2.55	2.7	4.8	4.15	3.4
16.	6.05	4.8	4.0	3.3	2.5	2.9	2.3	2.4	2.6	4.7	4.1	3.4
17.	5.8	4.7	4.0	3.3	2.5	3.15	2.2	2.1	2.5	5.9	4.1	3.3
18.	5.7	4.7	4.0	3.3	2.5	3.3	2.2	2.2	2.4	4.85	4.0	3.3
19.	5.7	4.7	3.9	3.2	2.75	3.25	2.2	2.2	2.35	5.4	4.0	4.7
20.	5.85	4.6	3.9	3.2	2.55	3.15	2.2	1.9	2.3	4.9	3.95	6.7
21.	6.0	4.6	3.9	3.2	2.5	3.5	2.1	1.85	3.05	5.7	3.9	7.75
22.	5.7	4.5	3.9	3.2	2.5	3.85	2.1	1.8	3.2	5.75	3.9	9.3
23.	5.6	4.5	3.9	3.2	2.5	3.3	2.1	1.7	2.95	5.45	3.8	4.95
24.	5.5	4.5	3.9	3.1	2.5	3.05	2.1	1.7	2.7	5.35	3.8	4.25
25.	5.7	4.45	3.8	3.1	2.4	3.0	2.1	3.9	2.5	5.25	3.8	3.85
26.	5.5	4.4	3.8	3.1	2.4	3.0	2.0	7.1	2.35	5.2	3.7	3.75
27.	5.6	4.05	3.8	3.0	2.4	2.9	2.0	4.3	3.6	5.1	3.7	3.65
28.	5.55	5.15	3.7	3.0	2.4	2.8	2.2	4.7	5.9	5.05	3.7	3.55
29.	5.4	5.0	3.7	3.0		2.8	2.3	5.7	4.8	5.0	3.65	3.5
30.	5.4	4.8	3.7	3.0		2.8	2.0	7.3	4.0	4.9	3.6	3.5
31.	5.3		3.7	2.9		2.8		5.6		4.9	3.6	

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	3.5	4.05	2.7	2.5	1.9	2.05	1.4	1.2	1.0	-.4	6.2	6.1
2.....	3.4	4.0	2.7	2.5	1.95	2.0	1.3	1.2	.9	-.4	6.15	6.15
3.....	3.4	3.6	2.7	2.5	2.25	2.0	1.3	1.15	.75	-.45	6.15	6.05
4.....	7.1	3.2	2.7	2.45	2.6	2.0	1.3	1.1	.65	.6	6.25	7.0
5.....	5.9	3.0	2.6	2.4	2.9	2.0	1.3	1.1	.55	1.15	6.25	6.45
6.....	4.65	3.0	2.85	2.4	2.55	1.9	1.3	1.1	.45	3.0	6.1	6.55
7.....	4.0	3.0	2.75	2.4	2.45	1.85	1.2	1.0	.4	6.3	6.0	6.2
8.....	3.8	2.9	2.7	2.3	2.35	1.8	1.2	1.0	.3	12.95	5.85	6.7
9.....	3.75	2.9	2.65	2.3	2.3	1.8	1.25	1.25	.25	15.65	5.75	6.9
10.....	3.65	2.9	2.6	2.3	2.3	1.8	1.2	1.35	.2	16.75	5.65	6.55
11.....	3.5	2.8	2.6	2.3	2.3	1.8	1.2	1.2	.1	14.95	5.6	6.5
12.....	3.8	2.85	2.65	2.3	2.3	1.75	1.2	1.15	.1	13.65	5.75	6.35
13.....	3.55	2.85	2.7	2.3	2.3	1.7	1.1	1.1	.0	13.1	6.1	6.75
14.....	3.4	2.8	2.7	2.2	2.3	1.7	1.1	1.0	.0	7.65	5.8	6.5
15.....	3.3	2.8	2.6	2.2	2.3	1.7	1.0	1.0	-.05	6.7	5.65	6.45
16.....	3.3	2.8	2.6	2.2	2.3	1.7	1.0	.9	-.1	6.6	5.6	6.4
17.....	3.3	2.8	2.6	2.2	2.2	1.6	1.0	.9	-.15	6.45	5.5	6.25
18.....	3.2	2.8	2.65	2.2	2.2	1.6	1.1	1.0	-.2	6.2	5.5	6.1
19.....	3.2	4.3	2.85	2.2	2.2	1.6	1.2	1.3	-.05	6.3	6.0	6.65
20.....	3.6	4.6	2.85	2.1	2.2	1.6	1.2	2.7	.2	6.35	6.15	6.25
21.....	6.2	3.15	2.85	2.1	2.2	1.6	1.4	3.2	.25	6.55	6.3	6.1
22.....	6.2	3.3	2.95	2.05	2.2	1.5	2.9	3.1	.15	7.3	5.6	6.25
23.....	4.05	3.05	2.85	2.0	2.2	1.5	2.75	4.0	.05	6.95	5.85	7.05
24.....	3.45	2.95	2.7	1.95	2.2	1.5	2.2	3.6	-.1	6.7	5.9	6.7
25.....	3.3	2.9	2.7	1.9	2.2	1.5	1.85	2.3	-.2	6.45	5.75	6.6
26.....	3.1	2.85	2.6	1.9	2.1	1.5	1.6	1.7	-.3	6.25	5.7	6.15
27.....	3.1	2.8	2.6	1.9	2.4	1.5	1.45	1.35	-.4	6.1	5.6	6.0
28.....	3.0	2.8	2.6	1.9	2.15	1.4	1.35	1.15	-.35	6.0	5.95	5.9
29.....	3.0	2.8	2.6	1.9	.....	1.4	1.25	.95	-.3	5.85	6.0	5.85
30.....	3.0	2.7	2.6	1.9	.....	1.4	1.2	.8	-.4	5.7	6.95	5.75
31.....	3.0	.....	2.5	1.9	.....	1.4	.....	.7	.....	5.95	6.3	.....
1906-7.												
1.....	5.6	4.8	4.3	3.9	3.5	3.0	2.1	1.9	1.9	2.9	2.1	.8
2.....	5.6	4.75	4.3	3.9	3.5	2.9	2.1	1.95	1.75	2.8	2.1	.8
3.....	5.6	4.7	4.3	3.9	3.4	2.9	2.1	1.95	1.6	7.2	2.0	.8
4.....	5.6	4.7	4.3	3.8	3.4	2.9	2.1	2.25	1.5	8.6	2.0	.7
5.....	5.5	4.7	4.2	3.8	3.4	2.8	2.1	2.55	1.45	6.05	1.95	.7
6.....	5.5	4.7	4.2	3.8	3.4	2.8	2.1	2.7	1.4	3.95	1.9	.65
7.....	5.45	4.6	4.2	3.8	3.4	2.8	2.0	2.25	1.3	4.6	1.9	.6
8.....	5.4	4.6	4.2	3.8	3.3	2.8	2.0	1.95	1.2	3.95	1.8	.6
9.....	5.4	4.6	4.2	3.8	3.3	2.7	2.0	1.75	1.2	3.4	1.8	.5
10.....	5.3	4.6	4.2	3.7	3.3	2.7	2.0	4.8	1.2	3.2	1.8	.5
11.....	5.2	4.6	4.1	3.7	3.3	2.7	2.0	3.7	1.1	3.05	1.75	.5
12.....	5.2	4.5	4.1	3.7	3.3	2.7	1.9	3.9	1.1	2.8	1.7	.4
13.....	5.2	4.5	4.1	3.7	3.3	2.6	1.9	4.2	1.0	2.55	1.7	.4
14.....	5.2	4.5	4.1	3.7	3.2	2.6	1.9	3.45	1.0	2.45	1.65	.4
15.....	5.1	4.5	4.1	3.7	3.2	2.6	1.9	2.85	1.0	2.9	1.6	.4
16.....	5.1	4.45	4.1	3.6	3.2	2.6	1.9	2.55	.8	3.25	1.5	.4
17.....	5.2	4.4	4.1	3.6	3.2	2.6	1.8	2.25	.8	2.8	1.5	.4
18.....	5.1	4.4	4.1	3.6	3.2	2.5	1.8	2.15	1.35	2.55	1.45	.3
19.....	5.0	4.4	4.1	3.6	3.2	2.5	2.4	2.1	1.8	2.4	1.55	.3
20.....	5.0	4.4	4.1	3.6	3.1	2.5	2.7	2.0	1.55	2.4	1.55	.3
21.....	5.0	4.4	4.1	3.6	3.1	2.5	2.4	1.95	1.85	2.55	1.4	.3
22.....	5.0	4.4	4.1	3.55	3.1	2.4	2.35	2.25	1.75	2.4	1.3	.45
23.....	5.0	4.3	4.0	3.5	3.1	2.4	2.15	2.25	3.3	2.4	1.2	.85
24.....	4.9	4.3	4.0	3.5	3.0	2.4	2.0	2.05	3.6	2.4	1.1	2.3
25.....	4.9	4.3	4.0	3.5	3.05	2.3	1.9	1.95	3.25	2.3	1.1	2.75
26.....	4.9	4.3	4.0	3.5	3.0	2.3	1.9	1.9	3.1	2.3	1.1	2.35
27.....	4.9	4.3	4.0	3.5	3.0	2.2	1.9	5.9	3.1	2.2	1.0	2.05
28.....	4.8	4.3	4.0	3.5	3.0	2.2	1.8	3.85	3.0	2.2	1.0	1.85
29.....	4.8	4.3	3.9	3.5	.....	2.2	1.8	3.1	3.0	2.2	.95	1.7
30.....	4.8	4.3	3.9	3.5	.....	2.1	1.7	2.4	2.9	2.2	.9	1.75
31.....	4.8	.....	3.9	3.5	.....	2.1	.....	2.05	.....	2.2	.8	.....

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	1.6	4.5	4.4	4.0	3.2	2.4	1.9	2.7	4.25	1.0	4.15	4.2
2.....	1.5	4.6	4.5	4.0	3.1	2.4	1.9	2.6	3.65	.9	4.8	4.15
3.....	1.4	4.75	4.5	3.9	3.1	2.3	1.9	2.5	3.2	.9	4.2	4.85
4.....	1.3	4.95	4.6	3.9	3.1	2.3	1.9	2.4	2.55	1.9	3.75	4.2
5.....	1.3	5.15	4.6	3.9	3.1	2.3	1.9	2.3	2.3	2.1	3.6	4.1
6.....	1.5	5.4	4.5	3.9	3.0	2.3	1.8	2.2	2.2	2.75	3.8	4.0
7.....	9.9	5.3	4.5	3.8	3.0	2.2	1.8	2.1	1.95	5.05	3.7	3.95
8.....	11.15	5.3	4.5	3.8	3.0	2.2	1.8	2.0	1.75	3.95	6.15	3.9
9.....	5.6	5.2	4.5	3.8	3.0	2.25	1.7	1.9	1.6	2.55	6.85	3.9
10.....	4.25	5.15	4.4	3.7	3.0	2.3	1.7	1.9	1.6	2.1	5.5	3.8
11.....	3.85	5.0	4.4	3.7	2.9	2.2	5.7	1.9	1.5	2.05	5.8	3.95
12.....	3.65	5.0	4.4	3.7	2.9	2.1	5.7	1.8	1.4	1.65	5.25	3.85
13.....	3.5	4.9	4.3	3.6	2.9	2.1	5.4	1.8	1.3	1.5	5.1	3.8
14.....	3.4	4.9	4.3	3.6	2.8	2.2	2.85	3.4	1.2	4.35	5.1	4.4
15.....	3.3	4.9	4.3	3.6	2.8	2.1	4.5	6.1	1.1	3.4	5.0	4.85
16.....	3.2	4.8	4.3	3.6	2.8	2.2	3.95	6.2	1.1	2.8	5.0	4.0
17.....	3.2	4.8	4.3	3.5	2.7	2.1	3.6	4.35	1.0	2.25	4.9	4.75
18.....	3.1	4.7	4.3	3.5	2.7	2.0	3.45	3.35	1.0	1.9	4.9	4.6
19.....	3.1	4.7	4.2	3.5	2.7	2.0	3.35	2.85	.9	1.65	4.9	3.95
20.....	3.15	4.6	4.2	3.5	2.6	2.0	3.85	2.35	.9	1.5	4.8	3.8
21.....	3.35	4.6	4.2	3.5	2.6	2.0	4.2	2.25	.8	1.4	5.35	3.75
22.....	3.7	4.5	4.2	3.4	2.6	2.0	5.9	2.25	.8	1.6	5.85	3.65
23.....	4.45	4.5	4.15	3.4	2.6	2.0	4.95	2.05	.7	1.85	5.15	3.55
24.....	4.6	4.4	4.1	3.4	2.5	3.1	4.2	1.9	.7	1.65	4.75	3.5
25.....	4.65	4.4	4.1	3.4	2.5	2.8	3.55	1.8	.85	1.5	4.7	3.5
26.....	4.65	4.4	4.1	3.3	2.5	2.5	3.25	1.65	2.15	1.6	4.6	3.5
27.....	4.45	4.4	4.1	3.3	2.5	2.4	3.05	1.45	2.25	1.4	4.5	3.4
28.....	4.35	4.3	4.05	3.3	2.4	2.35	2.95	1.3	1.75	1.25	4.5	3.4
29.....	4.2	4.3	4.0	3.3	2.4	2.15	2.85	1.3	1.5	1.1	4.4	3.4
30.....	4.15	4.2	4.0	3.3	2.4	2.05	2.75	1.2	1.15	2.2	4.35	3.4
31.....	4.05	.....	4.0	3.2	.....	2.0	.....	1.2	.....	3.75	4.3	.....
1908-9.												
1.....	3.3	2.9	2.6	2.4	1.9	1.3	1.85	.6	3.7	1.65	3.0	16.45
2.....	3.3	2.9	2.6	2.45	1.9	1.3	1.65	.5	3.2	12.0	2.9	15.0
3.....	3.3	2.9	2.6	2.45	1.9	1.3	1.5	.5	2.9	16.75	2.9	10.9
4.....	3.2	2.8	2.6	2.4	1.9	1.2	1.4	.4	2.5	19.3	3.3	8.9
5.....	3.2	2.8	2.6	2.4	1.9	1.2	1.35	.4	2.4	18.5	3.3	7.7
6.....	3.3	2.8	2.6	2.3	1.9	1.2	1.25	.3	2.3	17.3	3.2	7.3
7.....	3.35	2.9	2.6	2.3	1.9	1.2	1.2	.3	2.25	11.75	3.2	6.95
8.....	7.0	2.8	2.6	2.3	1.8	1.2	3.85	.2	2.1	7.65	3.1	6.65
9.....	5.6	2.8	2.6	2.3	1.8	1.1	2.25	.2	2.0	8.25	3.05	6.1
10.....	4.05	2.7	2.6	2.2	1.8	1.1	2.55	.1	1.9	7.6	3.75	5.8
11.....	3.55	2.7	2.6	2.2	1.8	1.1	2.3	.1	1.75	6.25	3.65	5.35
12.....	3.4	2.7	2.6	2.2	1.8	1.1	1.8	.1	1.7	5.7	5.0	5.2
13.....	3.3	3.2	2.6	2.2	1.8	1.1	1.5	.0	1.6	5.35	5.9	5.1
14.....	3.2	3.05	2.6	2.1	1.8	1.0	1.4	.0	1.65	5.15	4.45	5.0
15.....	3.2	2.9	2.6	2.1	1.7	1.0	1.3	.0	1.65	4.95	3.95	5.1
16.....	3.1	2.9	2.6	2.1	1.7	1.0	1.2	.0	1.45	4.75	3.75	4.95
17.....	3.1	2.9	2.6	2.1	1.7	1.0	1.1	.0	1.25	4.55	3.5	5.0
18.....	3.15	2.8	2.5	2.1	1.6	1.0	.95	-.1	1.05	4.35	3.35	5.25
19.....	3.1	2.7	2.5	2.1	1.6	1.0	.9	-.1	1.7	4.15	3.35	5.3
20.....	3.1	2.7	2.5	2.1	1.5	1.0	.9	-.1	1.45	6.65	3.2	5.05
21.....	3.0	2.7	2.5	2.1	1.5	1.0	.9	-.1	1.3	5.4	3.1	4.6
22.....	3.15	2.7	2.5	2.1	1.5	1.0	.8	-.1	1.6	4.75	3.0	4.6
23.....	6.15	2.7	2.5	2.1	1.5	1.0	.8	-.1	2.35	4.2	2.9	4.55
24.....	3.7	2.7	2.5	2.0	1.4	1.0	.8	-.2	2.15	3.85	2.8	4.4
25.....	3.35	2.7	2.5	2.0	1.4	.9	.8	-.2	1.95	3.65	2.8	4.4
26.....	3.3	2.6	2.5	2.0	1.4	.9	.7	1.3	1.75	3.5	3.6	4.3
27.....	3.3	2.7	2.5	2.0	1.4	.9	.7	6.7	1.55	3.4	7.05	4.3
28.....	2.9	2.6	2.5	2.0	1.3	.9	.7	8.1	1.4	3.3	10.4	4.25
29.....	2.9	2.6	2.5	2.0	.....	.9	.6	6.25	1.4	3.2	15.7	4.2
30.....	2.9	2.65	2.5	2.0	.....	.9	.6	5.35	1.55	3.25	16.75	4.1
31.....	2.9	.....	2.5	1.9	.....	.9	.....	4.2	.....	3.05	14.85	.....

Daily gage height, in feet, of Rio Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	4.0	3.2	3.0	2.9	2.6	2.2	2.4	1.4	1.3	.8	-.1	7.1
2.....	4.0	3.2	3.0	2.9	2.6	2.2	2.4	1.4	1.2	.7	-.2	9.35
3.....	3.9	3.2	3.0	2.9	2.6	2.2	2.4	1.3	1.1	.6	-.2	6.0
4.....	3.9	3.2	3.0	2.9	2.5	2.2	2.4	1.3	1.0	.6	-.2	4.1
5.....	3.9	3.2	3.0	2.9	2.5	2.2	2.3	1.3	1.0	.5	-.2	3.2
6.....	3.8	3.1	3.0	2.9	2.5	2.2	2.3	1.3	4.65	.5	-.3	2.8
7.....	3.8	3.1	2.9	2.9	2.4	2.2	2.25	1.3	7.85	.5	-.3	2.4
8.....	3.7	3.1	2.9	2.9	2.4	2.2	2.2	1.45	4.7	.5	-.4	2.05
9.....	3.7	3.1	2.9	2.8	2.4	2.1	2.2	1.3	3.55	.4	-.4	1.85
10.....	3.7	3.1	2.9	2.8	2.4	2.1	2.1	1.3	3.3	.4	.....	2.75
11.....	3.6	3.1	2.9	2.8	2.4	2.1	2.1	1.2	2.95	.4	.....	2.1
12.....	3.6	3.1	2.9	2.8	2.4	2.1	2.3	1.2	2.7	.4	.....	2.1
13.....	3.6	3.1	2.9	2.8	2.4	2.1	2.2	1.2	2.3	.3	.....	3.3
14.....	3.6	3.1	2.9	2.8	2.4	2.1	2.0	1.2	2.05	.3	.....	6.7
15.....	3.5	3.0	2.9	2.9	2.4	2.1	2.8	1.6	1.9	.3	.....	10.8
16.....	3.5	3.0	2.9	2.9	2.4	2.1	2.7	2.05	1.8	.2	.....	15.8
17.....	3.5	3.0	2.9	2.9	2.4	2.1	2.6	2.0	1.7	.2	.....	15.0
18.....	3.5	3.0	2.9	2.9	2.4	2.1	2.6	1.9	1.6	.2	.....	14.25
19.....	3.95	3.0	2.9	2.8	2.3	2.9	2.5	1.85	1.5	.1	.....	12.65
20.....	4.0	3.0	2.9	2.8	2.3	2.9	2.35	1.65	1.4	.1	.....	7.8
21.....	3.75	3.0	2.9	2.8	2.3	3.0	2.15	1.45	1.3	.1	.....	7.0
22.....	3.5	3.0	3.0	2.8	2.3	5.4	1.95	1.85	1.7	.1	.....	6.5
23.....	3.4	3.0	3.0	2.8	2.3	4.95	1.9	2.05	1.85	.1	.....	6.15
24.....	3.4	3.0	3.0	2.8	2.3	3.85	1.8	2.85	1.65	.1	.....	5.95
25.....	3.3	3.0	3.0	2.7	2.3	3.65	1.7	2.4	1.45	.0	.....	5.75
26.....	3.3	3.0	3.0	2.7	2.3	3.35	1.6	1.95	1.3	.0	.....	5.65
27.....	3.2	2.9	3.0	2.7	2.3	2.95	1.5	1.7	1.2	.0	.....	5.5
28.....	3.2	2.9	3.0	2.7	2.2	2.75	1.4	1.6	1.1	.0	.....	5.4
29.....	3.2	2.9	2.9	2.7	.....	2.6	1.4	1.6	1.0	.....	.....	5.3
30.....	3.1	3.0	2.9	2.6	.....	2.6	1.4	1.5	.9	.....	.....	5.2
31.....	3.1	.....	2.9	2.6	.....	2.5	.....	1.4	.....	.....	.....	.....
1910-11.												
1.....	5.1	.....	.....	2.7	2.2	2.3	2.7	2.7	2.0	.4	2.05	5.95
2.....	5.0	.....	.....	2.7	2.2	2.3	2.6	2.6	1.9	.4	1.85	4.25
3.....	4.8	.....	.....	2.7	2.2	2.3	2.5	2.5	1.8	.6	1.65	3.05
4.....	4.9	.....	.....	2.7	2.1	2.2	2.5	2.5	1.7	.6	1.45	2.8
5.....	4.8	.....	.....	2.7	2.1	2.2	2.5	2.5	1.7	.6	1.25	1.95
6.....	5.25	.....	.....	2.7	2.1	2.2	2.5	2.55	1.6	.5	1.1	1.75
7.....	4.75	.....	.....	2.7	2.0	2.1	2.5	2.5	1.75	.5	1.0	1.55
8.....	4.4	.....	.....	2.6	2.0	2.1	2.4	2.4	1.55	.5	1.0	1.4
9.....	4.2	.....	.....	2.6	2.0	2.1	2.4	2.4	1.35	.4	.9	1.7
10.....	4.1	.....	.....	2.6	2.0	2.1	2.4	2.4	1.2	.4	.9	1.35
11.....	4.0	.....	.....	2.7	2.0	2.0	2.35	2.3	1.2	.3	.8	1.2
12.....	4.0	.....	.....	2.7	2.0	2.0	2.3	2.3	1.1	.3	.8	1.85
13.....	4.0	.....	.....	2.6	2.0	2.0	2.3	2.45	1.1	.3	.7	1.6
14.....	3.9	.....	.....	2.6	2.0	2.0	2.3	2.4	1.0	.3	.7	1.5
15.....	3.9	.....	.....	2.6	1.9	2.1	2.3	2.3	.9	.2	.6	1.4
16.....	3.8	.....	.....	2.5	1.9	2.1	2.3	2.2	.9	.2	.6	1.3
17.....	3.8	.....	.....	2.5	1.9	2.1	2.2	2.1	.9	.2	.5	1.15
18.....	3.8	.....	.....	2.7	1.9	2.1	2.2	2.0	.9	.2	.5	1.0
19.....	3.7	.....	.....	2.6	1.9	2.1	2.2	2.0	.8	.1	.4	.9
20.....	3.7	.....	.....	2.5	1.9	2.0	2.2	1.9	.8	.1	.4	.9
21.....	3.6	.....	.....	2.45	1.8	1.9	2.2	1.8	.8	.1	.3	.8
22.....	3.5	.....	.....	2.4	1.8	1.9	2.2	1.8	.7	.1	.3	.8
23.....	3.5	.....	.....	2.4	2.0	1.8	2.2	2.3	.7	.0	.3	.7
24.....	3.4	.....	.....	2.4	2.6	1.8	2.2	2.85	.6	.0	.3	.6
25.....	3.4	.....	.....	2.3	2.55	2.4	2.25	2.45	.6	.0	.2	.5
26.....	3.4	.....	.....	2.3	2.5	2.65	2.95	2.3	.6	2.5	.2	.4
27.....	3.4	.....	.....	2.3	2.45	3.25	2.75	2.3	.6	2.95	.2	.4
28.....	3.4	.....	.....	2.3	2.4	3.8	2.8	2.3	.6	3.95	.2	.3
29.....	3.3	.....	.....	2.2	.....	3.4	3.1	2.1	.5	3.2	.1	.2
30.....	3.3	.....	.....	2.2	.....	3.1	3.0	2.5	.4	2.6	.1	.2
31.....	3.3	.....	.....	2.2	.....	2.85	.....	2.15	.....	2.25	2.1	.....

Daily gage height, in feet, of Río Salado near Guerrero, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.	.1	1.2	.8	.1	.9	.4	.1	.1	.8	2.3	.4	.....
2.	.1	1.1	.8	.1	.9	.4	.1	.1	1.4	2.3	.4	.....
3.	.0	4.75	.7	.7	.9	.4	.1	.1	1.1	2.3	.3	.....
4.	.0	4.75	.7	.7	.9	.4	.1	.1	2.15	2.6	.3	.....
5.	.0	4.25	.6	.6	.8	.4	.1	.1	2.95	2.5	.3	.....
6.	.0	3.35	.6	.6	.8	.4	.1	.1	1.85	2.35	.2	.....
7.	.0	3.05	.5	.6	.8	.4	.1	.1	1.3	2.2	.2	.....
8.	7.8	3.05	.5	.6	.8	.3	.4	3.25	1.5	2.1	.2	.....
9.	2.75	4.35	.5	.6	.8	.3	.4	2.75	1.45	2.0	.2	.....
10.	2.2	3.25	.4	.6	.8	.3	.4	3.0	1.3	1.9	.1	.....
11.	1.85	2.45	.4	.6	.75	.3	.4	2.75	1.3	1.8	.1	.....
12.	1.4	2.4	.4	.5	.7	.3	.7	2.55	1.2	1.7	.1	.....
13.	1.15	2.3	.3	.5	.7	.3	.6	2.4	1.7	1.6	.1	.....
14.	1.0	2.2	.3	.4	.6	.3	.45	2.4	1.7	1.5	.1	.....
15.	4.3	2.2	.3	.4	.6	.3	.3	2.3	1.6	1.4	.1	.....
16.	3.95	2.0	.3	1.0	.6	.3	.3	2.3	1.5	1.3	.1	.....
17.	3.75	1.9	.3	1.0	.6	.2	.3	2.2	1.5	1.3	.0	.....
18.	3.45	1.8	.3	1.0	.6	.2	.3	2.2	3.85	1.2	.0	.....
19.	3.15	1.7	.2	1.0	.6	.2	.3	2.1	10.75	1.2	.0	.....
20.	2.85	1.6	.2	1.0	.5	.2	.3	2.1	11.0	1.1	.....	.....
21.	2.65	1.6	.2	1.0	.5	.2	.2	2.0	11.25	1.1	.....	.....
22.	2.4	1.45	.2	1.0	.5	.2	.2	2.0	8.75	1.0	.....	.....
23.	2.15	1.3	.2	1.0	.5	.2	.2	1.9	6.2	1.0	.....	.....
24.	1.95	1.3	.2	.9	.5	.1	.2	1.8	8.7	.9	.....	.....
25.	1.75	1.2	.2	.9	.5	.1	.2	1.7	8.2	.8	.....	.....
26.	1.65	1.1	.2	.9	.5	.1	.2	1.6	7.35	.7	.....	.....
27.	1.55	1.0	.2	.9	.5	.1	.2	1.5	4.15	.6	.....	.....
28.	1.45	1.0	.2	.9	.5	.1	.2	1.45	2.8	.5	.....	.....
29.	1.4	.9	.1	.9	.4	.1	.1	1.3	2.55	.5	.....	.....
30.	1.3	.8	.1	.9	.....	.1	.1	1.05	2.35	.4	.....	.....
31.	1.3	.....	.1	.9	.....	.1	.....	1.0	.....	.4	.....	.....
1912-13.												
1.	8.15	2.2	1.9	1.5	1.3	.8	.3	.....	.....	3.9	.....	.....
2.	5.55	2.2	1.85	1.5	1.3	.8	.3	.....	.....	3.5	.....	.....
3.	3.7	2.2	1.8	1.4	1.2	.8	.....	.....	.....	3.1	.....	.....
4.	3.1	2.1	1.8	1.4	1.2	.7	.....	.....	.....	2.85	.....	.....
5.	2.8	2.1	1.7	1.4	1.2	.7	.....	.....	.....	2.7	.....	.....
6.	2.4	2.1	1.6	1.4	1.1	.7	.....	.....	.....	2.6	.....	.....
7.	2.05	2.0	1.6	1.4	1.1	.7	.....	.....	.....	2.5	.....	.....
8.	1.85	1.9	1.5	1.3	1.0	.7	.....	.....	.....	2.5	.....	.....
9.	1.7	1.8	1.5	1.3	1.0	.7	.....	.....	6.15	2.4	.....	.....
10.	1.6	1.7	1.5	1.3	1.0	.7	.....	.....	5.25	2.4	.....	.....
11.	1.5	1.7	1.5	1.2	1.0	.7	.....	.....	4.35	2.3	.....	.....
12.	1.5	1.6	1.4	1.2	1.2	.7	.....	.....	4.1	2.3	.....	.....
13.	1.4	1.6	1.4	1.3	1.2	.9	.....	.....	3.95	2.3	.....	.....
14.	1.3	1.5	1.4	1.2	1.2	.9	.....	.....	3.7	2.2	.....	.....
15.	1.3	1.5	1.4	1.2	1.0	.9	.....	.....	3.2	.....	.....	.....
16.	1.2	1.4	1.5	1.2	1.1	.9	.....	.....	3.0	.....	.....	.....
17.	3.35	1.3	1.5	1.2	1.1	.8	.....	.....	2.9	.....	.....	.....
18.	2.85	1.9	1.5	1.2	1.1	.8	.....	.....	2.8	.....	.....	.....
19.	4.35	1.9	1.5	1.2	1.0	.7	.....	.....	4.3	.....	.....	.....
20.	3.7	1.8	1.5	1.2	1.0	.7	.....	.....	4.2	.....	.....	.....
21.	3.1	1.7	1.5	1.3	1.0	.6	.....	.....	4.0	.....	.....	.....
22.	3.1	1.6	1.6	1.3	.9	.6	.....	.....	3.8	.....	.....	.....
23.	5.75	1.5	1.6	1.3	.9	.6	.....	.....	3.6	.....	.....	.....
24.	3.6	2.75	1.8	1.3	.9	.5	.....	.....	3.4	.....	.....	.....
25.	2.95	2.1	1.8	1.3	.9	.5	.....	.....	3.2	.....	.....	.....
26.	2.75	2.3	1.8	1.3	.9	.5	.....	.....	3.0	.....	.....	.....
27.	2.55	2.2	1.7	1.2	.8	.4	.....	.....	3.15	.....	.....	.....
28.	2.4	2.1	1.7	1.4	.8	.4	.....	.....	4.9	.....	.....	.....
29.	2.3	2.0	1.6	1.4	.....	.3	.....	.....	7.1	.....	.....	.....
30.	2.2	1.9	1.6	1.3	.....	.3	.....	.....	4.6	.....	.....	.....
31.	2.2	.....	1.6	1.3	.....	.3	.....	.....	.....	.....	.....	.....

NOTE.—No flow at the station Aug. 19-31, 1901; Apr. 8-13, June 15-22, July 11-27, and Aug. 17 to Sept. 7, 1902; July 15-27, 1901; Aug. 10-31, 1910; Aug. 20 to Sept. 30, 1912; and Apr. 3 to June 8, 1913. Records stopped by revolutionists July 15, 1913.

RIO SAN JUAN NEAR LA QUEMADA AND SANTA ROSALIA RANCH,
TAMAULIPAS, MEXICO.

Location.—Originally located near La Quemada, 12 miles above Camargo, and 18 miles above the mouth. On July 14, 1902, it was moved 6 miles farther upstream to Santa Rosalia ranch.

Records available.—April 28, 1900, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Inclined staff. The Santa Rosalia gage had its datum changed October 1, 1909. Amount of change unknown. The datum of the gage was raised about 11 feet on May 27, 1912.

Channel.—Shifting. Station was originally within the influence of the Rio Grande during severe floods but is now above backwater.

Discharge measurements.—Made from car and cable.

Floods.—Rio San Juan is subject to very severe floods. The highest recorded stage, 60 feet, occurred August 30, 1909.

Zero flow.—At approximately 3.0 on present gage. At approximately -8.5 feet on gage used October 1, 1909, to May 25, 1912.

Accuracy.—Although frequent discharge measurements have been obtained, no estimates of daily discharge have been prepared by the commission.

Cooperation.—Station maintained by the Mexican section of the International Water Commission, by whom the base data are furnished.

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913.

[By S. Jaso and A. Argáandar.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1900.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>	1901.	<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 3.....	2.6	461	Feb. 28.....	.8	74	July 30.....	.7	97
5.....	1.75	64	Mar. 3.....	.8	72	Aug. 3.....	1.0	54
8.....	1.45	66	7.....	.8	74	7.....	1.6	144
19.....	.9	14	11.....	.7	63	11.....	1.1	30
23.....	1.8	89	15.....	.6	61	15.....	.8	16
28.....	1.9	89	20.....	.5	54	19.....	.6	11
30.....	1.2	51	24.....	.4	48	23.....	.7	13
Nov. 11.....	.7	312	28.....	.2	19	27.....	.4	11
13.....	.8	117	Apr. 2.....	.1	18	31.....	1.2	44
16.....	.7	168	6.....	.0	15	Sept. 3.....	14.2	6,398
20.....	.95	129	10.....	.0	16	7.....	1.8	571
23.....	1.0	237	14.....	.0	16	11.....	7.6	2,716
25.....	1.1	343	19.....	.0	14	15.....	2.1	257
28.....	1.0	187	23.....	.0	14	19.....	3.05	747
Dec. 4.....	1.0	371	28.....	.0	0	23.....	2.3	394
10.....	1.1	449	May 5.....	.0	0	26.....	15.6	8,251
14.....	1.2	478	11.....	3.5	732	30.....	6.25	2,430
18.....	3.15	1,737	15.....	1.1	127	Oct. 4.....	6.3	2,301
21.....	1.5	840	19.....	.7	75	8.....	3.7	1,052
26.....	1.05	418	24.....	1.4	151	12.....	3.2	784
30.....	1.2	436	27.....	2.0	397	16.....	3.0	675
1901.			31.....	1.5	160	20.....	2.6	722
Jan. 3.....	1.2	219	June 5.....	12.6	^b 7,097	30.....	4.3	1,787
7.....	1.3	234	9.....	1.3	134	Nov. 1.....	4.1	1,518
11.....	1.25	^a 168	13.....	.8	84	5.....	3.5	709
15.....	1.15	210	17.....	.5	60	9.....	2.8	625
20.....	1.3	228	21.....	.4	37	13.....	2.9	766
24.....	1.3	224	25.....	.4	37	17.....	2.6	442
28.....	1.3	214	30.....	19.35	^b 15,742	21.....	2.6	492
Feb. 3.....	1.0	123	July 6.....	1.8	229	25.....	2.6	454
8.....	1.1	140	10.....	10.0	^b 7,991	29.....	11.7	5,302
12.....	1.05	125	14.....	3.2	697	Dec. 3.....	3.5	1,062
23.....	.95	92	18.....	1.5	218	7.....	2.9	636
25.....	.9	90	22.....	.8	111	11.....	2.6	550
			26.....	.5	40	15.....	2.5	509

^a Measurement rejected.

^b Measurements made by floats.

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1901.	<i>Fect.</i>	<i>Sec.-ft.</i>	1902.	<i>Fect.</i>	<i>Sec.-ft.</i>	1904.	<i>Fect.</i>	<i>Sec.-ft.</i>
Dec. 19.....	2.3	427	Oct. 1.....	15.05	10,818	Jan. 23.....	.9	26
23.....	2.5	465	6.....	3.4	579	27.....	.8	22
27.....	2.3	423	10.....	2.5	315	Feb. 3.....	.8	22
31.....	2.4	435	14.....	1.5	146	6.....	.8	24
1902.			16.....	15.35	12,539	12.....	.7	24
Jan. 4.....	2.1	274	19.....	4.4	991	15.....	.8	26
9.....	2.1	308	23.....	2.8	399	20.....	1.7	181
12.....	2.0	275	27.....	2.0	223	24.....	1.0	45
16.....	2.0	277	30.....	8.6	5,351	28.....	.6	19
22.....	1.9	216	Nov. 4.....	1.6	162	Mar. 3.....	.5	16
26.....	1.8	205	9.....	1.5	119	7.....	.4	b 8
30.....	1.7	146	13.....	1.1	57	11.....	.3	b 7
Feb. 1.....	1.6	129	17.....	1.0	39	15.....	.2	b 7
5.....	1.6	128	21.....	.8	28	19.....	.2	b 7
9.....	1.65	169	25.....	2.15	233	25.....	.1	b 6
13.....	1.7	175	29.....	.9	46	29.....	2.05	226
17.....	1.7	184	Dec. 2.....	7.5	a 5,297	Apr. 3.....	18.45	c 12,687
21.....	1.5	150	7.....	1.8	172	9.....	1.4	99
25.....	1.5	166	11.....	1.7	146	13.....	.8	23
28.....	1.3	143	16.....	1.2	85	16.....	.6	20
Mar. 5.....	1.1	96	20.....	1.1	78	21.....	.4	14
9.....	.9	54	23.....	1.1	82	24.....	3.85	700
13.....	.85	47	28.....	1.0	68	28.....	1.1	52
17.....	.8	27	1903.			May 2.....	9.4	3,861
21.....	.7	22	June 23.....	1.9	188	6.....	2.0	210
25.....	.6	17	27.....	1.5	103	9.....	9.35	4,525
29.....	.55	15	July 3.....	1.6	118	14.....	6.4	3,192
Apr. 2.....	.5	13	7.....	6.2	2,215	18.....	1.8	212
6.....	.4	12	11.....	1.7	147	24.....	.9	36
10.....	.3	10	15.....	.8	31	28.....	.8	26
14.....	1.4	139	21.....	.4	6	June 4.....	1.1	52
17.....	11.5	6,439	25.....	.2	4	7.....	13.25	9,234
22.....	1.9	203	29.....	.0	4	14.....	1.6	114
26.....	1.4	161	Aug. 1.....	21.0	26,677	18.....	1.3	64
May 3.....	.8	30	5.....	3.4	478	24.....	2.95	498
7.....	12.7	6,987	10.....	1.7	79	27.....	1.0	59
11.....	2.4	436	14.....	2.0	144	30.....	.7	21
15.....	1.1	68	17.....	24.0	30,826	July 4.....	2.45	282
19.....	.8	27	27.....	3.75	823	9.....	1.30	39
23.....	1.2	87	31.....	3.3	580	14.....	.5	17
28.....	.7	33	Sept. 4.....	4.95	1,548	18.....	.3	13
June 1.....	.5	27	9.....	2.9	416	22.....	.2	12
5.....	.3	17	14.....	2.1	228	31.....	1.1	72
9.....	.2	0	18.....	2.75	506	Aug. 4.....	.7	38
13.....	.1	0	22.....	2.4	159	8.....	.4	14
17.....	.0	0	26.....	2.8	455	13.....	4.6	1,432
21.....	-.1	0	30.....	1.9	186	17.....	3.0	545
25.....	-.3	0	Oct. 3.....	1.5	117	22.....	.9	22
29.....	-.4	0	8.....	1.1	46	26.....	1.0	37
July 3.....	-.5	0	13.....	1.3	65	30.....	.4	14
7.....	4.5	1,991	18.....	.8	42	Sept. 3.....	.0	5
11.....	2.7	564	22.....	.7	29	7.....	4.55	1,302
15.....	1.3	157	26.....	1.95	193	8.....	6.65	2,659
19.....	.4	56	30.....	1.0	51	9.....	9.3	5,209
23.....	.0	28	Nov. 4.....	.9	37	10.....	11.7	6,523
27.....	-.2	7	9.....	1.0	53	13.....	13.45	9,092
29.....	5.9	2,456	13.....	.9	39	17.....	24.5	37,578
30.....	16.0	9,904	19.....	.8	30	22.....	15.05	9,954
Aug. 3.....	7.0	2,822	23.....	.8	45	25.....	6.0	2,037
7.....	.8	30	27.....	.9	38	29.....	9.65	4,039
11.....	.5	16	Dec. 3.....	.9	33	Oct. 3.....	4.95	1,482
15.....	.4	9	5.....	.9	37	7.....	5.65	1,847
19.....	.1	5	9.....	1.0	43	12.....	3.9	629
23.....	.0	4	14.....	1.0	34	16.....	3.1	408
27.....	-.2	0	18.....	1.1	45	20.....	2.7	261
31.....	-.3	0	22.....	1.1	50	25.....	2.3	187
Sept. 3.....	-.3	0	26.....	1.1	44	30.....	2.2	169
8.....	2.4	362	30.....	1.0	49	Nov. 4.....	2.3	176
12.....	2.0	222	1904.			8.....	2.8	328
16.....	3.4	599	Jan. 4.....	1.0	49	14.....	2.8	310
20.....	.4	35	8.....	1.1	44	19.....	3.15	441
24.....	1.9	225	13.....	1.0	40	Dec. 6.....	3.3	446
28.....	10.9	6,832	18.....	1.0	41	10.....	3.2	422
						14.....	3.0	375

a Approximate.
 b Measurement made by floats.
 c Measurement made by floats.

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1906.	<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 19.....	2.8	333	Oct. 11.....	4.7	875	Aug. 19.....	4.45	1,347
23.....	2.8	309	13.....	8.6	3,899	20.....	20.0	16,080
28.....	2.5	192	16.....	4.5	756	23.....	6.7	2,430
31.....	2.6	211	21.....	3.3	387	26.....	4.45	947
1905.			26.....	3.2	378	28.....	11.65	5,642
Jan. 4.....	2.5	209	Nov. 3.....	14.7	8,179	29.....	5.55	1,623
9.....	2.5	165	6.....	11.2	5,625	Sept. 1.....	3.65	560
14.....	2.3	160	9.....	8.75	4,102	4.....	5.55	1,644
18.....	2.2	117	13.....	6.6	2,077	6.....	9.65	4,560
21.....	2.2	113	18.....	5.9	1,786	7.....	13.6	7,223
26.....	2.0	74	21.....	10.75	4,445	10.....	4.75	1,286
30.....	2.0	77	27.....	4.9	1,305	13.....	3.55	554
Feb. 4.....	2.0	81	3.....	4.4	1,104	16.....	2.8	290
8.....	1.95	82	9.....	5.45	1,801	19.....	2.8	293
12.....	1.7	58	14.....	4.3	990	21.....	3.75	592
16.....	1.7	54	18.....	4.2	875	22.....	3.3	446
20.....	2.0	69	22.....	3.9	727	23.....	7.4	2,339
24.....	2.3	109	27.....	3.7	588	24.....	21.0	9,804
28.....	2.0	63	30.....	3.6	485	25.....	22.6	12,166
Mar. 4.....	1.9	57	1906.			28.....	6.85	2,284
6.....	3.4	586	Jan. 4.....	3.5	487	Oct. 1.....	4.9	1,219
8.....	7.2	3,345	9.....	3.2	374	4.....	4.95	1,330
13.....	2.2	176	14.....	3.1	317	5.....	6.6	2,272
17.....	2.6	264	19.....	2.9	259	7.....	4.5	966
21.....	2.5	227	23.....	2.7	211	10.....	3.85	610
25.....	2.2	194	27.....	2.6	187	13.....	3.6	499
29.....	1.9	113	31.....	2.5	171	16.....	3.55	492
Apr. 3.....	2.4	198	Feb. 4.....	5.8	1,711	17.....	4.6	1,012
7.....	1.4	53	8.....	3.6	510	19.....	4.1	726
12.....	1.6	74	12.....	3.5	477	22.....	3.4	424
20.....	1.25	52	16.....	3.2	401	25.....	3.15	373
24.....	3.35	436	20.....	3.1	347	28.....	3.0	339
28.....	1.4	49	25.....	3.2	366	30.....	4.65	976
May 3.....	1.3	49	27.....	4.75	994	31.....	3.95	648
8.....	6.45	2,191	Mar. 3.....	4.0	660	Nov. 6.....	3.4	450
9.....	3.95	778	8.....	3.4	426	9.....	4.0	675
12.....	1.7	72	13.....	3.2	359	15.....	3.6	354
17.....	1.1	30	20.....	2.6	250	18.....	3.3	288
22.....	.9	25	24.....	2.6	233	21.....	3.0	203
26.....	1.0	26	28.....	2.5	196	24.....	3.0	217
31.....	10.25	6,142	31.....	2.3	149	Dec. 3.....	3.1	236
June 2.....	15.65	14,663	Apr. 5.....	2.1	107	6.....	3.0	298
3.....	11.7	6,741	10.....	2.0	125	9.....	3.0	337
5.....	5.65	2,541	14.....	1.7	72	12.....	2.9	293
9.....	3.2	355	19.....	1.7	79	13.....	4.75	1,004
13.....	2.3	132	22.....	12.5	5,968	15.....	3.8	533
17.....	1.75	66	23.....	7.25	2,826	19.....	3.4	411
22.....	4.1	1,296	27.....	4.4	877	22.....	3.35	401
27.....	2.55	158	May 3.....	3.25	412	25.....	3.2	366
July 3.....	1.8	69	8.....	2.65	245	28.....	3.1	319
7.....	1.3	25	14.....	2.4	203	31.....	2.9	267
11.....	1.0	16	19.....	4.5	887	1907.		
15.....	.9	15	24.....	3.0	311	Jan. 4.....	2.85	253
16.....	3.0	361	28.....	2.25	147	8.....	2.7	222
18.....	16.35	15,676	31.....	1.9	111	13.....	2.6	206
19.....	10.1	4,518	June 4.....	1.5	78	17.....	2.5	172
25.....	2.3	127	8.....	1.3	59	22.....	2.4	165
31.....	1.5	27	12.....	1.2	28	25.....	2.3	158
Aug. 4.....	1.3	20	16.....	1.1	18	28.....	2.3	157
9.....	1.1	12	20.....	3.7	529	Feb. 2.....	2.35	162
11.....	2.9	338	25.....	5.45	1,834	8.....	2.1	118
14.....	1.8	66	27.....	4.55	1,079	11.....	2.1	118
18.....	1.2	23	July 2.....	1.7	53	15.....	2.0	112
22.....	.9	11	5.....	12.6	6,499	18.....	1.95	103
26.....	.8	10	9.....	2.65	220	24.....	1.8	55
30.....	.7	7	10.....	6.8	2,434	27.....	1.7	53
Sept. 4.....	.5	6	14.....	2.75	284	Mar. 4.....	1.8	68
17.....	2.8	345	19.....	2.15	136	8.....	1.7	43
19.....	4.85	1,354	23.....	3.35	464	13.....	1.5	20
20.....	16.5	18,071	27.....	2.85	311	16.....	1.45	18
21.....	13.15	8,444	30.....	2.2	153	20.....	1.4	17
25.....	5.05	1,155	Aug. 31.....	4.6	1,119	25.....	1.2	12
29.....	2.2	129	Oct. 2.....	6.9	2,266	29.....	1.0	8
Oct. 3.....	1.7	54	8.....	3.2	394	Apr. 2.....	1.0	7
4.....	6.55	3,973	5.....	5.4	1,865	6.....	.9	6
7.....	13.65	9,230	11.....	2.7	310	10.....	.8	2
8.....	10.2	5,781	14.....	2.1	146	13.....	2.4	183
9.....	8.0	3,262	17.....	1.7	81	18.....	1.7	57

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1908.	<i>Fcet.</i>	<i>Sec.-ft.</i>	1908.	<i>Fcet.</i>	<i>Sec.-ft.</i>
Apr. 23.....	1.8	75	Jan. 3.....	1.9	113	Oct. 23.....	3.95	660
28.....	4.25	782	8.....	1.9	115	25.....	3.9	634
May 2.....	1.6	49	12.....	1.8	90	28.....	1.8	97
5.....	23.6	17,663	17.....	1.7	87	Nov. 3.....	1.2	25
6.....	8.8	3,477	21.....	1.65	87	7.....	.9	12
9.....	2.8	261	25.....	1.6	74	11.....	.8	4
11.....	13.9	8,602	28.....	2.2	173	12.....	15.85	10,280
16.....	2.3	167	Feb. 3.....	1.7	88	14.....	4.55	896
20.....	1.9	88	7.....	1.6	80	17.....	2.4	217
21.....	7.6	2,816	11.....	1.6	77	21.....	1.4	45
27.....	23.6	17,663	16.....	1.4	67	25.....	1.2	33
June 2.....	7.7	2,993	21.....	1.4	59	Dec. 3.....	2.8	268
8.....	1.9	93	26.....	1.3	55	8.....	1.3	43
13.....	1.5	29	Mar. 2.....	1.2	42	13.....	1.1	28
17.....	1.4	26	10.....	1.0	20	16.....	1.0	17
18.....	4.45	1,051	13.....	.85	9	21.....	1.0	23
19.....	8.2	3,177	16.....	.8	10	26.....	1.0	18
20.....	5.15	1,201	21.....	.8	9			
27.....	1.9	82	24.....	.8	7	1909.		
July 2.....	1.5	30	Apr. 4.....	.6	3	Jan. 2.....	1.0	20
4.....	18.7	16,080	9.....	.6	4	4.....	2.4	234
5.....	10.55	5,594	12.....	14.05	8,086	8.....	1.6	74
6.....	10.25	4,418	14.....	11.35	6,734	13.....	1.3	49
7.....	6.5	2,389	17.....	3.05	391	18.....	1.2	30
8.....	17.6	14,756	20.....	12.3	6,856	24.....	1.1	25
9.....	10.6	5,979	22.....	7.6	2,930	28.....	1.0	22
10.....	5.0	1,534	26.....	2.1	167	Feb. 3.....	1.0	22
11.....	3.95	815	28.....	1.8	111	8.....	.9	18
13.....	4.35	946	May 4.....	1.3	53	12.....	.9	7
15.....	2.85	280	7.....	1.1	28	17.....	.8	4
19.....	1.7	65	14.....	3.3	480	24.....	.75	2
23.....	1.5	48	15.....	16.95	14,164	27.....	.7	3
26.....	1.7	50	16.....	7.8	3,310	Mar. 3.....	.7	3
29.....	1.4	29	18.....	3.35	530	9.....	.6	3
Aug. 2.....	1.2	16	25.....	1.2	24	10.....	.6	2
6.....	1.1	13	28.....	1.4	57	19.....	.5	0
10.....	1.0	12	June 2.....	9.1	5,351	24.....	.4	0
14.....	.9	4	6.....	3.15	428	30.....	.2	0
18.....	.8	4	9.....	1.3	64	Apr. 4.....	.1	0
22.....	1.5	56	9.....	1.0	19	10.....	5.3	1,435
26.....	1.1	15	14.....	.7	2	12.....	2.15	178
29.....	.9	13	19.....	.5	2	16.....	1.2	41
Sept. 2.....	.8	4	23.....	.4	0	21.....	.9	8
6.....	.7	5	25.....	7.15	3,002	25.....	.7	3
10.....	.6	0	27.....	3.45	565	28.....	.6	3
12.....	2.25	128	July 2.....	1.8	109	May 4.....	.5	0
13.....	3.95	661	5.....	6.3	2,317	9.....	.3	0
14.....	2.8	270	7.....	2.6	276	14.....	.2	0
18.....	1.4	36	9.....	3.85	696	19.....	.1	0
22.....	3.4	465	13.....	1.45	54	23.....	.8	2
23.....	4.5	922	14.....	4.05	825	27.....	1.2	48
25.....	1.8	99	17.....	2.15	162	28.....	4.9	1,466
28.....	3.85	643	23.....	1.0	7	June 2.....	2.0	126
Oct. 7.....	1.6	63	29.....	.9	7	3.....	4.2	855
7.....	2.6	226	31.....	15.85	12,932	5.....	1.8	99
9.....	5.75	1,693	Aug. 5.....	2.1	168	10.....	1.0	27
12.....	2.6	239	8.....	1.4	53	15.....	.8	5
16.....	1.6	52	12.....	1.2	43	20.....	.7	3
19.....	1.3	24	15.....	.9	13	25.....	.5	0
22.....	2.3	183	18.....	.8	5	27.....	.5	0
23.....	3.4	394	21.....	4.65	1,396	28.....	3.8	602
24.....	4.35	718	24.....	1.65	97	July 1.....	26.0	20,817
26.....	4.55	782	28.....	1.1	20	3.....	28.0	25,415
29.....	3.1	348	Sept. 2.....	.8	4	7.....	16.3	11,121
Nov. 2.....	2.65	218	7.....	.6	4	10.....	1.2	264
6.....	2.3	135	11.....	.9	14	11.....	22.0	17,476
12.....	3.1	333	15.....	1.25	34	12.....	28.0	29,552
16.....	2.6	203	17.....	3.6	485	13.....	16.0	9,199
26.....	1.9	103	19.....	2.65	260	17.....	5.5	3,930
28.....	2.0	137	23.....	3.8	685	23.....	3.4	1,166
Dec. 2.....	3.9	670	28.....	1.3	51	28.....	32.5	42,768
6.....	3.0	408	Oct. 1.....	2.65	276	29.....	53.5	88,160
10.....	2.7	287	3.....	1.55	80	Sept. 2.....	16.3	10,306
16.....	2.3	213	6.....	1.2	32	4.....	16.2	10,400
20.....	2.2	181	9.....	1.0	24	9.....	16.0	10,303
23.....	2.1	160	12.....	1.4	57	13.....	6.5	6,158
27.....	2.0	141	17.....	.9	22	16.....	13.5	19,412
29.....	1.95	126	22.....	.7	5	19.....	7.3	4,194

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1909.	<i>Feet.</i>	<i>Sec.-ft.</i>	1910.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 24.....	8.9	8,378	Aug. 20.....	-8.4	23	June 6.....	-1.9	125
28.....	4.4	1,529	24.....	-8.4	22	10.....	-2.3	91
Oct. 4.....	3.0	1,806	28.....	-8.5	0	13.....	-2.6	71
10.....	1.9	1,437	Sept. 1.....	15.5	10,342	18.....	-2.9	31
14.....	1.4	1,302	2.....	15.0	9,995	22.....	-3.4	31
25.....	.5	1,105	3.....	7.0	2,768	27.....	-3.1	31
28.....	.3	810	4.....	.9	1,545	July 2.....	-3.7	30
Nov. 5.....	.55	1,327	7.....	-3.6	434	6.....	-3.2	30
9.....	.2	1,248	10.....	-1.95	1,154	10.....	-3.4	30
14.....	-.3	997	15.....	15.5	10,342	14.....	-3.6	29
18.....	-.9	802	17.....	23.0	18,039	17.....	-2.8	31
21.....	-1.0	752	19.....	6.5	3,598	21.....	-3.7	28
24.....	-1.4	697	28.....	-2.5	2,867	26.....	-.7	740
28.....	-1.7	575	Oct. 3.....	5.1	3,079	28.....	-4.0	30
Dec. 3.....	-1.5	881	10.....	2.9	1,822	Aug. 2.....	-4.3	30
8.....	-1.8	636	14.....	2.7	1,622	6.....	-4.4	25
11.....	-1.7	716	18.....	2.0	1,476	10.....	-4.6	25
16.....	-1.9	581	22.....	1.6	971	14.....	-4.7	23
22.....	-1.7	649	25.....	1.3	833	18.....	-4.9	23
25.....	-1.7	688	29.....	3.3	2,209	22.....	-5.1	23
28.....	-1.9	670	Nov. 2.....	1.45	1,057	27.....	-5.2	23
1910.			7.....	.9	867	Sept. 2.....	-4.8	23
Jan. 3.....	-2.1	577	11.....	.7	655	4.....	-2.2	184
7.....	-2.4	529	15.....	.4	597	7.....	-3.4	31
11.....	-2.4	532	19.....	.3	597	11.....	-3.9	26
17.....	-2.35	621	23.....	.2	553	17.....	-4.3	23
23.....	-2.8	446	28.....	.0	481	21.....	-4.4	23
28.....	-3.4	315	Dec. 3.....	-.2	449	25.....	-4.5	23
Feb. 12.....	-3.5	275	7.....	-.3	396	28.....	-4.5	23
15.....	-3.9	256	12.....	-.2	431	Oct. 2.....	-4.6	22
16.....	-4.1	225	16.....	.0	561	6.....	-4.6	22
19.....	-4.5	154	20.....	.0	499	10.....	2.1	1,858
23.....	-4.5	148	24.....	-.3	404	12.....	-1.5	495
27.....	-5.0	99	28.....	-.4	389	16.....	-2.7	174
Mar. 3.....	-5.1	70	1911.			20.....	-3.1	31
7.....	-5.2	41	Jan. 3.....	-0.6	321	25.....	-3.2	28
11.....	-5.4	39	7.....	-.6	317	28.....	-3.4	23
16.....	-5.5	39	11.....	-.8	275	Nov. 6.....	1.0	1,390
21.....	-5.1	71	15.....	-1.1	247	11.....	.5	984
22.....	-.95	750	20.....	-1.1	249	15.....	-1.3	454
24.....	-2.4	620	24.....	-1.3	199	19.....	-2.0	281
28.....	-4.4	173	28.....	-1.7	153	22.....	-2.4	244
Apr. 1.....	-.2	1,162	Feb. 2.....	-1.8	151	25.....	-2.6	166
2.....	-1.15	908	6.....	-2.1	111	Dec. 2.....	-2.6	161
6.....	-2.65	508	11.....	-2.7	91	6.....	-2.6	160
10.....	-4.4	332	15.....	-2.6	90	10.....	-2.7	146
14.....	-5.2	40	20.....	-3.0	40	16.....	-3.0	34
18.....	-5.8	40	24.....	-3.3	40	20.....	-2.6	121
22.....	-6.3	39	27.....	-3.3	40	24.....	-2.7	86
27.....	-6.5	33	Mar. 2.....	-3.3	39	28.....	-2.8	75
May 5.....	-7.0	33	6.....	-3.4	39	1912.		
7.....	-7.1	31	10.....	-3.6	37	Jan. 2.....	-2.8	69
11.....	-7.0	31	15.....	-3.8	37	6.....	-2.8	71
16.....	-7.0	30	20.....	-3.9	34	11.....	-2.9	27
20.....	-.65	1,954	25.....	1.2	1,251	15.....	-3.0	27
24.....	-4.55	337	25.....	5.4	2,763	19.....	-3.15	27
28.....	-5.9	37	28.....	2.9	2,461	23.....	-3.2	26
June 3.....	-6.7	31	29.....	4.25	2,863	28.....	-3.1	27
7.....	-1.45	1,208	Apr. 3.....	-.1	876	Feb. 2.....	-3.2	26
11.....	-5.6	37	7.....	-.7	787	6.....	-3.1	27
16.....	-5.7	35	11.....	-.05	760	19.....	-3.1	27
21.....	-6.9	29	16.....	-2.1	122	14.....	-2.55	127
25.....	-7.1	28	20.....	-1.9	125	19.....	-3.4	26
26.....	-4.35	331	25.....	-1.8	132	23.....	-3.5	26
28.....	-4.05	427	26.....	9.5	10,361	27.....	-3.7	26
July 3.....	-7.0	29	28.....	8.05	5,590	Mar. 2.....	-3.7	26
7.....	-6.65	30	May 2.....	.5	841	6.....	-3.7	26
12.....	-7.0	27	6.....	.7	961	11.....	-3.7	26
16.....	-7.7	26	8.....	3.5	2,628	15.....	-3.8	24
20.....	-7.8	25	10.....	3.6	2,918	19.....	-3.9	24
23.....	-4.7	300	12.....	1.9	1,853	23.....	-3.9	23
28.....	-7.0	27	16.....	.6	1,026	28.....	-3.7	25
Aug. 2.....	-7.8	26	20.....	3.7	2,662	Apr. 2.....	-3.9	22
7.....	-8.2	24	24.....	-.4	572	6.....	-3.9	21
11.....	-8.3	24	28.....	-1.5	192	10.....	1.5	1,747
16.....	-8.3	24	June 2.....	-1.7	144	12.....	-.3	616

^a A new gage installed Oct. 1, 1909. Readings are not comparable with old gage.

Discharge measurements of Rio San Juan near La Quemada and Santa Rosalia ranch, Tamaulipas, Mexico, in 1900-1913—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1912.	<i>Fect.</i>	<i>Sec.-ft.</i>	1912.	<i>Fect.</i>	<i>Sec.-ft.</i>	1913.	<i>Fect.</i>	<i>Sec.-ft.</i>
Apr. 15.....	-2.6	177	Aug. 24.....	7.4	25	Jan. 3.....	8.8	250
19.....	-3.3	26	28.....	7.3	25	8.....	8.7	227
23.....	-3.6	23	Sept. 2.....	7.2	24	12.....	8.6	220
27.....	-3.8	19	6.....	7.1	24	16.....	8.6	219
May 2.....	-3.4	26	11.....	7.0	23	20.....	8.6	214
4.....	-2.7	168	16.....	7.0	22	24.....	8.2	82
6.....	-3.2	27	19.....	8.0	77	28.....	8.2	88
10.....	-3.4	26	23.....	12.65	2,006	Feb. 2.....	8.3	160
14.....	-3.4	26	25.....	9.15	335	6.....	8.15	146
18.....	-3.9	19	28.....	9.5	375	10.....	8.05	110
22.....	-4.1	18	Oct. 2.....	14.75	3,810	14.....	8.05	108
27.....	6.9	18	4.....	11.35	1,441	18.....	8.2	122
June 2.....	6.9	18	6.....	9.75	546	23.....	8.1	127
4.....	10.2	642	10.....	8.65	287	27.....	7.95	90
6.....	8.4	211	15.....	8.1	146	Mar. 2.....	7.95	89
8.....	11.8	1,525	19.....	8.65	259	6.....	7.8	58
10.....	11.25	966	23.....	9.65	436	10.....	7.75	24
14.....	8.9	337	24.....	17.5	5,546	15.....	7.95	84
19.....	20.6	10,481	26.....	12.05	1,857	19.....	8.1	105
23.....	12.5	1,859	28.....	11.0	1,076	21.....	7.85	62
25.....	24.75	20,565	Nov. 2.....	9.8	497	28.....	7.7	24
28.....	17.1	4,515	6.....	9.4	423	Apr. 2.....	7.6	18
July 2.....	11.45	1,282	10.....	9.0	325	6.....	7.5	18
7.....	10.7	767	14.....	8.75	253	10.....	7.45	18
11.....	9.9	415	19.....	9.5	363	14.....	7.4	18
15.....	9.2	228	23.....	10.1	590	18.....	7.4	18
19.....	8.75	195	28.....	10.6	856	22.....	7.35	18
24.....	8.4	178	Dec. 2.....	10.1	647	27.....	7.3	18
28.....	9.15	291	6.....	9.6	507	May 2.....	7.5	18
Aug. 2.....	8.0	84	10.....	9.4	403	6.....	8.55	246
6.....	7.8	59	14.....	9.4	428	8.....	9.5	437
10.....	7.7	41	18.....	9.2	360	10.....	7.9	77
14.....	7.6	25	22.....	9.1	334			
19.....	7.5	25	27.....	9.0	314			

Daily gage height, in feet, of Rio San Juan near La Quemada, Tamaulipas, Mexico, for 1900-1902.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1900.							1900.						
1.....	6.75	4.35			7.75		16.....	14.85	2.15		5.95	0.8	
2.....	6.05	11.6			7.65		17.....	14.8	2.0				.45
3.....	4.5	9.25			8.35		18.....	10.05	2.8				.8
4.....	3.8	5.3			6.45	0.95	19.....	6.65	2.45				.45
5.....	2.6	6.8			4.6	.85	20.....	4.5					.55
6.....		2.2	7.75		4.85	3.0	21.....		6.6				.35
7.....		2.1	6.7		5.1	2.2	22.....		14.0		4.15		.35
8.....		2.25	4.55		6.1	10.45	23.....		14.8		3.45		.25
9.....		2.2	3.6		8.1	5.0	24.....		9.95		2.9		.0
10.....		1.9	3.2		9.95	2.55	25.....		6.50		2.65		.1
11.....		1.85	3.0		13.05	2.45	26.....		5.15		2.45		.0
12.....		1.7	2.9		12.6	2.1	27.....		4.4		3.25		.35
13.....		1.45	2.75		11.25	1.85	28.....	4.85	4.0		2.85		.25
14.....		1.4	2.35		9.2	1.6	29.....	3.1	3.6		2.6		.2
15.....		4.5	2.25		7.6	1.15	30.....	3.6	3.25		7.7		.55
							31.....		3.0		10.9		

Daily gage height, in feet, of Rio San Juan near La Quemada, Tamaulipas, Mexico, for 1900-1902—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	0.75	0.95	0.9	1.25	1.1	0.8	0.1	0.0	1.35	9.65	0.45	0.95
2.....	1.75	.85	.95	1.2	1.0	.8	.1	.0	1.1	5.85	.4	.8
3.....	2.65	.8	1.15	1.15	1.0	.8	.1	.0	.95	4.9	.25	12.15
4.....	2.05	1.05	1.1	1.2	1.0	.8	.1	.0	.85	4.0	1.25	8.6
5.....	1.75	.8	1.1	1.2	1.0	.8	.0	.0	10.3	1.95	1.1	4.7
6.....	1.55	.8	1.15	1.2	1.0	.8	.0	.0	9.25	1.85	1.3	3.6
7.....	1.45	.8	1.05	1.25	1.0	.8	.0	.0	8.85	1.7	1.6	2.35
8.....	1.45	.75	1.05	1.25	1.1	.8	.0	.0	8.0	1.75	1.35	3.15
9.....	1.85	.8	.95	1.3	1.1	.75	.0	.0	1.3	5.95	1.3	3.15
10.....	1.65	.8	1.15	1.25	1.05	.7	.0	3.55	1.35	6.4	1.3	6.05
11.....	1.55	.75	1.1	1.25	1.2	.7	.0	3.75	1.15	5.85	1.15	8.4
12.....	1.5	.7	1.15	1.3	1.1	.7	.0	2.55	.95	4.15	1.0	5.6
13.....	1.0	.8	1.15	1.35	1.1	.6	.0	1.7	.8	3.2	1.0	3.65
14.....	.9	.8	1.1	1.55	1.1	.6	.0	1.45	.75	3.2	.9	3.35
15.....	.75	.7	.95	1.3	1.0	.6	.0	1.25	.7	3.05	.8	2.05
16.....	.75	.65	.95	1.35	1.1	.5	.0	1.15	.6	2.6	.8	2.75
17.....	.75	.7	1.1	1.25	1.0	.5	.0	.95	.5	1.5	.8	4.5
18.....	.85	.95	2.55	1.15	1.0	.5	.0	.8	.5	1.5	.8	5.15
19.....	.9	1.05	2.6	1.2	1.0	.5	.0	.7	.5	1.35	.7	3.4
20.....	.9	.95	1.8	1.3	1.0	.5	.0	.65	.4	1.55	.7	4.5
21.....	1.8	.85	1.65	1.25	1.0	.4	.0	2.6	.4	1.55	.7	3.35
22.....	1.7	1.25	1.65	1.2	1.0	.4	.0	2.25	.4	1.1	.65	2.55
23.....	1.75	1.1	1.45	1.2	.95	.4	.0	1.85	.4	.7	.65	2.3
24.....	1.8	.85	1.45	1.25	.9	.4	.0	1.4	.4	.6	.6	1.05
25.....	1.85	.95	1.15	1.1	.9	.3	.0	1.3	.4	.4	.4	2.95
26.....	1.75	1.05	1.1	1.2	.9	.2	.0	5.0	.4	.5	.4	16.35
27.....	3.05	1.0	.85	1.2	.9	.2	.0	2.0	.35	.35	.4	17.1
28.....	1.9	1.05	.75	1.2	.8	.2	.0	3.15	.45	2.6	.4	13.3
29.....	1.55	.95	1.1	1.2	.....	.2	.0	2.2	22.0	2.35	1.2	8.1
30.....	1.15	1.1	1.15	1.3	.....	.15	.0	1.85	19.55	.65	1.7	5.8
31.....	1.05	.....	1.2	1.3	.....	.1	.....	1.65	.....	.55	1.15	.....
1901-2.												
1.....	11.05	4.05	7.65	2.4	1.6	1.3	.55	.9	.....	.....	.....	.....
2.....	9.55	3.95	3.95	2.5	1.6	1.3	.5	.85	.....	.....	.....	.....
3.....	7.2	3.8	3.75	2.75	1.6	1.2	.45	.8	.....	.....	.....	.....
4.....	5.8	3.6	3.35	2.6	1.6	1.15	.45	.75	.....	.....	.....	.....
5.....	4.9	3.5	3.15	2.55	1.6	1.1	.5	.85	.....	.....	.....	.....
6.....	4.3	3.35	3.00	2.55	1.6	1.0	.5	1.6	.....	.....	.....	.....
7.....	3.9	3.15	2.85	2.55	1.6	1.0	.4	13.4	.....	.....	.....	.....
8.....	3.65	2.9	2.75	2.6	1.6	.9	.45	8.4	.....	.....	.....	.....
9.....	3.6	2.8	2.55	2.55	1.65	.9	.45	4.55	.....	.....	.....	.....
10.....	3.4	2.75	2.15	2.6	1.6	.9	.45	2.35	.....	.....	.....	.....
11.....	3.25	3.2	2.75	2.6	1.6	.9	.4	1.95	.....	.....	.....	.....
12.....	3.2	3.05	2.75	2.0	1.7	.85	.35	1.65	.....	.....	.....	.....
13.....	12.0	2.9	2.7	2.05	1.7	.85	.3	1.45	.....	.....	.....	.....
14.....	8.75	2.75	2.7	2.0	1.7	.85	1.2	1.35	.....	.....	.....	.....
15.....	4.2	2.55	2.5	2.0	1.7	.8	.85	.....	.....	.....	.....	.....
16.....	3.1	2.55	2.5	2.0	1.7	.8	.85	.....	.....	.....	.....	.....
17.....	2.85	2.7	2.45	2.1	1.7	.8	11.55	.....	.....	.....	.....	.....
18.....	2.7	2.55	2.35	2.0	1.6	.8	8.8	.....	.....	.....	.....	.....
19.....	2.6	2.5	2.3	1.85	1.6	.75	8.25	.....	.....	.....	.....	.....
20.....	2.5	2.55	2.35	2.2	1.55	.7	4.85	.....	.....	.....	.....	.....
21.....	2.5	2.7	2.45	1.9	1.5	.7	3.1	.....	.....	.....	.....	.....
22.....	7.05	2.6	2.5	1.9	1.5	.65	2.15	.....	.....	.....	.....	.....
23.....	11.4	2.6	2.5	1.85	1.55	.65	1.8	.....	.....	.....	.....	.....
24.....	10.35	2.6	2.4	1.85	1.55	.6	1.45	.....	.....	.....	.....	.....
25.....	9.0	2.5	2.4	1.8	1.5	.6	1.35	.....	.....	.....	.....	.....
26.....	7.0	2.5	2.3	1.75	1.5	.6	1.35	.....	.....	.....	.....	.....
27.....	5.55	2.45	2.3	1.8	1.4	.6	1.25	.....	.....	.....	.....	.....
28.....	5.0	9.35	2.4	1.8	1.3	.55	1.2	.....	.....	.....	.....	.....
29.....	4.55	11.3	2.35	1.8	.....	.55	1.05	.....	.....	.....	.....	.....
30.....	4.25	12.1	2.4	1.8	.....	.55	.95	.....	.....	.....	.....	.....
31.....	4.25	.....	2.4	1.7	.....	.5	.....	.....	.....	.....	.....	.....

NOTE.—Gage heights at this station affected at times by backwater from the Rio Grande. No flow Apr. 28 to May 9, 1901.

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1902-1913.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902.												
1									0.5	-0.45	2.95	-0.3
2									.5	-.5	9.1	-.3
3									.4	-.5	5.55	-.3
4									.3	-.55	3.4	-.3
5									.3	-.6	1.8	-.2
6									.3	-.6	1.25	1.6
7									.3	3.75	.7	3.8
8									.3	3.0	.55	4.45
9									.2	2.9	.5	7.25
10									.2	2.9	.5	3.55
11									.2	2.65	.5	2.45
12									.1	2.0	.5	2.2
13									.1	1.85	.4	5.65
14									.1	1.8	.4	3.75
15								1.15	.1	1.3	.4	3.08
16								1.0	.0	1.3	.3	2.7
17								.95	.0	.8	.3	1.55
18								.9	-.05	.5	.25	1.05
19								.8	-.1	.4	.1	.65
20								.8	-.1	.3	.1	.45
21								1.05	-.1	.15	.05	.25
22								1.3	-.2	.05	.0	.15
23								1.1	-.2	.0	.0	.35
24								.95	-.2	.0	.0	2.6
25								.9	-.3	-.1	.0	4.45
26								.8	-.3	-.1	-.1	5.8
27								.75	-.35	-.2	-.2	4.0
28								.7	-.4	-.2	-.2	7.4
29								.6	-.4	-2.65	-.2	8.7
30								.55	-.4	11.95	-.25	4.55
31								.5	.....	4.25	-.3	.....
1902-3.												
1	14.9	2.75	6.3	1.0	.7			3.95	.3	2.5	21.5	3.2
2	12.35	2.1	7.5	.95	.7			2.6	.2	1.85	14.3	3.3
3	8.6	1.9	4.6	.9	.7			3.6	.2	1.55	7.25	3.35
4	6.65	2.7	3.3	.9	.6			2.15	1.55	1.35	4.0	4.9
5	4.4	2.85	2.6	.9	.6			1.65	1.4	2.8	3.3	3.85
6	2.75	2.2	2.15	.9	.6			2.95	2.9	7.0	2.85	3.4
7	3.45	1.8	1.75	.9	.6			4.7	4.95	5.6	2.45	3.0
8	3.25	1.55	4.9	.9	.6			2.75	3.2	3.95	2.25	2.85
9	2.85	1.45	2.3	.9	.6			2.2	2.25	2.65	2.0	2.85
10	2.5	1.35	1.85	.9	.55			2.0	2.6	2.0	1.65	2.7
11	2.05	1.2	1.75	.9	.5			3.3	3.5	1.6	1.45	2.45
12	1.9	1.1	1.45	.9	.5			3.45	2.5	1.25	2.0	2.35
13	1.8	1.05	1.25	.9	.5			2.65	11.75	1.05	2.65	2.25
14	1.5	1.0	1.1	.9	.5			2.05	13.25	.85	1.95	2.1
15	14.15	1.0	1.3	1.0	.5			1.85	6.45	.75	2.4	2.8
16	13.75	1.0	1.2	1.05	.5			2.05	4.6	.65	12.3	2.85
17	9.05	1.0	1.2	1.0	.5			1.55	3.8	.6	24.3	2.55
18	5.5	1.0	1.2	1.1	.5			1.35	3.3	.5	15.6	2.65
19	4.3	1.0	1.2	1.1	.4			2.5	2.85	.5	9.7	2.15
20	3.8	.9	1.1	1.05	.4			2.25	2.3	.4	9.8	2.55
21	3.3	.85	1.1	1.0	.4			1.5	2.05	.4	9.1	2.2
22	3.05	.8	1.1	.95	.4			1.25	1.95	.3	7.4	2.35
23	2.75	.8	1.1	.9	.4			.95	1.85	.3	6.2	2.3
24	2.5	1.1	1.1	.9	.3			.85	1.75	.2	5.35	2.3
25	2.3	2.1	1.1	.9	.3			.75	1.65	.2	5.1	3.9
26	2.15	1.5	1.1	.9	.3			.65	1.55	.1	4.5	3.45
27	1.95	1.4	1.0	.9	.3			.55	1.45	.1	3.8	2.6
28	1.8	1.4	1.0	.8	.3			.45	5.35	.0	3.65	2.25
29	1.7	.95	1.0	.8				.35	5.15	.0	3.5	2.05
30	8.05	.9	1.0	.8				.3	3.65	2.2	3.4	1.85
31	4.25		1.0	.8				.3		7.5	3.25	

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1902-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.75	1.0	.9	1.0	.8	.5	.95	1.05	1.65	.65	1.05	.2
2.....	1.65	.95	.9	1.0	.8	.5	.9	6.0	1.45	.55	.85	.0
3.....	1.55	.9	.9	1.0	.8	.5	13.76	4.1	1.25	.45	.75	.05
4.....	1.45	.9	.9	1.0	.8	.4	5.6	3.1	1.05	3.05	.65	.05
5.....	1.35	1.05	.9	1.0	.8	.4	5.15	4.6	.85	1.9	.55	.0
6.....	1.25	2.05	.9	1.1	.8	.4	3.95	2.0	1.5	3.4	.5	.0
7.....	1.15	1.5	.9	1.1	.8	.4	1.95	1.55	11.5	2.2	.4	4.6
8.....	1.1	1.15	1.0	1.1	.8	.35	1.65	1.6	12.2	1.5	.35	7.6
9.....	1.05	1.0	1.0	1.1	.8	.3	1.45	8.3	8.2	1.15	6.0	7.7
10.....	1.0	.95	1.0	1.1	.7	.3	1.25	8.0	4.8	.9	3.65	8.9
11.....	1.95	.9	1.0	1.1	.7	.3	1.05	4.7	2.5	.8	3.55	6.75
12.....	1.45	.9	1.0	1.05	.7	.3	.9	2.55	2.1	.7	4.7	2.75
13.....	1.25	.9	1.0	1.0	.7	.3	.8	2.0	1.85	.6	5.1	12.2
14.....	1.05	.9	1.0	1.0	.7	.2	.75	7.35	1.55	.5	3.25	6.15
15.....	.95	.9	1.1	1.0	.8	.2	.65	11.25	1.95	.4	2.35	15.25
16.....	.9	.9	1.1	1.0	.8	.2	.6	7.85	1.75	.4	2.85	27.0
17.....	.8	.9	1.1	1.0	.8	.2	.5	3.75	1.55	.35	2.65	22.5
18.....	.8	.9	1.1	1.0	.75	.2	.5	2.3	1.35	.3	2.3	13.8
19.....	.7	.8	1.1	1.0	.7	.2	.5	1.65	1.15	.25	1.7	9.6
20.....	.7	.8	1.1	1.0	2.0	.2	.4	1.45	2.0	.2	1.3	6.75
21.....	.7	.8	1.1	.9	2.3	.1	.4	1.3	6.5	.2	.95	6.1
22.....	.7	.8	1.1	.9	1.5	.1	.4	1.15	4.1	.2	.9	16.6
23.....	.7	.8	1.1	.9	1.1	.1	.35	.95	2.55	.1	.8	15.6
24.....	.7	.9	1.1	.9	.95	.1	2.0	.9	3.0	.1	.75	8.45
25.....	2.7	.9	1.1	.9	.85	.1	2.75	.9	2.05	6.8	1.15	6.5
26.....	1.85	.9	1.1	.85	.7	.1	1.75	.9	1.35	4.8	.95	10.2
27.....	1.35	.9	1.1	.8	.6	.1	1.3	.8	.95	3.4	.65	18.45
28.....	1.2	.9	1.1	.8	.6	2.7	1.05	.8	.85	2.55	.55	15.6
29.....	1.1	.9	1.1	.8	.6	1.9	1.05	1.15	.75	2.15	.45	9.65
30.....	1.05	.9	1.0	.8	.....	1.3	1.3	3.3	.65	1.7	.4	8.0
31.....	1.2	.....	1.0	.8	.....	1.1	.....	2.15	.....	1.25	.35	.....
1904-5.												
1.....	6.95	2.2	3.8	2.6	2.0	2.0	1.7	1.4	7.4	2.05	1.5	.6
2.....	6.4	2.2	3.8	2.6	3.25	2.0	1.7	1.35	14.1	1.95	1.4	.6
3.....	5.55	2.25	3.7	2.6	2.3	1.9	2.2	1.3	10.4	1.75	1.4	.6
4.....	5.5	2.3	3.6	2.5	2.0	1.9	1.7	1.3	10.55	1.6	1.3	.5
5.....	5.15	2.45	3.45	2.5	1.9	2.6	1.6	1.3	6.0	1.5	1.3	.5
6.....	6.7	2.5	3.3	2.5	1.9	3.8	1.5	1.3	5.2	1.4	1.3	.5
7.....	5.45	2.65	3.3	2.5	1.9	4.1	1.4	1.25	4.35	1.25	1.2	.....
8.....	4.7	2.8	3.3	2.5	1.9	6.6	1.4	4.6	3.45	1.1	1.3	.....
9.....	4.4	2.8	3.25	2.5	2.0	4.2	1.45	3.5	3.05	1.1	1.1	.....
10.....	4.1	2.9	3.15	2.4	1.95	3.2	1.5	2.45	2.65	1.0	1.1	.....
11.....	3.95	2.9	3.1	2.4	1.85	2.45	1.6	1.95	2.55	1.0	2.95	.....
12.....	3.85	2.8	3.1	2.35	1.75	2.3	1.55	1.8	2.4	1.0	2.7	.....
13.....	3.7	2.8	3.0	2.3	1.7	2.2	1.5	1.65	2.25	.95	1.95	.....
14.....	3.45	2.8	3.0	2.3	1.8	2.2	1.5	1.45	2.15	.9	1.75	.....
15.....	3.25	2.8	2.95	2.2	1.8	2.65	1.4	1.3	1.95	.9	1.55	.....
16.....	3.1	2.7	2.9	2.2	1.7	2.5	1.4	1.2	1.85	2.9	1.45	.....
17.....	3.0	2.7	2.9	2.2	1.7	2.8	1.4	1.1	1.7	6.2	1.35	2.35
18.....	2.9	2.55	2.85	2.2	1.7	2.85	1.3	1.1	1.6	15.2	1.15	2.5
19.....	2.8	3.1	2.8	2.2	2.15	2.7	1.3	1.05	1.55	11.45	1.1	4.0
20.....	2.7	2.8	2.8	2.2	2.0	2.6	1.25	1.0	1.5	6.15	1.0	14.5
21.....	2.6	2.8	2.8	2.2	1.95	2.5	1.2	.9	1.7	5.1	.95	11.75
22.....	2.55	2.7	2.8	2.15	2.1	2.4	1.2	.9	5.65	3.25	.9	6.15
23.....	2.5	2.7	2.8	2.1	2.2	2.35	1.2	.9	4.85	2.75	.9	4.3
24.....	2.4	2.7	2.8	2.1	2.3	2.3	2.25	.9	3.6	2.45	.85	3.25
25.....	2.35	2.7	2.8	2.0	2.25	2.2	2.6	.95	3.3	2.25	.8	3.9
26.....	2.25	2.7	2.7	2.0	2.2	2.05	2.1	1.0	3.35	2.05	.8	3.85
27.....	2.2	2.7	2.6	2.0	2.1	2.0	1.4	1.0	3.35	1.9	.7	2.75
28.....	2.2	2.7	2.5	2.0	2.0	1.95	1.35	1.0	3.15	1.8	.7	2.35
29.....	2.2	2.7	2.5	2.0	.....	1.9	1.3	1.0	2.35	1.7	.7	2.15
30.....	2.2	2.7	2.6	2.0	.....	1.85	1.25	1.0	1.95	1.6	.7	2.0
31.....	2.2	.....	2.6	2.0	.....	1.7	.....	8.5	.....	1.5	.7	.....

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1902-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	1.95	4.75	4.6	3.5	2.5	4.8	2.2	3.55	1.75	1.85	2.9	3.65
2.....	1.75	19.3	4.55	3.45	2.6	4.3	2.2	3.35	1.7	1.65	4.75	3.4
3.....	3.5	14.45	4.4	3.4	2.8	3.95	2.2	3.25	1.6	1.45	5.6	5.0
4.....	6.6	9.95	4.3	3.45	5.8	3.75	2.1	3.2	1.5	9.65	3.95	5.7
5.....	5.4	8.25	4.3	3.3	4.6	3.6	2.1	3.05	1.45	9.4	3.25	3.6
6.....	4.55	10.35	4.35	3.2	3.8	3.5	2.1	2.9	1.4	5.2	2.95	12.6
7.....	11.9	11.7	4.5	3.2	3.65	3.5	2.1	2.8	1.4	3.75	2.5	13.0
8.....	11.3	10.95	4.7	3.2	3.6	3.4	2.1	2.65	1.3	3.4	3.6	6.5
9.....	7.35	8.7	5.45	3.2	3.55	3.4	2.05	2.6	1.3	2.55	4.1	4.9
10.....	5.45	9.35	5.3	3.15	3.5	3.3	2.0	2.55	1.3	4.5	2.85	4.65
11.....	4.55	8.0	4.15	3.1	3.5	3.3	1.9	2.5	1.25	5.2	3.1	4.0
12.....	6.9	6.9	4.5	3.1	3.5	3.2	1.85	2.4	1.2	4.1	2.9	3.55
13.....	8.5	6.6	4.4	3.1	3.5	3.2	1.8	2.4	1.2	3.25	2.3	3.4
14.....	5.65	6.6	4.3	3.1	3.4	3.1	1.7	2.4	1.15	2.7	2.1	3.2
15.....	4.9	6.65	4.3	3.1	3.25	3.0	1.7	2.4	1.1	2.4	1.9	2.95
16.....	4.45	6.5	4.25	3.0	3.2	2.9	1.6	2.4	1.1	2.3	1.8	2.75
17.....	4.1	5.85	4.2	2.9	3.1	2.8	1.7	2.3	1.0	2.45	1.7	2.6
18.....	3.85	5.75	4.2	2.9	3.1	2.7	1.7	3.85	1.0	2.5	2.0	2.45
19.....	3.65	5.65	4.1	2.9	3.1	2.7	1.7	4.7	1.0	2.1	3.8	2.8
20.....	3.55	5.55	4.1	2.8	3.1	2.65	1.7	4.3	3.4	1.85	19.8	3.1
21.....	3.25	9.1	3.9	2.8	3.7	2.7	2.3	3.05	2.7	2.8	17.75	3.6
22.....	3.35	6.75	3.9	2.7	3.55	2.7	9.2	2.5	2.3	3.65	9.85	4.4
23.....	3.45	5.95	3.9	2.7	3.35	2.6	8.4	2.85	1.9	3.3	6.35	7.3
24.....	3.35	5.55	3.9	2.6	3.3	2.6	6.1	3.15	1.6	2.9	5.25	20.0
25.....	3.3	5.3	3.8	2.6	3.2	2.6	5.2	2.9	3.95	2.6	4.8	21.8
26.....	3.2	5.2	3.7	2.6	3.2	2.5	4.7	2.7	2.9	2.45	4.45	11.85
27.....	3.1	4.9	3.7	2.6	4.4	2.5	4.35	2.45	4.4	2.85	4.5	8.85
28.....	3.1	4.8	3.7	2.6	5.25	2.5	4.15	2.25	3.25	2.65	9.2	6.95
29.....	3.0	4.7	3.6	2.6	.....	2.4	3.95	2.05	2.45	2.35	5.65	6.15
30.....	3.0	4.6	3.6	2.6	.....	2.35	3.75	1.95	1.95	2.15	4.55	5.55
31.....	3.0	.....	3.6	2.5	.....	2.3	.....	1.85	.....	4.2	3.85	.....
1906-7.												
1.....	5.0	3.65	3.05	2.9	2.3	1.7	1.0	1.85	5.05	1.55	1.2	.8
2.....	4.7	3.5	3.1	2.9	2.35	1.7	1.0	1.6	6.6	1.45	1.2	.8
3.....	4.55	3.45	3.1	2.9	2.3	1.7	1.0	1.5	3.6	1.4	1.2	.8
4.....	4.75	3.4	3.1	2.85	2.3	1.8	1.0	6.1	3.05	18.2	1.1	.8
5.....	6.05	3.4	3.0	2.8	2.2	1.75	1.0	20.75	2.55	9.7	1.1	.8
6.....	5.15	3.45	3.0	2.8	2.2	1.7	.9	8.15	2.2	9.0	1.05	.7
7.....	4.45	3.85	3.0	2.7	2.15	1.7	.9	5.0	2.05	8.0	1.0	.7
8.....	4.15	4.0	3.0	2.7	2.1	1.7	.9	3.15	1.85	17.4	1.0	.7
9.....	3.95	3.95	3.0	2.7	2.1	1.6	.8	2.75	1.75	9.25	1.0	.65
10.....	3.85	3.85	3.0	2.7	2.1	1.6	.8	2.55	1.65	4.8	1.0	.6
11.....	3.7	3.7	3.0	2.7	2.1	1.6	.8	11.9	1.6	3.85	.95	.6
12.....	3.6	3.6	2.95	2.6	2.1	1.5	2.65	5.5	1.5	3.7	.9	2.05
13.....	3.6	3.6	4.9	2.6	2.1	1.5	2.5	4.15	1.5	4.2	.9	3.8
14.....	3.5	3.6	4.15	2.6	2.0	1.5	2.2	2.95	1.4	3.45	.9	2.65
15.....	3.45	3.6	3.8	2.6	2.0	1.5	2.05	2.7	1.4	2.75	.85	2.0
16.....	3.5	3.5	3.65	2.5	2.0	1.45	1.9	2.25	1.4	2.35	.8	1.6
17.....	4.35	3.4	3.5	2.5	2.0	1.4	1.8	2.15	1.4	2.1	.8	1.5
18.....	4.6	3.3	3.4	2.5	1.95	1.4	1.7	2.05	5.65	1.95	.8	1.45
19.....	4.05	3.2	3.4	2.5	1.9	1.4	1.7	1.9	7.4	1.75	.9	1.45
20.....	3.7	3.1	3.4	2.5	1.9	1.35	1.6	6.95	4.8	1.7	1.0	1.4
21.....	3.6	3.0	3.4	2.4	1.9	1.3	1.5	8.25	3.95	1.6	.9	1.35
22.....	3.35	3.0	3.35	2.4	1.8	1.3	1.7	4.7	3.15	1.55	1.5	3.15
23.....	3.3	3.0	3.3	2.35	1.8	1.3	1.8	2.95	2.75	1.5	1.35	4.0
24.....	3.2	3.0	3.3	2.3	1.8	1.2	1.6	2.5	2.55	1.4	1.2	2.4
25.....	3.15	3.0	3.2	2.3	1.8	1.2	1.5	2.25	2.3	1.7	1.15	1.7
26.....	3.1	3.0	3.2	2.3	1.7	1.2	1.4	2.05	2.05	1.65	1.1	1.55
27.....	3.1	2.9	3.15	2.3	1.7	1.1	3.85	16.6	1.9	1.55	1.0	2.2
28.....	3.0	3.1	3.1	2.3	1.7	1.1	4.15	20.8	1.85	1.45	9.5	3.6
29.....	2.95	3.1	3.05	2.3	.....	1.0	2.8	8.6	1.75	1.4	.9	2.6
30.....	4.5	3.1	3.0	2.3	.....	1.0	2.15	5.2	1.65	1.3	.9	2.0
31.....	3.9	.....	2.9	2.3	.....	1.0	.....	3.9	.....	1.3	.85	.....

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1902-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	1.75	2.55	3.5	1.9	1.8	1.2	.6	1.5	4.1	2.0	6.25	.8
2.....	1.55	2.6	3.85	1.9	1.7	1.2	.6	1.45	2.9	1.9	4.9	.8
3.....	1.4	2.4	3.55	1.9	1.7	1.2	.6	1.35	2.15	1.9	3.15	.7
4.....	1.3	2.4	3.35	1.9	1.7	1.1	.6	1.3	1.75	2.15	2.4	.7
5.....	1.2	2.35	3.2	1.9	1.7	1.1	.6	1.25	1.4	4.85	2.0	.7
6.....	1.1	2.3	3.05	1.9	1.7	1.1	.6	1.2	1.3	3.9	1.75	.6
7.....	2.55	2.3	2.9	1.9	1.6	1.0	.6	1.1	1.2	2.45	1.5	.6
8.....	2.0	2.25	2.8	1.9	1.6	1.0	.6	1.0	1.1	1.95	1.35	.6
9.....	3.6	2.2	2.75	1.85	1.6	1.0	.6	1.0	1.0	2.7	1.35	.65
10.....	3.9	2.2	2.7	1.8	1.6	1.0	.6	.9	.9	2.95	1.55	1.0
11.....	3.25	2.2	2.6	1.8	1.6	.9	6.8	.9	.8	1.95	1.4	.9
12.....	2.5	3.3	2.55	1.8	1.5	.9	14.05	.8	.8	1.65	1.15	.8
13.....	2.15	3.0	2.5	1.8	1.5	.85	13.75	1.3	.75	1.45	1.0	.7
14.....	1.85	3.1	2.4	1.75	1.5	.8	11.05	3.15	.7	2.7	.95	.7
15.....	1.7	2.7	2.4	1.7	1.5	.8	5.6	17.5	.7	3.75	.9	1.15
16.....	1.6	2.6	2.3	1.7	1.4	.8	3.8	10.3	.65	2.55	.85	.9
17.....	1.5	2.55	2.3	1.7	1.4	.8	3.0	4.8	.6	2.1	.8	2.3
18.....	1.4	2.5	2.3	1.7	1.4	.8	2.4	3.35	.6	1.8	.8	3.4
19.....	1.3	2.5	2.25	1.7	1.4	.8	2.0	2.65	.5	1.65	.7	3.05
20.....	1.3	2.4	2.2	1.65	1.4	.7	11.0	2.15	.5	1.5	.7	2.25
21.....	1.6	2.3	2.2	1.6	1.4	.8	10.05	1.85	.5	1.35	4.2	2.35
22.....	1.95	2.2	2.2	1.6	1.4	.8	7.25	1.65	.5	1.15	1.8	2.85
23.....	3.2	2.1	2.1	1.6	1.3	.8	3.85	1.3	.4	.9	1.35	3.7
24.....	4.1	2.0	2.1	1.6	1.3	.8	2.7	1.2	1.75	1.45	1.7	2.5
25.....	3.55	2.0	2.1	1.6	1.3	.8	2.3	1.35	10.45	1.3	1.7	1.9
26.....	4.45	1.9	2.0	1.55	1.3	.8	2.1	1.8	6.6	1.15	1.45	1.6
27.....	3.85	1.95	2.0	1.5	1.3	.8	1.8	1.6	3.35	1.0	1.25	1.45
28.....	3.4	2.0	2.0	2.2	1.3	.8	1.75	1.35	5.4	.95	1.05	1.3
29.....	3.1	2.1	1.95	2.05	1.3	.7	1.7	1.25	3.75	.9	1.0	1.15
30.....	2.85	2.5	1.9	1.9	1.3	.7	1.55	1.15	2.7	.9	.9	1.15
31.....	2.65	.....	1.9	1.8	.....	.6	.....	8.35	.....	13.1	.85	.....
1908-9.												
1.....	2.5	1.3	1.0	1.0	1.0	.7	.....	.....	1.5	19.9	1.35	23.25
2.....	2.3	1.3	1.0	1.0	1.0	.7	.....	.....	3.2	24.5	1.25	18.4
3.....	1.6	1.15	2.55	1.0	1.0	.7	.....	.....	3.9	26.0	1.2	16.3
4.....	1.4	1.0	2.25	2.4	1.0	.7	.....	.....	2.1	21.0	1.35	16.2
5.....	1.25	1.0	1.85	2.1	.9	.7	.....	.....	1.75	12.0	1.2	16.2
6.....	1.15	.95	1.55	1.85	.9	.7	.....	.....	1.55	13.15	1.15	16.1
7.....	1.0	.9	1.4	1.75	.9	.7	.....	.....	1.35	14.75	1.7	16.1
8.....	1.0	.9	1.3	1.6	.9	.7	.....	.....	1.3	15.65	1.6	16.0
9.....	.95	.8	1.2	1.5	.9	.6	.....	.....	1.15	10.85	1.35	15.65
10.....	.9	.8	1.2	1.45	.9	.6	5.05	.....	1.0	4.5	1.15	13.35
11.....	.9	.8	1.1	1.4	.9	.6	2.9	.....	.9	3.85	25.0	6.95
12.....	1.35	15.95	1.1	1.35	.9	.6	2.0	.....	.9	2.85	28.25	6.75
13.....	1.25	5.85	1.1	1.3	.9	.6	1.6	.....	.9	2.7	20.0	6.5
14.....	1.0	4.4	1.0	1.3	.9	.6	1.5	.....	.8	2.35	8.5	6.25
15.....	1.0	3.5	1.0	1.3	.9	.....	1.35	.....	.8	2.2	7.0	6.7
16.....	.95	3.0	1.0	1.2	.9	.....	1.2	.....	.8	2.0	6.0	13.5
17.....	.9	2.45	1.0	1.2	.8	.....	1.1	.....	.7	1.9	5.5	10.3
18.....	.9	2.15	1.0	1.2	.8	.....	1.1	.....	.7	1.8	4.5	8.5
19.....	.9	1.75	1.0	1.2	.8	.....	1.0	.....	.7	1.7	3.95	6.2
20.....	.8	1.55	1.1	1.2	.8	.....	1.0	.....	.7	1.7	3.7	6.75
21.....	.7	1.45	1.0	1.2	.8	.....	.95	.....	.6	5.25	3.55	6.4
22.....	.7	1.3	1.0	1.2	.8	.....	.9	.....	.6	3.65	3.45	6.1
23.....	4.05	1.2	1.0	1.2	.8	.....	.8	.....	.6	3.15	4.95	5.85
24.....	5.0	1.2	1.0	1.15	.8	.....	.8	.....	.5	2.7	6.5	8.1
25.....	3.9	1.2	1.0	1.05	.7	.....	.7	1.25	.5	2.3	6.8	6.2
26.....	2.9	1.2	1.0	1.0	.7	.....	.7	1.25	.5	1.85	7.0	5.3
27.....	2.2	1.1	1.0	1.0	.7	.....	.7	6.25	.5	1.75	12.6	4.9
28.....	1.75	1.0	1.0	1.0	.7	.....	.6	5.7	3.4	1.65	28.75	4.45
29.....	1.6	1.0	1.0	1.0	.....	.....	.6	4.3	2.15	1.5	51.75	4.15
30.....	1.5	1.0	1.0	1.0	.....	.....	.6	2.55	1.7	1.5	60.0	3.9
31.....	1.3	.....	1.0	1.0	.....	.....	.....	1.95	.....	1.4	43.5	.....

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1902-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	une.	July.	Aug.	Sept.
1909-10.												
1.	3.75	.1	-2.0	-2.0	-3.3	-5.1	.3	-6.6	-6.6	-6.5	-7.55	11.45
2.	3.5	.0	-1.5	-2.1	-3.35	-5.1	-1.45	-6.75	-6.6	-6.9	-7.85	13.1
3.	3.25	.0	-1.5	-2.15	-3.4	-5.1	-3.2	-6.8	-6.7	-7.05	-8.0	5.55
4.	2.95	.65	-1.5	-2.3	-3.5	-5.15	2.6	-7.0	-6.7	-7.2	-8.05	.1
5.	2.75	.5	-1.6	-2.3	-3.55	-5.2	2.3	-7.0	-6.8	-7.3	-8.1	-1.75
6.	2.55	.15	-1.7	-2.4	-3.65	-5.2	-2.95	-7.0	-6.8	-7.4	-8.15	-3.0
7.	2.35	.0	-1.8	-2.4	-3.75	-5.2	-3.75	-7.1	-3.65	-5.9	-8.2	-3.75
8.	2.2	.0	-1.75	-2.4	-3.85	-5.3	-4.25	-7.1	-1.9	-5.5	-8.3	-4.2
9.	2.05	.5	-1.8	-2.4	-3.9	-5.3	-4.4	-6.75	-2.8	-6.2	-8.3	-4.55
10.	1.85	.2	-1.7	-2.4	-3.9	-5.4	-4.4	-6.75	-4.55	-6.0	-8.3	-1.9
11.	1.65	.05	-1.7	-2.4	-3.9	-5.4	-4.45	-7.0	-5.75	-6.85	-8.3	-1.1
12.	1.55	-.05	-1.6	-2.4	-3.9	-5.4	-4.3	-7.0	-6.1	-7.05	-8.3	-3.55
13.	1.5	-.15	-1.8	-2.4	-4.0	-5.5	-4.8	-7.0	-6.3	-7.2	-8.3	1.2
14.	1.4	-.3	-1.9	-2.4	-4.0	-5.5	-5.2	-7.1	-6.5	-7.35	-8.3	5.75
15.	1.4	-.45	-1.9	-2.4	-4.0	-5.5	-5.3	-7.1	-4.8	-7.05	-8.3	11.35
16.	1.25	-.65	-1.9	-2.35	-4.1	-5.5	-5.4	-7.0	-5.8	-7.7	-8.3	23.0
17.	1.1	-.8	-1.9	-2.4	-4.15	-5.5	-5.5	-7.1	-6.05	-7.7	-8.4	22.5
18.	1.0	-.95	-1.9	-2.4	-4.25	-5.5	-5.9	-7.1	-6.3	-7.8	-8.4	15.25
19.	.95	-1.0	-1.9	-2.5	-4.35	-5.2	-6.2	-3.85	-6.6	-7.8	-8.4	5.25
20.	.9	-1.0	-1.9	-2.6	-4.4	-5.1	-6.3	-.45	-6.7	-7.8	-8.4	2.7
21.	.8	-1.0	-1.8	-2.7	-4.5	-3.0	-6.3	-2.4	-6.9	-7.8	-8.4	1.2
22.	.7	-1.1	-1.7	-2.7	-4.5	-1.4	-6.3	-3.65	-7.05	-7.1	-8.4	.95
23.	.7	-1.25	-1.65	-2.8	-4.5	-2.65	-6.3	-4.2	-6.7	-4.85	-8.4	1.0
24.	.55	-1.4	-1.65	-2.85	-4.6	-2.75	-6.4	-4.6	-7.1	-5.9	-8.4	1.3
25.	.45	-1.45	-1.7	-2.95	-4.75	-3.45	-6.4	-4.85	-3.8	-6.3	-8.4	-.75
26.	.4	-1.5	-1.7	-3.15	-4.95	-3.9	-6.4	-5.1	-2.65	-6.7	-8.4	1.35
27.	.4	-1.6	-1.8	-3.3	-5.0	-4.25	-6.5	-5.6	-3.65	-6.9	-8.4	-1.9
28.	.3	-1.7	-1.9	-3.4	-5.0	-4.4	-6.5	-5.95	-4.45	-7.05	.....	-2.6
29.	.2	-1.85	-1.9	-3.2	.....	-4.5	-6.5	-6.05	-5.6	-7.25	.....	-3.5
30.	.1	-2.0	-2.0	-3.2	.....	-4.6	-6.6	-6.3	-6.1	-7.3	.....	-4.1
31.	.1	.....	-2.0	-3.3	.....	-3.25	.....	-6.5	.....	-7.4	.....	.....
1910-11.												
1.	-2.65	1.55	-.15	-.5	-1.9	-3.3	.3	.85	-1.3	-3.7	-4.05	-3.6
2.	-3.8	1.45	-.2	-.6	-1.8	-3.3	.05	.5	-1.8	-3.7	-4.3	-4.8
3.	-2.9	1.35	-.2	-.6	-1.9	-3.4	-.1	.55	-1.6	-3.55	-4.3	-4.8
4.	3.5	1.15	-.2	-.6	-2.05	-3.4	-.2	.45	-1.3	-3.0	-4.3	-2.35
5.	2.0	1.05	-.1	-.6	-2.1	-3.4	-.3	.6	-1.65	-3.05	-4.4	-2.4
6.	-.5	.95	-.2	-.6	-2.15	-3.4	-.6	.7	-1.8	-3.25	-4.4	-3.15
7.	-4.15	.85	-.3	-.6	-2.2	-3.5	-.75	4.35	-1.0	-3.3	-4.45	-3.45
8.	-6.75	.8	-.3	-.6	-2.3	-3.5	-1.0	3.35	-2.1	-3.4	-4.5	-3.65
9.	-7.0	.8	-.25	-.65	-2.5	-3.5	-1.05	4.35	-2.2	-3.4	-4.5	-3.75
10.	-8.4	.8	-.2	-.75	-2.5	-3.6	-1.25	3.35	-2.35	-3.4	-4.6	-3.9
11.	3.45	.7	-.2	-.8	-2.7	-3.6	-.1	2.75	-2.45	-3.5	-4.6	-3.95
12.	3.15	.6	-.2	-.85	-2.7	-3.65	-.55	1.75	-2.55	-3.5	-4.7	-4.1
13.	2.95	.5	-.3	-.9	-2.7	-3.7	-1.1	1.4	-2.65	-3.5	-4.7	-4.1
14.	2.7	.5	-.3	-1.0	-2.6	-3.7	-1.35	1.1	-2.7	-3.6	-4.75	-4.1
15.	2.55	.4	-.2	-1.1	-2.6	-3.8	-1.65	.75	-2.8	-3.55	-4.8	-4.2
16.	2.4	.3	-.1	-1.25	-2.7	-3.8	-2.05	.6	-2.8	-2.8	-4.9	-4.2
17.	2.15	.3	-.2	-1.45	-2.7	-3.8	-2.1	.55	-2.9	-2.8	-4.9	-4.3
18.	2.0	.3	-.1	-1.5	-2.7	-3.85	-2.1	.35	-2.9	-2.65	-4.9	-4.3
19.	2.0	.3	.05	-1.5	-2.8	-3.9	-2.1	.1	-3.05	-2.5	-5.1	-4.4
20.	1.85	.3	0	-1.1	-3.0	-3.9	-1.9	3.1	-3.25	-2.65	-5.1	-4.4
21.	1.65	.3	-.1	-1.1	-3.2	-3.9	-1.9	1.1	-3.4	-3.65	-5.1	-4.4
22.	1.6	.3	-.1	-1.1	-3.3	.95	-1.9	-.4	-3.45	-3.6	-5.1	-4.5
23.	1.5	.2	-.2	-1.3	-3.3	.0	-1.9	-.3	-3.5	-3.7	-5.1	-4.5
24.	1.4	.2	-.3	-1.4	-3.3	-.2	-2.4	-.55	-3.5	-3.7	-5.1	-4.5
25.	1.3	.1	-.3	-1.95	-3.3	4.9	-1.8	-.45	-3.3	-3.7	-5.1	-4.5
26.	1.3	.1	-.3	-1.7	-3.3	3.9	9.5	.35	-3.1	-.9	-5.2	-4.5
27.	1.45	.0	-.3	-1.7	-3.3	2.0	9.9	-1.05	-3.15	-3.75	-5.2	-4.5
28.	1.55	.0	-.4	-1.7	-3.3	4.8	7.35	-1.45	-3.35	-4.0	-5.2	-4.5
29.	3.6	-.1	-.4	-1.7	.....	5.95	4.95	-1.65	-3.5	-4.3	-5.2	-4.5
30.	2.55	-.1	-.5	-1.8	.....	2.05	1.55	-.25	-3.5	-4.6	-5.3	-4.5
31.	1.7	.....	-.5	-2.0	.....	.7	.....	-1.15	.....	-4.15	-3.8	.....

Daily gage height, in feet, of Rio San Juan near Santa Rosalia ranch, Tamaulipas, Mexico, for 1900-1913—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1	-4.5	-3.4	-2.7	-2.8	-3.1	-3.7	-3.9	-3.9	6.85	12.35	8.0	7.2
2	-4.6	-3.3	-2.6	-2.8	-3.2	-3.7	-3.9	-3.4	7.0	11.65	7.95	7.2
3	-4.6	5.9	-2.6	-2.8	-3.2	-3.7	-3.9	-2.65	9.45	11.45	7.9	7.15
4	-4.6	7.55	-2.6	-2.8	-3.2	-3.7	-3.9	-2.75	10.0	11.15	7.85	7.1
5	-4.6	3.2	-2.6	-2.8	-3.2	-3.7	-3.9	-3.05	8.7	11.0	7.8	7.1
6	-4.6	.9	-2.6	-2.8	-3.15	-3.7	-3.9	-3.25	8.3	10.8	7.8	7.1
7	-4.6	.35	-2.65	-2.8	-3.1	-3.7	-3.9	-3.4	9.5	10.65	7.8	7.1
8	-2.8	-.2	-2.7	-2.9	-3.1	-3.7	-3.9	-3.55	12.25	10.45	7.7	7.1
9	5.2	-.35	-2.7	-2.9	-3.1	-3.7	-3.9	-3.4	12.35	10.25	7.7	7.05
10	1.8	1.7	-2.75	-2.9	-3.1	-3.7	1.4	-3.45	10.85	10.05	7.7	7.0
11	-.6	.5	-2.8	-2.9	-3.1	-3.7	.2	-3.5	9.4	9.85	7.65	7.0
12	-1.75	-.35	-2.85	-2.9	-3.1	-3.7	-.8	-3.5	9.0	9.65	7.6	7.0
13	-2.25	-.9	-2.9	-3.0	-3.1	-3.8	-1.65	-3.35	10.0	9.5	7.6	7.0
14	-2.5	-1.3	-2.9	-3.0	-2.55	-3.8	-2.4	-3.35	8.85	9.35	7.6	7.0
15	-2.5	-1.35	-3.0	-3.0	-3.05	-3.8	-2.7	-3.5	8.3	9.15	7.6	7.0
16	-2.7	-1.55	-3.0	-3.1	-3.15	-3.8	-2.9	-3.65	8.05	9.0	7.6	7.0
17	-2.7	-1.6	-3.0	-3.1	-3.2	-3.8	-3.0	-3.75	7.85	8.9	7.6	7.8
18	-2.7	-1.7	-3.0	-3.1	-3.3	-3.8	-3.15	-3.85	8.0	8.8	7.55	7.5
19	-3.0	-2.0	-2.55	-3.15	-3.35	-3.85	-3.3	-3.95	18.0	8.75	7.5	8.05
20	-3.1	-2.3	-2.6	-3.2	-3.4	-3.9	-3.35	-4.0	19.5	8.65	7.5	8.0
21	-3.2	-2.3	-2.6	-3.2	-3.4	-3.9	-3.4	-4.0	17.65	8.6	7.5	7.7
22	-3.2	-2.4	-2.7	-3.2	-3.5	-3.9	-3.5	-4.1	13.05	8.7	7.5	7.6
23	-3.2	-2.5	-2.7	-3.2	-3.5	-3.9	-3.6	-4.2	15.95	8.55	7.4	12.3
24	-3.2	-2.6	-2.7	-3.2	-3.5	-3.9	-3.6	-4.2	24.15	8.4	7.4	10.2
25	-3.2	-2.6	-2.7	-3.2	-3.55	-3.9	-3.7	-4.25	24.7	8.3	7.35	9.05
26	-3.3	-2.6	-2.8	-3.1	-3.6	-3.8	-3.7	7.0	22.05	8.25	7.3	8.6
27	-3.3	-2.6	-2.8	-3.1	-3.7	-3.7	-3.8	6.9	18.25	9.45	7.3	8.45
28	-3.4	-2.7	-2.8	-3.05	-3.7	-3.7	-3.8	6.9	16.6	9.0	7.3	9.3
29	-3.4	-2.7	-2.8	-3.0	-3.7	-3.8	-3.9	6.9	13.95	8.55	7.3	8.5
30	-3.5	-2.7	-2.8	-3.0	-3.8	-3.9	-3.9	6.9	12.8	8.3	7.25	13.35
31	-3.5	.....	-2.8	-3.0	.....	-3.9	.....	6.8	.....	8.2	7.2	.....
1912-13.												
1	15.1	9.95	10.4	8.9	8.3	7.9	7.6	7.5	7.3	14.55	7.7	7.8
2	14.45	9.8	10.05	8.9	8.3	8.0	7.6	7.45	7.3	15.6	7.6	7.85
3	13.0	9.65	9.95	8.8	8.2	7.9	7.6	7.4	7.2	14.45	7.6	7.9
4	11.2	9.5	9.7	8.8	8.2	7.9	7.6	7.4	7.2	13.25	7.6	8.0
5	10.35	9.5	9.7	8.8	8.2	7.9	7.55	7.35	7.2	13.15	7.5	8.2
6	9.7	9.4	9.6	8.8	8.15	7.8	7.5	8.6	7.2	12.45	7.5	9.3
7	9.35	9.4	9.6	8.8	8.1	7.85	7.5	9.85	8.2	12.15	7.5	11.0
8	9.2	9.25	9.5	8.7	8.1	7.85	7.5	9.35	9.5	11.65	7.45	10.2
9	9.05	9.1	9.5	8.7	8.05	7.8	7.5	8.35	12.75	11.2	7.4	9.4
10	8.65	9.0	9.4	8.6	8.0	7.75	7.5	7.95	17.75	10.9	7.4	11.6
11	8.5	8.95	9.4	8.6	8.0	7.8	7.4	7.75	14.8	10.6	12.6	10.55
12	8.4	8.9	9.5	8.6	8.0	7.8	7.4	7.55	10.0	10.25	11.9	11.55
13	8.25	8.8	9.4	8.6	8.1	7.8	7.4	7.45	8.8	10.25	10.9	13.55
14	8.2	8.75	9.35	8.6	8.1	7.9	7.4	7.35	8.3	9.65	9.45	12.7
15	8.1	8.7	9.3	8.6	8.05	8.0	7.4	7.3	8.45	9.45	8.4	11.75
16	8.1	8.65	9.3	8.6	8.0	8.0	7.4	7.3	12.85	9.25	7.7	10.9
17	8.05	9.75	9.3	8.6	8.05	8.05	7.4	7.3	25.35	9.1	7.4	10.55
18	7.95	10.3	9.2	8.6	8.2	8.1	7.4	7.25	17.25	8.85	7.3	16.7
19	8.6	9.6	9.2	8.6	8.3	8.1	7.4	12.25	13.65	8.75	15.0	22.7
20	8.25	11.1	9.15	8.6	8.2	8.0	7.4	9.5	12.35	8.55	14.55	20.0
21	8.2	11.05	9.1	8.5	8.2	8.0	7.4	8.45	12.25	8.35	13.1	14.9
22	10.35	10.45	9.1	8.4	8.1	8.0	7.4	10.65	16.45	8.25	12.05	13.35
23	9.45	10.05	9.1	8.3	8.1	7.9	7.4	9.85	15.55	8.15	10.7	12.5
24	16.95	9.8	9.1	8.2	8.05	7.85	7.4	9.2	14.25	8.25	9.5	12.2
25	13.6	9.65	9.1	8.2	8.0	7.8	7.4	8.6	13.5	8.25	8.3	27.55
26	12.0	9.6	9.05	8.2	8.0	7.75	7.3	8.1	12.95	8.0	7.45	20.0
27	11.4	10.05	9.0	8.25	7.9	7.7	7.3	7.75	14.05	7.9	9.6	17.15
28	10.95	10.45	9.0	8.2	7.9	7.7	7.35	7.6	14.05	7.85	11.3	13.5
29	10.65	10.35	9.0	8.2	.....	.....	7.8	7.6	13.55	7.8	9.5	12.25
30	10.4	10.9	9.0	8.35	.....	.....	7.75	7.5	13.2	7.7	8.3	11.75
31	10.15	.....	9.0	8.4	.....	.....	.....	7.5	.....	7.7	7.45	.....

NOTE.—There was no flow at the station Sept. 7-16, 1905, Mar. 15-Apr. 9, May 1-24, 1909, Aug. 28-31⁷ 1910, and Mar. 29-31, 1913. Gage datum lowered about 11 feet May 26, 1912.

CLOSED BASINS.**MIMBRES RIVER BASIN.****GENERAL FEATURES.**

Mimbres River drains an interior basin (see pp. 18-21) chiefly in the northeastern part of Grant County, N. Mex. It rises on the west slope of the Mimbres Range, in T. 14 S., R. 10 W., and flows in a southerly direction until its waters are lost in the desert plain in Luna County. It has no important surface tributaries, as the waters of Whitewater Draw, Lampbright Draw, and Cameron Creek are lost a short distance from its channel, but it is possible that they reach the Mimbres by seepage.

The upper part of the basin, which furnishes a practically perennial flow to the Mimbres at least as far as the gaging station near Faywood, lies in mountainous country between the Continental Divide and the Mimbres Mountains, with elevations ranging from 5,000 to 8,000 feet above sea level. The lower part of the basin is a comparatively flat, gently sloping plain, in which elevations range from 4,200 to 5,000 feet above sea level and above which rise isolated mountains. In its course across this plain the river is intermittent for many miles before its waters finally disappear east of Deming.

The lines of equal rainfall for the southwestern part of New Mexico (Pl. III) indicate that the mean annual precipitation in the Mimbres basin decreases from 17 inches or more in the upper part to 10 inches in the vicinity of Deming. Although there are no records of rainfall in the mountainous part of the area, it is probable that the precipitation at the higher altitudes exceeds 17 inches.

Little water is used for irrigation above the gaging station near Faywood, but below that point much of the flow is diverted. Without storage, which has not yet been provided, the possibilities of irrigation from the Mimbres are small, as it is chiefly a floodwater stream. A good dam site located near the gaging station could be utilized to form a reservoir that would store sufficient water to reclaim several thousand acres of land along the river.

GAGING STATION RECORDS.**MIMBRES RIVER NEAR FAYWOOD, N. MEX.**

Location.—About 6 miles northeast of Faywood Hot Springs, in sec. 7, T. 20 S., R. 10 W., 10 miles from Faywood, a station on the Silver City branch of the Atchison, Topeka & Santa Fe Railway.

Records available.—April 8, 1908, to September 30, 1913.

Drainage area.—Approximately 450 square miles.

Gage.—Automatic recording, installed August 13, 1909, at a point 200 feet upstream from the site of the chain gage originally installed. The chain-gage datum was lowered 4.00 feet on July 8, 1909, and the datum of the recording gage is about 3.00 feet higher than the new datum of the chain gage.

Channel.—Very shifting.

Discharge measurements.—Made from car and cable during high water and by wading at other times.

Winter flow.—Practically no backwater from ice at this point.

Accuracy.—Owing to the meager data and shifting channel no estimates of discharge were made for 1911. The estimate for the other years are either approximate or fair, except for the last half of 1912 and for 1913, for which they may be considered good.

Cooperation.—During 1912-13 station was maintained in cooperation with the State engineer.

Discharge measurements of Mimbres River near Faywood, N. Mex., in 1907-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1907.		<i>Fect.</i>	<i>Sec.-ft.</i>	1913.		<i>Fect.</i>	<i>Sec.-ft.</i>
Nov. 13	.....	.....	19.4	July 14	R. S. Watrous	.12	2.5
1908.				15	do.	.10	2.4
May 12	R. L. Cooper	0.00	6.3	16	do.	.09	2.4
July 31	do.	.20	38	17	do.	.09	2.4
1909.				18	do.	.09	2.5
Jan. 6	J. B. Stewart	3.90	8.8	19	do.	.11	2.6
Feb. 3	do.	3.60	5.2	20	do.	.09	2.3
Apr. 27	do.	3.65	2.0	21	do.	.09	2.4
June 10	do.	3.70	1.1	22	do.	.40	11.0
July 8	do.	3.90	1.4	23	do.	.24	3.3
Aug. 13	do.	4.70	164	24	do.	.22	2.6
do. 20	do.	a 1.16	1.5	25	do.	.22	2.8
Sept. 1	do.	b 1.30	3.5	26	do.	.22	2.5
Oct. 12	W. B. Freeman	c 1.18	3.8	27	do.	.22	2.3
1910.				28	do.	.23	2.2
Feb. 13	J. B. Stewart	.79	4.3	29	do.	.22	2.2
Mar. 18	do.	.72	3.2	30	do.	.23	2.1
do. 23	do.	.70	3.1	31	do.	.23	2.0
May 8	C. D. Miller	.65	1.8	Aug. 1	do.	.23	2.1
July 2	J. B. Stewart	.54	d .5	2	do.	.23	2.1
Sept. 20	do.	.....	(e)	3	do.	.23	1.9
1911.				4	do.	.21	1.8
Feb. 1	C. D. Miller	.....	0	5	do.	.22	2.8
Apr. 1	G. H. Russell	1.60	13.2	6	do.	.22	2.6
Aug. 17	do.	.75	2.0	7	do.	.20	1.9
1912.				8	do.	.19	1.8
May 7	R. H. Fletcher	.80	9.9	9	do.	.19	1.8
Aug. 19	Gray and Redding	.90	27.9	10	do.	.23	3.2
Sept. 5	E. L. Redding	.95	46.8	11	do.	.41	17.8
Oct. 7	do.	.88	10.9	12	do.	.56	29.4
Nov. 5	do.	.50	10.9	12	do.	1.35	212
Dec. 24	do.	.20	10.0	13	do.	.61	18.7
1913.				13	do.	.88	75.3
Feb. 27	E. L. Redding	.18	7.0	13	do.	.90	109
May 1	do.	.43	12.0	14	do.	.38	4.3
June 5	do.	.25	2.9	14	do.	2.50	554
do. 25	Redding and Watrous	.20	3.7	14	do.	.82	169
do. 26	R. S. Watrous	.20	2.9	15	do.	.05	3.0
do. 27	do.	.20	2.8	15	do.	.73	119
do. 28	do.	.20	2.6	16	do.	.55	21.2
do. 29	do.	.20	2.7	17	do.	.27	3.4
do. 30	do.	.20	2.8	18	do.	.25	2.8
July 1	do.	.20	2.8	19	do.	.22	2.3
do. 2	do.	.19	2.6	20	do.	.21	2.2
do. 3	do.	.19	2.7	21	do.	.21	2.0
do. 4	do.	.17	2.8	22	do.	.21	2.0
do. 5	do.	.15	2.3	23	do.	.22	1.9
do. 6	do.	.14	2.5	24	do.	.22	2.0
do. 7	do.	.14	2.5	25	do.	.22	1.7
do. 8	do.	.14	2.5	25	do.	1.50	426
do. 9	do.	.14	2.6	26	do.	.57	12.9
do. 10	do.	.13	2.5	27	do.	.38	2.3
do. 11	do.	.13	2.5	28	do.	.27	1.9
do. 12	do.	.12	2.6	29	do.	.27	1.9
do. 13	do.	.12	2.4	30	do.	.26	1.5
				31	do.	.26	1.7
				Sept. 1	do.	.25	1.8
				2	do.	.24	1.7
				3	do.	.25	1.7

a Chain gage read 4.15 feet.

b Chain gage read 4.30 feet.

c Chain gage read 4.20 feet.

d Estimated.

e Stream dry.

Discharge measurements of Mimbres River near Faywood, N. Mex., in 1907-1913—Con.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1913.		<i>Fect.</i>	<i>Sec. ft.</i>	1913.		<i>Fect.</i>	<i>Sec. ft.</i>
Sept. 4	R. S. Watrous	.25	1.7	Sept. 15	R. S. Watrous	.33	2.4
5	do	.25	1.6	16	do	.33	2.1
6	do	.25	1.6	17	do	.32	2.1
6	do	.50	11.8	18	do	.31	1.8
6	do	1.46	262	19	do	.31	1.6
6	do	1.40	240	20	do	.30	1.5
7	do	.72	20.5	21	do	.30	1.5
8	do	.80	27.8	22	do	.30	1.5
8	do	.85	36.0	23	do	.29	1.3
9	do	.72	28.8	24	do	.28	1.4
10	do	.68	23.9	24	do	.62	14.4
11	do	.58	13.0	25	do	.48	7.5
12	do	.47	5.6	Nov. 6	E. L. Redding	.32	1.9
13	do	.35	2.5	Dec. 2	do	.70	15.2
14	do	.35	2.4				

Daily gage height, in feet, of Mimbres River near Faywood, N. Mex., for 1908-1913.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1908.						1908.					
1	0.1	0.1	0.0	0.2	0.2	16	0.0	0.0	0.4	0.5	0.2
2	.1	.1	.0	.6	.2	17	.0	.0	1.3	.3	.3
3	.2	.1	.0	.5	1.5	18	.0	.0	.3	.2	.3
4	.2	.1	.0	.3	.5	19	.0	.0	.3	.2	.2
5	.1	.0	.0	.2	.2	20	.1	.0	.3	1.1	.3
6	.1	.0	.0	.1	.2	21	.1	.0	.2	.4	.2
7	.1	.0	.0	.2	.2	22	.1	.0	.1	.2	.3
8	.1	.0	.0	.2	.2	23	.1	.0	.0	.2	.2
9	.1	.0	.1	.2	.2	24	.1	.0	.0	.2	.2
10	.1	.0	.2	.2	.2	25	.1	.0	1.5	.2	.2
11	.1	.0	.2	.2	.2	26	.0	.0	1.1	.3	.3
12	.0	.0	.1	.1	.2	27	.0	.0	1.7	2.3	.3
13	.0	.0	.0	.1	.2	28	.0	.0	1.5	.3	.2
14	.0	.0	1.1	.1	.2	29	.0	.0	1.3	.2	.2
15	.0	.0	.2	.8	.2	30	.0	.0	.5	2.5	.2
						31	.0		.2	.3	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1	0.2	0.1	-0.1	4.2	3.8	3.7	3.7	3.7	3.7	3.75	3.85	1.3
2	.2	.0	-	4.2	3.8	3.7	3.7	3.65	3.7	3.85	3.85	1.25
3	.3	.0	-	4.1	3.6	3.7	3.7	3.65	3.7	4.05	3.85	1.3
4	.3	.0	.0	4.0	3.6	3.7	3.6	3.65	3.7	3.8	3.9	1.3
5	.2	.0	.0	4.0	3.7	3.7	3.6	3.7	3.7	3.75	3.9	1.5
6	.3	.0	.0	3.9	3.8	3.7	3.6	3.7	3.7	3.9	3.95	1.2
7	.3	.0	.0	3.9	3.7	3.7	3.6	3.65	3.7	4.1	3.95	1.1
8	.3	.0	.0	3.9	3.7	3.7	3.6	3.7	3.7	3.9	3.95	1.05
9	.2	-	.0	3.8	3.7	3.7	3.7	3.7	3.7	3.9	3.9	1.05
10	.3	-	.0	3.8	3.7	3.7	3.7	3.7	3.7	3.9	3.95	1.15
11	.3	-	.0	3.8	3.6	3.7	3.7	3.65	3.7	3.9	4.0	1.45
12	.3	-	.0	3.8	3.6	3.7	3.7	3.65	3.7	3.9	4.1	1.35
13	.3	-	.1	3.9	3.6	3.8	3.7	3.7	3.75	4.6	4.0	1.35
14	.3	-	.2	3.9	3.6	3.9	3.7	3.7	3.75	3.95	4.55	1.3
15	.3	-	.2	3.9	3.6	3.8	3.7	3.75	3.75	3.95	4.55	1.25
16	.2	.0	.3	3.9	3.6	3.7	3.7	3.75	3.75	3.9	1.3	1.25
17	.2	.0	.2	3.9	3.6	3.7	3.7	3.75	3.75	3.9	1.2	1.25
18	.2	-	.2	3.9	3.6	3.7	3.7	3.75	3.7	3.9	1.1	1.25
19	.2	-	.2	3.9	3.7	3.7	3.6	3.75	3.75	3.9	1.1	1.2
20	.2	.0	.1	3.9	3.7	3.7	3.6	3.75	3.75	4.0	1.15	1.2
21	.2	.0	.1	3.8	3.8	3.7	3.6	3.75	3.8	4.0	1.15	1.15
22	.2	.0	.1	3.8	3.8	3.7	3.6	3.75	3.8	3.95	1.2	1.15
23	.2	.0	.1	3.8	3.8	3.7	3.6	3.7	3.8	3.9	1.45	1.15
24	.2	-	.1	3.8	3.7	3.7	3.6	3.7	3.8	3.95	1.35	1.15
25	.3	-	.2	3.8	3.7	3.8	3.6	3.7	3.8	4.0	1.3	1.15
26	.3	-	.2	3.8	3.7	3.9	3.65	3.65	3.75	4.0	1.2	1.15
27	.3	-	.2	4.0	3.7	3.9	3.65	3.65	3.75	3.9	1.2	1.15
28	.2	-	.1	3.9	3.7	3.8	3.7	3.65	3.75	3.9	1.2	1.15
29	.2	-	.1	3.8		3.8	3.7	3.7	3.85	3.9	1.2	1.15
30	.2	-	.1	3.8		3.7	3.7	3.7	3.95	3.95	1.2	1.15
31	.1		.1	3.8		3.7			4.0	1.4		

Daily gage height, in feet, of Mimbres River near Faywood, N. Mex., for 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1.15	1.2	1.05	1.0	1.0	0.7	0.7	0.7	0.65	0.55	1.0	0.9
2.....	1.15	1.2	1.05	1.0	.95	.7	.65	.7	.65	.55	.95	.....
3.....	1.15	1.2	1.05	1.0	.95	.7	.65	.7	.65	.5	.95	.9
4.....	1.15	1.2	1.05	1.0	.95	.7	.65	.7	.65	.5	.95	.9
5.....	1.15	1.2	1.0	1.0	.95	.7	.65	.65	.7	.5	.95	.9
6.....	1.15	1.2	1.0	.95	.9	.7	.65	.65	.7	.5	.95	.9
7.....	1.15	1.2	1.0	1.0	.85	.7	.....	.65	.7	.65	.95	.8
8.....	1.15	1.2	1.0	.95	.85	.7	.....	.65	.7	.55	.95	.75
9.....	1.15	1.2	1.0	.95	.8	.7	.....	.65	.7	.55	1.1	.....
10.....	1.2	1.2	.95	.95	.8	.7	.....	.65	.7	.6	1.7	.....
11.....	1.2	1.2	.95	1.0	.8	.7	.....	.65	.7	.6	1.1	.....
12.....	1.2	1.2	.95	1.0	.8	.7	.....	.65	.7	.6	1.05	.....
13.....	1.2	1.2	.95	1.0	.8	.7	.....	.7	.7	.6	1.05	.....
14.....	1.2	1.2	.95	1.0	.8	.7	.7	.7	.7	.6	1.0	.....
15.....	1.2	1.2	.9	1.0	.8	.7	.7	.7	.7	1.1	1.2	.....
16.....	1.2	1.2	.9	1.0	.8	.7	.7	.65	.7	.....	1.2	.....
17.....	1.2	1.15	.9	1.0	.75	.7	.7	.65	.7	.....	1.1	.....
18.....	1.2	1.2	.9	1.0	.75	.7	.7	.65	.7	.8	1.1	1.1
19.....	1.2	1.2	.9	1.0	.75	.7	.7	.65	.7	.8	1.1	.....
20.....	1.2	1.2	.9	1.0	.75	.7	.7	.65	.7	.....	1.1	.....
21.....	1.2	1.2	.9	.95	.75	.7	.7	.65	.7	.....	1.1	.....
22.....	1.2	1.15	.9	.....	.75	.7	.7	.65	.7	.....	1.1	.....
23.....	1.2	1.1	.9	.....	.7	.7	.7	.65	.65	.....	1.1	.....
24.....	1.2	1.1	.9	.....	.7	.7	.7	.65	.8	.8	1.4	.....
25.....	1.2	1.1	.9	.....	.7	.7	.7	.65	.55	.75	.95	.....
26.....	1.2	1.1	.95	.....	.7	.7	.7	.65	.9	.7	.9	.....
27.....	1.2	1.1	.95	.....	.7	.7	.7	.65	.55	.7	.9	.....
28.....	1.2	1.1	.95	.....	.7	.7	.65	.65	.55	1.25	.....	.....
29.....	1.2	1.1	1.0	.....	.....	.7	.7	.65	.55	1.1	.....	.....
30.....	1.2	1.1	1.0	1.0	.....	.7	.7	.65	.55	.9	.....	.....
31.....	1.2	.....	1.0	1.0	.....	.7	.....	.65	.....	.9	.....	.....
1910-11.												
1.....	.....	.....	.....	.....	.....	1.40	1.60	1.50	1.20	1.00	1.05	.75
2.....	.....	.....	.....	.....	.....	1.50	1.60	1.50	1.20	1.00	.95	.75
3.....	.....	.....	.....	.....	.....	1.60	1.60	1.45	1.20	1.00	.95	.75
4.....	.....	.....	.....	.....	.....	1.60	1.60	1.50	1.15	1.45	.95	.75
5.....	.....	.8	.....	.....	.....	1.70	1.60	1.45	1.15	1.40	.95	.75
6.....	.....	.....	.....	.....	.....	1.70	1.55	1.45	1.15	1.30	.80	.75
7.....	.....	.....	.....	.....	.....	1.80	1.55	1.45	1.15	1.45	.80	.75
8.....	.....	.....	.....	.....	.....	1.75	1.50	1.45	1.15	1.50	.80	.70
9.....	.....	.....	.....	.....	.....	1.75	1.50	1.45	1.15	1.40	.80	.85
10.....	.....	.....	.....	.....	.....	1.70	1.50	1.45	1.15	2.35	.75	.79
11.....	.....	.....	.....	.....	.....	1.75	1.50	1.45	1.15	1.50	.75	.78
12.....	.....	.....	.....	.....	.....	1.75	1.50	1.45	1.15	1.40	.75	.85
13.....	.....	.....	.....	.....	.....	1.65	1.50	1.45	1.15	1.50	.....	.85
14.....	.....	.....	.....	.....	.....	1.65	1.45	1.45	1.15	1.40	.....	.82
15.....	.....	.....	.....	.....	.....	1.65	1.45	1.45	1.15	1.30	.75	.82
16.....	.....	.....	.....	.....	.....	1.60	1.45	1.45	1.15	1.30	.75	.82
17.....	.....	.....	.....	.....	.....	1.60	1.50	1.45	1.15	1.80	.75	.83
18.....	.....	.....	.....	.....	.....	1.60	1.50	1.45	1.15	1.70	.75	.84
19.....	.....	.....	.....	.....	.....	1.65	1.50	1.45	1.15	2.00	.75	.84
20.....	.....	.....	.....	.....	.....	1.60	1.50	1.40	1.15	1.50	.70	1.35
21.....	.....	.....	.....	.....	.....	1.70	1.50	1.40	1.35	1.30	.70	.90
22.....	.....	.....	.....	.....	.....	1.60	1.50	1.40	1.60	1.30	1.20	.90
23.....	.....	.....	.....	.....	.....	1.60	1.50	1.40	1.20	.....	.....	.85
24.....	.....	.....	.....	.....	.....	1.65	1.50	1.40	1.00	.....	1.00	.85
25.....	.....	.....	.....	.....	.....	1.60	1.50	1.35	1.00	.....	1.00	.85
26.....	.....	.....	.....	.....	.....	1.70	1.50	1.35	1.00	.....	1.00	.85
27.....	.....	.....	.....	.....	.....	1.60	1.50	1.30	1.00	.....	1.00	.85
28.....	.....	.....	.....	.....	1.2	1.65	1.50	1.25	1.00	1.15	1.00	.82
29.....	.....	.....	.....	.....	.....	1.70	1.45	1.25	1.00	1.10	1.00	.84
30.....	.....	.....	.....	.....	.....	1.65	1.50	1.20	1.00	1.15	.80	2.00
31.....	.....	.....	.....	.....	.....	1.65	.....	1.20	.....	1.10	.80	.....

Daily gage height, in feet, of Mimbres River, near Faywood, N. Mex., for 1908-1913—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1	1.70	1.04	0.62						0.74		0.89	1.12
2	1.55	1.03	.62						.74		.88	1.48
3	1.50	1.03	.60						.74		.97	1.47
4	1.50	1.03	.60						.74		.85	1.05
5	1.50	.95	.60					.80	.72		.95	.98
6		.95	.60					.80	.72		.96	.97
7		.94	.60					.80	.70		.89	.95
8		.94	.60					.80	.70		.89	.90
9		.93	.60					.80	.70		.89	.88
10		.92	.60			1.50		.80	.70		.88	.85
11	1.10	.92	.55			1.90		.80	.70		.76	.84
12	1.10	.88	.55			1.80		.80	.71		.77	.86
13	1.10	.83	.55			1.30		.79	.72		.79	.90
14	1.10	.80	.54			1.20		.79	.72		.93	.90
15	1.10	.80	.53			1.20		.78	.73	0.80	1.20	.88
16	1.10	.77	.52			1.15		.78	.73	1.07	1.16	.86
17	1.10	.75	.52			1.15		.77	.73	1.12	.91	.84
18	1.10	.75	.52			1.13		.76	.74	1.00	.93	.82
19	1.10	.78	.50			1.13		.74	.75	1.03	1.06	.81
20	1.10	.75	.50			1.10		.74	.76	1.13	1.09	.81
21	1.10	.72	.50			1.10		.74	.76	1.22	1.10	.83
22	1.10	.70	.50			1.10		.74	.76	1.29	1.02	.82
23	1.10	.67	.50			1.10		.74	.70	1.46	.95	.81
24	1.10	.66	.50			1.05		.74	.70	.82	1.09	.81
25	1.08	.65	.50			1.00		.74	.70	1.03	1.11	.80
26	1.06	.65	.50			1.00		.74	.72	1.15	1.11	.80
27	1.05	.63	.50			.98		.74	.70	.93	1.10	.81
28	1.05	.62	.50			.97		.74	.70	.95	1.21	.83
29	1.05	.62	.50			.95		.74	1.06	1.22	.88	.87
30	1.05	.62	.50					.74		.95	1.22	.85
31	1.05		.50					.74		.91	1.21	
1912-13.												
1	.88	.53	.28	.20	.20	.18	0.27	.39	.28	.19	.21	.26
2	.88	.50	.28	.20	.05	.15	.47	.40	.27	.19	.21	.26
3	.87	.50	.30	.22	.05	.14	.57	.41	.25	.17	.22	.26
4	.86	.50	.30	.22	.05	.13	.59	.40	.24	.15	.21	.26
5	.87	.50	.30	.21	.05	.12	.60	.39	.25	.14	.20	.26
6	.87	.50	.34	.22	.05	.12	.60	.39	.25	.13	.27	.62
7	.86	.50	.30	.23	.08	.10	.60	.38	.26	.13	.21	.66
8	.84	.50	.31	.23	.05	.09	.60	.38	.23	.13	.19	.85
9	.81	.50	.31	.23	.03	.09	.60	.40	.23	.13	.19	.66
10	.82		.30	.26	.03	.08	.60	.35	.22	.13	.28	.60
11	.80		.29	.27	.02	.08	.59	.30	.21	.12	.40	.50
12	.80		.27	.24	.01	.08	.58	.30	.21	.10	.62	.42
13	.80		.30	.24	.00	.08	.56	.30	.22	.10	.58	.35
14	.79		.29	.24	.00	.07	.55	.28	.22	.10	.68	.35
15	.78		.28	.23	.00	.07	.54	.28	.22	.10	.47	.34
16	.77		.28	.23	.00	.10	.55	.28	.22	.10	.51	.33
17	.77		.27	.23	.00	.08	.56	.28	.21	.10	.27	.32
18	.76		.27	.23	.00	.07	.57	.28	.21	.08	.23	.31
19	.75		.27		.00	.15	.50	.28	.20	.10	.21	.30
20	.75		.26		.00	.20	.40	.28	.19	.08	.20	.30
21	.75		.25	.20	.00		.40	.28	.42	.30	.21	.30
22	.74		.25	.20	.02	.20		.28	.20	.33	.22	.30
23	.73		.24	.20		.22		.28	.19	.22	.22	.30
24	.72		.20	.20		.24		.28	.20	.21	.22	.44
25	.71		.21	.20		.25		.26	.21	.21	.48	.47
26	.70		.21	.20		.27	.42	.26	.22	.21	.45	.42
27	.62	.35	.21	.20	.20	.26		.24	.22	.21	.29	.48
28	.59	.34	.20	.20	.20	.23		.24	.21	.21	.28	.42
29	.58	.32		.20		.22		.26	.20	.21	.27	.42
30	.57	.30		.20		.23	.37	.25	.20	.21	.27	.40
31	.55			.20		.25		.25		.21	.26	

NOTE.—It is doubtful whether the gage heights Nov. 9 to Dec. 6, 1908, are plus or minus readings. Gage heights Jan. 1 to Aug. 15, 1909, refer to a datum 4 feet lower than that of the original gage. Gage heights thereafter refer to an automatic gage located 200 feet upstream and whose datum is about 3 feet above that of the second gage. Gage heights Jan. 1 to Mar. 9, 1912, were below 0.5 foot.

Daily discharge, in second-feet, of Mimbres River near Faywood, N. Mex., for 1908-1910,
1912-13.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1908.						1908.					
1.....	13.4	15.5	10.1	39	41	16.....	6.6	8.6	72	108	41
2.....	13.4	15.6	10.2	143	41	17.....	6.8	8.7	435	57	59
3.....	25	15.7	10.3	108	520	18.....	6.9	8.8	53	39	59
4.....	25	15.8	10.3	56	112	19.....	7.0	8.9	53	39	41
5.....	13.4	7.8	10.3	39	41	20.....	14.6	9.0	53	345	59
6.....	13.4	7.8	10.4	24	41	21.....	14.7	9.1	36	79	41
7.....	13.4	7.9	10.4	39	41	22.....	14.8	9.2	22	39	59
8.....	13.4	7.9	10.5	39	41	23.....	14.9	9.3	10.6	39	41
9.....	13.4	8.0	21	39	41	24.....	15.0	9.4	10.6	39	41
10.....	13.4	8.0	35	39	41	25.....	15.1	9.5	515	39	41
11.....	13.4	8.1	35	39	41	26.....	7.4	9.6	345	57	59
12.....	6.3	8.2	21	24	41	27.....	7.5	9.7	630	910	59
13.....	6.3	8.3	10.8	24	41	28.....	7.6	9.8	515	56	41
14.....	6.4	8.4	345	24	41	29.....	7.7	9.9	435	39	42
15.....	6.5	8.5	34	220	41	30.....	7.8	10.0	106	1,000	42
						31.....	7.8		38	59	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	42	28	28	46	21	7.8	5.0	3.0	1.6	0.1	1.7	3.5
2.....	42	16	28	46	21	7.8	5.0	1.8	1.5	1.1	1.7	2.0
3.....	61	16	28	30	5.2	7.8	5.0	1.8	1.5	7.8	1.7	4.0
4.....	61	16	17	17	4.6	7.8	2.0	1.8	1.4	.4	2.7	4.0
5.....	42	16	17	17	10	7.8	2.0	3.0	1.4	.1	3.5	18
6.....	61	16	17	8.8	20	7.8	2.0	3.0	1.3	1.7	5.4	2.5
7.....	61	16	17	8.5	10	6.7	1.6	1.5	1.2	9.1	5.4	1.0
8.....	61	16	17	8.5	10	6.7	1.6	2.4	1.1	1.4	5.4	.5
9.....	42	28	17	4.4	10	6.7	4.0	2.4	1.1	1.6	3.5	.5
10.....	61	28	17	5.0	10	6.7	4.0	2.4	1.1	1.6	5.4	1.0
11.....	61	28	17	6.0	4.6	6.7	4.0	1.5	.8	1.6	9.0	15
12.....	61	28	17	6.0	4.6	6.7	4.0	1.5	.8	1.6	18	8.0
13.....	61	44	30	13	4.6	14	4.0	2.4	1.6	93	9.0	8.0
14.....	61	44	46	13	4.6	25	4.0	2.4	1.6	2.7	108	5.5
15.....	61	28	46	15	4.0	14	4.0	3.2	1.3	2.7	108	4.0
16.....	42	16	65	15	4.0	6.7	4.0	3.2	1.3	1.6	7.0	4.0
17.....	42	16	46	15	4.0	6.7	3.5	3.2	1.3	1.6	3.0	4.0
18.....	42	28	46	15	4.0	4.8	3.5	3.2	.5	2.2	1.0	4.0
19.....	42	28	16	20	8.8	4.8	2.6	3.2	.7	2.2	1.0	2.0
20.....	42	16	30	20	8.8	4.8	2.6	3.2	.7	5.3	1.5	2.0
21.....	42	16	30	10.4	17.5	4.8	2.6	3.2	1.7	5.3	2.0	1.0
22.....	42	16	30	10.4	17.5	4.8	2.6	3.2	1.7	3.4	2.0	1.0
23.....	42	16	30	13.5	17.5	4.8	2.6	2.0	1.2	2.2	20	1.0
24.....	42	28	30	13.5	8.8	4.8	2.6	1.6	1.2	3.4	8.0	1.5
25.....	61	28	46	13.5	8.0	12.1	2.6	1.6	1.2	5.3	5.0	1.5
26.....	61	28	46	13.5	8.0	23	2.0	.7	.5	5.3	1.5	1.5
27.....	61	28	46	45	8.0	23	2.0	.7	.2	2.7	1.5	1.5
28.....	44	28	30	30	8.0	10.5	3.0	.7	.2	2.7	1.0	1.5
29.....	44	28	30	17		10.5	3.0	1.6	1.6	2.7	1.0	1.5
30.....	44	28	30	17		5.0	3.0	1.6	4.2	4.3	1.0	1.5
31.....	28		30	21		5.0		1.6		6.7	8.5	

Daily discharge, in second-feet, of Mimbres River near Faywood, N. Mex., for 1908-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	2.0	7.0	3.5	4.5	10	2	2.5	2.5	1.6	0.5	17	8
2.....	2.0	7.0	3.5	4.5	8	2	1.6	2.5	1.6	.5	12	8
3.....	2.0	7.0	3.5	4.5	8	2	1.6	2.5	1.6	.0	12	8
4.....	2.0	7.0	3.5	4.5	8	2	1.6	2.5	1.6	.0	12	8
5.....	2.0	7.0	2.0	4.5	8	2	1.6	1.6	2.5	.0	12	8
6.....	2.0	7.5	2.0	3	8	2	1.6	1.6	2.5	.0	12	8
7.....	2.0	7.5	2.0	5	4	2	2	1.6	2.5	1.0	12	3
8.....	2.0	7.5	2.0	3	4	2	2	1.6	2.5	.0	12	2
9.....	2.0	7.5	2.0	3	3.5	2	2	1.6	2.5	.0	27	.....
10.....	4.0	7.5	2.0	3	3.5	2	2	1.6	2.5	.2	196	.....
11.....	4.0	8.0	2.0	5	4.0	2.5	2	1.6	2.5	.2	27	.....
12.....	4.0	8.0	2.0	5	4.5	2.5	2	1.6	2.5	.2	21	.....
13.....	4.5	8.0	2.0	5.5	5	2.5	2	2.5	2.5	.2	21	.....
14.....	4.5	8.0	2.0	5.5	5	2.5	2.5	2.5	2.5	.2	16	.....
15.....	5.0	8.0	1.5	5.5	5	2.5	2.5	2.5	2.5	33	42	.....
16.....	5.0	8.0	1.5	5.5	5	2.5	2.5	1.6	2.5	9	42	.....
17.....	5.0	6.0	1.5	6	3	2.5	2.5	1.6	2.5	4.5	28	.....
18.....	5.0	8.5	1.5	6	3	2.5	2.5	1.6	2.5	4.5	28	25
19.....	5.0	8.5	1.5	6	3	2.5	2.5	1.6	2.5	4.5	28	.....
20.....	5.5	8.5	1.5	6	3	2.5	2.5	1.6	2.5	4.5	28	.....
21.....	5.5	8.5	1.5	6	3	2.5	2.5	1.6	2.5	4.5	28	.....
22.....	6.0	6.5	1.5	4	3	2.5	2.5	1.6	2.5	1.0	28	.....
23.....	6.0	5.0	1.5	4	2	2.5	2.5	1.6	1.6	1.0	28	.....
24.....	6.0	5.0	1.5	4	2	2.5	2.5	1.6	6.0	4.5	86	.....
25.....	6.0	5.0	1.5	5	2	2.5	2.5	1.6	.5	2.5	10	.....
26.....	6.5	5.0	2.5	5	2	2.5	2.5	1.6	12.5	1.0	8	.....
27.....	6.5	5.0	2.5	6	2	2.5	2.5	1.6	.5	1.0	8	.....
28.....	6.5	5.0	2.5	6	2	2.5	1.6	1.6	.5	57	8	.....
29.....	6.5	5.0	4.0	7	.....	2.5	2.5	1.6	.5	30	8	.....
30.....	6.5	5.0	4.0	8	.....	2.5	2.5	1.6	.5	9	8	.....
31.....	7.0	.....	4.0	8	.....	2.5	.....	1.6	.....	9	8	.....
Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.	
1912.												
1.....	10	8	10	27	82	16.....	9	7	47	72	24	
2.....	10	8	10	26	160	17.....	9	7	61	29	21	
3.....	10	8	10	35	155	18.....	8	8	39	32	18	
4.....	10	8	9	24	70	19.....	8	8	45	46	17	
5.....	10	7	9	33	52	20.....	8	8	70	51	16	
6.....	10	7	9	34	49	21.....	8	8	95	52	18	
7.....	10	6	9	27	45	22.....	8	8	110	41	16	
8.....	10	6	8	27	35	23.....	8	6	150	33	15	
9.....	10	6	8	27	31	24.....	8	6	22	51	14	
10.....	10	6	8	26	27	25.....	8	6	42	54	13	
11.....	10	6	8	19	24	26.....	8	7	70	54	12	
12.....	10	6	7	19	26	27.....	8	6	32	52	12	
13.....	10	7	8	21	31	28.....	8	6	33	75	14	
14.....	10	7	9	32	30	29.....	8	38	95	26	17	
15.....	9	7	10	90	27	30.....	8	10	33	95	14	
						31.....	8	.....	29	100	.....

Daily discharge, in second-feet, of Mimbres River near Faywood, N. Mex., for 1908-1910, 1912-13—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	16	11	10	10	10	8.4	21	8.4	3.6	2.8	1.8	1.8
2.....	15	11	10	10	8.0	6.0	63	9.2	2.8	2.6	1.9	1.7
3.....	13	11	10	13	5.0	5.2	90	10	2.0	2.5	2.1	1.7
4.....	12	11	10	13	1.0	4.4	95	9.2	2.0	2.4	1.8	1.7
5.....	12	11	10	12	1.0	3.6	98	8.4	2.8	2.3	1.8	1.6
6.....	12	11	10	13	1.0	3.6	98	8.4	2.8	2.5	3.0	30
7.....	11	11	10	15	1.6	2.0	98	7.6	3.6	2.5	2.6	10
8.....	11	11	10	15	1.0	1.8	98	8.4	1.8	2.5	1.9	36
9.....	11	11	10	15	.6	1.8	98	10	2.0	2.6	1.8	18
10.....	11	11	10	20	.6	1.6	98	6.0	1.8	2.5	8.4	12
11.....	11	11	10	21	.4	1.6	92	2.0	1.6	2.5	20	5.2
12.....	11	11	10	16	.2	1.6	87	2.0	1.8	2.6	26	3.6
13.....	11	11	10	16	.2	1.6	78	2.0	2.0	2.4	18	2.5
14.....	11	11	10	16	.2	1.4	73	1.8	2.0	2.5	24	2.4
15.....	11	11	10	15	.2	1.4	68	1.8	2.8	2.4	63	2.4
16.....	11	11	10	15	.2	2.0	68	1.8	2.8	2.4	15	2.1
17.....	11	11	10	15	.2	1.6	68	1.8	2.0	2.4	3.4	2.1
18.....	11	11	10	15	.2	1.4	68	1.8	2.8	2.5	2.5	1.8
19.....	11	11	10	13	.2	6.0	48	1.8	2.0	2.6	2.3	1.6
20.....	11	11	10	11	.2	10	26	2.0	1.8	2.3	2.2	1.5
21.....	11	11	10	10	.2	10	24	2.0	32	21	2.0	1.5
22.....	11	11	10	10	.4	10	24	2.0	2.8	5.2	2.0	1.5
23.....	11	11	10	10	1.0	13	22	2.0	2.0	3.0	1.9	1.3
24.....	11	11	10	10	4.0	16	22	2.0	2.2	2.6	2.0	5.2
25.....	11	11	10	10	6.0	18	20	1.8	2.2	2.8	51	6.8
26.....	11	11	10	10	8.0	21	20	1.8	2.9	2.5	4.4	3.6
26.....	11	11	10	10	10	20	17	1.4	2.8	2.3	2.0	8.4
28.....	11	11	10	10	10	15	14	1.4	2.8	2.0	1.9	3.6
29.....	11	11	10	10	10	13	11	1.8	2.7	2.2	1.9	3.6
30.....	11	11	10	10	10	15	7.6	1.8	2.8	1.9	1.9	2.0
31.....	11	11	10	10	10	18	18	1.8	1.8	1.9	1.7	.....

NOTE.—No flow Sept. 8, 1910, to Feb. 27, 1911, except on Sept. 18 and Nov. 5, on which days the discharge was estimated at 25 and 5 second-feet, respectively. Mean discharge for April, 1912, estimated at 8 second feet. Daily discharge determined by the indirect method for shifting channels. Discharge interpolated on days for which gage heights are missing during 1913.

Monthly discharge of Mimbres River near Faywood, N. Mex., for 1908-1911, 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-ft).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1908.					
May.....	25	6.3	11.6	713	C.
June.....	15.8	7.8	9.7	577	C.
July.....	630	10.1	126	7,750	C.
August.....	1,000	24	124	7,620	C.
September.....	520	41	63	3,750	C.
The period.....				20,400	
1908-9.					
October.....	61	28	50	3,080	C.
November.....	44	16	24	1,420	D.
December.....	65	16	30	1,860	D.
January.....	46	4.4	17.2	1,060	C.
February.....	21	4.0	9.5	530	C.
March.....	25	4.8	8.9	548	C.
April.....	5.0	1.6	3.2	187	C.
May.....	3.2	.7	2.2	136	C.
June.....	4.2	.2	1.2	70	C.
July.....	93	.1	5.9	364	C.
August.....	108	1.0	11.4	701	D.
September.....	18	.5	3.6	212	D.
The year.....	108	.1	13.9	10,200	

Monthly discharge of Mimbres River near Faywood, N. Mex., for 1908-1911, 1912-13—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
October.....	7	2	4.5	275	D.
November.....	8.5	5	6.9	411	D.
December.....	4	1.5	2.3	139	D.
January.....	8	3	5.1	314	D.
February.....	10	2	4.4	245	D.
March.....	2.5	2	2.3	144	C.
April.....	2.5	1.6	2.2	131	C.
May.....	2.5	1.6	1.8	111	C.
June.....	12	.5	2.5	147	D.
July.....	57	.0	5.9	364	D.
August.....	196	8	26.9	1,650	D.
September.....	25	.0	2.6	155	D.
The year.....	196	.0	5.6	4,090	
1910-11.					
October.....	0	0	.0	0	
November.....	5	0	.2	10	
December.....	0	0	.0	0	
January.....	0	0	.0	0	
1912.					
May.....	10	8	9.0	553	C.
June.....	38	6	8.1	482	C.
July.....	150	7	35.6	2,190	B.
August.....	100	19	42.9	2,640	B.
September.....	160	12	36.2	2,150	B.
The period.....				8,020	
1912-13.					
October.....	16	11	11.5	707	B.
November.....	11	11	11.0	655	B.
December.....	10	10	10.0	615	B.
January.....	21	10	12.9	793	B.
February.....	10	.2	2.56	142	B.
March.....	21	1.4	7.61	468	B.
April.....	98	7.6	57.2	3,400	B.
May.....	10	1.4	4.01	247	B.
June.....	32	1.6	3.40	202	B.
July.....	21	1.9	3.14	193	B.
August.....	63	1.7	8.91	548	B.
September.....	36	1.3	5.91	352	B.
The year.....	98	.2	11.5	8,320	

LAMPBRIGHT DRAW NEAR SANTA RITA, N. MEX.

Location.—Five and one-half miles southeast of Santa Rita, at mouth of box canyon in sec. 19, T. 18 S., R. 11 W. Rustler Canyon enters Lampbright Draw about 2 miles above the station and Martin Canyon joins about 3½ miles below.

Records available.—August 20, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Automatic recording.

Channel.—Subject to shift during high water.

Discharge measurements.—Wading at low stages and from cable during flood stages.

Winter flow.—Slight backwater from ice during the winter months.

Accuracy.—Estimates of discharge for very low stages rated good; for higher stages estimates can be considered only fair.

Cooperation.—Maintained in cooperation with the Chino Copper Co., Hurley, N. Mex., and the State engineer.

Discharge measurements of Lampbright Draw near Santa Rita, N. Mex., in 1912-13.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 20	Gray and Redding.....	0.30	1.2	June 5	E. L. Redding.....	0.25	0.21
Sept. 5	E. L. Redding.....	.38	1.1	26	do.....	.26	a. 20
Oct. 7	do.....	.35	1.0	Aug. 12	do.....	.15	a. 15
				Nov. 6	do.....	.32	a. 10
1913.				25	do.....	.35	1.2
Feb. 26	E. L. Redding.....	0.34	0.67	Dec. 2	do.....	.32	a. 5
May 1	do.....	.29	.38	22	do.....	.36	a. 1.5

a Estimated.

Daily gage height, in feet, of Lampbright Draw near Santa Rita, N. Mex., for 1912-13.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.				
1912.			1912.			1912.						
1.....		0.37	11.....		0.40	21.....	0.24	0.40				
2.....		.93	12.....		.40	22.....	.21	.40				
3.....		.48	13.....		.40	23.....	.22	.40				
4.....		.38	14.....		.40	24.....	.58	.40				
5.....		.38	15.....		.40	25.....	.53	.40				
6.....		.39	16.....		.40	26.....	.30	.40				
7.....		.40	17.....		.40	27.....	.30	.40				
8.....		.41	18.....		.40	28.....	.30	.40				
9.....		.41	19.....		.40	29.....	.30	.40				
10.....		.41	20.....	0.31	.40	30.....	.31	.41				
						31.....	.35	.....			
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	0.42	0.40	0.35	0.35	0.29	0.35	0.35	0.30	0.31	0.27	0.26	0.36
2.....	.40	.40	.35	.35	.30	.35	.35	.30	.31	.27	.27	.38
3.....	.40	.40	.35	.35	.32	.35	.35	.30	.31	.26	.28	.38
4.....	.40	.40	.35	.35	.30	.35	.35	.30	.31	.25	.29	.40
5.....	.40	.40	.36	.35	.30	.35	.35	.30	.31	.25	.29	.32
6.....	.40	.40	.38	.35	.30	.35	.35	.30	.31	.25	.30	.40
7.....	.41	.40	.35	.35	.40	.35	.35	.30	.31	.25	.30	.40
8.....	.40	.40	.36	.35	.37	.35	.35	.30	.30	.26	.30	.31
9.....	.38	.40	.36	.35	.38	.35	.35	.30	.31	.26	.30	.33
10.....	.38	.40	.35	.35	.42	.35	.35	.30	.31	.24	.30	.40
11.....	.38	.40	.35	.35	.35	.36	.35	.30	.31	.23	.49	.40
12.....	.37	.40	.35	.28	.33	.37	.35	.29	.31	.22	.22	.40
13.....	.37	.40	.35	.28	.32	.37	.35	.29	.30	.23	.21	.38
14.....	.39	.40	.35	.32	.30	.37	.35	.29	.30	.30	.46	.35
15.....	.38	.37	.35	.28	.30	.36	.35	.29	.30	.20	.30	.36
16.....	.38	.35	.35	.28	.30	.35	.35	.30	.30	.19	.30	.36
17.....	.37	.35	.35	.28	.30	.36	.35	.30	.30	.22	.30	.37
18.....	.36	.35	.35	.30	.30	.36	.35	.30	.29	.20	.30	.38
19.....	.35	.35	.35	.28	.30	.37	.35	.30	.29	.20	.32	.38
20.....	.35	.35	.35	.29	.30	.37	.35	.30	.29	.27	.31	.39
21.....	.35	.35	.35	.30	.30	.36	.34	.30	.29	.23	.31	.....
22.....	.35	.35	.35	.35	.30	.35	.33	.30	.33	.24	.32	.....
23.....	.36	.35	.35	.31	.30	.35	.32	.31	.30	.28	.34	.....
24.....	.36	.35	.35	.31	.30	.35	.31	.32	.29	.25	.35	.....
25.....	.33	.35	.35	.30	.35	.35	.30	.31	.29	.25	.42	.....
26.....	.37	.35	.35	.28	.36	.37	.30	.31	.29	.27	.35	.....
27.....	.40	.35	.35	.28	.36	.35	.30	.31	.28	.28	.34	.45
28.....	.39	.36	.35	.28	.36	.35	.30	.31	.28	.28	.36	.45
29.....	.39	.36	.35	.38	.....	.35	.30	.31	.28	.28	.37	.45
30.....	.39	.35	.35	.28	.....	.35	.30	.31	.28	.29	.36	.45
31.....	.40	.....	.35	.28	.....	.35	.....	.31	.....	.27	.36	.....

NOTE.—Gage heights affected by ice Dec. 19-31, 1912.

Daily discharge, in second-feet, of Lampbright Draw near Santa Rita, N. Mex., for 1912-13.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1912.			1912.			1912.		
1.....		1.0	11.....		1.3	21.....	0.8	1.3
2.....		16.0	12.....		1.3	22.....	.5	1.3
3.....		2.9	13.....		1.3	23.....	.6	1.3
4.....		1.1	14.....		1.3	24.....	5.8	1.3
5.....		1.1	15.....		1.3	25.....	4.2	1.3
6.....		1.2	16.....		1.3	26.....	.4	1.3
7.....		1.3	17.....		1.3	27.....	.4	1.3
8.....		1.5	18.....		1.3	28.....	.4	1.3
9.....		1.5	19.....		1.3	29.....	.4	1.3
10.....		1.5	20.....	1.2	1.3	30.....	.5	1.3
						31.....	.8	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1912-13.												
1.....	1.7	1.3	0.8	0.7	0.4	0.7	0.7	0.4	0.5	0.3	0.2	2.0
2.....	1.3	1.3	.8	.7	.4	.7	.7	.4	.5	.3	.3	2.4
3.....	1.3	1.3	.8	.7	.5	.7	.7	.4	.5	.2	.3	2.4
4.....	1.3	1.3	.8	.7	.4	.7	.7	.4	.5	.2	.4	2.7
5.....	1.3	1.3	.9	.7	.4	.7	.7	.4	.5	.2	.4	1.3
6.....	1.3	1.3	1.1	.7	.4	.7	.7	.4	.5	.2	.4	2.7
7.....	1.5	1.3	.8	.7	1.1	.7	.7	.4	.5	.2	.4	2.7
8.....	1.3	1.3	.9	.7	.9	.7	.7	.4	.4	.2	.4	1.2
9.....	1.1	1.3	.9	.7	1.0	.7	.7	.4	.5	.2	.4	1.5
10.....	1.1	1.3	.8	.7	1.2	.7	.7	.4	.5	.2	.4	2.7
11.....	1.1	1.3	.8	.7	.7	.8	.7	.4	.5	.2	5.3	2.7
12.....	1.0	1.3	.8	.3	.6	.9	.7	.4	.5	.2	.4	2.7
13.....	1.0	1.3	.8	.3	.5	.9	.7	.4	.4	.2	.4	2.4
14.....	1.2	1.3	.8	.5	.4	.9	.7	.4	.4	.4	4.4	1.8
15.....	1.1	1.0	.8	.3	.4	.8	.7	.4	.4	.1	1.0	2.0
16.....	1.1	.8	.8	.3	.4	.7	.7	.4	.4	.1	1.0	2.0
17.....	1.0	.8	.8	.3	.4	.8	.7	.4	.4	.2	1.0	2.2
18.....	.9	.8	.8	.4	.4	.8	.7	.4	.4	.1	1.0	2.4
19.....	.8	.8	.7	.3	.4	.9	.7	.4	.4	.1	1.3	2.4
20.....	.8	.8	.7	.4	.4	.9	.7	.4	.4	.3	1.2	2.5
21.....	.8	.8	.7	.4	.4	.8	.7	.4	.4	.2	1.2	2.7
22.....	.8	.8	.7	.7	.4	.7	.6	.4	.5	.2	1.3	2.9
23.....	.9	.8	.7	.5	.4	.7	.5	.5	.4	.3	1.7	3.2
24.....	.9	.8	.7	.5	.4	.7	.5	.5	.4	.2	1.8	3.4
25.....	.7	.8	.7	.4	.7	.7	.4	.5	.4	.2	3.3	3.7
26.....	1.0	.8	.7	.3	.8	.9	.4	.5	.4	.3	1.8	3.9
27.....	1.3	.8	.7	.3	.8	.7	.4	.5	.3	.3	1.7	4.2
28.....	1.2	.9	.7	.3	.8	.7	.4	.5	.3	.3	2.0	4.2
29.....	1.2	.9	.7	.5		.7	.4	.5	.3	.3	2.2	4.2
30.....	1.2	.8	.7	.3		.7	.4	.5	.3	.4	2.0	4.2
31.....	1.3		.7	.3		.7		.5		.3	2.0	

NOTE.—Daily discharge determined from two curves and by the indirect method for shifting channels. Discharge estimated on account of ice Dec. 19-31, 1912.

Monthly discharge of Lampbright Draw near Santa Rita, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
August 20-31.....	5.8	0.4	1.17	28	C.
September.....	16	1.1	1.84	109	C.
1912-13.					
October.....	1.7	.7	1.11	68	B.
November.....	1.3	.8	1.05	62	B.
December.....	1.1	.7	.78	48	B.
January.....	.7	.3	.49	30	B.
February.....	1.2	.4	.57	32	B.
March.....	.9	.7	.75	46	B.
April.....	.7	.4	.62	37	B.
May.....	.5	.4	.43	26	B.
June.....	.5	.3	.43	26	B.
July.....	.4	.1	.23	14	B.
August.....	5.3	.2	1.34	82	C.
September.....	4.2	1.2	2.68	159	C.
The year.....	5.3	.1	.87	630	

WHITEWATER DRAW AT HURLEY, N. MEX.

Location.—About the center of sec. 30, T. 18 S., R. 12 W., at "B" ranch pumping station of the Chino Copper Co., half a mile northeast of Hurley. About 1 mile above the hydraulic fill dam being built by the Chino Copper Co. A small draw enters from the east below the station.

Records available.—June 2 to September 30, 1913.

Drainage area.—35 square miles. (Taken from topographic sheet.)

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—By wading and from car and cable.

Winter flow.—Very little effect from ice during the winter months.

Flood discharge.—Creek subject to sudden floods. No flow most of the year.

Accuracy.—Owing to a lack of discharge measurements, estimates of daily and monthly discharge can not be made.

Cooperation.—Maintained in cooperation with the State engineer of New Mexico and the Chino Copper Co., Hurley, N. Mex.

The following discharge measurement was made by E. L. Redding:

August 15, 1913; gage height, 2.15 feet; discharge, 8.4 second-feet.

Daily gage height, in feet, of Whitewater Draw at Hurley, N. Mex., for 1913.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1.....				11.....				21.....			
2.....				12.....		0.50		22.....			
3.....				13.....		2.20		23.....			2.00
4.....				14.....	0.86	1.70		24.....		2.20	
5.....		2.20	2.00	15.....		1.20		25.....		2.10	
6.....			2.20	16.....				26.....			
7.....				17.....				27.....			
8.....			2.10	18.....				28.....			
9.....			2.30	19.....				29.....			
10.....				20.....				30.....			
								31.....			

NOTE.—Steam was dry on all other days from July 1 to Sept. 30, 1913.

CAMERON CREEK AT FORT BAYARD, N. MEX.

Location.—Near the pumping plant at Fort Bayard, in sec. 25, T. 17 S., R. 13 W. 1 mile below the mouth of the nearest tributary, Beartooth Creek, an intermittent stream.

Records available.—January 17, 1907, to September 11, 1911; August 6, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff for high stages and inclined staff for medium and low stages.

Channel.—Shifting.

Discharge measurements.—Made by wading. For the greater part of the year the flow comes from springs and amounts to less than 1 second-foot.

Winter flow.—Ice does not appreciably affect the flow at this station.

Diversions.—The intake for the Army post water supply is above the station, and a small amount of water is also diverted for garden irrigation.

Accuracy.—Owing to the shifting character of the stream and a lack of high-water discharge measurements, estimates of flow are only approximate. Data 1911 to 1913 insufficient for estimates of discharge.

Cooperation.—Station maintained in cooperation with the United States Army and the State engineer.

Discharge measurements of Cameron Creek at Fort Bayard, N. Mex., in 1907-1910, 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Fect.</i>	<i>Sec.-ft.</i>	1910.		<i>Fect.</i>	<i>Sec.-ft.</i>
Jan. 19	W. A. Lamb.....	2.02	14.0	Feb. 10	J. B. Stewart.....	1.48	<i>a</i> 0.3
May 14	.....do.....	1.75	1.0	May 8	C. D. Miller.....	1.4	<i>a</i> .2
1908.				Sept. 15	J. B. Stewart.....	-----	(<i>b</i>)
Nov. 9	R. L. Cooper.....	1.45	<i>a</i> .5	Nov. 18	T. J. McBurney.....	-----	(<i>b</i>)
1909.				1912.			
Jan. 5	J. B. Stewart.....	1.65	<i>a</i> .6	Aug. 6	Gray and Redding....	1.55	<i>a</i> 1.0
Feb. 5	.....do.....	1.70	.3	14	.....do.....	1.30	<i>a</i> .2
Apr. 16	.....do.....	-----	.5	Sept. 16	E. L. Redding.....	1.30	<i>a</i> .25
June 4	.....do.....	1.62	.5	21	.....do.....	1.30	<i>a</i> .25
July 7	.....do.....	1.62	.5				
Aug. 8	.....do.....	1.32	.5				
Oct. 8	W. B. Freeman.....	1.35	<i>a</i> .2				

a Estimated.*b* Creek dry.

Daily gage height, in feet, and discharge, in second-feet, of Cameron Creek at Fort Bayard, N. Mex., for 1907-1910.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.			1909.		
Jan. 19	2.02	14.0	July 16	1.75	1.0
20-24	-----	2.0	17	1.45	.5
25-29	-----	1.0	18	1.75	1.0
30-31	-----	2.0	19	1.95	8.0
Feb. 1	-----	1.5	20	1.55	.5
2-June 30	-----	1.0	21-31	1.45	.5
July 1-10	-----	.5	Aug. 1	1.60	.5
11	-----	2.5	2-10	1.35	.5
12-20	-----	.5	11	1.70	.5
21	2.2	23.5	12-13	1.35	.5
22-Aug. 26	-----	.5	14	1.6	.5
Aug. 27	2.25	26.5	15-16	1.35	.5
28	2.35	32.0	17	2.45	96
29-Dec. 31	-----	.5	18-20	1.35	.5
1908.			21	2.45	96
Jan. 1-Feb. 3	-----	.5	22-26	1.35	.2
Feb. 4	-----	1.0	27	1.65	.5
5-July 28	-----	.5	28-Dec. 31	1.35	.2
July 29	2.1	18.0	1910.		
30-Aug. 19	-----	.5	Jan. 1-Feb. 9	1.35	.2
20	2.65	48.5	Feb. 10-June 2	1.5	.2
21-Dec. 31	-----	.5	June 3-4	1.55	.5
1909.			5-July 26	1.5	.2
Jan. 1 to June 28	1.45	.5	July 27	2.0	13.0
June 29	1.60	.5	28-Aug. 13	1.5	.2
30-July 2	1.45	.5	Aug. 14	1.65	1.0
July 3	1.50	.5	15-Sept. 11	1.5	.2
July 4-12	1.45	.5	Sept. 12-16	(<i>a</i>)	.0
13	1.60	.5	17-24	1.5	.2
14	1.55	.5	25-Nov. 3	(<i>a</i>)	.0
15	1.45	.5	Nov. 4	1.7	2.0
			5-Dec. 31	(<i>a</i>)	.0

a Creek dry.

NOTE.—The gage heights for low stages are not a true index of the discharge.

Daily gage height, in feet, of Cameron Creek at Fort Bayard, N. Mex., for 1911-12.

Day.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.
1911.								
1		1.67	1.35	1.35	1.35	1.35		
2		1.65	1.35	1.35	1.35	1.35		
3		1.58	1.35	1.35	1.35	1.35		
4		1.55	1.35	1.35	1.35	1.35		
5		1.55	1.35	1.35	1.35	1.35		
6		1.52	1.35	1.35	1.35	1.35		
7		1.42	1.35	1.35	1.35	1.35		
8		1.38	1.35	1.35	1.35	1.35		
9		1.35	1.35	1.35	1.35	1.35		
10		1.35	1.35	1.35	1.35	2.20		
11		1.35	1.35	1.35	1.35			3.00
12		1.35	1.35	1.35	1.35			
13		1.35	1.35	1.35	1.35			
14		1.35	1.35	1.35	1.35			
15		1.35	1.35	1.35	1.35			
16		1.35	1.35	1.35	1.35			
17		1.35	1.35	1.35	1.35			
18		1.35	1.35	1.35	1.35			
19		1.35	1.35	1.35	1.35			
20		1.35	1.35	1.35	1.35			
21		1.35	1.35	1.35	1.72			
22		1.35	1.35	1.35	1.35			
23		1.35	1.35	1.35	1.35		3.80	
24		1.35	1.35	1.35	1.35			
25		1.35	1.35	1.35	1.35			
26		1.35	1.35	1.35	1.35			
27		1.35	1.35	1.35	1.35			
28	1.89	1.35	1.35	1.35	1.35			
29		1.35	1.35	1.35	1.35			
30		1.35	1.35	1.35	1.35			
31		1.35			1.35			

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.						1912.					
1			1.30	1.30	1.30	16	2.28	1.30	1.30	1.30	1.30
2		^a 2.10	1.30	1.30	1.30	17	1.20	1.30	1.30	1.30	1.30
3		1.35	1.30	1.30	1.30	18	1.20	1.30	1.30	1.30	1.30
4		1.30	1.30	1.30	1.30	19	2.25	1.30	1.30	1.30	1.30
5		1.30	1.30	1.30	1.30	20	1.65	1.30	1.30	1.30	1.30
6	1.55	1.30	1.30	1.30	1.30	21	1.20	1.30	1.30	1.30	1.30
7		1.30	1.30	1.30	1.30	22	1.20	1.30	1.30	1.30	1.30
8		1.30	1.30	1.30	1.30	23	1.20	1.30	1.30	1.30	1.30
9		1.30	1.30	1.30	1.30	24	1.20	1.30	1.30	1.30	1.30
10		1.30	1.30	1.30	1.30	25	1.20	1.30	^c 1.65	1.30	1.30
11		1.30	1.30	1.30	1.30	26	1.20	1.30	1.30	1.30	1.30
12		1.30	1.30	1.30	1.30	27	1.20	1.30	1.30	1.30	1.30
13		1.30	1.30	1.30	1.30	28	1.20	1.30	1.30	1.30	1.30
14	1.30	1.30	1.30	1.30	1.30	29	1.20	1.30	1.30	1.30	1.30
15	^b 3.28	1.30	1.30	1.30	1.30	30	^b 3.10	1.30	1.30	1.30	1.30
						31	2.50		1.30		1.30

^a Maximum gage height 3.0 feet.

^b Maximum gage height 5.0 feet.

^c Maximum gage height 2.2 feet.

NOTE.—Creek dry from Jan. 1 to Feb. 27, 1911.

Monthly discharge of Cameron Creek near Fort Bayard, N. Mex., for 1907-1910.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1907.			1908-9.		
January 19-31.....	2.54	66	December.....	.50	31
February.....	1.02	57	January.....	.50	31
March.....	1.00	62	February.....	.50	28
April.....	1.00	60	March.....	.50	31
May.....	1.00	62	April.....	.50	30
June.....	1.00	60	May.....	.50	31
July.....	1.31	81	June.....	.50	30
August.....	2.35	144	July.....	.77	47
September.....	.50	30	August.....	6.57	404
The period.....		622	September.....	.20	12
1907-8.			The year.....		
October.....	.50	31		1.00	736
November.....	.50	30	1909-10.		
December.....	.50	31	October.....	.20	12
January.....	.50	31	November.....	.20	12
February.....	.52	30	December.....	.20	12
March.....	.50	31	January.....	.20	12
April.....	.50	30	February.....	.20	11
May.....	.50	31	March.....	.20	12
June.....	.50	30	April.....	.20	12
July.....	1.06	65	May.....	.20	12
August.....	2.05	126	June.....	.22	13
September.....	.50	30	July.....	.61	38
The year.....	.68	496	August.....	.23	14
1908-9.			September.....	.13	8
October.....	.50	31	The year.....	.23	168
November.....	.50	30			

NOTE.—Estimates of discharge are only approximate.

Floods on Cameron Creek at Fort Bayard, N. Mex., in 1913.

Date.	Hour.	Duration.	Maximum gage height.
		<i>Hours.</i>	<i>Feet.</i>
Mar. 13.....	1. 15 p. m.	1.0	1.40
15.....	1. 00 p. m.	1.0	1.55
July 14.....	5. 30 a. m.	6.5	2.50
Aug. 5.....	3. 00 p. m.	3.0	3.00
13.....	12. 30 p. m.	2.5	2.50
14.....	2. 15 p. m.	3.5	8.50

NOTE.—For other parts of the year the flow comes from springs and amounts to less than 1 second-foot.

CAMERON CREEK NEAR HURLEY, N. MEX.

Location.—In sec. 27, T. 18 S., R. 13 W., 2 miles northwest of Hurley, a quarter of a mile below a concrete dam of the Chino Copper Co. Two small draws enter just above the station from the northwest.

Records available.—July 2 to September 30, 1913.

Drainage area.—46 square miles (measured on topographic map).

Gage.—Vertical staff.

Channel.—Slightly shifting.

Discharge measurements.—Wading and from cable and car.

Winter flow.—Very little effect from ice during winter months.

Flood discharges.—Stream is subject to sudden floods; no flow during most of the year.

Accuracy.—Estimates of the floods were made by discharge measurements and the slope and cross section of the stream. These estimates can be rated as good.

Cooperation.—Maintained in cooperation with the State engineer of New Mexico and the Chino Copper Co., Hurley, N. Mex.

Discharge measurements of Cameron Creek near Hurley, N. Mex., in 1913.

Date.	Hydrographer.	Gage height.	Discharge.
Aug. 14	E. L. Redding.....	Feet. 1.05	Sec.-ft. 282
14	.....do.....	.82	160
14	.....do.....	.79	147
15	.....do.....	.25	a.9

^a Estimated.

Floods of Cameron Creek near Hurley, N. Mex., in 1913.

Date.	Maximum gage height of flood.	Estimated discharge at maximum gage height.	Duration.	Mean gage height of flood.	Mean discharge.	Run-off.
	<i>Feet.</i>	<i>Second-feet.</i>	<i>Hours.</i>	<i>Feet.</i>	<i>Second-feet.</i>	<i>Acre-feet.</i>
July 11.....	2.50	1,450	8.5	1.30	400	282
22.....	2.30	1,250	9.5	1.20	340	268
Aug. 5.....	.60	100	6.0	.50	70	35
11.....	1.00	230	6.0	.90	200	100
12.....	.30	20	1.5	.20	10	1
13.....	1.30	400	7.5	1.20	340	212
14.....	5.50	5,490	12.0	2.40	1,370	1,360
Sept. 8.....	1.20	340	5.0	.55	85	35
9.....	3.30	2,350	4.5	.90	200	75
Nov. 17.....	.50	70	4.0	.35	35	12
Total.....						2,380

NOTE.—From July 2 to Dec. 31 there was no flow on days for which data are missing.

STEVENS CREEK NEAR FORT BAYARD, N. MEX.

Location.—About 3½ miles north of Fort Bayard, 2 miles above the mouth, in sec. 12, T. 17 S., R. 13 W. No tributary below the station.

Records available.—Fragmentary records January 17, 1907, to September 30, 1913.

Drainage area.—Not measured.

Gage.—From January 17, 1907, to August 3, 1912, an inclined gage was installed above the Forest Nursery. The position and datum remained unchanged through this period. August 4, 1912, a vertical staff gage was installed at the Forest Nursery, referred to a new datum, in place of the inclined staff, which was one-half a mile above the nursery.

Channel.—Permanent.

Discharge measurements.—Made by wading.

Winter flow.—Ice has practically no effect on the discharge.

Diversions.—The intake for the planting station ditch of the Forest Service is located above the station.

Accuracy.—Owing to a lack of discharge measurements no estimates of daily or monthly discharge can be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service and the State engineer.

Discharge measurements of Stevens Creek near Fort Bayard, N. Mex., in 1907, 1909-10, 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Fcet.</i>	<i>Sec.-ft.</i>	1910.		<i>Fcet.</i>	<i>Sec.-ft.</i>
Jan. 17	W. A. Lamb.....	1.30	2.7	Feb. 10	J. B. Stewart.....	1.40	a 0.2
May 14	.....do.....	1.14	.1	Mar. 4	.....do.....	1.47	a.3
1909.				May 8	C. D. Miller.....	1.39	(b)
Jan. 5	J. B. Stewart.....	1.30	a .3	Sept. 15	J. B. Stewart.....		a.1
Feb. 5	.....do.....	1.32	a .4	1912.			
Apr. 16	.....do.....	1.35	a .3	Aug. 6	Gray and Redding.....		(c)
July 7	.....do.....	1.48	a .1	.....do.....	.....do.....		(c)
Aug. 8	.....do.....	1.26	a .1	.....do.....	.....do.....		(c)
Oct. 8	W. B. Freeman.....	1.25	a .01	Sept. 16	E. L. Redding.....		(c)

a Estimated.

b Practically no flow.

c Dry.

Daily gage height, in feet, of Stevens Creek near Fort Bayard, N. Mex., for 1907-1910

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.												
1.....					1.18	1.17	.....	1.14	1.18	.....	1.15	1.16
2.....					1.18	1.16	.....	1.14	1.18	.....	1.14	1.15
3.....					1.18	1.15	1.17	1.14	1.17	.....	1.14	1.16
4.....					1.18	1.15	1.16	1.14	1.18	.....	1.15	1.14
5.....					1.17	1.15	1.17	1.14	1.18	.....	1.15	1.15
6.....					1.17	1.15	1.17	1.14	1.18	1.18	1.14	1.15
7.....					1.17	1.16	1.17	1.15	1.18	1.18	1.15	1.14
8.....					1.17	1.17	1.28	1.14	1.18	1.18	1.14	1.14
9.....					1.17	1.17	1.14	1.14	1.18	1.18	1.13	1.12
10.....					1.18	1.15	1.14	1.14	1.17	1.20	1.13	1.13
11.....					1.18	1.16	1.13	1.14	1.17	1.19	1.12	1.13
12.....					1.18	1.16	1.14	1.14	1.16	1.18	1.13	1.13
13.....					1.18	1.16	1.14	1.14	1.16	1.19	1.14	1.13
14.....					1.17	1.16	1.14	1.15	1.17	1.18	1.15	1.18
15.....					1.17	1.16	1.14	1.15	1.15	1.18	1.14	1.15
16.....					1.18	1.16	1.14	1.15	1.20	1.19	1.13	1.16
17.....				1.30	1.18	1.16	1.14	1.15	1.18	1.16	1.14	1.15
18.....					1.17	1.16	1.14	1.15	1.17	1.16	1.14	1.16
19.....					1.17	1.16	1.13	1.15	1.19	1.18	1.15	1.16
20.....				1.18	1.16	1.16	1.13	1.15	1.18	1.18	1.19	1.17
21.....				1.18	1.16	1.16	1.13	1.14	1.18	1.30	1.16	1.17
22.....				1.17	1.16	1.17	1.14	1.15	1.18	1.28	1.17	1.17
23.....				1.17	1.17	.....	1.14	1.15	1.18	1.17	1.17	1.16
24.....				1.17	1.17	.....	1.14	1.15	1.17	1.15	1.16	1.16
25.....				1.17	1.17	1.16	1.14	1.15	1.18	1.15	1.16	1.15
26.....				1.17	1.17	1.16	1.14	.....	1.12	1.14	1.17	1.15
27.....				1.17	1.18	1.16	1.14	.....	1.13	1.15	1.02	1.14
28.....				1.17	1.17	1.16	1.14	1.16	1.13	1.13	1.19	1.14
29.....				1.17	.....	.....	1.15	1.16	1.16	1.12	1.18	1.15
30.....				1.19	.....	.....	1.14	1.20	.....	1.13	1.17	1.14
31.....				1.18	.....	.....	.....	1.19	.....	1.14	1.16	.....

Daily gage height, in feet, of Stevens Creek near Fort Bayard, N. Mex., for 1907-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1909-10.											
1	1.27						1.39				
2			1.38		1.43						
3	1.25	1.35				1.43					
4				1.40		1.47	1.39				1.50
5	1.25		1.39		1.43	1.39					
6											
7	1.27			1.40			1.39				
8		1.35				1.39		1.38			1.60
9			1.40		1.43						1.10
10	1.25			1.41	1.40						
11										1.90	
12	1.25		1.40		1.43	1.39	1.39				
13				1.41							
14					1.42						
15		1.35	1.40	1.41			1.39				
16	1.27										
17	1.27			1.42	1.43						
18			1.40			1.39					
19											
20	1.26	1.36	1.40	1.42			1.40				
21					1.43						
22						1.39					
23											
24	1.26	1.36	1.40		1.43		1.40				
25				1.43		1.39					
26											
27			1.40						2.10		
28					1.43	1.39					
29	1.27	1.36		1.43							
30											
31	1.27										

Gage height, in feet, of Stevens Creek near Fort Bayard, N. Mex., in 1911.

Date.	Gage height.	Date.	Gage height.	Date.	Gage height.
June 22	1.6	Sept. 11	1.7	Oct. 4	1.2
July 9	1.5	29	1.4	27	1.1
10	1.8	30	1.2	28	1.3
Aug. 23	1.5	Oct. 3	1.5		

NOTE.—Creek was dry on all other days during 1911.

Floods on Stevens Creek near Fort Bayard, N. Mex., in 1912-1913.

Date.	Hour.	Duration.	Maximum gage height.	Date.	Hour.	Duration.	Maximum gage height.
1912.				1913.			
Aug. 15.	11.15 a. m.	Hours.	Feet.	July 14.	4.00 a. m.	Hours.	Feet.
16.	1.15 p. m.	1.5	0.5	18.	4.35 p. m.	1.0	0.0
19.	12.45 p. m.	1.5	.2	Aug. 5.	12.35 p. m.	1.5	.3
30.	5.45 p. m.	1.5	.1	14.	2.10 p. m.	1.5	.1
31.	2.30 p. m.	4.0	1.1			2.0	2.9
Sept. 2.	7.30 p. m.	2.0	.5				
		2.5	.4				

NOTE.—Creek was dry Aug. 6-14, 17, 18, 20-29, Sept. 1, and Sept. 3 to Dec. 31, 1912. Creek dry rest of the year during 1913.

RIO DE ARENA NEAR HURLEY, N. MEX.

Location.—In sec. 21, T. 18 S., R. 13 W., 4 miles northwest of Hurley, 150 feet southwest of pumping station of Chino Copper Co., 115 feet south of small concrete dam.

About half a mile above the mouth of a small stream coming from the north.

Records available.—July 2 to September 30, 1913.

Drainage area.—16 square miles (measured on topographic sheet).

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—Wading and from car and cable.

Winter flow.—Very little effect from ice during winter months.

Flood discharge.—Stream is subject to sudden floods; no flow during most of the year.

Accuracy.—Estimates of the flood discharge were computed by means of the slope and cross section and can be considered fair.

Cooperation.—Maintained in cooperation with the State engineer of New Mexico and the Chino Copper Co., Hurley, N. Mex.

Floods of Rio de Arena near Hurley, N. Mex., in 1913.

Date.	Maximum gage height of flood.	Estimated discharge at maximum gage height.	Duration.	Mean gage height of flood.	Mean discharge.	Run-off.
	<i>Feet.</i>	<i>Second-feet.</i>	<i>Hours.</i>	<i>Feet.</i>	<i>Second-feet.</i>	<i>Acre-feet.</i>
July 15.....	1.20	8	2	0.92	1.0	0.2
21.....	1.40	20	2.5	1.00	2.0	.4
Aug. 5.....	2.20	105	1.75	1.17	7.0	1.0
13.....	2.20	105	2	1.85	60	10
14.....	5.40	1,020	5.5	2.24	110	50
Sept. 6.....	2.90	260	3.5	1.94	68	20
7.....	1.10	3	2.5	.77	.5	.1
8.....	2.00	79	4.0	1.54	30	10
9.....	3.00	285	2.5	2.02	80	17
Oct. 3.....	1.80	55	1.0	1.60	35	3.0
Total.....						112

NOTE.—No flow in the stream on days for which data are missing from July 2 to Dec. 31.

FLOOD ON CAMERON CREEK AND RIO DE ARENA AUGUST 10-14, 1913.

Rain began in the Rio de Arena and Cameron Creek basins August 10, 1913, and continued to fall in small showers until the afternoon of August 14, when 2.39 inches of water fell at the United States Forest Service planting station above Fort Bayard and 1.07 inches fell at Fort Bayard. This rainfall was localized around Fort Bayard, as near-by precipitation records show only a moderate rainfall during this period. The total rainfall at the planting station from August 10 to 12 was 2.85 inches and at Fort Bayard 1.84 inches.

The rainfall records show that an average of 2.34 inches of rain fell during the period from August 10 to 14 above the gaging station on the drainage area of Cameron Creek west of Hurley, in the NE. $\frac{1}{4}$ sec. 27, T. 18 S., R. 13 W., an amount equal to 5,490 acre-feet of water on the 44 square miles of drainage area above the gaging station. The flood reached the gaging station at 3.20 p. m. August 14 with a discharge of 2,300 second-feet, and the stream continued to rise until 4.25 p. m. on the 14th, when it reached the maximum gage

height of 5.5 feet, or 5,490 second-foot discharge. At this point it began to recede and at 3 a. m. on the 15th ceased to flow. With a duration of 12 hours and a mean discharge of 1,370 second-feet, this flood carried past the gaging station 1,360 acre-feet of water, or 25 per cent of the rainfall on the drainage area above the station from August 10 to 14. This low percentage of run-off is attributed in large measure to the preceding period of drought, the general condition of the drainage area, and the high rate of evaporation.

At the maximum stage of the stream, or 5,490 second-feet, the run-off from the drainage area was 125 second-feet per square mile, a rate of flow that is considered very heavy, for comparison with the available data shows in general a lower rate of run-off for western streams.

The area drained by Rio de Arena is an oblong stretch of country that lies west of the Cameron Creek basin and extends northward. The rainfall records at Silver City show less precipitation from August 10 to 14 than those in the Cameron Creek basin, and therefore the rainfall in the Rio de Arena basin is assumed to have been less than in the Cameron Creek basin. In the absence of rainfall data no attempt will be made to estimate the volume of water that fell on the drainage area of the Rio de Arena, above the gaging station, in sec. 21, T. 18 S., R. 13 W., northwest of Hurley. As measured on the United States Geological Survey topographic map of the Silver City quadrangle, that area is 16 square miles.

The discharge at the gaging station has been estimated by means of the cross section and the slope of the stream, no discharge measurements being available. On August 13 from 4.55 to 6.55 p. m. a flood passed the gaging station. The maximum stage reached was a gage height of 2.20 feet, with a discharge of 105 second-feet. The mean discharge of this flood was 60 second-feet, or a run-off of 10 acre-feet. A second flood that occurred from 3.55 p. m. to 9.30 p. m. on August 14 reached a maximum stage of 5.40 feet, or 1,020 second-feet at 4.20 p. m.; the mean discharge of the second flood was 110 second-feet, or a run-off of 50 acre-feet for the period.

The run-off from the drainage area during the maximum stage was 63.8 second-feet per square mile, or about one-half of that from the Cameron Creek basin. This fact confirms precipitation records which indicate decrease in rainfall westward.

CLOSED BASINS BETWEEN RIO GRANDE AND PECOS RIVER.

GENERAL FEATURES.

As stated in the general description of the Rio Grande basin (pp. 18-21) there is a large area between the western headwaters of the Pecos and the Rio Grande proper, extending from Albuquerque into Texas, whose waters for the most part flow toward the interior where they

are lost by seepage and evaporation. Within this area there are three streams for which fragmentary records of flow are available, Rio Tularosa, Rio La Luz, and Rio Fresnal. These streams all rise on the western slope of the Sacramento Mountains and flow westward until their waters sink in the sands of the great interior region.

The upper parts of the basins of these three streams, being in the Sacramento Range, receive the heaviest precipitation, the 10-year mean at Cloudercroft (elevation 8,650) being 23 inches. The effect of altitude on precipitation is very clearly marked in this region as at Alamagordo, within a few miles of Cloudercroft (elevation 4,300) the 10-year mean precipitation is less than 11 inches.

GAGING STATION RECORDS.

RIO TULAROSA AT MESCALERO, N. MEX.

Location.—At highway bridge one-fourth mile below the Indian agency at Mescalero, south of the center of T. 13 S., R. 12 E.

Records available.—November 27, 1910, to June 3, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made from the highway bridge during high water and by wading at ordinary stages.

Accuracy.—Owing to a lack of discharge measurements no estimates of daily or monthly discharge can be made.

Cooperation.—Station maintained in cooperation with the United States Indian Service and the United States Forest Service.

Discharge measurements of Rio Tularosa at Mescalero, N. Mex., in 1910-11.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910. Nov. 27	J. B. Stewart.....	<i>Feet.</i> 1.82	<i>Sec.-ft.</i> 13.6	1911. May 24	H. B. Waha.....	<i>Feet.</i> 1.98	<i>Sec.-ft.</i> 11.6

Daily gage height, in feet, of Rio Tularosa at Mescalero, N. Mex., for 1910-11.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1910-11.								1910-11.							
1.....	1.9	1.84	1.80	1.94	.....	2.05	1.88	16.....	1.8	.....	2.00	1.86	1.98	1.98	.....
2.....	1.9	1.86	1.70	1.98	1.72	2.00	1.86	17.....	1.85	.....	2.10	1.84	1.46	2.00	.....
3.....	1.85	1.82	1.90	1.92	1.70	1.98	1.84	18.....	1.95	.....	2.05	1.82	1.50	1.98	.....
4.....	1.85	1.88	2.00	1.96	1.84	1.94	.....	19.....	2.0	.....	1.90	1.84	1.50	1.96	.....
5.....	1.9	1.84	1.90	1.84	1.82	1.84	.....	20.....	1.9	.....	1.95	1.84	1.54	1.90	.....
6.....	1.9	1.90	1.50	1.82	1.84	1.82	.....	21.....	1.95	.....	1.96	1.88	1.50	1.96	.....
7.....	1.85	1.94	1.40	1.82	1.90	1.80	.....	22.....	1.85	.....	1.94	1.86	1.60	1.96	.....
8.....	1.9	.....	1.60	1.86	2.10	1.88	.....	23.....	2.5	.....	1.96	1.90	2.05	1.98	.....
9.....	1.9	.....	1.55	1.84	2.05	1.84	.....	24.....	1.9	.....	1.98	1.84	2.00	1.98	.....
10.....	1.8	.....	1.50	1.80	2.02	1.90	.....	25.....	.....	.....	1.92	1.92	2.10	1.88	.....
11.....	2.1	.....	1.94	1.82	2.00	1.94	.....	26.....	1.9	.....	1.90	1.90	2.10	1.90	.....
12.....	1.9	.....	1.98	1.82	1.98	1.88	.....	27.....	1.95	.....	1.88	1.90	2.05	1.92	.....
13.....	1.95	.....	1.92	1.84	1.98	2.00	.....	28.....	1.9	.....	1.94	1.80	2.00	1.96	.....
14.....	1.95	.....	1.90	1.84	2.00	1.96	.....	29.....	2.5	.....	.....	1.74	2.10	1.98	.....
15.....	1.85	.....	1.88	1.86	1.94	1.94	.....	30.....	2.0	.....	.....	1.82	.....	1.94	.....
								31.....	2.0	.....	.....	1.82	.....	1.98	.....

RIO TULAROSA NEAR BENT, N. MEX.

Location.—In sec. 28, T. 13 S., R. 12 E., 2 miles east of Bent. No important tributaries within several miles of the station.

Records available.—May 24, 1911, to December 30, 1911, when the station was discontinued.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Data too meager to determine.

Discharge measurements.—Made by wading.

Winter flow.—Ice causes backwater at the gage during the winter months.

Diversions.—A number of small ditches divert water for irrigation above the station.

Accuracy.—Owing to a lack of discharge measurements no estimates of daily or monthly discharge can be made.

Cooperation.—Station maintained in cooperation with the United States Forest Service.

The following discharge measurement was made by H. B. Waha:
May 24, 1911: Gage height, 1.32 feet; discharge, 9.4 second-feet.

Daily gage height, in feet, of Rio Tularosa near Bent, N. Mex., for 1911.

Day.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		1.31	1.72	1.40	1.32	1.35	1.35	1.40
2.....		1.31	1.65	1.40	1.34	1.35	1.35	1.40
3.....		1.35	1.67	1.40	1.36	1.35	1.35	1.40
4.....		1.34	1.45	1.40	1.35	1.35	1.37	1.40
5.....		1.38	1.40	1.40	1.36	1.38	1.37	1.40
6.....		1.40	1.40	1.40	1.35	1.40	1.37	1.40
7.....		1.40	1.39	1.39	1.35	1.40	1.40	1.40
8.....		1.40	1.39	1.38	1.35	1.40	1.40	1.40
9.....		1.34	1.41	1.38	1.35	1.36	1.40	1.40
10.....		1.35	1.42	1.36	1.35	1.35	1.40	.....
11.....		1.31	1.86	1.35	1.35	1.35	1.40	.....
12.....		1.31	1.38	1.35	1.35	1.35	1.40	.....
13.....		1.32	1.38	1.38	1.35	1.35	1.40	.....
14.....		1.31	1.39	1.35	1.35	1.35	1.40	.....
15.....		1.35	1.39	1.35	1.35	1.35	1.40	.....
16.....		1.35	1.40	1.35	1.35	1.35	1.40	.....
17.....		1.32	1.38	1.35	1.35	1.35	1.40	1.40
18.....		1.40	1.39	1.35	1.35	1.35	1.40	1.41
19.....		1.39	1.62	1.34	1.35	1.35	1.40	1.44
20.....		1.38	1.40	1.34	1.35	1.35	1.40	1.45
21.....		1.36	1.39	1.32	1.35	1.35	1.40	1.45
22.....		1.36	1.40	1.32	1.35	1.35	1.40	1.45
23.....		1.35	1.39	1.30	1.35	1.35	1.40	1.45
24.....	1.32	1.36	1.39	1.30	1.35	1.38	1.40	1.45
25.....	1.34	1.36	1.40	1.30	1.35	1.40	1.40	1.45
26.....	1.35	1.37	1.40	1.30	1.35	1.40	1.40	1.45
27.....	1.38	1.36	1.40	1.30	1.35	1.40	1.40	1.45
28.....	1.35	1.35	1.40	1.30	1.35	1.40	1.40	1.45
29.....	1.38	1.38	1.40	1.30	1.35	1.40	1.40	1.45
30.....	1.32	1.39	1.40	1.30	1.35	1.37	1.40	1.45
31.....	1.34	.....	1.40	1.30	.....	1.35	.....	.....

RIO TULAROSA NEAR TULAROSA, N. MEX.

Location.—Three miles above Tularosa, about half a mile above the head gate of the Tularosa irrigation ditch, in sec. 21, T. 14 S., R. 10 E.

Records available.—December 2, 1912, to September 30, 1913.

Drainage area.—Not measured.

Gage.—Vertical staff.

Channel.—Shifting.

Discharge measurements.—By wading.

Winter flow.—Very little effect from ice during the winter months.

Diversions.—Some water diverted for irrigation above this station.

Accuracy.—Estimates may be considered excellent for greater part of time.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Rio Tularosa near Tularosa, N. Mex., in 1912-1913.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1913.		<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 2	E. L. Redding.....	1.50	13.1	Mar. 27	E. L. Redding.....	1.40	9.3
				May 21	.....do.....	1.35	2.8
1913.				July 2	.....do.....	1.65	16.3
Feb. 5	E. L. Redding.....	1.45	10.9	Oct. 9	.....do.....	1.47	9.5

Daily gage height, in feet, of Rio Tularosa near Tularosa, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....				1.45	1.52	1.62	1.48	1.52	1.40	1.55	1.50	1.62
2.....			1.42	1.42	1.50	1.60	1.40	1.52	1.35	1.80	1.58	1.52
3.....			1.42	1.40	1.55	1.60	1.55	1.52	1.40	1.60	1.45	1.58
4.....			1.44	1.40	1.55	1.55	1.60	1.48	1.38	1.52	1.25	1.68
5.....			1.44		1.42	1.55	1.60	1.45	1.35	1.42	2.32	1.68
6.....			1.44	1.52	1.48	1.55	1.50	1.38	1.38	1.40	1.58	1.92
7.....			1.46	1.50	1.50	1.55	1.52	1.38	1.38	1.38	1.62	1.70
8.....				1.70	1.50	1.55	1.52	1.40	1.38	1.35	1.32	1.55
9.....			1.44	1.75	1.50	1.60	1.55	1.45	1.35	1.35	1.65	1.50
10.....			1.45	1.62	1.50	1.55	1.60	1.45	1.60	1.45	1.60	1.50
11.....			1.50	1.50	1.50	1.60	1.55	1.38	1.48	1.45	1.42	1.50
12.....			1.50		1.50	1.60	1.42	1.28	1.48	1.52	1.48	1.52
13.....			1.52	1.50	1.55	1.60	1.42	1.48	1.42	1.45	1.45	1.50
14.....			1.46	1.52	1.50	1.60	1.42	1.48	1.40	1.38	1.50	1.50
15.....				1.52	1.55	1.60	1.52	1.45	1.48	1.20	1.65	1.50
16.....			1.50	1.52	1.52	1.60	1.50	1.45	1.40	1.38	1.78	1.48
17.....			1.48	1.55	1.52	1.60	1.50	1.42	1.42	1.45	1.62	1.42
18.....			1.48	1.55	1.55	1.60	1.52	1.40	1.42	1.42	1.62	1.42
19.....			1.48		1.55	1.60	1.52	1.42	1.55	1.42	2.35	1.42
20.....			1.45	1.60	1.55	1.40	1.52	1.42	2.10	1.35	2.40	1.50
21.....			1.45	1.50	1.55	1.40	1.55	1.38	1.60	1.48	1.70	1.50
22.....				1.50	1.55	1.40	1.80	1.45	1.30	1.50	1.78	1.70
23.....			1.48	1.50	1.60	1.35	1.60	1.32	1.30	1.50	2.15	1.50
24.....			1.48	1.52	1.60	1.30	1.58	1.55	1.55	1.45	1.80	1.58
25.....			1.45	1.55	1.65	1.45	1.55	1.18	1.55	1.50	2.12	1.52
26.....			1.35		1.62	1.52	1.55	1.38	1.52	1.50	1.85	1.35
27.....			1.50	1.52	1.60	1.42	1.48	1.48	1.58	1.32	1.72	1.40
28.....			1.40	1.50	1.62	1.40	1.35	1.42	1.68	1.42	1.62	1.42
29.....				1.50		1.38	1.50	1.35	1.60	1.85	1.62	1.35
30.....			1.45	1.55		1.42	1.50	1.32	1.60	1.50	1.62	1.45
31.....			1.42	1.55		1.40		1.35		1.50	1.60	

NOTE.—Gage heights affected by ice Dec. 7, 8, 11-13, 26-28, 1912, and Jan. 1-10, 1913.

Daily discharge, in second-feet, of Rio Tularosa near Tularosa, N. Mex., for 1912-13.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1			10	11	14	19	12	14	9.2	12	10	15
2			10	10	13	18	9.2	14	7.7	25	13	11
3			10	9.2	16	18	16	14	9.2	14	8.5	13
4			11	9.2	16	16	18	12	8.6	11	3.5	18
5			11	11	10	16	18	11	7.7	7.6	97	18
6			11	13	12	16	13	8.6	8.6	7.0	13	35
7			12	13	13	16	14	8.6	8.6	6.5	15	19
8			12	13	13	16	14	9.2	8.6	5.8	15	12
9			11	13	13	18	16	11	7.7	5.8	16	10
10			11	13	13	16	18	11	18	8.5	14	10
11			13	13	13	18	16	8.6	12	8.5	7.6	10
12			13	13	13	18	10	5.6	12	11	9.4	11
13			14	13	16	18	10	12	10	8.5	8.5	10
14			12	14	13	18	10	12	9.2	6.5	10	10
15			12	14	16	18	14	11	12	2.5	16	10
16			13	14	14	18	13	11	9.2	6.5	24	9.4
17			12	16	14	18	13	10	10	8.5	15	7.6
18			12	16	16	18	14	9.2	10	7.6	15	7.6
19			12	17	16	18	14	10	16	7.6	104	7.6
20			11	18	16	9.2	14	10	56	5.8	116	10
21			11	13	16	9.2	16	8.6	14	9.4	19	10
22			12	13	16	9.2	30	11	4.5	10	24	19
23			12	13	18	7.7	18	6.8	4.5	10	64	10
24			12	14	18	6.2	17	7.7	12	8.5	25	13
25			11	16	20	11	16	3.5	12	10	59	11
26			8	15	19	14	16	8.6	11	10	29	5.8
27			13	14	18	10	12	12	13	5.0	20	7.0
28			9	13	19	9.2	7.7	10	18	7.6	15	7.6
29			10	13		8.6	13	7.7	14	29	15	5.8
30			11	16		10	13	6.8	14	10	15	8.5
31			10	16		9.2		7.7		10	14	

NOTE.—Daily discharge determined from the well-defined curve. Discharge estimated on account of ice Dec. 7, 8, 11-13, 26-28, 1912, and Jan. 1-10, 1913. Estimates of flood flow are only approximate. Discharge interpolated for days for which gage heights are missing.

Monthly discharge of Rio Tularosa near Tularosa, N. Mex., for 1912-13.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
December	14	8.0	11.4	701	B.
January	18	9.2	13.5	830	A.
February	20	10	15.2	844	A.
March	19	6.2	14.3	879	A.
April	30	7.7	14.4	857	A.
May	14	3.5	9.78	601	A.
June	56	4.5	12.2	726	A.
July	29	2.5	9.54	587	A.
August	116	3.5	26.8	1,650	C.
September	35	5.8	11.7	696	B.
The period				8,370	

RIO LA LUZ NEAR LA LUZ, N. MEX.

Location.—Two miles southeast of La Luz, one-fourth mile above confluence of Rio La Luz and Rio Fresnal, in sec. 30, T. 15 S., R. 11 E.

Records available.—July 19, 1911, to August 24, 1912, when the station was discontinued.

Drainage area.—30 square miles.

Gage.—Automatic recording. On July 10, 1912, the automatic gage was taken out by a flood. From July 11, 1912, to August 24, 1912, a staff gage was used. Both gages were referred to the same datum. August 25, 1912, the staff gage was carried away by a flood.

Channel.—Shifting.

Discharge measurements.—Made by wading.

Winter flow.—No backwater from ice during the winter months.

Diversions.—There are several diversions for irrigation above this station.

Accuracy.—Because of meager data no estimates of discharge have been made.

Cooperation.—Station maintained in cooperation with the State Engineer.

Discharge measurements of Rio La Luz near La Luz, N. Mex., in 1911-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 14	J. E. Powers.....	1.35	2.1	Apr. 8	J. E. Powers.....	1.50	3.5
Oct. 30	Powers and Carroll....	1.70	5.5	May 8	.....do.....	1.60	2.5
				May 30	.....do.....	1.55	1.1
1912.				June 22	.....do.....	1.50	2.7
Jan. 13	J. E. Powers.....	1.65	5.7	July 20	.....do.....	1.50	3.6
Feb. 10	.....do.....	1.60	3.9	Aug. 24	.....do.....	1.60	4.6
Mar. 20	.....do.....	1.60	4.0				

Daily gage height, in feet, of Rio La Luz near La Luz, N. Mex., for 1911-12.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.							1911.						
1.....	0.97	1.20	1.61	1.79	1.80	1.80	16.....	1.02	1.40	1.71	1.80	1.80	1.80
2.....	.96	1.25	1.63	1.79	1.81	1.81	17.....	1.04	1.40	1.70	1.80	1.81	1.79
3.....	.88	1.30	1.66	1.80	1.82	1.82	18.....	1.03	1.45	1.72	1.80	1.80	1.79
4.....	.79	1.26	1.69	1.80	1.82	1.82	19.....	1.09	1.02	1.48	1.72	1.80	1.79
5.....	.80	1.21	1.73	1.81	1.83	1.83	20.....	1.04	.96	1.57	1.70	1.80	1.79
6.....	.81	1.15	1.77	1.81	1.83	1.83	21.....	1.02	.95	1.58	1.70	1.81	1.79
7.....	.81	1.17	1.80	1.82	1.84	1.84	22.....	1.04	.92	1.58	1.71	1.81	1.79
8.....	.85	1.24	1.75	1.82	1.84	1.84	23.....	.95	1.03	1.59	1.72	1.81	1.80
9.....	.86	1.32	1.71	1.80	1.81	1.81	24.....	.95	1.02	1.48	1.72	1.81	1.80
10.....	.88	1.37	1.71	1.80	1.79	1.79	25.....	.94	1.03	1.42	1.72	1.79	1.80
11.....	.87	1.38	1.71	1.80	1.80	1.80	26.....	.92	1.03	1.45	1.72	1.79	1.81
12.....	.86	1.40	1.71	1.79	1.80	1.80	27.....	.91	1.00	1.43	1.72	1.80	1.81
13.....	.85	1.40	1.71	1.79	1.81	1.81	28.....	.97	1.28	a1.71	1.74	1.80	1.81
14.....	.90	1.43	1.70	1.78	1.81	1.81	29.....	1.05	b1.30	1.58	1.86	1.80	1.80
15.....	.97	1.41	1.70	1.79	1.81	1.81	30.....	.98	1.18	1.60	1.80	1.80	1.80
							31.....	.98	1.21	.....	1.80	.....	1.80

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	1.79	1.81	1.62	1.48	1.61	1.53	1.48	1.45	.....	.....	.....	.....
2.....	1.79	1.80	1.59	1.46	1.62	1.57	1.47	.....	.....	.....	.....	.....
3.....	1.79	1.80	1.58	1.44	1.63	1.56	1.47	1.45	.....	.....	.....	.....
4.....	1.79	1.80	1.59	1.45	1.61	1.56	1.69	.....	.....	.....	.....	.....
5.....	1.80	1.80	1.59	1.46	1.63	1.66	1.60	.....	.....	.....	.....	.....
6.....	1.79	1.80	1.59	1.50	1.70	1.61	1.50	.....	.....	.....	.....	.....
7.....	1.80	1.79	1.60	1.52	1.61	1.61	1.50	.....	.....	.....	.....	.....
8.....	1.80	1.79	1.60	1.53	1.65	1.60	1.50	1.45	.....	.....	.....	.....
9.....	1.80	1.78	1.60	1.56	1.64	1.60	1.50	.....	.....	.....	.....	.....
10.....	1.80	1.79	1.61	1.59	1.67	1.60	1.50	1.50	.....	.....	.....	.....
11.....	1.80	1.80	1.62	1.60	1.57	1.60	.....	.....	.....	.....	.....	.....
12.....	1.80	1.79	1.62	1.60	1.58	1.60	.....	.....	.....	.....	.....	.....
13.....	1.80	1.80	1.62	1.60	1.56	1.59	.....	.....	.....	.....	.....	.....
14.....	1.80	1.80	1.63	1.60	1.50	1.57	.....	.....	.....	.....	.....	.....
15.....	1.80	1.80	1.63	1.60	1.50	1.55	.....	1.50	.....	.....	.....	.....
16.....	1.80	1.80	1.61	1.60	1.47	1.59	.....	.....	.....	.....	.....	.....
17.....	1.79	1.80	1.60	1.60	1.51	1.58	1.50	1.50	.....	.....	.....	.....
18.....	1.79	1.79	1.59	1.61	1.60	1.58	.....	.....	.....	.....	.....	.....
19.....	1.79	1.77	1.57	1.60	1.50	1.59	.....	.....	.....	.....	.....	.....
20.....	1.80	1.78	1.57	1.60	1.52	1.52	1.50	.....	.....	.....	.....	.....
21.....	1.80	1.79	1.56	1.62	1.55	1.50	.....	.....	.....	.....	.....	.....
22.....	1.81	1.80	1.55	1.65	1.64	1.50	.....	.....	.....	.....	.....	.....
23.....	1.80	1.80	1.53	1.64	1.53	1.51	.....	1.50	.....	.....	.....	.....
24.....	1.81	1.80	1.53	1.64	1.55	1.61	1.45	1.50	.....	.....	.....	.....
25.....	1.81	1.77	1.53	1.63	1.60	c1.62	.....	.....	.....	.....	.....	.....
26.....	1.81	1.74	1.51	1.63	1.61	1.58	.....	.....	.....	.....	.....	.....
27.....	1.81	1.71	1.51	1.60	1.61	1.57	1.45	.....	.....	.....	.....	.....
28.....	1.81	1.68	1.50	1.63	1.58	1.56	.....	.....	.....	.....	.....	.....
29.....	1.82	1.65	1.49	1.62	1.58	1.55	.....	.....	.....	.....	.....	.....
30.....	1.82	.....	1.49	1.61	1.58	1.53	.....	.....	.....	.....	.....	.....
31.....	1.82	.....	1.49	.....	1.58	.....	.....	.....	.....	.....	.....	.....

a Maximum gage height, 5.65 feet. b Maximum gage height, 3.90 feet. c Maximum gage height, 2.05 feet.

RIO LA LUZ AT LA LUZ, N. MEX.

Location.—In the Alamo National Forest, three-fourths mile above La Luz, in sec. 30, T. 15 S., R. 11 E., one-half mile below the mouth of Rio Fresnal, the nearest tributary.

Records available.—Fragmentary records August 13, 1910, to April 4, 1913.

Drainage area.—74 square miles.

Gage.—Automatic recording. From August 13 to November 23, 1910, readings were taken from an inclined gage referred to a different datum than is being used at present. The present datum has remained unchanged since November 23, 1910, but an automatic gage was installed July 8, 1911, in place of the inclined staff.

Channel.—Shifting.

Discharge measurements.—Made by wading.

Winter flow.—No effect from ice.

Diversions.—There are several diversions above and below this station.

Accuracy.—Owing to the meagerness of the data, no estimates of daily or monthly discharge can be made.

Cooperation.—Station was maintained in cooperation with the United States Forest Service.

Discharge measurements of Rio La Luz at La Luz, N. Mex., in 1910-1913.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 13	W. B. Freeman.....	1.58	13.7	Jan. 20	J. E. Powers.....	1.15	9.5
Nov. 23	J. B. Stewart.....	1.00	13.5	Feb. 10	.....do.....	1.20	7.6
1911.				Mar. 30	.....do.....	1.30	7.0
Jan. 28	C. D. Miller.....	.98	10.0	May 30	.....do.....	1.30	1.9
May 22	H. B. Waha.....	.90	3.4	July 20	.....do.....	.85	8.3
Aug. 7	J. E. Powers.....	.78	1.1	Aug. 17	.....do.....	4.10	420
Sept. 14	.....do.....	1.00	4.1	24	.....do.....	1.20	8.6
15	.....do.....	1.00	6.9	24	.....do.....	4.50	765
Oct. 14	.....do.....	1.10	10.0	Sept. 28	E. L. Redding.....	1.05	4.7
Nov. 1	.....do.....	1.12	10.5	Oct. 27	.....do.....	1.30	6.1
Dec. 15	.....do.....	1.15	9.6	Nov. 30	.....do.....	1.20	5.4
				1913.			
				Feb. 3	E. L. Redding.....	1.46	7.4
				Mar. 26	.....do.....	1.48	7.7

NOTE.—Measurements made by wading. Gage heights of measurements in 1910 are referred to different datums.

Daily gage height, in feet, of Rio La Luz at La Luz, N. Mex., for 1910-1913.

Day.	August.	Day.	August.
1910.		1910.	
13.....	1.6	16.....	1.6
14.....	1.6	17.....	2.6
15.....	1.6		

Daily gage height, in feet, of Rio La Luz at La Luz, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.												
1									0.90		0.90	0.97
2									.80		.88	.85
3									.80		.80	.76
4									.90		.79	.85
5									.85		.80	.90
6									.85		.80	.85
7									.85		.80	.80
8									.90	0.87	.80	.87
9									.85	a 1.03	.80	1.30
10									1.00	.91	.80	1.30
11									1.00	.89	.80	1.25
12									1.00	.92	.80	1.12
13									1.00	1.01	.82	1.05
14									.90	.91	.84	1.05
15									1.00	.96	.81	1.00
16									.95	.95	.83	1.00
17									.95	.92	.84	1.00
18									.95	.92	.82	1.00
19									1.00	.92	.87	1.00
20									1.00	.91	.88	1.02
21									1.50	.91	.87	1.00
22								0.90		.88	.86	1.00
23										.91	.99	1.00
24										1.02	1.00	.99
25										.99	1.01	.98
26								.95		1.07	1.00	.98
27								.90		1.09	1.00	.98
28								.90		1.16	1.24	b 1.34
29								.85		1.02	c 1.72	.90
30								.85		.93	.93	1.70
31								1.03		.92	1.45	.....
1911-12.												
1	0.98	1.25	1.25	1.21	1.20	1.20	1.30	1.30	1.29	1.45	.90	1.07
2	1.00	1.24	1.21	1.24	1.20	1.20	1.30	1.31	1.31	1.32	.83	1.40
3	.99	1.26	1.19	1.26	1.20	1.20	1.28	1.29	1.32	1.32	.81	.95
4	1.10	1.27	1.20	1.25	1.20	1.21	1.28	1.30	1.30	1.40	.72	.95
5	1.40	1.30	1.20	1.21	1.20	1.21	1.29	1.32	1.39	1.43	.58	.95
6	1.05	1.30	1.20	1.20	1.20	1.21	1.40	1.35	1.39	1.40	.58	.95
7	1.00	1.30	1.20	1.20	1.20	1.21	1.40	1.33	1.39	1.40	.61	.95
8	1.05	1.30	1.20	1.20	1.20	1.21	1.40	1.31	1.40	1.41	.62	.80
9	1.12	1.30	1.17	1.20	1.20	1.20	1.40	1.31	1.39	1.41	.62	.88
10	1.12	1.30	1.13	1.20	1.20	1.33	1.41	1.31	1.39	1.43	.60	.88
11	1.12	1.30	1.13	1.20	1.20	1.40	1.42	1.29	1.40	1.30	.52	.89
12	1.11	1.30	1.10	1.20	1.20	1.41	1.41	1.30	1.41	1.30	.55	1.07
13	1.11	1.32	1.10	1.20	1.20	1.41	1.40	1.30	1.39	1.16	.58	1.08
14	1.10	1.31	1.10	1.20	1.20	1.42	1.40	1.28	1.36	1.07	.55	1.06
15	1.12	1.32	1.15	1.20	1.20	1.41	1.40	1.28	1.40	.93	.88	1.05
16	1.14	1.33	1.20	1.20	1.20	1.41	1.40	1.26	1.40	.86	.94	1.07
17	1.16	1.31	1.18	1.20	1.20	1.39	1.40	1.20	1.40	.84	d 1.14	1.08
18	1.17	1.30	1.18	1.20	1.20	1.38	1.43	1.30	1.40	e 1.22	1.02	1.08
19	1.18	1.30	1.20	1.20	1.20	1.35	1.39	1.30	1.40	.94	1.10	1.05
20	1.19	1.29	1.20	1.20	1.20	1.34	1.35	1.30	1.41	.83	1.12	1.07
21	1.20	1.28	1.20	1.20	1.20	1.34	1.35	1.28	1.41	.79	1.24	1.00
22	1.20	1.27	1.20	1.20	1.20	1.34	1.36	1.30	1.38	.75	1.20	1.02
23	1.20	1.28	1.20	1.20	1.20	1.34	1.35	1.30	1.37	.75	1.20	1.02
24	1.21	1.28	1.20	1.20	1.20	1.31	1.31	1.30	1.39	.73	f 1.45	1.05
25	1.22	1.30	1.20	1.20	1.20	1.31	1.30	1.30	1.41	.78	.85	1.04
26	1.22	1.30	1.20	1.20	1.20	1.31	1.30	1.31	1.41	.80	.65	.98
27	1.22	1.30	1.25	1.20	1.20	1.31	1.30	1.30	1.41	.79	.55	.99
28	1.28	1.30	1.24	1.20	1.20	1.30	1.31	1.27	1.41	.79	.64	1.03
29	1.48	1.34	1.20	1.20	1.20	1.30	1.31	1.30	1.40	.91	.76	1.00
30	1.45	1.34	1.20	1.20	1.20	1.30	1.30	1.31	1.40	.88	.88	1.03
31	1.26	.....	1.21	1.20	.....	1.30	.....	1.32	.....	.90	1.10	.....

a Maximum gage height, 3.15 feet.

b Maximum gage height, 4.20 feet.

c Maximum gage height, 3.95 feet.

d Maximum gage height, 4.10 feet.

e Maximum gage height, 6.95 feet.

f Maximum gage height, 4.50 feet.

Daily gage height, in feet, of Río La Luz at La Luz, N. Mex., for 1910-1913—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1912-13.							
1.....	1.12	1.31	1.21	.....	1.43	1.49	1.48
2.....	1.12	1.30	1.22	.....	1.43	1.49	1.47
3.....	1.10	1.30	1.25	.....	1.43	1.50	1.46
4.....	1.10	1.30	1.28	1.30	1.43	1.50	1.45
5.....	1.10	1.30	1.30	1.30	1.43	1.50	.....
6.....	1.12	1.30	1.30	1.30	1.43	1.50	.....
7.....	1.32	1.31	1.29	1.24	1.47	1.50	.....
8.....	1.26	1.31	1.29	1.25	1.45	1.49	.....
9.....	1.20	1.30	1.29	1.37	1.45	1.51	.....
10.....	1.20	1.31	1.30	1.43	1.48	1.50	.....
11.....	1.20	1.31	1.30	1.45	1.47	1.51	.....
12.....	1.33	1.31	1.30	1.47	1.47	1.51	.....
13.....	1.31	1.31	1.29	1.47	1.47	1.50	.....
14.....	1.29	1.31	1.29	1.46	1.47	1.50	.....
15.....	1.29	1.31	1.30	1.47	1.49	1.50	.....
16.....	1.29	1.30	1.30	1.47	1.50	1.50	.....
17.....	1.29	1.30	1.30	1.46	1.50	1.50	.....
18.....	1.29	1.30	1.30	1.45	1.50	1.50	.....
19.....	1.29	1.30	1.30	1.44	1.50	1.50	.....
20.....	1.31	1.31	1.30	1.44	1.50	1.50	.....
21.....	1.31	1.31	1.30	1.44	1.50	1.50	.....
22.....	1.31	1.30	1.30	1.42	1.51	1.50	.....
23.....	1.32	1.30	1.31	1.40	1.50	1.52	.....
24.....	1.31	1.27	1.32	1.40	1.51	1.52	.....
25.....	1.30	1.27	1.32	1.41	1.52	1.52	.....
26.....	1.30	1.26	1.31	1.42	1.50	1.52	.....
27.....	1.30	1.25	1.31	1.42	1.50	1.50	.....
28.....	1.30	1.25	1.33	1.42	1.50	1.50	.....
29.....	1.31	1.25	1.32	1.42	.....	1.50	.....
30.....	1.31	1.25	1.32	1.42	.....	1.50	.....
31.....	1.30	.....	1.34	1.42	.....	1.48	.....

NOTE.—Slightly affected by ice Jan. 1-9, 1913.

RIO FRESNAL NEAR MOUNTAIN PARK, N. MEX.

Location.—Five miles east of Mountain Park, 4 miles east of Highrolls, 1 mile below the Fresnal box canyon, one-fourth mile below the confluence of Río Fresnal and Salado Creek, the nearest tributary, in sec. 1, T. 16 S., R. 10 E.

Records available.—August 7, 1911, to August 23, 1912, when station was discontinued.

Drainage area.—44 square miles.

Gage.—Automatic recording. From August 7 to October 28, 1911, the gage readings referred to the original datum are used. On November 4, 1911, a second gage was installed which was referred to a new datum. This datum remained unchanged until August 23, 1912, when the gage was washed away by a flood.

Channel.—Shifting.

Discharge measurements.—By wading.

Winter flow.—No backwater from ice during winter months.

Diversions.—There are several diversions above this station for irrigation.

Accuracy.—On account of meager data no estimates were made in 1911 and 1912.

Cooperation.—Station maintained in cooperation with the State engineer.

Discharge measurements of Rio Fresnal near Mountain Park, N. Mex., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1911.				1912.			
Aug. 7	R. L. Cooper.....	0.50	0.6	Jan. 13	J. E. Powers.....	0.70	6.2
Sept. 14	J. E. Powers.....	.60	2.8	Feb. 10	.....do.....	.70	4.3
Oct. 30	Carroll and Powers.....		5.5	Mar. 30	.....do.....	.60	5.0
Nov. 6	J. E. Powers.....	.70	5.6	May 30	.....do.....	.30	.6
				July 20	.....do.....	.40	5.6
				Aug. 23	.....do.....	.40	5.6

Daily gage height, in feet, of Rio Fresnal near Mountain Park, N. Mex., for 1911-12.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.						1911.					
1.....		0.97	0.45		0.71	16.....	0.39	0.60	0.30	0.68	0.70
2.....		.70	.38		.70	17.....	.38	.59	.32	.69	.70
3.....		.68	.33		.70	18.....	.35	.60	.34	.70	.71
4.....		.68	.34	0.70	.70	19.....	.31	.60	.36	.70	.71
5.....		.68	a.58	.70	.70	20.....	.29	.74	.38	.70	.72
6.....		.68	.40	.71	.71	21.....	.29	.78	.40	.70	.72
7.....	0.50	.68	.40	.71	.71	22.....	.31	.76	.40	.70	.72
8.....		.72	.41	.71	.71	23.....	.29	.60	.37	.70	.70
9.....		1.08	.40	.69	.69	24.....	.31	.60	.33	.70	.70
10.....	.46	1.02	.40	.69	.67	25.....	.46	.56	.32	.70	.70
11.....	.45	.97	.39	.70	.65	26.....	.62	.55	.32	.70	.69
12.....	.45	.90	.38	.70	.68	27.....	.60	.57	.31	.70	.69
13.....	.43	.82	.37	.70	.68	28.....	.84	b.95	.34	.70	.70
14.....	.41	.75	.31	.70	.67	29.....	1.06	1.12		.70	.70
15.....	.40	.67	.30	.69	.68	30.....	.99	.72		.70	.70
						31.....	.98				.71

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1912.								
1.....	0.72	0.73	0.77	0.59	0.49	0.30	0.66	0.40
2.....	.72	.72	.78	.60	.49	.27	.73	.42
3.....	.72	.71	.78	.56	.47	.24	.73	.40
4.....	.71	.72	.78	.55	.42	.21	.71	.40
5.....	.70	.71	.78	.56	.41	.23	.62	.40
6.....	.70	.70	.77	.51	.40	.20	.45	.38
7.....	.70	.71	.76	.50	.41	.32	.42	.41
8.....	.70	.71	.75	.51	.41	.41	.44	.42
9.....	.70	.70	.75	.51	.41	.40	.40	.41
10.....	.70	.70	.78	.51	.43	.42	c.55	.36
11.....	.70	.69	.63	.51	.45	.43	.40	.35
12.....	.70	.69	.62	.51	.45	.49	.35	.36
13.....	.70	.68	.61	.51	.43	.45	.30	.35
14.....	.70	.68	.60	.56	.42	.43		.35
15.....	.69	.68	.60	.52	.42	.45		.47
16.....	.69	.68	.60	.53	.42	.43	.35	.52
17.....	.70	.70	.61	.53	.41	.42	.35	.53
18.....	.69	.70	.61	.53	.41	.41	d.60	.54
19.....	.70	.69	.60	.54	.42	.40	.42	.62
20.....	.71	.69	.57	.51	.40	.41	.40	.64
21.....	.72	.69	.52	.51	.39	.43	.40	e.61
22.....	.73	.69	.57	.51	.32	.44	.40	.42
23.....	.73	.72	.62	.51	.30	.42	.40	.40
24.....	.73	.74	.67	.50	.29	.47	.40	
25.....	.73	.78	.68	.49	.34	.45	.40	
26.....	.73	.78	.65	.48	.35	.48	.40	
27.....	.71	.79	.63	.50	.36	.47	.40	
28.....	.72	.78	.60	.50	.36	.49	.40	
29.....	.73	.76	.60	.49	.35	.51	.42	
30.....	.74		.60	.49	.35	.52	.42	
31.....	.74		.59		.33		.42	

a Maximum gage height, 2.95 feet.

b Maximum gage height, 3.65 feet.

c Maximum gage height, 1.50 feet.

d Maximum gage height, 2.00 feet.

e Maximum gage height, 1.50 feet.

MISCELLANEOUS MEASUREMENTS.

Discharge measurements have been made at many points in the Rio Grande drainage basin other than regular stations. These measurements have been compiled from the annual reports of the United States Geological Survey and arranged in accordance with the general rule for presenting discharge data. The measurements on the Rio Grande itself are given first, beginning with the measurement nearest the source and following the stream toward its mouth. Measurements on tributaries are arranged in the same order and follow those on the main stream.

The measurements in this list do not include those made during the seepage investigations in 1911 and 1913.

Miscellaneous measurements in Rio Grande drainage basin.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Dis-charge.
Sept. 12, 1910	Rio Grande.....		Above Clear Creek.....	<i>Fct.</i>	<i>Sec.-ft.</i>
July 18, 1911	.....do.....		South Fork.....	2.82	0.85
July 21, 1911	.....do.....		Below Rio Grande canal.....		.391
Do.....	.....do.....		Below Farmers Union canal.....		.262
Do.....	.....do.....		Headgate Prairie canal.....		.166
May 24, 1904	.....do.....		Monte Vista, Colo.....	1.60	.112
July 14, 1904	.....do.....		.....do.....	.50	.525
July 30, 1904	.....do.....		.....do.....	.60	.77
Sept. 20, 1910	.....do.....		.....do.....		.82
Do.....	.....do.....		6 miles below Monte Vista, Colo.....		.64
Do.....	.....do.....		12 miles below Monte Vista.....		12.1
Do.....	.....do.....		5 miles above Alamosa, Colo.....		18.8
Sept. 14, 1910	.....do.....		Above Rio Alamosa, Colo.....		6.6
Do.....	.....do.....		Above mouth of Rio La Jara, Colo.....		10.8
Sept. 15, 1910	.....do.....		Above mouth of Conejos River, Colo.....		11.7
Sept. 14, 1910	.....do.....		Above mouth of Rio Trinchera, Colo.....		14.8
Sept. 15, 1910	.....do.....		5 miles below LasSauces, Colo.....		15.6
Sept. 16, 1910	.....do.....		2 miles above bridge, Lobatos, Colo.....		46.2
Do.....	.....do.....		Colorado-New Mexico State line.....		41
Sept. 22, 1912	.....do.....		Dunns bridge, New Mexico.....		387
Sept. 24, 1912	.....do.....		Woody's bridge, New Mexico.....		372
Apr. 13, 1889	.....do.....		Below Embudo, N. Mex.....		2,020
Oct. 22, 1904	.....do.....		Albuquerque, N. Mex.....		2,250
Oct. 3, 1911	Clear Creek.....	Rio Grande.....	Santa Maria Lake, Colo.....		73
July 2, 1910	.....do.....	.....do.....	Above ditches, sec. 32., T. 41, R. 2 W.....		84
July 12, 1910	Clear Creek (S. Fork).....	Clear Creek.....	2 miles above mouth.....		4
July 8, 1910	Crooked Creek.....	Rio Grande.....	Sec. 31, T. 41 N., R. 2 W.....		1.2
July 13, 1910	Red Mountain Creek.....	.....do.....	Sec. 18, T. 40 N., R. 1 W.....		29
July 3, 1910	Shallar Creek.....	.....do.....	Above ditches, sec. 4, T. 41 N., R. 1 W.....		8.9
Do.....	.....do.....	.....do.....	Sec. 10, T. 41 N., R. 1 W.....		3.3
July 6, 1910	Miners Creek.....	.....do.....	Sec. 2, T. 41 N., R. 1 W.....		2.6
Nov. 10, 1907	Willow Creek.....	.....do.....	Creede, Colo.....	<i>a</i> 20	
May 17, 1909	.....do.....	.....do.....	1 mile below South Fork, Colo.....	<i>a</i> 50	
July 15, 1910	.....do.....	.....do.....	In flume above Creede, Colo.....		18.2
Aug. 1, 1910	.....do.....	.....do.....	Below all ditches.....		3.1
Mar. 17, 1908	Dry Gulch.....	.....do.....	Wason, Colo.....		2
Mar. 7, 1910	Bellows Creek.....	.....do.....	Sec. 13, T. 41 N., R. 1 E., Colorado.....		31.5
Do.....	.....do.....	.....do.....	500 feet above mouth, sec. 14, T. 41 N., R. 1 E., Colorado.....		23.6
May 18, 1909	Goose Creek.....	.....do.....	Wagon Wheel Gap, Colo.....	<i>a</i> 30	
July 1, 1910	.....do.....	.....do.....	1,000 feet above mouth, sec. 35, T. 41 N., R. 1 E., Colorado.....		79.6
Sept. 23, 1910	.....do.....	.....do.....	.....do.....		22
Oct. 20, 1910	.....do.....	.....do.....	.....do.....		21

a Estimated.

Miscellaneous measurements in Rio Grande drainage basin—Continued.

Date.	Stream	Tributary to—	Locality.	Gage height.	Dis-charge.
				<i>Feet.</i>	<i>Sec.-ft.</i>
July 13, 1910	Deer Creek.....	Goose Creek.....	Sec. 35, T. 41 N., R. 1 E.....		1.0
July 19, 1910	Elk Creek.....	Rio Grande.....	Below all ditches.....		.4
July 20, 1910	Trout Creek.....	do.....	Sec. 4, T. 39 N., R. 3 E.....		12
July 13, 1910	do.....	do.....	Sec. 24, T. 40 N., R. 3 E., above ditches.		28
Do.....	Bear Creek.....	Trout Creek.....	Sec. 24, T. 40 N., R. 2 W.....		.8
July 19, 1910	Alder Creek.....	Rio Grande.....	Above ditches, sec. 27, T. 40 N., R. 3 E.		5.1
May 17, 1909	Shaw Creek.....	do.....	4 miles below South Fork, Colo.		15
Aug. 3, 1910	Embargo Creek.....	do.....	Sec. 33, T. 41 N., R. 4 E.....		10
Aug. 6, 1910	do.....	do.....	Below ditches, sec. 23, T. 40 N., R. 4 E.		8.4
May 17, 1909	Los Pinos Creek.....	Rio Grande.....	2 miles above Del Norte, Colo.		60
July 27, 1909	do.....	do.....	Below ditches, sec. 26, T. 40 N.		2
July 22, 1910	San Francisco Creek.....	do.....	T. 39 N., R. 6 E.....		1.0
Aug. 17, 1910	Rock Creek.....	do.....	Sec. 32, T. 38 N., R. 7 E.....		7
Sept. 3, 1910	Spring Creek.....	Rock Creek.....	Below Sheridan ditches, T. 37 N., R. 7 E.		10
Sept. 8, 1910	Cotton Creek.....	San Luis Creek.....	At mouth.....		0.
Oct. 7, 1910	do.....	do.....	do.....		2
Do.....	Wild Cherry Creek.....	do.....	do.....		0
Do.....	Rito Alto Creek.....	do.....	do.....		0
Sept. 9, 1910	San Isabel Creek.....	do.....	do.....		0.5
Sept. 10, 1910	Rito Arenas Creek.....	do.....	Liberty, Colo.....		6.6
Sept. 9, 1910	Deadman Creek.....	Rito Arenas Creek.....	do.....		1.0
Oct. 5, 1910	Carnero Creek.....	San Luis Creek.....	½ mile above Devil's Gate, near La Garita, Colo.		5
Aug. 8, 1910	do.....	do.....	At Devil's Gate, near La Garita, Colo.		2.8
Sept. 2, 1910	do.....	do.....	At stage road between Del Norte and Saguache, 1½ miles northwest of La Garita, Colo.		.8
Oct. 7, 1910	do.....	do.....	Mouth near Bismark (p. o.), Colo.		.0
Aug. 25, 1910	La Garita Creek.....	do.....	Sec. 6, T. 41 N., R. 6 E.....		5.1
Sept. 2, 1910	do.....	do.....	3 miles southwest of La Garita (p. o.).		.8
Oct. 5, 1910	do.....	do.....	do.....		4.4
Oct. 17, 1910	Rio Alamosa.....	Rio Grande.....	Above Nordland ditch, sec. 7, T. 35 N., R. 8 E.		b2
May 29, 1913	do.....	do.....	5 miles above Terrace reservoir.		497
June 2, 1913	do.....	do.....	do.....		389
May 13, 1913	do.....	do.....	Just above Terrace reservoir.		450
May 29, 1913	do.....	do.....	Below main canal of Terrace reservoir, 2 miles above Capulin, Colo.		511
June 2, 1913	do.....	do.....	do.....		504
Sept. 26, 1910	do.....	do.....	Near Capulin, Colo.		8.2
July 2, 1913	do.....	do.....	At Capulin, Colo.		55
May 30, 1913	do.....	do.....	5 miles below Terrace reservoir.		335
Aug. 9, 1910	do.....	do.....	At mouth, near Alamosa, Colo.		0
Sept. 24, 1910	do.....	do.....	do.....		0
Sept. 28, 1910	do.....	do.....	do.....		0
Oct. 17, 1910	Rio La Jara.....	do.....	T. 34 N., R. 6 E.....		a 15
Aug. 15, 1910	do.....	do.....	Hanson's ranch, near Alamosa, Colo.		61
Aug. 17, 1910	do.....	do.....	do.....		52
Sept. 28, 1910	do.....	do.....	do.....		4.4
Oct. 17, 1910	do.....	do.....	do.....		11.4
Sept. 14, 1910	do.....	do.....	At mouth near Alamosa, Colo.		3.1
Sept. 17, 1910	Rio Trinchera.....	do.....	T. 31 S., R. 71 W., Colorado.		9.9
Sept. 18, 1910	do.....	do.....	Head of Trinchera canal, sec. 2 T. 31 S., R. 72 W., Colorado.		6
Do.....	do.....	do.....	Head of Pat Breen ditch, sec. 2, T. 31 S., R. 73 W., Colorado.		0
Oct. 4, 1910	do.....	do.....	½ mile above mouth, sec. 24, T. 31 S., R. 75 W., Colorado.		a 1
Sept. 14, 1910	do.....	do.....	At mouth, near Alamosa, Colo.		0
Sept. 29, 1910	do.....	do.....	do.....		0
Sept. 16, 1910	Ute Creek.....	Rio Trinchera.....	Below White ranch, T. 29 S., R. 72 W.		6.9
Sept. 15, 1910	Sangre de Cristo.....	Ute Creek.....	T. 30 S., R. 71 W.....		1.0
Sept. 15, 1911	Conejos River.....	Rio Grande.....	Near mouth, at Austin's ranch, near La Jara, Colo.		24
Sept. 28, 1910	do.....	do.....	do.....		25

a Float measurement.

Miscellaneous measurements in Rio Grande drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Discharge.
Oct. 17, 1910	Concejos River	Rio Grande	Near mouth, at Austin's ranch, near La Jara, Colo.	<i>Fect.</i>	<i>Sec.-ft.</i> 34
June 11, 1907	Fox Creek	Conejos River	Mogote, Colo.		a 30
June 27, 1907	do.	do.	do.		a 2
July 30, 1907	do.	do.	do.		0
Nov. 8, 1907	do.	do.	do.		0
May 18, 1908	do.	do.	do.		a 2
June 9, 1908	do.	do.	do.		0
July 31, 1907	Rio San Antonio	do.	Antonito, Colo.		a 50
May 18, 1908	do.	do.	do.		723
May 9, 1908	do.	do.	do.		282
June 15, 1909	do.	do.	1 mile south of Antonito, Colo.		814
June 23, 1909	do.	do.	do.		234
Oct. 1, 1909	do.	do.	do.		b 20
Apr. 2, 1910	do.	do.	do.		40
May 26, 1910	do.	do.	do.		197
Oct. 13, 1910	do.	do.	½ mile east of Lobatos		0
July 22, 1911	do.	do.	1 mile south of Antonito.		50
Aug. 9, 1911	do.	do.	do.		3
Aug. 10, 1911	Los Pinos Creek	San Antonio	Osier, Colo.		7
Sept. 9, 1910	Culebra River	Rio Grande	Above forks, sec. 36, T. 3 N., R. 71 W.		15.3
Sept. 14, 1910	do.	do.	Sec. 27, T. 3 N., R. 72 W.		31.3
July 29, 1913	do.	do.	Above main feeder to Sanchez reservoir.		45
Sept. 10, 1910	Vallejo Creek	Culebra River	1 mile below sawmill, T. 2 N., R. 71 W.		7
Sept. 13, 1910	Ventero Creek	do.	Sec. 1, T. 1 N., R. 72 W.		.8
Sept. 10, 1910	Joroso Creek	Ventero Creek	T. 1 N., R. 71 W.		2.5
Sept. 12, 1910	Torcido Creek	do.	Mouth of canyon, T. 1 N., R. 71 W.		1
Sept. 8, 1910	Pozo Creek	Culebra River	T. 3 N., R. 71 W.		9.9
Dec. 27, 1911	Costilla Creek	Rio Grande	Costilla, N. Mex.		25
Oct. 13, 1910	do.	do.	1 mile west of Eastdale, Colo.		0
Apr. 9, 1910	do.	do.	do.		32
Dec. 27, 1911	do.	do.	do.		0
Sept. 20, 1912	do.	do.	Mouth		0
Sept. 13, 1910	Latir Creek	do.	4 miles above Carro, N. Mex.		4.8
Oct. 13, 1910	do.	do.	Road crossing near Questa, N. Mex.		3
Sept. 20, 1912	do.	do.	Mouth		0
Apr. 26, 1912	Rio Colorado	do.	3 miles above Red River		15.8
Apr. 27, 1912	do.	do.	5 miles above Questa, N. Mex.		49.5
Mar. 1, 1889	do.	do.	Near Red River, N. Mex.		23
Apr. 26, 1912	Road Canyon	Rio Colorado	1½ mile above Red River, N. Mex.		a 1
Do.	Bobcat Creek	do.	Just above Red River, N. Mex.		a 3
Apr. 25, 1912	Columbine Creek	do.	½ mile above mouth		a 8
Apr. 27, 1912	do.	do.	Mouth		a 7
Sept. 13, 1910	Cabresto Creek	do.	4 miles above Questa, above all ditches.		6
Dec. 24, 1912	do.	do.	3 miles above Questa, N. Mex.		15.3
Dec. 27, 1912	do.	do.	2½ miles above Questa, N. Mex.		15.5
Sept. 13, 1910	do.	do.	Mouth		.5
Apr. 24, 1912	Lake Fork of Cabresto Creek	Cabresto Creek	do.		5
Sept. 24, 1912	Arroyo Hondo	Rio Grande	do.		0
Oct. 15, 1910	Arroyo Seco	Arroyo Hondo	Near mouth		1
Feb. 23, 1889	Rio Taos	Rio Grande	Near Taos, N. Mex.		16
Feb. 25, 1889	do.	do.	Near Los Cordovas, N. Mex.		52
Feb. 27, 1889	Taos Creek	Rio Taos	In canyon		3
May 5, 1908	Rio Lucero	do.	In canyon, 10 miles above Taos, N. Mex.		43.7
Do.	do.	do.	Above ditch, near Taos, N. Mex.		33.2
Do.	do.	do.	Above Pueblo pasture, near Taos.		7.1
Sept. 23, 1912	Rio Fernando de Taos	do.	3 miles above mouth		9.8
Apr. 22, 1912	Rio Chiquita	do.	Taos road crossing		40
Mar. 31, 1913	Baracha Creek	Rio Vallecitos	25 feet above mouth		22.3
Apr. 22, 1912	Cienuquilla Creek	Rio Grande	3 miles above Woodys, N. Mex.		2.5
Sept. 24, 1912	do.	do.	Mouth		0
Feb. 12, 1889	Embudo Creek	do.	do.		20
Sept. 24, 1912	do.	do.	do.		29
Aug. 14, 1911	Chama River	do.	Chama, N. Mex.		12
Sept. 30, 1909	do.	do.	Chamita, N. Mex.		20
Oct. 1, 1909	do.	do.	do.		30
Mar. 26, 1889	Brazos River	Chama River	Near mouth		150
Mar. 31, 1889	Nutritas Creek	do.	do.		10
Mar. 26, 1889	Willow Creek	do.	do.		12

a Estimated.

b Float measurement.

Miscellaneous measurements in Rio Grande drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Dis-charge.
				Feet.	Sec.-ft.
Mar. 27, 1889	Oso Creek	Chama River	Near mouth		5
Mar. 28, 1889	Frijoles Creek	do.	do.		5
Mar. 29, 1889	Upper Canyon	do.	do.		8
Mar. 30, 1889	Lower Canyon	do.	do.		14
Mar. 26, 1889	Rio Nutritas	do.	do.		26
Do.	Cebolla Creek	do.	do.		12
Do.	Puerco Creek	do.	do.		40
Do.	Horn River	do.	do.		28
Do.	Little Chama River	do.	do.		95
Do.	El Rito Creek	do.	do.		33
Feb. 14, 1889	Ojo Caliente	do.	do.		28
Mar. 7, 1889	do.	do.	do.		50
Apr. 20, 1889	Santa Cruz River	Rio Grande	Near Santa Cruz, N. Mex.		83
Mar. 30, 1910	do.	do.	1/2 mile above Santa Cruz, N. Mex.		32
May 6, 1911	Medio Creek	Santa Cruz River	Near Nambu, N. Mex.		3.9
Mar. 16, 1910	Rio Quemado	do.	1 1/2 miles above Cordova, N. Mex.		6.3
Mar. 17, 1889	Santa Clara River	Rio Grande	Near Espanola, N. Mex.		6
Apr. 17, 1889	do.	do.	do.		11
Mar. 6, 1911	Tesque Creek	do.	Tesque, N. Mex.		3
Apr. 19, 1889	do.	do.	Near Santa Fe, N. Mex.		23
Apr. 18, 1889	do.	do.	Above Tesuque, N. Mex.		50
Mar. 11, 1889	do.	do.	Below Tesuque, N. Mex.		19
May 6, 1911	Nambu Creek	Tesque Creek	At Nambu, N. Mex.		11
Do.	do.	do.	Near Nambu, N. Mex.		26.1
Do.	do.	do.	Nambu Falls, N. Mex.		6.8
Sept. 18, 1913	do.	do.	Below Nueva Aceque, N. Mex.		5.9
Do.	do.	do.	Below Nambu Falls, N. Mex.		8.2
Do.	do.	do.	Below Trujillos Aceque, N. Mex.		3.9
Mar. 19, 1911	Santa Fe Creek	do.	3 miles above Santa Fe, N. Mex.		6.0
Jan. 24, 1911	do.	do.	2 miles above Santa Fe, N. Mex.	40	a 2.0
Mar. 8, 1911	do.	do.	do.		9.7
Do.	do.	do.	1 mile above Santa Fe, N. Mex.		7.1
Apr. 16, 1912	do.	do.	Santa Fe, N. Mex.		a 12.0
Apr. 17, 1912	do.	do.	do.		a 12.0
Apr. 18, 1912	do.	do.	do.		a 12.0
Apr. 19, 1912	do.	do.	do.		a 7.0
Apr. 21, 1912	do.	do.	do.		a 2.5
Apr. 22, 1912	do.	do.	do.		a 2.5
Mar. 14, 1911	do.	do.	La Bajada, N. Mex.		a 8.0
Nov. 14, 1911	Galisteo Creek	do.	Above Lamy, N. Mex.		a 2.5
Do.	do.	do.	Lamy, N. Mex.		a 2.5
July 27, 1911	do.	do.	Los Cerrillos, N. Mex.		a 4.0
July 29, 1911	do.	do.	do.		a 4.0
Nov. 14, 1911	do.	do.	Mouth		4.0
Nov. 11, 1911	San Cristobal Creek	Galisteo Creek	Kennedy, N. Mex.		2.0
Do.	Jaspe Creek	San Cristobal Creek	2 miles south of Kennedy, N. Mex.		0
Mar. 15, 1889	Jemez River	Rio Grande	Canyon, N. Mex.		85
May 25, 1889	do.	do.	do.		83
July 3, 1889	do.	do.	do.		30
July 6, 1889	do.	do.	do.		29
Aug. 25, 1889	do.	do.	do.		22
Oct. 1, 1889	do.	do.	Below Canyon, N. Mex.		20
Feb. —, 1889	Bluewater Creek	Rio Puerco	Below Big Spring near San Jose, N. Mex.		10-12
July 28, 1911	do.	do.	Near Copperton, N. Mex.		100
Do.	do.	do.	Above Cottonwood Creek		75
Do.	Cottonwood Creek	Bluewater Creek	Near mouth		25
Aug. 4, 1912	Tularosa River	Interior Basin	4 miles below Bent, N. Mex.		11.3
Mar. 31, 1912	Pecos River	Rio Grande	Valley Ranch, N. Mex.		112
Mar. 11, 1911	do.	do.	San Miguel, N. Mex.		92
Oct. 20, 1912	do.	do.	1 mile below San Miguel, N. Mex.		38
Do.	do.	do.	1 mile below Puertito, N. Mex.		40
Oct. 19, 1912	do.	do.	2 miles above La Cuesta, N. Mex.		26
Mar. 11, 1911	do.	do.	1 mile above La Cuesta, N. Mex.		77
Do.	do.	do.	La Cuesta, N. Mex.		87
Mar. 10, 1911	do.	do.	4 miles below La Cuesta, N. Mex.		92
Oct. 19, 1912	do.	do.	2 miles below La Junta, N. Mex.		2
Mar. 11, 1911	do.	do.	1 mile below Anton Chico		81
Oct. 19, 1912	do.	do.	2 miles above Los Colonias		0
Do.	do.	do.	Los Colonias, N. Mex.		0
Mar. 13, 1911	do.	do.	1 mile below Los Colonias		20
Nov. 11, 1911	do.	do.	Santa Rosa, N. Mex.		77
Sept. 22, 1912	do.	do.	6 miles below Santa Rosa		20
Feb. 3, 1910	do.	do.	4 miles below Santa Rosa, N. Mex.		95
Mar. 14, 1911	do.	do.	4 miles below Puerta de Luna		88
Sept. 18, 1912	do.	do.	Mouth of Alamo Gordo Creek		82

a Estimated.

Miscellaneous measurements in Rio Grande drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Dis-charge.
Jan. 13, 1911	Pecos River.....	Rio Grande	Fort Sumner, N. Mex.....	<i>Fct.</i>	<i>Sec.-ft.</i>
May 11, 1911	do.....	do.....	do.....		3
Apr. 29, 1912	do.....	do.....	Carlsbad, N. Mex.....		100
June 11, 1912	do.....	do.....	do.....		136
Sept. 8, 1898	do.....	do.....	do.....		476
Sept. 7, 1898	do.....	do.....	Red Bluff, N. Mex.....		227
Sept. 5, 1898	do.....	do.....	Eddy, Tex.....		157
Mar. 30, 1912	Davis Creek.....	Pecos River.....	6 miles above Pecos, Tex.....		80
June 9, 1910	Wilbur Creek.....	do.....	do.....		1.0
Jan. 5, 1911	do.....	do.....	do.....		2
Oct. 31, 1911	San Antonio Creek.....	do.....	Below Cowles, N. Mex.....		.5
Do.....	Cebadilla Creek.....	do.....	do.....		3
Jan. 6, 1911	Holy Ghost Creek.....	do.....	Lloyds ranch.....		4
Apr. 23, 1910	do.....	do.....	Mouth.....		15
June 9, 1910	do.....	do.....	do.....		8
Mar. 31, 1911	do.....	do.....	do.....		2.5
May 25, 1911	do.....	do.....	do.....		4
Oct. 31, 1911	do.....	do.....	do.....		5
Mar. 30, 1912	do.....	do.....	do.....		20
Apr. 23, 1910	Indian Creek.....	Holy Ghost Creek.....	do.....		2.8
June 9, 1910	do.....	do.....	do.....		.5
Nov. 1, 1910	do.....	do.....	do.....		.5
Mar. 31, 1911	do.....	do.....	do.....		1.5
May 25, 1911	do.....	do.....	do.....		1.0
Aug. 7, 1911	do.....	do.....	do.....		2
Oct. 31, 1911	do.....	do.....	do.....		1.0
Mar. 30, 1912	do.....	do.....	do.....		8
Aug. 7, 1911	Dark Canon.....	Pecos River.....	Santa Fe-Pecos trail.....		.5
May 25, 1911	El Macho Creek.....	Dark Canon.....	Mouth.....		.5
Aug. 7, 1911	do.....	do.....	Santa Fe-Pecos trail.....		1.0
Mar. 31, 1911	do.....	do.....	Mouth.....		3
Apr. 23, 1910	do.....	do.....	do.....		9.7
June 9, 1910	do.....	do.....	do.....		0
Mar. 30, 1912	do.....	do.....	do.....		10
Apr. 23, 1910	Dalton Creek.....	Pecos River.....	do.....		10.7
June 9, 1910	do.....	do.....	do.....		0
Mar. 31, 1911	do.....	do.....	do.....		2
May 25, 1911	do.....	do.....	do.....		.5
Mar. 30, 1912	do.....	do.....	do.....		8
Aug. 20, 1911	Gallinas River.....	do.....	Las Vegas, N. Mex.....		.2
Apr. 20, 1912	do.....	do.....	do.....		7
Apr. 21, 1912	do.....	do.....	do.....		7
Oct. 21, 1910	Salado Creek.....	Gallinas Creek.....	Railroad crossing north of Las Vegas.....		.8
Sept. 22, 1912	Rito Creek.....	Pecos River.....	Santa Rosa, N. Mex.....		28
Aug. 18, 1910	Canyon Pintada.....	do.....	Pintada, N. Mex.....		0
Aug. 19, 1910	do.....	do.....	do.....		4
Aug. 20, 1910	do.....	do.....	do.....		0
Nov. 11, 1911	do.....	do.....	do.....		0
Feb. 17, 1912	do.....	do.....	do.....		0
Feb. 3, 1910	do.....	do.....	Mouth.....		29
Sept. 22, 1912	do.....	do.....	do.....		4
Feb. 3, 1910	Agua Negra Chiquita.....	do.....	Near mouth.....		33
Mar. 13, 1910	do.....	do.....	do.....		29
Feb. 10, 1889	Hondo River.....	do.....	10 miles west of Roswell, N. Mex.....		48
Feb. 26, 1889	do.....	do.....	Frasier's mill.....		16
June 1, 1911	Rio Ruidoso.....	Hondo River.....	6 miles west of Ruidoso, N. Mex.....		10.3
May 18, 1907	Rio Bonito.....	do.....	Below diversion above Fort Stanton.....		8.2
May 17, 1907	do.....	do.....	Fort Stanton, N. Mex.....		10.6
Aug. 17, 1910	do.....	do.....	1/2 mile below Fort Stanton.....		.2
May 18, 1907	Rio Bonito, West Fork.....	do.....	Just above forks.....		4.5
Do.....	Rio Bonito, South Fork.....	do.....	do.....		8
Aug. 17, 1910	Salado Creek.....	Rio Bonito.....	2 miles below Capitan, N. Mex.....		.8
Feb. 9, 1889	North Spring River.....	Hondo River.....	do.....		5 0
Do.....	South Spring River.....	do.....	do.....		73
Aug. 15, 1910	Felix River.....	Pecos River.....	2 miles west of east boundary Mescalero Reservation, N. Mex.....		0
Do.....	Lincoln Canyon.....	Felix River.....	see. 32, T. 13 S., R. 17 W.....		.2
Aug. 16, 1910	do.....	do.....	do.....		0
Mar. 15, 1911	Penasco River.....	Pecos River.....	5 miles below Elk, N. Mex.....		96
Mar. 23, 1910	do.....	do.....	4 miles below Elk, N. Mex.....		32
Mar. 26, 1910	Penasco River (Upper).....	do.....	Falls 1 mile below Box Canyon.....		15
Mar. 22, 1910	do.....	do.....	Railroad crossing.....		31
Apr. 11, 1910	do.....	do.....	5 miles below Mayhill, N. Mex.....		54
Mar. 23, 1910	do.....	do.....	Laramore Ranch.....		37

Miscellaneous measurements in Rio Grande drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Discharge.
				<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 23, 1910	Penasco River (Upper)	Pecos River	Head of Hope ditch near Hope, N. Mex.		23
Aug. 14, 1910	Chiquita Creek	Penasco River	Mouth		0
Oct. 24, 1907	Alamo River	do.	10 miles southeast of Alamo-gordo, N. Mex.		3
Aug. 15, 1910	Elk Canyon	do.	Mouth		.5
Aug. 14, 1910	James Canyon	do.	2 miles east of Cloudercroft, N. Mex.		0
Do.	do.	do.	Mouth		25
Jan. 18, 1912	Hope ditch	do.	Head of ditch		33
Do.	do.	do.	Charley White Draw		29
June 10, 1906	Black River	Pecos River	Malaga, N. Mex.		8.5
Do.	do.	do.	Johnson's ranch, near Malaga, N. Mex.		7.6
June 29, 1906	do.	do.	Keenan's ranch		.59
Do.	do.	do.	Blue Spring ranch		3.77
Aug. 2, 1906	do.	do.	Above Blue Spring ranch		3.7
Feb. 1, 1907	do.	do.	Kenyon's ranch, sec. 8, T. 27 N., R. 26 E., New Mexico.		.25
Sept. 22, 1907	do.	do.	Above Judkin's ranch, sec. 3, T. 27 N., R. 26 E., New Mexico.		1.1
Do.	do.	do.	Below Judkin's ranch, sec. 24, T. 28 N., R. 26 E., New Mexico.		9.6
Mar. 26, 1907	Black River canal	Black River	U. S. R. S. canal at spillway, 600 feet below headgate and between R. 27 and R. 28 E. New Mexico.		2.1
Do.	do.	do.	do.		2.4
Do.	do.	do.	do.		11.1
Do.	do.	do.	do.		7.8
Do.	do.	do.	do.		42
Feb. 1, 1907	Blue Spring Creek	do.	Judkin's ranch, sec. 27, T. 28 N., R. 26 E., New Mexico.		15
Sept. 22, 1907	do.	do.	Above Judkin's dam, sec. 28, T. 28 N., R. 26 E.		15.2
Do.	do.	do.	Below Judkin's dam, sec. 27, T. 28 N., R. 26 E.		.25
Aug. 2, 1906	Blue Spring canal	Blue Spring Creek	do.		.6
Feb. 1, 1907	Blue Spring canal, North Branch.	do.	do.		.9
Do.	Blue Spring canal, South Branch.	do.	do.		1.8
June 29, 1906	East ditch	do.	Blue Spring ranch		14.4
Aug. 2, 1906	do.	do.	do.		15.4
June 29, 1906	West ditch	do.	do.		2.1
Aug. 2, 1906	do.	do.	do.		2.0
Sept. 8, 1898	Delaware River	Pecos River	Pecos Valley Ry. crossing.		4
Sept. 5, 1900	Toyah Creek	do.	Toyahvale, Tex.		46
July 21, 1904	do.	do.	do.		46
Jan. 15, 1898	Devils River	Rio Grande	Southern Pacific R. R. bridge		362
Dec. —, 1895	San Felipe Creek	do.	Del Rio, Tex.		99
Mar. —, 1899	do.	do.	do.		113
Sept. —, 1900	do.	do.	do.		149
Dec. —, 1901	do.	do.	do.		150
Sept. —, 1902	do.	do.	do.		115
Mar. —, 1904	do.	do.	do.		118
Aug. —, 1905	do.	do.	do.		103
Jan. 14, 1910	do.	do.	do.		43
Sept. —, 1910	do.	do.	do.		70
Nov. —, 1911	do.	do.	do.		71
Jan. 14, 1898	Madre ditch	San Felipe Creek	do.		25
Dec. —, 1895	Las Moras Creek	Rio Grande	Foot bridge, Brackettville, Tex.		21
June —, 1899	do.	do.	Mulligans Bend, Tex.		60
Sept. —, 1900	do.	do.	do.		51
Sept. —, 1902	do.	do.	do.		11
Mar. —, 1904	do.	do.	do.		28
Aug. —, 1905	do.	do.	do.		14
Apr. —, 1906	do.	do.	do.		18
Sept. —, 1910	do.	do.	Brackettville, Tex.		14
Nov. —, 1911	do.	do.	do.		8.4
Nov. —, 1911	Leona River	do.	Brick yard crossing, 1½ miles below Uvalde, Tex.		0
Nov. —, 1911	San Antonio River	do.	Hot Wells, San Antonio, Tex.		16
May 30, 1911	Guadalupe River	do.	1,500 yards below dam, Seguin, Tex.		394
.....	Comal River	do.	Highway bridge, New Braunsfels, Tex.		267

SEEPAGE.

SCOPE OF INVESTIGATION.

In the arid regions, where water in large quantities is used for irrigation and where much of the soil and the underlying strata is porous, the surface tributaries of a stream do not furnish all the water in certain sections and diversions do not account for all the losses that occur in other sections. This unaccounted for gain or loss in flow is called seepage and represents the water that percolates through the ground either into or away from the river.

The underground water reaching the river—which is called return seepage—may have entered the ground within a comparatively short distance of the point at which it reaches the river or many miles away and in an entirely different drainage basin. If, for example, water is diverted to irrigate porous soil in a valley the lower end of which is crossed by a dike, the dike may force the percolating irrigation water near enough to the surface to permit it to reenter the river; or, if there is no dike across the valley, the transverse slope of the valley toward the river may be so great that the percolating water is speedily returned to the stream. An example of return seepage occurring at a point remote from its origin is found where water percolating through the ground enters a porous stratum which leads it finally to the river many miles away. This water may have been applied to the soil for irrigation or it may have been the natural percolation from rainfall.

A thorough knowledge of the geologic formation of a drainage basin is necessary to determine whether return seepage is water originally diverted for irrigation in the upper part of a drainage basin or from natural ground water that may have originated in an entirely different basin. Nor is there any certainty that conditions of seepage remain constant throughout the year. Thus seepage investigations can show little more than the actual quantities gained or lost in different sections of a river at the time the measurements are made. It is highly desirable, however, that the investigation be made at a time during which the river and its tributaries remain at constant stage and chiefly for this reason such work is usually carried on in the fall of the year or early spring, when little water is being diverted and the flow is nearly constant. Thus results do not show the actual condition during the irrigation season when the river stage is changing, except by assuming that seepage conditions are fairly constant.

Seven separate investigations to determine the gains and losses from seepage in the Rio Grande have been made at intervals since 1900. Of these, five have covered a part of the river in Colorado,

three the canyon section between the Colorado-New Mexico line and the gaging station at Embudo, two between Embudo and San Marcial, and one between San Marcial and El Paso.

STUDIES ON THE RIO GRANDE IN COLORADO.

THE MEASUREMENTS.

The investigations covering the part of the Rio Grande in Colorado were made by the State engineer and the results, except for the measurements made in 1913, were published in the biennial reports. As the same measuring points were not used in the various series of measurements it is not possible to present the results in a comparative table. For that reason the results of each investigation are given separately, as originally published.

Seepage measurements on the Rio Grande from South Fork to State Bridge near Lobatos, Colo., in August, 1900.^a

Place of measurement.	Date.	Amount in river.	Section.		Section, gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Railroad station at South Fork.....	Aug. 30	194.24	0.85	33.41	.....	.....
United States Geological Survey gaging station above Del Norte.....	31	209.83	.....	.....	48.15	48.15
Do.....	20	249.06	.....	146.61	.....	.....
Above Del Norte canal.....	20	176.50	.....	.....	-25.95	22.20
Do.....	21	178.90	.....	32.11	.....	.....
At Off's.....	21	168.48	.....	.....	21.69	43.89
Do.....	22	156.22	.....	47.19	.....	.....
Below Prairie canal.....	22	99.29	.31	.....	-10.05	33.84
Do.....	23	108.91	4.33	96.0	.....	.....
Below Monte Vista Bridge.....	23	14.0	.....	.....	-3.24	30.60
Do.....	24	14.30	.....	30.29	.....	.....
Below San Luis canal.....	24	5.90	5.21	14.24	21.89	52.49
Below Hickory-Jackson ditch.....	24	10.65	.....	.....	13.78	66.27
Do.....	25	11.55	.....	10.69	.....	.....
Below Alamosa.....	25	1.0	.....	.....	.14	66.41
Do.....	27	1.01	.....	.....	.....	.....
Above mouth Conejos River.....	27	1.35	14.33	.....	.34	66.75
Below Conejos River, North Branch.....	27	15.33	6.90	.....	-.35	66.40
Below Las Sauces.....	27	23.98	.....	.....	1.75	68.15
Do.....	28	22.31	.....	.....	.....	.....
Above State Bridge.....	28	17.22	.....	.....	-5.09	63.06

^a Tenth Biennial Report of the State Engineer, p. 219.

NOTE.—The stage of the river was not constant during the entire investigation, but sections chosen were so short that the flow was practically constant during the determination of seepage in any one section.

Seepage measurements on the Rio Grande from South Fork to State Bridge, near Lobatos, Colo., in September, 1903.^a

Place of measurement.	River.		Section, gain or loss.	Total gain or loss.
	Inflow.	Diver-sion.		
From South Fork to United States Geological Survey gaging station above Del Norte.....	323.98	324.58	0.60	0.60
Del Norte opposite power house.....	307.74	328.24	20.50	21.10
Bridge at John Off's house.....	148.56	140.45	- 8.11	12.99
Prairie canal.....	132.73	133.57	.84	13.83
Monte Vista.....	107.49	117.34	9.85	23.68
San Luis canal.....	37.08	43.88	6.80	30.48
Hickory-Jackson ditch.....	.10	10.45	10.35	40.83
Rio Grande canal.....	7.34	9.47	2.13	42.96
Above mouth of Conejos River.....	14.27	17.08	2.81	45.77
Below Las Sauces.....	52.24	54.85	2.61	48.38
State Bridge.....	66.50	64.00	- 2.50	45.88

^a Thirteenth Biennial Report of the State Engineer, p. 257.

NOTE.—No dates are given for the measurements in 1903, but as there was no duplicating of measurements at each point on the river, it is to be assumed that the stage was practically constant during the entire investigation, as otherwise the results would not show the true conditions of seepage.

Seepage measurements on the Rio Grande from Granger to mouth of Conejos River, Colo., in October, 1907.^a

Place of measurement.	Distance in miles.	Amount in river.	Section.		Section, gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Granger station.....		671.0				
Del Norte.....	11	572.1	21.05	146.77	26.82	26.82
Do.....		465.9				
Sevenmile Bridge $\frac{1}{4}$ mile above Prairie Canal.....	7	442.4	.00	32.89	9.39	36.21
Do.....		426.6				
Monte Vista.....	8	392.9	.00	51.95	18.25	54.46
Do.....		379.1				
County line bridge.....	7	375.0	.00	17.64	13.54	68.00
Do.....		376.2				
Alamosa.....	11	383.2	.00	1.96	8.96	76.96
Do.....		381.7				
Below Meadow overflow ditch.....	5	394.2	.70	.17	11.97	88.93
Above mouth of Conejos River.....	12	490.5	64.6	.00	31.7	120.63

^a Fourteenth Biennial Report of the State Engineer, p. 244.

NOTE.—The stage of the river was not constant during the entire investigation, but sections chosen were so short that the flow was practically constant during the determinations in any one section.

Seepage measurements on the Rio Grande from Granger to State Bridge, near Lobatos, Colo., in September and October, 1908. ^a

Place of measurement.	Distance in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Granger station.....		383				
United States Geological Survey gaging station above Del Norte.....	6	413	3.0	4.9	31.9	31.9
Del Norte.....	5	305	4.8	126.4	13.6	45.5
Sevenmile Bridge $\frac{1}{2}$ mile above Prairie canal Do.....	7	248	0.0	31.2	-25.8	19.7
Monte Vista.....	8	181	0.0	67.0	- 2.0	17.7
County line bridge.....	7	131	0.0	57.7	7.7	25.4
Alamosa.....	11	132	0.0	0.0	1.0	26.4
Below Meadow overflow ditch.....	5	136	0.5	0.0	4.0	30.4
Above mouth of Conejos River.....	12	157	21.2	0.0	- .22	30.2
Do.....		176				
Las Sauces.....	3	203	36.2	0.0	- 9.2	21.0
State Bridge.....	14	236	13.4	0.0	19.6	40.6

^a Fourteenth Biennial Report of the State Engineer, p. 245.

NOTE.—No dates are given for the measurements in 1908, but as there was no duplicating of measurements at each point on the river it is to be assumed that the stage was practically constant during the entire investigation, as otherwise the results would not show the true conditions of seepage.

Seepage measurements on the Rio Grande from Del Norte to State Bridge, near Lobatos, Colo., in October, 1913.

Place of measurement.	Distance in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Rio Grande at Del Norte.....	0	650			0	
Rio Grande canal.....				7		
Farmers Union canal.....				76		
Sylvia ditch.....				8		
Prairie ditch.....				2		
Rio Grande at concrete bridge.....	7	526			-31	-31
Small ditches.....				2		
Monte Vista canal.....				23		
Small amounts in canals.....				2		
Rio Grande at Monte Vista.....	15	517			+18	-13
Empire canal.....				6		
Centennial ditch.....				2		
Rio Grande below Centennial ditch.....	22	521			+12	- 1
San Luis canal.....				43		
Excelsior canal.....				4		
Rio Grande at Alamosa.....	33	478			+ 3	+ 2
Alamosa sewer.....			1			
Rio Grande at Hansons ranch.....	43	461			-18	-16
La Jara Creek at Hansons ranch.....			24			
Conejos River at Austins ranch.....			46			
Creek at Austins ranch.....			4			
Ditch at Las Sauces.....				1		
Rio Grande at Las Sauces.....	58	526			- 8	-24
Do.....		490				
Rio Grande at State Bridge.....	72	490			0	-24

NOTE.—During the measurements in 1913 the stage of the Rio Grande at Del Norte fell from 1.3 to 1.2 showing a decrease in flow of approximately 70 second-feet at Del Norte. It is stated that frequent duplicate measurements showed no change in stage, so it is possible that the hydrographer kept ahead of the falling stage.

INTERPRETATION OF RESULTS.

In order to study the effects of seepage, the river above the State Bridge at the entrance to the Rio Grande canyon, a few miles above the New Mexico line and a few miles from Lobatos, Colo., may be divided into three sections (1) the stretch above the Del Norte station, (2) that from the Del Norte gaging station to Monte Vista, and (3) that from Monte Vista to the State Bridge.

Above the Del Norte gaging station little if any return irrigation water reaches the Rio Grande as most of the canals divert water below that point. Therefore any return water in all probability is natural underground flow from the mountains through which the river flows. The measurements made during the latter part of August 1900, show a gain from the South Fork to the Del Norte bridge of 48 second-feet, which is greater than for any other section during that investigation. On the other hand, the measurements made in 1903 showed little if any return seepage above the Del Norte station but a steadily increasing return below that point.

The alluvial fan built up by the Rio Grande extends from the entrance of the river into the San Luis Valley (near the Del Norte gaging station) nearly to Monte Vista, as shown by Siebenthal in his report on the San Luis Valley.^a

Across this fan, as might be expected, occur the greatest seepage losses above the State Bridge, although the various investigations have shown that these losses are not constant. During the measurements in 1907, for example, no losses appeared in this section. The greatest losses found were 26 second-feet in September, 1908, between Del Norte and the head of Prairie canal, and 31 second-feet between the same points in October, 1913. Measurements in August, 1900, showed a loss of 26 second-feet in a short stretch of river above Del Norte, at the upper edge of the alluvial fan.

From Monte Vista nearly to the State Bridge the Rio Grande flows across the San Luis Valley, the upper part of which is extensively irrigated. In this section the gains from seepage far outweigh any losses that may occur. In general, the various series of measurements show an increase of return seepage, the total below Monte Vista being 32 second-feet during August, 1900, 23 second-feet in September, 1903, 23 second-feet in September and October, 1908, and 13 second-feet in October, 1913. The 1907 measurements terminated at the mouth of the Conejos, but between that point and Monte Vista, the total return seepage was 67 second-feet.

STUDIES ON THE RIO GRANDE IN NEW MEXICO.

THE MEASUREMENTS.

POINTS SELECTED.

Three separate investigations of the seepage conditions of stretches of the Rio Grande in New Mexico have been made; one in March, 1911, from the State Bridge near Lobatos to San Marcial, another in October, 1913, from Lobatos to El Paso, and a third in October, 1913, from Lobatos to Embudo, at the lower end of the Rio Grande Canyon. The first was made by the United States Geological Survey, the second by the United States Geological Survey in cooperation with the State engineer of New Mexico, and the third by the State engineer of Colorado.

LOBATOS TO SAN MARCIAL.

The results of measurements between Lobatos and San Marcial were published in Water-Supply Paper 308, from which the following table and notes have been compiled:

Seepage measurements on the Rio Grande from State Bridge, near Lobatos, Colo., to San Marcial, N. Mex., March, 1911.

Place of measurement.	Date.	Approximate distance in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
				Inflow.	Diver-sion.		
Rio Grande at State Bridge, Colo.	Mar. 7	.....	426	.....	.....	.....	.....
Costilla Creek at mouth.....	.....do.....	3	.....	0	.....	.....	.....
Latir Creek at mouth.....	.....do.....	16	.....	1	.....	.....	.....
Rio Colorado below Questa.....	Mar. 8	.....	.....	30	.....	.....	.....
Cebolla Creek at mouth.....	Mar. 9	.....	.....	3	.....	.....	.....
Rio Grande at Dunn's bridge.....	Mar. 10	32	594	.....	.....	+134	+134
Rio Hondo at mouth.....	Mar. 9	32	.....	13	.....	.....	.....
Rio Taos at Los Cordovas.....	Mar. 12	.....	.....	50	.....	.....	.....
Arroyo Hondo at mouth.....	.....do.....	.....	.....	0	.....	.....	.....
Cieneguilla Creek at mouth.....	.....do.....	47	.....	0	.7	.....	.....
No Agua.....	.....do.....	.....	.....	0	.....	.....	.....
Embudo Creek at Dixon.....	Mar. 13	60	.....	68	.....	.....	.....
Truchas River at mouth.....	.....do.....	.....	.....	0	.....	.....	.....
Rio Grande at Velarde.....	.....do.....	66	800	.....	.....	+134.3	+268.3
Rio Grande at San Juan.....	Mar. 14	76	863	.....	.....	+ 3	+271.3
Chama River at mouth.....	.....do.....	77	.....	530	.....	.....	.....
Santa Cruz Creek at mouth.....	.....do.....	81	.....	26	.....	.....	.....
Santa Clara Creek at mouth.....	Mar. 15	82	.....	4	.....	.....	.....
San Hdefonso Creek at mouth.....	.....do.....	81	.....	8	.....	.....	.....
Rio Grande at Buckman.....	.....do.....	88	1,400	.....	.....	- 31	+240.3
Rio Grande at Cochiti.....	Mar. 17	.....	1,390	.....	.....	- 10	+230.3
Jemez River at mouth.....	Mar. 18	133	.....	144	.....	.....	.....
Rio Grande at Bernalillo.....	.....do.....	137	1,590	.....	.....	+ 56	+286.3
Rio Grande at Alburquerque.....	Mar. 20	157	1,775	.....	.....	+185	+471.3
Rio Grande at Belen.....	Mar. 21	.....	1,750	.....	.....	- 25	+446.3
Rio Puerco at mouth.....	Mar. 22	2 8	.....	90	.....	.....	.....
Rio Salado at mouth.....	Mar. 23	217	.....	3	.....	.....	.....
Allamillo Creek at mouth.....	.....do.....	.....	.....	0	.....	.....	.....
Rio Grande at San Marcial.....	.....do.....	262	1,715	.....	.....	-128	+318.3

The gage-height record shows a practically uniform stage of the river at Lobatos during this period, but a rise at Buckman, N. Mex., of 0.7 foot on March 11. This rise is thought to have been caused mostly by Chama River, which enters the Rio Grande a short dis-

tance above, but a part was undoubtedly due to melting of snow and a rain which occurred in the region around Taos about March 7. This rise, however, preceded the measurements all the way down, and as the Buckman gage record shows the stage of the river to have been practically constant for the several days succeeding the rise during which measurements were made, it is thought that the condition of the river was fairly even throughout the period.

From the State line down to a point a few miles below Embudo the river flows through a box canyon which is cut in a lava formation and ranges in depth from 50 feet at the State line to about 1,000 feet at Embudo. In this stretch the river is accessible at only a few places, as little water is contributed over the surface except by Rio Taos and Embudo Creek. The water flowing at the heads of several other streams sinks soon after it reaches the sheet of lava that borders the river on either side and enters the river as seepage.

Between Embudo and Buckman the canyon widens out into a narrow valley in which some irrigation is carried on, and the river spreads out over a sandy bed and among islands.

From Buckman the river flows in a comparatively narrow channel through White Rocks Canyon to Cochiti. At Cochiti the valley opens again into a flat sandy plain, and thence practically to San Marcial the river spreads out over a broad bed and among sand bars. Along this stretch considerable irrigation is practiced.

At the Lobatos, the mouth of the Rio Hondo, San Juan, Buckman, Cochiti, and San Marcial, very good measurements of the Rio Grande were obtained. Conditions at the other measured sections were unfavorable and results are only fair.

It should be noted that the river loses little, if any, water by diversion or otherwise above Embudo, and that below Embudo more or less water is being diverted for irrigation; also, that in the lower stretch considerable loss from evaporation results from the spreading of the river over so much area and the openness of the valley.

LOBATOS TO EL PASO.

A special investigation of gains and losses in the Rio Grande from seepage between the State bridge near Lobatos, Colo., and El Paso, Tex., was made October 20 to 30, 1913, under the direction of Glenn A. Gray, district engineer in charge of the Santa Fe district. The stream was divided into four sections, a hydrographer being detailed to each section. The discharge was measured at various intervals along the main stream, at the mouth of each tributary, and at the headgate of each diversion.

Automatic gages are maintained on the Rio Grande at the State bridge near Lobatos, Colo., at Embudo, N. Mex., Buckman, N. Mex.,

on the Chama River at its mouth near Chamita, N. Mex., and on the Rio Puerco at its mouth. Staff gages, read twice daily, are maintained on the Rio Grande at San Marcial, N. Mex., and El Paso, Tex., and on the Rio Hondo at its mouth. These gages showed the stream to be falling gradually during the last of October, with no floods to interfere with the investigation.

From available maps, automatic gage records, and discharge measurements it was estimated that 10 days would be required for water to flow from the State bridge to El Paso, Tex. By the aid of the automatic gage charts, the estimated rate of flow, and the discharge measurements the entire seepage data were corrected to represent measurements of the same water passing different sections.

These data represent natural conditions as they were found above Selden, N. Mex. Below this point the flow is controlled by the Leasburg diversion dam, which irrigates a large area. It was found extremely difficult to draw conclusions from observations below Elephant Butte, and in view of the fact that the Elephant Butte dam will soon control the flow to the New Mexico-Texas State line, more attention was given to that part of the stream above this point.

Seepage measurements on the Rio Grande from State Bridge, near Lobatos, Colo., to El Paso, Tex., in October, 1913.

Place of measurement.	Approximate distance, in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
			Inflow.	Diversion.		
Rio Grande at State Bridge, Colo.....	0	481			0	0
Costilla Creek at mouth.....	3		0			
Latir Creek at mouth.....	16		0			
Rio Colorado at mouth.....	24		65.0			
San Cristobal Creek at mouth.....	29		0			
Rio Grande at Dunn's bridge.....	32	686			+140	+140
Rio Hondo at mouth.....	32		13.0			
Rio Taos at mouth.....	46		30.0			
Arroyo Hondo at mouth.....	47		0			
Aguage de la Petaca at mouth.....	48		0			
Rio Grande at Glenwoody.....	54	720			- 9	+131
East Rinconada ditch at headgate.....	56			3.3		
Embudo Creek at mouth.....	60		64.0			
Rio Grande at Embudo.....	63	786			+ 5	+136
Rio Grande at Velarde.....	66	762			- 24	+112
Del Medio ditch at headgate.....	76			2.1		
Rio Grande at San Juan.....	76	714			- 46	+ 66
Chama River at mouth.....	77		78.0			
Return ditch at Espanola.....	80		4.5			
Rio Grande at Espanola.....	80	850			+ 54	+120
Santa Cruz Creek at mouth.....	81		25.4			
Santa Clara Creek at mouth.....	82		4.0			
San Ildefonso Creek at mouth.....	87		6.6			
Rio Grande near Buckman.....	88	888			+ 2	+122
Santa Fe Creek near mouth.....	112		0			
Peña Blanca ditch.....	113			19.7		
Rio Grande at Peña Blanca.....	114	916			+ 48	+170
Galisteo Creek at mouth.....	119		0			
Bernalillo ditch.....	131			5.0		
Rio Jemez at mouth.....	133		0			
Rio Grande at Bernalillo.....	137	901			- 10	+160
Madre de Corrales ditch.....	141			19.9		
Los Ranchos ditch.....	149			30.1		
Los Griegos ditch.....	152			3.5		
Barella ditch.....	153			.7		

Seepage measurements on the Rio Grande from State Bridge, near Lobatos, Colo., to El Paso, Tex., in October, 1913—Continued.

Place of measurement.	Approximate distance, in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Duranes ditch.....	154			2.9		
Albuquerque ditch.....	154			9.2		
Arenal ditch.....	156			13.8		
Rio Grande at Albuquerque.....	157	721			-100	+ 60
Acequia Nueva.....	158			.5		
Acequia Vieja de Atrisco.....	159			3.0		
Pajarito ditch.....	159			.5		
Padillo ditch.....	160			3.0		
Pueblito ditch.....	161			5.0		
Chical ditch.....	169			5.7		
Del Casique ditch.....	170			6.0		
De la Maquina ditch.....	170			5.4		
Del Bosque ditch.....	170			6.0		
Las Lentes ditch.....	170			14.6		
Del Medio ditch.....	170			3.7		
Peralta ditch.....	171			12.6		
Valencia ditch.....	172			2.5		
Los Lunas ditch.....	173			7.7		
Las Cercas ditch.....	173			10.2		
Huning ditch.....	174			18.1		
Fernandez ditch.....	174			3.1		
Constancia ditch.....	174			4.0		
Rio Grande at Los Lunas.....	175	605			- 4	+ 56
Madre de Tome ditch.....	176			8.6		
Los Chavez ditch.....	178			4.9		
Enlarmes ditch.....	181			26.5		
Sonsal ditch.....	184			12.3		
Los Innocents ditch.....	185			5.2		
Del Rincon ditch.....	186			6.9		
Jarales ditch.....	187			10.2		
San Francisco ditch.....	188			8.7		
San Juan ditch.....	188			12.3		
Sabinal ditch.....	190			7.8		
Rio Puerco at mouth.....	208		0			
Arroyo Salado at mouth.....	217		0			
Rio Grande at San Marcial.....	262	319			-183	-127
Rio Grande at Elephant Butte.....	303	248			- 71	-198
Cuchillo Vegra Creek at mouth.....	304		0			
Palomas Springs.....	313		3.0			
Palomas Creek at mouth.....	313		0			
Rio Grande at Los Palomas.....	313	263			+ 12	-186
Animas Creek at mouth.....	320		0			
Rio Grande at Arrey.....	329	256			- 7	-193
Garfield ditch.....	330			9.7		
Cienega Apache Creek at mouth.....	332		0			
Berenda Creek at mouth.....	336		0			
Rio Grande at Rincon.....	347	221			- 25	-218
Rio Grande at Selden.....	363	192			- 29	-247
Leasburg canal.....	363			100		
Rio Grande below Leasburg canal.....	363	96.0			+ 4	-243
Rio Grande at Shalem.....	372	98.2			+ 2	-241
Field ditch.....	373		3.0			
Dona Ana waste ditch.....	374		6.6			
Mesilla waste ditch.....	375		9.1			
Rio Grande at Mesilla.....	380	111			- 6	-247
San Miguel ditch.....	382			65.4		
Rio Grande at Mesquite.....	389	33.5			- 12	-259
Chamberino ditch.....	389			20.4		
Three Saints ditch.....	390			11.0		
Rio Grande at Berino.....	398	4.0			+ 2	-261
Rio Grande near El Paso.....	419	4.0			0	-261

LOBATOS STATION TO EMBUDO.

While the Survey engineers were making measurements to determine seepage between Lobatos, Colo., and El Paso, Tex., the State engineer of Colorado made an investigation from the State Bridge, near Lobatos, Colo., to Embudo, N. Mex. The following table has

been compiled from data furnished through the courtesy of the State engineer:

Seepage measurements on the Rio Grande from State Bridge, near Lobatos, Colo., to Embudo, N. Mex., in October, 1913.

Place of measurement.	Approximate distance, in miles.	Amount in river.	Section.		Section gain or loss.	Total gain or loss.
			Inflow.	Diver-sion.		
Rio Grande at State Bridge.....	0	490	.....	.....	0	0
Rio Colorado near Vigil Mill.....	.....	.....	24	.....	.....	.....
Rio Grande at Dunn's bridge.....	32	641	.....	.....	+127	+127
Rio Hondo at mouth.....	32	.....	8	.....	.....	.....
Rio Taos at Los Cordovas.....	.....	.....	28	.....	.....	.....
Embudo Creek near mouth.....	60	.....	62	.....	.....	.....
Rio Grande at Embudo.....	62	742	.....	.....	+ 3	+130

INTERPRETATION OF RESULTS.

To make the results of the various measurements directly comparable, an allowance must be made for changes in the flow of Rio Grande, as determined in the first and third series of measurements. In the first investigation the flow was measured at the head of the box canyon $1\frac{1}{2}$ miles below Questa and about 8 miles above the mouth, and as there are no intervening tributaries, the discharge at the mouth was assumed to be the same; in the second series of measurements, the discharge was determined both at the head of the canyon and at the mouth, and it was found that the flow increased in the canyon from 28.1 to 67.1 second-feet, a gain of 39 second-feet. Therefore it is evident that the discharge for Rio Grande, as determined in the first investigation, did not represent the entire flow entering the Rio Grande. It is impossible to state what the increase was in March, 1911, when the first seepage measurements were made, but as underflow is much more constant than surface run-off, the results will be more nearly correct if the increase of 39 second-feet is applied to the discharge of the Rio Colorado, making it 69 second-feet instead of 30 second-feet, as given originally. This will reduce the seepage gain between the Lobatos station and Dunn's bridge from 134 to 95 second-feet, and reduce all subsequent values in the last column by the same amount.

In the third series of investigations the measurement was made 4 miles below Questa, and the results obtained were practically the same as those obtained in the second series at the head of the box canyon. Therefore it is evident that this discharge of 30 second-feet should be increased by 39 second-feet to show the flow of Rio Colorado at its mouth—especially as the second and third series were made

within a few days of each other. Thus the flow of Rio Colorado entering the Rio Grande was 63 second-feet, and the seepage gain between Lobatos and Dunn's bridge 88 second-feet instead of 127 second-feet, as given in the preceding table. This change also reduces the total seepage gain at Embudo from 130 to 91 second-feet. A smaller increase, amounting to 4.3 second-feet, was found on Rio Taos between Los Cordovas and the mouth, but this correction, being relatively unimportant, has not been applied to the first and third series of measurements.

To study in some detail the seepage conditions along the Rio Grande in New Mexico, the river may be divided into three sections: (1) Rio Grande canyon extending from the State Bridge near Lobatos, Colo., to Embudo, N. Mex.; (2) Espanola Valley and White Rocks Canyon, extending from Embudo to Peña Blanca, and (3) the section from Peña Blanca to El Paso.

An attempt was made to compare by sections the results of the various seepage investigations but, except for the part of the Rio Grande canyon above Dunn's bridge, the results are so discrepant that the attempt was abandoned, and instead, the general effects of seepage in different parts of the river is discussed in connection with the measurements made in 1913.

Except for a few small ditches below Glenwoody, there are no diversions for irrigation in the Rio Grande Canyon and, therefore, any return seepage does not come from near-by irrigation water diverted from the Rio Grande, as it probably does in San Luis Valley, but must come from a source more or less remote and may be either return irrigation water or natural underground water. The investigations in the upper part of this section all show a comparatively large return seepage. The measurements made in 1911 determined this to be 95 second-feet, whereas the two separate investigations in October, 1913, found it to amount to 140 and 88 second-feet, respectively. There is little seepage in the lower section of the canyon.

From Embudo to the mouth of the Chama near San Juan there was no return seepage and seepage losses amounted to 74 second-feet. These losses are accounted for by the porous soil over which the river flows in Espanola Valley. From the mouth of the Chama to the lower end of White Rocks canyon, near Peña Blanca, return seepage amounted to 104 second-feet, half of which occurred in the lower end of Espanola Valley in the 4 miles between San Juan and Espanola.

Measurements made in 1913 showed that practically no return seepage reached the river below White Rocks Canyon, and that seepage losses were large. From Peña Blanca to Bernalillo there was little seepage loss, in spite of the fact that this section is irri-

gated extensively, and had been irrigated within a few weeks of the measurements. The absence of return seepage is probably due to the very porous soil in the river bed itself and to losses by evaporation of the water diverted for irrigation. This same condition is more marked in the lower part of the Albuquerque Valley and the Belen Valley in the section extending from Bernalillo to San Acacia near the mouth of the Arroyo Salado. The most rapid state of seepage loss in the New Mexico portion of the Rio Grande occurred between Bernalillo and Albuquerque, where, in a distance of 20 miles, the loss amounted to 100 second-feet, in a section extensively irrigated both during and prior to the investigation.¹ Below Albuquerque the seepage loss is less, being practically nothing as far as Las Lunas, but from that point to the lower end of the Engle Reservoir site at Elephant Butte, the investigations showed seepage loss aggregating 254 second-feet in 130 miles. Between Elephant Butte and El Paso the seepage loss is much smaller—only 59 second-feet in 116 miles.

STUDIES ON CHAMA RIVER.

In addition to the seepage investigations on the Rio Grande itself, an investigation has been made of the seepage losses and gains in Chama River from Chama to its mouth.

The gains and losses from seepage were investigated along Chama River from Chama, N. Mex., to the mouth of the stream by measuring the main stream, tributaries, and diversions at various points. The investigation was begun at Chama, N. Mex., October 28, 1913, by Frank O'Brien, junior engineer, United States Geological Survey, who carried the work to a point 46 miles south by river, or the mouth of the Gallinas River. From this point to the mouth of the Chama the work was done by John E. Powers, hydrographer for the State of New Mexico. Other investigations have been planned for the Chama River basin as it is believed that stage of stream, preceding climatologic conditions and seasonal elements, are influential factors in regulating seepage in a basin.

Automatic gages are being maintained on Chama River just above the confluence with the Rio Grande, El Vado, and Park View, and a staff gage is read twice daily at Chama. An automatic gage is also being maintained on Brazos River at the mouth of the Bos Canyon, so that the flow of the largest tributary of Chama River can be determined.

During the period covered by this investigation the gages above El Vado showed some diurnal change caused by the melting snows. These changes in stage did not affect the flow at El Vado or that

¹ It may be noted that during the measurements in March, 1911, return seepage amounting to 185 second feet was found in this section. The flood which occurred in the Chama during the latter measurement made the results below the mouth of that stream uncertain.

part of the stream below this point. The stage remained constant during the period from October 28 to November 3. Heavy rains around Abiquiu, Espanola, and north of Chamita caused the Chama, above the mouth of Ojo Caliente, to rise slightly, Ojo Caliente to carry 39 second-feet of water, and the lower Chama to rise about 1 foot.

The data taken along the stream were corrected for time interval by means of the gages along the Chama and the velocities as obtained from the various discharge measurements. In this way it has been estimated that water that passed Chama the morning of October 29 reached the Rio Grande the morning of November 1.

Chama River flows through a fertile valley from Chama to a point a short distance above the mouth of Nutritus Creek, where it boxes up and passes through a canyon to El Vado Valley. At the end of El Vado Valley, which is about 4 miles long, the stream passes through the Canyon de Chama, opening into Gallinas Valley. From Gallinas Valley it flows through a canyon above Abiquiu, whence it passes through a valley that joins the Espanola Valley of the Rio Grande. The topography along some sections of the Chama is so rough that it is exceedingly difficult to carry on an investigation of this kind.

The following tables show the results of this work as compiled from the discharge measurements taken in the Chama basin on the main stream, tributaries, and irrigation ditches carrying water; also the record of daily gage heights taken from the various gages in the basin for the period of investigation:

Rio de Vallecitos.....do.....	2	.5	31	68	5	46	8.6	0	28.7	1.1	18.4	+84	Do. Good measurement.
Chama River.....Abiquin.....	3	70.9	1	0	0	0	0	0	28.7	1.1	14.4	+65	Do.
El Rito.....Mouth.....	3	0	1	64	0	42	0	0	28.7	1.1	14.4	+65	Do.
Chama River.....Above mouth of Ojo Caliente Creek.....	3	66.5	1	0	0	40	0	0	28.7	1.1	12.4	+55	Do. Do.
Ojo Caliente Creek.....Mouth.....	3	39.3	1	0	0	40	0	0	28.7	1.1	12.4	+55	Do. Do.
Chama River.....do.....	3	142	1	62	0	40	0	0	28.7	1.1	12.4	+55	Do. Do.

Daily gage height, in feet, and discharge, in second-feet, at gaging stations maintained on Chama River and tributaries from Oct. 25 to Nov. 5, 1913.

Date.	Chama River at Chama.		Brazos River near Brazos.		Chama River at Park View.		Chama River at Tierra Amarilla.		Chama River at Chamita.	
	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Oct. 25.....	1.86	25	0.52	.....	0.87	45	0.11	.....	0.82	78
26.....	1.86	25	.49	.....	.85	43	.10	.....	.81	75
27.....	1.88	26	.52	.....	.79	36	.04	.....	.82	78
28.....	1.82	22	.52	.....	.77	33	.01	.....	.81	75
29.....	1.81	22	.53	.....	.78	35	.01	.....	.81	75
30.....	1.82	22	.52	.....	.77	33	.01	.....	.78	68
31.....	1.82	22	.53	.....	.78	35	.02	.....	.77	65
Nov. 1.....	1.82	22	.51	.....	.78	35	.....	.....	.76	62
2.....	1.82	22	.51	.....	.79	36	.....	.....	.75	60
3.....	1.88	26	.61	.....	.86	44	.....	.....	1.03	148
4.....	1.90	27	.59	.....	.91	50	.....	.....	1.51	265
5.....	1.86	25	.54	.....	.87	45	.....	.....	1.17	177

The measurements show that the surface contributions and diversions are at a minimum, there being 1.1 second-feet of water diverted and 28.7 second-feet contributed through the part of the stream investigated. It should be noted that 21 per cent of the flow is lost by seepage between Chama and Park View, and 42 per cent returns through seepage between Park View and the mouth of Nutritus Creek. In the canyon below the mouth of Nutritus Creek there is a gain of 17 per cent, in El Vado Valley a loss of 31 per cent, in Canyon de Chama a gain of 13 per cent, in Gallinas Valley a gain of 64 per cent, in Abiquiu Canyon neither gain nor loss, and in Abiquiu Valley a loss of 29 per cent; the net result is a gain of 55 per cent between Chama and the mouth of the stream.

EVAPORATION.

THEORY OF EVAPORATION.

The waters of the Rio Grande and its tributaries are already so fully utilized that any increase in development must come chiefly through storage of the flood waters. Whenever water is stored, and especially in a climate so hot and dry as that characterizing the greater part of the Rio Grande basin, it causes serious losses.

The following brief discussion, based on "The general theory of evaporation" given in the Weather Bureau's Manual for Observers, is presented to show the factors that influence the rate of evaporation, in order that the magnitude of the phenomenon for any particular locality may be better understood.

From the surface of any sheet of water when the air rests upon it without motion, as in a calm, a series of vapor-pressure tubes extend upward, gradually spreading out into a sheaf like the magnetic lines surrounding the poles of a magnet. The vapor pressure at the water surface is a maximum, depending on the temperature of the water

surface. The pressure at any point in the tube varies inversely with its distance from the water surface and is a minimum at the dew point of the air. In other words, there is a vapor blanket over the water surface caused by the particles of water passing from the water surface into the air. This blanket is densest at the water surface and becomes thinner as the distance above the water surface increases. The total depth or thickness of the vapor blanket is determined by the relation between the vapor pressure at the water surface and the vapor pressure of the dew point of the air. When these two are equal, there is little if any evaporation. When the difference between the two pressures is greatest (the pressure at the water surface being the greater) evaporation takes place at a maximum rate. When the vapor pressure of the air increases beyond the dew point there is a negative flow of vapor in the form of rain (or snow).

From the foregoing it is evident that two very important factors influencing evaporation are the temperatures of the water and of the air. It may be noted that the drier the air the less its vapor pressure and, therefore, the greater the evaporation. Thus both temperature and humidity (or amount of moisture) of the air influence evaporation.

Another most important factor is the velocity of the wind across the water surface. The wind blows away the densest portion of the vapor blanket that is in direct contact with the water surface, and in its place brings in drier air whose vapor pressure is much less. This greater difference in vapor pressure between the water surface and the air in contact with it immediately induces a greater rate of flow along the vapor tubes—just as the amount of water delivered by a pump against a pressure head is increased as soon as the pressure head is reduced.

METHODS OF MEASUREMENT.

The most direct way to determine evaporation is actually to measure the loss of water in a pan.

The United States Weather Bureau, which carried on extensive experiments with evaporation pans placed in various surroundings, found that pans placed in the ground absorbed so much heat from the soil that the temperature of the water was greater than that in near-by ponds and reservoirs, and therefore the evaporation recorded was greater than simultaneous records from pans floating in the water; also, that pans placed at different heights above the water surface showed different results, depending on their relative positions in the vapor blanket. In problems involving storage the actual evaporation from the water surface should be determined, and, as evaporation is very sensitive to atmospheric conditions within an inch or two of the water surface, the most desirable position in which to place the measuring pan is to float it on the water itself. Unfortunately, in bodies of water exposed to high winds it is impossible to prevent the

waves from slopping into the pan and vitiating the results, and therefore it is usually necessary to select a relatively sheltered point in the pond or reservoir rather than one which is exposed to the effect of the average wind. The error introduced by this selection of location is within the limits of error allowable in solving hydraulic problems dealing with storage and use of water.

As more evaporation records are taken from ground pans than from floating pans, the following experiments are cited to show the errors that may be introduced by using the ground-pan records.

At Hermiston, Oreg., and at Granite Reef, Ariz., the Weather Bureau found that evaporation from the pans set in the ground was greater than that from pans of the same size floating in water. The ground-pan record at Hermiston shows a total annual evaporation of 97.29 inches for the floating pan, 68.05 inches, or an excess of 43 per cent more than the water record. At Granite Reef the ground pan gave 115.18 inches and the floating pan 97.74 inches, an excess of 18 per cent.

On the other hand, Prof. L. G. Carpenter, in his experiments at Fort Collins, Colo., found the temperature of the water in the ground pan to be less than that in near-by lakes and reservoirs, and increased his annual results from 46.3 inches to 59.5 inches, an increase of 28 per cent, to obtain the evaporation from reservoir surfaces. A like excess of floating-pan records over those for ground pans was found by Desmond Fitzgerald near Croton Reservoir, New York.

It is evident from these experiments that records from pans set in the ground do not give the same results as floating pans, nor is it known definitely whether the ground-pan rates are too large or too small when applied to reservoir surfaces. Though the records from pans floating on the water surfaces are open to criticism, they approach much nearer true conditions for evaporation from large water surfaces than do the records from pans set in the ground.

RECORDS OF EVAPORATION.

So far as known, there are but three points in the Rio Grande drainage basin where evaporation records from pans floating in the water have been taken—at Fort Bliss near El Paso, Tex., at Lake Avalon near Carlsbad, N. Mex., and at Santa Fe, N. Mex. Records from pans set in the ground have been kept at several points.

FORT BLISS.

From 1889 to 1893 the United States Geological Survey kept an evaporation pan, 3 feet square and 10 inches deep, in the Rio Grande at Fort Bliss near El Paso. Owing to the difficulty of obtaining observations the results are fragmentary. The monthly summaries are given in the following table:

*Evaporation, in inches, at Fort Bliss, near El Paso, Tex.*¹

Month.	1889	1890	1891	1892	1893	Average.
January.....		2.0	2.7	2.4	4.3	2.85
February.....		2.0	2.9	3.2	4.8	3.22
March.....		7.0	5.5	6.0	4.0	5.62
April.....		7.3	7.4	7.5	9.3	7.88
May.....	10.9	10.8		10.0		10.57
June.....	10.7	11.7		13.0		11.80
July.....	9.6	9.6		12.5		10.57
August.....	11.4	7.6		11.9		10.30
September.....	9.2					9.20
October.....	6.8					6.80
November.....	4.6	3.7				4.15
December.....	2.9	3.0				2.95
Total.....						95.91

¹ U. S. Geol. Survey Fourteenth Ann Rept., pt. 2, p. 154, 1894.

NOTE.—Records based on mean daily evaporation as determined for less than the full number of days for each month.

LAKE AVALON.

Records of evaporation during 1909–10 were obtained by the United States Weather Bureau from a pan 4 feet in diameter floating on the surface of Lake Avalon a few miles north of Carlsbad. The following table shows the monthly summaries determined from these records:

Evaporation, in inches, at Lake Avalon, N. Mex.

January.....	a 4.50	August.....	a 12.00
February.....	a 4.50	September.....	a 9.50
March.....	5.51	October.....	a 7.00
April.....	7.45	November.....	a 5.75
May.....	10.12	December.....	a 4.50
June.....	11.05		
July.....	12.88	The year.....	94.51

As the records at both Fort Bliss and Lake Avalon are fragmentary, it is due chiefly to chance that the mean annual evaporation, as shown by the two, agree so closely.

SANTA FE.

Since May, 1913, records of evaporation have been obtained by the United States Geological Survey from a pan 3 feet square floating in an irrigation reservoir on Jones's ranch, three-fourths mile west of Santa Fe. The monthly summaries of evaporation are given in the following table:

Evaporation, in inches, at Santa Fe, N. Mex., 1913–14.

1913.		1914.	
May.....	8.36	January.....	1.96
June.....	6.65	February.....	2.20
July.....	7.23	March.....	3.85
August.....	6.37	April.....	5.66
September.....	5.54		
October.....	5.15	The year.....	58.92
November.....	3.29		
December.....	2.66		

^a Estimated by comparison with evaporation records at points outside the Rio Grande basin.

The foregoing records are too brief to give conclusive evidence regarding evaporation in the Rio Grande Basin. It should be borne in mind, however, that the annual evaporation varies less than rainfall or run-off, and therefore long-time records are not so essential.

No records of evaporation from floating pans in the Colorado part of the basin, which includes the San Luis Valley, are available, but an approximate estimate can be made for San Luis Valley from the Santa Fe records. San Luis Valley is 600 to 1,000 feet higher than Santa Fe and is surrounded by mountains. The higher altitude tends to reduce the mean temperature and thus reduce evaporation. The effect of the lower temperature is at least partly offset by the greater altitude, which tends to increase evaporation by reducing atmospheric pressure. As these factors are more or less compensating, it is believed that evaporation in the San Luis Valley will not differ greatly from that at Santa Fe.

RECORDS FROM PANS SET IN THE GROUND.

Although records of evaporation as determined from pans set in the ground are liable to large errors and must be used with caution, the following table showing the annual evaporation is presented to show the variation at different points and under different conditions:

Evaporation from pans set in the ground.

Month.	Queen reservoir, near Kansas Creek, in Arkansas Valley, Colo. ^a	Elephant Butte, N. Mex. ^b	Carlsbad. ^b	Near Carlsbad. ^b	Granite Reef, Ariz. ^b	San Antonio, Tex. ^c	Austin, Tex. ^d	Phoenix, Ariz.	Del Norte, Colo.
January.....	4.50	e 2.50	e 5.00	e 5.00	4.59	2.72	2.52	1.76	.....
February.....	4.00	e 2.75	e 5.50	e 5.25	e 4.75	3.12	1.72	2.61	.....
March.....	5.54	e 4.50	8.94	e 8.95	e 6.25	4.68	2.62	3.99	4.55
April.....	6.20	e 8.00	11.68	11.09	e 9.00	5.32	3.07	5.74	f 7.18
May.....	7.38	e 11.50	12.86	10.95	e 11.50	6.63	4.70	8.28	f 7.75
June.....	8.40	13.45	12.40	9.06	e 13.50	8.40	7.96	9.42	f 9.94
July.....	11.68	11.57	12.00	10.58	e 14.25	8.69	7.33	11.29	f 9.90
August.....	10.97	10.43	11.03	9.32	14.23	9.39	8.58	6.55	f 7.92
September..	6.57	8.58	9.76	7.84	13.76	7.31	6.69	7.08	f 7.44
October.....	5.06	6.76	7.58	5.88	11.31	5.23	2.86	4.81	4.27
November...	2.15	3.86	5.50	5.43	7.39	3.21	1.51	2.05	.....
December...	.82	e 3.00	e 5.00	e 5.00	4.65	2.38	1.36	2.05	.....
The year..	73.27	86.95	107.25	94.35	115.13	67.07	50.92	65.63	.....

^a 1 year's record.

^b 1 year's record from 4-foot pan.

^c Mean of 6 years' records from 8-foot pan.

^d 1 year's record from pan 2 by 2½ feet floating in cement pit 5 feet square and 5 feet deep.

^e Estimated by comparison with records at other points.

^f Mean of 10 years' records.

SEDIMENTATION.**SILT IN RIO GRANDE WATER.**

The Rio Grande is one of the most heavily silt-laden streams in the United States, and any contemplated diversion or storage of its waters must take account of the sediment. In its upper stretch the river, above Del Norte, is a clear mountain stream, flowing in a channel of boulders and gravel and receiving tributaries of a similar character, but as it flows through the San Luis Valley its bed gradually becomes more sandy, and a small amount of suspended matter appears, but the river does not carry any considerable quantity of sediment until it receives the waters of Chama River, which is the first silt-laden stream to enter it. Below the mouth of the Chama the sediment increases, the Jemez River and Galisteo Creek frequently bringing down silt. The principal sources of sediment, however, are the Puerco and the Salado—torrential streams of great declivity—which in flood bring down large quantities of mud. For weeks after one of these floods the water of the main river will be loaded with silt as far down as the mouth of the Conchos. Even the snow waters in the spring of the year, which are clear in the upper portion of the river, accumulate considerable silt in the alluvial valleys—silt from caving banks and the remains of the Puerco's summer floods. This muddy water is diluted by the clearer waters of the Conchos, Pecos, and Devils rivers, and the springs in the canyon.

W. W. Follett, in his report on "Silt in the Rio Grande," separates the Rio Grande, as regards sediment, into three divisions. From its source to Albuquerque it is clear, except in its lower portion, where it sometimes carries silt from the Chama and Jemez Rivers and Galisteo Creek; from Albuquerque to the mouth of the Conchos the water is muddy and sometimes saturated with silt. Below the Conchos the Rio Grande is a silt-bearing stream, but the average percentage of silt is much less than in the middle section.

MEASUREMENTS OF SILT.

Measurements, made at El Paso and San Marcial for a number of years, to determine the amount of sediment carried by the Rio Grande show that no definite relation exists between the discharge of the river and the silt carried. Furthermore, the variation in total volume of silt carried each year is so much greater than the variation in the total discharge that prediction of sediment in future years is more uncertain than that of the discharge.

The first recorded determination of sediment in the Rio Grande was made at El Paso by the United States Geological Survey in 1889 and 1890.¹ The method followed was to collect a sample from the flowing

¹ U. S. Geol. Survey Eleventh Ann. Rept., pt. 2, pp. 55, 1891.

water in a horizontal cylinder having vertical sliding doors at each end. Samples were taken at about half a foot below the surface for the top sample, and the same distance above the bottom for the bottom sample. These samples were then placed in covered jars and allowed to settle for three or four days. At the end of that time the clear water was carefully drawn off with a glass siphon and the sediment washed out upon filter paper by means of a jet of clear water. The filter papers were previously dried and weighed, and after receiving the sediment, were again dried for 24 hours and carefully weighed, due precautions being taken against increase of weight by absorption of moisture from the air. Each sample weighed was made up of water taken from the top and bottom of the section, sections being chosen in the center of the stream, and from 30 to 60 feet from each shore (width of section 220 to 230 feet) to determine the average conditions. The amount of silt in the water was expressed as percentage by weight, no attempt being made to determine the percentage by volume.

From May, 1897, to December, 1904, samples of water near El Paso were taken under the direction of the International Water Boundary Commission and furnished to Prof. J. C. Nagle of the Agricultural and Mechanical College of Texas, who determined the percentage of sediment by volume and by weight.

Most of these samples were taken in a quart bottle that was lowered slowly from the surface to the bottom of the river, and then after a slight pause drawn slowly to the top. The movement was so timed that the bottle was filled about the time it reached the surface. The percentage of silt by volume was determined by pouring the samples into calibrated glass tubes and allowing them to settle for a week, when the depth of the sediment at the bottom was measured. The percentage by weight was determined by taking a given quantity of the well-shaken sample and filtering it through a Gooch crucible until the effluent was clear, then drying the sediment and weighing it. Beginning January 1, 1905, and extending to May 31, 1910, samples were taken more frequently at El Paso, and the silt percentage, by weight, of those taken from January 8, 1905, to April 30, 1908, was determined at the Berkeley, Cal., laboratory of the United States Reclamation Service. After that date the determinations were made by Mr. Arthur W. Houck in his El Paso laboratory. The method used by the Reclamation Service is not stated. Mr. Houck has determined his percentage of silt by weighing carefully the whole sample, then running it through filter paper, drying out, and weighing the residual. The percentage is then obtained from the two weights.

The International Water Commission has obtained for the Reclamation Service semiweekly samples of the Rio Grande water at San Marcial from May, 1905, to the present time, and with the exception of the work done by Prof. Nagle, no attempt has been made

to determine from the samples themselves the percentage of silt by volume for silt compacted in a reservoir or canal. The volumetric results obtained by Prof. Nagle, being three or four times as large as those by weight, dry, have been thought by the Government engineers making the silt determination to bear no relation to actual conditions in reservoirs and canals, and have been discarded.

RELATION BETWEEN WEIGHT AND VOLUME OF SILT.

To determine the proper relation between the weight and volume of silt compacted in a reservoir or canal, a special investigation was made in 1904. As the value of the silt records depends largely upon the determination of this relation, the following discussion is quoted from Follett's report (Silt in the Rio Grande):

In 1904 the Reclamation Service began a careful study of the Rio Grande conditions, preparatory to the development of the Rio Grande project. Mr. B. M. Hall was the supervising engineer in charge and he discussed with the writer the silt problem in all its phases. The question of paramount importance was the space which the silt would occupy in the proposed reservoir. It was evident that the per cent by weight, dry, was too small, as the silt would never be dry in the bottom of a reservoir and as it is a well-known fact that clay or clayey earth will swell when wet and as all Rio Grande silt contains a large percentage of clay. This statement is based on the assumption that the specific gravity of the dry silt is the same as that of water. While, at first sight this seems improbable, it appearing that its weight would be more than that of water, the investigators knew that the Rio Grande silt was extremely light. Others, * * * have, since 1904, assumed that a cubic foot dry weighs 85 pounds, but there is no statement given of an actual weighing of a fixed quantity of dry silt, no more than there was in 1890, when it was assumed to weigh 100 pounds per cubic foot. It was not the specific gravity of dry silt which was wanted anyway. It cut no figure whatever in the problem. The unit which was desired was the amount of silt which would fill a cubic foot of space when fully settled and when compressed by the overlying load of water, and its relation to the per cent by weight of dry silt to the water which carried it.

It was evident that the per cent by bulk, obtained from test tubes, would be too large for the desired unit because there was no weight on the silt in the tube to compact it, as there would be in a reservoir, and because the mud would stick to the glass and so not settle.

Something more than guess work was wanted. It did not seem proper to us to found all our silt calculations on an assumed bulk for it which was, as it were, simply pulled out of the air. The desire was to approximate as closely as possible to the conditions which would be found in the bottom of a reservoir. After considering various schemes, to all of which there seemed to be valid objections, it was finally decided to seek a mud bar in the river where the water had been comparatively still and which had shrunk enough to show material cracks, and to cut from this bar a 3-inch cube, have it dried out and weighed and to abide by the result, whatever it was. The idea was that a bar should be chosen which had shrunken enough to make up for the compression which the silt in the bottom of a reservoir would undergo from the weight of the water over it. Of course, the necessary amount of shrinkage could not be told exactly, but it was thought that a fairly good guess could be made.

On June 29, 1904, Mr. Hall and the writer carefully cut a 3-inch cube of silt free from gravel out of a sediment bar just above the Mexican dam at El Paso. The bar showed signs of material shrinkage since the water had receded, there being large cracks in it, so that it was decided that the piece cut out, having already shrunken considerably from

exposure to the air, would fairly meet the prescribed requirements. This sample was taken to Mr. Arthur W. Houck, who had had some 15 years' experience in analytical chemical work. He dried it out at a temperature high enough to evaporate the water but not so high as to volatilize any of its substance, and then weighed the residual. He found its dry weight to be 5,789 grains or 0.827 pound (7,000 grains to the pound). There would be 64 of these cubes in a cubic foot, or a cubic foot of wet silt in the bar from which this was taken would, when dried out, weigh 53 pounds or 85 per cent as much as a cubic foot of water (the latter weighing 62.4 pounds).

It has been assumed that the above experiment fairly determined the weight of reservoir silt and that all silt determinations should be divided by 0.85 in order to obtain the actual final volume of the silt.

It may be objected that the results involved are too important to make them depend upon one single observation, as was done in this case. In reply it should be stated that the conditions under which the silt will settle in a reservoir are not well known and that there are enough other indeterminate factors in the problem to render it probable that this one sample, deliberately and intelligently chosen by two trained men who were fully conversant with all the conditions confronting them and who were careful in their selection of the sample, would give a result fully as good as might come from the mean of many samples taken with less care. Moreover, the result appeared to be reasonable.

It should be stated that the Rio Grande silt contains no sand coarse enough to be perceptible. It is composed of finely desiccated and almost impalpable clay and alluvium and it settles slowly. Therefore, it is not proper to compare its density when settled with that of silt, which has much sand in it. Of course, the suspended silt, when settling in the river, frequently becomes mixed with the sand, which is moving on the bottom of the river, and hence mud bars frequently show some sand. This sand was not carried in suspension, however.

RECORDS OF SILT DETERMINATION AT EL PASO AND SAN MARCIAL.

The determinations of silt made by the Geological Survey in 1889-90 were by weight, and in estimating the total amount of silt passing El Paso the acre-feet (assuming the silt to weigh the same as water) carried each month was obtained by averaging the various percentages determined during the month. As this method did not take into account the great variation in discharge to which the percentages applied, its results were less accurate than those obtained by determining the actual silt for each day from the different percentages and taking the sum of these as the total silt for the month and computing the mean percentage for the month by dividing the silt by the discharge in acre-feet—the method used by Mr. Follett in his report. To make the records comparable with the later records at El Paso and San Marcial, the mean monthly percentages have been divided by 0.85 on the assumption that the compacted silt will weigh 53 pounds per cubic foot. The following table shows the monthly discharge in acre-feet of the Rio Grande near El Paso during the period covered by the Geological Survey silt determination, the mean monthly silt percentages, and the total silt in acre-feet carried by the river each month:

Silt carried by the Rio Grande at El Paso, Tex., 1889-90.

Month.	Discharge in acre-feet.	Silt.		Month.	Discharge in acre-feet.	Silt.	
		Per cent.	Acre-feet.			Per cent.	Acre-feet.
1889.				1890.			
June.....	157,000	0.65	1,020	January.....	12,100	0.40	48
July.....	14,600	.46	67	February.....	16,100	.45	72
August.....	0	.....	.....	March.....	26,100	.92	240
September.....	0	.....	.....	April.....	130,000	.75	975
October.....	0	.....	.....	May.....	355,000	.40	1,420
November.....	0	.....	.....	June.....	262,000	.26	681
December.....	4,370	.86	38	July.....	52,500	.16	84
				August.....	45,100	.95	428
The period.....			1,120	The period.....			3,950

The following tables, taken from the report on "Silt in the Rio Grande," give all the silt determinations of the Rio Grande at El Paso and San Marcial subsequent to the work done in 1889 and 1890. As explained previously, the volumetric determinations made by Prof. Nagle have been discarded and the percentage by volume obtained by dividing by 0.85 the percentage by weight, dry:

Silt determinations of Rio Grande water samples taken at El Paso, Tex., between May, 1897, and May, 1910.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ÷0.85.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ÷0.85.
1897.				1903.			
May 7.....	5,890	1.13	1.33	Feb. 27.....	25	1.69	1.99
11.....	7,240	1.68	1.98	Mar. 11.....	1,360	4.04	4.75
Sept. 23.....	550	4.68	5.51	24.....	405	1.82	2.13
1898.				Apr. 10.....	1,020	2.70	3.18
May 21.....	1,700	1.00	1.18	24.....	660	1.42	1.67
Nov. 8.....	3	.40	.47	May 9.....	2,450	1.80	2.12
1900.				18.....	5,060	.64	.75
June 27.....	95	.25	.30	25.....	4,430	.52	.61
29.....	45	.21	.25	31.....	2,340	.64	.76
Sept. 9.....	830	3.91	4.60	June 6.....	2,590	.43	.51
9.....	830	5.52	6.49	18.....	16,000	.89	1.05
13.....	1,690	3.70	4.35	26.....	16,660	.53	.62
13.....	1,690	4.29	5.05	29.....	12,430	.22	.26
15.....	740	5.15	6.06	July 2.....	10,030	.15	.18
18.....	680	4.90	5.76	7.....	3,540	.28	.33
20.....	160	8.66	10.19	12.....	1,740	.17	.20
24.....	45	3.37	3.96	16.....	970	.15	.18
1901.				24.....	1,000	.70	.82
Feb. 14.....	90	1.36	1.60	1904.			
15.....	110	1.47	1.73	Aug. 10.....	480	6.19	7.28
16.....	180	1.47	1.73	12.....	370	6.38	7.51
May 2.....	1,020	3.98	4.68	Sept. 15.....	230	.77	.91
4.....	1,520	2.96	3.48	Oct. 5.....	6,850	6.88	8.09
5.....	1,880	1.92	2.26	Dec. 16.....	550	.10	.12
6.....	2,380	2.03	2.39	24.....	490	.08	.10
7.....	3,050	1.95	2.29	31.....	430	.08	.10
8.....	3,100	1.99	2.34	1905.			
9.....	2,340	1.64	1.93	Jan. 8.....	385	.05	.06
1902.				11.....	765	.11	.13
Apr. 26.....	465	1.56	1.84	14.....	1,075	.20	.24
28.....	425	3.61	4.25	21.....	605	.08	.10
30.....	145	1.35	1.59	28.....	540	.08	.09
May 2.....	60	2.06	2.42	Feb. 4.....	460	.08	.09
7.....	5	.06	.07	19.....	720	.20	.23
June 3.....	135	2.46	2.89	21.....	1,220	.21	.24
				28.....	1,300	.23	.27
				Mar. 3.....	2,500	.20	.23

Silt determinations of Rio Grande water samples taken at El Paso, Tex., between May, 1897, and May, 1910—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.
1905.				1906.			
Mar. 9	3,910	1.45	1.71	Jan. 18	520	0.54	0.63
21	3,170	.73	.86	21	945	.65	.76
Apr. 7	1,980	.48	.56	24	1,045	.62	.73
14	2,930	.70	.82	27	560	.43	.50
19	3,330	.92	1.08	30	515	.34	.40
29	7,300	1.74	2.05	Feb. 2	490	.39	.46
May 4	5,530	.70	.82	5	470	.35	.41
9	9,760	.71	.84	8	470	.34	.40
13	5,960	.67	.79	11	595	.60	.71
19	6,020	.51	.60	14	715	.57	.67
25	10,210	.43	.51	17	795	.55	.65
June 6	15,630	.45	.53	20	635	.51	.60
13	23,050	.46	.54	23	555	.47	.55
19	13,620	.47	.55	26	485	.40	.47
26	4,950	.44	.52	Mar. 2	515	.43	.50
July 1	3,150	.24	.28	5	425	.35	.41
13	735	.09	.11	8	395	.29	.34
22	385	.02	.02	11	370	.31	.36
25	435	.03	.03	14	270	.24	.28
28	380	.03	.03	17	280	.30	.35
Aug. 3	215	.03	.03	20	580	.48	.56
10	595	2.09	2.46	23	520	.70	.82
11	570	1.78	2.09	26	355	.65	.76
12	950	2.89	3.40	29	235	.48	.56
15	490	2.20	2.59	31	770	1.46	1.72
18	300	1.24	1.46	Apr. 2	1,340	1.38	1.63
21	200	.09	.11	5	1,210	1.83	2.15
24	145	.03	.04	8	970	1.42	1.67
27	100	.03	.03	11	780	1.87	2.12
30	50	.02	.02	14	1,150	.99	1.16
Sept. 2	35	.00	.00	15	1,060	.73	.86
5	30	.03	.04	17	1,470	1.07	1.26
8	35	.02	.02	20	1,170	.79	.93
11	25	.03	.03	23	1,710	1.15	1.35
14	110	.04	.05	26	1,870	1.02	1.20
17	75	.03	.04	28	2,850	1.02	1.20
20	45	.01	.01	30	3,470	.93	1.09
23	20	.02	.03	May 3	3,700	.73	.86
26	15	.02	.02	6	2,760	.63	.74
29	165	.23	.27	9	2,810	.60	.71
Oct. 2	195	1.83	2.15	12	4,740	.72	.85
5	130	3.91	4.60	15	5,840	.93	1.10
8	90	3.43	4.03	18	7,330	.69	.81
11	69	.66	.78	20	6,390	.72	.85
14	45	.66	.78	23	6,990	.75	.88
20	25	.20	.23	26	8,460	.64	.75
23	30	.08	.10	29	8,140	.72	.85
26	40	.07	.08	June 1	6,120	.75	.88
29	40	.09	.10	4	4,470	.87	1.03
Nov. 1	35	.07	.08	7	4,360	.88	1.03
4	75	.07	.08	10	3,610	1.09	1.28
7	115	.24	.28	13	3,730	1.04	1.22
10	200	.65	.77	16	4,770	1.15	1.35
15	380	1.58	1.86	19	5,770	1.22	1.43
18	340	1.53	1.80	22	6,500	1.36	1.60
21	310	.89	1.05	25	4,720	1.28	1.51
24	335	.79	.93	28	2,910	.92	1.08
27	1,240	2.33	2.74	30	2,210	.65	.76
30	1,560	1.68	1.98	July 3	1,390	.38	.45
Dec. 3	1,350	1.36	1.60	6	1,280	.47	.55
6	690	1.38	1.62	9	2,030	.60	.70
9	540	1.01	1.19	11	2,310	1.06	1.25
12	595	.60	.71	12	2,590	.98	1.15
15	570	.58	.68	15	1,660	1.05	1.23
18	580	.50	.59	18	1,770	.80	.94
21	580	.53	.62	21	1,840	.77	.90
24	455	.40	.47	24	1,510	.94	1.11
27	450	.38	.45	27	1,060	.84	.99
30	280	.16	.18	29	900	.63	.74
1906.				31	680	.48	.56
Jan. 1	220	.10	.12	Aug. 3	1,430	1.86	2.19
4	165	.09	.11	6	1,610	1.94	2.28
7	175	.09	.11	9	1,230	1.16	1.36
10	175	.07	.08	12	805	1.10	1.29
13	240	.12	.14	15	505	1.07	1.26
16	240	.11	.13	18	355	1.38	1.62
				21	250	.91	1.07

Silt determinations of Rio Grande water samples taken at El Paso, Tex., between May, 1897, and May, 1910—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .
1906.				1907.			
Aug. 24	240	0.51	0.60	Apr. 3	1,740	0.67	0.79
27	120	.39	.46	6	1,440	.46	.54
30	545	1.32	1.55	9	1,370	.51	.60
Sept. 2	150	.39	.46	12	1,330	.45	.53
5	65	.34	.40	15	1,280	.46	.54
8	40	.07	.08	17	3,080	.76	.89
11	20	.02	.02	19	5,070	1.21	1.42
14	20	.01	.01	21	6,060	1.28	1.51
17	10	.01	.01	24	5,810	1.16	1.36
21	10	.08	.09	27	3,750	1.03	1.21
24	15	.01	.01	30	3,600	.77	.90
27	15	.04	.05	May 15	2,470	1.08	1.27
30	140	.41	.48	18	3,090	1.12	1.32
Oct. 1	1,245	8.39	9.87	21	3,260	1.11	1.31
3	580	4.50	5.30	25	5,480	1.00	1.18
6	435	3.16	3.72	28	7,740	1.05	1.24
9	650	2.02	2.37	30	9,290	1.27	1.50
11	720	1.38	1.62	June 2	9,210	1.18	1.39
14	630	1.15	1.35	5	7,020	1.38	1.62
18	505	.90	1.06	8	5,780	1.62	1.91
21	505	.80	.94	11	6,830	1.32	1.55
24	490	.72	.85	14	7,220	1.16	1.37
27	820	.99	1.16	17	6,960	1.24	1.46
30	565	.76	.90	20	8,040	1.33	1.56
Nov. 2	760	.90	1.06	22	9,170	1.32	1.55
5	1,180	1.05	1.24	24	10,750	1.28	1.51
8	1,140	1.01	1.19	27	7,590	1.27	1.49
11	1,240	.90	1.06	30	5,230	1.00	1.18
14	1,150	.86	1.01	July 3	4,980	1.14	1.34
18	1,050	.76	.89	6	6,860	.96	1.13
21	1,110	.61	.72	9	7,650	.97	1.14
24	980	.85	1.00	12	6,560	2.79	3.28
27	550	.45	.53	15	6,230	.99	1.16
29	550	.42	.50	18	5,130	1.33	1.57
Dec. 2	1,000	.53	.62	22	4,920	.82	.96
5	3,670	1.68	1.98	25	4,270	.62	.73
8	1,510	.74	.87	28	3,970	.94	1.11
11	1,560	1.31	1.54	31	4,350	1.29	1.52
14	1,110	.76	.90	Aug. 3	3,560	1.17	1.38
17	1,170	.30	.35	6	2,600	.81	.95
20	1,170	.32	.38	9	2,230	1.12	1.32
23	810	.34	.40	12	2,080	.87	1.02
26	600	.27	.32	15	1,130	.56	.66
29	940	.35	.41	18	725	.39	.49
31	810	.36	.43	21	620	.54	.64
1907.				24	1,550	1.35	1.59
Jan. 3	940	.36	.42	27	2,280	1.64	1.93
6	835	.40	.47	29	3,790	2.59	3.05
9	720	.40	.47	31	4,440	3.15	3.70
12	905	.52	.61	Sept. 2	8,620	2.44	2.87
15	1,295	.42	.49	5	3,730	4.05	4.76
19	1,400	.69	.81	8	2,680	1.78	2.09
22	1,210	.45	.53	11	1,830	1.35	1.59
25	960	.32	.38	15	1,180	.94	1.11
29	630	.24	.28	17	880	.77	.91
31	660	.25	.29	20	1,540	.78	.92
Feb. 3	875	.28	.33	23	4,150	5.78	6.80
6	1,000	.29	.34	25	2,630	4.50	5.29
9	920	.41	.48	27	1,360	3.59	4.22
12	905	.48	.57	30	780	1.40	1.65
15	800	.43	.51	Oct. 3	560	.48	.57
18	800	.38	.45	6	530	.43	.51
21	785	.34	.40	9	470	.64	.76
24	750	.32	.38	12	420	.61	.72
28	820	.36	.42	15	455	.54	.63
Mar. 3	950	.42	.50	18	520	.76	.89
6	825	.40	.47	21	785	.47	.55
9	585	.31	.36	27	850	.93	1.10
12	595	.29	.34	30	1,440	3.47	4.08
15	825	.37	.44	31	1,190	3.13	3.68
18	960	.50	.59	Nov. 3	1,040	4.27	5.02
21	540	.34	.40	6	925	.43	.51
24	510	.22	.26	9	820	.40	.47
27	2,060	.89	1.05	12	900	.36	.42
29	2,380	1.02	1.20	15	750	.43	.50
31	1,980	.94	1.11	18	825	.56	.66

Silt determinations of Rio Grande water samples taken at El Paso, Tex., between May, 1897, and May, 1910—Continued.

Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.	Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.
1907.				1908.			
Nov. 21.....	1,110	0.48	0.57	July 24.....	0605	7.54	8.87
24.....	1,010	.70	.82	27.....	470	5.46	6.43
27.....	945	.46	.54	30.....	440	2.86	3.37
30.....	760	.35	.41	Aug. 2.....	400	3.47	4.08
Dec. 3.....	590	.65	.77	5.....	460	3.13	3.68
6.....	750	.76	.90	8.....	1,290	4.56	5.37
9.....	675	.84	.99	11.....	240	2.86	3.37
12.....	675	.82	.96	13.....	1,360	4.16	4.90
15.....	580	.95	1.12	16.....	870	6.87	8.08
18.....	685	.93	1.09	18.....	1,910	3.45	4.06
21.....	630	.84	.99	21.....	1,280	3.16	3.72
24.....	565	.76	.89	24.....	1,770	3.00	3.53
27.....	465	.84	.99	27.....	1,730	2.96	3.48
30.....	475	.87	1.02	29.....	850	2.16	2.54
1908.				31.....	1,300	2.10	2.47
Jan. 4.....	565	.55	.65	Sept. 3.....	355	.84	.99
7.....	765	.54	.64	4.....	1,760	1.49	1.75
10.....	665	.76	.89	7.....	215	.54	.64
13.....	565	.60	.71	10.....	75	.10	.12
16.....	400	.95	1.12	13.....	20	.08	.10
19.....	450	.56	.66	16.....	20	.08	.09
22.....	480	.65	.76	1909.			
28.....	445	.69	.81	Feb. 9.....	350	.59	.69
31.....	455	.70	.82	12.....	455	.84	.99
Feb. 3.....	435	.85	1.00	15.....	390	.97	1.14
6.....	505	.84	.99	18.....	245	.65	.76
9.....	480	.76	.89	21.....	330	.51	.60
12.....	755	1.34	1.58	25.....	160	.54	.63
15.....	530	1.16	1.36	28.....	165	.58	.68
18.....	520	.90	1.06	Mar. 3.....	185	.65	.77
21.....	565	1.00	1.18	6.....	35	.60	.71
24.....	560	.65	.77	9.....	340	.70	.82
27.....	580	.59	.69	13.....	1,110	1.66	1.95
29.....	595	.85	1.00	16.....	890	.99	1.16
Mar. 3.....	770	1.26	1.48	20.....	335	.75	.88
6.....	785	1.05	1.24	24.....	415	.87	1.02
9.....	575	1.00	1.18	28.....	395	1.45	1.71
12.....	795	.84	.99	Apr. 3.....	230	.88	1.03
15.....	690	.65	.77	6.....	115	.65	.77
18.....	375	.54	.64	9.....	65	.61	.72
21.....	240	.52	.61	12.....	680	.76	.89
24.....	1,520	.83	.98	15.....	320	.81	.95
26.....	1,120	.75	.88	18.....	275	1.59	1.87
29.....	825	.73	.86	21.....	215	1.05	1.24
31.....	610	.69	.81	24.....	3,630	1.36	1.60
Apr. 3.....	650	.51	.60	27.....	3,300	1.26	1.48
6.....	530	.45	.53	30.....	1,460	.76	.89
9.....	420	.43	.50	May 3.....	2,150	.65	.77
12.....	325	.45	.53	6.....	2,000	.75	.88
15.....	1,000	.54	.64	9.....	2,640	.55	.65
18.....	1,450	.69	.81	12.....	6,240	.65	.77
21.....	2,740	.76	.89	15.....	6,250	.60	.71
24.....	2,820	.84	.99	18.....	6,350	.75	.88
27.....	2,360	1.45	1.71	21.....	5,070	.54	.64
30.....	1,800	.70	.82	26.....	5,670	.36	.42
May 3.....	1,340	.76	.89	30.....	3,430	.26	.31
6.....	1,130	.59	.69	June 3.....	3,169	.99	1.16
9.....	2,400	.84	.99	6.....	2,460	.84	.99
14.....	1,500	.65	.77	9.....	2,420	.65	.77
17.....	1,670	.60	.71	12.....	5,530	.69	.81
21.....	1,210	.65	.76	15.....	6,270	.62	.73
24.....	2,380	.68	.80	19.....	4,970	.76	.89
28.....	2,960	.74	.87	22.....	3,740	.89	1.05
31.....	2,080	.65	.76	25.....	3,530	.78	.92
June 3.....	1,100	.54	.64	28.....	3,210	.67	.79
6.....	900	.60	.71	30.....	2,170	.80	.94
9.....	845	.46	.54	July 7.....	890	.60	.71
12.....	665	.45	.53	11.....	295	.85	1.00
15.....	305	.63	.74	16.....	310	.71	.83
18.....	155	.85	1.00	19.....	80	.42	.50
21.....	840	.65	.76	22.....	35	.21	.25
25.....	515	.54	.64	25.....	15	.10	.12
July 3.....	30	.40	.47	Aug. 21.....	30	10.17	11.96
6.....	0	.12	.14	24.....	20	10.50	12.35
10.....	5	.10	.12	28.....	540	7.30	8.59
21.....	1,260	3.56	4.19	31.....	1,010	6.10	7.18

Silt determinations of Rio Grande water samples taken at El Paso, Tex., between May, 1897, and May, 1910—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.
1909.				1910.			
Sept. 3.....	635	6.54	7.70	Jan. 12.....	470	0.47	0.55
6.....	625	8.35	9.83	15.....	375	.34	.40
9.....	5,140	10.44	12.29	18.....	720	.29	.34
12.....	4,880	10.13	11.92	21.....	880	.21	.25
15.....	3,290	1.68	1.98	24.....	955	.56	.66
18.....	2,250	2.35	2.76	28.....	665	.53	.62
22.....	1,670	1.11	1.31	31.....	565	.38	.45
24.....	1,170	.97	1.14	Feb. 4.....	500	.22	.26
27.....	1,060	.94	1.11	7.....	505	.22	.26
30.....	690	.92	1.09	10.....	495	.21	.25
Oct. 3.....	645	.35	.41	13.....	250	.19	.22
6.....	430	.38	.45	17.....	255	.21	.25
9.....	385	.29	.34	20.....	200	.20	.24
12.....	1,000	.84	.99	23.....	340	.38	.45
16.....	755	.76	.89	26.....	150	.18	.21
18.....	560	.60	.71	Mar. 1.....	400	.21	.25
21.....	660	.56	.66	6.....	705	.78	.92
24.....	500	.75	.88	9.....	1,730	.59	.69
27.....	500	.71	.83	12.....	1,490	.94	1.11
29.....	465	.25	.29	15.....	1,620	.58	.68
31.....	415	.21	.25	18.....	1,470	.32	.38
Nov. 3.....	380	.35	.41	21.....	1,740	.30	.35
6.....	310	.21	.25	24.....	1,570	.48	.57
9.....	290	.20	.24	27.....	1,810	.30	.35
12.....	275	.29	.34	31.....	2,320	.48	.56
15.....	365	.47	.55	Apr. 3.....	1,880	.68	.80
18.....	330	.37	.43	6.....	1,240	.32	.38
21.....	290	.21	.25	9.....	1,280	.40	.47
24.....	535	.35	.41	12.....	1,360	.84	.99
27.....	400	.26	.31	15.....	1,380	.47	.55
30.....	345	.20	.24	18.....	2,110	.56	.66
Dec. 9.....	435	.25	.29	22.....	1,770	.62	.73
12.....	390	.21	.25	25.....	2,030	.84	.99
15.....	235	.20	.23	28.....	3,220	.78	.92
19.....	475	.18	.21	30.....	4,620	.80	.94
22.....	225	.19	.22	May 3.....	6,370	.75	.88
24.....	190	.20	.23	6.....	7,720	.52	.61
25.....	190	.19	.22	9.....	5,710	.48	.56
28.....	145	.13	.15	12.....	3,870	.47	.55
31.....	110	.12	.14	15.....	4,390	.35	.42
				18.....	5,070	.27	.32
Jan. 1910.				22.....	5,320	.25	.30
3.....	195	.25	.29	25.....	2,620	.31	.36
6.....	1,350	.22	.26	28.....	1,590	.30	.35
9.....	790	.37	.43	31.....	905	.36	.42

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent $\div 0.85$.
1905.				1905.			
Aug. 24.....	5	0.08	0.09	Nov. 3.....	175	0.71	0.84
Sept. 9.....	150	10.20	12.00	9.....	690	1.54	1.81
25.....	50	.44	.52	14.....	550	.86	1.01
27.....	400	9.92	11.67	17.....	480	.66	.78
29.....	230	5.09	5.99	20.....	480	.55	.65
Oct. 2.....	170	3.19	3.75	23.....	605	.74	.87
5.....	160	2.92	3.44	25.....	1,920	3.20	3.76
8.....	125	1.29	1.52	28.....	620	1.35	1.59
11.....	85	.88	1.04	30.....	1,530	2.46	2.89
14.....	95	.75	.88	Dec. 3.....	815	1.34	1.58
17.....	80	.72	.85	6.....	505	.65	.77
20.....	85	.60	.71	9.....	565	.57	.67
23.....	95	.60	.70	12.....	605	.46	.54
26.....	125	.74	.87	15.....	740	.48	.57
28.....	150	.69	.81	18.....	620	.39	.46
31.....	170	.80	.94	21.....	645	.39	.46

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .
1905.				1906.			
Dec. 24.....	230	0.21	0.25	Aug. 15.....	525	0.68	0.80
27.....	175	.07	.08	18.....	420	1.22	1.43
30.....	185	.12	.14	21.....	220	.16	.19
1906.				24.....	155	.61	.72
Jan. 2.....	125	.03	.04	27.....	320	1.33	1.57
5.....	280	.09	.11	30.....	185	1.47	1.73
8.....	240	.07	.08	Sept. 2.....	175	4.44	5.22
11.....	285	.06	.07	5.....	70	1.49	1.76
14.....	515	.22	.26	8.....	40	2.16	2.54
17.....	1,250	.59	.69	25.....	15	.39	.46
20.....	1,310	.77	.91	28.....	9,070	9.82	11.55
23.....	700	.59	.69	30.....	1,060	1.64	1.93
26.....	485	.19	.23	Oct. 3.....	1,270	1.53	1.80
29.....	805	.36	.42	6.....	1,380	1.00	1.18
31.....	650	.32	.38	9.....	1,180	.73	.86
Feb. 3.....	625	.64	.75	12.....	910	.49	.58
6.....	705	1.04	1.22	15.....	1,000	.43	.50
9.....	635	.61	.72	18.....	880	.40	.47
12.....	795	.49	.58	21.....	1,010	.42	.50
15.....	875	.46	.54	22.....	1,080	.83	.98
18.....	780	.48	.56	25.....	1,390	.82	.96
21.....	720	.33	.39	28.....	1,070	.82	.96
24.....	660	.30	.35	31.....	1,410	.67	.79
27.....	780	.37	.44	Nov. 3.....	1,550	.57	.67
Mar. 3.....	730	.32	.38	6.....	1,620	.59	.69
6.....	690	.33	.39	9.....	1,550	.51	.60
9.....	580	.27	.32	12.....	1,490	.44	.52
12.....	750	.24	.28	15.....	1,420	.40	.47
15.....	920	.65	.76	20.....	1,280	.33	.39
18.....	1,030	1.14	1.34	23.....	900	.31	.37
21.....	790	.94	1.11	26.....	900	.28	.33
24.....	520	.66	.78	29.....	1,010	.37	.43
27.....	740	1.07	1.26	Dec. 2.....	1,390	.49	.58
30.....	2,200	2.83	3.33	5.....	1,770	.75	.88
Apr. 3.....	1,210	1.39	1.64	8.....	2,120	.89	1.05
6.....	1,450	.99	1.17	11.....	1,550	.37	.44
9.....	1,430	.99	1.17	14.....	1,400	.39	.46
12.....	1,730	1.28	1.51	17.....	1,190	.57	.67
18.....	2,660	1.62	1.91	20.....	780	.33	.39
21.....	3,320	1.14	1.34	23.....	685	.26	.31
24.....	4,380	1.16	1.37	26.....	965	.25	.30
27.....	5,840	.90	1.06	29.....	965	.25	.29
30.....	4,970	.71	.83	31.....	1,115	.17	.20
May 3.....	4,560	.59	.69	1907.			
6.....	4,390	.54	.63	Jan. 3.....	1,035	.17	.20
9.....	7,080	.65	.77	6.....	685	.15	.18
12.....	9,370	.99	1.16	9.....	900	.27	.32
15.....	10,450	.58	.68	12.....	1,140	.24	.28
18.....	9,650	.49	.58	15.....	970	.23	.27
22.....	10,800	.65	.77	18.....	1,255	.27	.32
25.....	10,160	.57	.67	21.....	1,130	.21	.25
28.....	8,910	.50	.59	24.....	770	.13	.16
31.....	6,380	.39	.46	28.....	860	.19	.22
June 3.....	5,320	.37	.43	30.....	970	.18	.21
7.....	5,300	.44	.52	Feb. 2.....	1,060	.23	.27
10.....	5,430	.33	.39	5.....	1,350	.57	.67
13.....	6,240	.35	.41	8.....	1,190	.47	.55
16.....	8,500	.43	.50	11.....	1,230	.44	.52
19.....	8,330	.44	.52	14.....	1,060	.38	.45
26.....	4,330	.12	.14	17.....	1,110	.29	.34
29.....	2,710	.24	.28	20.....	1,190	.26	.30
July 2.....	1,710	.82	.96	23.....	1,300	.22	.26
5.....	2,310	.67	.79	26.....	1,460	.32	.38
8.....	2,580	.90	1.06	28.....	1,400	.33	.39
11.....	2,190	.55	.65	Mar. 2.....	1,240	.34	.40
14.....	1,930	.62	.73	6.....	950	.24	.28
20.....	2,640	.79	.93	9.....	900	.23	.27
23.....	1,760	.43	.51	12.....	1,190	.31	.36
26.....	1,170	.25	.29	15.....	1,150	.31	.36
29.....	1,070	.40	.47	18.....	710	.18	.21
31.....	1,450	.85	1.00	21.....	1,130	.31	.36
Aug. 3.....	1,470	1.72	2.02	23.....	2,350	.62	.73
6.....	1,360	1.08	1.27	26.....	2,880	.69	.81
9.....	1,095	.98	1.15	31.....	2,260	.44	.52
12.....	625	1.04	1.22	Apr. 3.....	1,740	.25	.30

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent +0.85.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent +0.85.
1907.				1907.			
Aug. 6	1,920	0.32	0.38	Nov. 23	1,000	0.24	0.28
9	2,000	.32	.38	26	950	.22	.26
11	2,040	.32	.38	29	700	.25	.29
14	3,280	.58	.68	Dec. 2	815	.35	.41
16	5,580	.78	.92	5	830	.48	.57
19	5,710	.58	.68	8	825	.62	.73
22	7,500	.53	.62	12	830	.56	.66
24	4,950	.48	.57	15	720	.59	.69
27	3,840	.37	.43	18	600	.53	.62
May 21	5,340	.53	.62	21	585	.48	.56
22	6,320	.69	.81	24	615	.40	.47
25	8,920	.76	.90	27	740	.52	.61
28	11,470	.91	1.07	30	640	.48	.57
31	9,700	.80	.94	1908.			
June 3	7,330	1.21	1.42	Jan. 2	815	.45	.53
6	6,770	.99	1.16	5	920	.41	.48
7	8,040	.66	.78	8	725	.39	.46
9	9,660	.65	.77	11	650	.37	.43
12	9,140	.67	.79	14	655	.40	.47
15	9,510	.75	.88	17	685	.52	.61
18	9,120	.69	.81	20	735	.54	.63
20	10,110	.71	.83	23	665	.54	.64
21	11,680	.85	1.00	26	580	.56	.66
24	9,430	.90	1.06	30	685	.45	.53
27	7,550	.77	.90	Feb. 2	750	.46	.54
30	7,190	.77	.90	5	630	.56	.66
July 3	7,320	.76	.89	8	770	.84	.99
6	7,530	.76	.89	11	620	.90	1.06
9	7,530	.82	.97	14	725	.93	1.10
12	6,030	.89	1.05	17	600	.85	1.00
15	5,460	.88	1.04	20	605	.65	.77
18	5,110	.32	.38	23	730	.54	.64
21	4,110	.69	.81	26	1,600	2.57	3.02
24	3,190	.58	.68	29	1,180	2.85	3.35
27	3,160	.97	1.14	Mar. 3	1,290	2.46	2.89
29	3,400	2.51	2.95	6	1,010	.84	.99
31	2,490	.88	1.03	10	1,240	.82	.97
Aug. 3	2,590	.85	1.00	13	945	.75	.88
6	2,780	.86	1.01	16	1,100	.71	.84
9	2,000	.94	1.11	19	1,730	.95	1.12
12	1,700	.33	.39	22	1,680	.74	.87
15	1,140	.22	.26	25	1,500	.65	.76
18	950	.21	.25	28	1,190	.60	.71
21	2,280	1.00	1.18	31	1,230	.45	.53
23	3,670	2.00	2.35	Apr. 3	795	.43	.51
26	2,170	2.42	2.85	6	815	.54	.64
27	5,050	1.38	1.62	9	980	.40	.47
30	4,600	3.00	3.53	12	1,650	.41	.48
Sept. 1	10,610	5.70	6.71	15	1,980	.42	.49
4	3,760	1.60	1.88	18	2,409	.94	1.11
7	2,590	1.06	1.25	19	4,079	1.01	1.19
10	1,920	.84	.99	22	3,570	1.05	1.23
13	1,480	.47	.55	25	3,250	.84	.99
16	1,340	.42	.49	28	2,900	.76	.89
19	2,360	2.84	3.34	30	2,150	.75	.88
21	4,400	5.45	6.41	May 3	1,580	.65	.77
22	5,840	5.90	6.94	6	4,000	.60	.71
25	1,750	2.14	2.52	9	2,100	.54	.64
28	1,080	.83	.98	12	2,040	.54	.64
30	1,000	.43	.51	15	2,410	.56	.66
Oct. 3	760	.42	.50	18	2,260	.47	.55
6	775	.40	.47	22	3,620	.64	.76
9	830	.35	.41	25	3,800	.82	.96
12	815	.38	.45	28	3,260	.76	.89
15	895	.41	.48	31	2,300	.60	.71
18	990	.46	.54	June 3	1,920	.46	.54
21	895	.59	.69	6	1,810	.37	.44
24	2,230	.75	.88	9	1,680	.36	.42
27	1,520	2.27	2.67	12	1,280	.37	.43
30	1,430	1.88	2.21	15	1,200	.40	.47
Nov. 2	1,230	1.25	1.47	18	2,020	.51	.60
5	985	.87	1.02	21	1,940	.54	.64
8	870	.50	.59	24	1,280	.46	.54
11	860	.35	.41	27	790	.35	.41
14	915	.29	.34	30	535	.34	.40
17	985	.27	.32	July 3	950	.26	.30
20	905	.29	.34				

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

1908.				1909.			
Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.	Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.
July 6	650	0.36	0.42	Mar. 18	645	0.70	0.82
9	820	4.38	5.15	21	735	1.45	1.71
12	270	.54	.64	24	710	1.00	1.18
15	370	1.26	1.48	27	915	1.25	1.47
17	1,970	10.52	12.38	29	995	1.11	1.31
20	1,750	8.00	9.41	Apr. 2	750	.99	1.16
23	600	2.50	2.94	6	855	1.18	1.39
26	690	2.86	3.36	9	1,130	1.84	2.17
29	1,120	6.17	7.26	12	845	.99	1.16
31	565	3.58	4.21	15	865	.97	1.14
Aug. 3	900	5.22	6.14	18	1,070	.94	1.11
3 (p. m.)	2,700	9.32	10.96	21	3,910	1.97	2.32
5	2,620	11.20	13.18	24	4,000	1.45	1.71
8	540	3.53	4.15	27	2,900	1.01	1.19
9	2,660	17.39	20.46	30	2,540	.84	.99
12	960	4.10	4.82	May 3	2,980	.78	.92
15	2,140	8.45	9.94	6	2,720	.80	.94
18	1,690	4.56	5.37	9	6,340	1.34	1.58
21	950	3.45	4.06	12	7,180	.76	.89
24	1,440	2.64	3.11	15	7,110	.84	.99
28	1,620	2.54	2.99	18	6,380	.69	.81
31	1,010	2.50	2.94	21	6,560	.60	.71
Sept. 3	585	1.74	2.05	24	6,750	.54	.64
6	375	2.97	3.49	27	5,460	.50	.59
9	220	1.84	2.16	30	3,720	.37	.43
12	105	.25	.29	June 2	4,140	.30	.35
15	45	.12	.14	5	3,370	.28	.33
Oct. 25	70	.36	.42	8	3,840	.27	.32
28	205	.42	.50	11	7,740	.96	1.13
31	285	.25	.29	14	7,750	.55	.65
Nov. 3	430	.36	.43	17	5,720	.58	.68
6	515	.84	.99	20	4,500	.52	.61
9	495	.65	.77	23	4,350	.54	.63
12	515	.64	.75	26	4,120	.53	.62
15	560	.45	.53	29	3,160	.48	.56
18	460	.38	.45	July 2	2,010	.42	.50
21	375	.36	.42	5	1,400	.40	.47
24	445	.42	.50	8	1,030	.31	.37
27	600	.42	.49	11	770	.55	.65
Oct. 30	755	.48	.57	14	715	.51	.60
3	695	.65	.76	17	435	.48	.57
6	820	.70	.82	20	255	3.84	4.52
9	785	.71	.84	23	315	3.11	3.66
12	575	.68	.81	26	800	1.49	1.75
15	545	.48	.56	27	700	10.64	12.52
18	570	.54	.63	30	130	7.35	8.65
21	525	.47	.55	Aug. 3	145	7.32	8.61
24	545	.48	.56	6	145	9.99	11.75
27	690	.50	.59	9	205	13.46	15.84
Oct. 30	500	.41	.48	12	165	7.53	8.86
1909.				15	590	10.62	12.50
Jan. 2	565	.40	.47	18	275	6.60	7.76
5	650	.51	.60	21	1,050	13.75	16.18
8	580	.59	.69	24	1,920	12.50	14.71
11	645	.54	.64	26	1,570	7.49	8.81
14	715	.51	.60	30	1,710	4.14	4.87
17	725	.48	.57	Sept. 2	1,090	1.80	2.12
20	765	.52	.61	5	1,460	2.06	2.42
23	775	.63	.74	6	5,110	5.08	5.98
26	665	.84	.99	8	7,010	5.37	6.32
29	645	.93	1.09	9	4,230	11.56	13.60
Oct. 31	755	.76	.90	12	4,300	2.75	3.23
Feb. 3	590	.65	.77	15	3,320	.65	.76
6	665	.75	.88	18	3,000	.61	.72
9	635	.48	.57	21	2,880	.45	.53
12	660	.51	.60	24	1,830	.52	.61
15	550	.48	.57	27	1,610	.38	.45
18	630	.42	.49	Oct. 30	1,180	.30	.35
22	645	.47	.55	3	915	.37	.43
25	615	.54	.63	6	765	.87	1.02
28	530	.51	.60	7	765	.54	.64
Mar. 3	495	.70	.82	10	2,150	.99	1.16
6	1,200	1.34	1.58	13	1,320	.27	.32
9	940	2.16	2.54	16	1,280	.81	.95
12	1,040	1.64	1.93	19	1,140	.22	.26
15	835	.76	.89	22	805	.21	.25
				25	740	.19	.22

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent ± 0.85 .
1909.				1910.			
Oct. 28.....	690	0.15	0.18	June 30.....	40	0.11	0.13
31.....	615	.16	.19	July 14.....	95	12.58	14.80
Nov. 3.....	625	.13	.15	17.....	40	10.46	12.30
6.....	550	.13	.15	29.....	35	14.18	16.68
9.....	590	.13	.15	31.....	5	16.64	16.05
12.....	555	.12	.14	Aug. 3.....	150	15.74	18.52
15.....	540	.12	.14	6.....	125	15.96	18.78
18.....	750	.14	.17	9.....	45	16.41	19.31
21.....	660	.12	.14	11.....	680	11.68	13.74
24.....	575	.16	.19	21.....	55	16.97	19.97
27.....	870	.12	.14	28.....	60	5.97	7.02
Dec. 1.....	920	.10	.12	31.....	170	11.84	13.93
4.....	875	.13	.15	Sept. 1.....	785	10.09	12.58
7.....	875	.14	.17	24.....	45	12.75	15.00
10.....	935	.21	.25	Oct. 28.....	40	11.65	13.71
13.....	580	.42	.50	31.....	30	11.84	13.93
16.....	485	.42	.50	Nov. 3.....	40	.88	1.03
	635	.12	.14	6.....	60	.93	1.09
				9.....	100	.99	1.16
1910.					125	1.07	1.26
Jan. 1.....	1,730	.47	.55	12.....	125	1.07	1.26
4.....	1,430	.26	.30	15.....	160	1.28	1.51
7.....	275	.21	.25	18.....	140	1.38	1.62
10.....	470	.19	.22	21.....	180	.91	1.11
13.....	940	.53	.62	24.....	195	1.06	1.25
16.....	1,210	.52	.61	27.....	270	1.27	1.50
19.....	1,370	.31	.37	30.....	310	1.33	1.56
22.....	1,200	.30	.35	Dec. 3.....	340	.49	.57
25.....	930	.22	.26	6.....	385	.58	.68
28.....	830	.21	.25	9.....	365	.58	.68
Feb. 31.....	775	.22	.26	12.....	300	.51	.61
3.....	835	.32	.38	15.....	415	.48	.57
12.....	680	.13	.15	18.....	465	.53	.62
16.....	525	.11	.13	21.....	340	.51	.60
19.....	610	.18	.21	24.....	335	.57	.68
22.....	655	1.24	1.46	28.....	345	.54	.64
25.....	750	2.08	2.45	31.....	320	.70	.82
28.....	1,370	6.43	7.57	1911.			
Mar. 3.....	1,500	2.12	2.50	Jan. 11.....	540	.78	.92
6.....	1,800	2.07	2.44	14.....	625	.57	.67
9.....	2,040	1.88	2.21	17.....	820	.82	.97
12.....	2,360	1.74	2.05	22.....	750	.84	.99
15.....	2,470	1.68	1.98	25.....	670	.76	.90
18.....	2,260	.99	1.17	28.....	610	.73	.86
21.....	2,260	1.25	1.47	31.....	785	.63	.74
24.....	2,620	.84	.99	Feb. 3.....	850	.79	.93
27.....	3,300	.26	.31	6.....	795	.75	.88
30.....	3,100	.24	.29	9.....	730	.63	.74
Apr. 3.....	2,050	.31	.36	12.....	580	.25	.29
6.....	2,200	.27	.32	15.....	490	.27	.32
9.....	2,110	.21	.25	18.....	655	.21	.25
12.....	2,120	.37	.44	22.....	640	.17	.20
16.....	3,220	.21	.25	25.....	465	.29	.34
20.....	2,520	.20	.24	Mar. 1.....	470	.54	.64
23.....	3,590	.20	.24	4.....	625	.52	.61
26.....	4,640	.19	.23	7.....	620	.61	.72
29.....	6,830	.22	.26	9.....	3,380	4.78	5.63
May 2.....	8,420	.31	.36	12.....	1,700	2.75	3.24
7.....	7,850	.27	.32	14.....	3,700	2.87	3.38
4.....	6,380	.40	.47	17.....	1,240	1.04	1.23
10.....	5,370	.21	.25	20.....	1,480	.75	.88
13.....	5,030	.18	.21	23.....	1,720	.37	.43
16.....	6,390	.15	.18	31.....	835	1.00	1.18
19.....	5,630	.16	.19	Apr. 3.....	1,290	.23	.27
22.....	3,970	.13	.15	6.....	1,560	.19	.22
25.....	3,030	.13	.15	9.....	1,670	.21	.25
28.....	1,870	.12	.14	12.....	1,030	.22	.26
31.....	1,310	.12	.14	15.....	920	.20	.24
June 3.....	2,460	.12	.14	18.....	1,000	.25	.29
6.....	2,980	.14	.16	21.....	930	.22	.26
9.....	1,940	.11	.13	25.....	2,330	.37	.43
12.....	940	.12	.14	28.....	2,940	.48	.56
15.....	880	.88	1.03	30.....	3,830	.70	.82
18.....	335	.31	.37	May 3.....	3,670	.37	.44
21.....	175	.68	.80	6.....	3,610	.84	.99
24.....	70	.51	.60	9.....	5,060	.98	1.15
27.....	35	.29	.34	12.....	8,100	1.00	1.18

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.	Date.	Discharge in second- feet.	Per cent by weight— dry.	Per cent ±0.85.
1911.				1912.			
May 16.	6,190	0.46	0.54	Jan. 3.	295	0.07	0.08
19.	5,740	.58	.68	6.	590	.07	.08
22.	5,220	.59	.70	9.	720	.07	.08
25.	3,640	.43	.61	12.	920	.08	.09
28.	3,720	.42	.50	15.	1,230	.08	.09
31.	4,140	.38	.45	18.	1,160	.07	.08
June 3.	4,520	1.34	1.58	21.	1,060	.09	.11
6.	4,520	1.07	1.26	24.	735	.08	.09
9.	4,290	.58	.68	28.	920	.08	.09
13.	5,220	.48	.57	31.	955	.09	.11
16.	5,870	.65	.76	Feb. 3.	900	.10	.12
19.	4,570	.88	1.03	6.	715	.09	.11
9.	4,220	.65	.76	9.	795	.09	.11
25.	3,990	.58	.68	12.	755	.08	.09
27.	4,150	.78	.92	15.	745	.08	.09
30.	3,190	.47	.55	18.	715	.09	.11
July 3.	8,430	14.76	17.37	21.	740	.09	.11
6.	5,770	6.54	7.70	24.	810	.08	.09
10.	5,600	4.16	4.90	27.	775	.08	.09
14.	5,580	10.87	12.79	29.	755	.09	.11
15.	6,270	10.54	12.40	Mar. 3.	675	.08	.09
19.	5,850	10.61	12.48	6.	630	.08	.09
22.	9,650	10.42	12.26	9.	750	.09	.11
25.	8,040	10.85	12.76	12.	1,500	.08	.09
27.	7,160	6.75	7.94	15.	850	.13	.15
29.	5,010	5.87	6.91	19.	790	.12	.14
31.	4,870	4.12	4.85	22.	2,370	.46	.54
Aug. 3.	3,200	.65	.76	25.	2,650	.65	.76
6.	1,390	.72	.85	28.	1,460	.74	.87
10.	690	.42	.50	31.	1,230	.31	.37
13.	280	.31	.36	Apr. 3.	1,480	.22	.26
16.	80	.53	.62	6.	1,480	.28	.33
19.	185	.72	.85	9.	3,080	.59	.69
22.	265	.31	.37	12.	3,320	.51	.60
25.	855	.28	.33	15.	2,550	.34	.40
28.	820	.84	.99	18.	2,000	.42	.49
31.	675	.91	1.07	21.	1,610	.53	.62
Sept. 3.	610	.32	.38	24.	1,740	.76	.90
6.	545	.54	.64	27.	990	.65	.76
9.	375	.49	.58	30.	1,880	.53	.62
12.	640	.94	1.11	May 3.	3,230	.76	.90
18.	505	.87	1.02	6.	6,430	.94	1.11
21.	1,000	5.36	6.31	9.	4,250	.87	.85
24.	565	2.84	3.34	12.	5,650	.72	.79
27.	670	1.65	1.94	16.	6,160	.65	.76
30.	1,285	8.79	10.34	19.	7,490	.82	.97
Oct. 3.	2,000	4.39	5.16	22.	9,240	.91	1.07
6.	7,940	3.84	4.52	25.	13,350	.76	.90
7.	11,780	12.65	14.88	28.	14,830	.72	.85
10.	11,530	13.44	15.81	31.	15,270	.84	.99
13.	9,690	6.25	7.35	June 3.	13,490	.71	.84
15.	7,050	2.68	3.15	6.	12,050	.54	.64
16.	5,400	5.64	6.63	9.	12,870	.35	.41
19.	3,310	.48	.56	12.	10,320	.31	.36
22.	2,920	.13	.15	15.	7,490	.52	.61
25.	2,530	.18	.21	18.	6,120	.42	.50
29.	3,260	.38	.45	21.	4,790	.35	.41
31.	3,070	.58	.68	24.	5,140	.31	.37
Nov. 3.	2,670	.84	.99	27.	4,710	.48	.56
6.	2,360	.82	.97	30.	4,810	.52	.61
9.	2,330	.53	.62	July 3.	4,130	.27	.32
12.	2,170	.47	.55	6.	3,190	.69	.81
15.	1,610	.41	.48	9.	1,850	.84	.99
18.	1,540	.37	.43	12.	850	.91	1.07
21.	1,470	.27	.32	15.	810	1.64	1.93
24.	1,690	.22	.26	18.	1,040	2.17	2.55
27.	1,540	.21	.25	21.	970	3.67	4.32
30.	1,270	.22	.26	24.	3,020	21.36	25.13
Dec. 3.	950	.20	.24	27.	1,780	3.69	4.34
6.	1,230	.18	.21	29.	1,040	13.52	15.90
9.	1,340	.19	.22	31.	560	9.34	10.99
12.	1,220	.12	.14	Aug. 3.	230	9.67	11.38
15.	1,030	.29	.34	6.	195	9.57	11.26
19.	920	.14	.17	9.	200	4.07	4.79
22.	895	.12	.14	12.	110	9.47	11.14
25.	780	.09	.11	15.	180	4.27	5.02
28.	390	.08	.10	16.	2,380	6.00	7.06
31.	165	.08	.10	19.	515	7.00	8.24

Silt determinations of Rio Grande water samples taken at San Marcial, N. Mex., between August, 1905, and December, 1912—Continued.

Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent +0.85.	Date.	Discharge in second-feet.	Per cent by weight—dry.	Per cent +0.85.
1912.				1912			
Aug. 22.....	265	12.88	15.15	Nov. 12.....	435	10.07	11.85
25.....	195	12.47	14.67	15.....	400	10.06	11.84
28.....	175	9.62	11.32	18.....	585	14.43	16.98
31.....	790	9.25	10.88	21.....	545	6.88	8.09
Sept. 3.....	510	16.54	19.46	24.....	580	6.37	7.49
6.....	150	16.05	18.88	27.....	555	10.83	12.74
Oct. 10.....	115	.38	.45	30.....	550	6.37	7.50
13.....	75	.37	.43	Dec. 3.....	535	7.00	8.24
16.....	155	.24	.28	6.....	500	6.40	7.53
19.....	210	10.00	11.76	9.....	485	6.76	7.95
22.....	200	10.08	11.86	12.....	525	6.82	8.03
25.....	265	.31	.37	15.....	500	3.40	4.00
28.....	265	.29	.34	18.....	555	5.35	6.29
31.....	235	.54	.64	21.....	455	6.77	7.97
Nov. 3.....	320	6.58	7.74	24.....	150	.56	.66
6.....	370	6.43	7.57	27.....	165	.19	.22
9.....	425	6.65	7.82	31.....	165	.13	.16

TOTAL SILT CARRIED IN SUSPENSION PAST SAN MARCIAL.

Although determinations of silt and records of discharge are available at both San Marcial and El Paso, the Eagle reservoir of the Reclamation Service, located 40 miles below San Marcial, has made the computations of the total silt passing that point of greater importance. For that reason the estimates for San Marcial have been made by Mr. Follett. For the estimates prior to 1905, when only the El Paso determinations were available, monthly percentages of silt by volume were made from the El Paso records, modified somewhat by an intimate knowledge of the river between the two points. Subsequent study indicated that not enough changes were made in the El Paso table to fit the conditions at San Marcial—that the percentages used for storm-water months were usually too small and that used for usual winter flow was too large. It is believed, however, that they will balance fairly well. The following table shows the monthly discharge in acre-feet, percentage of silt by weight, and total silt in acre-feet, passing San Marcial from 1897 to 1912, inclusive:

Acre-feet of silt which has passed San Marcial, N. Mex., in suspension, year by year, from 1897 to 1912, inclusive.

Month.	Water (acre-feet).	Silt.		Month.	Water (acre-feet).	Silt.	
		Per cent.	Acre-feet.			Per cent.	Acre-feet.
1897.				1898.			
January.....	19,547	1.06	207	January.....	57,679	1.06	611
February.....	24,278	1.06	257	February.....	59,405	1.06	630
March.....	40,740	1.06	432	March.....	62,182	1.06	659
April.....	212,629	2.42	5,143	April.....	271,448	2.57	6,976
May.....	755,206	.96	7,250	May.....	165,848	1.18	1,957
June.....	366,476	.61	2,236	June.....	126,268	1.18	1,490
July.....	67,726	.61	413	July.....	167,028	1.18	1,971
August.....	6,188	4.71	291	August.....	13,864	1.18	164
September.....	113,107	5.51	6,232	September.....	3,699	1.18	44
October.....	281,693	3.45	9,718	October.....	0	.....	0
November.....	175,736	2.42	4,253	November.....	10,195	1.06	108
December.....	152,727	1.06	1,619	December.....	23,365	1.06	248
The year.....	2,215,953	1.72	38,051	The year.....	960,981	1.55	14,858

Acre-feet of silt which has passed San Marcial, N. Mex., in suspension, year by year, from 1897 to 1912, inclusive—Continued.

Month.	Water (acre-feet).	Silt.		Month.	Water (acre-feet).	Silt.	
		Per cent.	Acro-feet.			Per cent.	Acro-feet.
1899.				1904.			
January.....	27,828	1.06	295	January.....	16,840	1.06	179
February.....	24,585	1.06	261	February.....	18,902	.59	112
March.....	27,560	1.65	455	March.....	6,060	.59	36
April.....	54,090	2.35	1,271	April.....	0	.....	0
May.....	35,028	1.65	578	May.....	0	.....	0
June.....	962	1.65	16	June.....	0	.....	0
July.....	28,383	5.81	1,649	July.....	10,532	5.81	612
August.....	6,426	.59	38	August.....	55,974	4.14	2,317
September.....	2,916	5.81	169	September.....	44,727	1.35	604
October.....	694	1.65	11	October.....	463,240	2.69	12,461
November.....	9,511	1.65	157	November.....	51,769	.91	471
December.....	21,451	1.06	227	December.....	41,752	.11	46
The year.....	239,434	2.14	5,127	The year.....	709,796	2.37	16,838
1900.				1905.			
January.....	40,552	1.06	430	January.....	39,114	.14	55
February.....	35,118	1.06	372	February.....	63,868	.21	134
March.....	34,443	.59	203	March.....	217,904	1.12	2,441
April.....	5,217	.35	18	April.....	279,392	1.29	3,604
May.....	123,630	2.55	3,153	May.....	962,221	.64	6,158
June.....	159,868	1.18	1,886	June.....	714,268	.52	3,714
July.....	139	.35	0	July.....	35,782	.64	229
August.....	0	.....	0	August.....	20,093	3.20	643
September.....	56,102	5.81	3,260	September.....	5,276	10.35	546
October.....	99	1.18	1	October.....	7,349	1.65	121
November.....	2,439	1.18	29	November.....	42,397	2.19	928
December.....	10,096	1.06	107	December.....	34,344	.88	302
The year.....	467,703	2.02	9,459	The year.....	2,422,008	.78	18,875
1901.				1906.			
January.....	20,945	1.06	222	January.....	36,496	.54	197
February.....	25,468	1.68	428	February.....	39,689	.60	258
March.....	15,114	1.68	254	March.....	56,866	1.49	847
April.....	23,683	2.55	604	April.....	163,140	1.33	2,170
May.....	256,126	1.91	4,892	May.....	500,707	.72	3,605
June.....	96,178	1.18	1,135	June.....	345,064	.43	1,484
July.....	59,286	5.81	3,445	July.....	118,314	.77	911
August.....	65,534	5.81	3,808	August.....	43,210	1.42	614
September.....	37,607	5.81	2,185	September.....	25,527	8.82	2,251
October.....	17,018	5.81	989	October.....	70,830	.90	637
November.....	20,053	1.68	337	November.....	77,752	.52	404
December.....	19,240	1.06	204	December.....	86,142	.63	543
The year.....	656,252	2.82	18,503	The year.....	1,563,737	.89	13,901
1902.				1907.			
January.....	22,731	1.06	241	January.....	60,635	.24	146
February.....	17,435	1.06	185	February.....	67,696	.41	278
March.....	7,954	.35	28	March.....	92,549	.52	481
April.....	40,106	2.55	1,023	April.....	222,863	.59	1,315
May.....	26,787	2.42	648	May.....	368,965	.78	2,878
June.....	6,407	2.89	185	June.....	524,192	.94	4,927
July.....	0	.....	0	July.....	328,740	.96	3,156
August.....	49,210	5.81	2,859	August.....	165,521	2.24	3,708
September.....	13,349	5.81	776	September.....	3,349	3.25	5,712
October.....	823	1.06	9	October.....	160,899	1.09	702
November.....	4,641	1.06	49	November.....	64,453	.57	322
December.....	11,286	1.06	120	December.....	56,489	.59	322
The year.....	200,729	3.05	6,123	The year.....	44,707	.57	264
1903.				1908.			
January.....	17,197	1.06	182	January.....	43,636	.54	236
February.....	21,927	1.99	436	February.....	47,970	1.66	796
March.....	46,790	2.80	1,310	March.....	77,375	1.12	867
April.....	100,007	2.42	2,420	April.....	123,927	.90	1,115
May.....	318,367	1.06	3,375	May.....	165,263	.74	1,223
June.....	660,476	.61	4,029	June.....	90,516	.51	462
July.....	77,841	.34	265	July.....	48,952	5.16	2,526
August.....	3,064	1.18	36	August.....	95,663	7.92	7,577
September.....	1,438	1.65	24	September.....	9,709	2.25	218
October.....	545	1.65	9	October.....	2,757	.40	11
November.....	5,534	.59	33	November.....	29,931	.59	177
December.....	18,883	1.06	200	December.....	38,410	.68	261
The year.....	1,272,069	.97	12,319	The year.....	774,109	2.00	15,469

Acre-feet of silt which has passed San Marcial, N. Mex., in suspension, year by year, from 1897 to 1912, inclusive—Continued.

Month.	Water (acre-feet).	Silt.		Month.	Water (acre-feet).	Silt.	
		Per cent.	Acre-feet.			Per cent.	Acre-feet.
1909.				1911.			
January.....	41,554	0.71	295	January.....	30,198	0.88	266
February.....	34,334	.63	216	February.....	35,633	.55	196
March.....	52,622	1.44	758	March.....	87,094	2.02	1,759
April.....	104,340	1.56	1,628	April.....	92,450	.42	388
May.....	336,238	.86	2,892	May.....	303,888	.76	2,310
June.....	239,983	.64	1,856	June.....	269,554	.87	2,345
July.....	48,080	1.93	928	July.....	392,390	10.18	39,945
August.....	52,661	10.96	5,772	August.....	63,164	1.03	650
September.....	179,048	2.52	4,511	September.....	39,164	3.02	1,183
October.....	59,742	.50	299	October.....	312,754	7.90	24,708
November.....	39,580	.15	59	November.....	116,469	.60	699
December.....	41,752	.25	104	December.....	56,975	.20	114
The year.....	1,279,934	1.51	19,318	The year.....	1,799,733	4.14	74,563
1910.				1912.			
January.....	61,320	.39	239	January.....	50,311	.10	50
February.....	42,019	1.52	638	February.....	44,430	.10	44
March.....	143,663	1.52	2,184	March.....	77,375	.42	325
April.....	189,917	.28	532	April.....	117,798	.56	660
May.....	308,628	.26	802	May.....	501,779	.92	4,616
June.....	63,094	.24	151	June.....	502,096	.57	2,862
July.....	1,061	13.31	141	July.....	113,772	4.75	5,404
August.....	7,339	15.01	1,102	August.....	22,830	9.41	2,148
September.....	2,995	12.80	383	September.....	7,646	15.73	1,203
October.....	575	13.72	79	October.....	9,005	3.83	345
November.....	8,915	1.36	121	November.....	27,580	10.06	2,774
December.....	23,157	.64	148	December.....	24,992	6.35	1,587
The year.....	852,692	.76	6,520	The year.....	1,499,614	1.47	22,018

SEDIMENT MOVING ON BOTTOM OF RIVER.

The foregoing records show only the sediment carried in suspension. In regard to the sediment moving on the bottom of the river, Mr. Follett states:

There is also a large amount of sediment which is rolled along the bottom. No method has yet been devised of measuring this moving sediment. That its amount is large is shown indirectly by many phenomena. How large it is the writer is unable to say with any degree of confidence. That it may amount to 25 per cent of the silt carried in suspension he believes possible. The amount will vary greatly with different streams, the factors affecting it being the weight and fineness of the sediment, the declivity of the stream's bed, and the number and abruptness of variations in flow. It is unfortunate that it can not be measured and studied as can the silt in suspension. It adds an indeterminate factor to the problem which is troublesomely large. The only way its amount can ever be arrived at will be by the measuring, for a long series of years, of the deposit in some existing reservoir, together with the delta at its head, while silt determinations are kept up. In this way a result may finally be deduced for one stream, but the question of its applicability to other streams will be an open one.

SEDIMENTATION IN PECOS RIVER.¹

The silt in the upper Pecos Valley consists of nothing more than the material ground away by the mountain torrents, and soon settles, often before reaching the main channel. Lower down on the river,

¹ Taken chiefly from U. S. Recl. Service Third Ann. Rept.

where the course is through alluvial soil, more silt is gathered until at the McMillan reservoir the water is heavily charged.

In 1904 the United States Reclamation Service made borings in the bottom of Lake McMillan reservoir, which was then dry, to determine the amount of silt deposited in its 10 years of service. Ordinary screw post-hole diggers supplied with extension shanks were used to make the borings, and the natural surface beneath the silt was determined by the change of color in the material and also by the particles of vegetable matter found in most places where the natural surface was reached.

At the time of the borings the reservoir had accumulated 12,232 acre-feet of silt, and as the capacity of the reservoir was then 16,500 acre-feet, the original capacity was 28,732 acre-feet—a decrease in capacity of 42 per cent in 10 years. In addition to the silt deposited in the reservoir, there was a considerable deposit above the highest storage contour. A few random borings taken at a considerable distance above the contour showed the depth of silt to be greater than at any point within the storage area. This was due to the fact that when the river flood met the still water in the reservoir the velocity was checked and the heavier sediment deposited. The investigations were not sufficiently extensive to indicate the amount of silt deposited outside the storage area.

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